

**Empire  
Wind**

Let's power New York's  
future together



**equinor**

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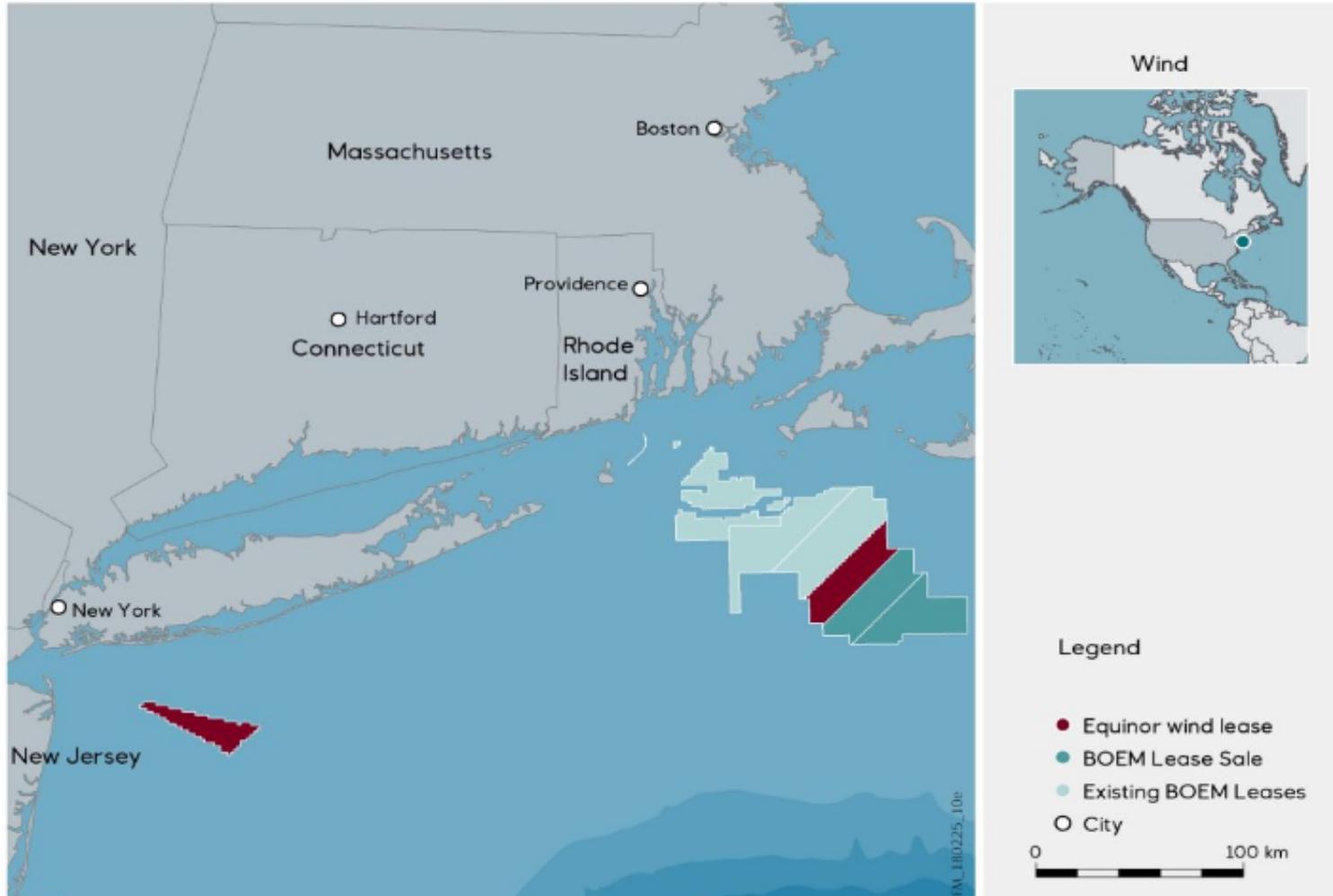


# Equinor introduction: Bringing European experience to the US

					North West Europe	United States East Coast	Japan
							US West Coast
Hywind demo	Sheringham Shoal	Dudgeon	Hywind Scotland	Arkona	Dogger Bank	Empire Wind	Floating large scale
							
In operation	In operation	In operation	In operation	In operation	Consented	Provisional Award	
<b>2.3 MW</b>	<b>317 MW</b>	<b>402 MW</b>	<b>30 MW</b>	<b>385 MW</b>	<b>3 x 1.2 GW</b>	<b>816MW</b>	
2009-	2012-	2017	2017	2019	2020-	2024-	



# Equinor Wind in the US: leading position in US offshore wind



New York

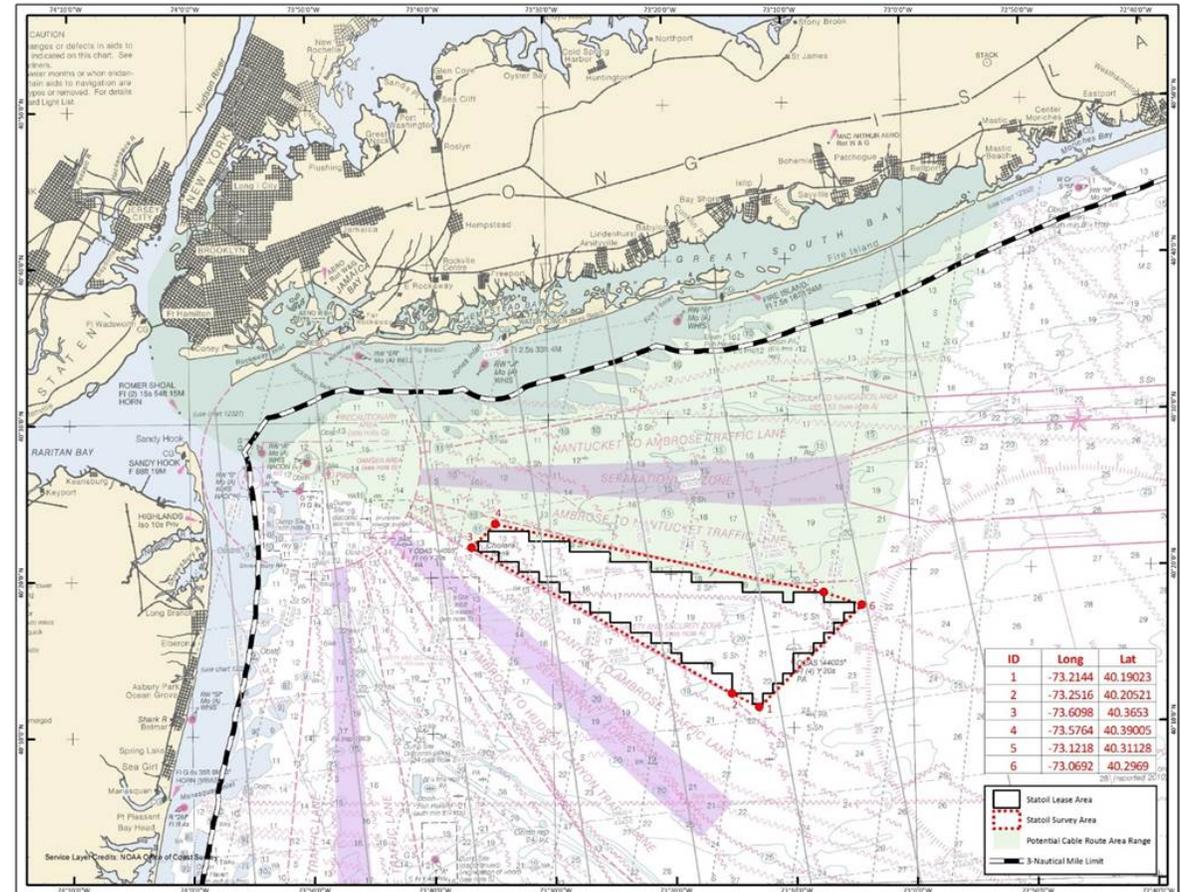
New Jersey

New England



# Empire Wind: Key facts

- Provisional award capacity: 816 MW
- Foundations: Gravity-Based (Concrete) manufactured in the Capital Region
- Operations and Maintenance (O&M) base in New York City
- Proposed onshore substation: Gowanus
- Next generation turbines
- Water depth: 65 – 100 ft
- Construction period: 2022-23
- Electricity Delivered to New York: 2024+



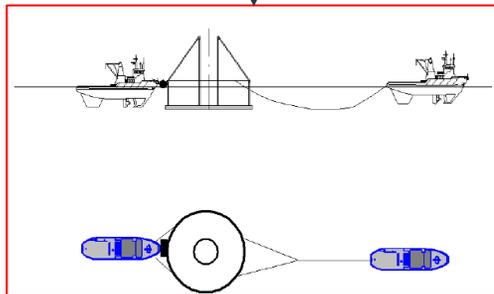
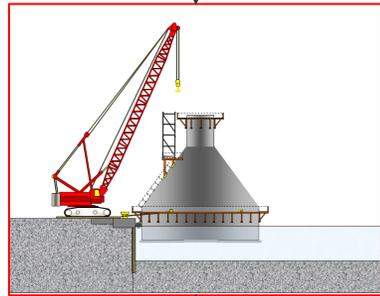
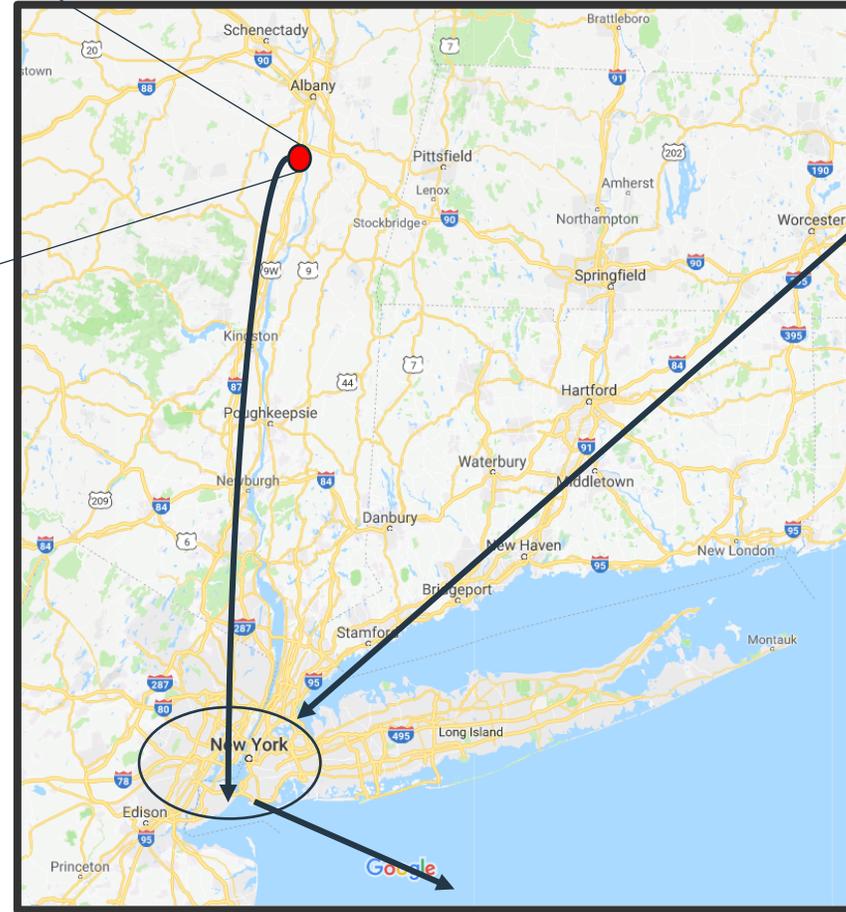
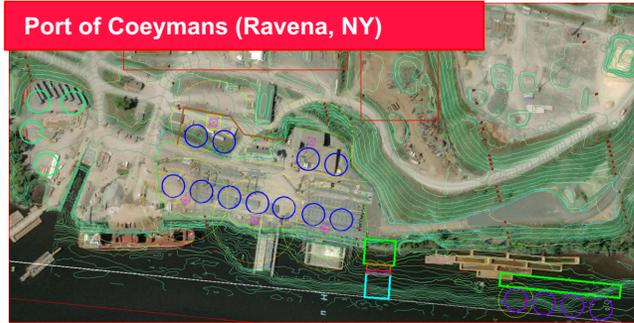
# Empire Wind: Providing great benefits to New York

- Creating **thousands of jobs** during construction and operations
- Creating a **manufacturing hub for concrete foundations** at Port of Coeymans
- More than **\$60 million** in **port upgrades**
- **Operations and maintenance** base in New York
- Establishing a **community benefits fund** of \$4.5 million
- Supplying renewable power from the **New York Bight to the heart of New York City**
- Supporting New York State in **cost-effectively delivering its long-term decarbonization goals**
- **Reduced CO<sub>2</sub> emissions** of 1.6 million tons per year



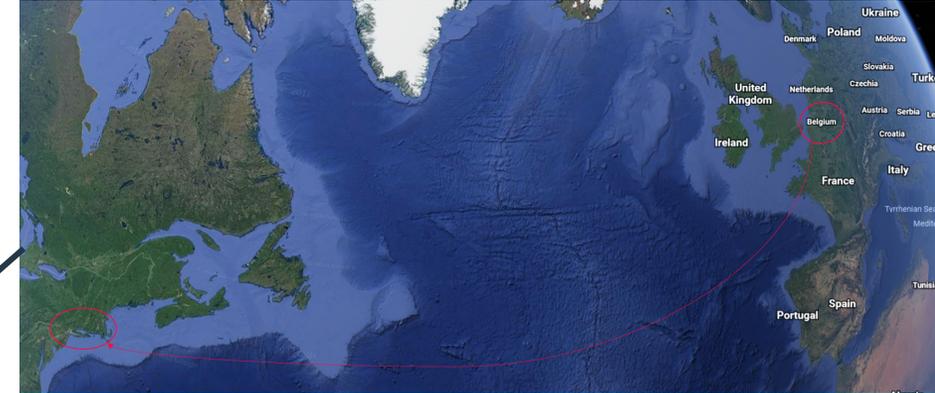
# Empire Wind: Gravity-Based Structure (GBS) Foundation Fabrication

## 1. Fabrication at Port of Coeymans



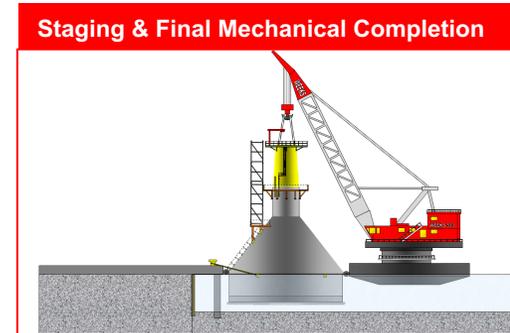
Tow out ~120nm, 30hr, @4knots

## 2. Assembly with Transition Piece

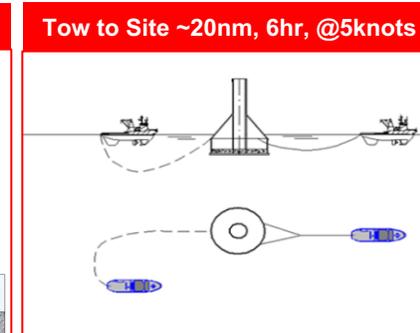


EU TP Manufacturing and transport to US, 2wks transport @10knots

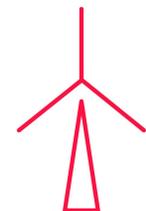
## 3. Staging and Delivery to Site



Staging & Final Mechanical Completion



Tow to Site ~20nm, 6hr, @5knots



Empire Wind

# Empire Wind: Operations and Maintenance (O&M) base in Brooklyn

- Proposed O&M base at South Brooklyn Marine Terminal
- Direct labor: approx. 50-70 full-time jobs
- Indirect labor: additional staffing working from the base:
  - Turbine suppliers
  - Vessel workers
  - Other contractors – e.g. Installation and construction contractors, equipment contractors, vessel captains, etc.



Dudgeon O&M – East coast UK

# Empire Wind: Responsible siting and permitting

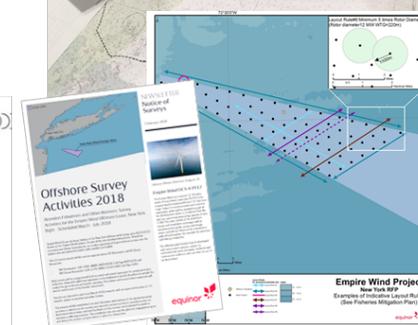
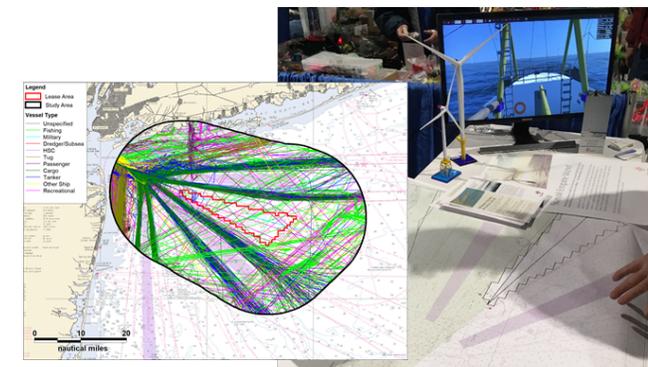
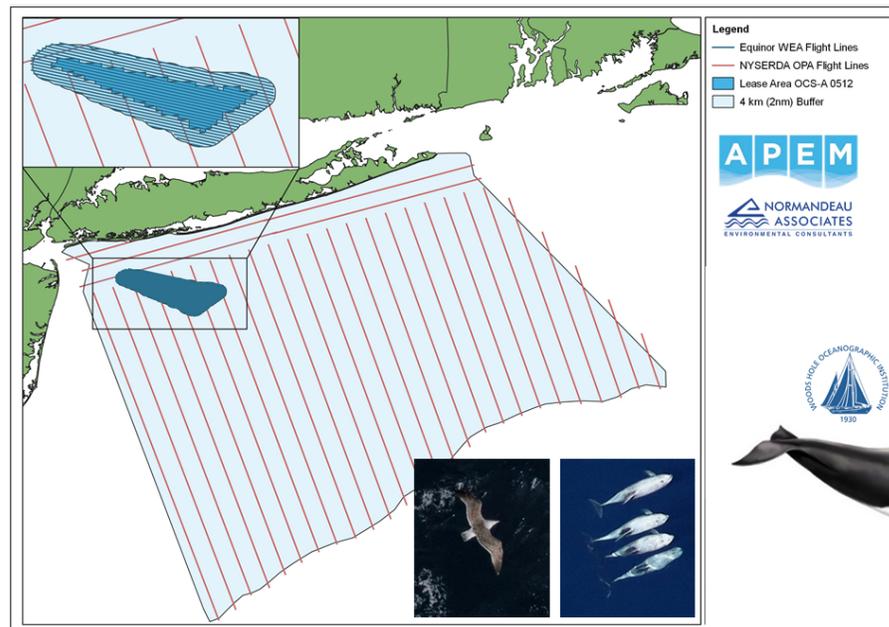
## New York State

- Environmental and Fishing Mitigation Plans
- Article VII Process



## BOEM

- Site Assessment Plans (SAP)
- Construction and Operation Plan (COP)
- Environmental and Technical Review



## Stakeholder Engagement





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