



**NYSERDA**

# Offshore Wind Open House

September 2019



# Agenda

- Welcome
- NYSERDA Overview
- Empire Wind
- Sunrise Wind
- Poster Session



# 9,000 MW of offshore wind by 2035

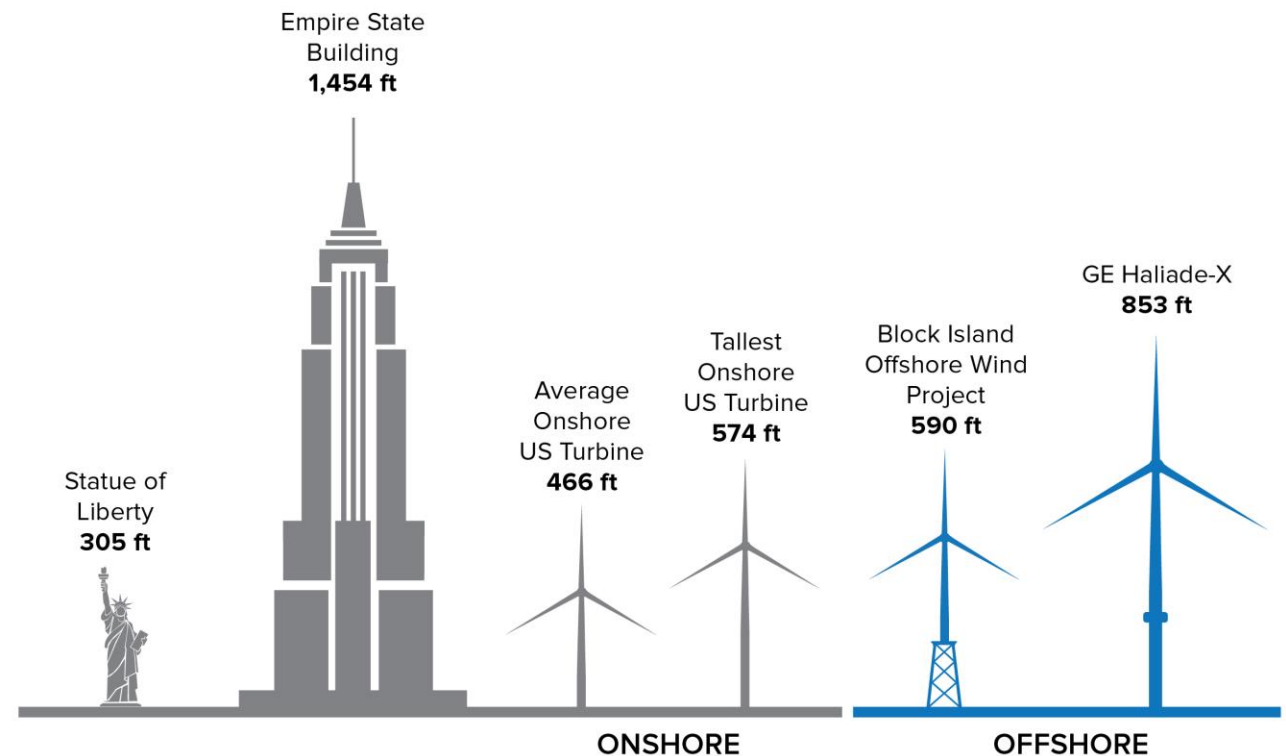
10,000 JOBS  
ENOUGH TO POWER  
6 MILLION HOMES  
BILLIONS IN  
INFRASTRUCTURE  
30% OF NEW YORK'S  
ELECTRICITY LOAD

**NEW YORK'S NATION-LEADING CLIMATE LAW**  
**Climate Leadership and Community Protection Act**

**100% Clean  
Electricity x 2040**

# Why Offshore Wind?

- Enormous potential for **clean, renewable, and locally produced power** where demand is highest
- **Significant investments** in infrastructure and communities
- Major new source for **thousands** of short- and long-term **skilled jobs**
- More **diverse, resilient** electricity supply
- **Avoids harmful greenhouse gas emissions** that contribute to climate change



# BOEM

## The Federal Role

- “Landlord” of lease areas
- Oversees leasing process
- Oversees all federal permitting processes: Site Assessment Plans, Construction and Operations Plans, Environmental Assessments

# New York

## The State Role

- Buyer in long-term revenue contracts with projects
- State permitting processes
- Energy policy and strategy development
- Stakeholder engagement
- Supply chain and workforce development
- Research and data development
- Regulatory activities related to offshore energy development

**NYSERDA, DOS, DEC, DPS**

# Developers

## The Industry Role

- Design, finance, build, and operate projects
- Supply chain planning including ports development and top-tier procurement
- Fulfill federal and state permit requirements
- Stakeholder engagement throughout development

# New York's Priorities

- Environmental and Fisheries Mitigation Plans
- Community Outreach Plans
- Project Labor Agreements
- Prevailing Wage
- New York Supplier Opportunity



Record  
Competition

**4 proposers**  
**18 bids**

Evaluation Criteria

**70% price**

**20% economic benefits**

**10% project viability**

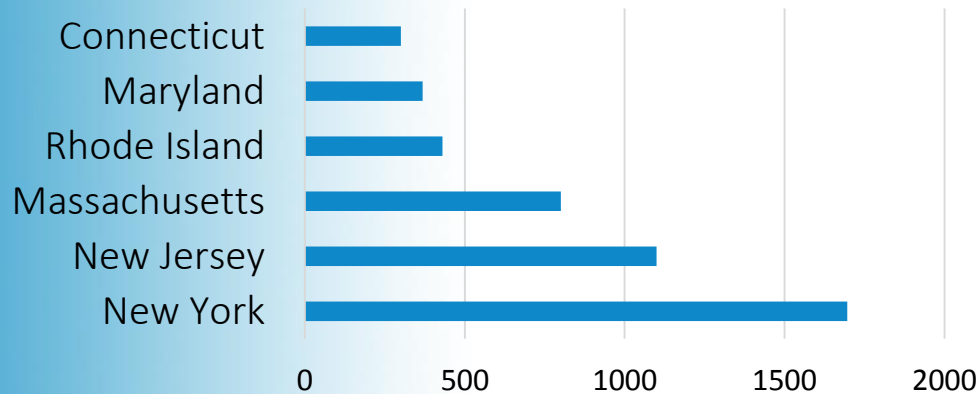
## AWARD RESULTS: TWO PROJECTS

THE LARGEST  
COMMITMENT TO  
OFFSHORE WIND  
BY A STATE IN  
U.S. HISTORY

**1,696 MW**  
of offshore wind capacity

*Enough to power over  
1 million New York homes*

Contracted MW By State





# AWARD RESULTS: TWO PROJECTS

2019: Project Kick-off



Manufacturing and Assembly at Capital Region ports



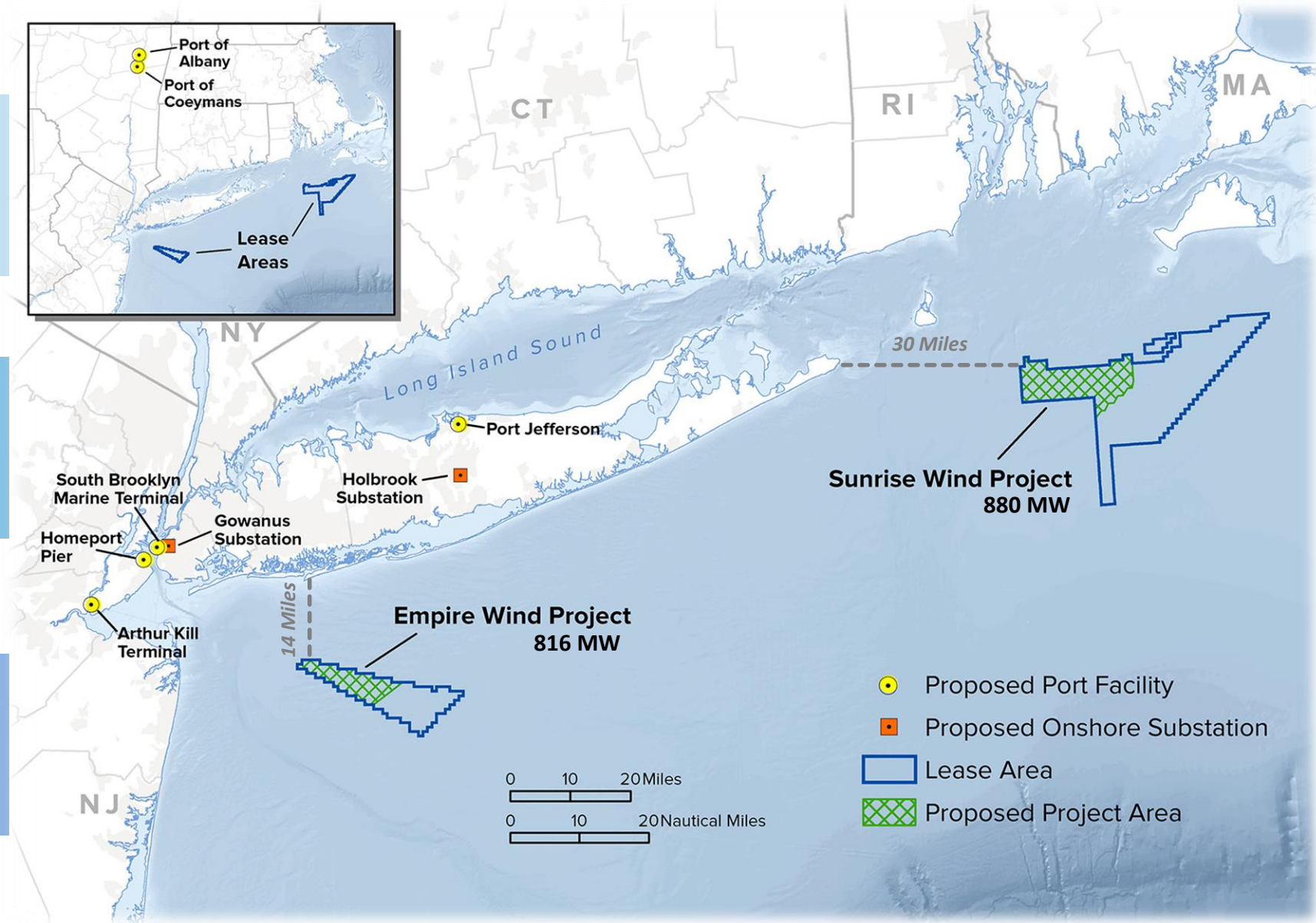
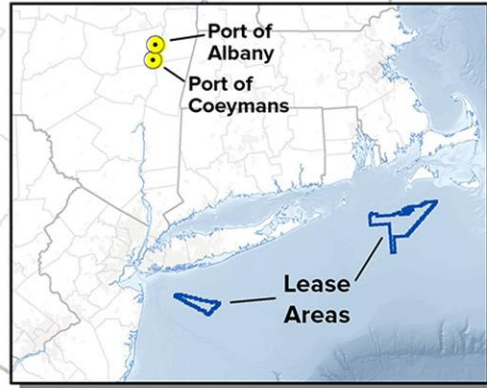
Staging and Installation in New York Harbor

2024: Project Commissioning



Operations and Maintenance from Brooklyn and Port Jefferson

~2050 (25-Year Contracts)



- Proposed Port Facility
- Proposed Onshore Substation
- Lease Area
- Proposed Project Area

## AWARD RESULTS: TWO PROJECTS

# Economic and Job Opportunities

**\$3.2 billion**

in combined private sector investments both upstate and downstate

**\$287 million**

in combined investments, with Governor Cuomo's 2019 State of the State commitment to port infrastructure, in long-term port facilities and cutting-edge technologies

**1,600 Jobs**

in project development, component manufacturing, installation, and operations maintenance

*Directly offering well-paying careers with salaries of over \$100,000 per year*



## AWARD RESULTS: TWO PROJECTS

# NYS Investments

**\$20 million**

**Offshore Wind  
Training Institute**

**\$3 million**

**Community and Workforce  
Benefits Fund**

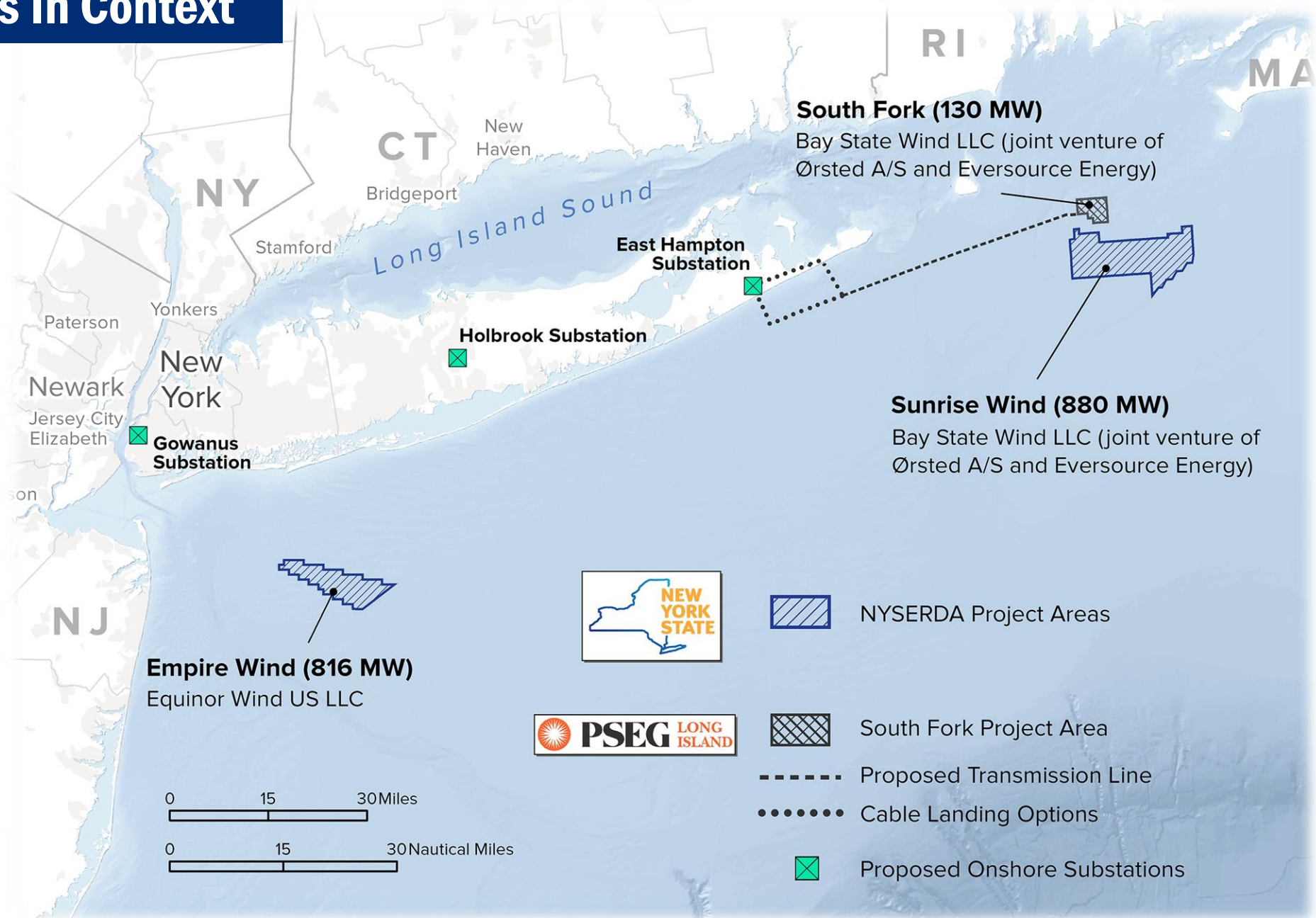
in combined public and private investments



# Offshore Wind Projects In Context

## New York Offshore Wind

**1,826 MW**





**Empire  
Wind**

Let's power New York's future  
together



**equinor**

**Julia Bovey**

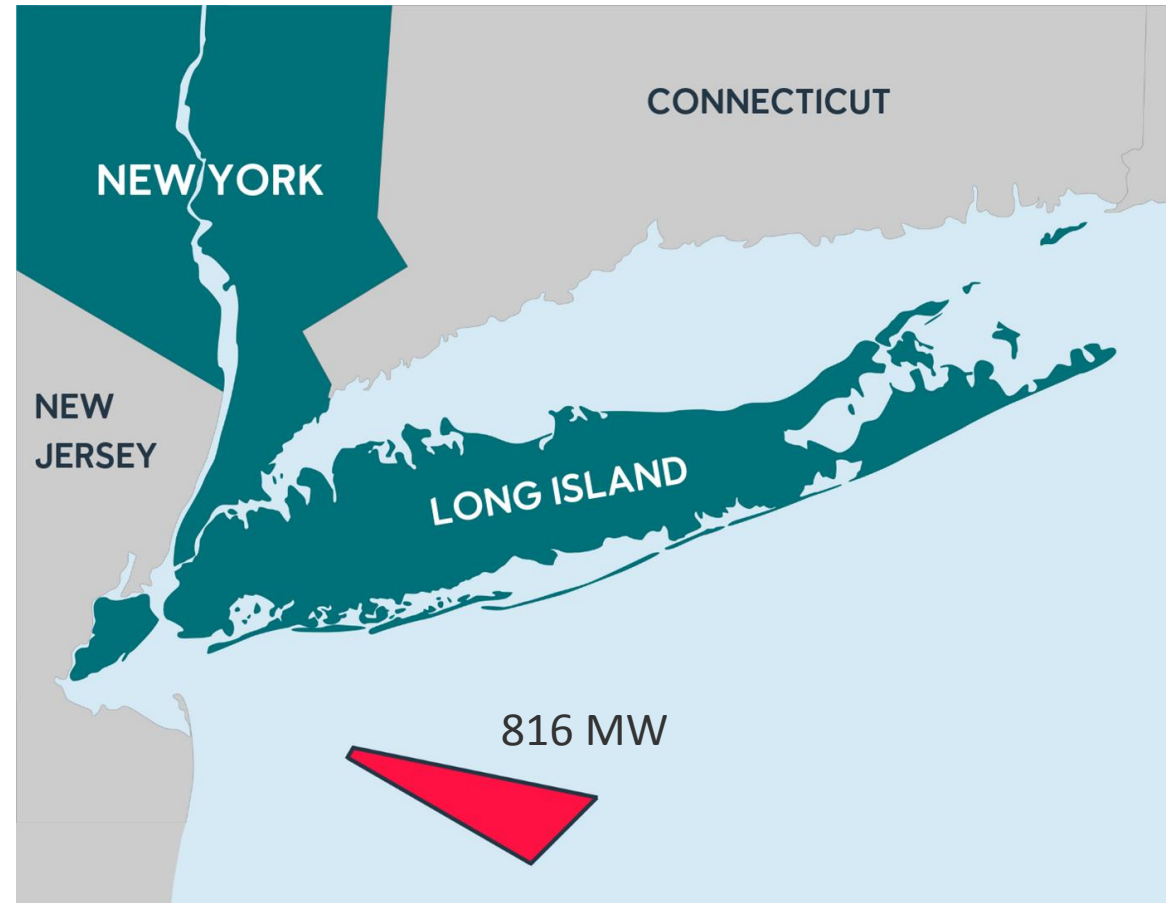
Director, External Affairs | Equinor Wind US

### **Bringing European experience to the US**

Almost 2,000 MW in Permitting, Planning and Operations

### **Empire Wind Key Facts**

- Gravity-Based (Concrete) Foundations manufactured in the Capital Region
- Operations and Maintenance (O&M) base in New York City
- Proposed onshore substation: Gowanus
- Production Commencing: 2024+
- Reduced CO<sub>2</sub> emissions of 1.6 million tons per year



# 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
- Proposed point of final foundation staging at **Homeport Pier, Staten Island**
- Establishing a **community benefits fund** of \$4.5 million

## Proposed O&M base at South Brooklyn Marine Terminal

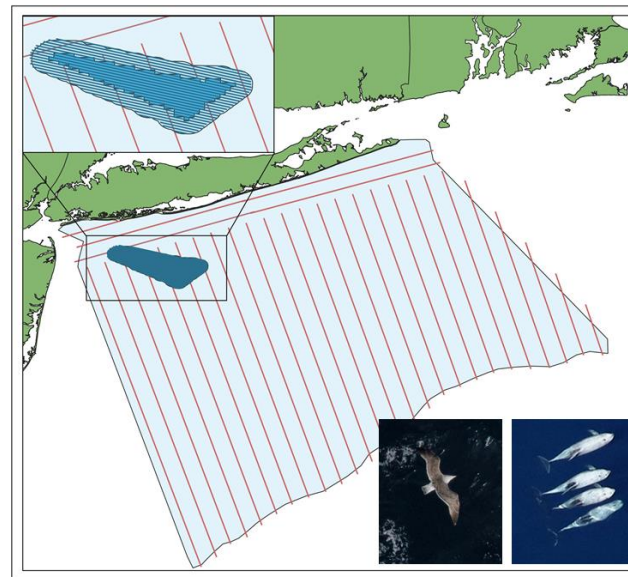
- Direct labor: approx. 50-70 full-time jobs
- Indirect labor: additional staffing working from the base:
  - Turbine suppliers
  - Vessel workers
  - Other contractors – e.g. Installation and construction contractors, equipment contractors, vessel captains, etc.



# Empire Wind: Responsible siting and permitting

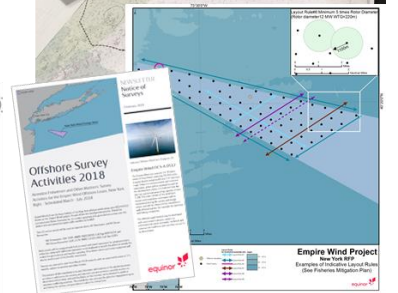
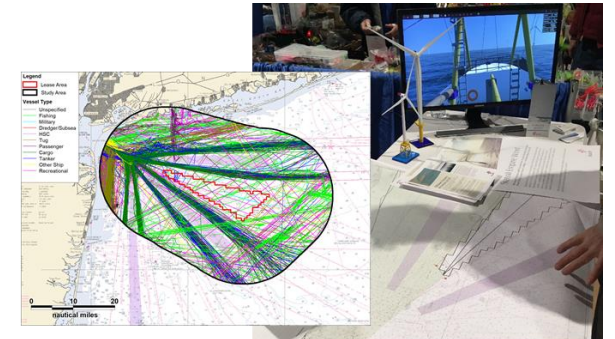
## New York State

- 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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# Sunrise Wind

A Joint Venture of Ørsted and Eversource



NYSERDA Offshore Wind Public Meetings

September 2019

# Sunrise Wind is bringing unparalleled experience in developing offshore wind to New York



## Offshore Wind Pioneer

Built the first offshore wind farm in the world, the first in the U.S. and developing the largest project portfolio in the country

## Global Leadership

20+ years experience building offshore wind farms

## Proven Expertise

25 successful offshore wind farms totalling 5.6GW capacity



## Energy Leader

100+ year history of operation in Northeast  
New England's largest energy company

## Transmission Expertise

Premier electric transmission developer

## Northeast Roots

Deep-rooted knowledge of the region's electrical system

# Sunrise Wind Is Coming To New York

880 MW of Clean, Reliable Energy

## Energy *Where* It's Needed

- Located 30+ miles over the horizon from Montauk, NY
- Output delivered over a new submarine export cable to Brookhaven, NY

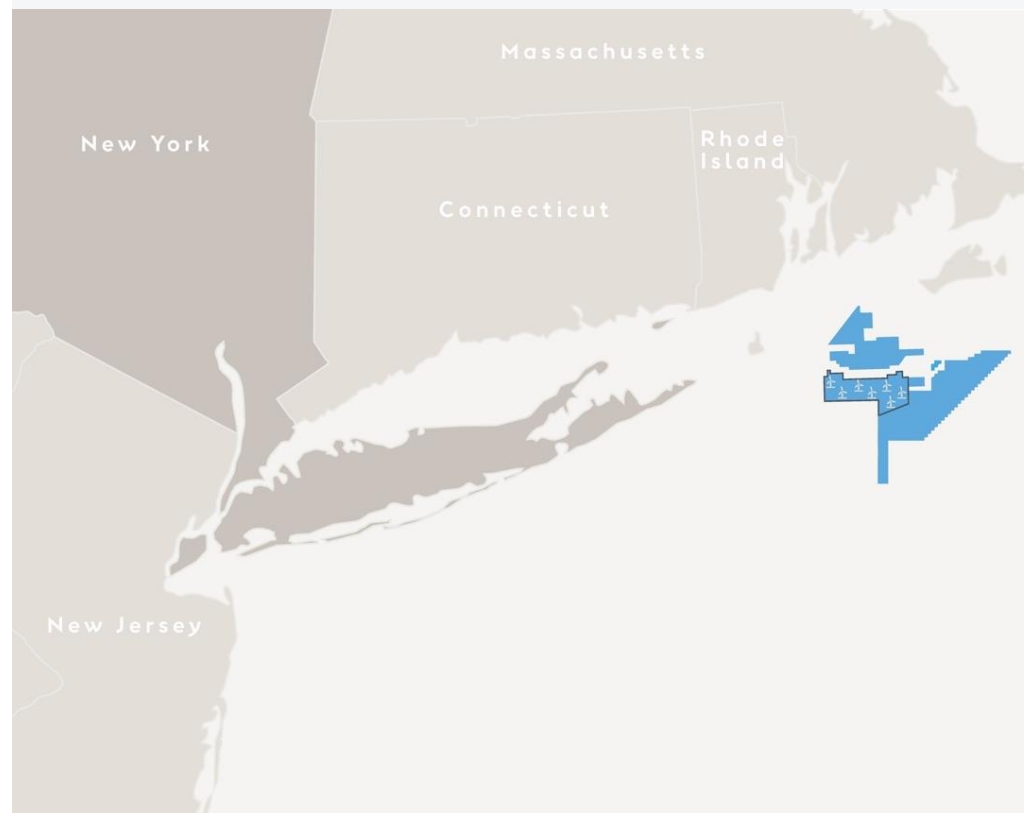
## Energy *When* Its Needed

- Production beginning in 2024
- Supports New York's nation-leading clean energy mandate

## Energy *For* New York

- 800 direct jobs
- 1,500-2,000 indirect jobs
- Committed to paying prevailing wages
- Project Labor Agreement(s)

## Renewable energy for 500,000+ New Yorkers



# Sunrise Wind Is Investing In New Yorkers

## Strategic Initiatives to Position NY for a New Industry

### \$10 Million to fund the **National Workforce Training Center**

- Nation's first training facility dedicated to the U.S. offshore wind workforce
- Hosted by Suffolk County Community College, Long Island
- Innovative partnership between industry, academia, and labor

### \$1 Million **Upper Hudson Workforce Development Fund**

- Targeted to advancing the skills of the workforce of the Upper Hudson and Capital Region
- Prepare region to be a hub of OSW fabrication and logistics



# Sunrise Wind Is Investing In Major Port Infrastructure Upgrades

## \$10 Million New York Ports Infrastructure Development Fund

- Supporting major port infrastructure upgrades at multiple New York ports

## Port Jefferson regional operations and maintenance hub

- Complementary use of the port that will not conflict with ferry service
- ~100 permanent, full-time jobs over the 25-year life of project and shorter-term construction jobs

## Establishing key foundation component manufacturing facility at a port in the Capital Region



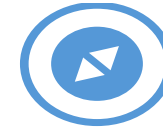
# Sunrise Wind Commitment to the Fishing and Environmental Communities



We will...



Promote the smart growth of the American offshore wind industry



Focus on maintaining access and navigation in and around our wind farms for all ocean users



Complete scientific research collaboratively with the fishing and environmental communities



Be accessible and available

# Learn More | Contact Us

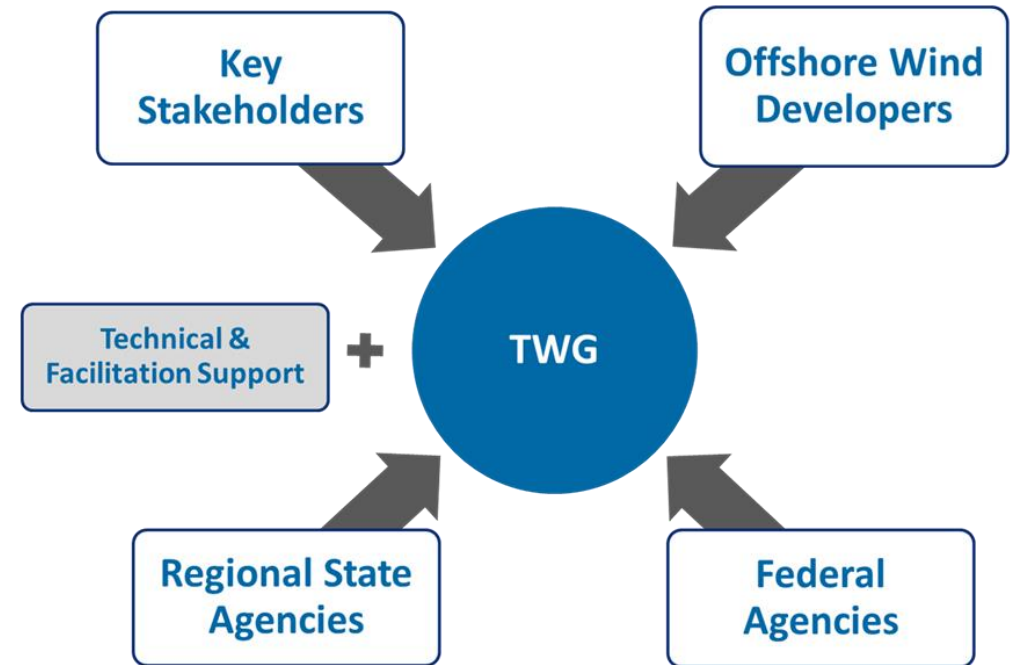
[www.SunriseWindNY.Com](http://www.SunriseWindNY.Com)  
[info@us.orsted.com](mailto:info@us.orsted.com)

**Orsted**  
EVERSOURCE

## AWARD RESULTS: TWO PROJECTS

# Public Engagement

**Cost-Effective  
and Responsible  
Advancement of  
Offshore Wind  
for New York**



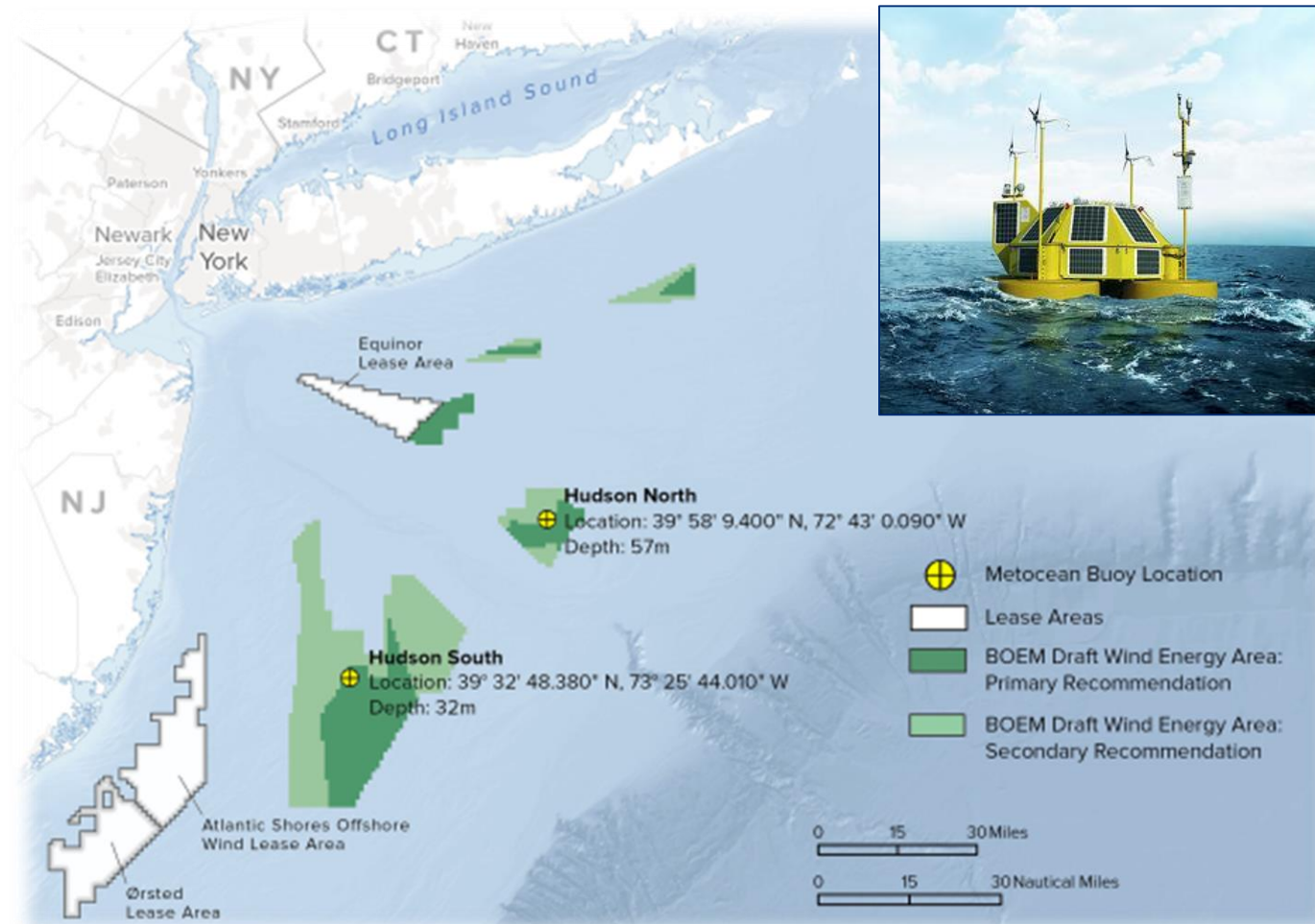
Technical Working Groups



# Ongoing Research

## Metocean Buoys in the New York Bight

- Two floating LiDAR (light detection and ranging) buoys deployed August 2019 for a 2-year period
- Remote sensing will provide continuous data on wind, ocean currents, and wildlife
  - Acoustic monitoring for birds, bats, and marine mammals
  - Nanotag antennas and fish tag receivers



# Ongoing Research

## Digital Aerial Survey

- Recently completed a 3-year, quarterly digital aerial survey of birds, marine mammals, sharks and fish shoals across the New York Bight
- Full reporting by end of 2019
- More than 3.5 million images collected



# New Research

## OSW and Fishing Projects in Development

- **Strategies and Tools to Address Commercial Fishing Access in Offshore Wind Farms;** National Renewable Energy Laboratory (NREL)
- **Creation of a Fishermen's Data Trust for effective inclusion of fishermen's knowledge in OSW decision making;** Responsible Offshore Development Alliance (RODA)



# Contact Us

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