VolturnUS
Floating Offshore Wind Technology

US DOE
Advanced Technology Demonstration Program for Offshore Wind

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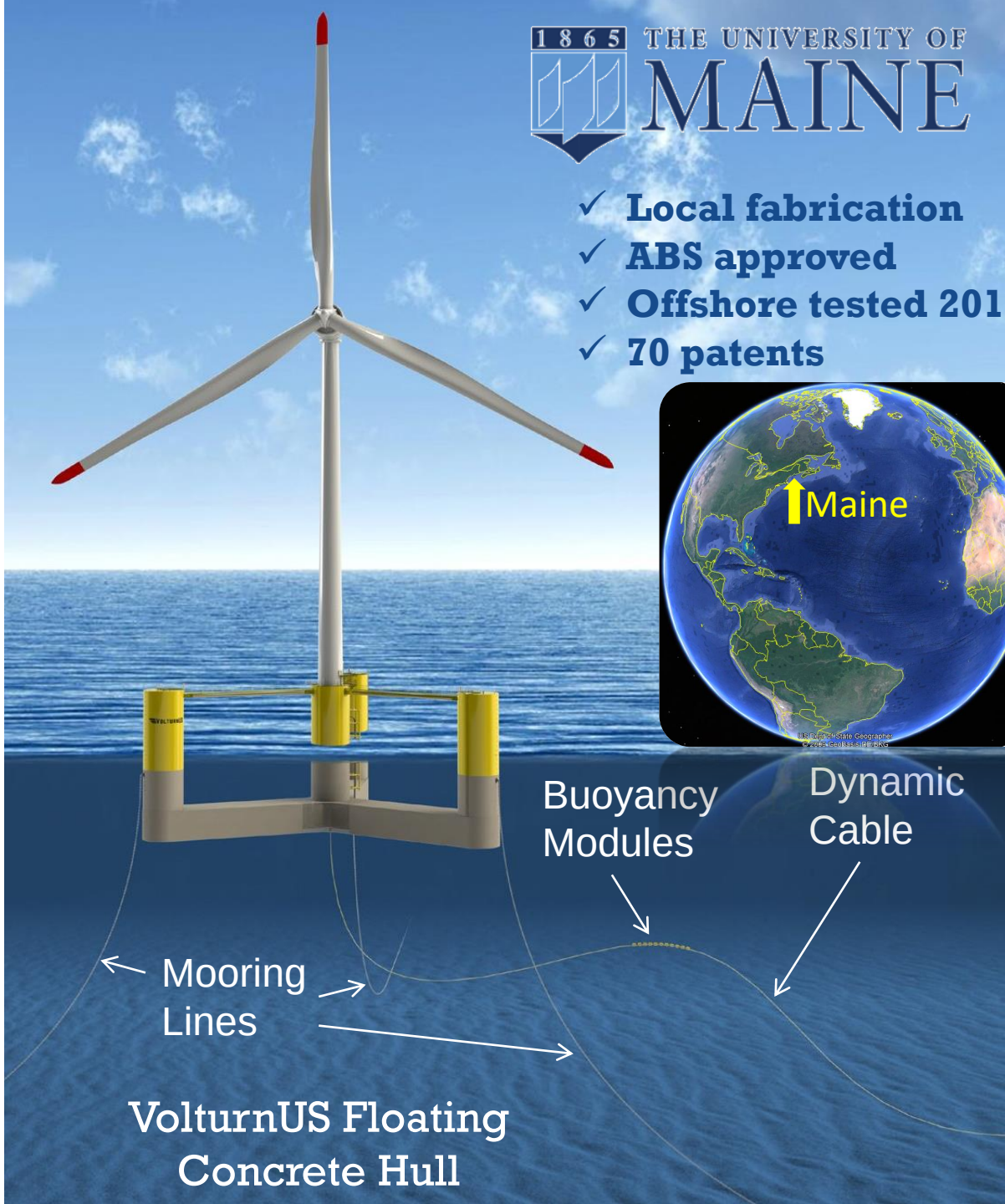
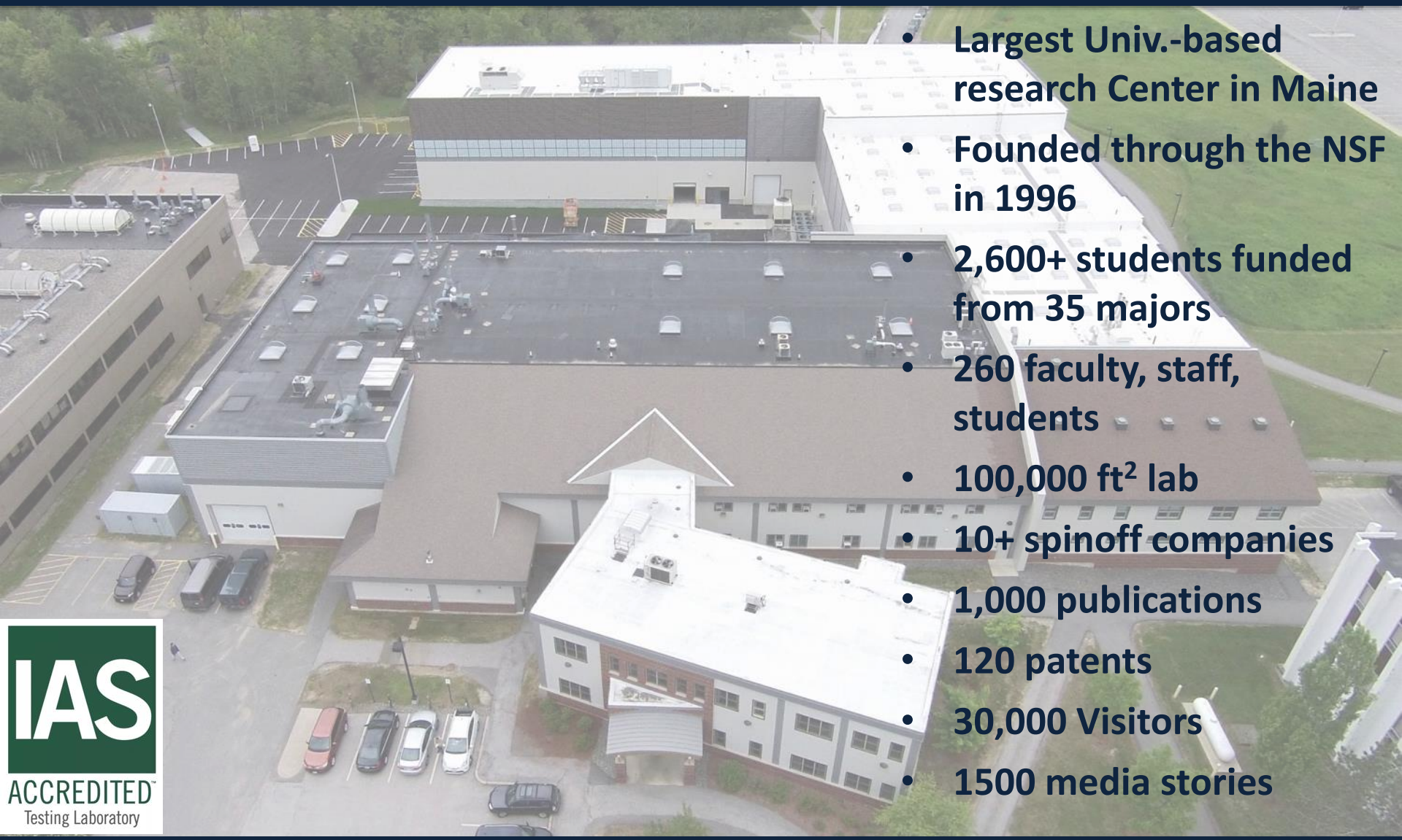


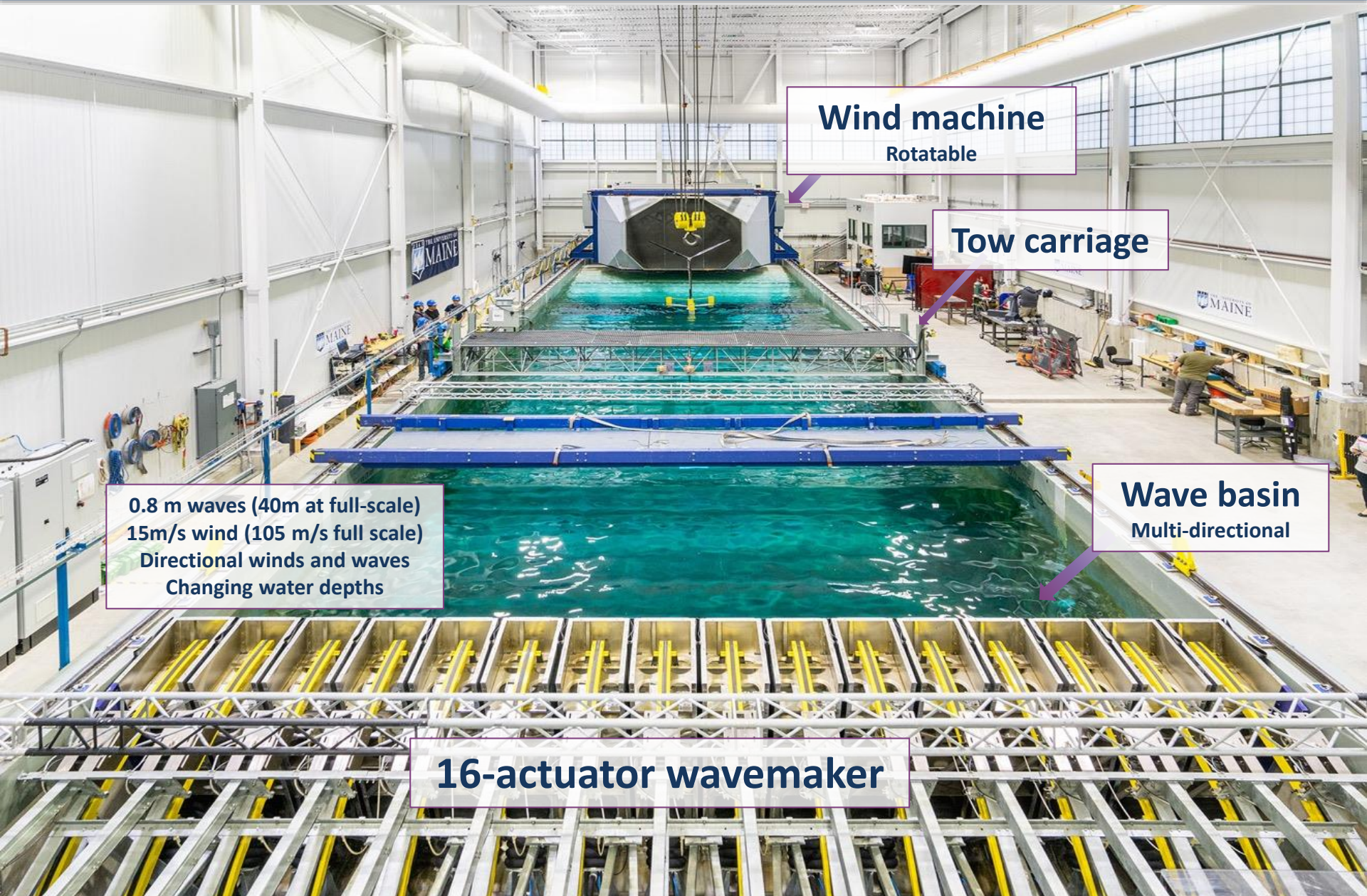


- Largest Univ.-based research Center in Maine
- Founded through the NSF in 1996
- 2,600+ students funded from 35 majors
- 260 faculty, staff, students
- 100,000 ft^2 lab
- 10+ spinoff companies
- 1,000 publications
- 120 patents
- 30,000 Visitors
- 1500 media stories

IAS ACCREDITED Testing Laboratory

Structural and Material Testing

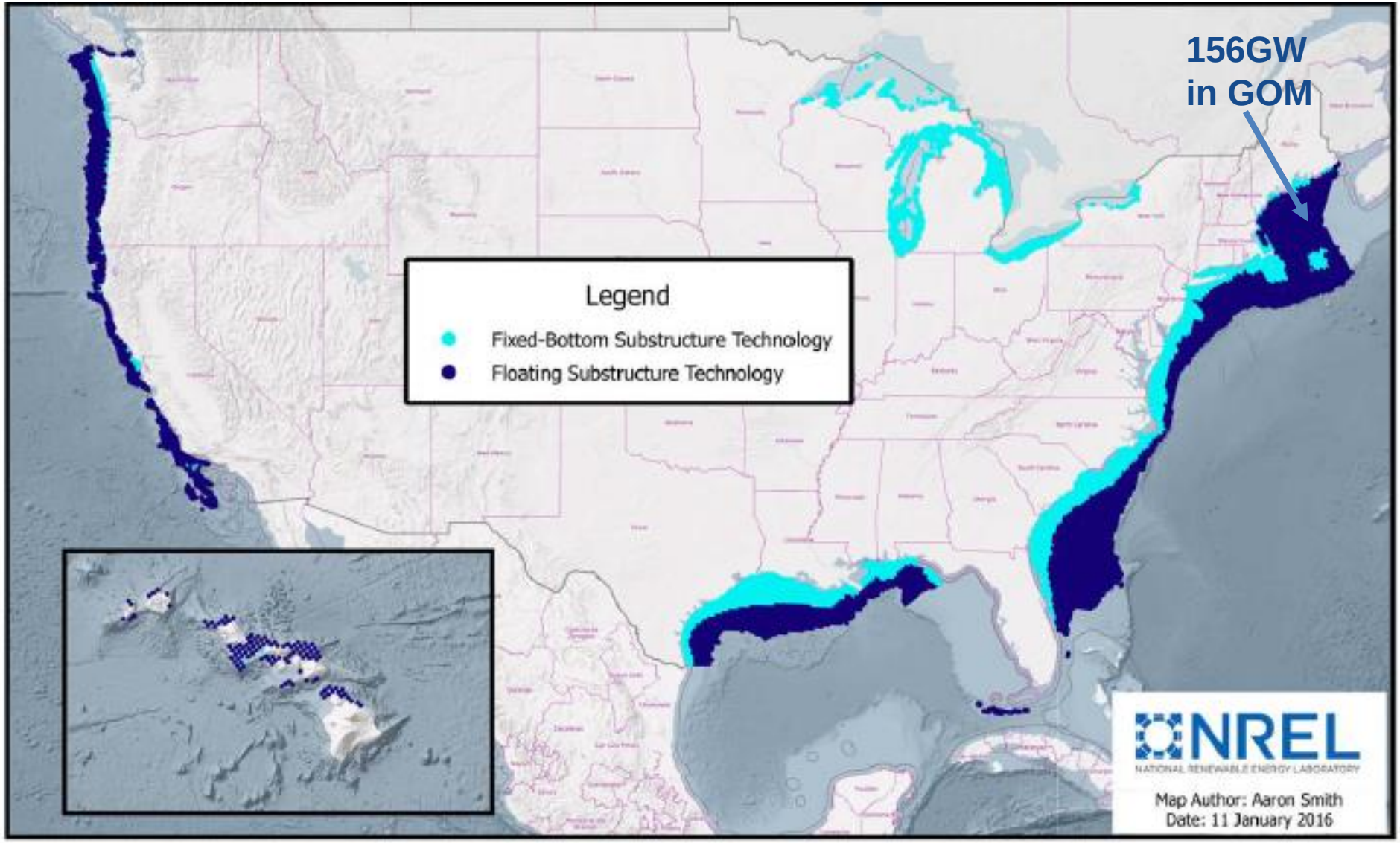
Alfond W2 Wave-Wind Basin



US Potential for Floating Wind

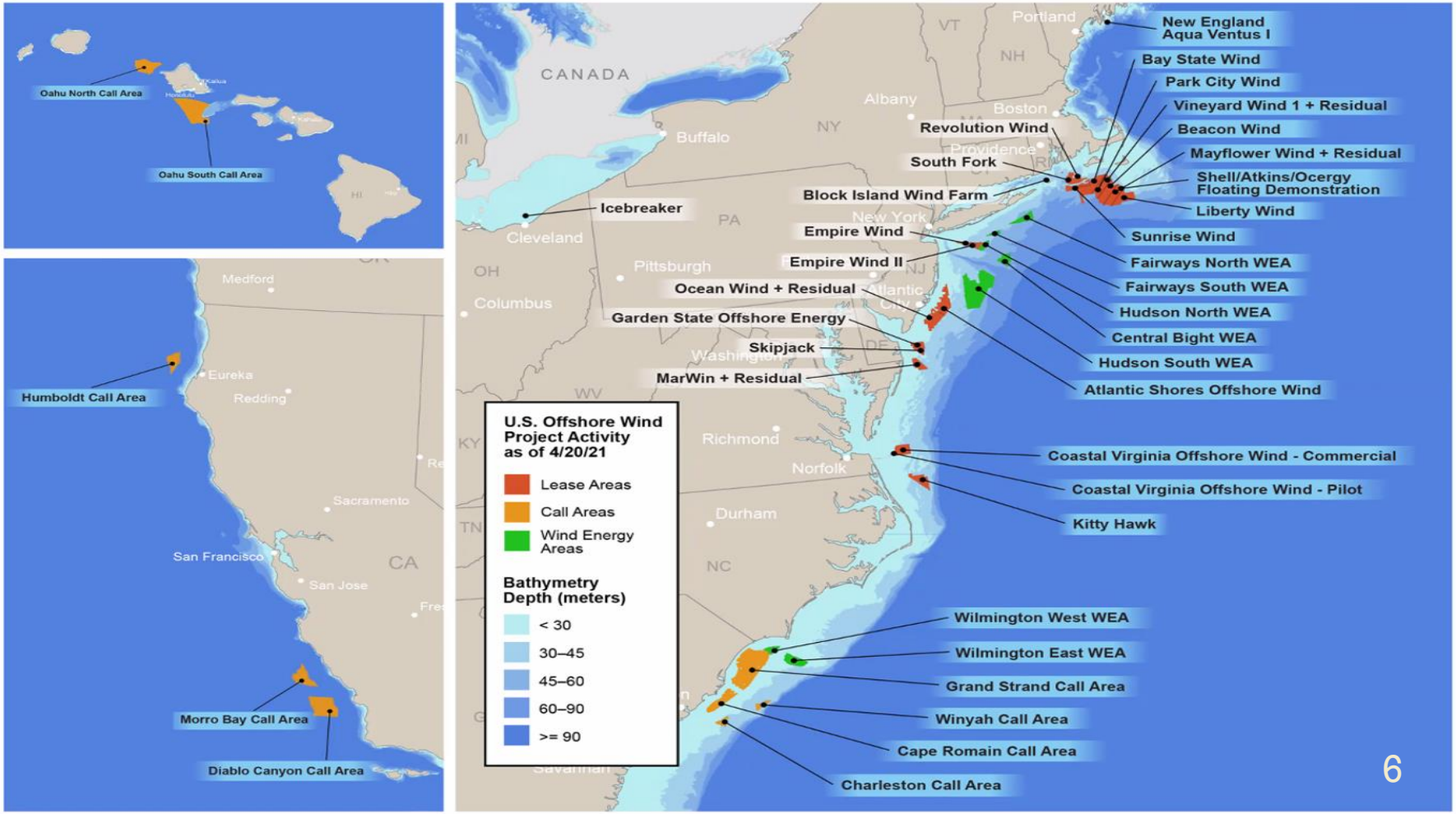
60% of US resource requires floating technology

BOEM to issue three floating leases by 2025: GOM, California & Oregon



US Offshore Wind Goal: 30GW by 2030

- East Coast states: 39 GW state policy commitments; 42 MW installed; 800 MW approved (Vineyard Wind)
- 14 projects = 11 GW in advanced permitting
- Two floating demonstrators



US offshore Wind Research Strategy

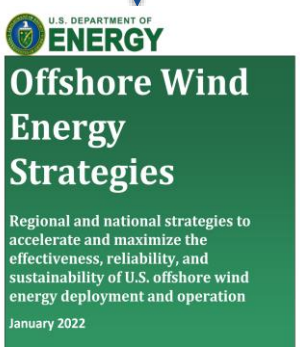
WETO
Wind Energy Technology Office

U.S. DEPARTMENT OF ENERGY

ARPA·E

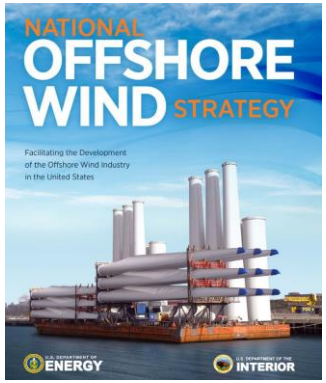
NATIONAL OFFSHORE WIND
RESEARCH & DEVELOPMENT CONSORTIUM

https://nationaloffshorewind.org/

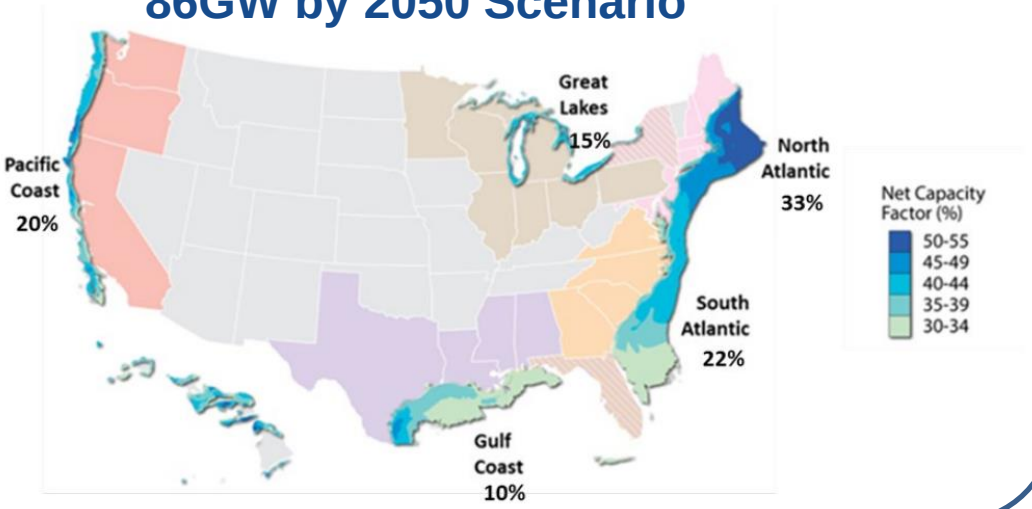


https://www.energy.gov/sites/default/files/2022-01/offshore-wind-energy-strategies-report-january-2022.pdf

86GW by 2050 Scenario



https://www.energy.gov/sites/prod/files/2016/09/f33/National-Offshore-Wind-Strategy-report-09082016.pdf



VolturnUS
Floating Technology Roadmap

2013

1/8 Scale Pilot Project - 1 turbine (Castine – UMaine, Cianbro, MMA)

2023/24

11 MW Demonstration Project - 1 turbine (Monhegan – NEAV LLC, UMaine)

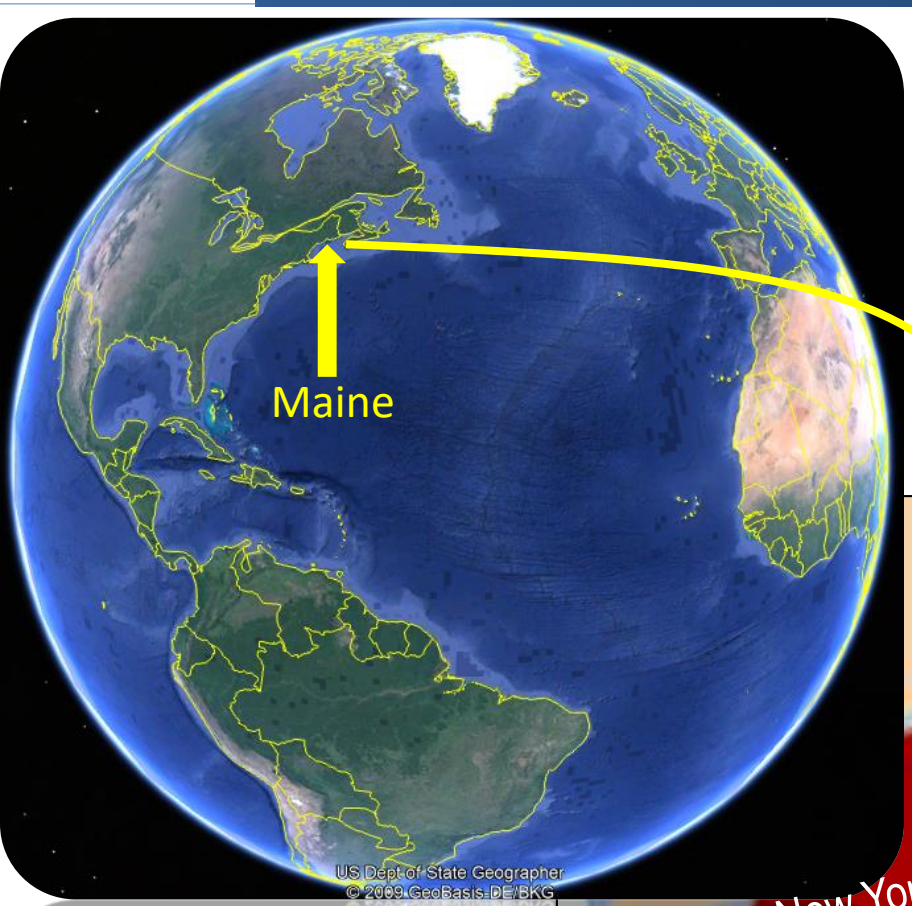
2026-2027

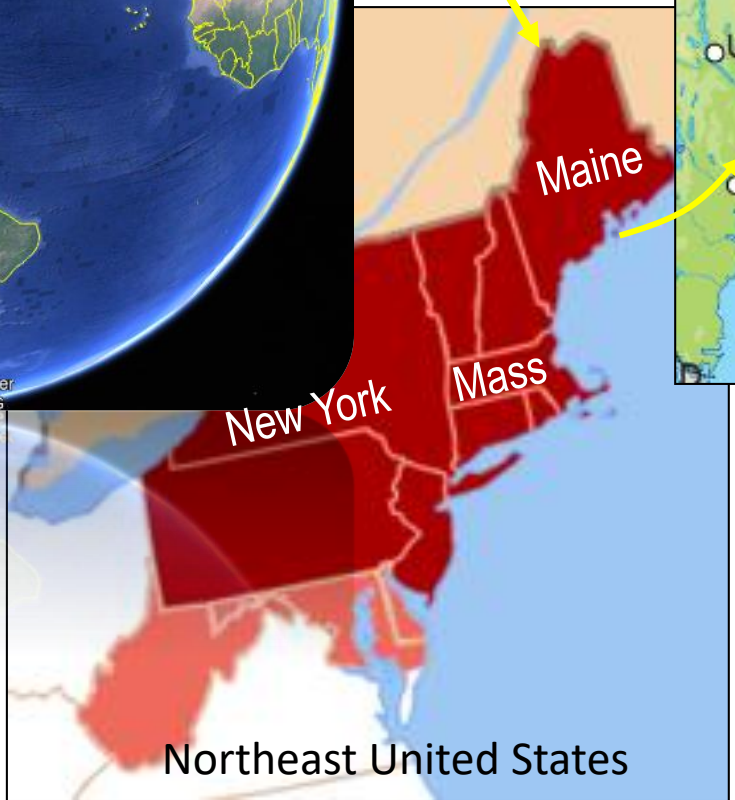
Research Array - 12 turbines or less (State, UMaine, NEAV LLC) LD336

2030+

Commercial Development - BOEM Leasing and Permitting

New England Aqua Ventus and MeRA Project Sites





Northeast United States

VolturnUS 1:8 Launch

May 31, 2013

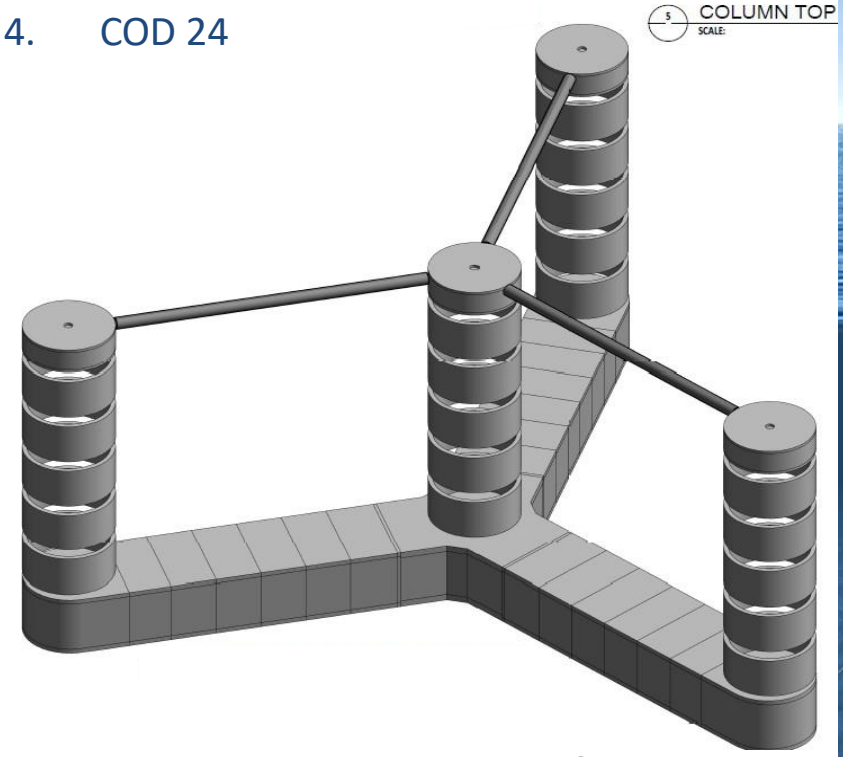
Castine, Maine (2013)

Tow-Out Testing

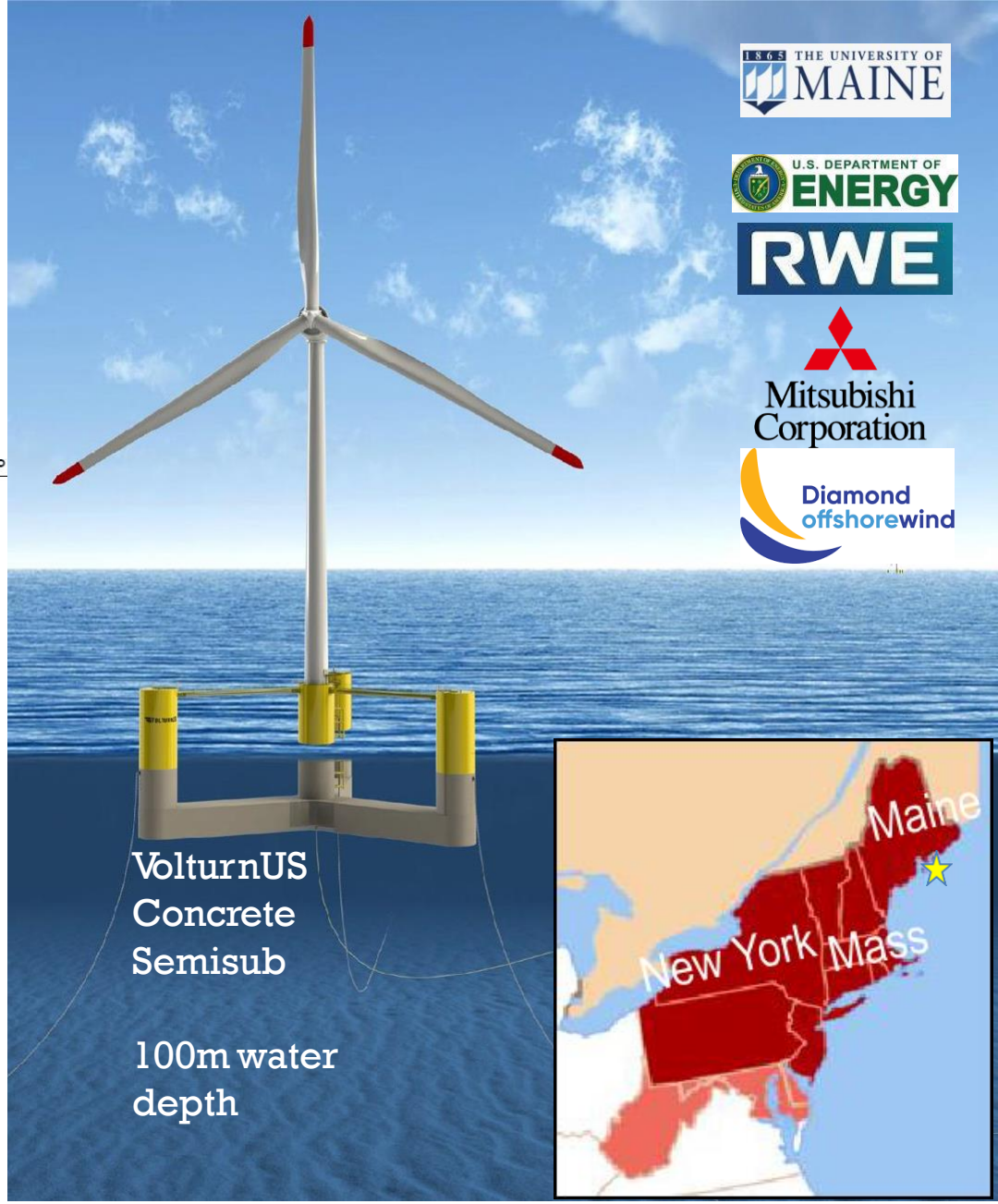
50-Year Return Period Storm

New England Aqua Ventus I

1. UMaine VolturnUS Concrete semisub
2. US DOE Advanced Technology Demonstration Program for Offshore Wind
3. Monhegan Island, Maine
4. COD 24



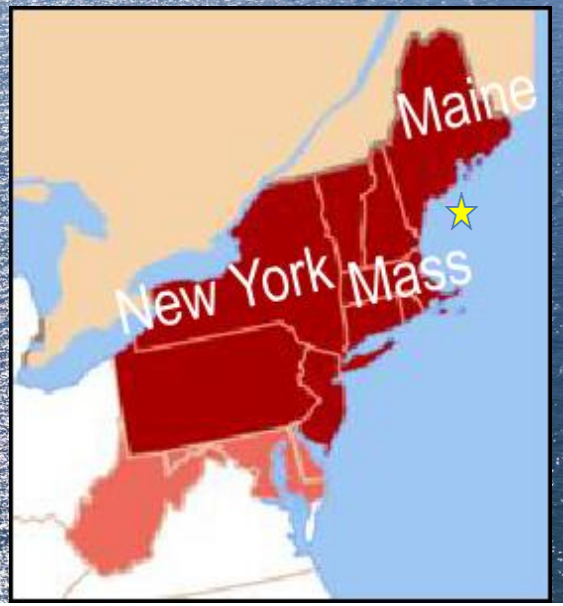
Locally produced VolturnUS segmental concrete hull



MeRA: Maine Research Array (2027)

Up to 12 turbines, 150 MW, 16 square mile

~ one mile



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