Wind Energy off Long Beach Island

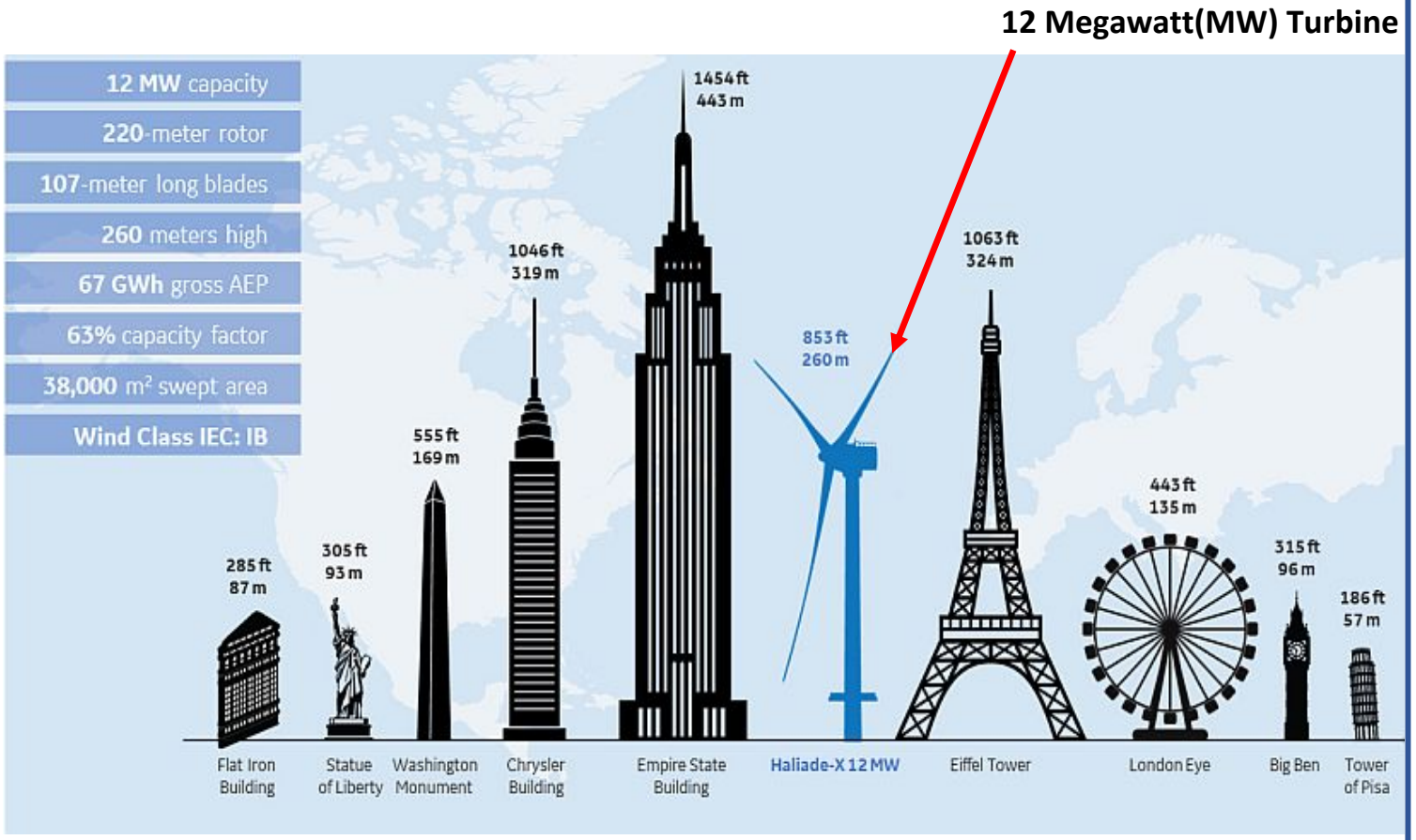
Current Proposal and Suggested Alternative

Prepared by The LBI Coalition for Wind Without Impact

April 2021

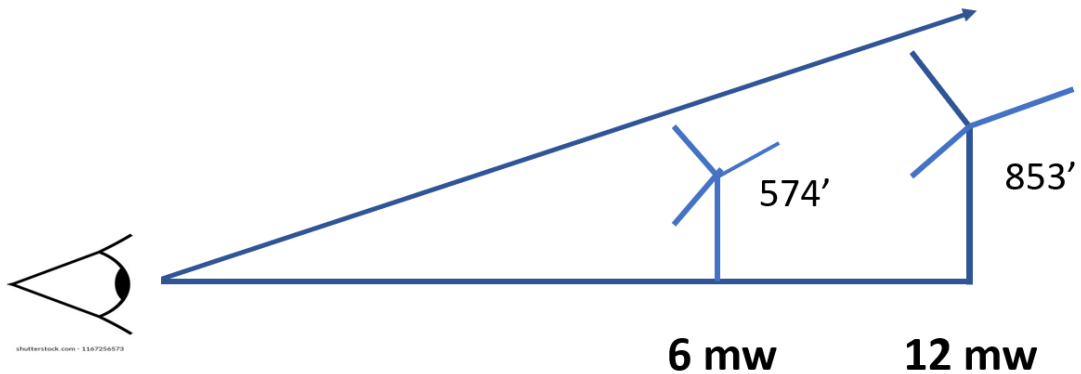
Overview of Project as Currently Proposed

- Size of LBI turbines to be built by Atlantic Shores to be at least 12 megawatts(MW); height similar to Eiffel Tower
- To start **10** miles out, closer than any large turbine project in the U.S. or the world
  - The BOEM Turbine Exclusion Zone for New York State is **17.3** Miles
- Based on available information, expectation is that turbines will be clearly visible from shoreline
- Size and proximity of LBI project is extreme in comparison to other comparable size projects in other states and overseas
- Many unanswered questions, yet project is proceeding quickly without real public input



Visual Renditions of Turbine Size and Location as Currently Proposed (Continued on following two slides)

Equivalence-Line of Sight



6 mw Turbine at 8 miles

12 mw at 12 miles

- Atlantic Shores has been asked for but has yet to provide renderings of the project propose for LBI
  - Power level sought, 1200 -2400 megawatts, and current turbines sizes, 12-14 megawatts each, allows us to predict between 86 to 200 turbines planned for LBI, and compare that to existing renderings for other projects
- Images included on following slides depict the closest renditions found to what will be seen from LBI
  - Turbines pictured are 6 megawatt turbines starting at 8 miles out; images have been retrieved from a University of Delaware study
  - Pictured turbines have same line of sight as 12 megawatt turbines, 12 miles out, which is quite similar to what would be seen from LBI

Economic Concerns Associated with Project as Currently Proposed

- Potential for loss of several hundred millions of dollars in annual tourism revenue to Long Beach Island[(1)]
- 18% less tourist visits per year[(2)]
- 55% of prior oceanfront and ocean view renters will not return[(3)]
- Potential for significant impact to property values[(4)]

Issues Affecting the Viability of the Project as Currently Proposed

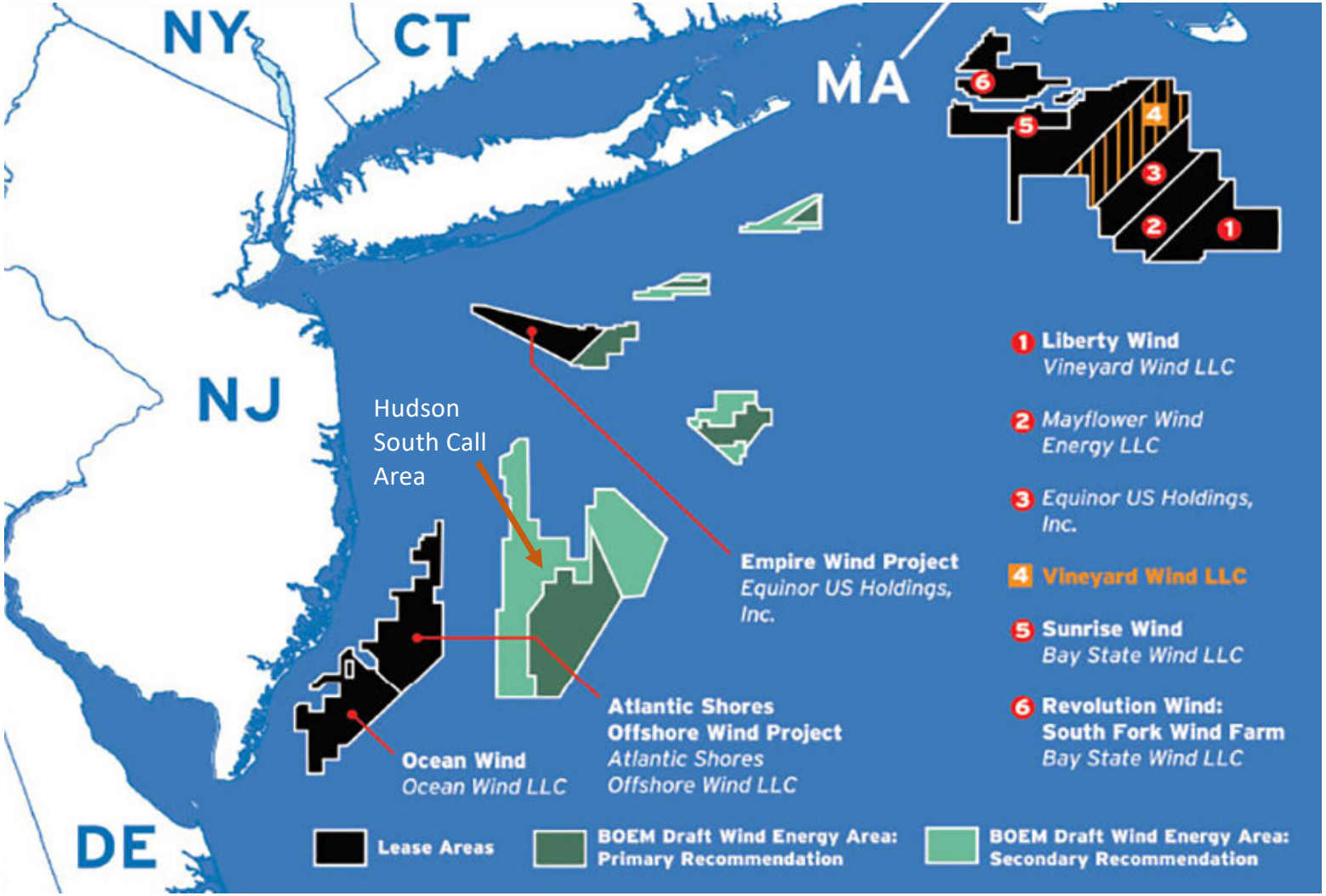
- BOEM ***Turbine Exclusion Zone of 17.3 Miles*** *for New York State*; a similar zone should be adopted for New Jersey
- Endangered ***North Atlantic Right Whale*** **Migratory Path Within** Outer Perimeter- may need 1.5 mile buffer,
- + may need added buffer, approx. 0.9 miles[5][6][7], for operational noise

  + needs seasonal foundation installation restrictions for pile driving noise
- With exclusions, leaves only Two Rows of Turbines- 532 Megawatts of Power
- Company Seeking 1200 -2400 Megawatts

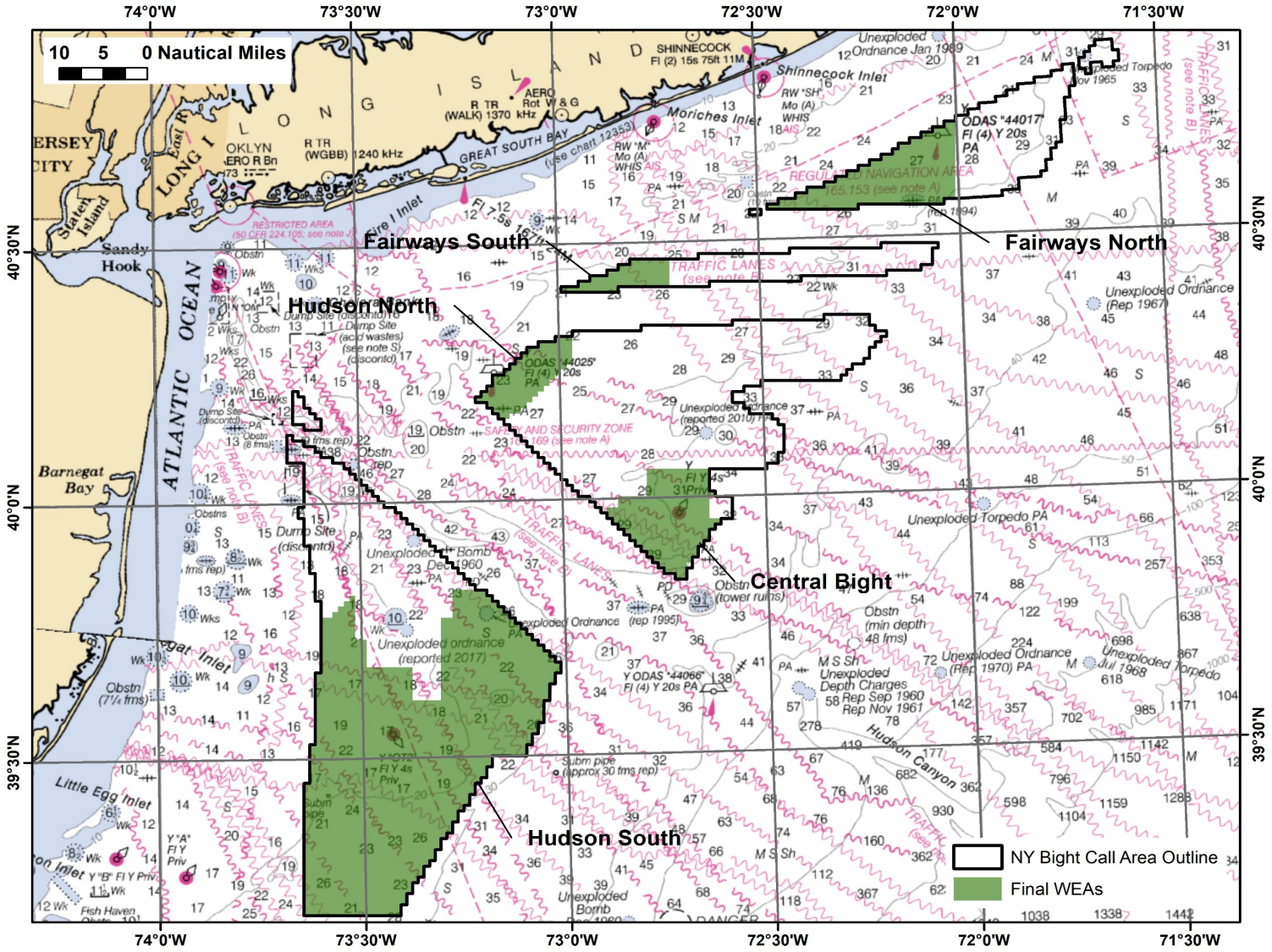
Alternative to Project as Currently Proposed: The Hudson South Call Area

- **Already** Screened by the Bureau of Ocean Energy Management (BOEM) for Wind Energy Potential, Cost of Development ,Visible Impact , Navigation and Fishing Conflicts, and Marine Mammal Protection.
- **Recommended** by the BOEM for Wind Energy Development
- **Ready** for Lease Sales
- Much **Greater** Wind Energy Potential
- Located 30 to 57 miles offshore, **Eliminating** concerns related to visibility, tourism, and property values

Original BOEM Recommended Lease Areas (in green)



Final NY Bight Wind Energy Areas



Side-by-Side Comparison of Currently Proposed Project & Alternative

Factor	Current Project	Hudson South Call Area
Distance Offshore(miles)	9-20 miles proposed	30 to 57
Wind Energy Potential (megawatts)	532 (with visible impact and right whale exclusion zones)	6890
Job, Revenue Potential	New Jobs, Foundations (Paulsboro), Staging (Lower Alloways Creek) Tourism Losses	Same More jobs, Transmission Substations
Fishing Conflicts	To be assessed	None to date, based on BOEM screening
Marine Mammal Conflicts	North Atlantic Right Whale	None to date, BOEM screening
Public Acceptance	Low	High

Closing Suggestions

- Push to have Hudson South added to the EIS as a REASONABLE alternative
- Keep options open
- Plenty of time to do proper due diligence on All EIS Options; No decision needed until the Final EIS is prepared, which won't happen for another two years
- Need support of our Elected Representatives to have additional, reasonable options added into the EIS and have options properly assessed before a decision is made

Other Comparable Size Projects

- Ocean Wind project off Atlantic City, 15 Miles out.
- Vineyard 1 project off of Martha's Vineyard, 15 miles
- Skipjack Project off Ocean City, MD, 19.5 miles
- Dominion Energy Virginia projects, 27 miles
- Closer 5 Mile out Cape Wind Project off of Cape Cod canceled in 2017 due to local opposition.
- Overseas: Hornsea 1 UK 75 Miles, Sinan project S. Korea 80 miles, Dogger Bank UK 78 miles, East Anglia 3 UK 43 miles, Changua project Taiwan 30 miles.
- **LBI Project is Extreme, 10 Miles Out**

References

(1) An Assessment of the Potential Costs and Benefits of Offshore Wind Power, Global Insight, 2008, Inc.

(2) Atlantic Offshore Wind Energy Development -Values and Implications for Recreation and Tourism, University of Delaware, sponsored by the BOEM, March, 2018.

(3) The Amenity Costs of Offshore Wind Farms- Evidence from a Choice Experiment in August 2017, North Carolina State University, 2017.

(4), Global Insight Report, 2008.

(5) Modeling of Noise Effects of Operational Offshore Wind Turbines, Marine Scotland, 09/08/2013

(6) How Loud is the Underwater Noise from Operating Offshore Wind turbines, the Acoustical Society of America, November 24, 2020.

(7) How could operational underwater sound from future offshore wind turbines impact marine life?, J. Acout. Soc., March, 2021.