

New Jersey Offshore Wind Projects the Promise and the Reality and

*The Project off Long Beach Island, New Jersey, and A
Much Better Approach*

Save Long Beach Island, Inc.

www.SaveLBI.org

July, 2023

The Promises

The Realities

Climate Change

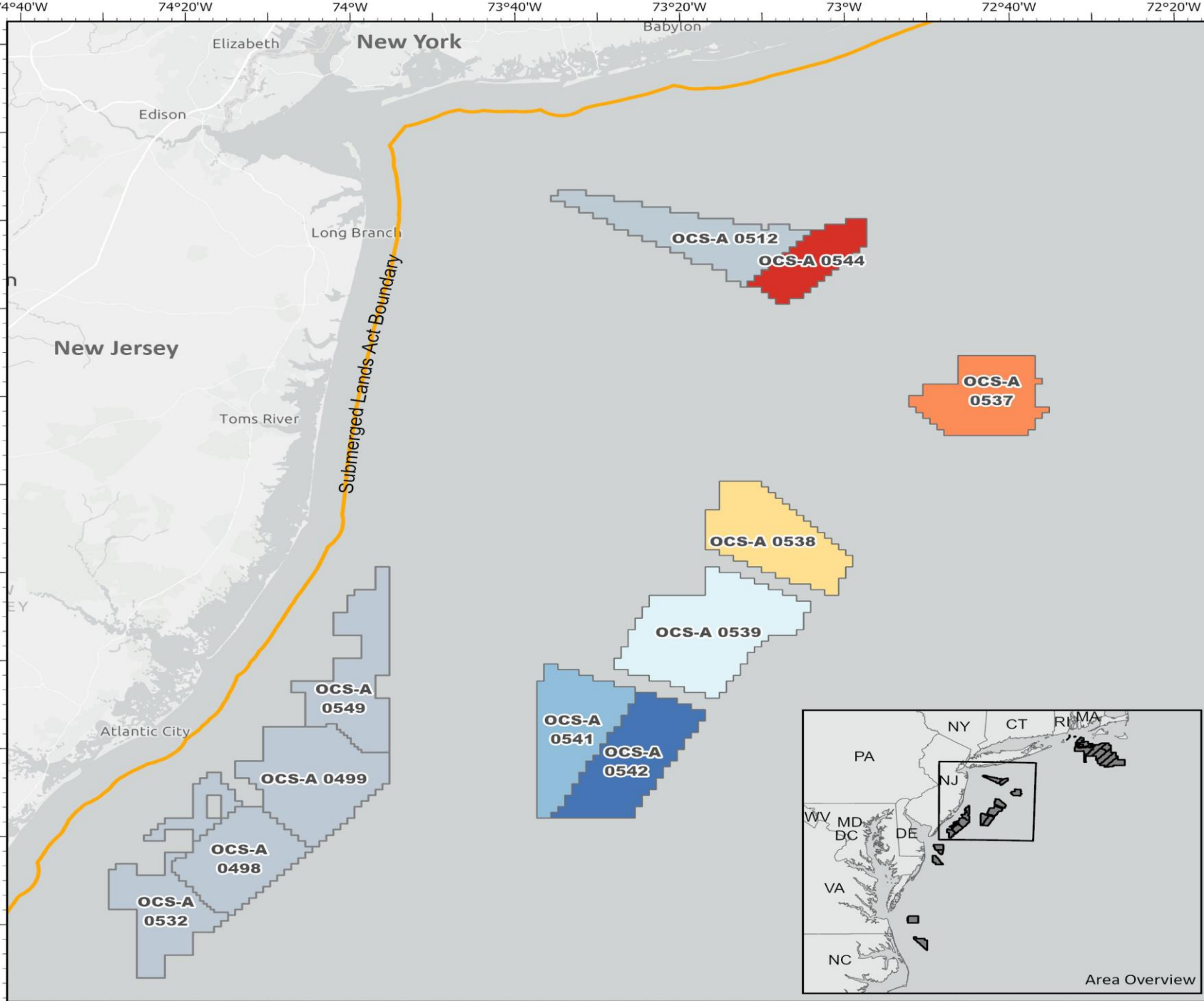
Sea Level Rise

Environmental Impact

Jobs

Electric Cost

Conclusions



New York Bight (NYB) Commercial Wind Leases

Lease Number with Company Name

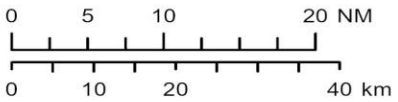
- OCS-A 0537- Bluepoint Wind, LLC
- OCS-A 0538- Attentive Energy LLC
- OCS-A 0539- Community Offshore Wind, LLC
- OCS-A 0541- Atlantic Shores Offshore Wind Bight, LLC
- OCS-A 0542- Invenergy Wind Offshore LLC
- OCS-A 0544- Vineyard Mid-Atlantic LLC

Nearby Leases

- OCS-A 0512 - Empire Offshore Wind, LLC
- OCS-A 0549- Atlantic Shores Offshore Wind, LLC
- OCS-A 0499- Atlantic Shores Offshore Wind Projects 1 & 2, LLC's
- OCS-A 0498- Ocean Wind LLC
- OCS-A 0532- Orsted North America Inc.
- Submerged Lands Act Boundary (State/Fed Boundary)

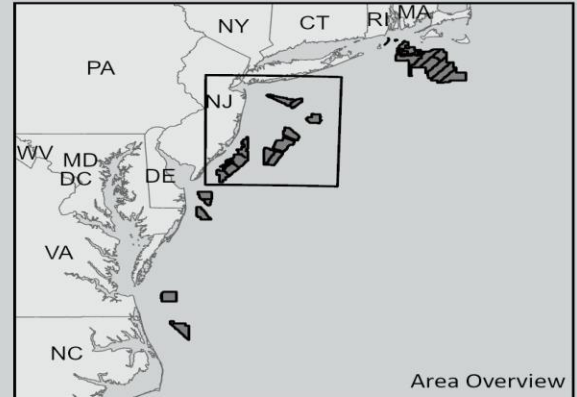


Bureau of Ocean Energy Management



Map Date: July 20, 2023

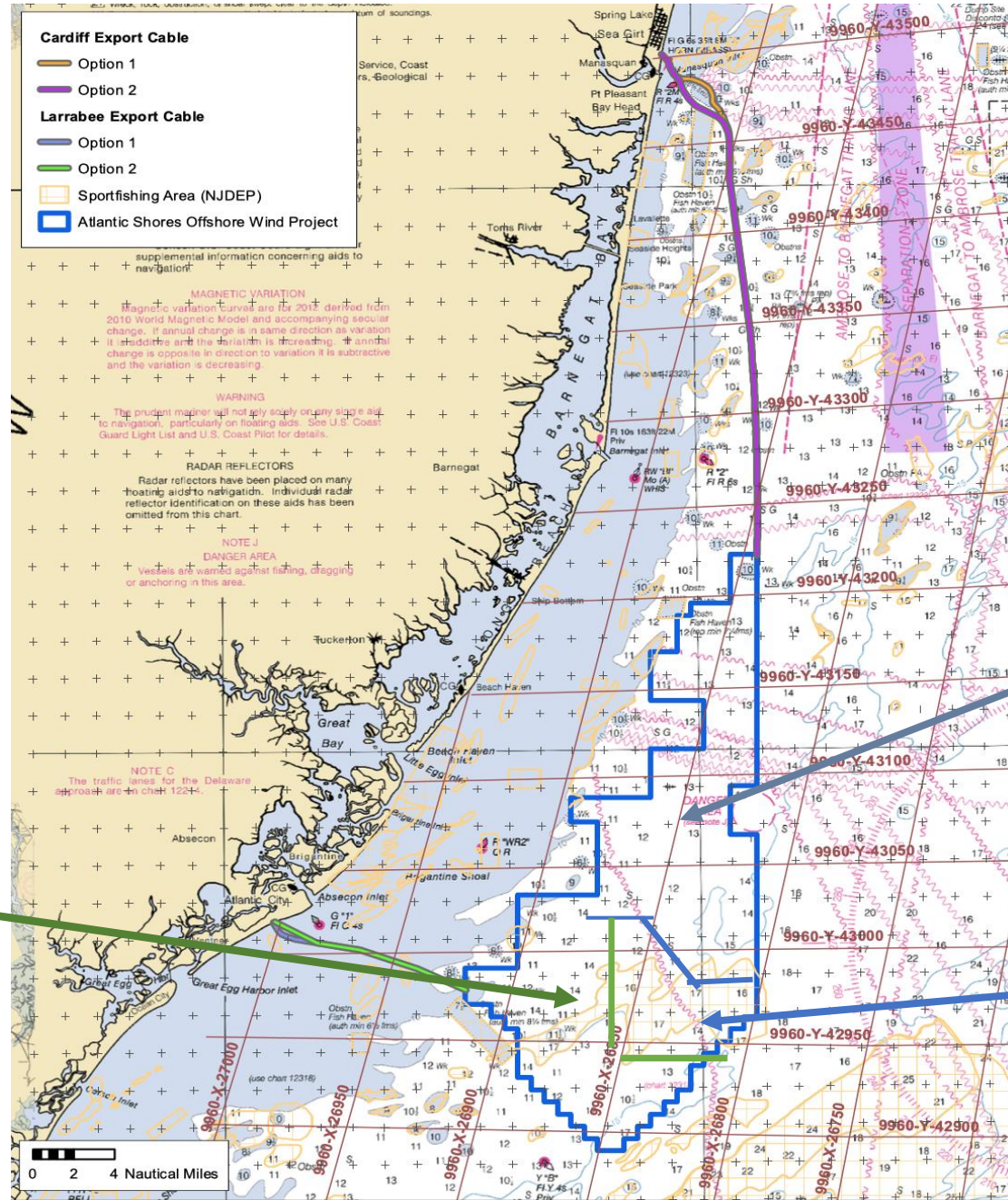
Spatial Reference
 Name: NAD 1983 UTM Zone 18N
 PCS: NAD 1983 UTM Zone 18N
 GCS: GCS North American 1983
 Datum: North American 1983
 Projection: Transverse Mercator



Lease Area off LBI

Companies surveying for export cable routes and turbine locations up the entire NJ shore.

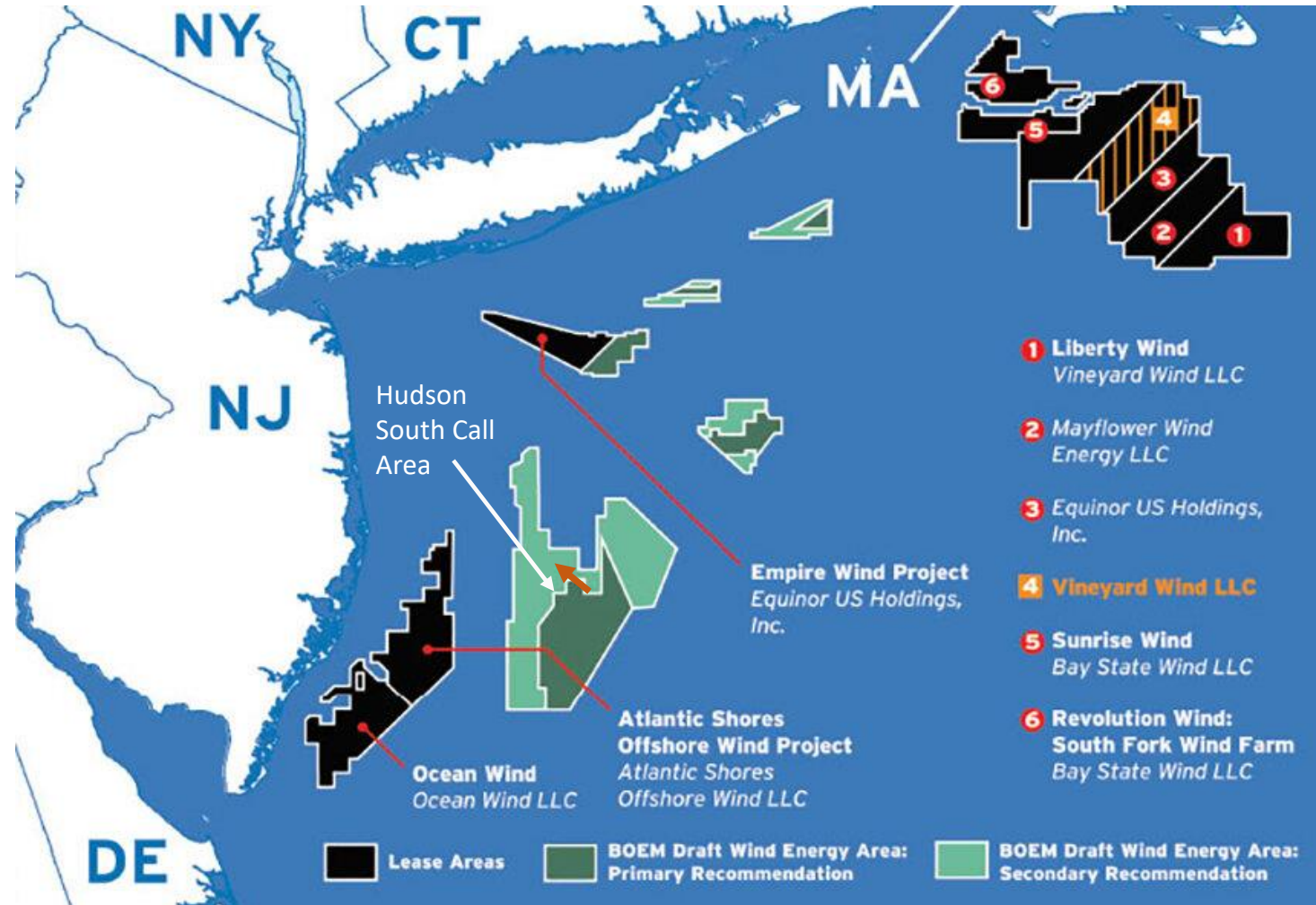
Atlantic Shores Project 1, 120 turbines, approval expected late 2023.



Project 3, 157 turbines, up to Barnegat Light

Project 2, 80 turbines, late 2023

The proposed wind project off LBI (in black) and the farther out Hudson South area (in green).

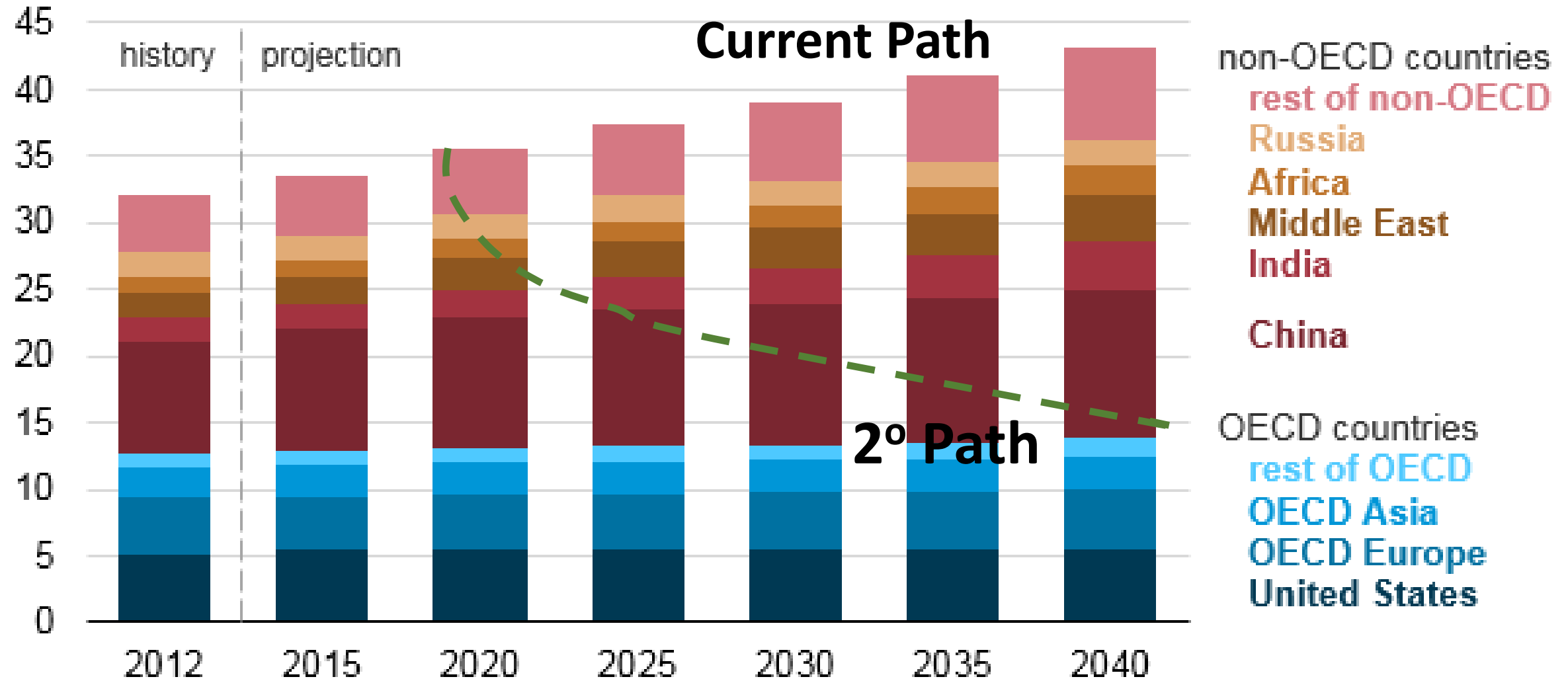


The Reality of Global Carbon Emissions

Energy-related carbon dioxide (CO₂) emissions by country or region (2012-40)

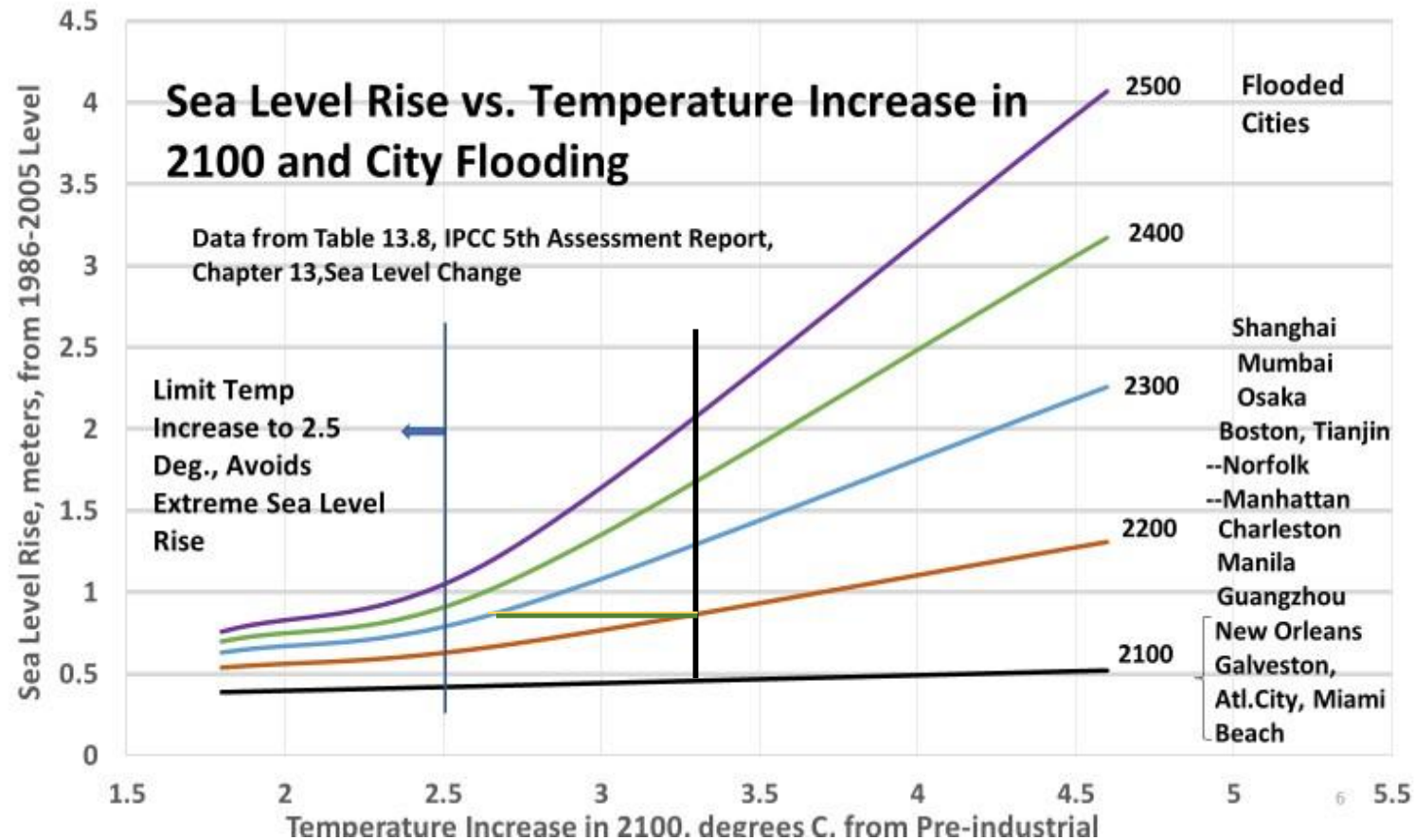


billion metric tons



Source: U.S. Energy Information Administration, [International Energy Outlook 2016](#)

The Reality of Rising Sea Levels, Temperature Increase & Time



Sea level rise depends on earth's temperature rise and elapsed time afterward.

Climate Change-The Program

The Promise:

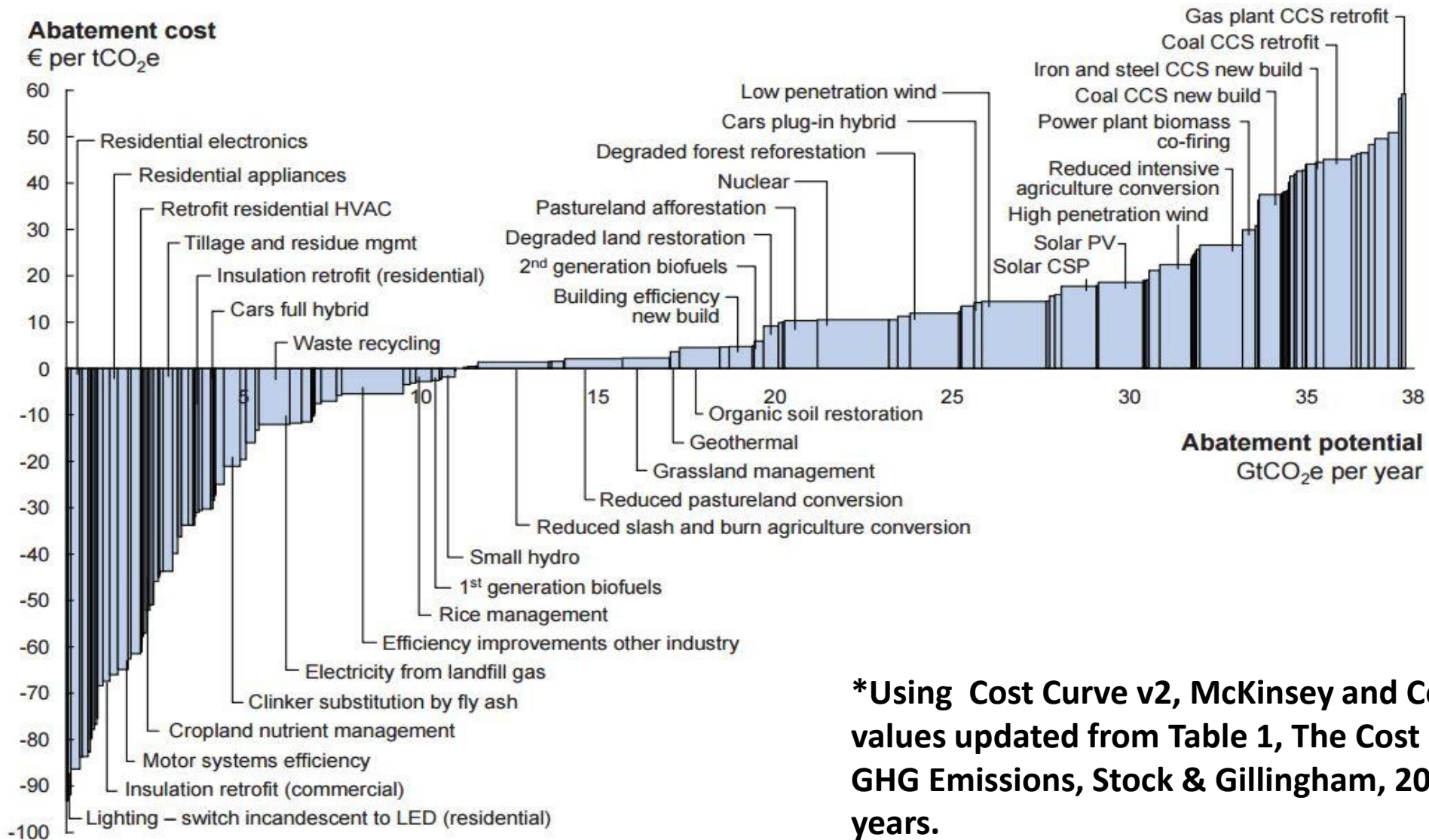
- **Address, tackle , lead the way to combat climate change**

The Reality:

- **World is not on the carbon reduction path to stop it and wind projects won't change that,**
- **Its not just the minute carbon reductions, but the heat transfer process itself-to ice caps & ocean, temperature difference x time**
- **Can only have modest delay in what sea level rise is coming**
- **Per BOEM EIS, wind projects have "no collective effect on global warming"**
- **Do "smart" carbon reductions, tons/\$\$, don't destroy env/econ**
- **Prepare for it, recent EIS " increase resilience to impacts of climate change " China-massive port, shore protection program**

Green House Gas Reduction-- Options

Global GHG abatement cost curve beyond business-as-usual – 2030



Offshore
Wind

***Using Cost Curve v2, McKinsey and Co., some values updated from Table 1, The Cost of Reducing GHG Emissions, Stock & Gillingham, 2018 – over 20 years.**

Note: The curve presents an estimate of the maximum potential of all technical GHG abatement measures below €60 per tCO₂e if each lever was pursued aggressively. It is not a forecast of what role different abatement measures and technologies will play.
Source: Global GHG Abatement Cost Curve v2.0

Environmental & Other Impact What You Haven't heard

The Promise: Renewable, Clean , Benign Form of Energy

The Reality: Renewable, but Far from Benign

- **Shore Conditions and Economy**
- **Whale Migration –Operating Turbine Noise**
- **Vessel Navigation**
- **Military Radars**
- **The Piping Plover**
- **Hurricane Risk**
- **Decommissioning**
- **Others**

Environmental Impacts- Some You Have Seen/Heard Visible Turbines

The Promise:

- Visible renditions in COP and EIS not so bad
- Turbines will be rarely seen

The Reality:

- Renditions in COPs and EISs need enlarging by 1/3 to be accurate,
- Most done under hazy conditions
- Percent of time visible not based on ocean view, but on undefined inland “visibility” data of what?
- Rotating blades not shown

BOEM Simulation, Beach Haven, Noon , 13.5 Miles to Nearest Turbine



Visual Impact Analysis – Photo Simulation



North Brigantine Natural Area



9 miles to turbines

Simulation Information	
Coordinates:	39.42954°N, 74.33968°W
Character Area:	Undeveloped Beach, Seascape (SCA)
User Group:	Residents/Tourists, Fishermen
Direction of View:	Southeast
Distance to Nearest Visible Turbine:	9.03 miles
Visually Sensitive Resource:	North Brigantine State Natural Area

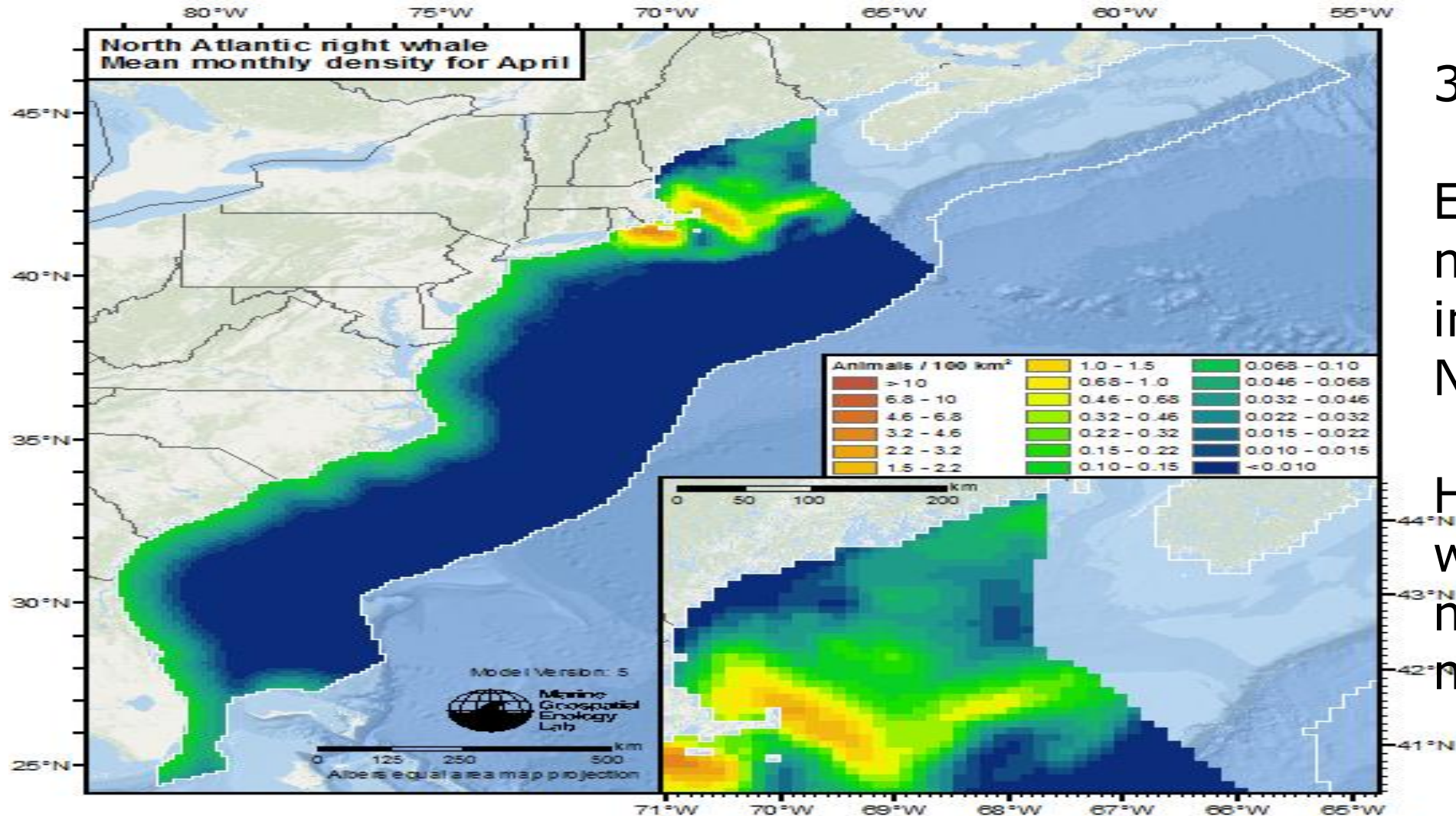
Environmental Impact –What You Haven't Heard **Shore Conditions & Economy–Cumulative Impact**

- **Visible Turbine Impact**, At 9 miles, the most visible large turbine project in the world- a “dominant” visual effect.
- **Rotating Blades**, amplifies the effect, turn away?..
- **Audible noise to persons at the shore** from turbine *operation*, exceeding the NJ night time residential standard.
- **Other Shore Conditions**, reduced breeze (about 26%), lesser waves, higher local temperature and humidity, based on federal study for NY, no study for NJ.
- **Economy**: 50% ocean view renters not returning, 24% less tourism*, property values and tax base down

*BOEM-sponsored Univ. of Delaware study

Environmental Impact –What You Haven’t Heard

The Right Whale & Turbine Operational Underwater Noise



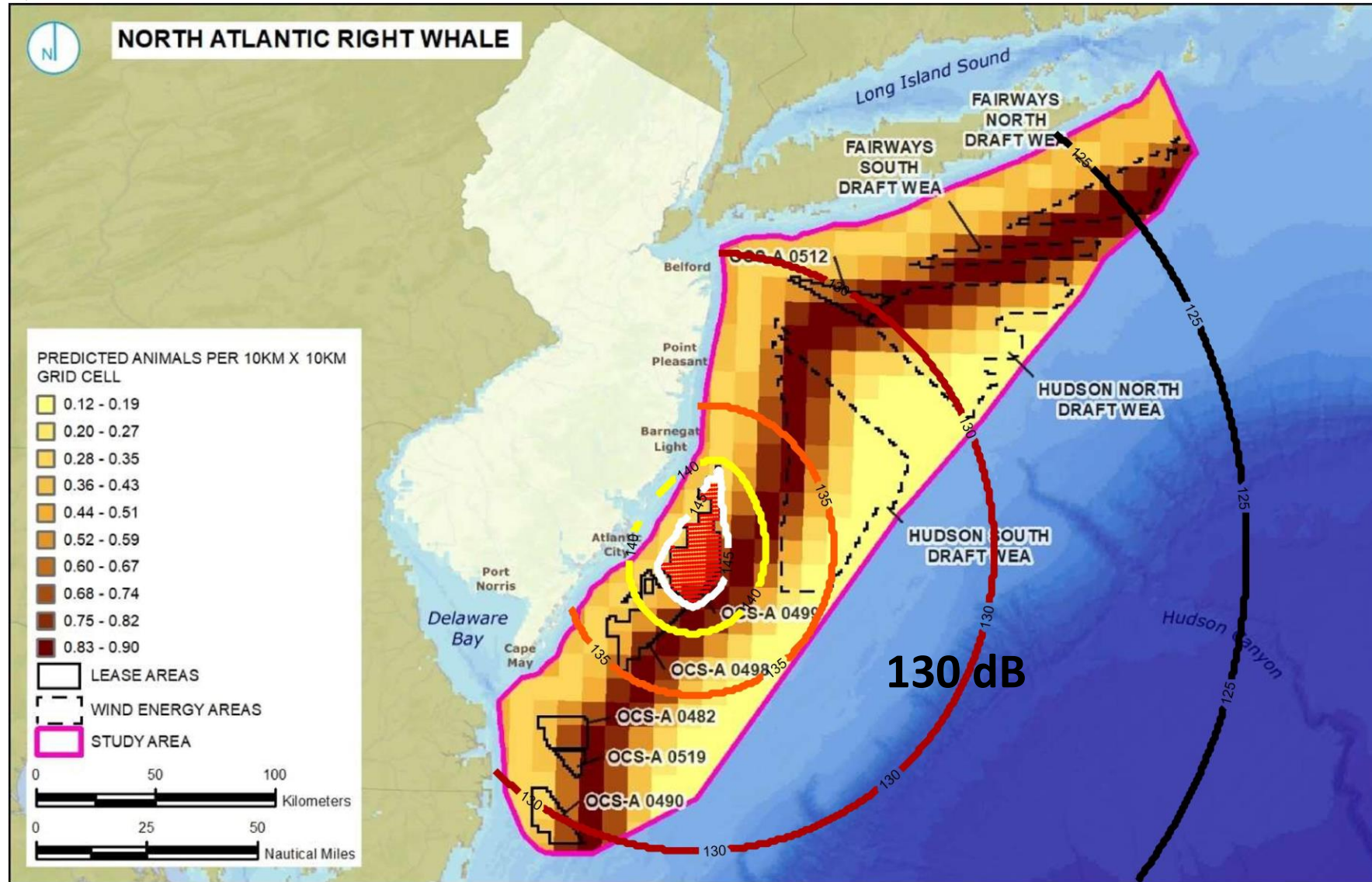
350 left

Essential annual migration, south in winter, birth North feeding

Historical route, within 86 miles, mainly inside 56 miles

Operational Noise Level versus Distance from Turbine Complex

Results - Monopile



Levels above 130 decibels out to 93 miles

90 % whale avoidance

With development also further out blocking all migration NARW paths

Need to chose one area, close in or far out

Fig 9- Estimated URN due to source SPL of 181 dB re 1µPa at 1m, spreading loss and attenuation loss

Environmental Impact –What You Haven't Heard Whales & Turbine Operational Underwater Noise

- **Noise level at new large gearbox turbines 10,000 times more intense than moderate size turbines**
- **Noise extends out many miles at levels the right whale (and others) will avoid**
- **With development also farther out in NY Bight, how will the whale migrate?**
- **Need to leave a path--choose one or the other, NJ close- or NY Bight farther out.**

Environmental Impact –What You Haven't Heard

Vessel Navigation

The Promise:

- **prevent interference with reasonable uses of the high seas, OCSLA, includes navigation**

The Reality: a unique New Jersey problem, turbines planned close in and farther out in the New York Bight.

- **Will concentrate commercial and military vessels into a 9-mile-wide “deep draft” vessel corridor between the two areas- also a migration corridor for the right whale.**
- **Marine radars potentially degraded by turbines, both sides**
- **Collision/allision risk analysis considering the concentration not in the EIS**

Environmental Impact –What You Haven't Heard
National Defense, Military Radars in Gibbsboro

The Promise:

- **Provide for the protection of the national security interest of the U.S.-OCSLA**

The Reality:

- **Potential interference by the wind turbine complex with our radars that look out over the ocean for unwanted aircraft in support of the NORAD system**
- **Unexplained DOD "exclusion zone" in the lease area off LBI**

Other Unaddressed Problems in EIS

- **Recent whale and dolphin deaths**
- **Piping plover risk of crossing the wind complex to get to its nesting grounds in Holgate and BL**
- **Hurricane risk**
- **Decommissioning**

Twenty-three subjects with potential significant impacts not addressed- identified in comments on the draft EIS

Decommissioning

The Promise:

- **Removal/return to pristine condition/recycling**

The Reality:

- **Feasibility, env. impact, high cost of large turbine removal, recycling and disposal not disclosed.**
- **BOEM-by itself- can authorize facilities to remain or be toppled in place.**
- **BOEM/NJ? should collect financial assurance at approval, not defer based on company's "financial strength"**
- **BOEM record on offshore oil and gas decom-collected 8% of needed costs, 97% of oil pipelines left on seabed**
- **Contract and enforcement/penalty tools weak**
- **Companies may never pay for/do it/just forfeit the 8%**
- **Needs Legislation!**

Jobs

The Promise: “tens of thousands” per Atlantic Shores CEO

The Reality:

- **Several thousand jobs over 2 year construction period, 90 for long term maintenance**
- **Unclear how many to NJ vs Dutch/French**
- **Tourism job loss, 639 in Ocean County, 3,303 in Atlantic County***
- **Other job losses, fishing, natural gas power, from higher electric costs**

***Based on NOAA Coastal Economy Data Base and BOEM –sponsored University of Delaware Study showing percentage loss in tourism with turbines present**

Electric Cost

The Promise: will go down

The Reality: will go up

For first 3 BPU-approved projects: \$16 billion--6.7% increase in residential electric costs (\$1,809 over 20-year project life), 8.6% commercial(\$15,000 life), and 10.3% industrial(\$126,00 life).

For the full 11,000-megawatt program: \$47 billion-20% increase in residential cost (\$5,300 project life**), 25% increase in **commercial (\$44,000 life)**, and a 30% increase in **industrial cost(\$370,000 life)**.**

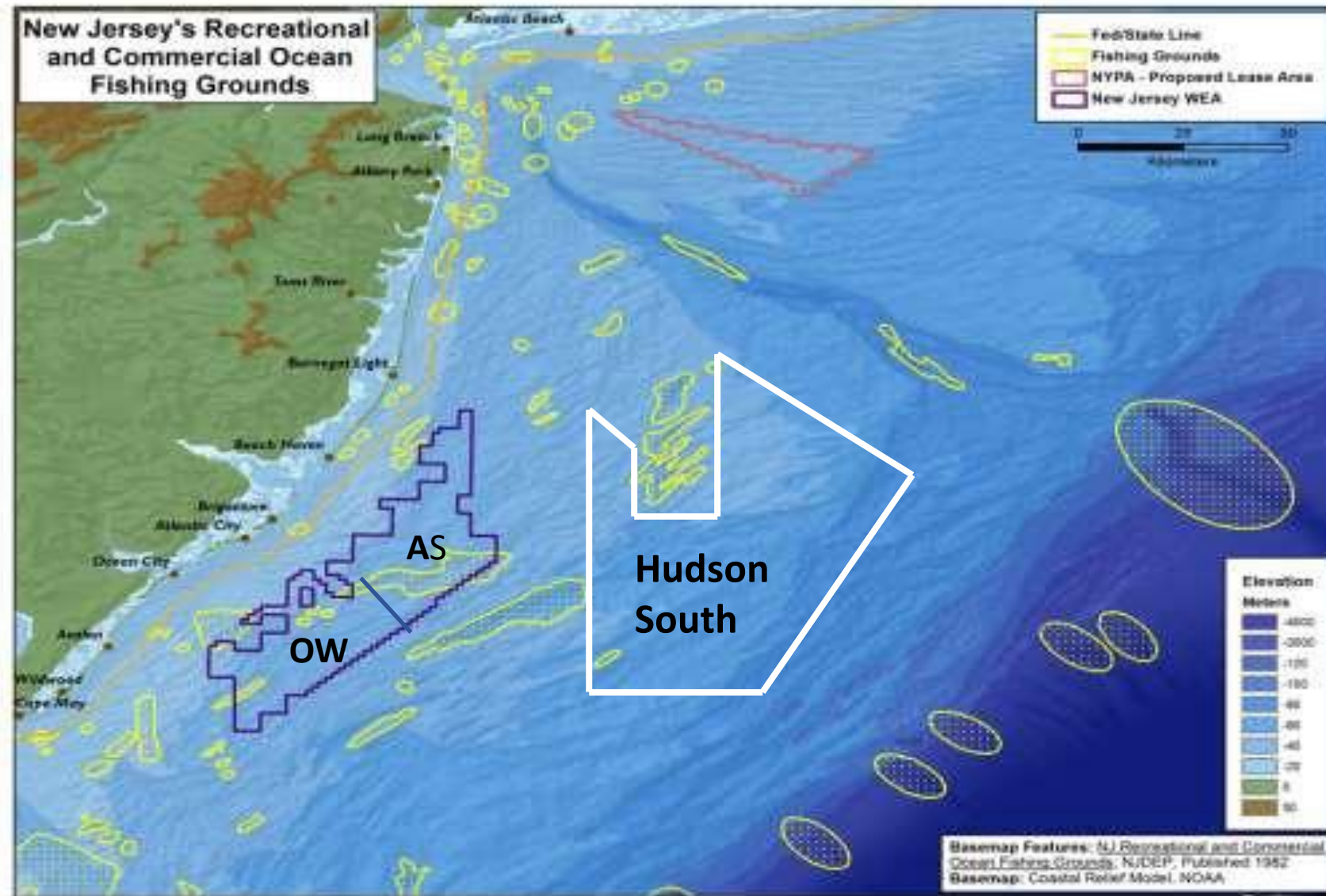
Plus taxpayer costs: \$250 million Paulsboro monopiles, \$350 million Salem County staging area, \$1 billion onshore transmission upgrades + offshore transmission grid to NJ/NY?

The Project off LBI A-Flawed Wind Project Siting Process

- Impact statements are more **about choice** than impacts
- **Nowhere in the BOEM EIS process are alternative turbine locations, numbers, or size presented to the public for genuine input.**
- **Obvious mistakes**, such as siting turbines in the path of the North Atlantic right whale.

Not the right process to select wisely and gain public acceptance for an energy project

An Alternative -The Hudson South Area



- AS:
Atlantic Shores project off entire coast of LBI
- OW:
Ocean Wind project off Atlantic City & Ocean City, NJ

A Better Location for Turbines: Hudson South

- **30 to 57 miles offshore, eliminating visibility, tourism, rentals and property value concerns.**
- **Greater wind energy potential, 12,000 megawatts, higher wind speeds**
- **Water depth to 150 feet, monopile foundations OK.**
- **Cable costs acceptable ~ 2% total capital cost**
- **Leaves closer-in passage for vessels and whales.**
- **Still some potential fishing conflicts, scallops**
- **Approved for wind energy, recent sales, \$ 4.3 billion paid by wind companies, clearly economically viable**

Legal Interventions

Statute/Action	Status
NEPA and ESA/ EIS and Biological Opinion to support selection of turbine areas	with Judge
NEPA /EIS on cumulative east coast impact to the right whale	with Judge
MMPA/ Enjoin vessel surveys	With Judge
CZMA/ State finding that project is “consistent” with NJ CZMA rules	To Court/Notice filed
OWEDA/ State cost-benefit analysis	BPU Rehearing requested.
ESA & MMPA/Blocking of right whale migration	Upon project approval
NEPA & NHPA/ Deficient Project EIS, historic property process	Upon project approval
Noise Control Act/ Audible noise at shore exceeding standards	Upon project approval
OCSLA/ National Security and Vessel Navigation criteria	Under review
Jones Act/ Use of US vs. foreign flag vessels	Under review
Inverse Takings/Nuisance , others	Under review

Conclusions-the Proposed Project- Reality

- **Turbines pose dramatic change to the shore for decades, last summer to see an natural seascape**
- **Project does not affect climate change, sea level rise, create long term jobs or lower electric costs-No Rush Needed**
- **Project does severely affect the shore and marine environment, vessel navigation, and possibly defense capability**
- **Comes down to your personal values for the shore, and if you heard a convincing reason to degrade it.**
- **Not a partisan issue, 5 months to go, time to take a stand, engage, donate to us.**