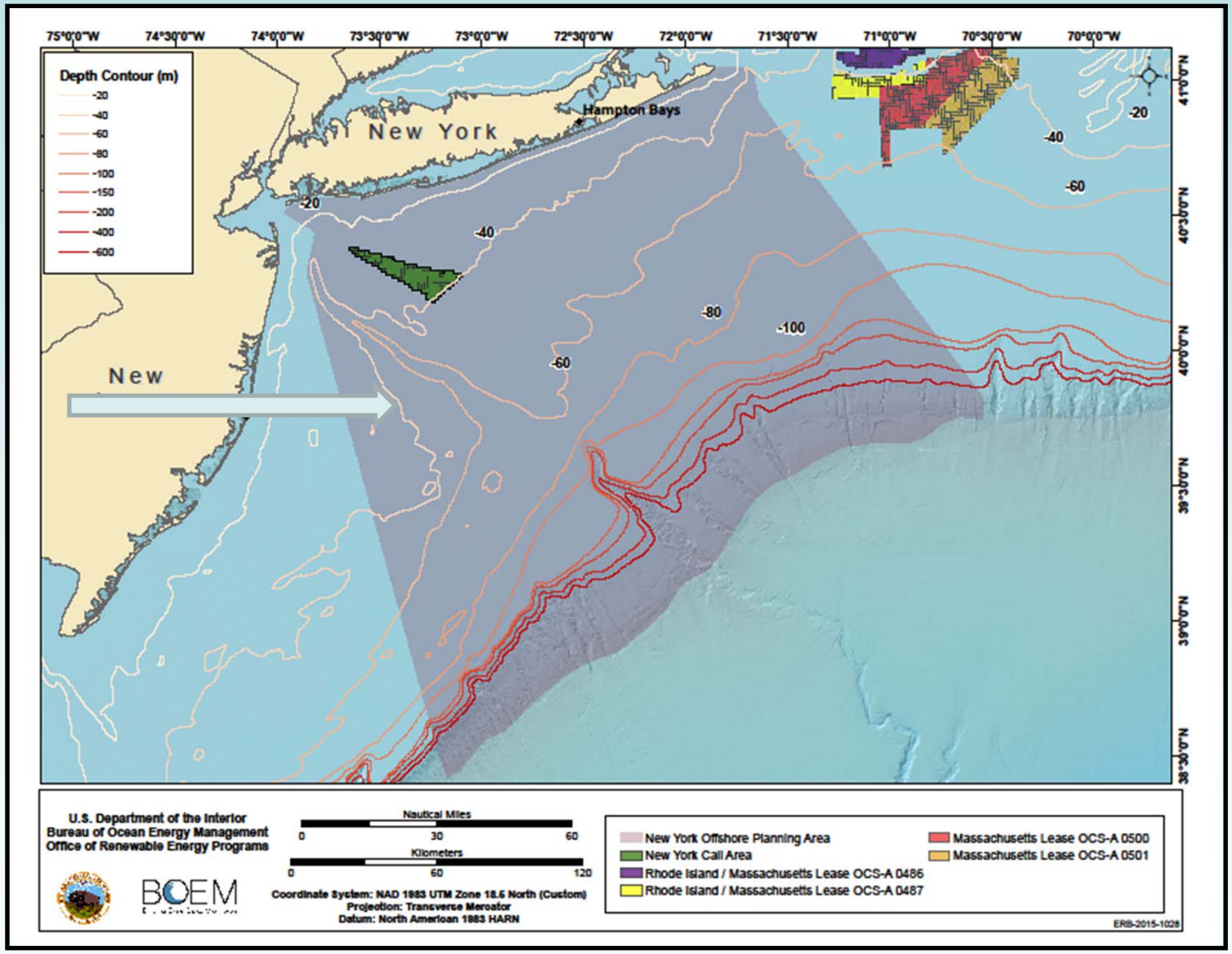
Offshore Wind Facility Technology & Design Options

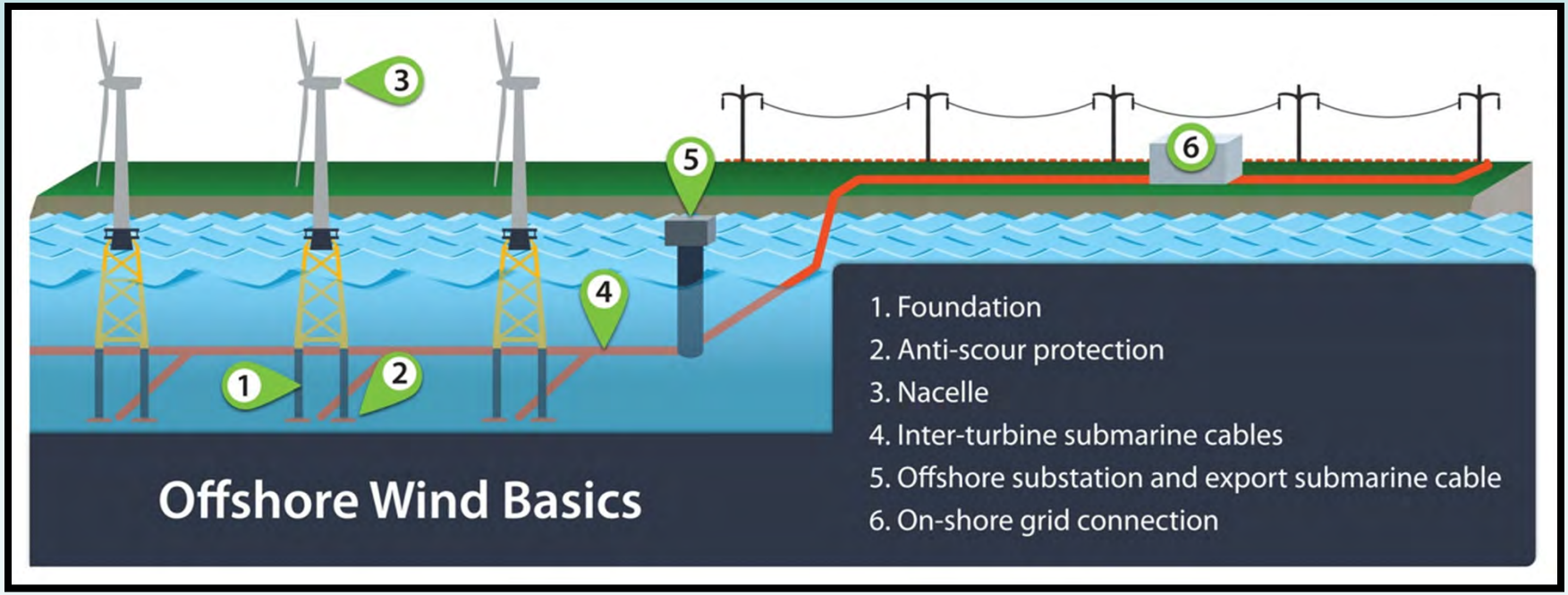
BOEM
Bureau of Ocean Energy Management

November 5, 2015

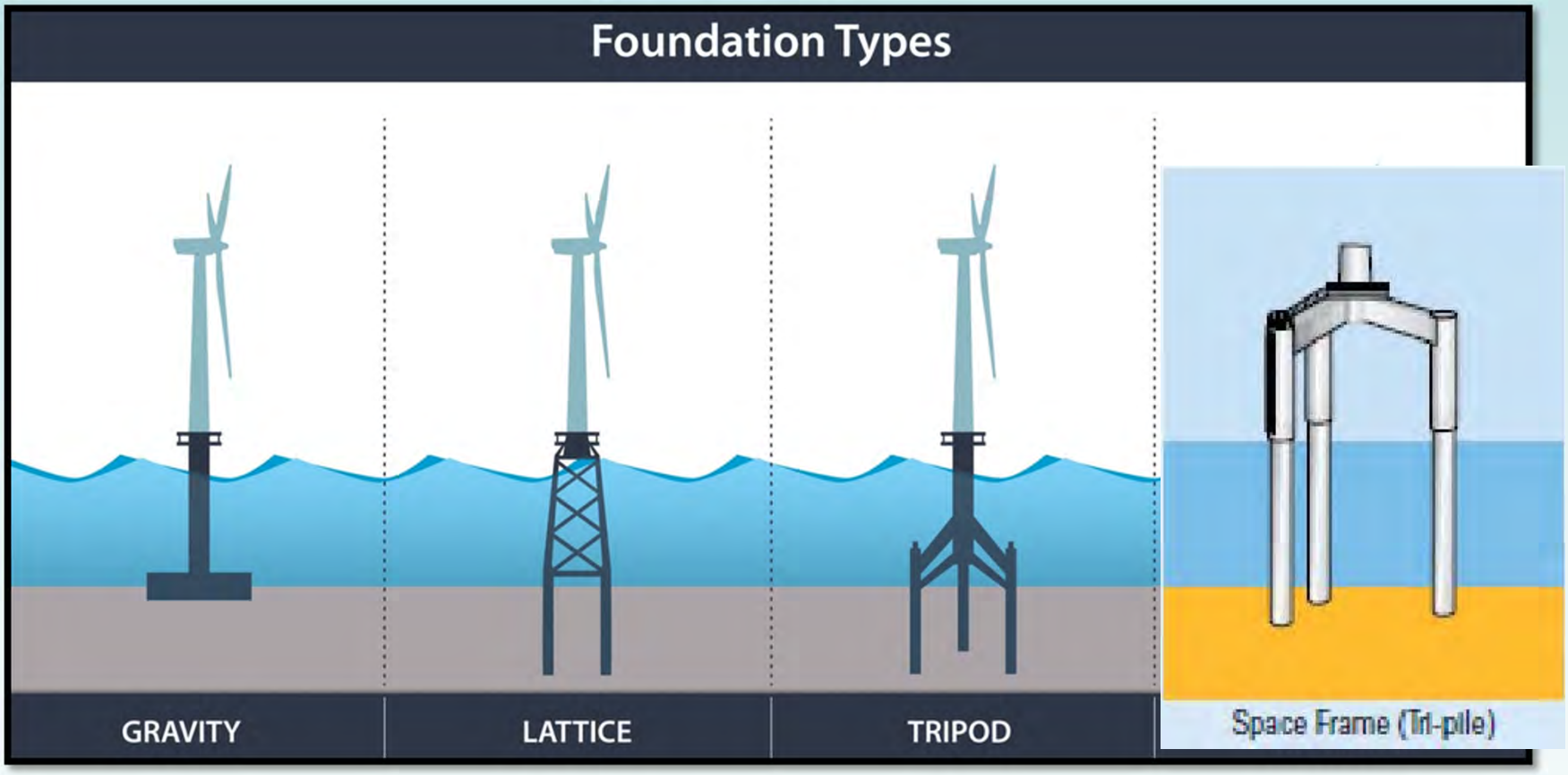
State of New York Offshore Planning Area



Basic Project Layout



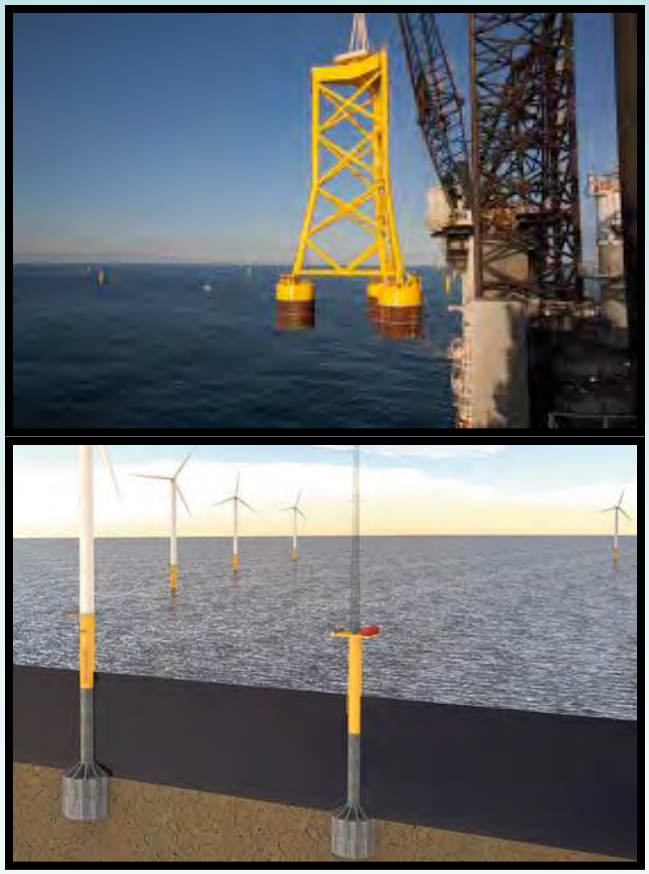
Fixed Foundations (1)



Also called "**Jackets**"

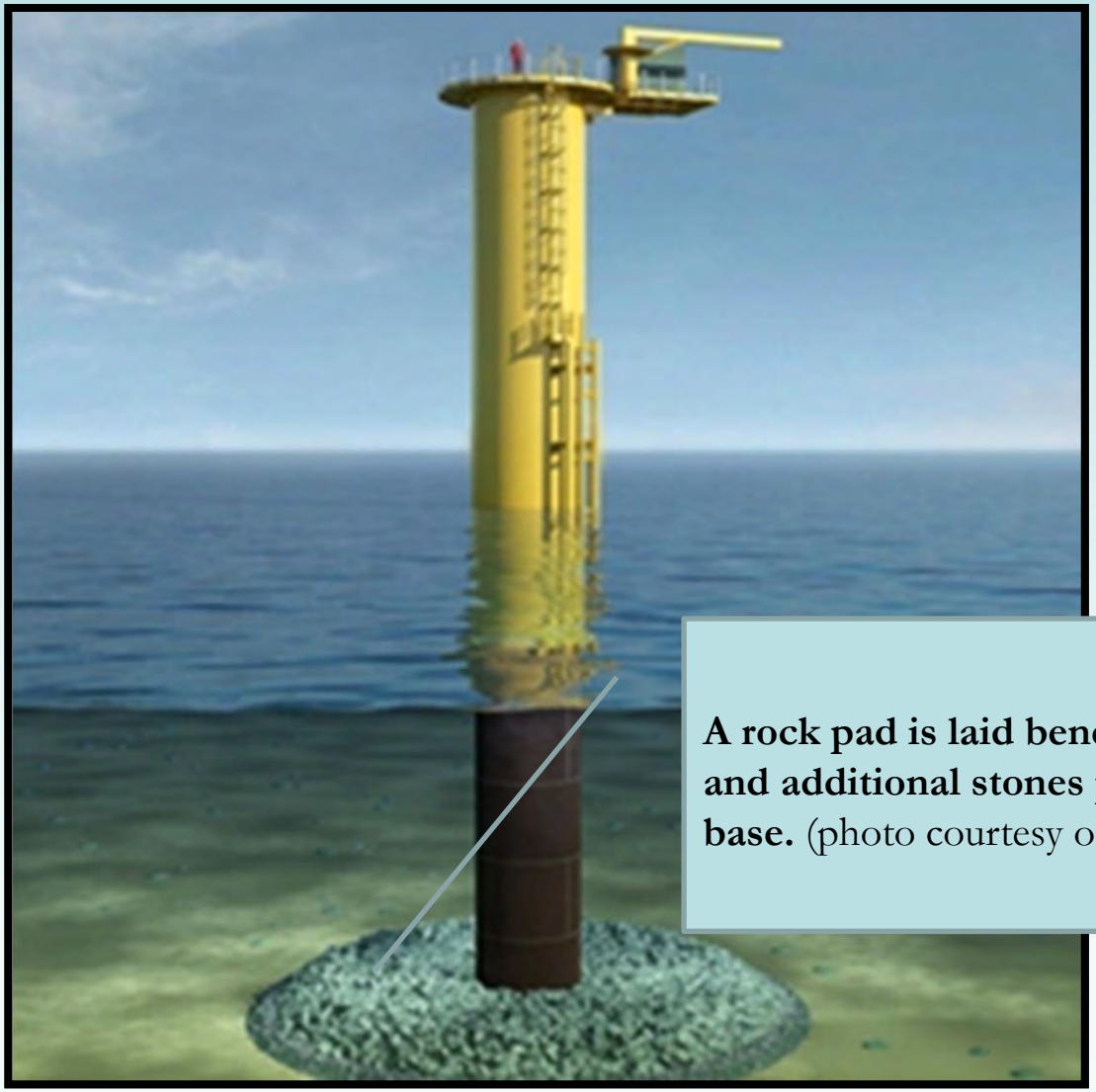
Fixed Foundations (2)

Source: Keystone Foundation



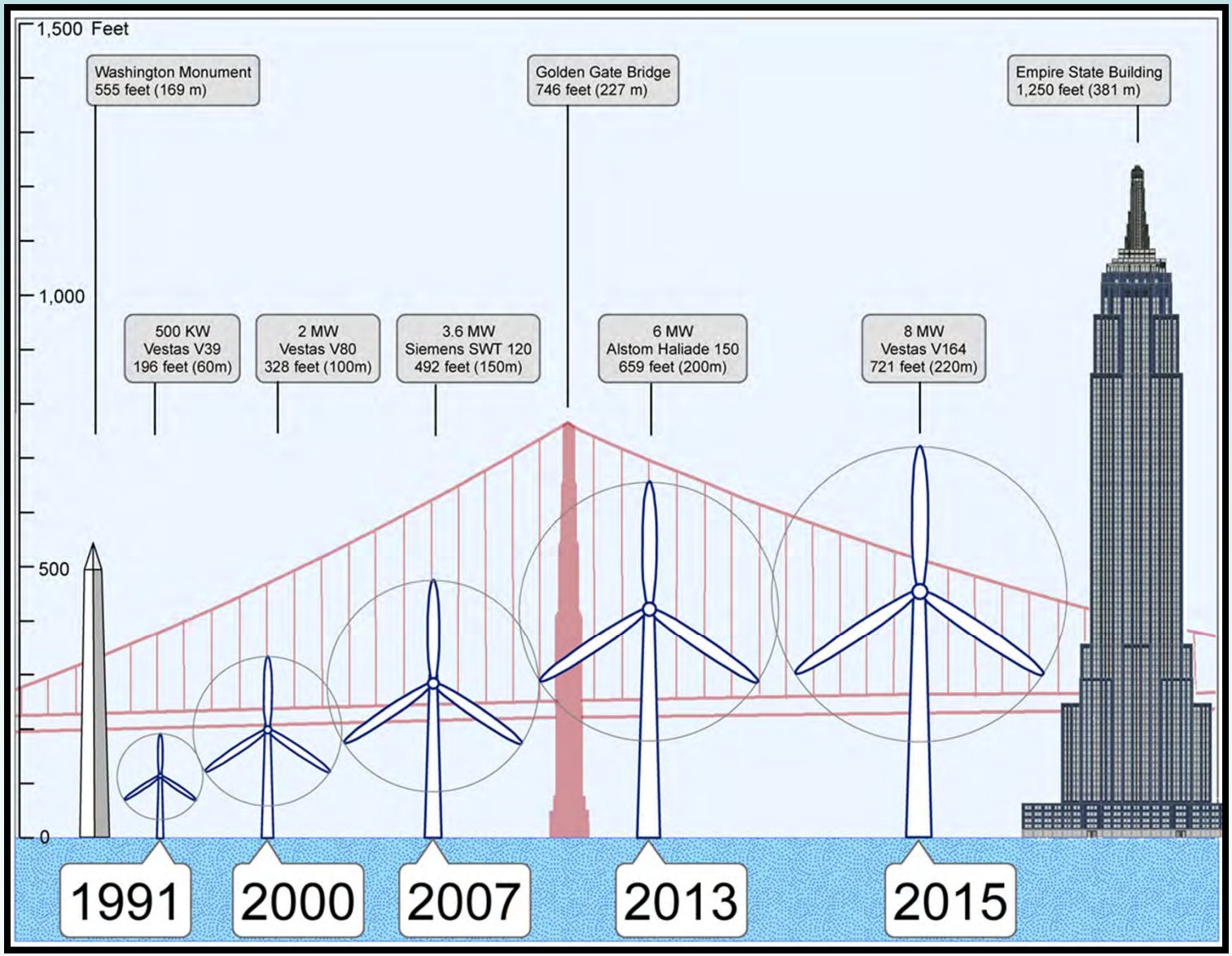
Source: Universal Foundation/Recharge News (top) and Dong Energy (bottom)

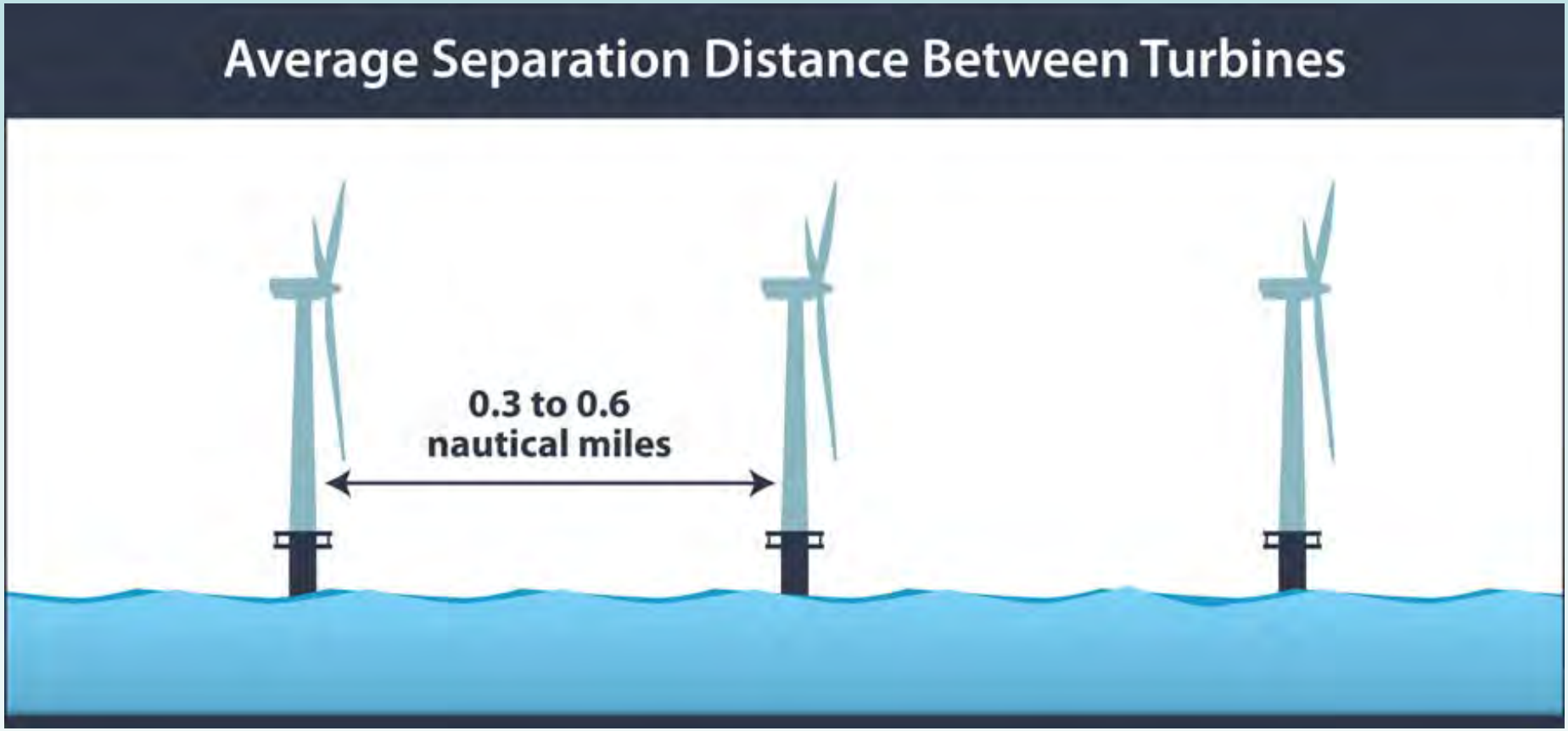
Scour Protection



A rock pad is laid beneath the monopile, and additional stones placed around the base. (photo courtesy of Ramboll.com)

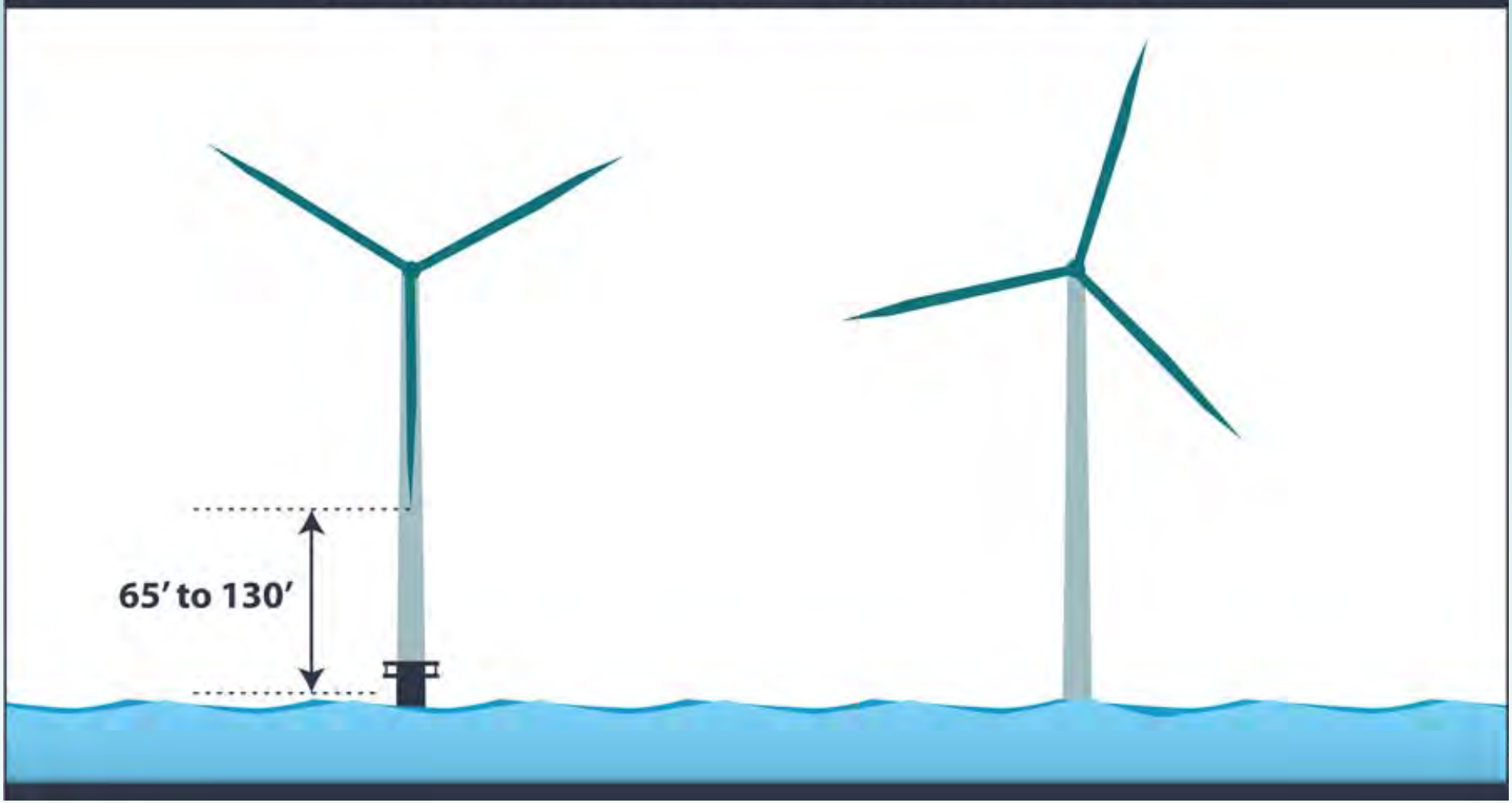
Height Comparison

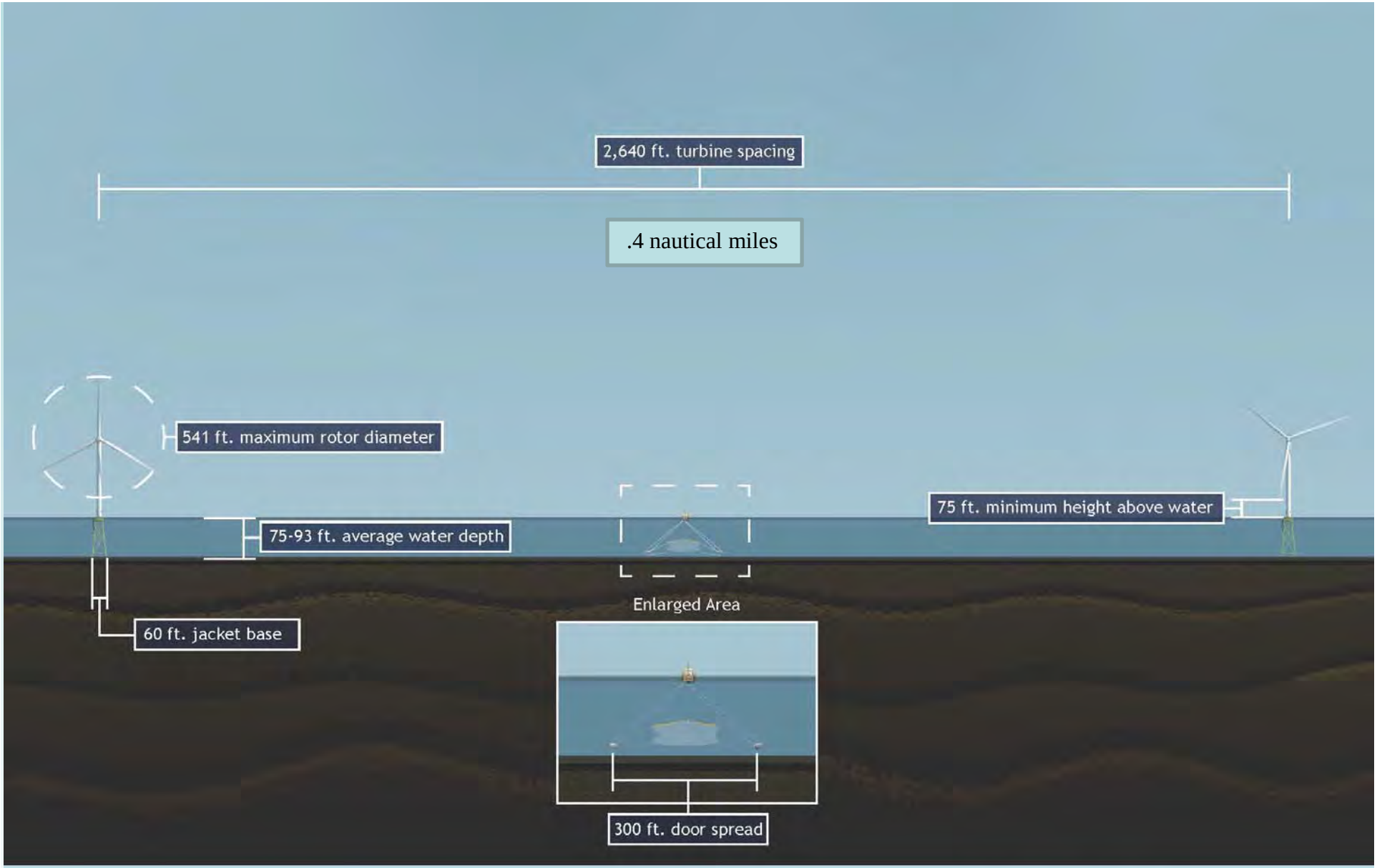



Average Separation Distance Between Turbines
0.3 to 0.6
nautical miles

Turbine Blade Average Height Above Sea Level

Utilizing Current Technology and Assuming Calm Seas





Block Island Wind Farm

October 9, 2012

0 150' 250' 500'

50' SCALE

Prepared by

edr COMPANIES

Prepared for

DEEPWATERWIND

Block Island Wind Farm

October 9, 2012

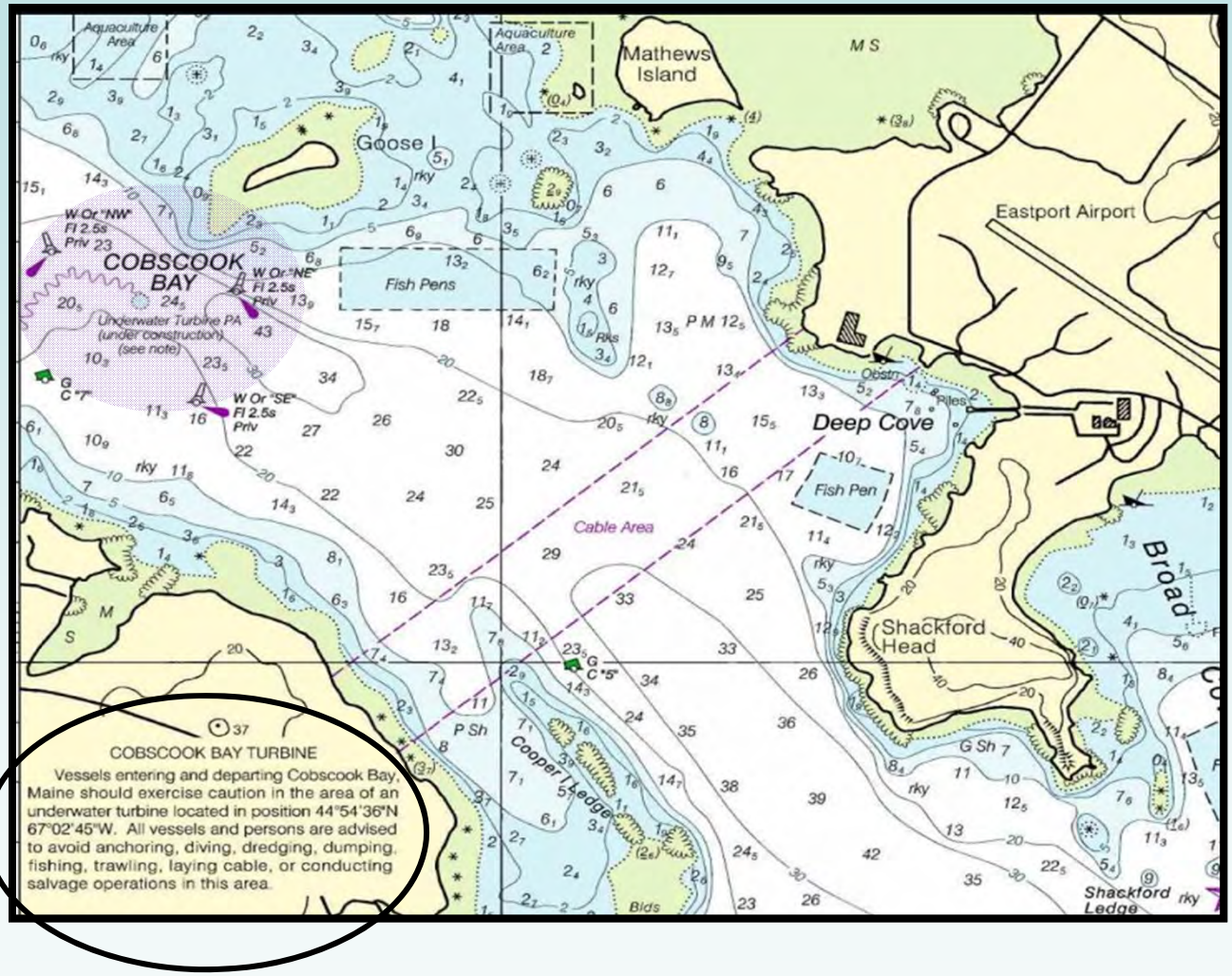
Prepared by

edr COMPANIES

Prepared for

DEEPWATERWIND

Caution Area Example



European Example: BARD Offshore 1

- Location: North Sea (Germany)
- Eighty 5 MW Turbines
- Turbine height: 151 m
- Rotor diameter: 122 m
- Foundation: Tripod
- Distance from shore: 101 km (54 nmi)

All Bard Offshore 1 photos courtesy of Bard (http://www.bard-offshore.de/en/media/photos.html)


BARD 1


WIND LIFT I
CUXHAVEN
WIND LIFT I

For More Information

BOEM Office of Renewable Energy Programs

(703) 787-1300

On the Web:

www.boem.gov

→Renewable Energy Program

→State Activities

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