

Ohio Offshore Wind & EPA Green Power Partnership



**By Lorry Wagner, Ph.D., President,
Lake Erie Energy Development Corporation**

Introducing...

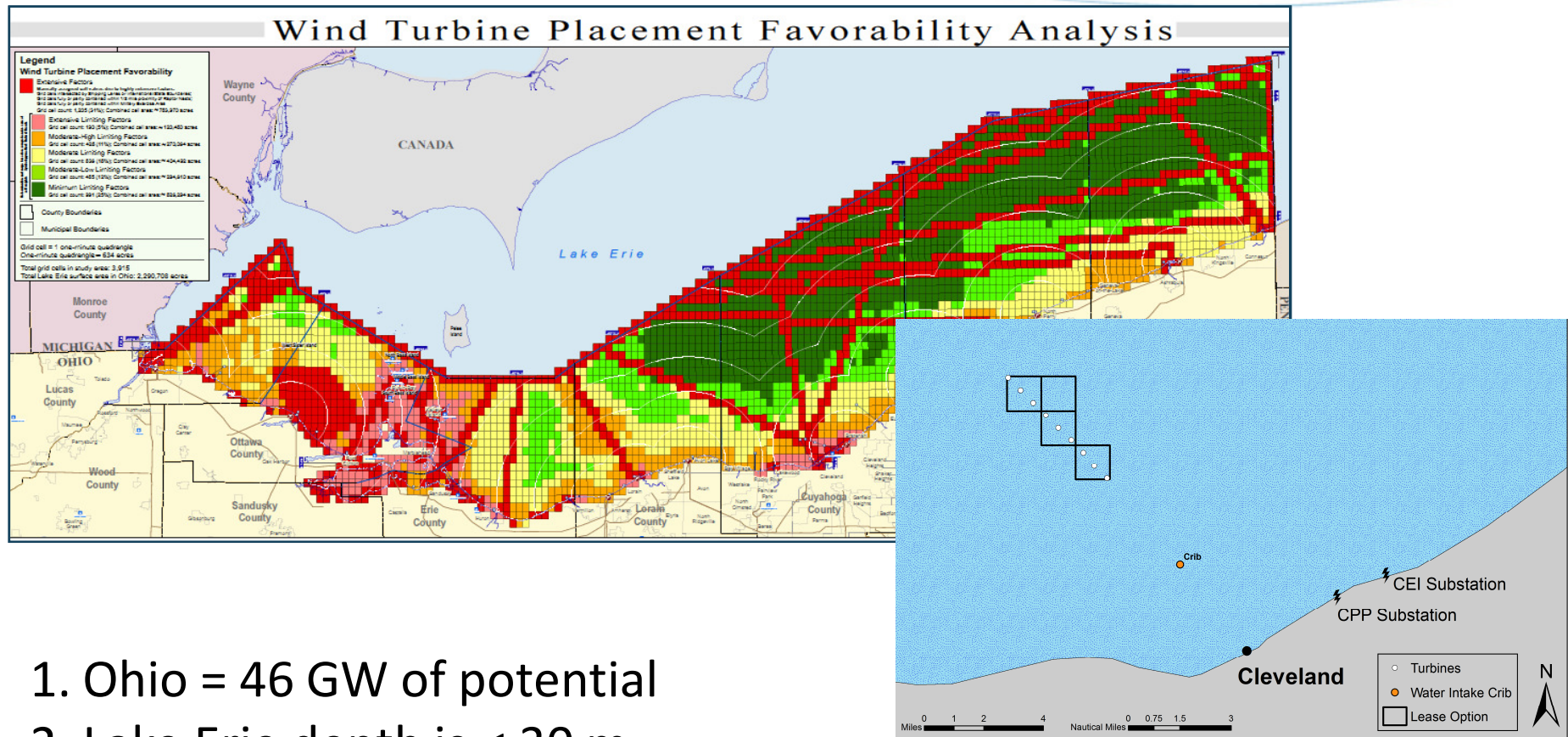


- ✦ LEEDCo - a regional non-profit representing 4 counties & Cleveland
- ✦ 27 MW – 9 Siemens 3 MW Direct Drive
- ✦ 7.9 m/s wind speed at site
- ✦ 7 miles from shore
- ✦ \$150 million project cost
- ✦ First offshore wind farm in Great Lakes



Icebreaker
wind·watts·work

Location



1. Ohio = 46 GW of potential
2. Lake Erie depth is < 30 m.
3. Great Lakes combined potential = 176 GW < 30 m.
4. Ohio has 26% of Great Lakes potential at least expensive depths.

Milestones

Project Milestones

- \$50.6 million DOE Offshore Wind grant applicant
- MOU with Cleveland Public Power for 25%
- Submerged Land Lease Option
- Bird & Avian Studies (spring/fall)
- Feasibility Study (juwi/GL)
- Six years of wind data (right)
 - Ice profiling with video data
- Geophysical and geotechnical profiling
 - RFP for borings to be released soon



LEEDCo

- ✓ Economic Impact Assessment sponsored by NorTech
- ✓ 2011 Department of Energy grants totaling \$1.2 million.
- ✓ 2011 TeamNEO Award – Intergovernmental Collaboration
- ✓ 2011 University Clean Energy Alliance Ohio - Partnership Award
- ✓ 100+ Media mentions

Icebreaker Team



Owner's Engineer



- Authority on technical consultancy, risk management, and verification
 - ✓ Certification/design verification for 44 offshore projects and 20 substations

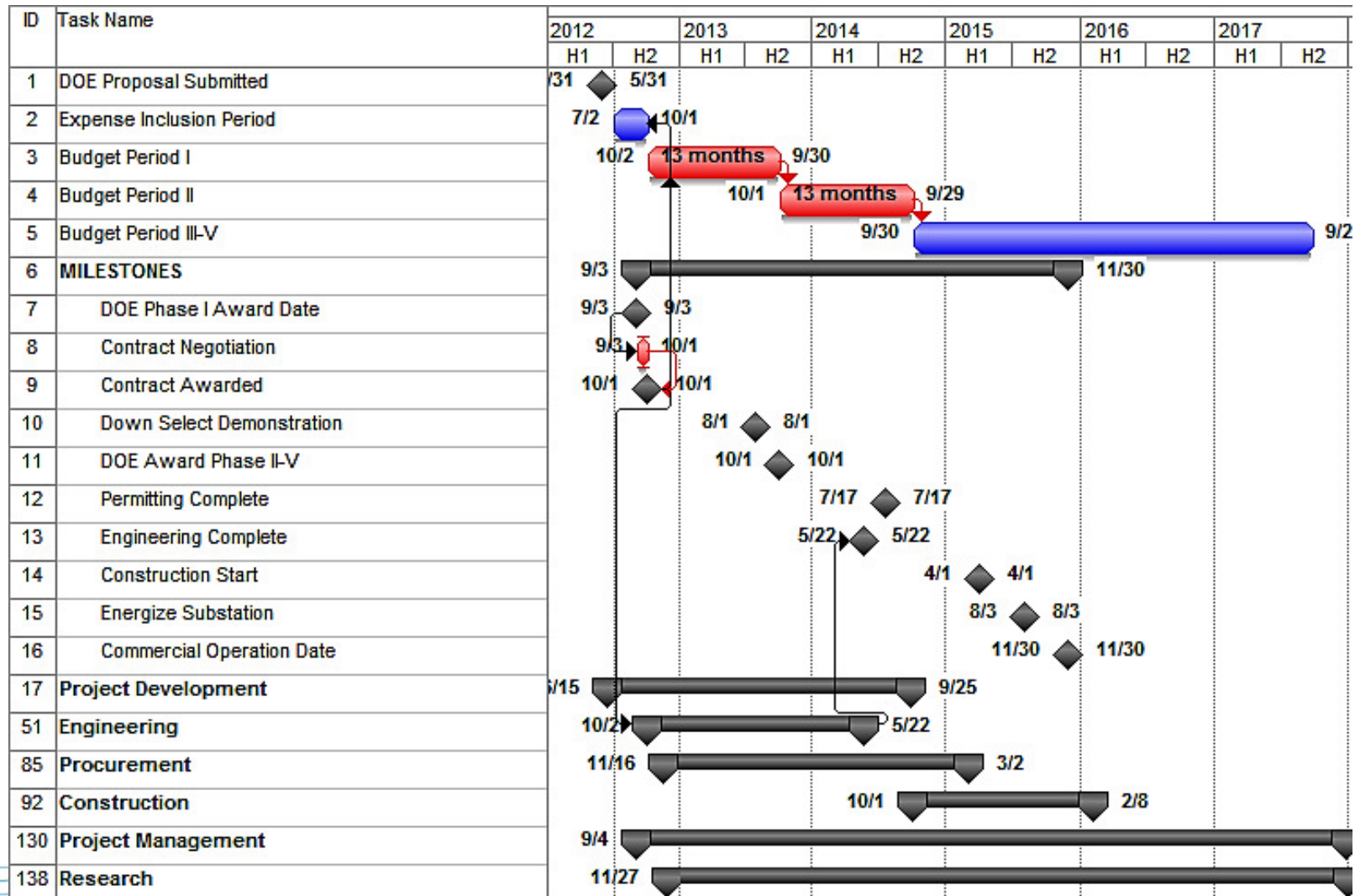
SIEMENS

- World leader in offshore wind
- 3 MW Direct Drive Optimal for Lake Erie
 - ✓ High capacity factor
 - ✓ “Light” turbine lowers installation cost



Schedule

Project fully operational by December 2015



IPO: Icebreaker Power Offering

Shares for a new generation.



Option 1:

- Long term PPA (PJM only)

Option 2:

- Equity investor
- Tax Credit Investor

Option 3:

- Branding opportunities
- Naming rights

• Option 4: REC purchases



*Icebreaker is the
Protégé of **Pori I**
in Bothnia Bay
off of Finland.*

Thank you.

