

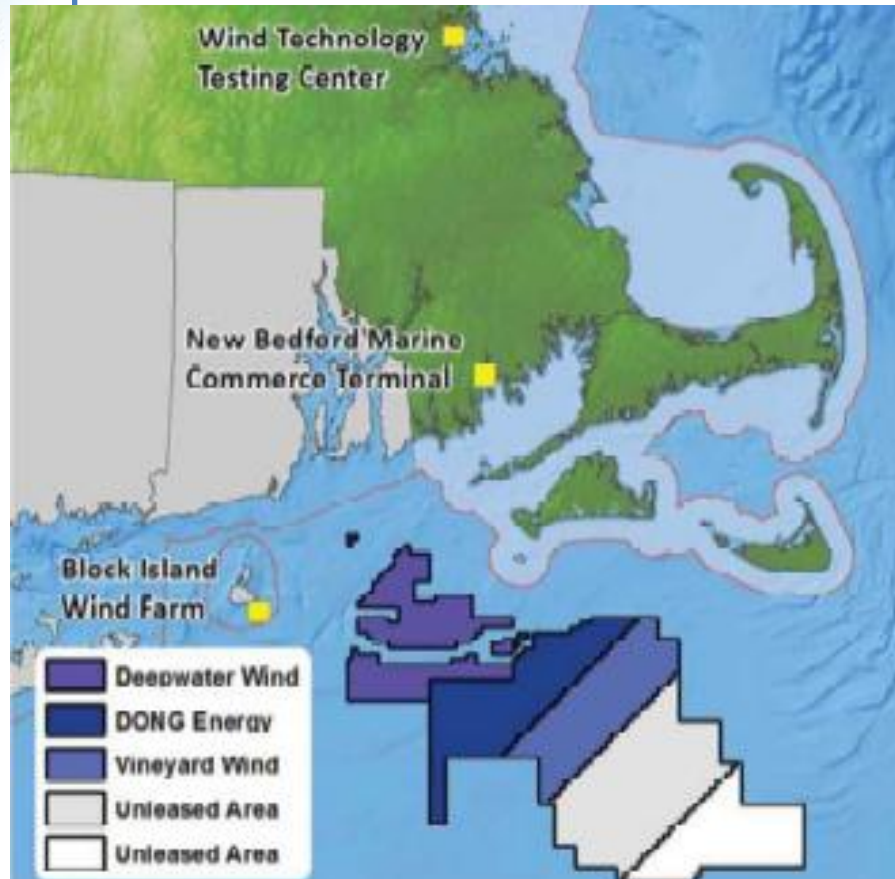
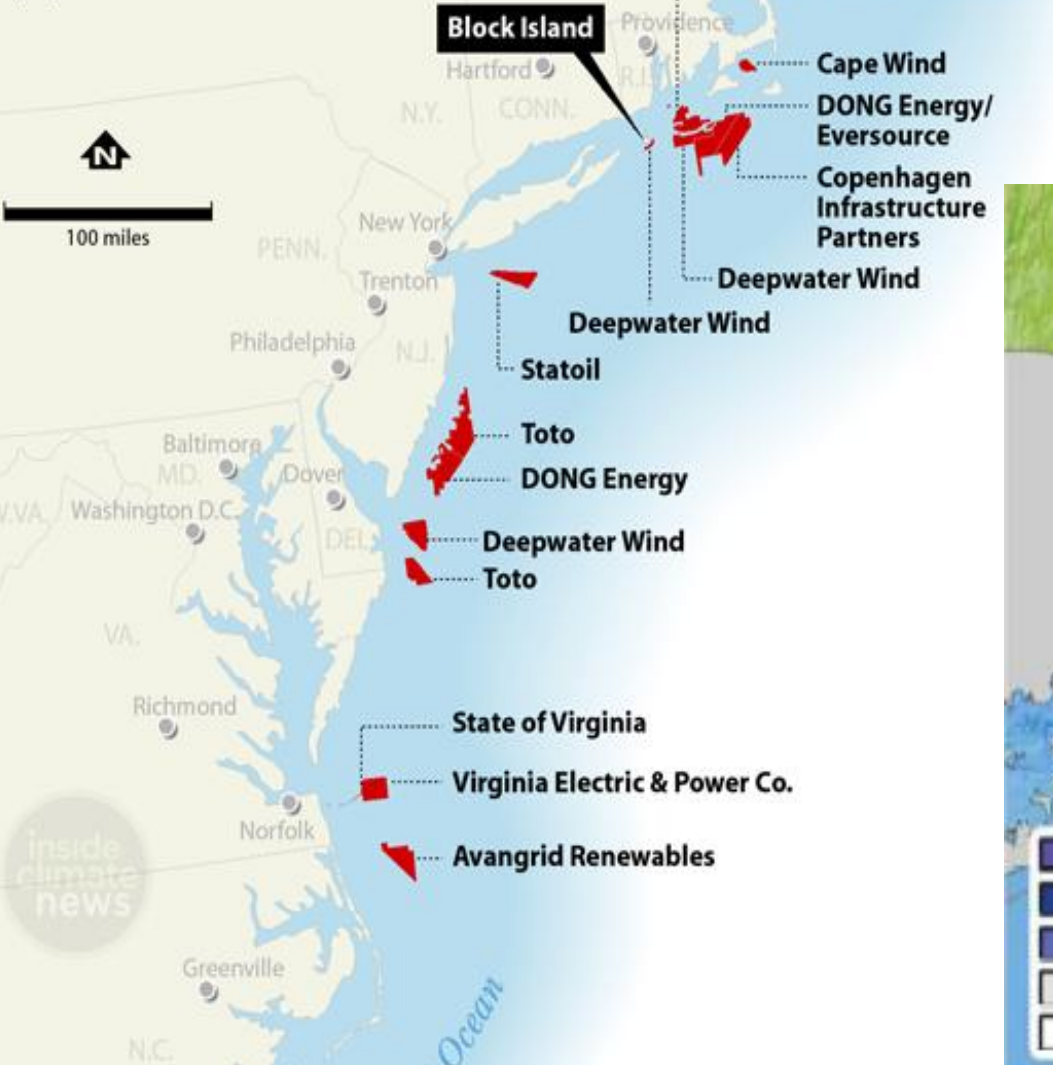
Offshore Wind: Critical Component of 100% Strategy



Connecticut Roundtable
on Climate and Jobs

U.S. Offshore Wind Readies for Takeoff

Block Island is America's first offshore wind farm, but companies all along the East Coast, one of the world's richest wind resources, have leased vast areas of federal water to develop additional projects.



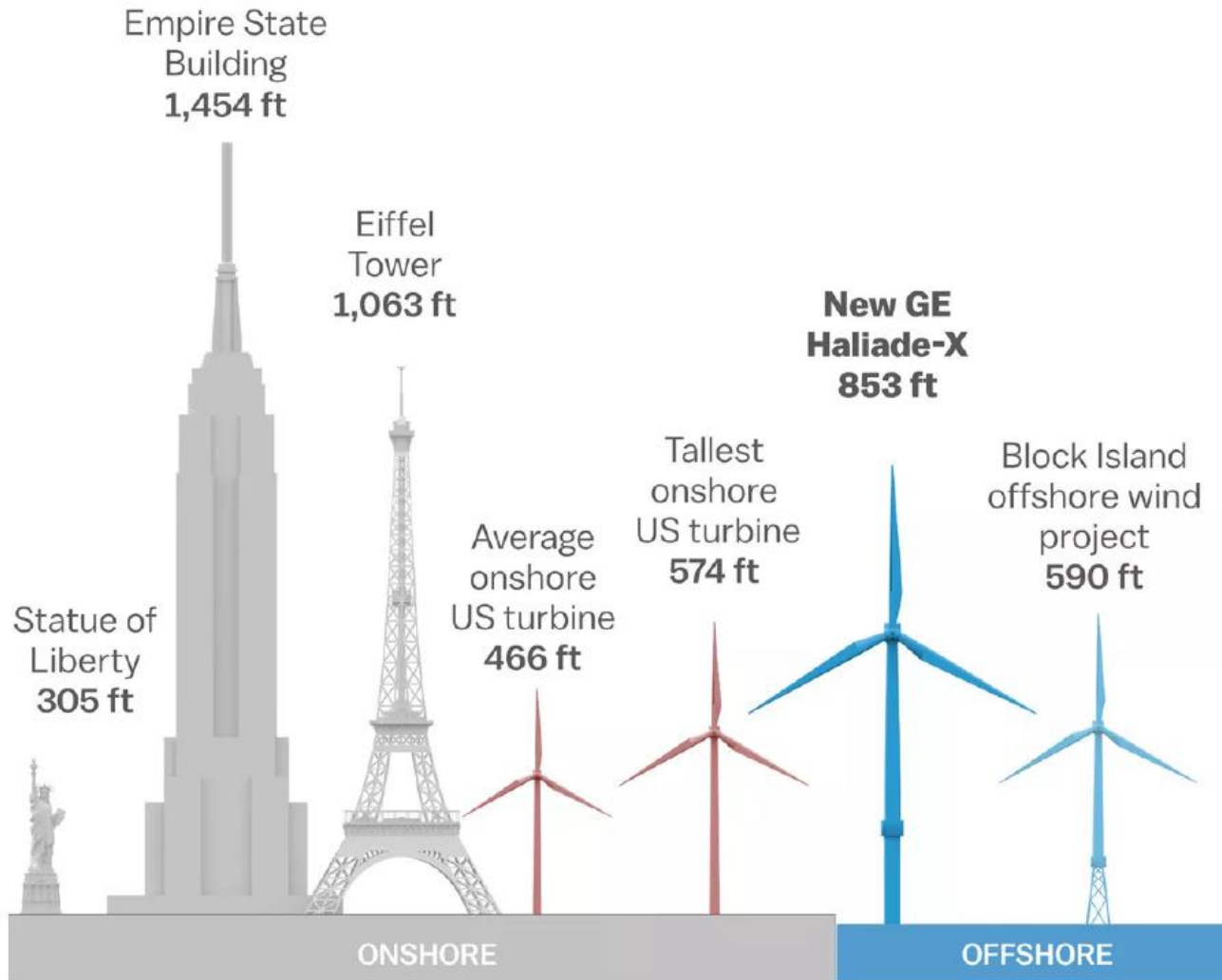
Offshore Wind By the Numbers

- **Europe: >16,000MW installed; >4000 turbines in 10 countries; 10% of electricity demand**
- **US: only 30MW (5 turbines) installed at Block Island**
- Acadia Center (2017): NY + NE needs 6400 MW by 2030 to achieve 45% reduction in GHG emissions
- **Contracts in process >1800MW (CT, MA, MD, NY, & RI)**
- **Total commitments/authority >9,000MW by 2035 (MA, NJ, NY, & RI)**
- **CT: 200MW contract with Deepwater Wind + 3 new bids under consideration**

Potential Economic Impacts

- **JOBS!**
 - Onshore & offshore construction;
 - Maritime (research, ferrying people and supplies);
 - Operations & maintenance;
 - Manufacturing & supply chain??
- **Which port(s) will be the hub(s)?**
- **Which technology used for the bases?**
- **Will developers invest in US-based manufacturing facilities?**

How the Haliade-X compares



Source: GE, Vox research

Vox

Capacity Factors:

“modern US wind is up to 42.5 percent and natural gas is at 56 percent. The Haliade-X, ...will have a capacity factor of *63 percent*. ...the floating offshore turbines in the Hywind Scotland project **hit 65 percent recently.**” - Vox

Declining Costs

The Massachusetts Department of Energy Resources found that the selected 800 MW offshore wind project would save ratepayers \$1.4 billion over the 20-year contract.