



NYSERDA

New York Offshore Wind OREC RFP 2022, NY3 Briefing Winter 2022



NYSERDA's Offshore Wind Team

Name	Role
Georges Sassine	Vice President Large Scale Renewables
Gregory Lampman	Director Offshore Wind / Acting Director Environmental Research
Sherryl Huber	Offshore Wind Contracts Manager
Laila El-Ashmawy	Offshore Wind Procurement Manager
Jessica Dealy	Senior Policy Advisor Stakeholder Engagement & Workforce Development
Peter Lion	Senior Advisor Supply Chain and Economic Development Benefits
Kate McClellan Press	Senior Project Manager Environment and Wildlife
Morgan Brunbauer	Offshore Wind Fisheries Manager
Janna Herndon	Offshore Wind Outreach and Engagement Manager (on leave through summer)

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<https://www.nysERDA.ny.gov/All-Programs/Offshore-Wind>

New York State Clean Energy Goals



New York is committed to
100% clean
carbon-free electricity

by 2040

most aggressive in the nation

NATION-LEADING GOAL

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**



Governor Hochul 2022 State of the State: OSW Highlights



\$500 MILLION INVESTMENT IN OFFSHORE WIND MANUFACTURING & SUPPLY CHAIN

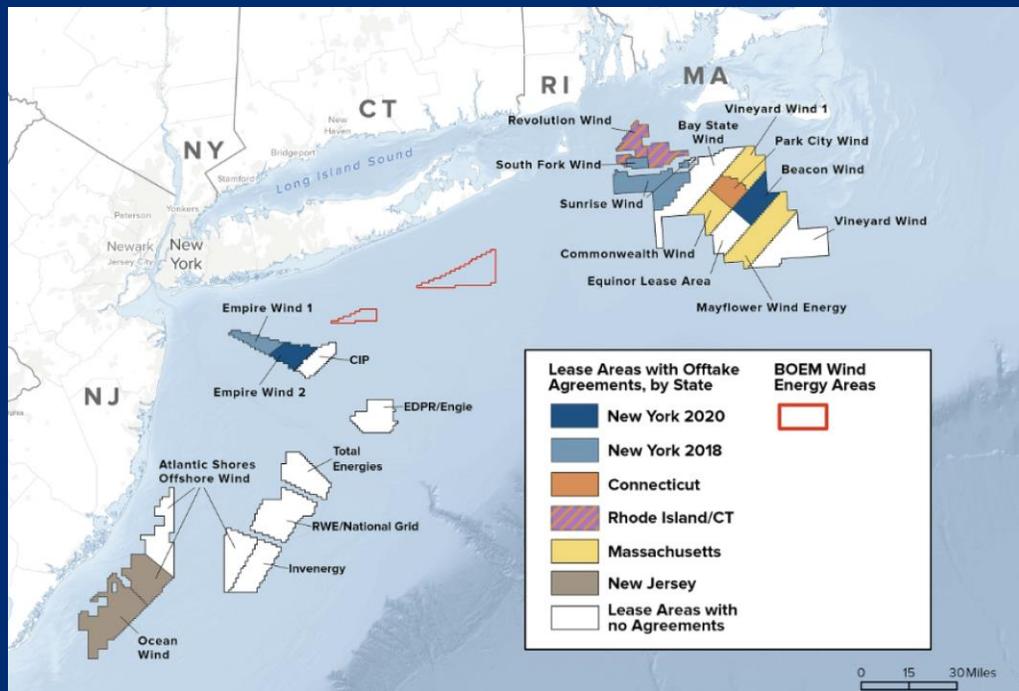
#StateOfTheStateNY #NYActsOnClimate

- > **\$500 million in Critical Offshore Wind Infrastructure:** Bringing New York's total public commitments to OSW ports, manufacturing, and supply chain infrastructure to a nation-leading total of \$700 million
- > **Procure at least 2 GW in NYSERDA's next OSW solicitation:** Enough new offshore wind energy to power at least 1.5 million homes and create at least 2,000 new jobs and award additional scoring credit to proposals that repurpose downstate fossil-fuel power plants
- > **Initiate Planning for a Future Offshore Wind Transmission Network:** To deliver +6 GW to NYC via a New York State Cable Corridor Study
- > **Launch the Offshore Wind Master Plan 2.0 Deep Water:** Building on the success of New York's award-winning Offshore Wind Master Plan, NYSERDA will initiate a new Master Plan 2.0: Deep Water to unlock the next frontier of floating OSW development

President Biden's Administration set offshore wind goals of **30 GW by 2030** and **110 GW by 2050**

Key elements of the Administration's announcement:

- > **6 new Wind Energy Areas** with 4 new developers in the New York Bight to deliver more than **5.6 - 7 GW**
- > **Joint supply chain effort** announced between BOEM-NY-NJ, including quarterly meetings of the **Regional Working Group on Supply Chain Development**
- > Advance up to **7 new lease sales by 2025**
- > Proceed with critical permitting and environmental reviews
- > Invest **\$230 million** for port and intermodal infrastructure-related projects (**\$50 million awarded to New York Ports in 2021!**), plus **\$3 billion** earmarked for offshore wind innovation in the DOE Loan Offer Program



**New York State
Procured Offshore Wind Projects
Update**

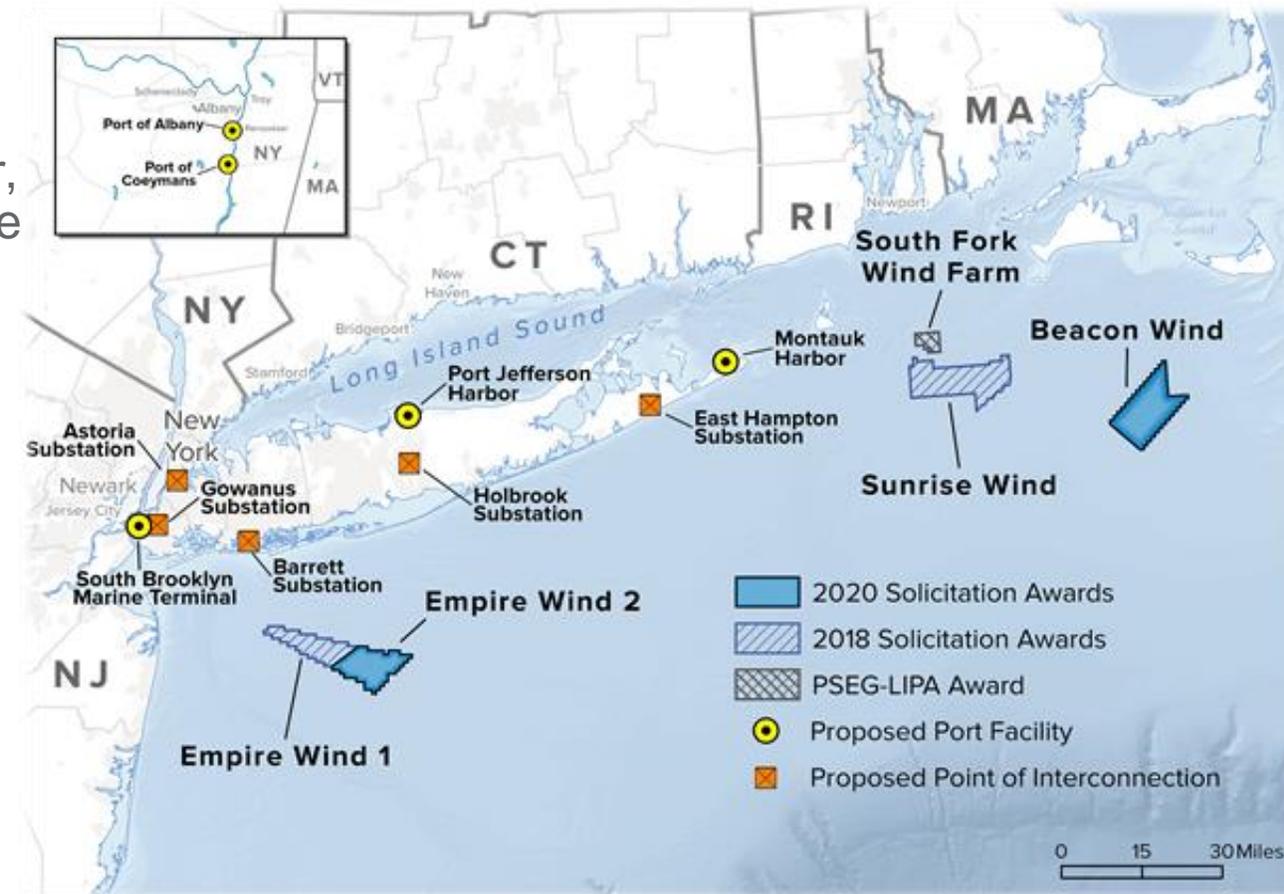
More than 4,300 MW in Active Development

Nation Leading 5 Offshore Wind Projects

- > More than **6,800** direct jobs
- > Combined economic activity of **\$12.1 billion** in labor, supplies, development, and manufacturing statewide

2022 Milestones:

- > BOEM auctioned **6 new lease areas** in the NY Bight
- > **Joint supply chain effort between BOEM, NY and NJ**
- > Contracts for Empire Wind 2 and Beacon Wind finalized
- > Governor Hochul announced **\$500 million** to support offshore wind supply chain
- > South Fork Wind receives federal approval to **start construction**



2018 and 2020 Offshore Procurements

Competitively Priced with Tremendous Benefits:

> The average bill impact for customers via 2020 procurement will be approximately **0.8%**, or about **\$0.95 per month**; Total project costs, including an **average all-in development cost of \$80.40 per megawatt hour** in 2020 Procurement were approximately **7% lower than those of the 2018 awards**

> **Power more than 2.4 million New York homes**

> More than **\$12.1 billion** in anticipated in-state spending and the creation of more than **6,800 jobs** backed by commitments to paying prevailing wage and negotiating project labor agreements

> **\$730 million** in combined private and public funds

> Unprecedented public and private funding commitments of **\$644 million in port infrastructure**, including:

- **\$357 million** in the nation's first offshore wind **tower manufacturing facility** to be built at the **Port of Albany**
- More than **\$287 million** in an offshore wind **staging and assembly facility** at the **South Brooklyn Marine Terminal**



South Fork Wind

- 132 MW, 12 Turbines
- Will power 70,000 New York Homes
- 35 miles East of Montauk Point
- O&M Located in Montauk
- Connecting to East Hampton Substation
- LIPA + PSEG RFP

Developed by: Orsted and Eversource

Fully operational in 2023

On track to be the first commercial offshore wind farm in the nation

- > Jan 2022: Received Federal Approval for Construction and Operations Plan (COP)
- > Offshore Substation fabricated by Kiewit Offshore Services, Ltd
- > Long Island-based contractor Haugland Energy Group LLC selected to install onshore transmission
- > Offshore installation of the project's monopile foundations and turbines expected to begin in summer 2023



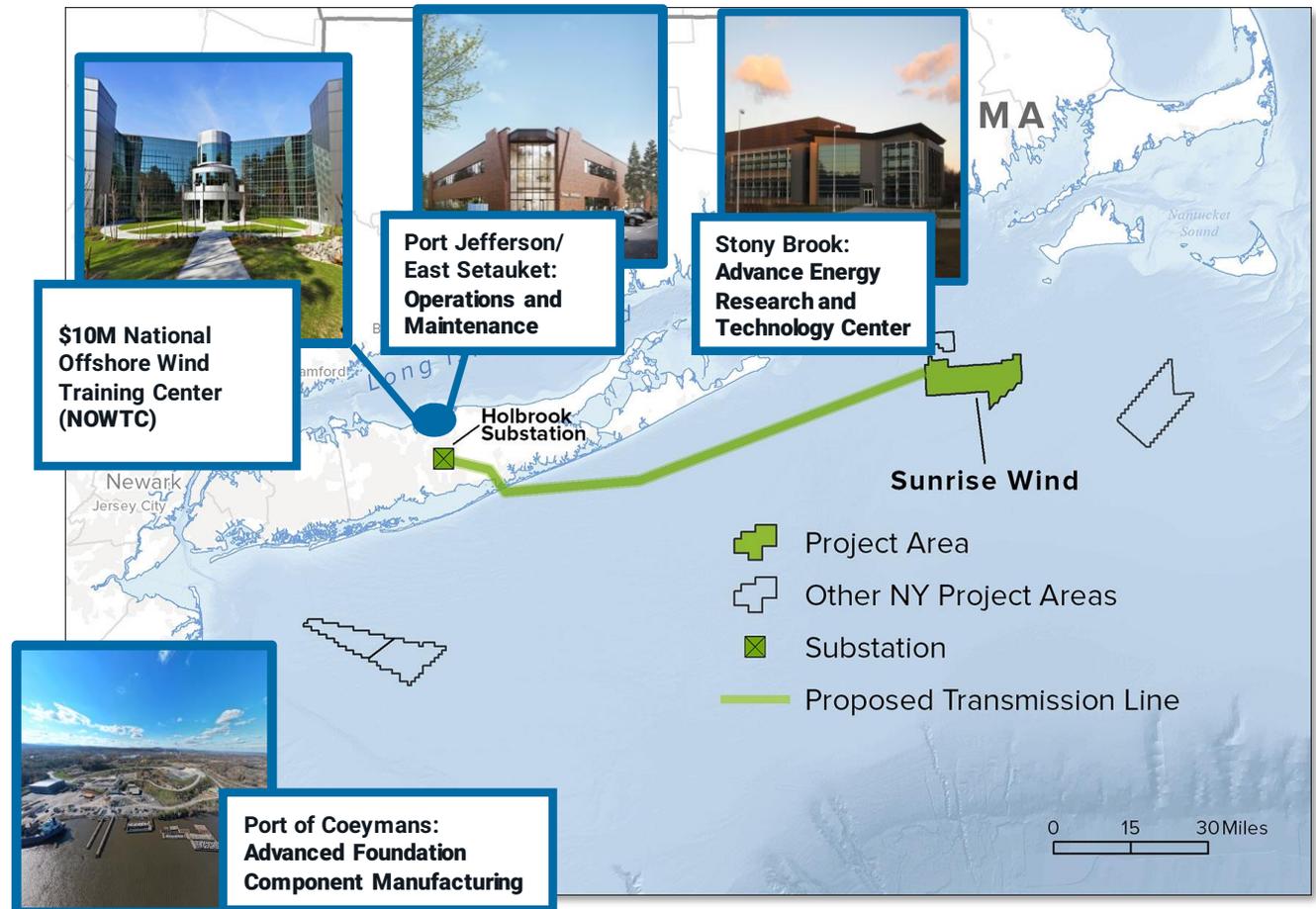
Sunrise Wind

- 924 MW, 102 Turbines
- Will power 600,000 New York homes
- Approximately 30 miles east of Montauk Point
- Interconnection at Holbrook and West-Bus substation
- O&M base in Port Jefferson

Developed by: Orsted and Eversource

Fully operational in 2025

- > Supports ~800 NYS jobs
- > MOU with North America's Building Trade Unions (NABTU)
- > \$10 million for National Workforce Training Center on Long Island
- > Fabrication of key components at Port of Albany



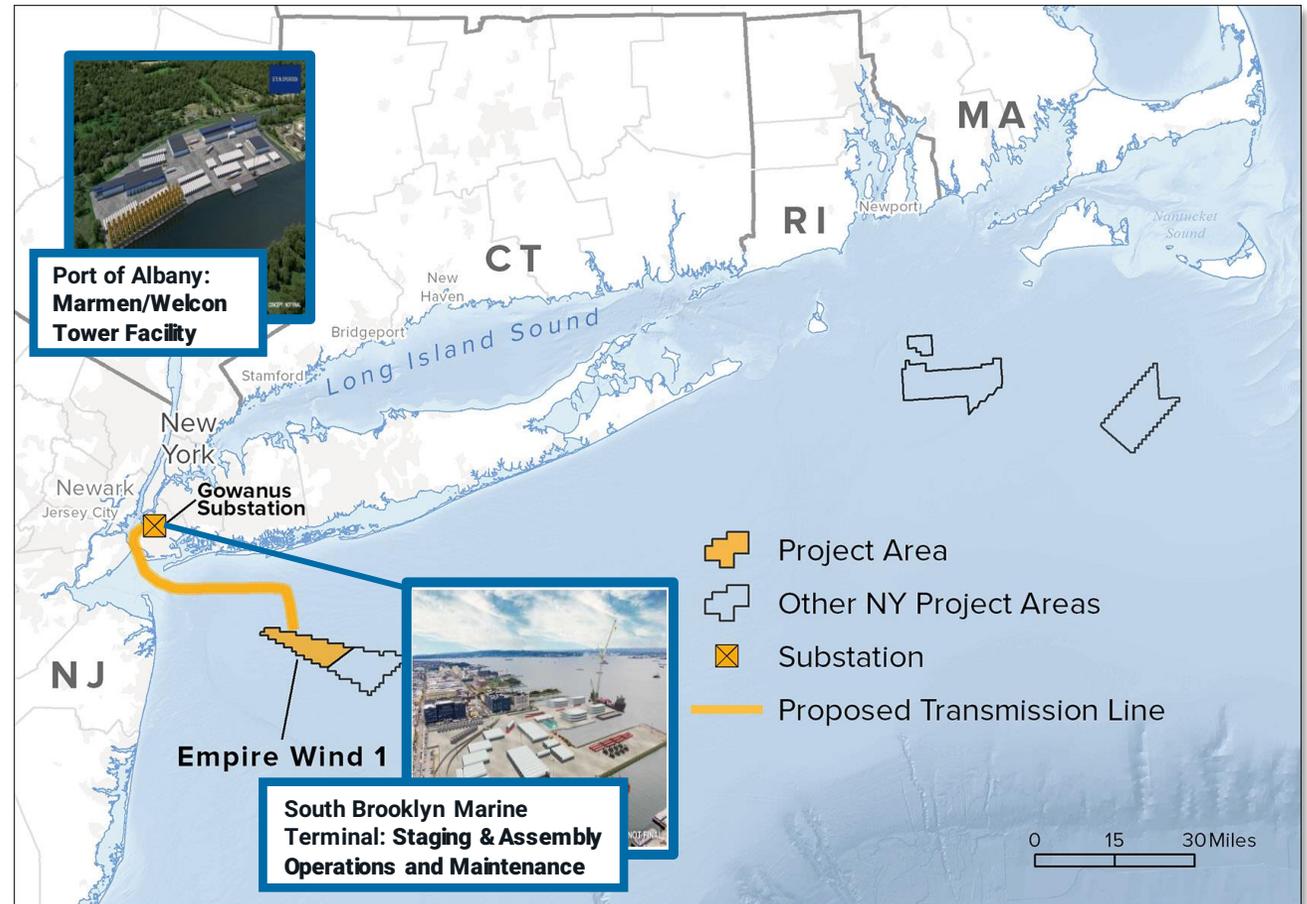
Empire Wind 1

- 816 MW, 73 Turbines
- Approximately 15-30 miles southeast of Long Island
- Connecting to Gowanus Substation
- O&M based in South Brooklyn

Developed by: Equinor and bp

Fully operational in 2026

- > Supports approximately 900 jobs
- > Federal and State permit approvals anticipated in 2023
- > Staging facility at SBMT
- > Product component manufacturing at Port of Albany anticipated operational by 2023



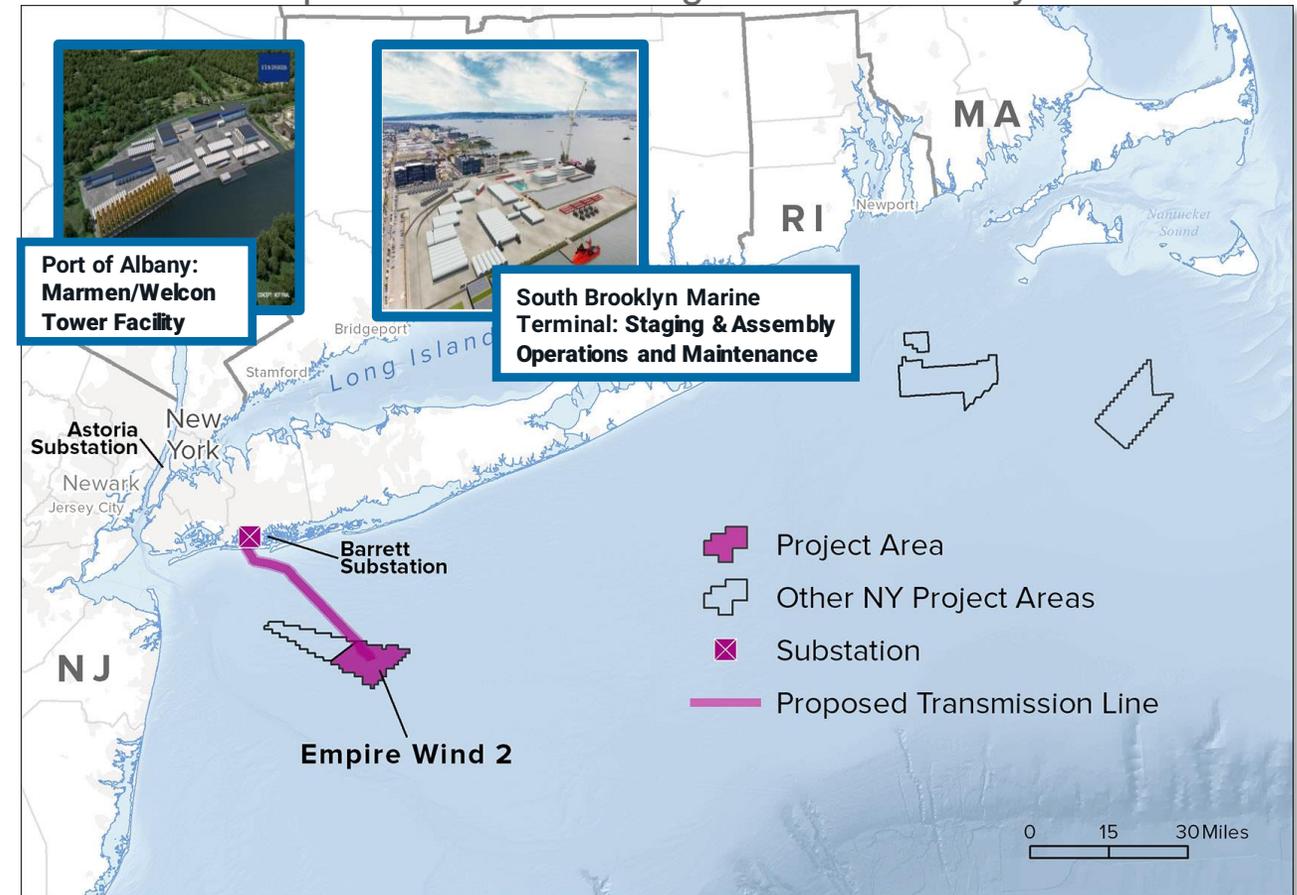
Empire Wind 2

- 1,260 MW, 90 Turbines
- Will power over 1 million New York homes
- 15-30 miles southeast of Long Island
- Proposed interconnection at Barrett Substation
- O&M base in South Brooklyn

Developed by: Equinor and bp

Fully operational in 2027

- > Export cable geotechnical and geophysical studies ongoing (Q1 2022)
- > Federal and State permit approvals anticipated in 2023
- > Staging facility at SBMT
- > Product component manufacturing at Port of Albany



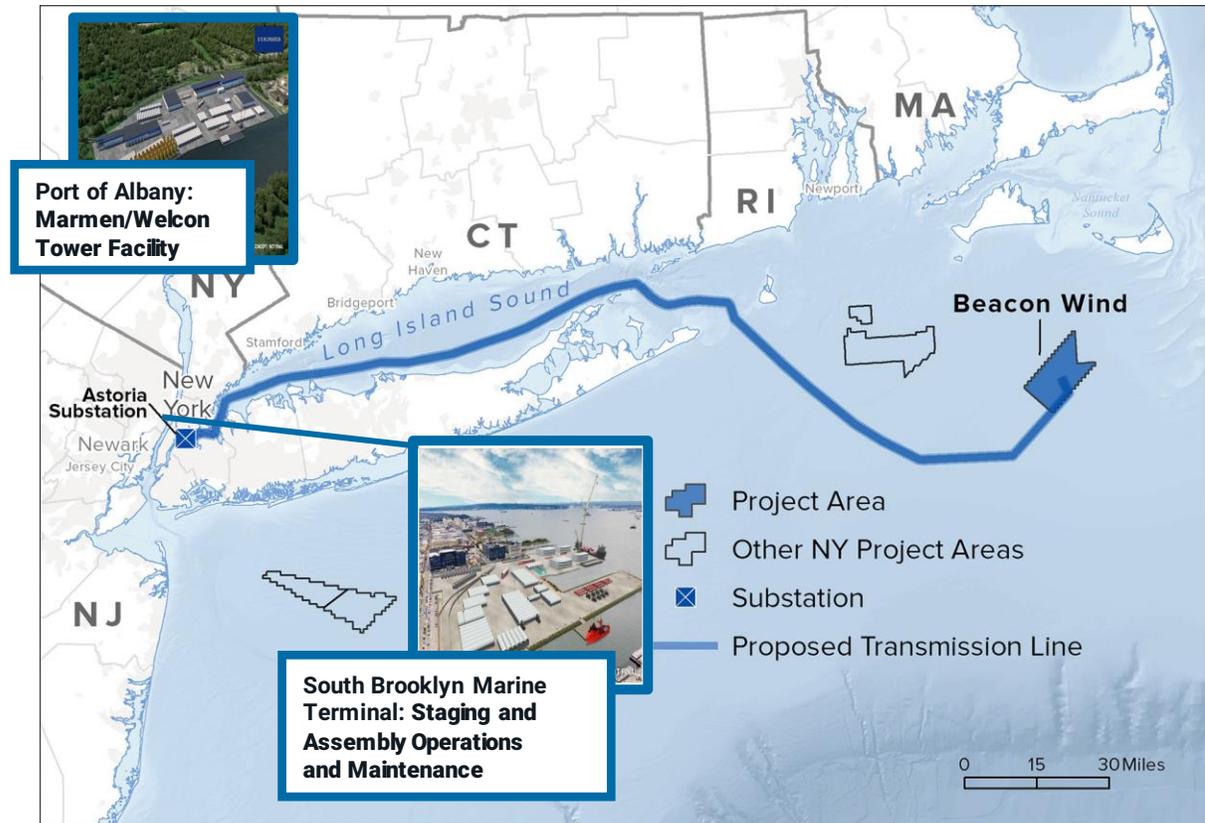
Beacon Wind

- 1,230 MW, 82 Turbines
- Will power over 1 million New York homes
- 60 miles east of Montauk Point
- Interconnecting at Astoria Substation
- O&M base in South Brooklyn

Developed by: Equinor and bp

Fully operational in 2028

- > Permitting until 2025
- > \$47 Million in Local Funding
 - Nassau County and Queens Community Benefits Fund
 - Technology Accelerator Fund and Workforce Development Hun with NYU Tandon School Urban Future Lab (UFL)
 - SBMT Green Energy Innovation and Community Fund
 - Just Access Workforce Development Fund





New York State's Third Offshore Wind Solicitation

ORECRFP22-1 "NY3"

New York State's Third Offshore Wind Solicitation

MORE THAN JUST **ELECTRONS**

Research and Collaboration to Support Responsible Development



Maximize cost-effectiveness for New York State ratepayers



Building a Regional Supply Chain to Support Long-Term Jobs

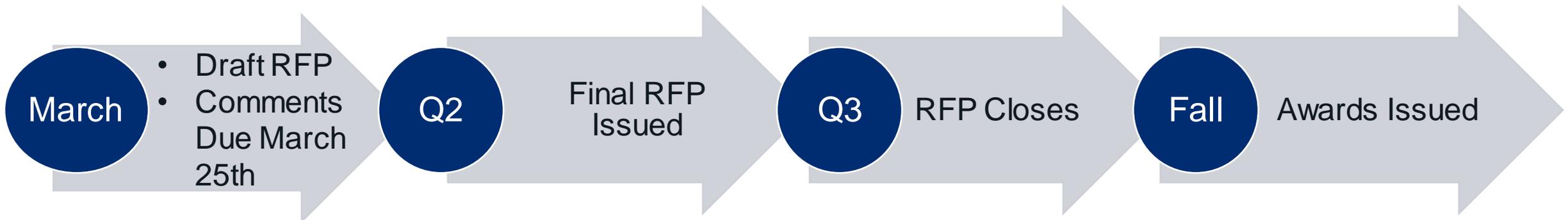


Placing a Premium on Transparent Stakeholder Engagement



“NY3” Offshore Wind Solicitation Schedule

- > Released an ORECRFP22-1 **DRAFT** RFP March 11, 2022
 - Opportunity for new entrants, incumbents and supply chain developers to review draft and provide feedback before Final RFP
- > Issuing the **FINAL** ORECRFP22-1 in Q2
- > RFP is expected to **CLOSE** Q3
- > Contract **AWARDS** are expected by Fall 2022



NEW ADDITIONS

- \$500 MM of Funding to Catalyze Marquee Investments
- Offshore Transmission Grid “Mesh-Readiness”, and Optional Storage
- Prioritized Fossil-Fuel Retirements
- Stakeholder Engagement, Labor Plans and Environmental Stewardship
- Benefits to NYS Disadvantaged Communities including Workforce Training
- 2021 NYS Public Service Law Changes: Prevailing Wage, Project Labor and Peace Agreements

NY3 SCORING CONSIDERATIONS

70% Price

20% Economic Benefits

10% Viability

\$500MM Supply Chain Investment

"PHASE"	ONE	TWO	THREE
TYPE OF PROPOSAL	NY3 Paired Investment Proposal	Supply Chain RFP	Supply Chain Support RFP
INVESTMENT TYPE	Marquee Investments: Blades, Cables, Ports, or Nacelles	Marquee Investments	Local Sub-Component Manufacturing
BIDDER	Offshore Wind Energy Developers	Original Equipment Manufacturers (OEMs) or Facility Developers	Existing Statewide Manufacturing & Service Providers
FUNDING CAP PER PROJECT	\$125 Million	\$125 Million	TBD

~\$300MM

~ \$150MM

~\$50MM

NY3 NYSERDA ORECRFP22-1 Transmission

- > "Meshed-Ready" Transmission
- > Enabling future beneficial meshed connections
- > Standardization to support "Plug-and-Play" framework
- > Commercial designs to support multi-zonal injection
- > HVDC radial lines to minimize stakeholder disruption and environmental footprint



NY3 NYSERDA OREC RFP22-1 Energy Storage

- > Energy storage may be included as an optional addition to offshore wind project proposals
- > Proposals do not need to include energy storage to be eligible
- > Storage facilities must be located within Zones J or K
- > Storage brings grid benefits such as higher penetration of renewables, grid reliability, and reduced curtailments



NY3 NYSERDA ORECRFP22-1 Jobs and Labor Plan

- > Prioritize benefits and opportunities for NY businesses and Disadvantaged Communities
- > Expenditures enable NY-based manufacturer and supplier participation
- > Supporting deep decarbonization goals of NYS Climate Act
- > Prevailing Wages, Labor Liaisons, Project Labor Agreements, Just Transition





NY3 NYSERDA ORECRFP22-1 Stakeholder Engagement

- > Quantifiable Stakeholder Engagement Plans
- > NYSERDA's Guiding Principles for Stakeholder Engagement
- > Measure and track collaboration between project developers, contractors, suppliers, impacted communities, marine users, labor organizations, State and local officials and other stakeholders

NY3 NYSERDA ORECRFP22-1 Environmental Mitigation Plans

- > Avoid, minimize, mitigate and offset potential environmental impacts of proposed projects
- > \$5,000 per MW for regional research and monitoring of wildlife and ecosystems
- > Ensure site and environmental data transparency
- > Lighting controls protective of migrating birds and bats
- > Noise impacts minimization requirements
- > Collaborate with the Environmental Technical Working Group



NY3 NYSERDA ORECRFP22-1 Fisheries Mitigation Plans

- > Collaborate with Fisheries Technical Working Group
- > \$5,000 per Megawatt for regional monitoring of commercial fish stocks
- > Establish baseline data on presence of fishing activity and fish resources within project area
- > Design alternatives to avoid, minimize, and mitigate potential adverse impacts

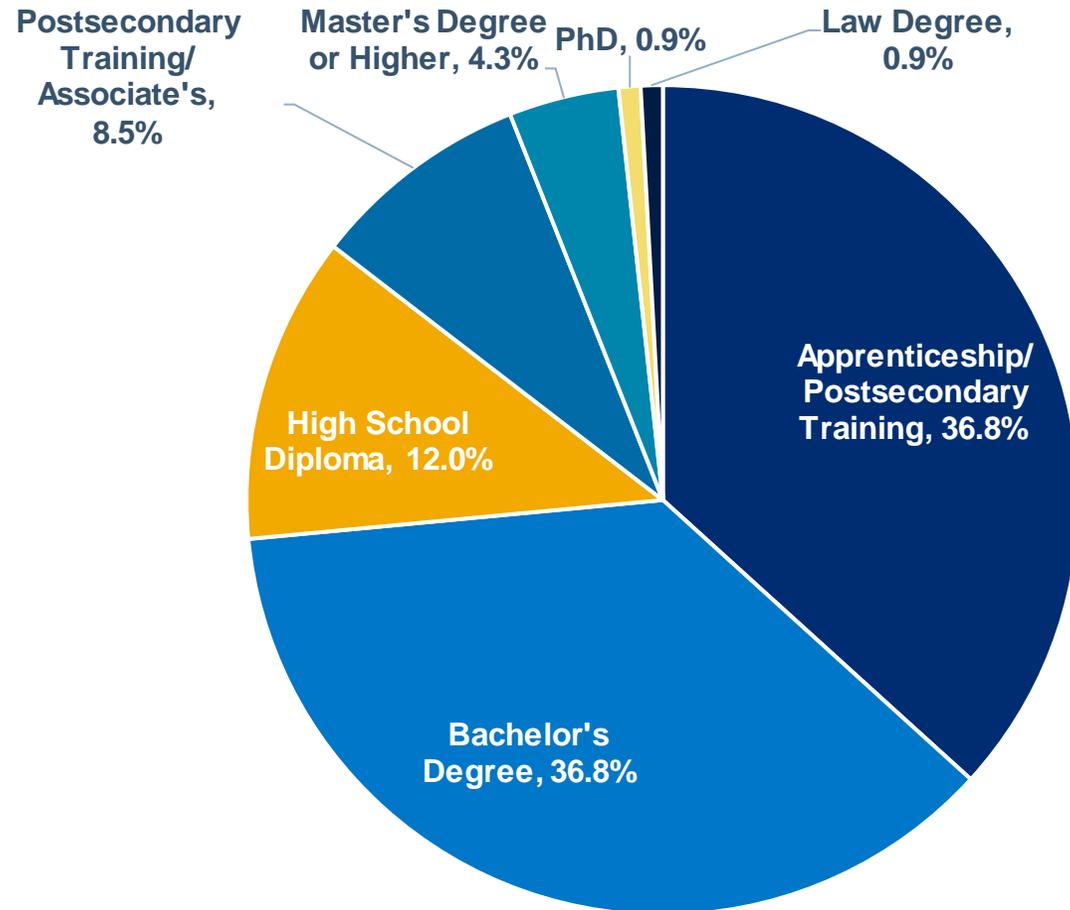


**New York State
Jobs and Workforce Development
Updates**

Top 10 Occupations with Projected Workforce Gaps

Occupation	Estimated Workforce Gap	Typical Education
Plant and System Operators	High	Apprenticeship/Postsecondary Training
Hoist and Winch Operators	High	Apprenticeship/Postsecondary Training
Continuous Mining Machine Operators	High	Post-secondary Training or Associate's
Wind Turbine Service Technicians	High	Post-secondary Training or Associate's
Metal-Refining Furnace Operators and Tenders	Moderate	High School Diploma
Metal Workers and Plastic Workers	Moderate	Apprenticeship/Postsecondary Training
Computer Tool Programmers	Moderate	Apprenticeship/Postsecondary Training
Structural Metal Fabricators and Fitters	Moderate	Apprenticeship/Postsecondary Training
Plating Machine Setters, Operators, and Tenders, Metal and Plastic	Moderate	High School Diploma
Engine and Other Machine Assemblers	Moderate	High School Diploma

Typical Educational Attainment



Top 10 occupations with a high to moderate workforce gap require Apprenticeship/Postsecondary or High School Diplomas

Training New York's Offshore Wind Workforce
Over \$100 Million Dollars of Funding

New York State	Offshore Wind Training Institute (OWTI) \$20M NYSERDA \$10M SUNY Stony Brook and Farmingdale \$10M
	NYSERDA Workforce ~\$15M
	CUNY \$20M: \$10M DOB \$10M NYC EDC

NYSERDA – Environmental Justice, Labor, CBOs, Supply Chain (HVCC Welding, LAGCC Wind Techs)
SUNY - Exclusive to SUNY institute programs
Clean Energy Internships PON 4000 ; Climate Justice Fellowship PON 4772; OJT Training PON 3982
Program Development at CUNY's diverse campus locations in NYC Kingsborough Community College CTV Simulator, At Height Training NYCCT, LGCC, Grove School of Engineering

Federal	SUNY Maritime \$795,000
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GWO Training Center Bronx, NYC Campus
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Private Sector	Sunrise Wind (Orsted/Eversource) \$1M
	Sunrise Wind (Orsted/Eversource) \$10M
	Sunrise Wind (Orsted/Eversource) \$5M
	Empire Wind 1 (Equinor/BP) \$5M
	Empire Wind 2/Beacon Wind (Equinor/BP) \$47M
	ORECRFP22-1 Future Opportunity

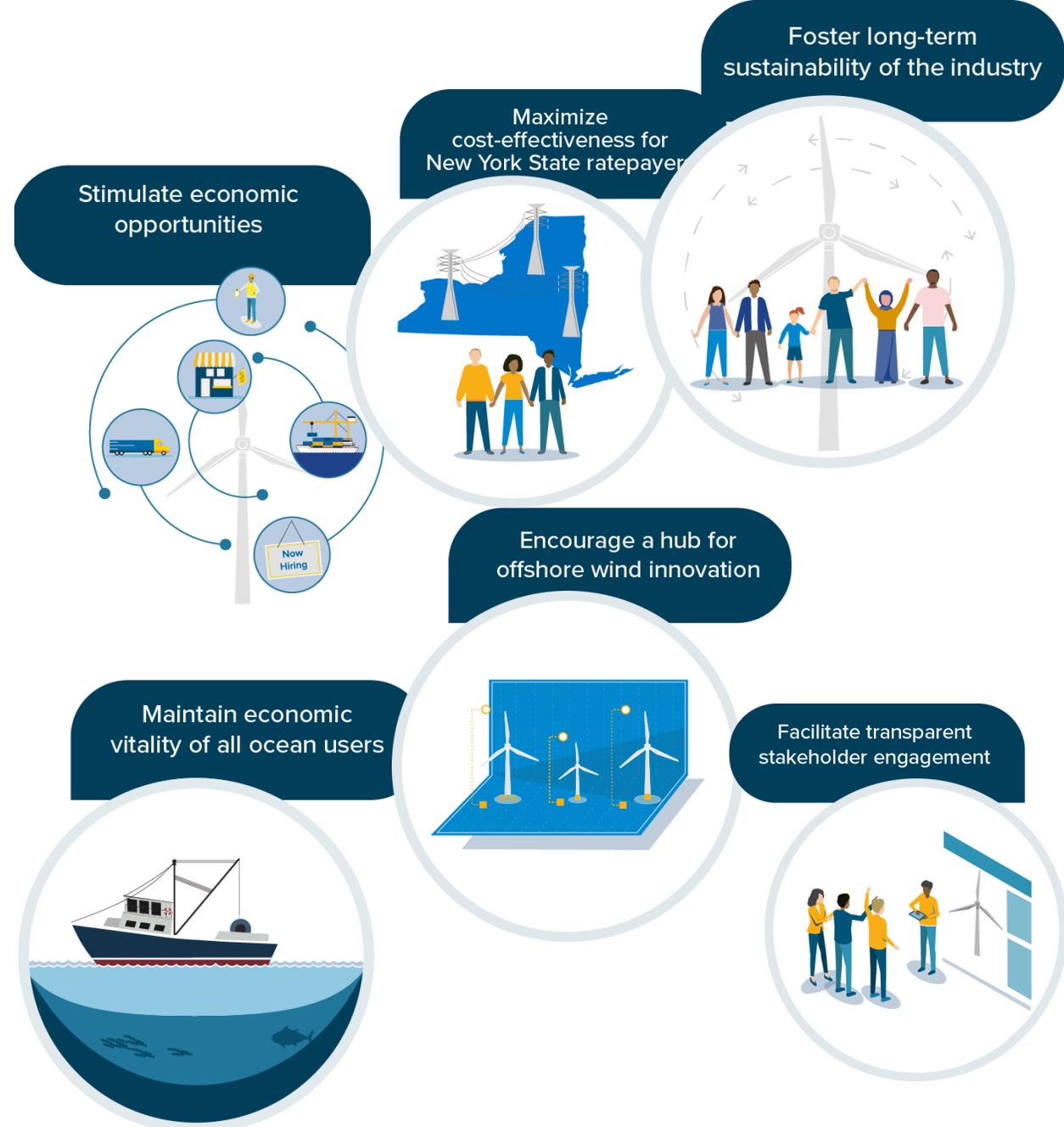
Upper Hudson Offshore Wind Workforce Development Fund Advance Component Manufacturing
National Offshore Wind Training Center (NOWTC) in Suffolk County Focus on GWO
Stony Brook University Advance Energy and Research Technology Center (AERTC)
Community Workforce Benefit Fund Just access to workforce development and equity
Community Benefits + Workforce Development Split Between 2 Projects; More Info to Come
Community Engagement
Workforce Development
Technology & Innovation Acceleration

Next Steps for Workforce Training Coordination

- **Overall Goals**
 - ✓ Centralize planning and coordinate across stakeholders
 - ✓ Ensure workforce is ready when we need them
 - ✓ Engage DACs to better develop future OWTI Solicitations
 - ✓ Release competitive solicitations
- **Launch Website – Q2 2022**
 - ✓ March Individual Catch Up Meetings – Information Sharing on Progress
 - ✓ Prepare for NYSERDA OWTI Solicitation – Q2 2022

**New York State
Regional Collaboration and
Stakeholder Engagement**

Guiding Principles for Offshore Wind Stakeholder Engagement



Learn More:

Learning

from the **Experts**

Next Up: New York and Regional Offshore
Wind Transmission Planning

Date: Wednesday, March 30

Time: 1:00 p.m. – 2:00 p.m. ET

- > Educational **webinar series featuring outside experts** presenting on key offshore wind technologies, development practices, and research findings
- > To receive notices of upcoming webinars, **sign up for the offshore wind email list**
 - [offshorewind.ny.gov](https://www.offshorewind.ny.gov)



NEW YORK
STATE OF
OPPORTUNITY.

Offshore
Wind

Learn More:

Offshore Wind State of the Science

- **2022 State of the Science Workshop on Wildlife and Offshore Wind: Building on Existing Knowledge and Emerging Collaborations**
 - July 26-28
 - Sleepy Hollow Conference Center
 - Tarrytown, NY
 - www.nyetwg.com/2022-workshop

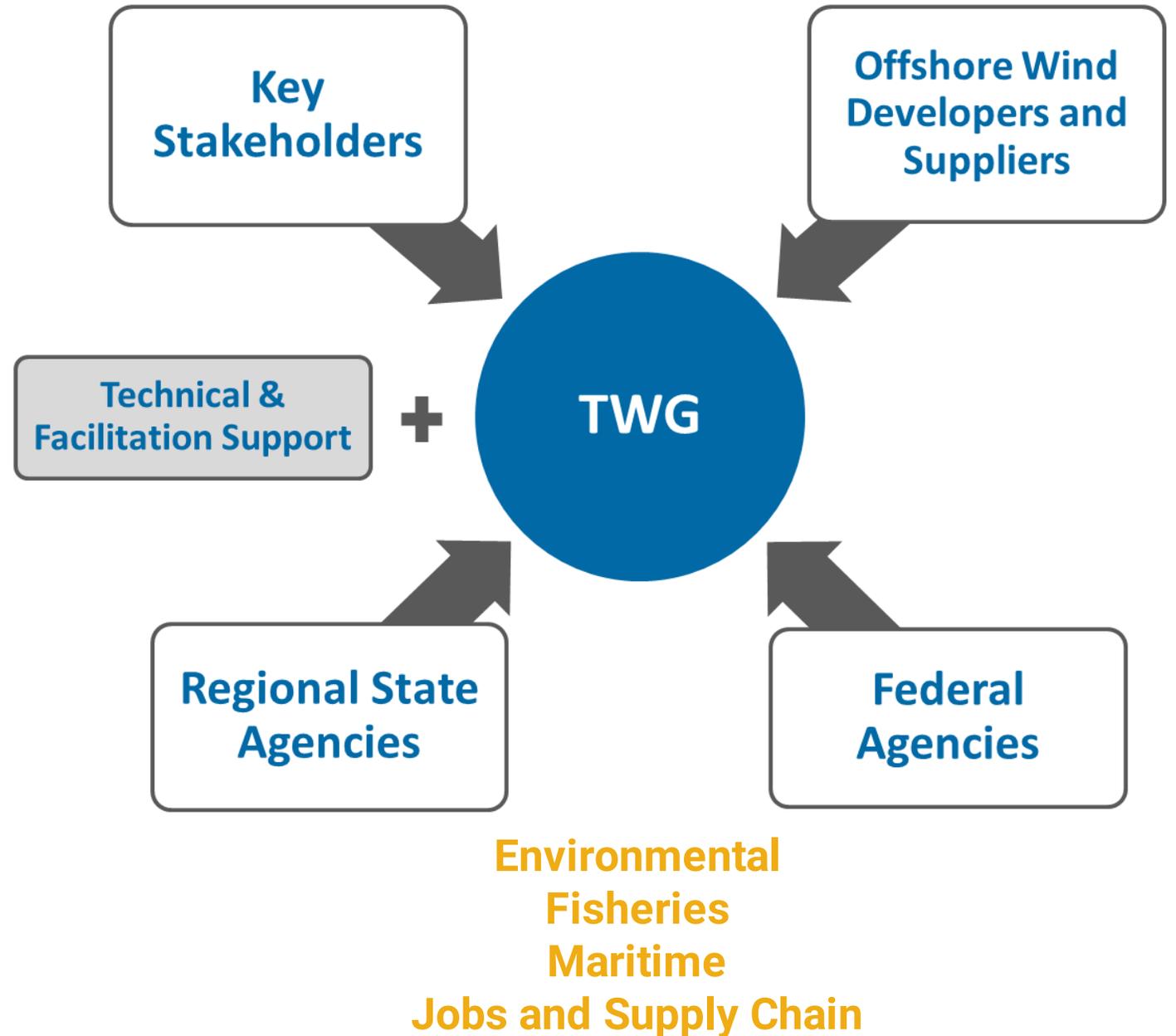


Offshore
Wind

OSW Technical Working Groups

Collaborative Engagement with Key Stakeholders

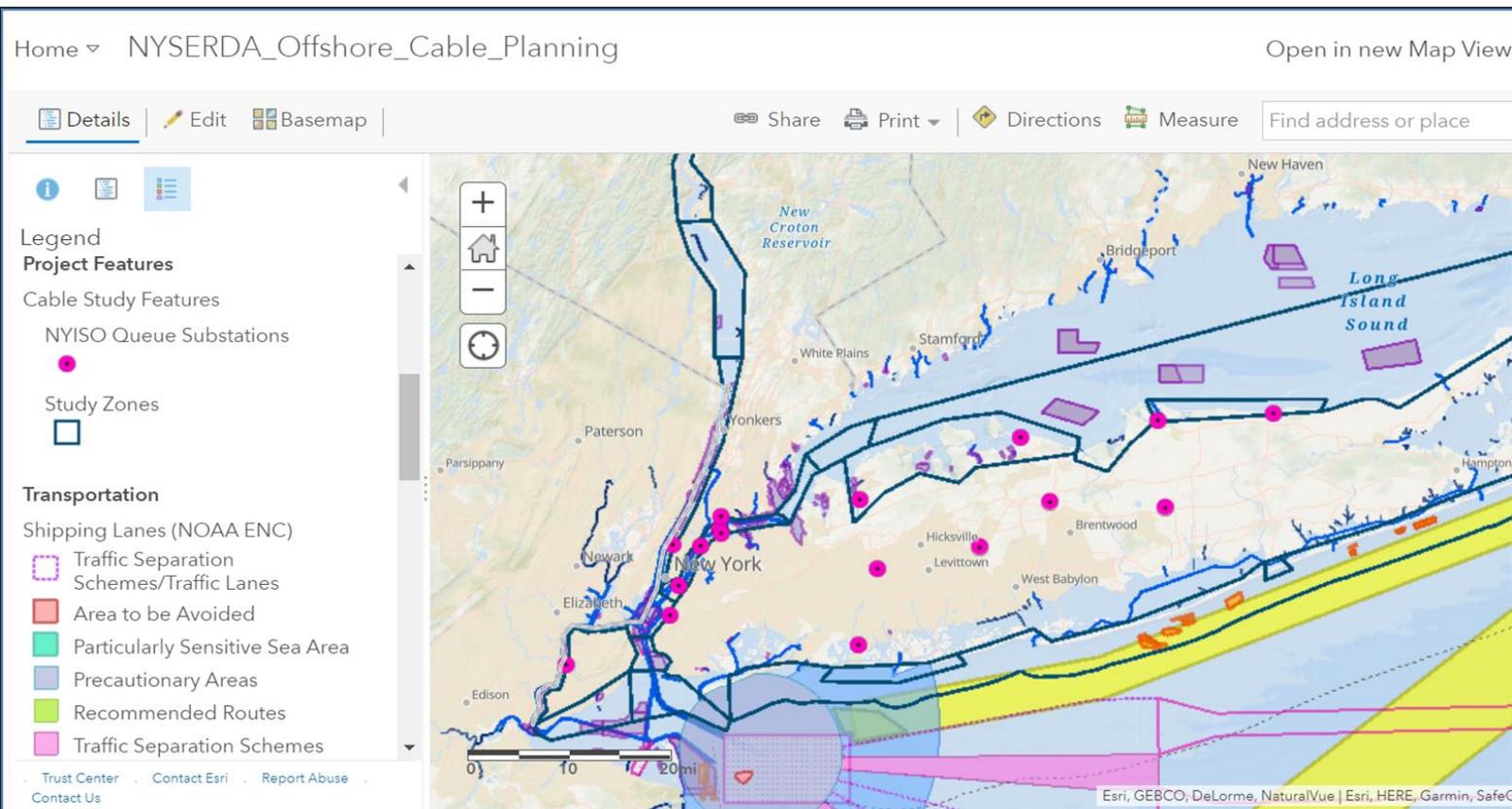
- > Unique points of view and targeted interests
- > Cross-borders and geographies
- > Powerful representative voices
- > Active problem-solving roles in NYS policy and program development



Offshore Wind Cable Corridor Constraints Assessment

Goals:

- Increase understanding and document environmental, technical and stakeholder constraints, opportunities, concerns, impacts, and risks of potential undersea and overland cable corridors and associated landings
- Inform potential future policy actions that maximize the benefits of OSW and minimize conflicts



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