Long Island Offshore Wind Park

140 Megawatts of Offshore Wind Energy

Louis "Coke" Coakley
Manager, Permitting & Environmental Programs
Long Island Offshore Wind Park

October 2005

FPL Energy

LIPA Clean Energy Initiative

Cautionary Statements And Risk Factors That May Affect Future Results

Any statements made herein about future operating results or other future events are forward-looking statements under the Safe Harbor Provisions of the Private Securities Litigation Reform Act of 1995. Actual results may differ materially from such forward-looking statements. A discussion of factors that could cause actual results or events to vary is contained in the Appendix herein and in the Company's SEC filings.

FPL Energy

Leader in Wind Energy

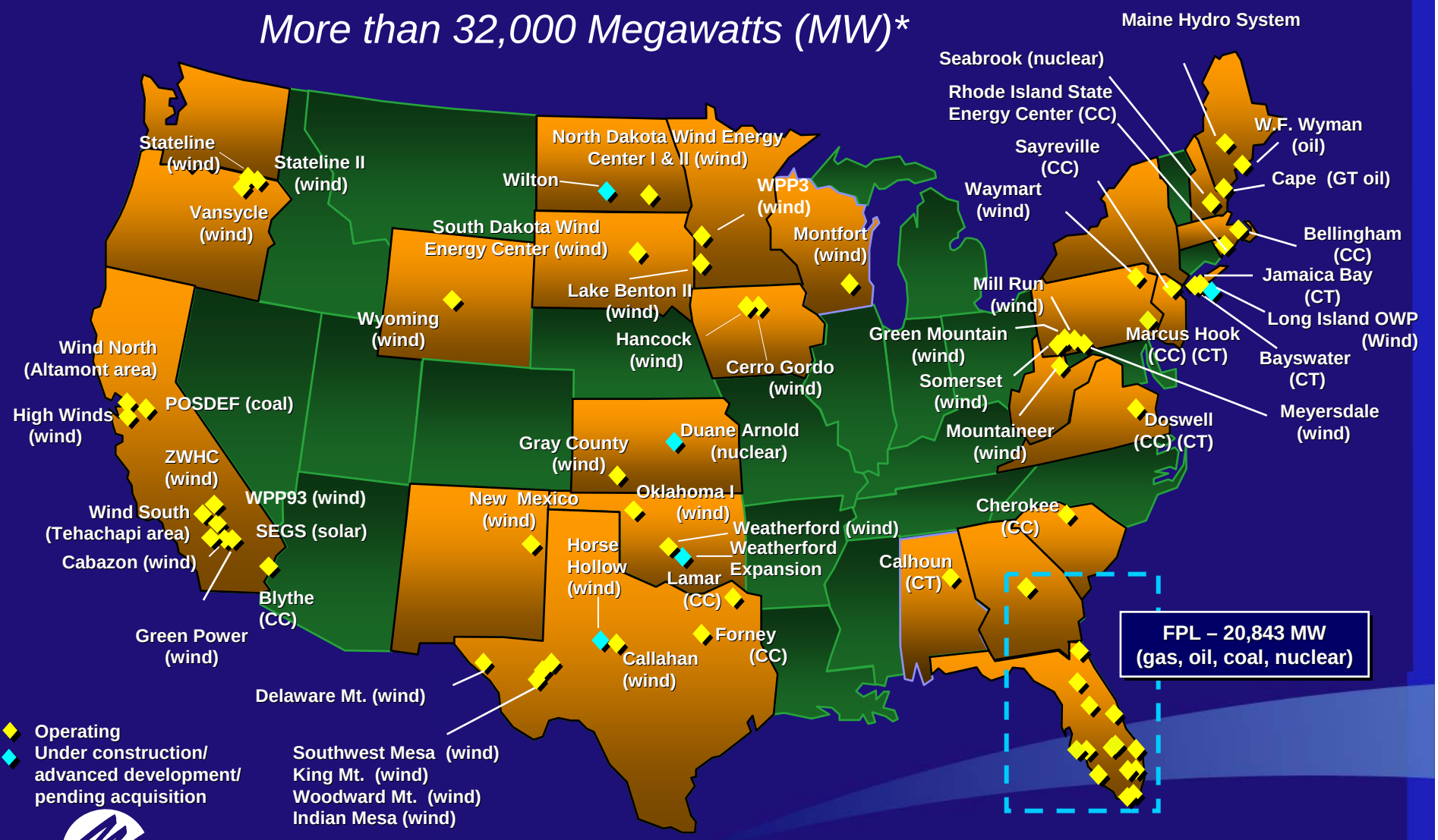
- **About 35-40%% of total U.S. wind capacity**
  - **Over 3,200 MW by year end 2005**
- **Invested over $3 billion into wind**
- **More than 6,800 turbines in operation***

FPL Energy

* as of September 2005

Leading U.S. Generator

*More than 32,000 Megawatts (MW)**



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* as of September 2005, represents net ownership in plant capability

Why Wind Power for Long Island?

- **Key element of LIPA Master Energy Plan**
- **Reasonable cost renewable energy source**
- **Competitive with fossil fuels**
- **Long Island has good offshore winds**
- **Helps to meet Governor Pataki's 25 percent Renewable Portfolio Standard**
- **Support of environmental, consumer and civic groups**

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LIPA Clean Energy Initiative

Organizations Supporting Long Island Wind Energy

- Long Island Offshore Wind Initiative (LIOWI) formed in 2002 to support development of wind energy on Long Island
- Coalition of over 30 environmental, civic, health & faith based groups
- Emphasis on advocacy and public education

For more information:
Contact RELI at 631-537-8282
Visit the website:
www.lioffshorewindenergy.org

Why Offshore Wind?

- Growth in energy demand on Long Island
- CLEAN…No air pollutants
- Reduce use of old fossil power plants, oil imports
- Public, State and LIPA desire for renewable energy
- No water consumption or waste generation
- Limited available land sites on Long Island
- Proven technology, similar operating plants in Europe
- Economic development

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Long Island Benefits

- **Estimated equivalent 13.5 million barrels oil not consumed ($810 million oil savings @ $60/ barrel) over 20 years**
- **Clean electricity for 44,000 Long Island homes**
- **Annual air pollution offsets**
  - ***sulfur dioxide - 489 tons***
  - ***nitrogen oxide - 221 tons***
  - ***carbon dioxide - 235,000 tons***
- **Energy to stay on Long Island**
- **Local economic benefits**

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Development Process

- 2002 to 2003 - LIPA Siting Studies
- June 2002 – Long Island Offshore Wind Symposium held
- May 2003 – LIPA Developer Proposals Received
- June 2004 – LIPA Approves Negotiations with FPL Energy
- April 2005 – LIPA / FPLE submit Proposal to US Army Corps of Engineers for Section 10 Permit
- Fall 2005 – LIPA plans to submit Proposal for Interconnection Cable to NY Public Service Commission
- 2005 to 2007 – Permit Review and Analysis Process
- 2007 to 2008 – Construction / Completion in 2008

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Project Responsibilities

- **FPLE to construct, own, operate and maintain the 140 MW Offshore Wind Park**
- **LIPA is responsible for 138 kV Interconnection Cable to Substation**
- **LIPA to purchase 100% electricity output under a Power Purchase Agreement**
- **LIPA is responsible for decommissioning and site restoration**

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Siting Criteria

- **Minimize visual impacts** *(relatively undeveloped Jones Beach Island)*
- **Acceptable water depths** *(45 – 60 feet)*
- **Wind speed** *(over 18 mph)*
- **Proximity to existing LIPA Sterling Substation** *(shortest distance to Long Island electrical grid)*
- **Avoidance of:**
  - coastal bird flyways *(Great South Bay)*
  - sensitive habitats *(Piping Plover beaches)*
  - shipping lanes *(begins 6.7 miles offshore into Port of NY)*
- **Minimize fishing impacts** *(provide artificial reefs near inlets)*

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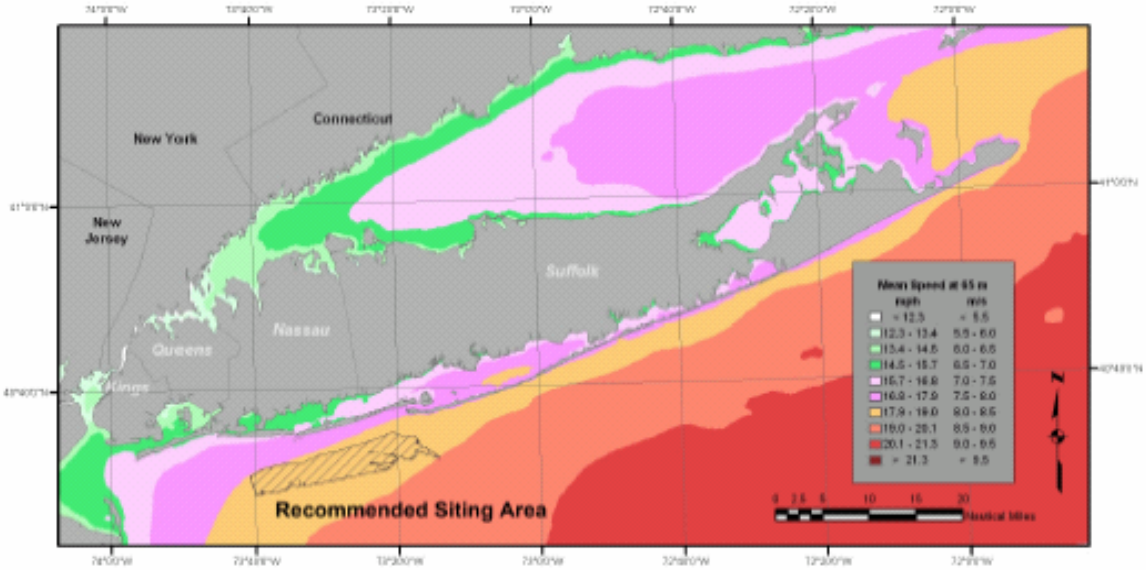
Long Island's Offshore Wind Energy Potential: Site Selection Process

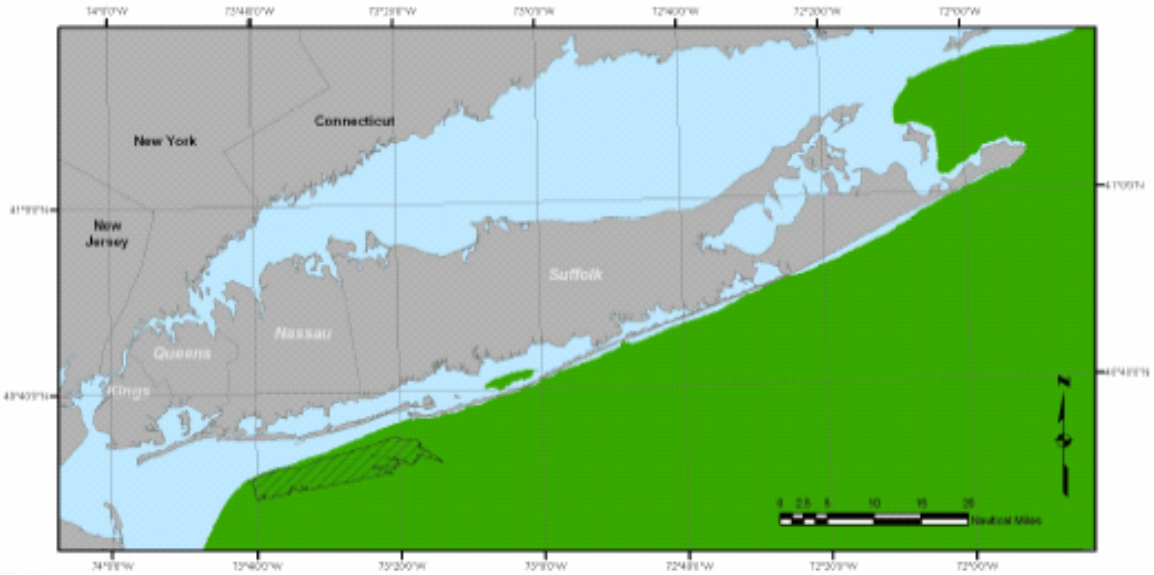
Key site screening parameters were mapped to identify the most appropriate area for siting an offshore wind energy project. These parameters are:

- **Wind Resource:** Economic viability requires a minimum average wind speed of 18 mph at hub height (center of rotor)
- **Water Depth:** Current turbine foundation technology requires water depths shallower than 70 ft
- **Distance from Shore:** 2.5 nm minimum distance from shore to limit viewshed impact
- **Shipping Lanes:** Avoid New York Harbor and designated shipping lanes
- **Bird Sensitivity:** Avoid high concentration bird areas
- **Project Size and Transmission:** Ensures minimum project size of 100 MW and economical transmission interconnection

1. Wind Resource

Long Island's Wind Resource: Annual average wind speeds calculated at a height of 65 m (213 ft)





Wind Resource Screening: Eligible offshore area having wind speeds greater than 18 mph (8 m/s)

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www.lipower.org/cei/offshore.study

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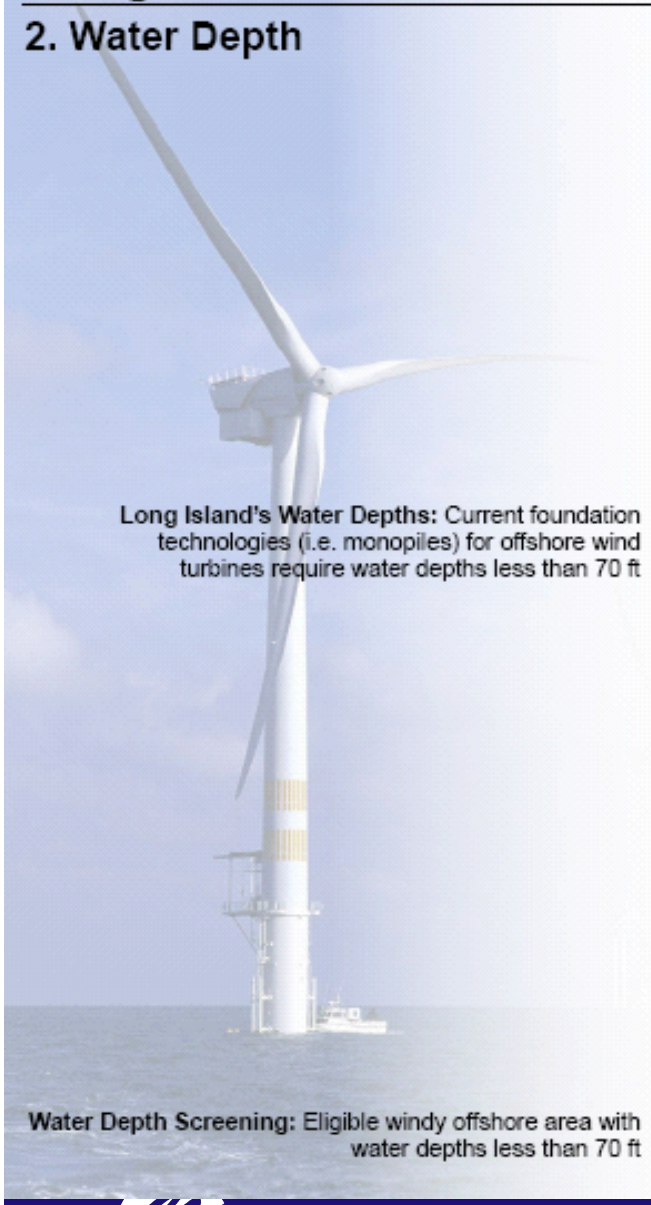
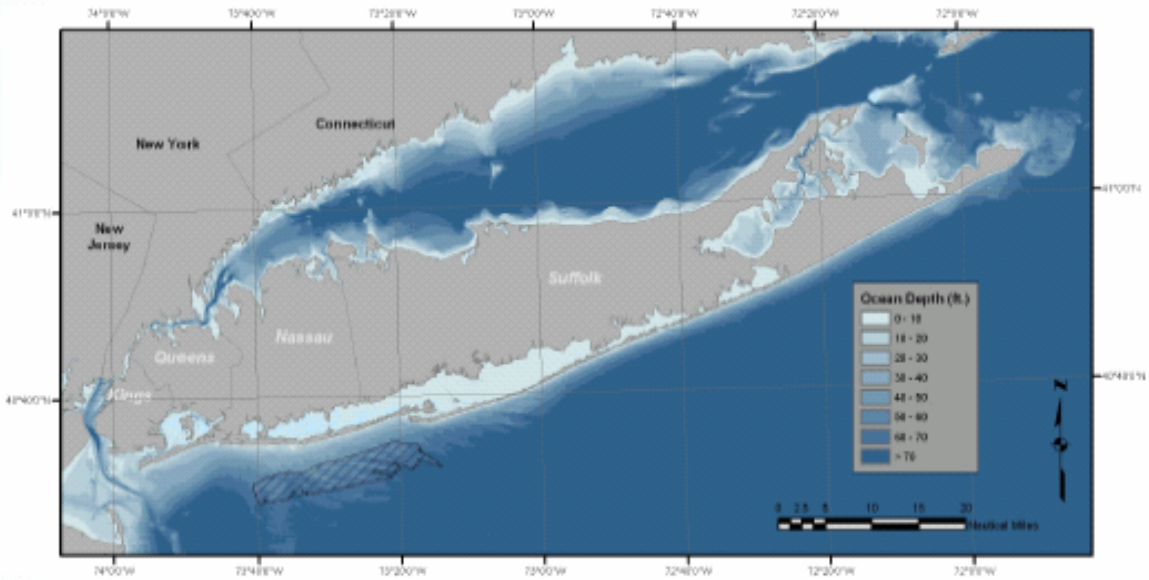
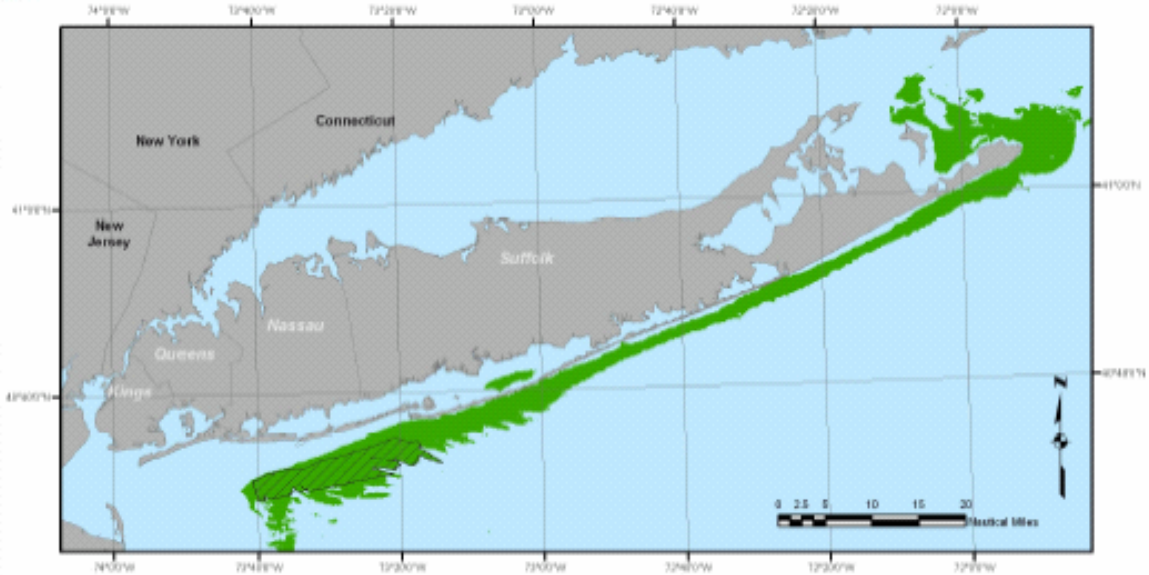
Long Island's Offshore Wind Energy Potential: Site Selection Process

2. Water Depth



Long Island's Water Depths: Current foundation technologies (i.e. monopiles) for offshore wind turbines require water depths less than 70 ft

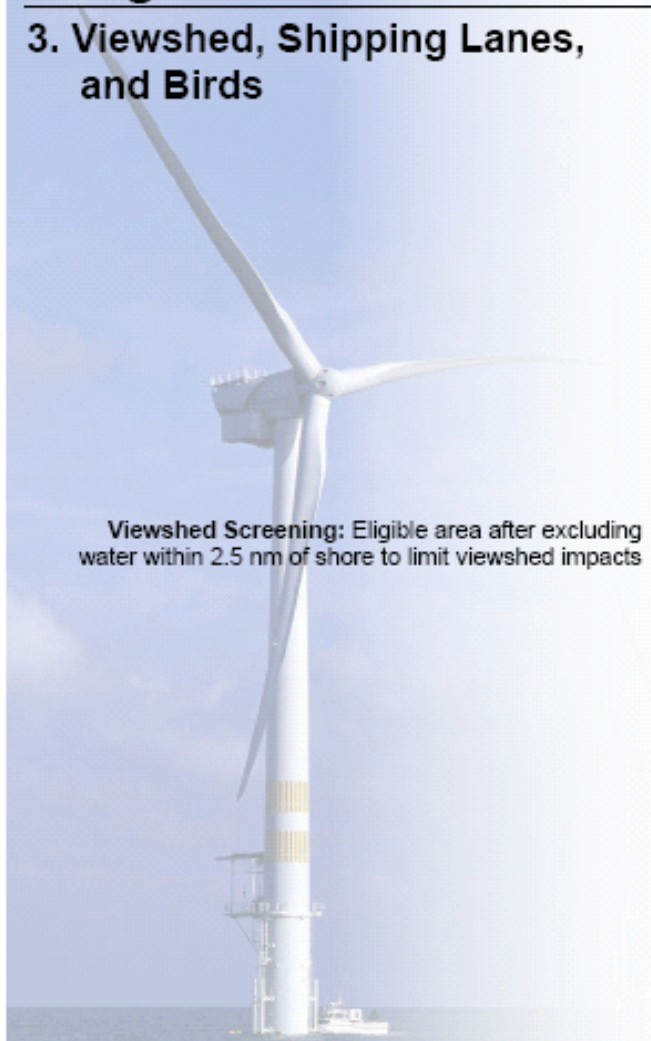


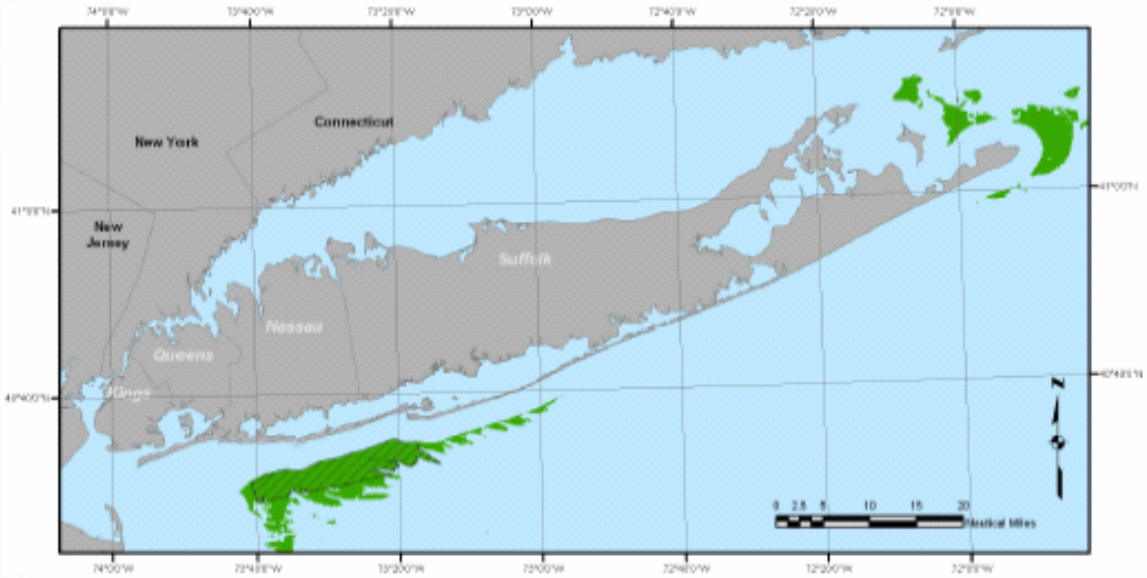


Water Depth Screening: Eligible windy offshore area with water depths less than 70 ft

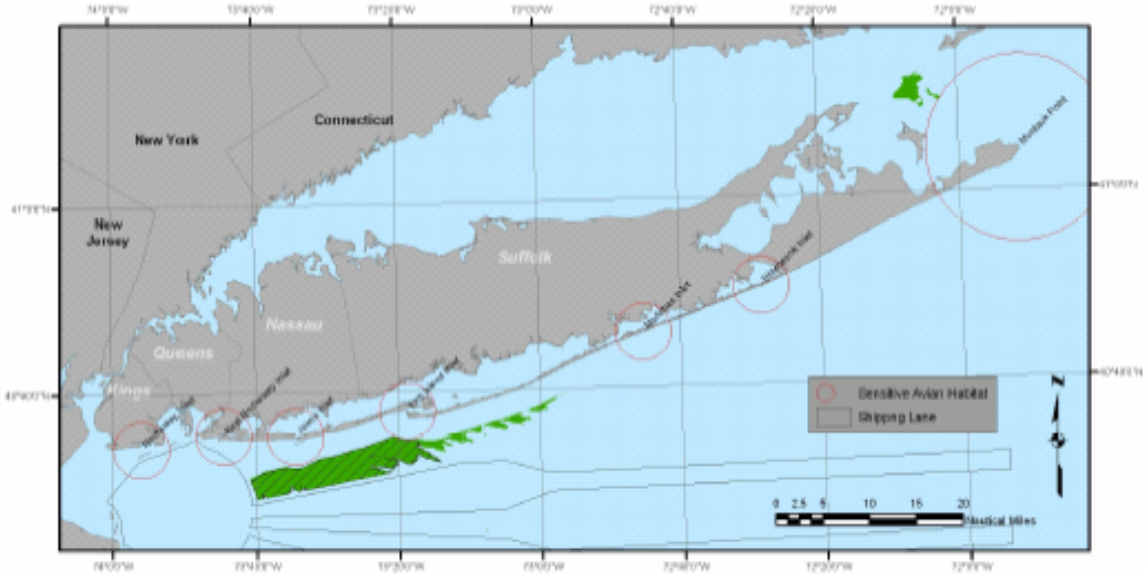
Long Island's Offshore Wind Energy Potential: Site Selection Process

3. Viewshed, Shipping Lanes, and Birds





Viewshed Screening: Eligible area after excluding water within 2.5 nm of shore to limit viewshed impacts

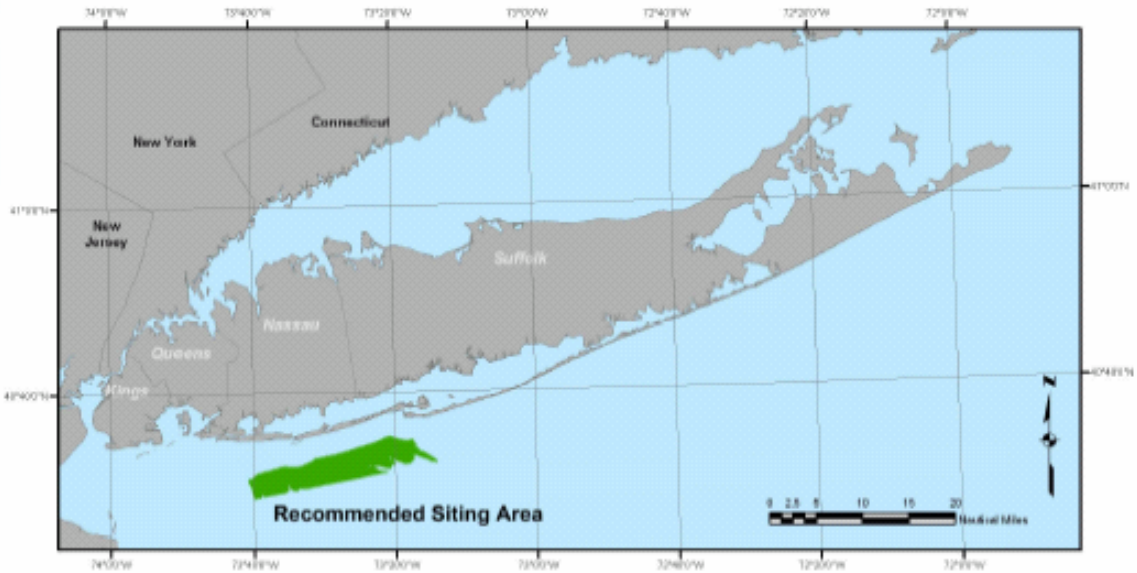


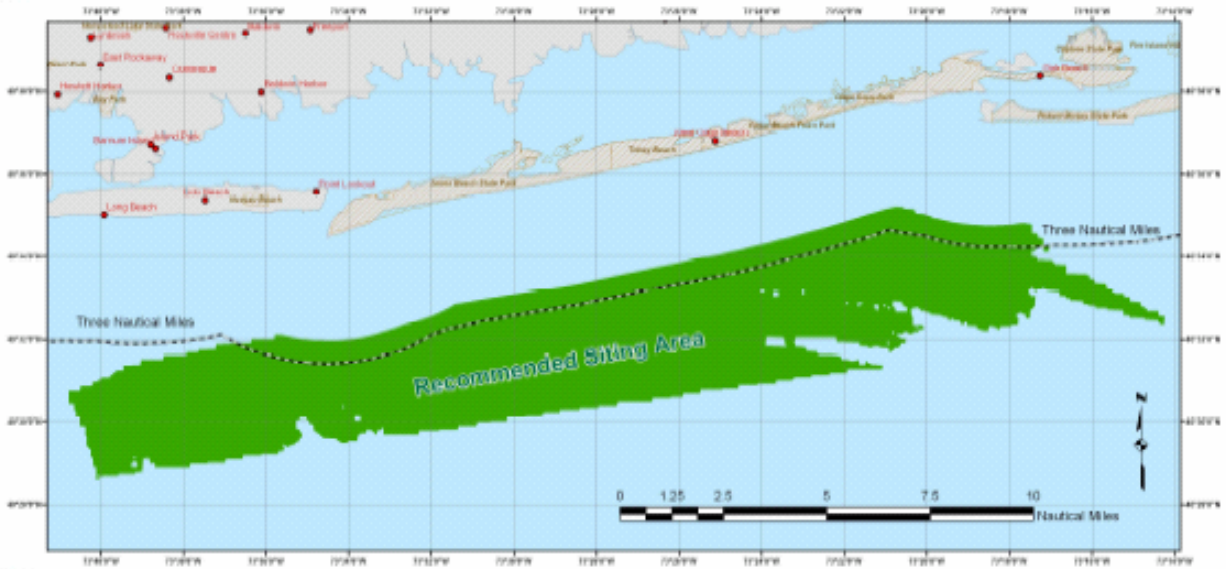
Shipping Lanes and Bird Screening: Eligible area after excluding designated shipping lanes (including a 0.5 nm buffer) and high concentration bird areas (3 nm radius around primary inlets and 10 nm radius around Montauk)

Long Island's Offshore Wind Energy Potential: Site Selection Process

4. Recommended Siting Area

Size and Transmission Screening: Area remaining after removing isolated areas too small to support a 100+ MW wind plant or too far from electrical interconnection





Close-up of the Recommended Siting Area

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www.lipower.org/cei/offshore.study

LIPA Clean Energy Initiative

Long Island Offshore Wind Park

- **State-of-the-art 140 MW offshore wind park**
- **40 wind turbines arranged to minimize visual and environmental impact**
- **Buried inner-array cables to offshore substation**
- **3.6 MW turbines**
- **Commercial operations by 2008**

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Offshore Wind Park Elements

- **Turbine** **3.6 MW each**
- **Tower height** **260 feet**
- **Spacing** **1/3 to 1/2 mile apart**
- **Rotor diameter** **364 feet**
- **8-16 revolutions per minute**
- **Monopile foundation design**
- **Offshore substation with buried 138 kV cable connecting to LIPA Sterling substation**

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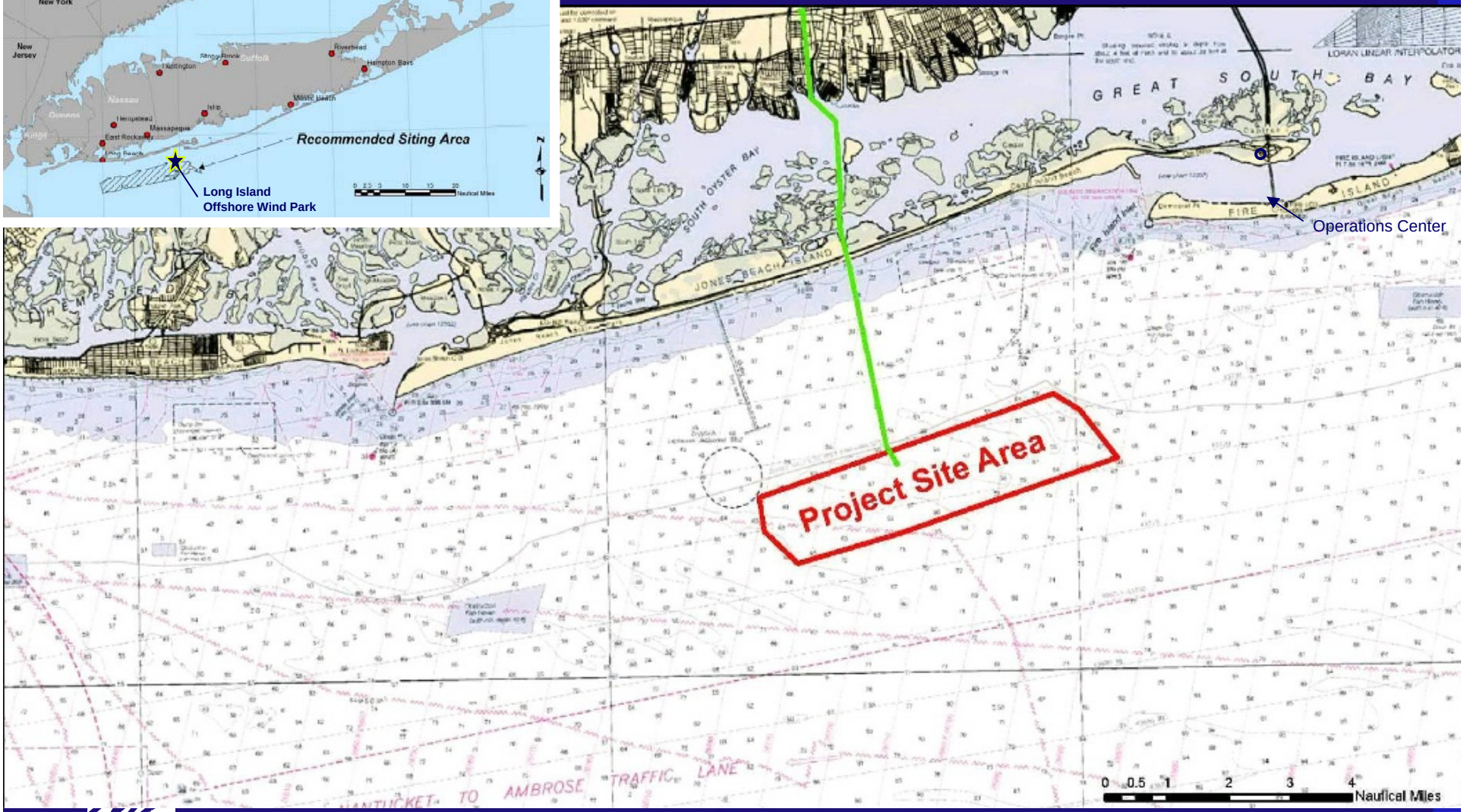
Proposed Wind Park & Cable Locations



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Regional Project Map

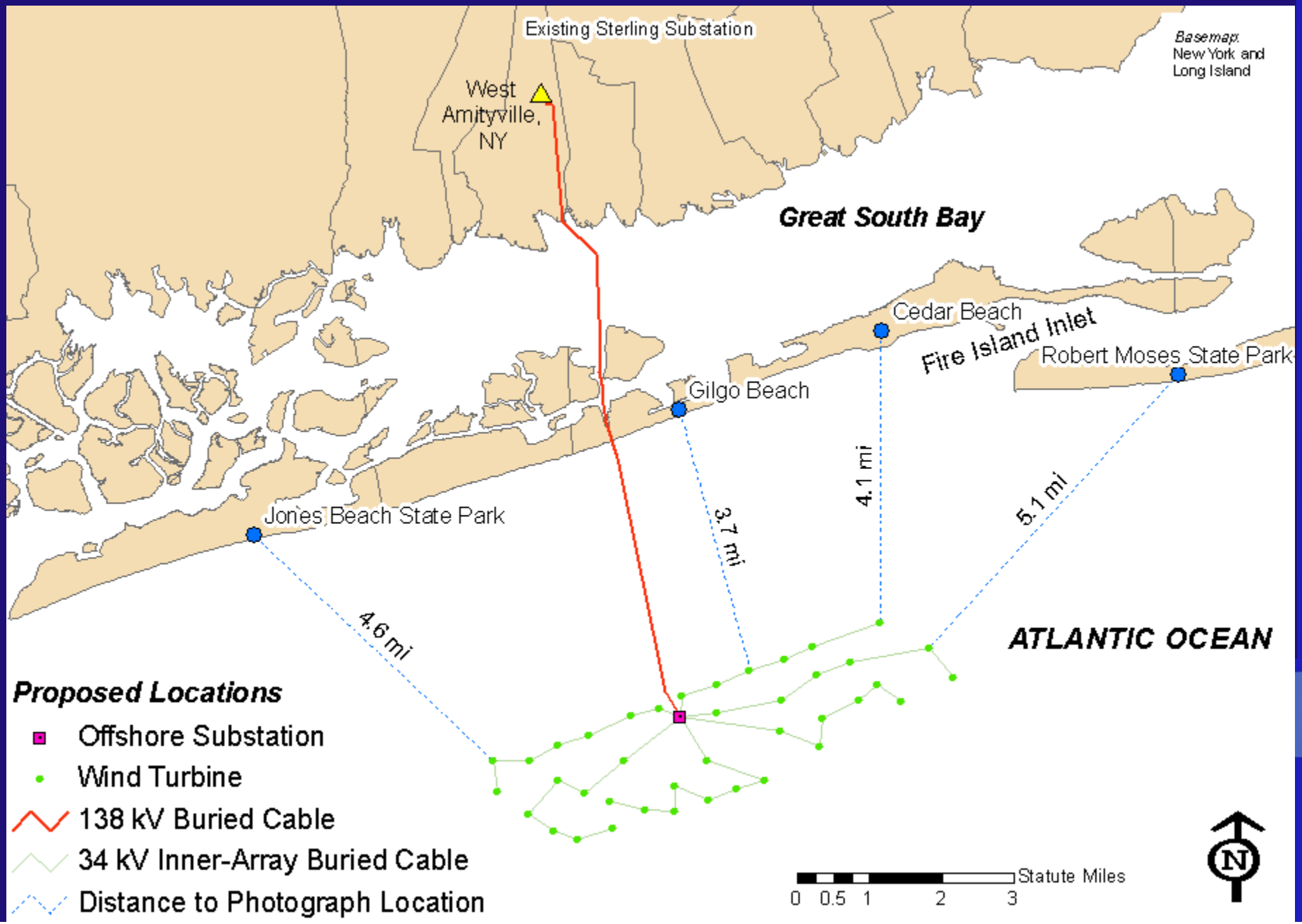
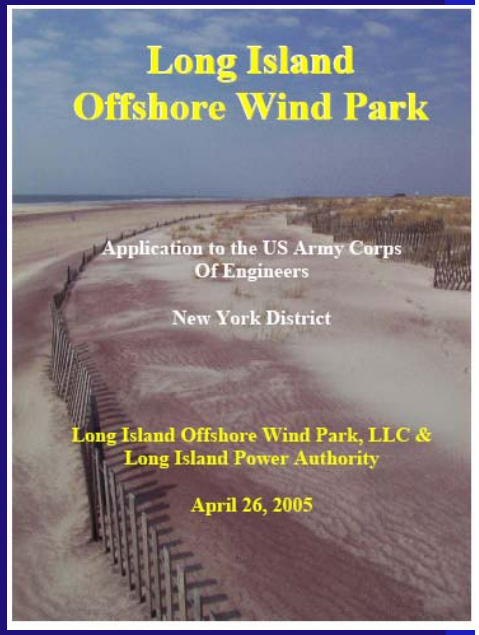


Photo Simulation from Jones Beach Central Mall

Haze Photo Simulation from Gilgo Beach

Major Permits/ Approvals

- **US Army Corps of Engineers –** *Section 10 / NEPA*
- **NYS Dept. of State –** *Coastal Consistency*
- **NYS Office of Parks, Recreation and Historic Preservation –** *Park Use & Historic Preservation*
- **US Federal Aviation Administration –** *Aviation*
- **US Coast Guard –** *Navigation*
- **US Minerals Management Service –** *Oil Spill Response Plan*
- **US Fish & Wildlife Service & National Marine Fisheries Service –** *Section 7 Consultation (Migratory birds, whales)*
- **NYS Dept. of Public Service** – *Article VII Transmission Line*



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Environmental & Technical Evaluations

Completed Prior to Construction

- **Biological & Environmental:**
  - Birds, fisheries, marine mammals, visual simulations, vessel traffic, cultural resources
- **Geophysical/ Oceanographic:**
  - Tides & waves, bottom conditions, geology, sediment transport, weather events
- **Transmission:**
  - Cable routes, interconnection design
- **Legal & Regulatory:**
  - Rigorous environmental review pursuant to Federal and State Laws

Project Avian Survey Vessels

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Avian Boat and Aerial Surveys

2004 – 2005 Results

- Higher bird concentrations within 3 miles of shoreline than in Wind Park
- Wind Park located away from listed bird species nesting habitat (i.e., Piping Plover, Roseate Tern, Least Tern, Common Tern)
- Wind Park located in waters deeper than that utlilized by rafting seaducks, which generally ranges no deeper than 40 feet
- Wind Park is located adjacent to a major avian migration flyway

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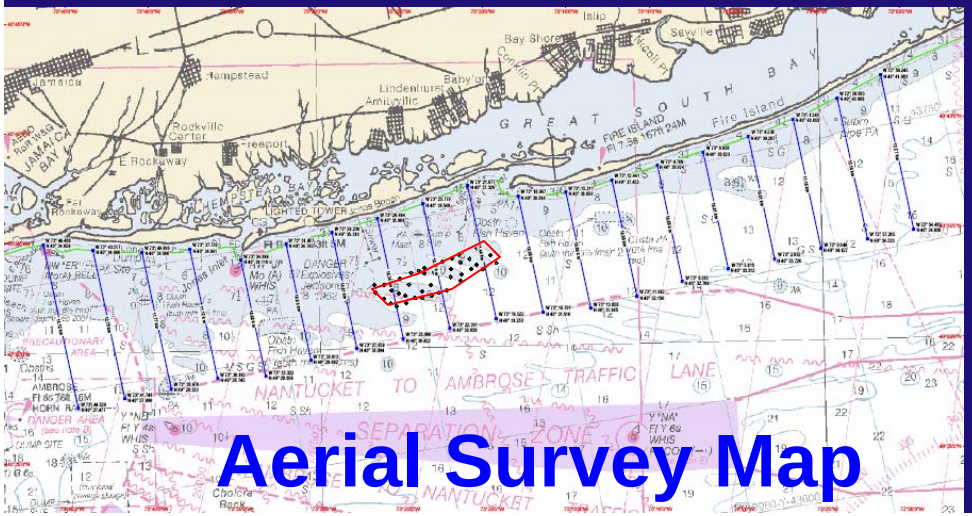
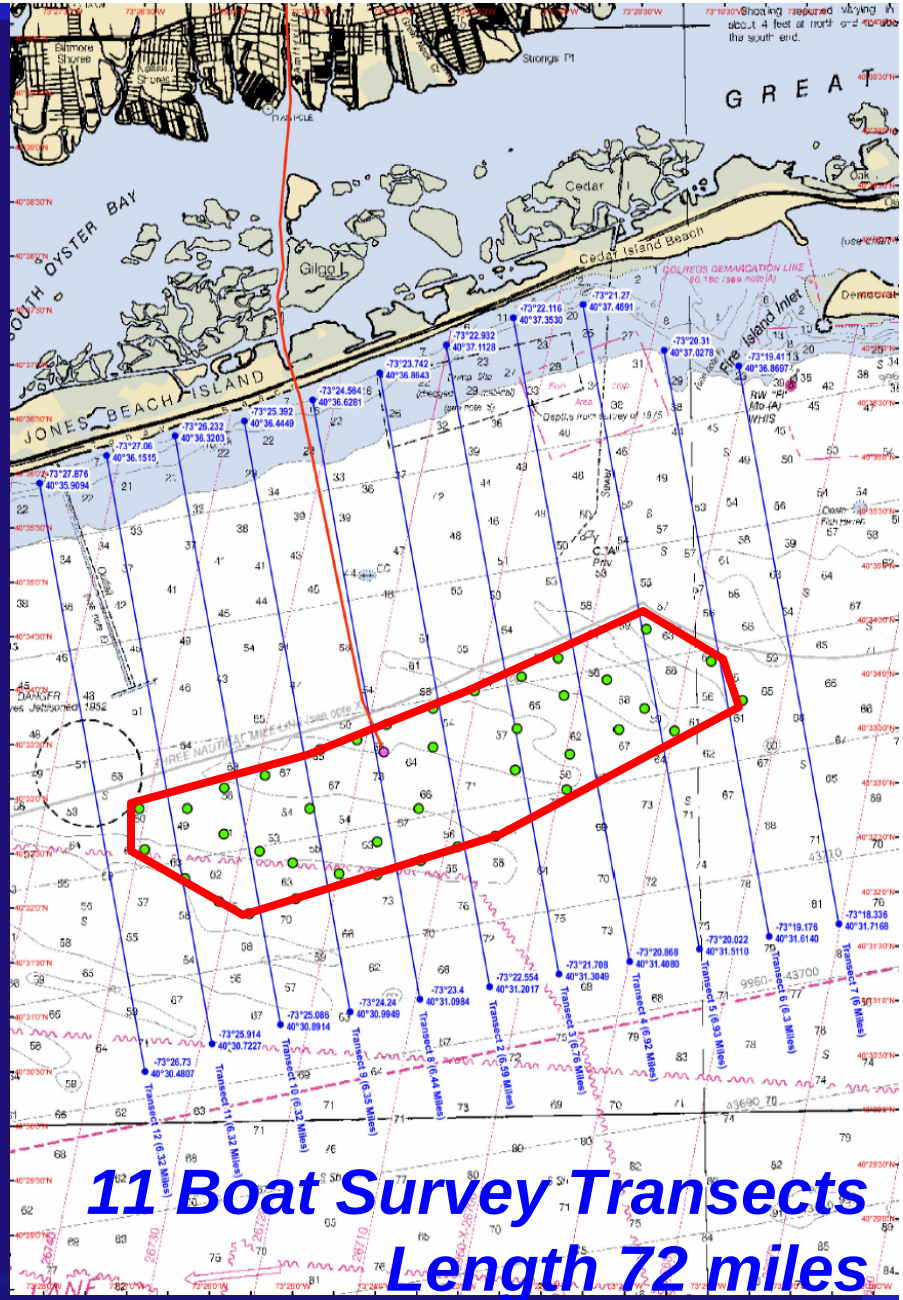
Avian Boat Survey Results To Date

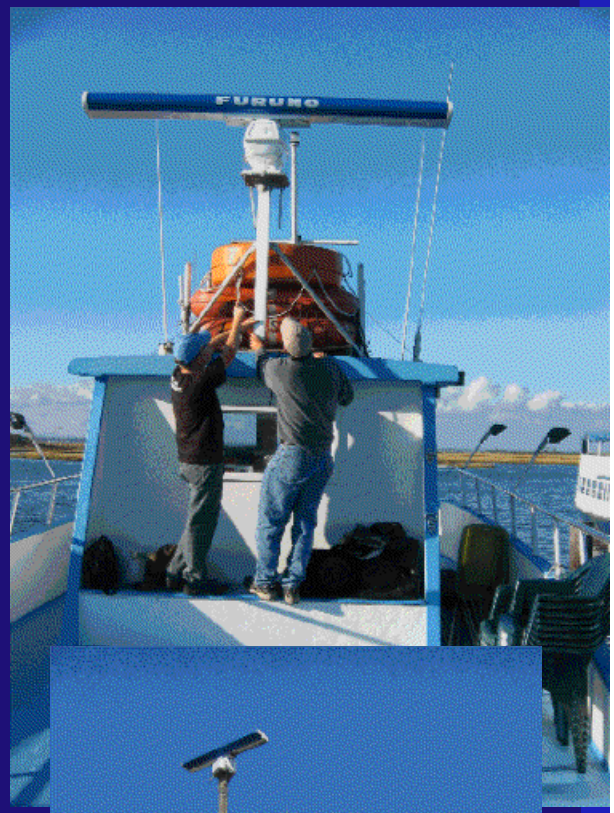
Season	Total Birds per Survey
Spring 2004	321
Summer 2004	229
Fall 2004	385
Winter 2004-2005	2,278
Spring 2005	713
Summer 2005	203
Fall 2005	145





Land-based and Boat Marine Radar

- Comprehensive Fall, Winter, Spring avian migration radar monitoring program
- S-band (7NM) and X-band (4 NM) radar
- Horizontal and vertical radar coverage
- Agency radar protocol established



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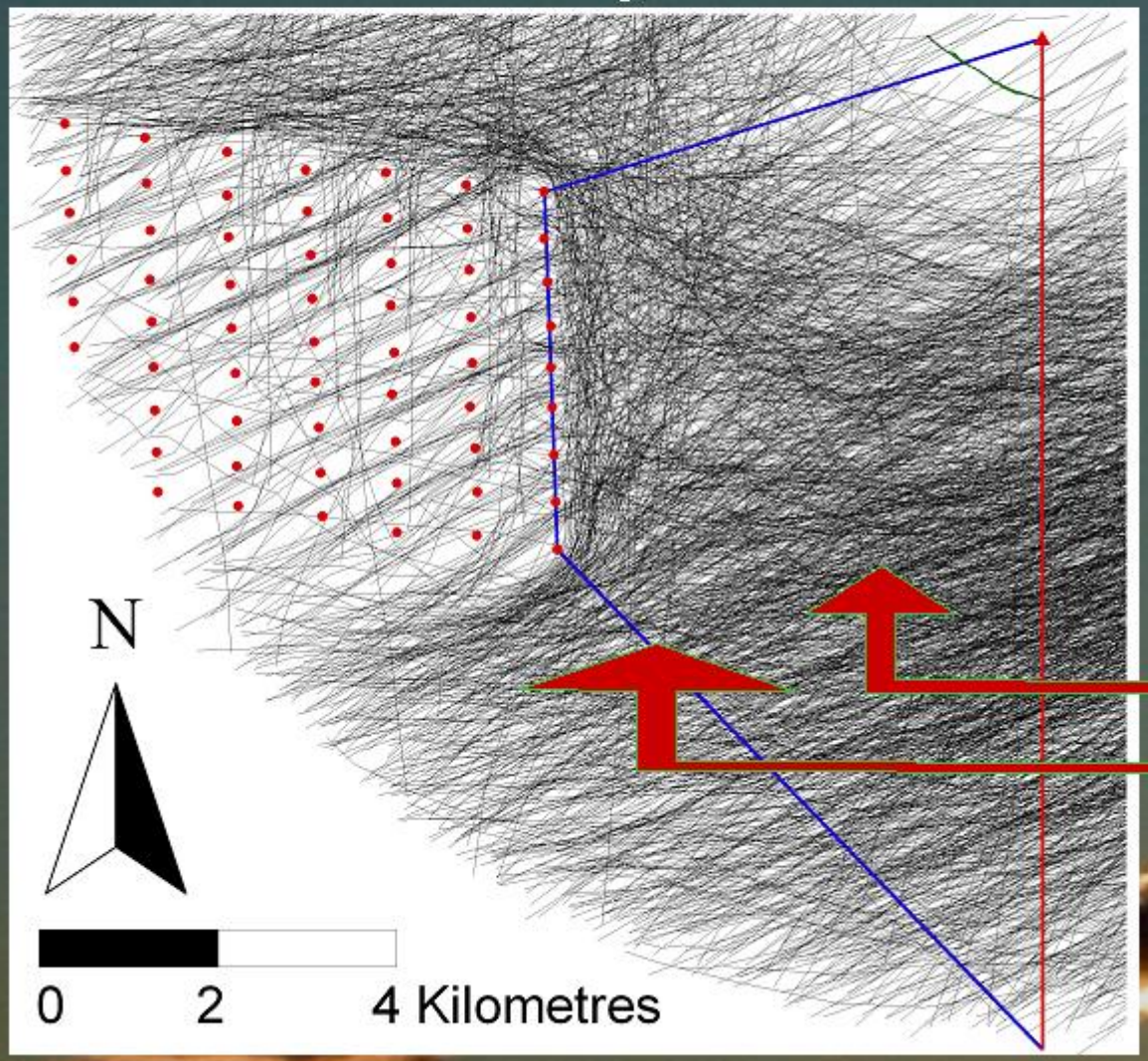
Nysted Migrating Birds

Marine Radar Tracking Demonstrates Birds Avoid Wind Turbines



Operation (2003):

Response distance:

day = c. 3000m

night = c. 1000m

Source: Mark Desholm, Bird studies - Results from Nysted Offshore Wind Farm, 2004

Long Island Coastal Issues

- Commercial trawl fishing entanglements and setbacks
- Recreational boating/ fishing access
- Navigational lighting/ fog horns
- Marine radar/ telecommunications impacts
- “NO MOORING / TRESPASSING – HIGH VOLTAGE” signage
- Additional navigational buoy considerations
- Wind Park video and other surveillance
- Homeland Security interest in shipping lane surveillance
- Coast Guard access to wind turbines and substation
- Search & Rescue response activities

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Long Island Coastal Issues (cont.)

- Public education program
- Ship collision study assessment/ response system
- Oil spill modeling, prevention and response training
- Construction coordination, staging and shipping requirements
- Cable burial installation and monitoring
- Decommissioning plan
- Noise monitoring
- Fishery and environmental monitoring
- Scuba diving access

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Regulatory Issues for US Offshore Wind

- **Federal Regulatory Authority - Energy Bill transition of lead agency authority to Minerals Management Service**
- **State Transmission Line Siting Acts**
- **All State and Local Permitting Responsibilities within 3 nautical miles, except coastal consistency**
- **Federal Aviation Administration Lighting Requirements**
- **US Coast Guard Aides to Navigation**
- **Homeland Security**
- **Cape Wind Project Outcome**
- **State Actions (NJ) involving Offshore Wind Moratorium**

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Permitting Issues for US Offshore Wind

- **Impact Assessments**
  - **Visual**
  - **Noise/ Vibration**
  - **Transportation and Navigation Safety**
  - **Benthic/ Shellfish Resources**
  - **Finfish Resources and Commercial/ Recreational Fisheries**
  - **Marine Species**
  - **Aquatic Vegetation**
  - **Terrestrial Ecology, Wildlife and Protected Species**
  - **Avian Resources**

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Permitting Issues for US Offshore Wind

- **Impact Assessments**
  - **Coastal and Freshwater Wetland Resources**
  - **Water Quality**
  - **Cultural and Recreation Resources**
  - **Electric and Magnetic Fields**
  - **Telecommunications**
  - **Air Quality, Hurricanes and Climate Change**
  - **Socioeconomics**
  - **Land Use and Planning**
  - **Cumulative/ Indirect Impacts**
  - **Decommissioning**

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Summary of Important Project Issues

- Aesthetic Impact Techniques
- Importance of Community Outreach/ Public Education
- Project Economics
- Avian Monitoring Programs - Pre- and Post-Construction
- Geo-physical/ Geo-technical data collection
- Marine/ benthic resource data collection
- Socio-economic and Property Value Assessments
- Oil Spill Prevention and Response
- Impacts to Fisheries, Site Access

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Development Issues Affecting Permitting

- **Wind Turbine Siting - Depth and Wind Availability**
- **Wind Turbine Availability for US Market**
- **Project Material Delivery Schedules**
- **Construction Equipment Availability and the Jones Act**
- **Foundation Alternatives and Feasibility**
- **Construction and Operation Restricted Areas/ Exclusion Zones**
- **Transmission Line Siting/ Interconnection to the Grid**

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Development Issues

- **Future of Wind Production Tax Credit**
- **Steel Future Costs - Foundations**
- **Currency Exchange Rates - Turbines**
- **Bidding/ Payments for Leasing Offshore Federal Land**

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For More Information

- Visit: www.lipower.org/cei or www.fplenergy.com

- For US Army Corps of Engineers information, visit:
www.nan.usace.army.mil/business/buslinks/regulat/lipa

- For US Dept of Interior, Minerals Management Service, visit:
www.mms.gov/offshore/RenewableEnergy/RenewableEnergyMain.htm

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Questions

Appendix

FPL Energy

Cautionary Statements And Risk Factors That May Affect Future Results

In connection with the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 (Reform Act), FPL Group, Inc. is hereby identifying important factors that could cause its or its subsidiaries' actual results to differ materially from those projected in forward-looking statements (as such term is defined in the Reform Act) made by or on behalf of FPL Group, Inc. and its subsidiaries (collectively, FPL Group) in this presentation, in response to questions or otherwise. Any statements that express, or involve discussions as to expectations, beliefs, plans, objectives, assumptions or future events or performance (often, but not always, through the use of words or phrases such as will likely result, are expected to, will continue, is anticipated, believe, could, estimated, may, plan, potential, projection, target, outlook) are not statements of historical facts and may be forward-looking. Forward-looking statements involve estimates, assumptions and uncertainties. Accordingly, any such statements are qualified in their entirety by reference to, and are accompanied by, the following important factors (in addition to any assumptions and other factors referred to specifically in connection with such forward-looking statements) that could cause FPL Group's actual results to differ materially from those contained in forward-looking statements made by or on behalf of FPL Group.

Any forward-looking statement speaks only as of the date on which such statement is made, and FPL Group undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time and it is not possible for management to predict all of such factors, nor can it assess the impact of each such factor on the business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statement.

The following are some important factors that could have a significant impact on FPL Group's operations and financial results, and could cause FPL Group's actual results or outcomes to differ materially from those discussed in the forward-looking statements:

• FPL Group is subject to changes in laws or regulations, including the Public Utility Regulatory Policies Act of 1978, as amended (PURPA), the Public Utility Holding Company Act of 1935, as amended (Holding Company Act), the Federal Power Act, the Atomic Energy Act of 1954, as amended and certain sections of the Florida statutes relating to public utilities, changing governmental policies and regulatory actions, including those of the Federal Energy Regulatory Commission (FERC), the Florida Public Service Commission (FPSC) and the utility commissions of other states in which FPL Group has operations, and the U.S. Nuclear Regulatory Commission (NRC), with respect to, among other things, allowed rates of return, industry and rate structure, operation of nuclear power facilities, operation and construction of plant facilities, operation and construction of transmission facilities, acquisition, disposal, depreciation and amortization of assets and facilities, recovery of fuel and purchased power costs, decommissioning costs, return on common equity (ROE) and equity ratio limits, and present or prospective wholesale and retail competition (including but not limited to retail wheeling and transmission costs). The FPSC has the authority to disallow recovery by Florida Power & Light Company (FPL) of any and all costs that it considers excessive or imprudently incurred.

• The regulatory process generally restricts FPL's ability to grow earnings and does not provide any assurance as to achievement of earnings levels.

• FPL Group is subject to extensive federal, state and local environmental statutes, rules and regulations relating to air quality, water quality, waste management, wildlife mortality, natural resources and health and safety that could, among other things, restrict or limit the output of certain facilities or the use of certain fuels required for the production of electricity and/or require additional pollution control equipment and otherwise increase costs. There are significant capital, operating and other costs associated with compliance with these environmental statutes, rules and regulations, and those costs could be even more significant in the future.

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• FPL Group operates in a changing market environment influenced by various legislative and regulatory initiatives regarding deregulation, regulation or restructuring of the energy industry, including deregulation of the production and sale of electricity. FPL Group will need to adapt to these changes and may face increasing competitive pressure.

• FPL Group's results of operations could be affected by FPL's ability to renegotiate franchise agreements with municipalities and counties in Florida.

• The operation of power generation facilities involves many risks, including start up risks, breakdown or failure of equipment, transmission lines or pipelines, use of new technology, the dependence on a specific fuel source or the impact of unusual or adverse weather conditions (including natural disasters such as hurricanes), as well as the risk of performance below expected or contracted levels of output or efficiency. This could result in lost revenues and/or increased expenses. Insurance, warranties or performance guarantees may not cover any or all of the lost revenues or increased expenses, including the cost of replacement power. In addition to these risks, FPL Group's nuclear units face certain risks that are unique to the nuclear industry including the ability to store and/or dispose of spent nuclear fuel, as well as additional regulatory actions up to and including shutdown of the units stemming from public safety concerns, whether at FPL Group's and FPL's plants, or at the plants of other nuclear operators. Breakdown or failure of an FPL Energy, LLC (FPL Energy) operating facility may prevent the facility from performing under applicable power sales agreements which, in certain situations, could result in termination of the agreement or incurring a liability for liquidated damages.

• FPL Group's ability to successfully and timely complete their power generation facilities currently under construction, those projects yet to begin construction or capital improvements to existing facilities is contingent upon many variables and subject to substantial risks. Should any such efforts be unsuccessful, FPL Group could be subject to additional costs, termination payments under committed contracts, and/or the write-off of their investment in the project or improvement.

• FPL Group uses derivative instruments, such as swaps, options, futures and forwards to manage their commodity and financial market risks, and to a lesser extent, engage in limited trading activities. FPL Group could recognize financial losses as a result of volatility in the market values of these contracts, or if a counterparty fails to perform. In the absence of actively quoted market prices and pricing information from external sources, the valuation of these derivative instruments involves management's judgment or use of estimates. As a result, changes in the underlying assumptions or use of alternative valuation methods could affect the reported fair value of these contracts. In addition, FPL's use of such instruments could be subject to prudency challenges and if found imprudent, cost recovery could be disallowed by the FPSC.

• There are other risks associated with FPL Energy. In addition to risks discussed elsewhere, risk factors specifically affecting FPL Energy's success in competitive wholesale markets include the ability to efficiently develop and operate generating assets, the successful and timely completion of project restructuring activities, maintenance of the qualifying facility status of certain projects, the price and supply of fuel, transmission constraints, competition from new sources of generation, excess generation capacity and demand for power. There can be significant volatility in market prices for fuel and electricity, and there are other financial, counterparty and market risks that are beyond the control of FPL Energy. FPL Energy's inability or failure to effectively hedge its assets or positions against changes in commodity prices, interest rates, counterparty credit risk or other risk measures could significantly impair FPL Group's future financial results. In keeping with industry trends, a portion of FPL Energy's power generation facilities operate wholly or partially without long-term power purchase agreements. As a result, power from these facilities is sold on the spot market or on a short-term contractual basis, which may affect the volatility of FPL Group's financial results. In addition, FPL Energy's business depends upon transmission facilities owned and operated by others; if transmission is disrupted or capacity is inadequate or unavailable, FPL Energy's ability to sell and deliver its wholesale power may be limited.

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• FPL Group is likely to encounter significant competition for acquisition opportunities that may become available as a result of the consolidation of the power industry. In addition, FPL Group may be unable to identify attractive acquisition opportunities at favorable prices and to successfully and timely complete and integrate them.

• FPL Group relies on access to capital markets as a significant source of liquidity for capital requirements not satisfied by operating cash flows. The inability of FPL Group, FPL Group Capital Inc (FPL Group Capital) and FPL to maintain their current credit ratings could affect their ability to raise capital on favorable terms, particularly during times of uncertainty in the capital markets, which, in turn, could impact FPL Group's ability to grow their businesses and would likely increase interest costs.

• FPL Group's results of operations are affected by changes in the weather. Weather conditions directly influence the demand for electricity and natural gas and affect the price of energy commodities, and can affect the production of electricity at wind and hydro-powered facilities.

• FPL Group's results of operations can be affected by the impact of severe weather which can be destructive, causing outages and/or property damage, and could require additional costs to be incurred. Recovery of these costs is subject to FPSC approval.

• FPL Group is subject to costs and other effects of legal and administrative proceedings, settlements, investigations and claims, as well as the effect of new, or changes in, tax laws, rates or policies, rates of inflation, accounting standards, securities laws or corporate governance requirements.

• FPL Group is subject to direct and indirect effects of terrorist threats and activities. Generation and transmission facilities, in general, have been identified as potential targets. The effects of terrorist threats and activities include, among other things, terrorist actions or responses to such actions or threats, the inability to generate, purchase or transmit power, the risk of a significant slowdown in growth or a decline in the U.S. economy, delay in economic recovery in the United States, and the increased cost and adequacy of security and insurance.

• FPL Group's ability to obtain insurance, and the cost of and coverage provided by such insurance, could be affected by national, state or local events as well as company-specific events.

• FPL Group is subject to employee workforce factors, including loss or retirement of key executives, availability of qualified personnel, collective bargaining agreements with union employees or work stoppage.

The issues and associated risks and uncertainties described above are not the only ones FPL Group may face. Additional issues may arise or become material as the energy industry evolves. The risks and uncertainties associated with these additional issues could impair FPL Group's businesses in the future.

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