

## Introduction to Offshore Wind in New York

# New York State Offshore Wind

*New York State Energy Research  
and Development Authority*



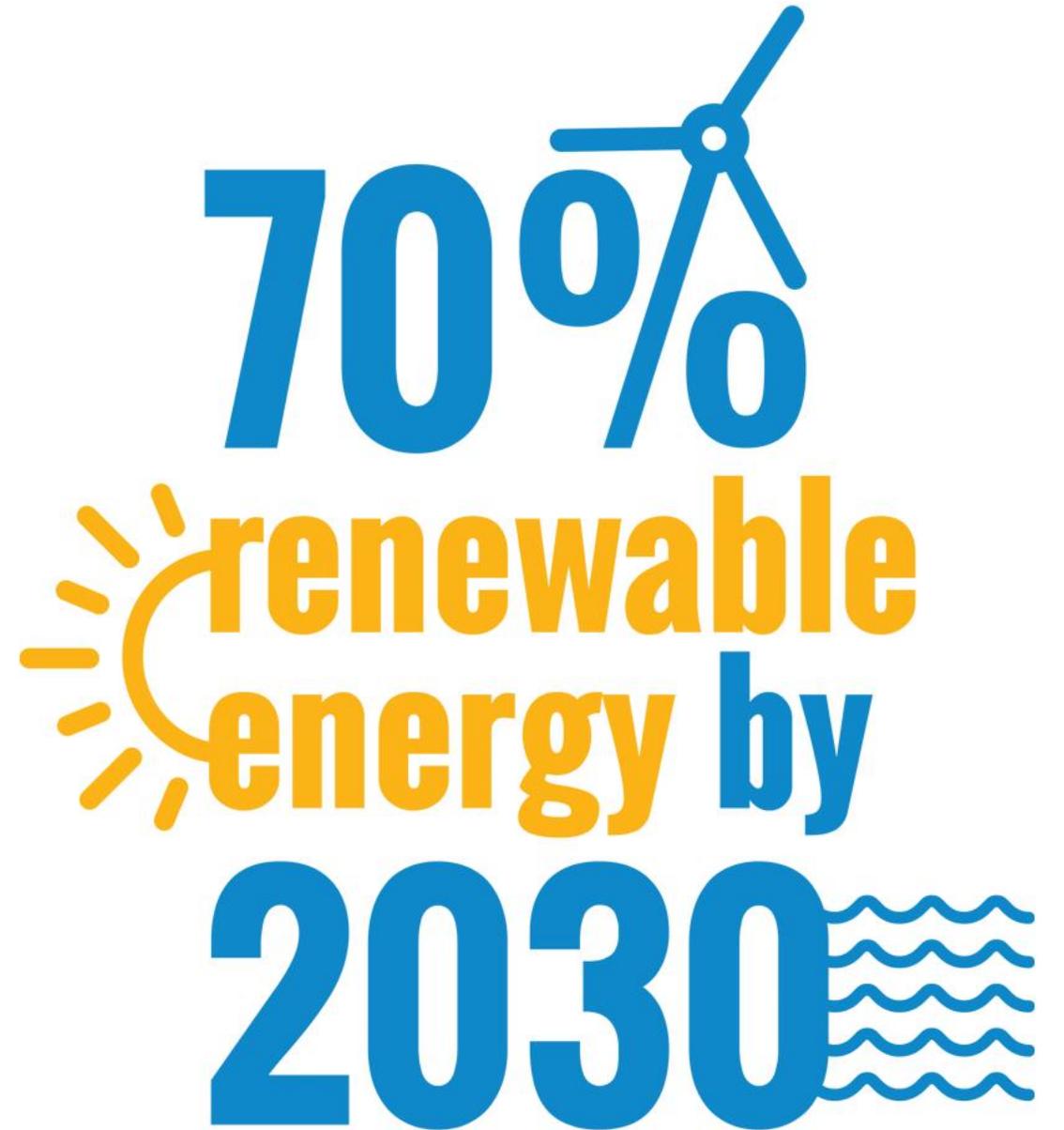
NEW YORK  
STATE OF  
OPPORTUNITY.

NYSERDA



Globally  
Unprecedented  
Ramp Up

70%  
renewable  
energy by  
2030





# 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**



**NYSERDA**

# Achievement of New York's offshore wind goals will result in significant benefits across the State

*Carbon Reduction*



*Infrastructure*



*Air Quality & Health*

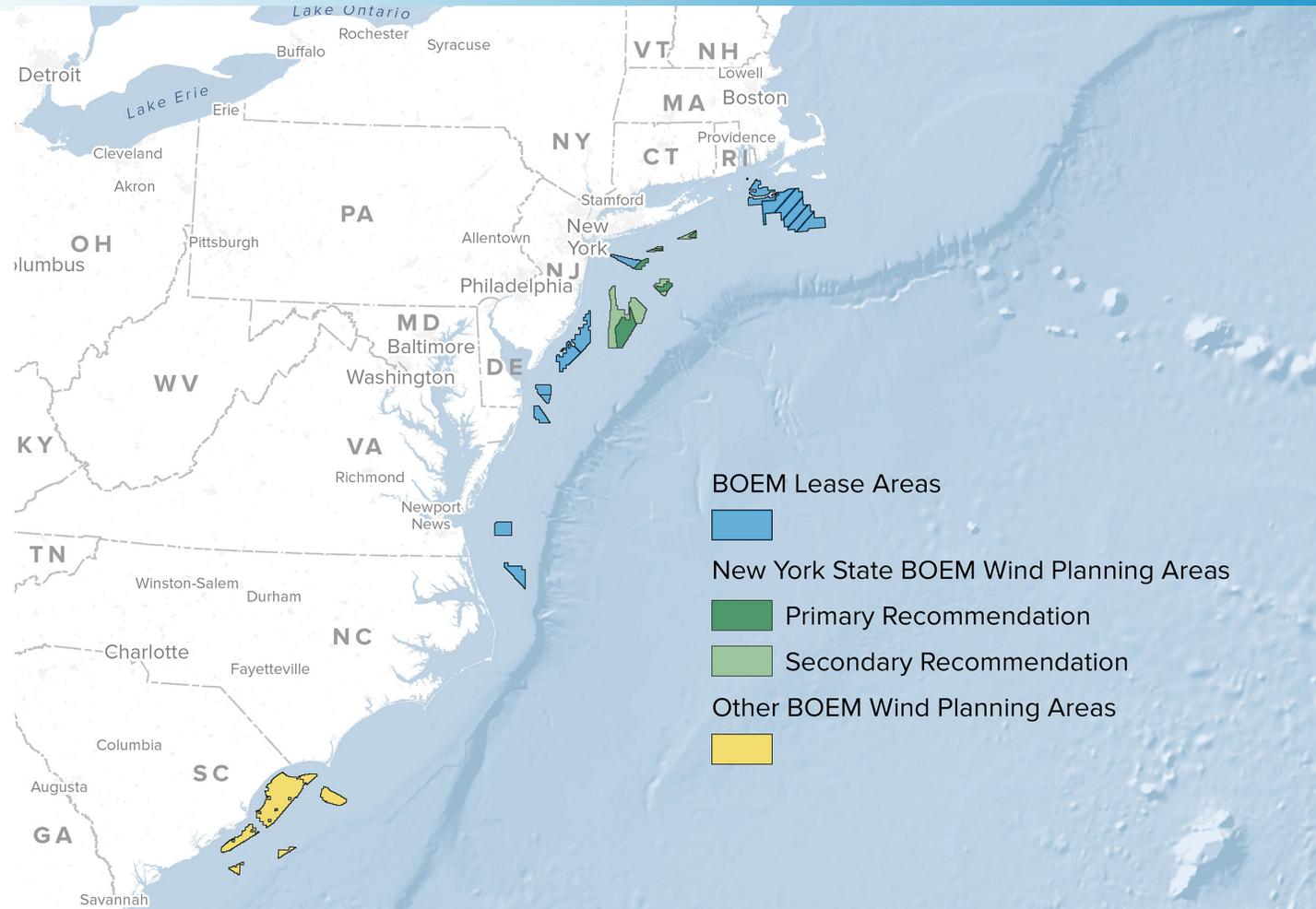
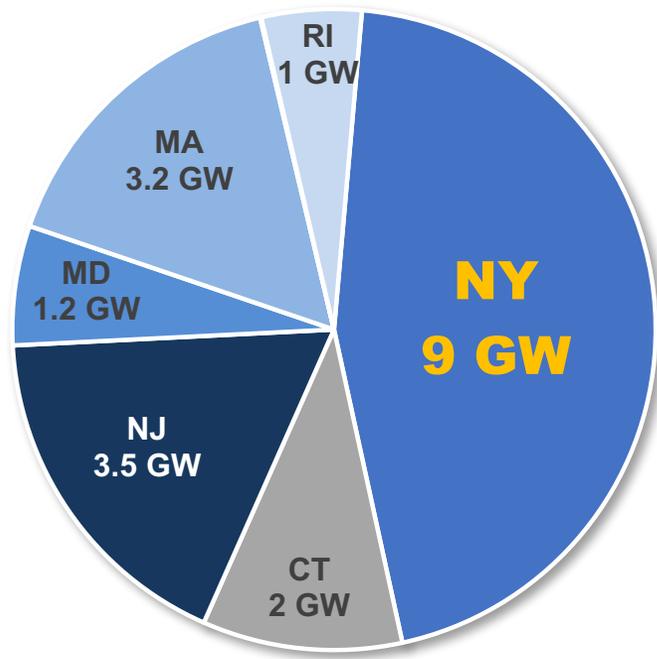


*Workforce*



# Regional Market Potential, 20GW

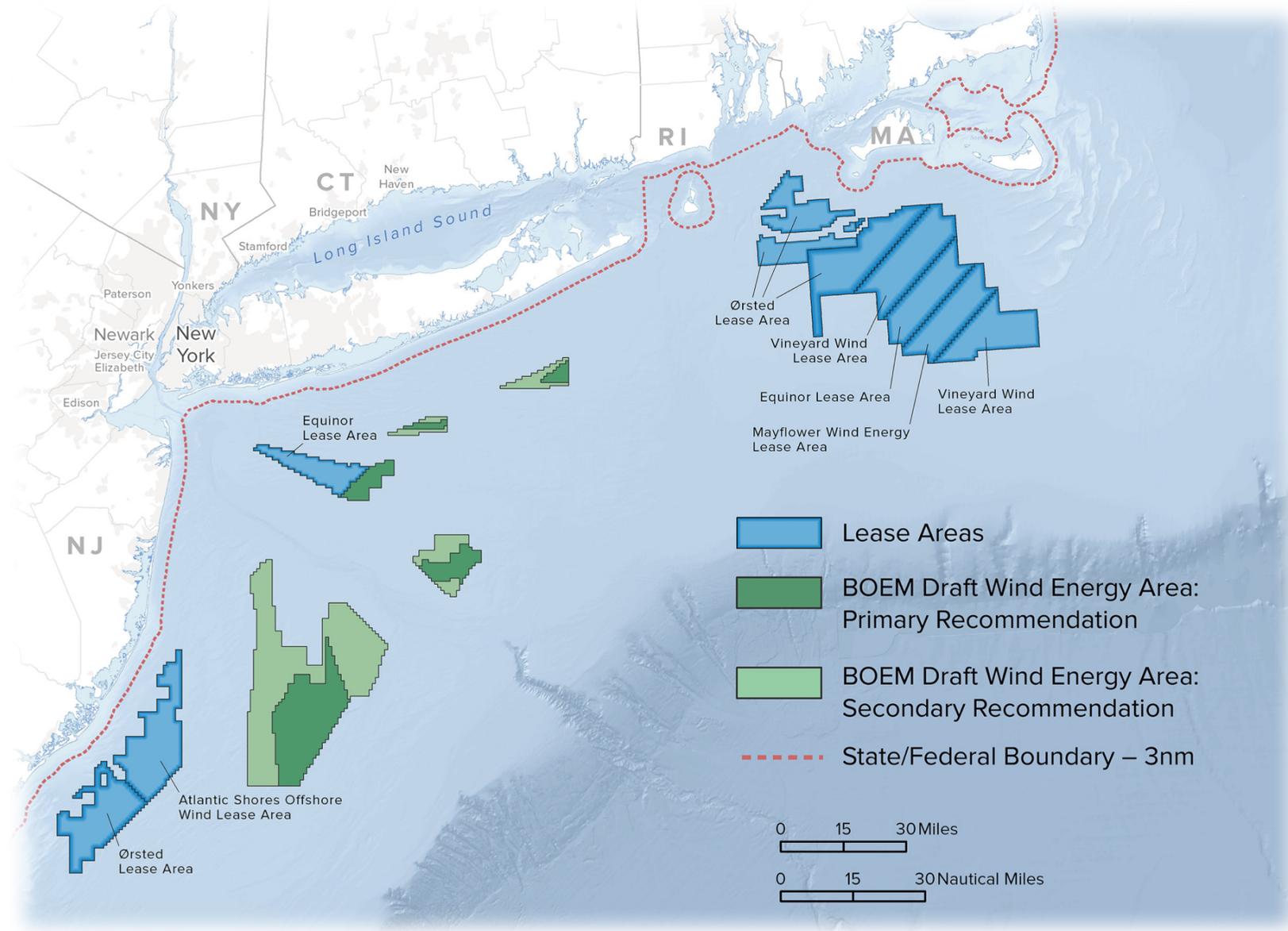
## Offshore Wind Goals by State



# 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



A photograph of an offshore wind turbine. The image shows the white tower, a yellow nacelle, and a large white blade extending from the nacelle. A worker in a red safety vest is visible on a yellow platform at the base of the tower. In the background, another turbine is visible on the water. The sky is overcast.

# NYSERDA

## The State Role

- > Stakeholder engagement
- > Research and data development
- > Supply chain and workforce development
- > New wind energy area recommendations
- > Regulated by NYS Dept. of Public Service
- > Long-term OREC contracts

# 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



Inaugural Solicitation, 2018

# Record Competition

**4 proposers**

**18 bids**

Evaluation Criteria

**70% price**

**20% economic benefits**

**10% project viability**

**2018 Solicitation:**

**New York  
Supply Chain  
Opportunity**

**Economic Benefit Criteria  
NY Supplier Opportunity Requirement  
NY Supply Chain Database  
Project Labor Agreements  
Prevailing Wage Requirements**



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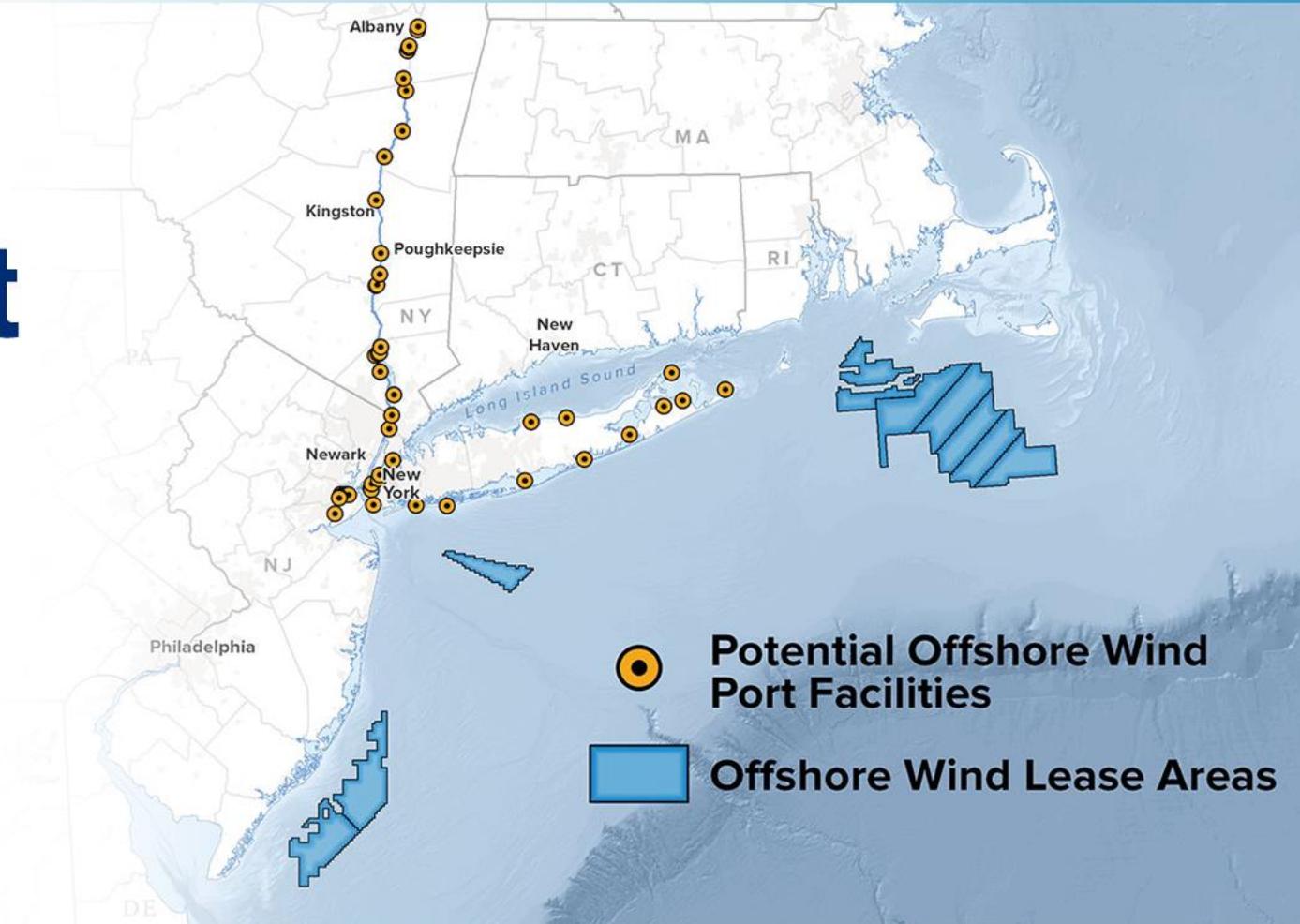
# Advancing interactions between stakeholders



# NYS Investments

**\$200 million**  
**largest investment**  
**by any state**

in offshore wind port infrastructure



Fostering offshore wind by investing

**\$15 Million**

in workforce development and  
infrastructure advancement

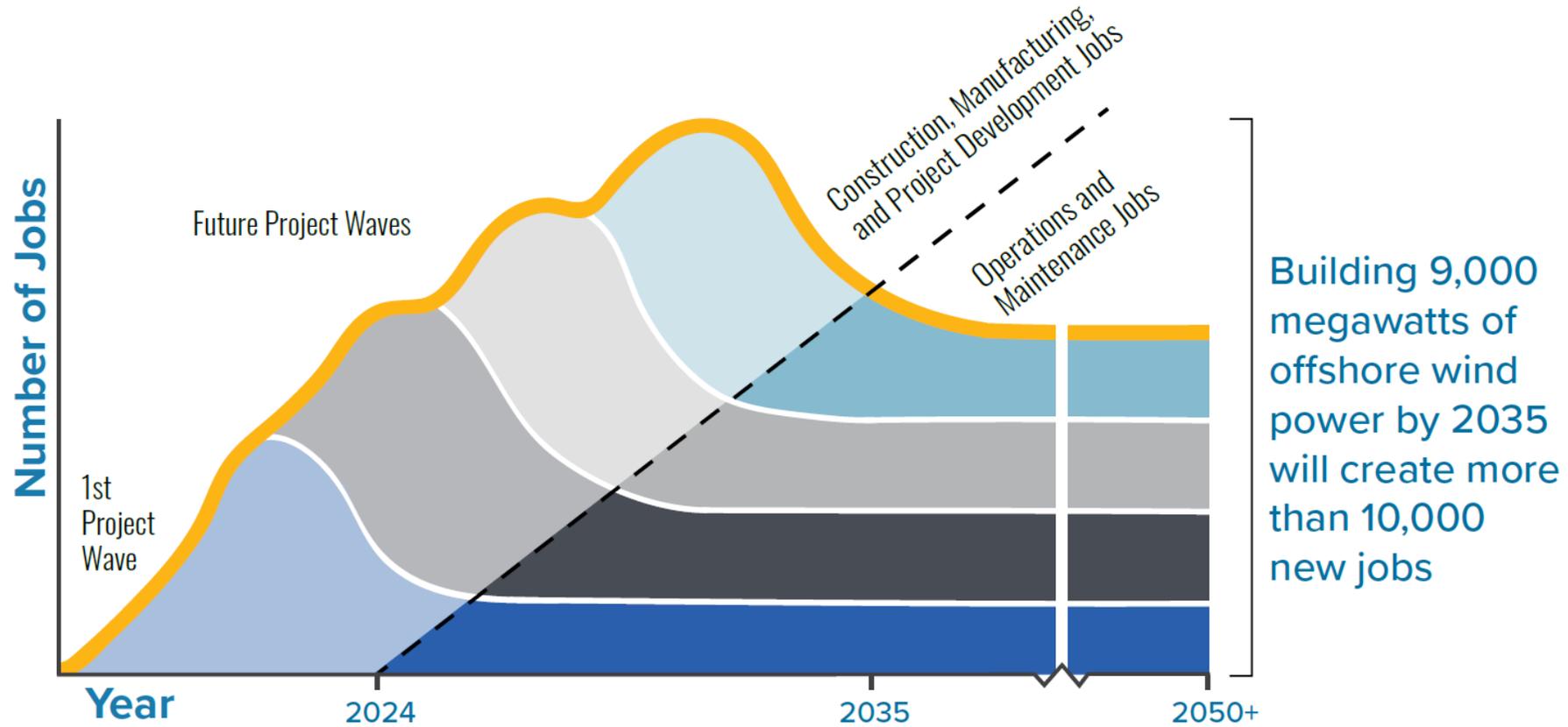


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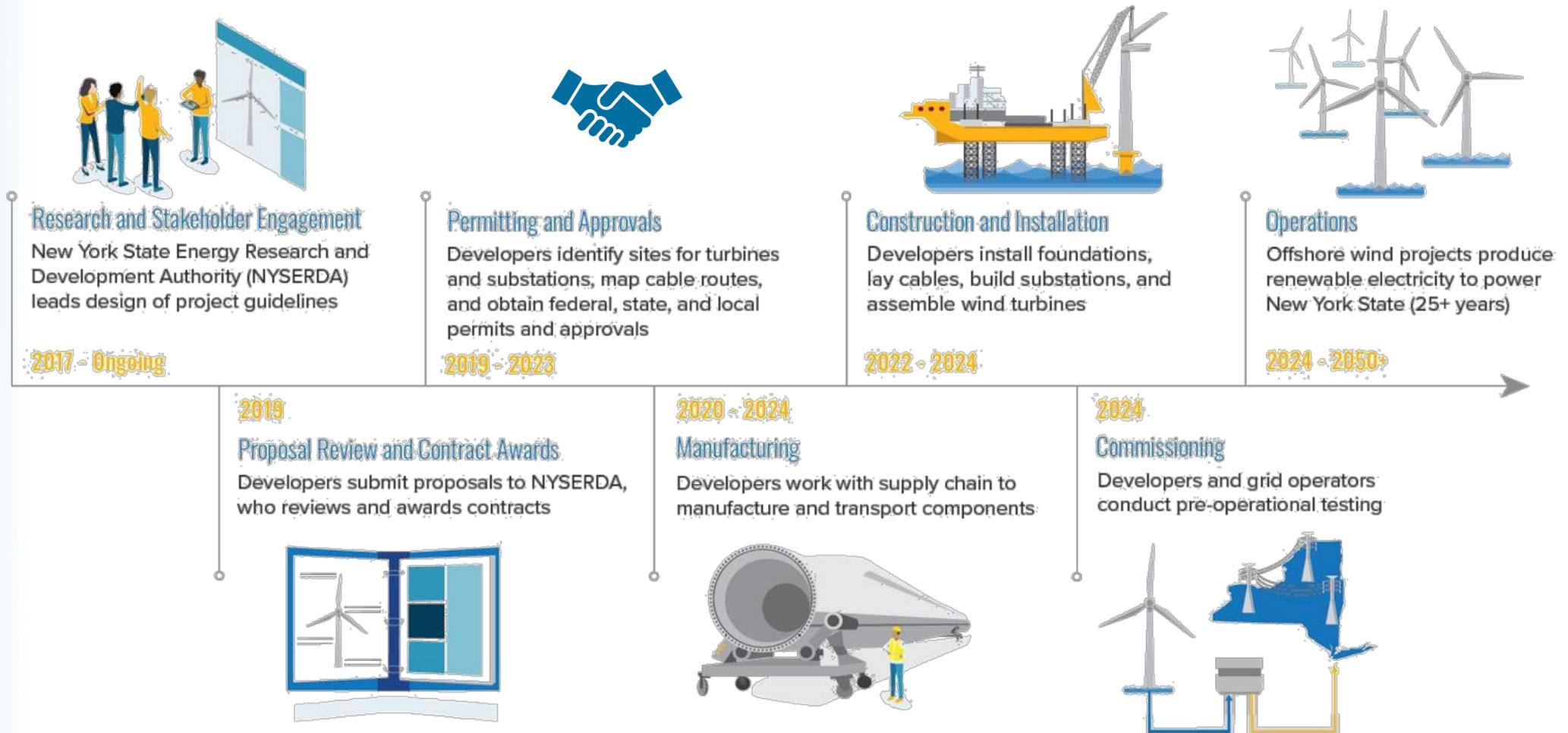
# NYS Investments

## OFFSHORE WIND JOB GROWTH

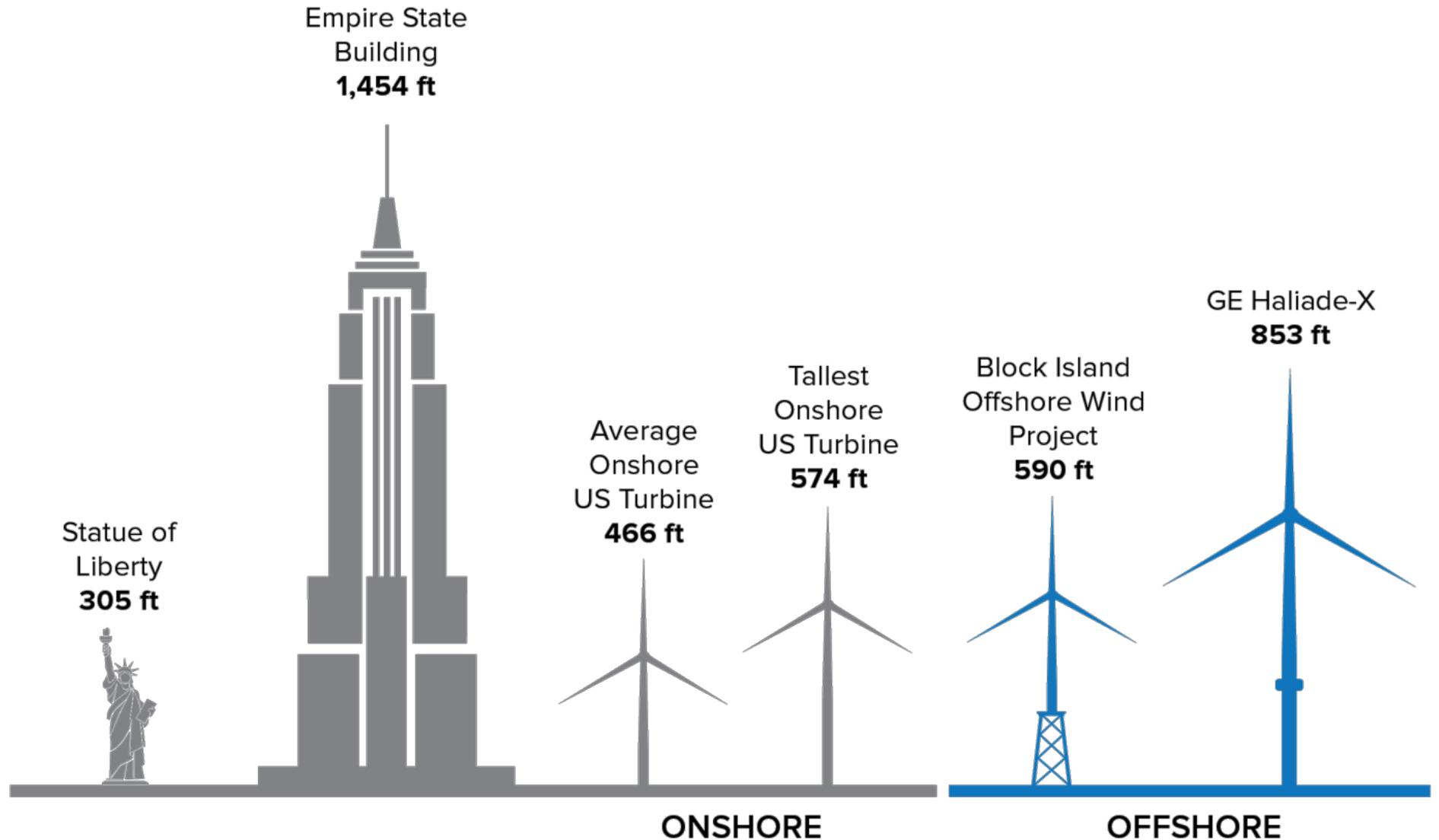


# Timeline

## Timeline for 1st wave of projects (approximate dates)

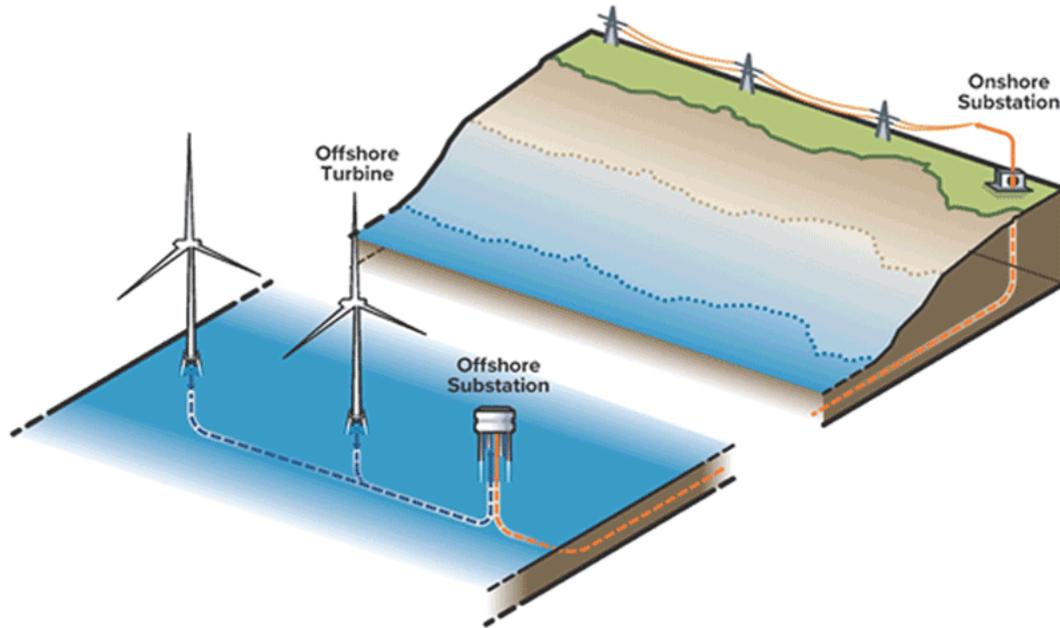


# Scale = Efficiency



# Components of the Offshore Wind Supply Chain

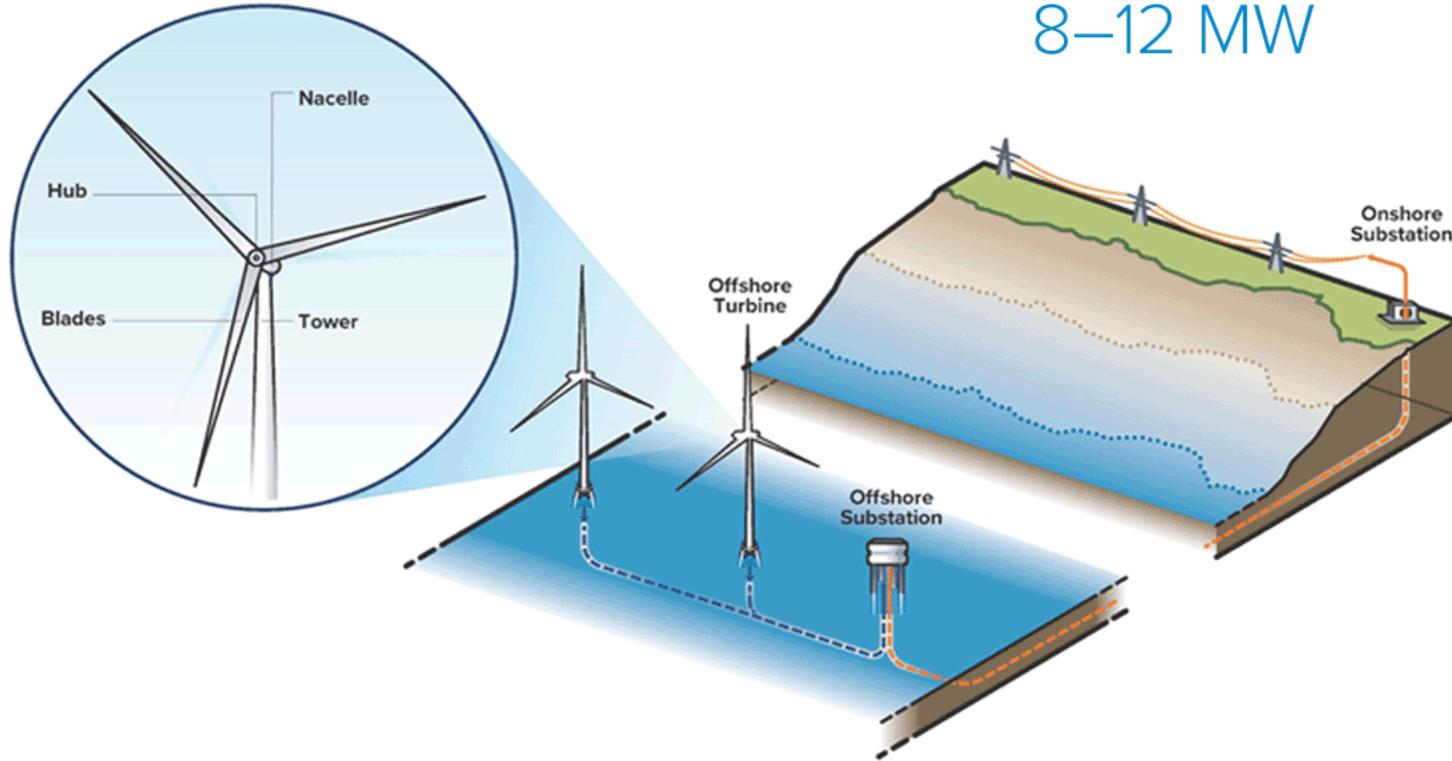
## Turbine Array Connected to Shore



# Components of the Offshore Wind Supply Chain

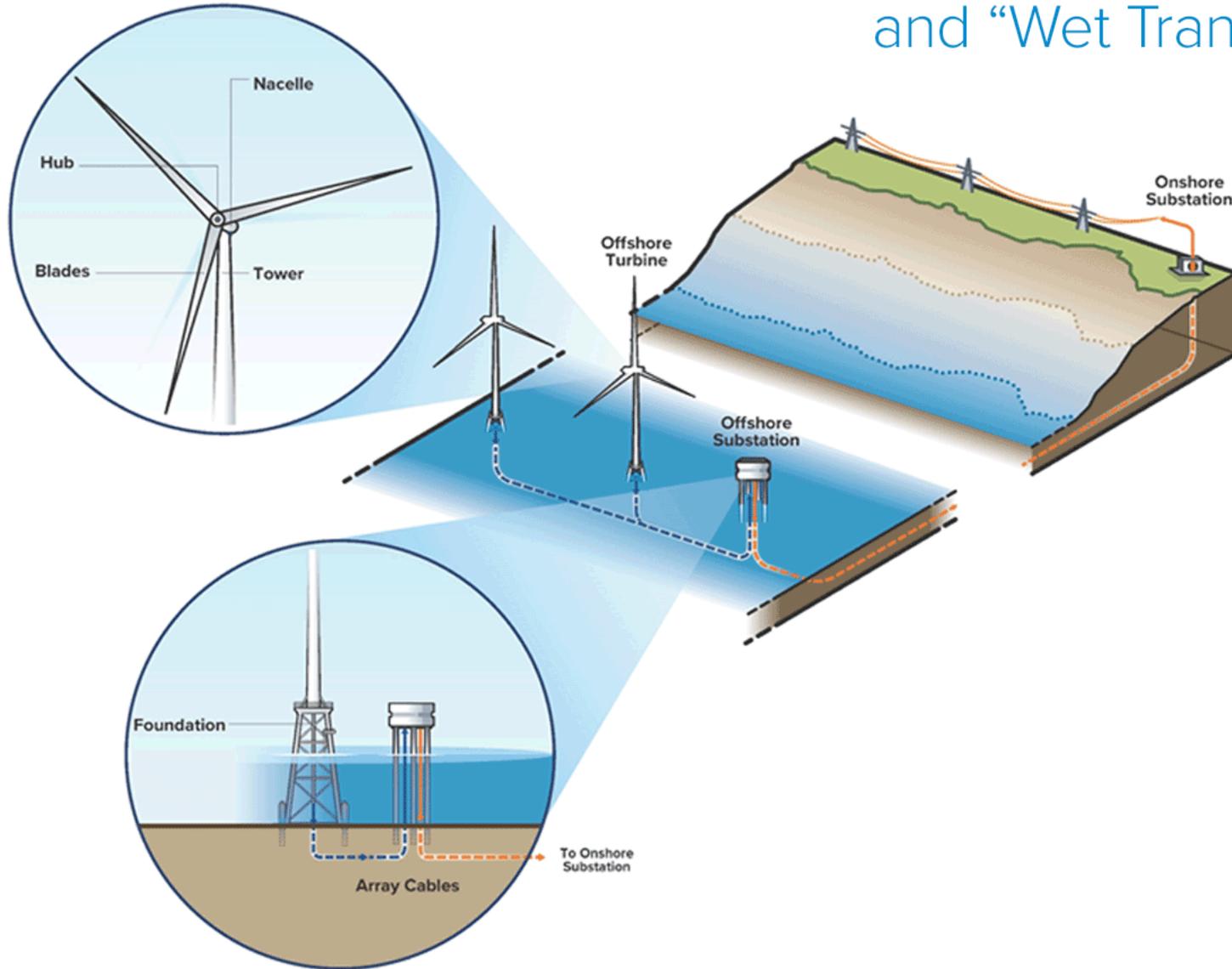
## Wind Turbines

8–12 MW



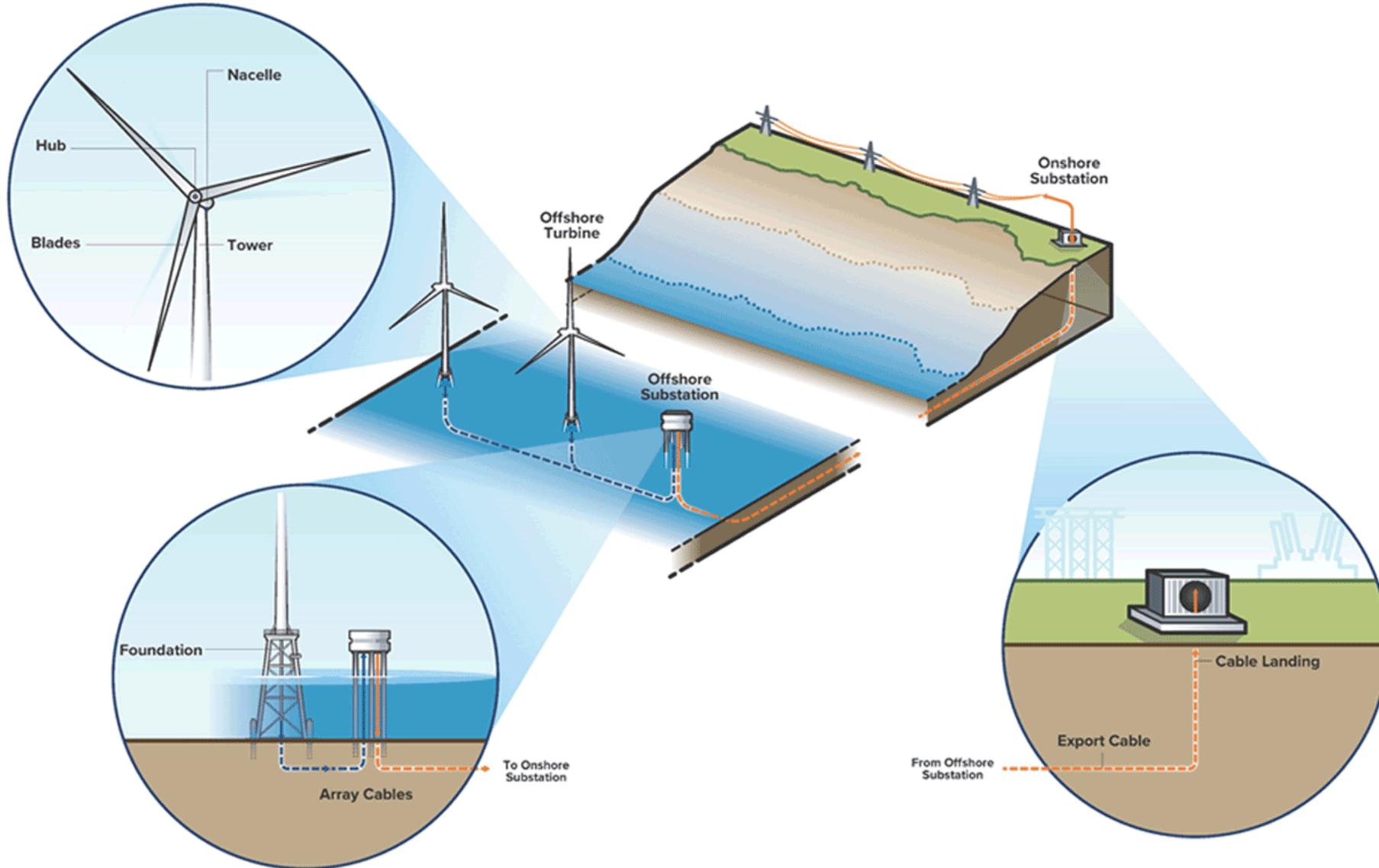
# Components of the Offshore Wind Supply Chain

## Foundations, Offshore Substation, and “Wet Transmission”

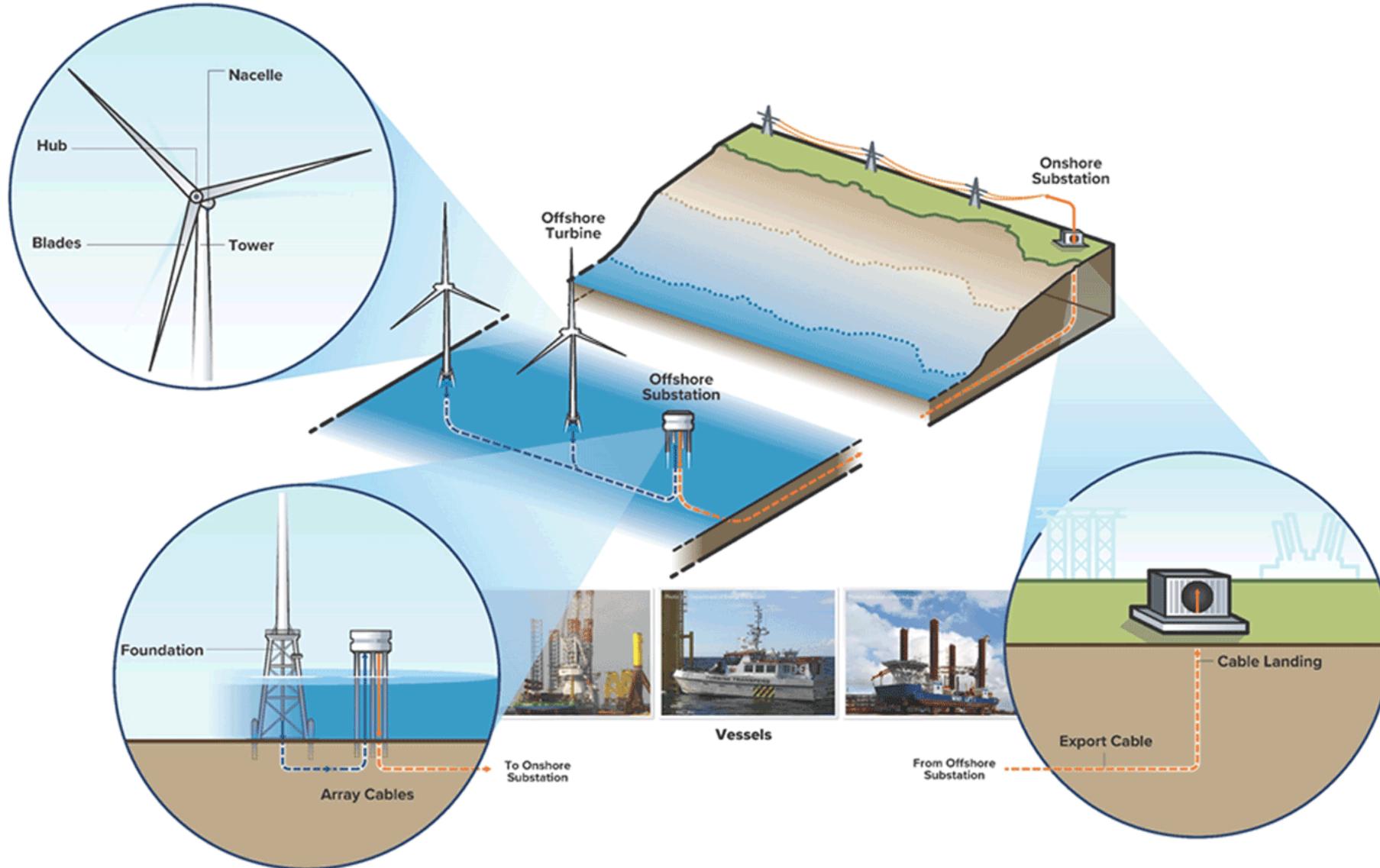


# Components of the Offshore Wind Supply Chain

## Cable-landfall and On-shore Transmission

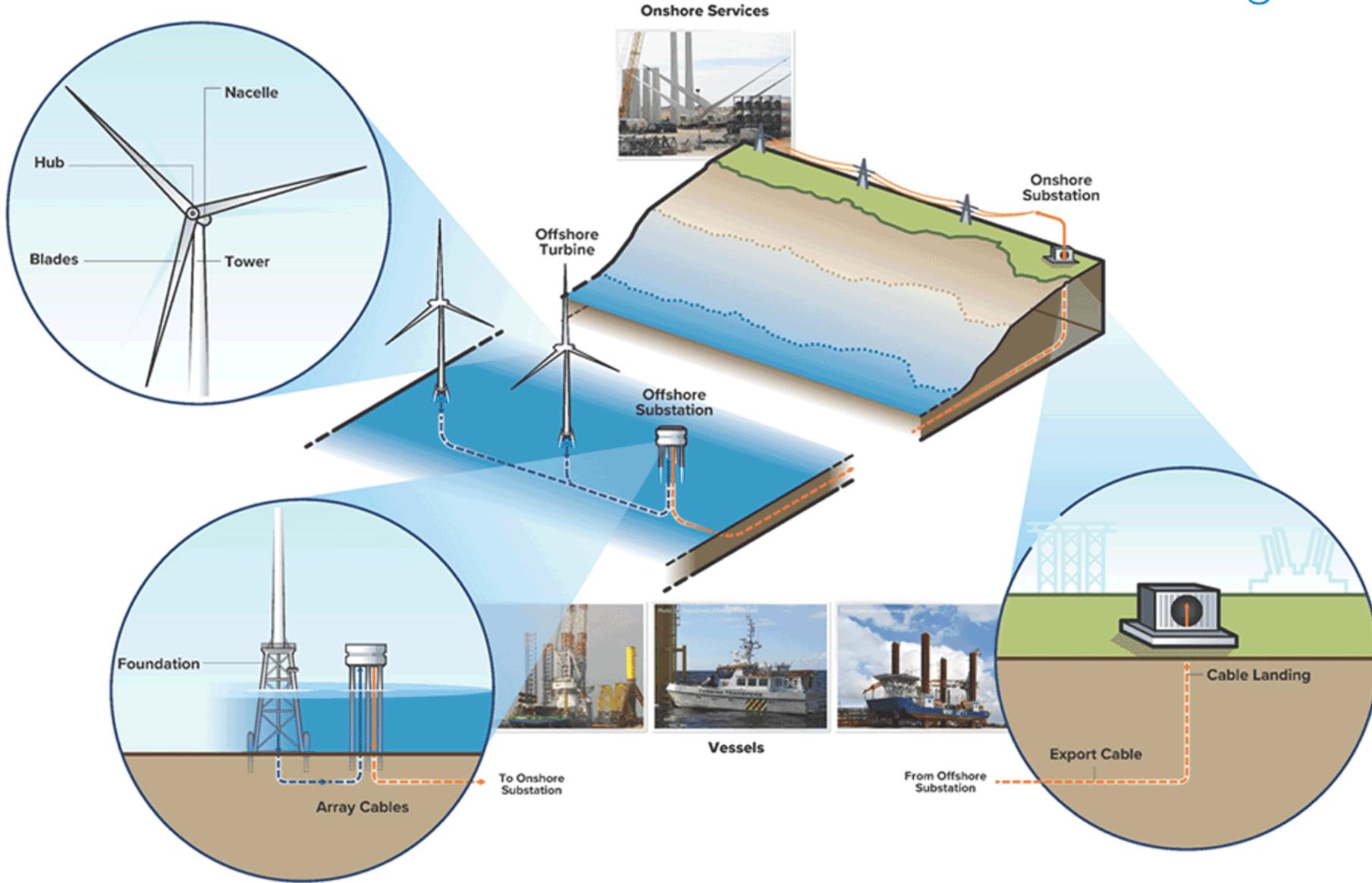


# Components of the Offshore Wind Supply Chain Installation and Support Vessels

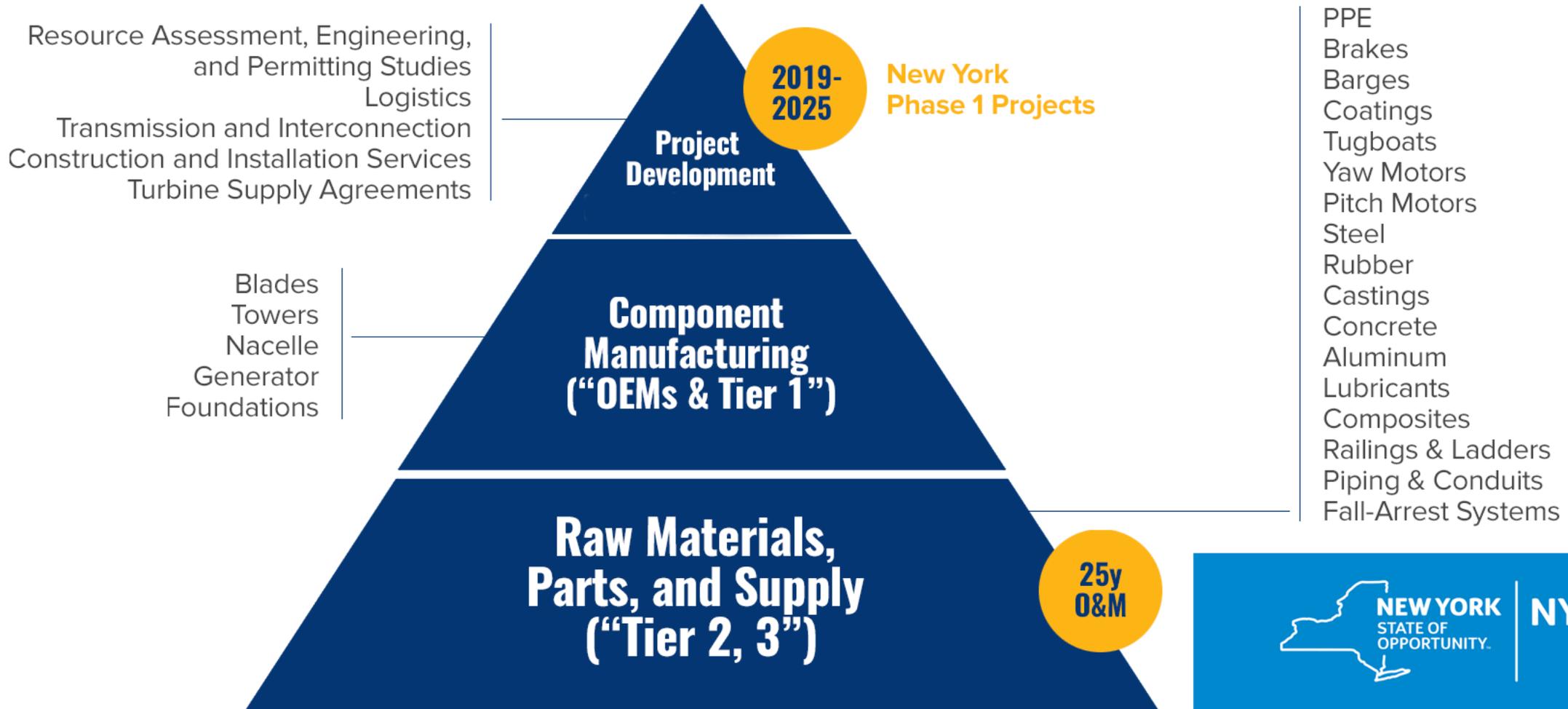


# Components of the Offshore Wind Supply Chain

## On-shore Marshalling and Equipment Staging



## Offshore Wind Developer



NEW YORK OFFSHORE WIND SUPPLIER FORUM

# Empire State Development

**ESD offers incentives that make New York an attractive and cost-competitive location for offshore wind businesses**

**Beyond traditional incentives, ESD invests in major infrastructure projects that benefit communities and industry**



**Supporting the growth of an industry by studying**

**New York's ports and  
manufacturing assets**

**Manufacturing**

**Staging**

**Operations and  
Maintenance**



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# National Offshore Wind Research and Development Consortium

the first federally funded public-private partnership focused on advancing research and development to accelerate the offshore wind industry in the United States



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