

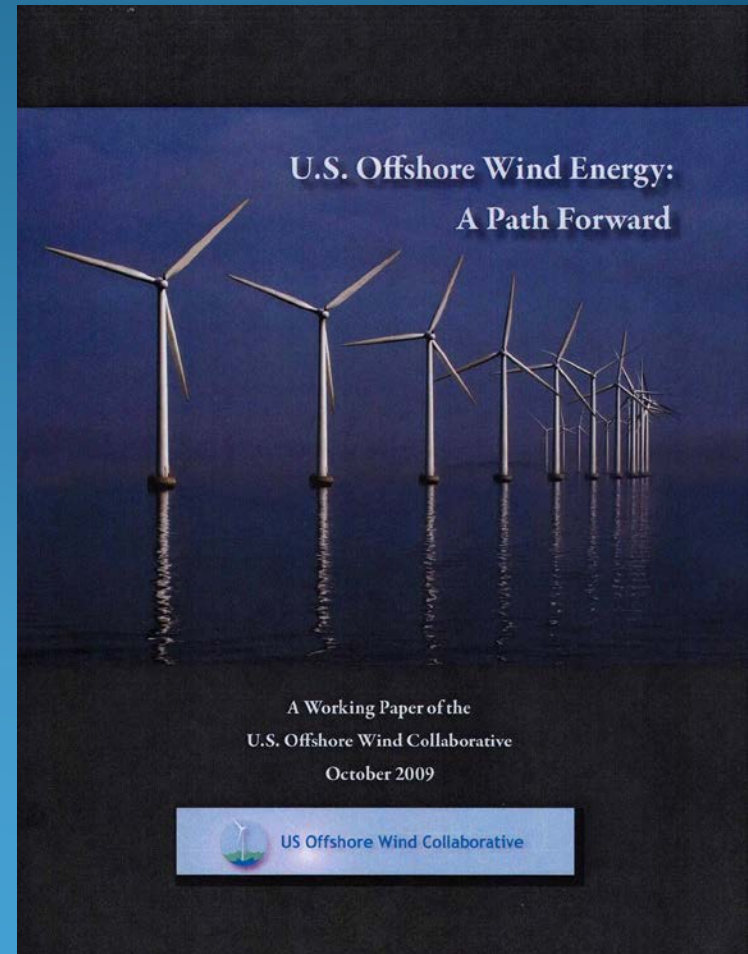
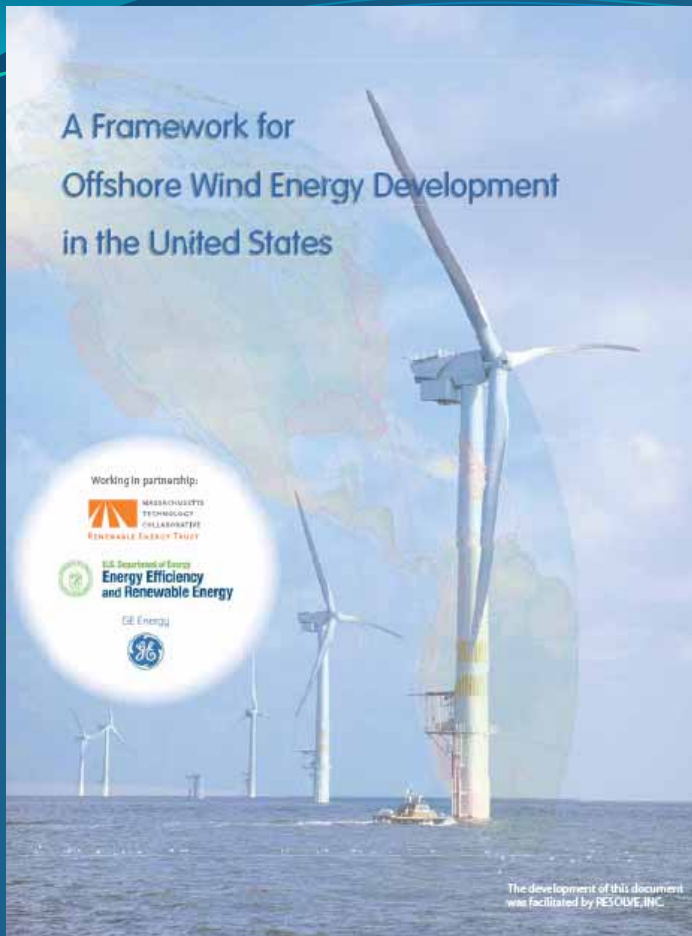
Offshore Wind Energy in the United States

The Evolving Policy Seascape
North American Wind Energy Academy
University of Colorado, Boulder
7 August 2013

Fara Courtney, Executive Director
USOWC



...2005



2009...

Global 2012 Offshore Wind Stats

- 1662 turbines installed and grid connected in EU- 4995 MW: 31% increase since end of 2011
- 55 Wind Farms in 10 EU countries
- **EU member states are lagging behind their offshore wind energy NREAP commitments**
- 73% of substructures are monopiles, 13% jackets, 6% tripods, 5% tripiles and 3% gravity foundations
- 2 full scale grid-connected floating turbines and 2 down scaled prototypes
- 2 near-shore demonstration projects in China

• Source for EU statistics: *The European offshore wind industry key trends and statistics 2012*

European vs. US Policy Context

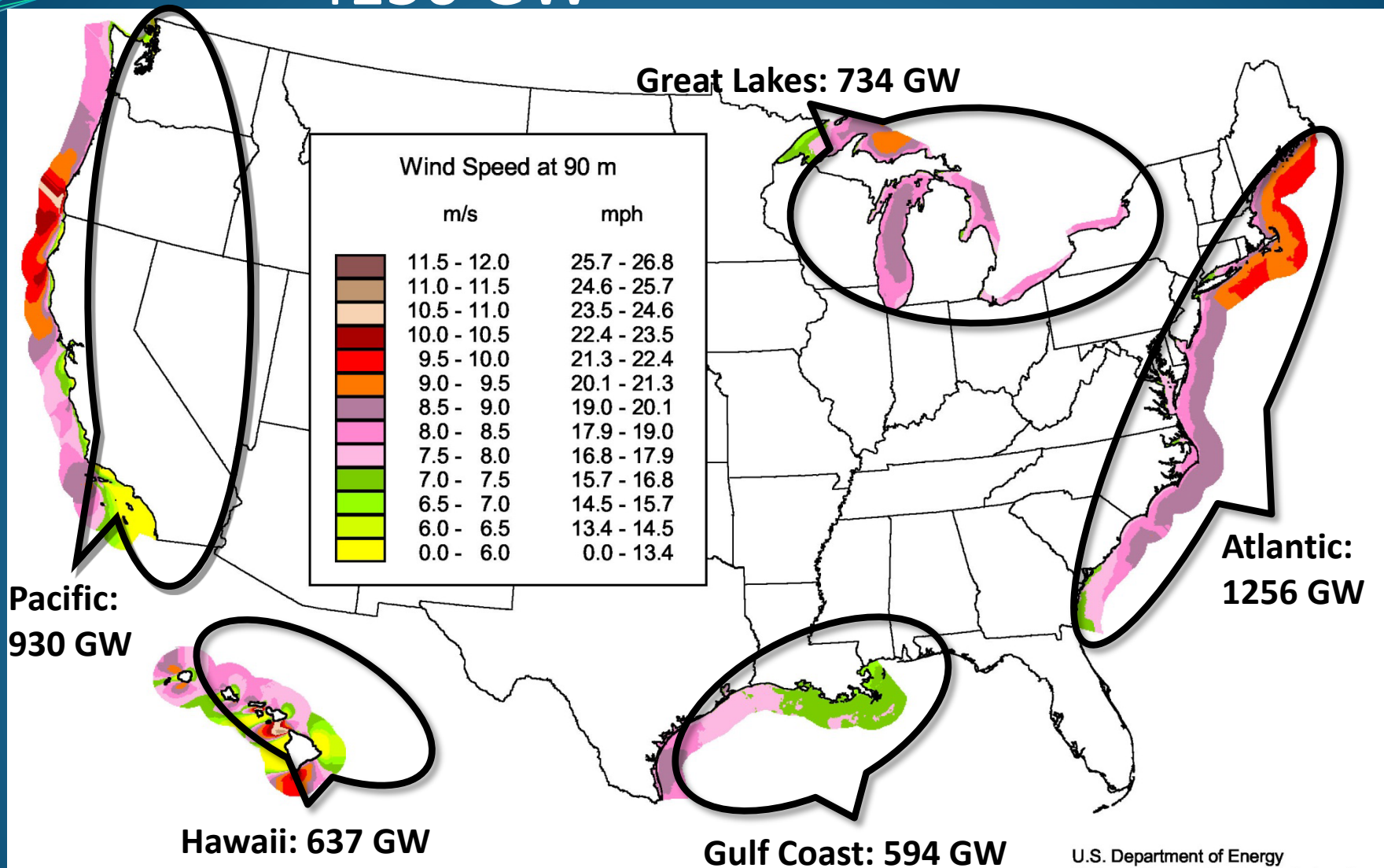
Them

- Climate change + energy security urgency
- Mandated targets via NREPs
- Heavy subsidies/ revenue guarantees
- Leasing process tied to a guaranteed market

US

- Climate change ambivalence; new sources of domestic fossil fuel
- No National Renewable Energy Policy; states driving market development
- Inconsistent, short-term policy support
- disconnect between the leasing process and the market

Offshore Wind Potential = 4150 GW



U.S. Department of Energy
National Renewable Energy Laboratory

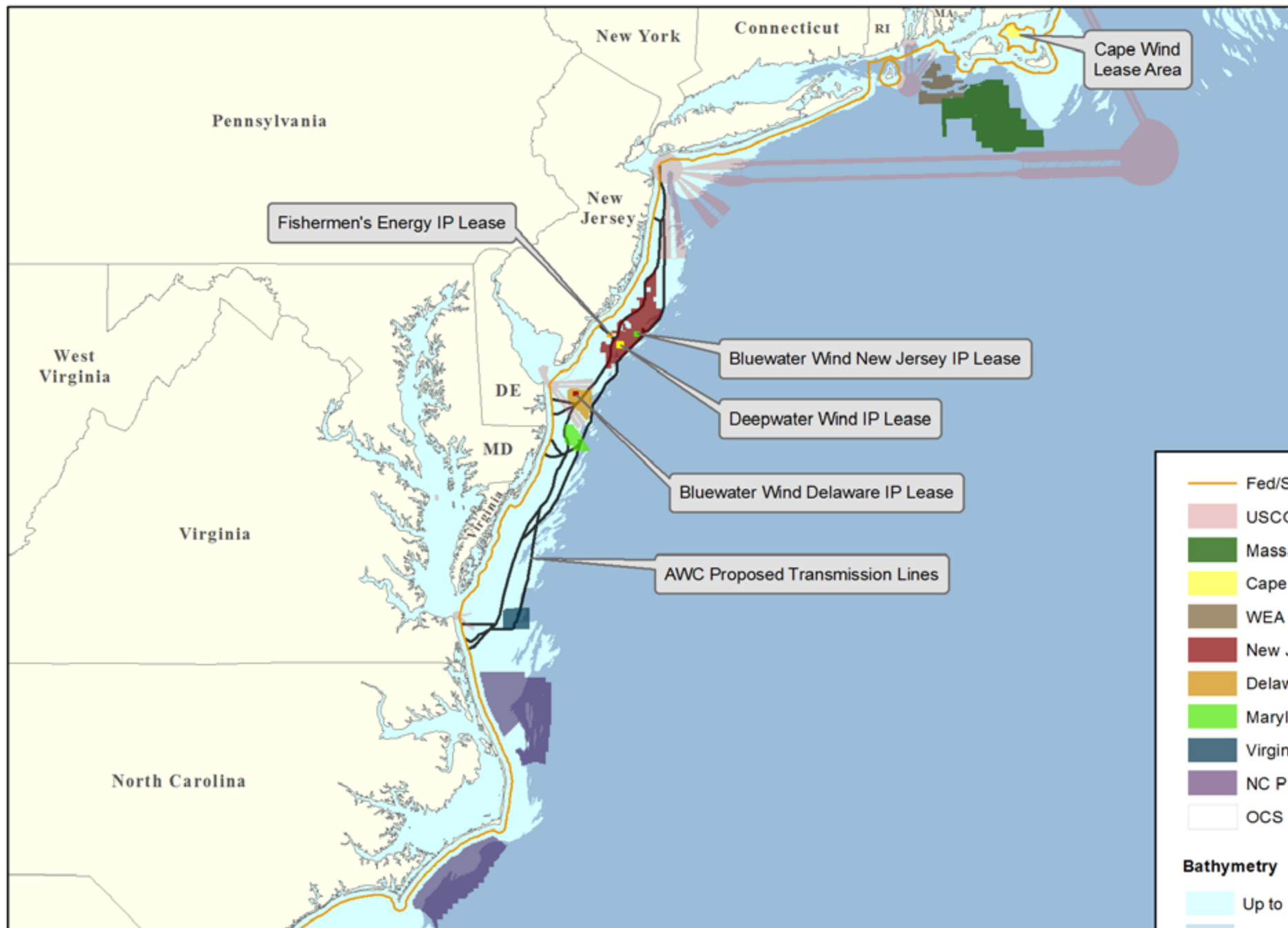
Total gross resource potential does not consider exclusion zones or siting concerns



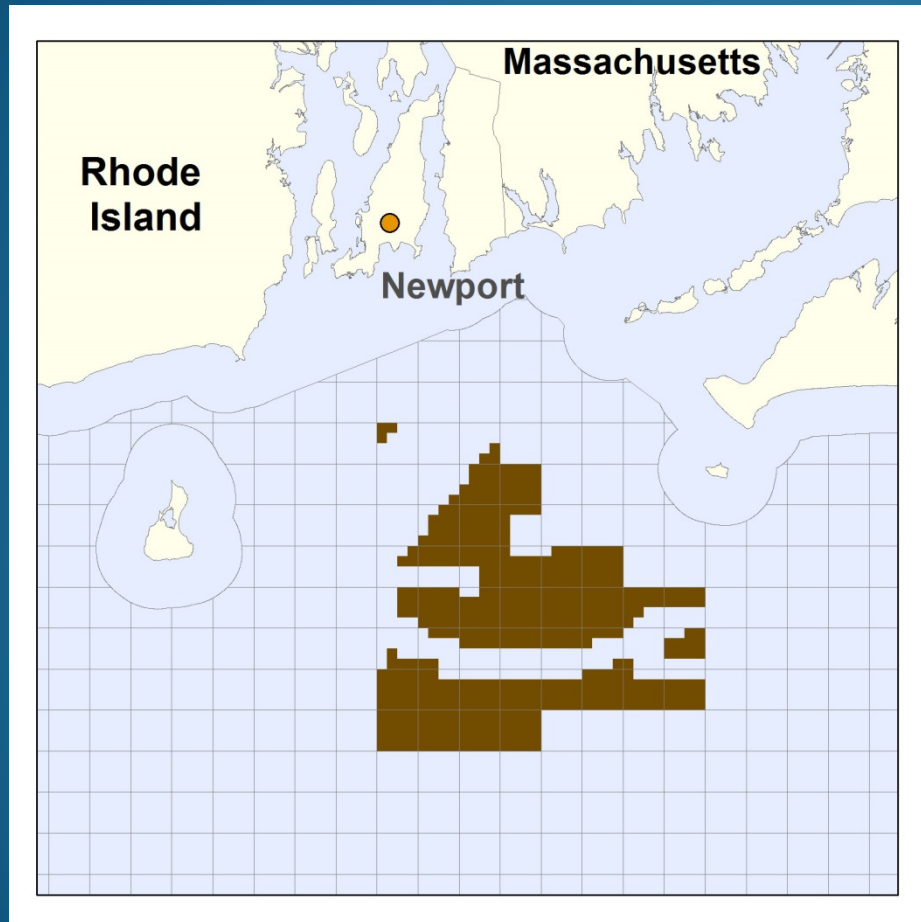
Offshore Wind: A Different Beast

- Like onshore wind, but different; like oil and gas, but different
- Near load centers; different transmission, siting, supply chain challenges/opportunities
- Early on the learning curve; current high costs should not be compared with mature technologies. Requires a *learning investment* to reach parity.
- US has to reinvent, adapt EU experience for American market conditions

Wind Energy Planning Areas - Massachusetts to North Carolina



First Offshore Wind Lease Sale: RI-MA Area of Mutual Interest 7/31/13



- 164,750 acres
- 2 lease areas, est. capacity 1955 MW and 1440 MW
- Rent \$3 /acre ; annual operating fee 2% of revenue
- Ascending clock auction format
- 20% credit for Joint Development Agreement; \$25 for PPA
- **Winning bid by Deepwater Wind: \$3.8 million**

Policy Challenges

- Leasing not tied to market development
- Auction process based on oil and gas model
- Short term PTC extensions don't help OSW due to long regulatory lead times and high capital cost – ITC is critical at this stage.
- Competitive positions among states a barrier to regional procurement discussion - but a regional approach is necessary for industry scale development

Let's Get to Work!



Fara Courtney, Executive Director,
USOWC

fcourt@usowc.org
www.usowc.org

