

NYISO Planning for Integration of Offshore Wind

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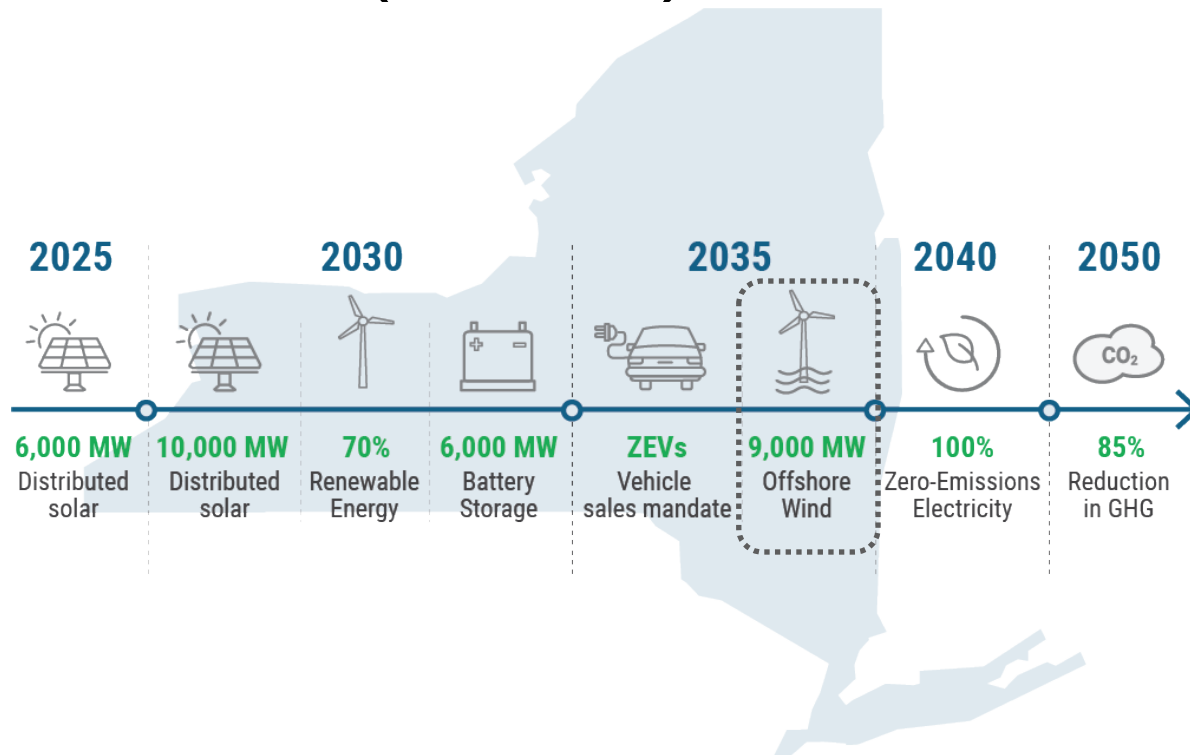
ESIG 2024 Fall Technical Workshop Opening Plenary Session

Monday October 21, 2024

Agenda

- **CLCPA Overview**
- **Offshore Wind Projects in New York**
- **Integrating Offshore Wind into New York Grid**
- **Public Policy Transmission Planning Process & Projects**
- **What's Next?**

Climate Leadership & Community Protection Act (CLCPA) Overview



Offshore Wind in New York State Today

■ South Fork Wind

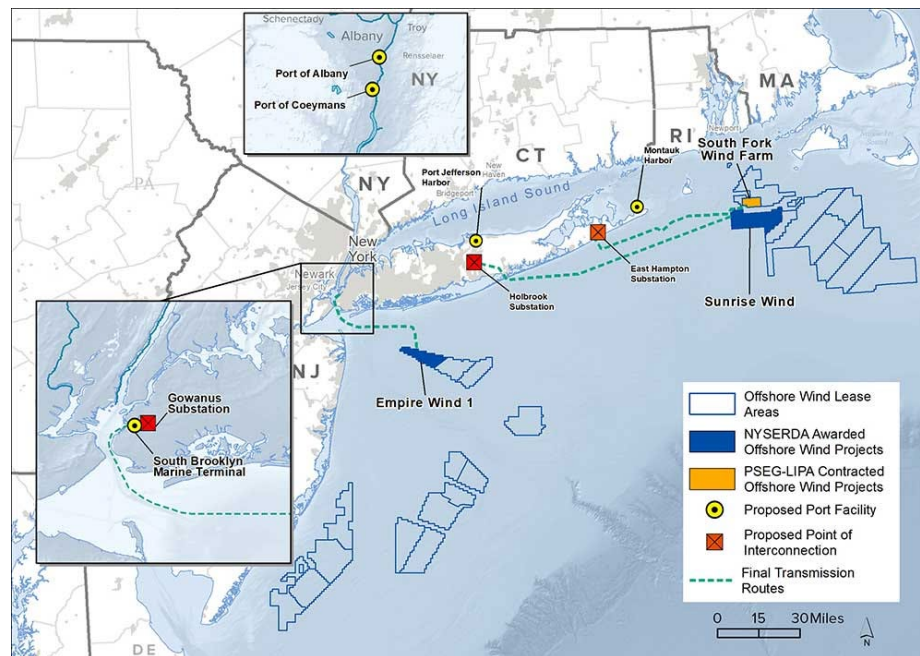
- **Developer:** Orsted
- **Specs:** 132 MW (Long Island POI)
- **Status:** Operational (2024)

■ Empire Wind 1

- **Developer:** Equinor
- **Specs:** 810 MW (New York City POI)
- **Status:** Under Construction (2027)

■ Sunrise Wind

- **Developer:** Orsted/Eversource
- **Specs:** 924 MW (Long Island POI)
- **Status:** Under Construction (2026)



Source: NYISERDA

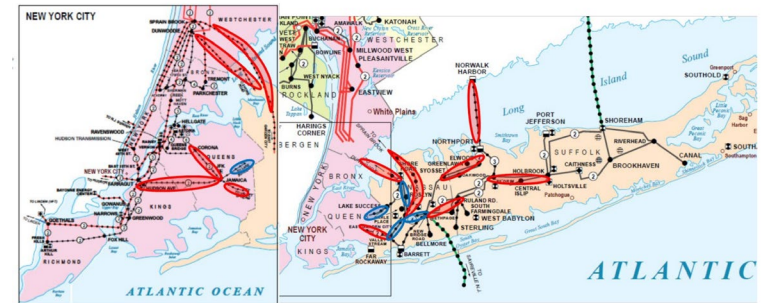
Future Offshore Wind Projects in New York

- New York State Energy Research & Development Authority (NYSERDA) solicitations
- Offshore Renewable Energy Certificate (OREC)
- 4 solicitations between 2018-2023
 - ~1,900 MW operational or under construction
- 5th solicitation closed September 2024
 - 25 project proposals
 - 4 developers
 - 6,870 MW in total offer capacity
 - Q1 2025 expected award notification

Integrating Offshore Wind into NY Grid

- All proposed connection points in NYC and Long Island
- Transmission system today insufficient to accommodate 9,000 MW of offshore wind generation
- Peak demand
 - NYC ~11 GW
 - Long Island demand ~5 GW

Long Island Transmission Constraints Under N-1-1 w/ 3GW OSW



Public Policy Transmission Planning Process

- NYISO's FERC Order 1000 process
- Enables planning, development, & cost allocation for transmission driven by public policy
- Sponsorship model vs bid based
- Two projects completed, one in development, one in evaluation



Step 1 The NYISO solicits proposals for **transmission needs driven by public policy requirements** and may offer its own suggestions. These proposed needs are provided to the New York Public Service Commission (PSC) for consideration through an open public process.

Step 2 The PSC identifies specific public policy **transmission needs** and following a technical conference the **NYISO requests proposed transmission designs** from developers.

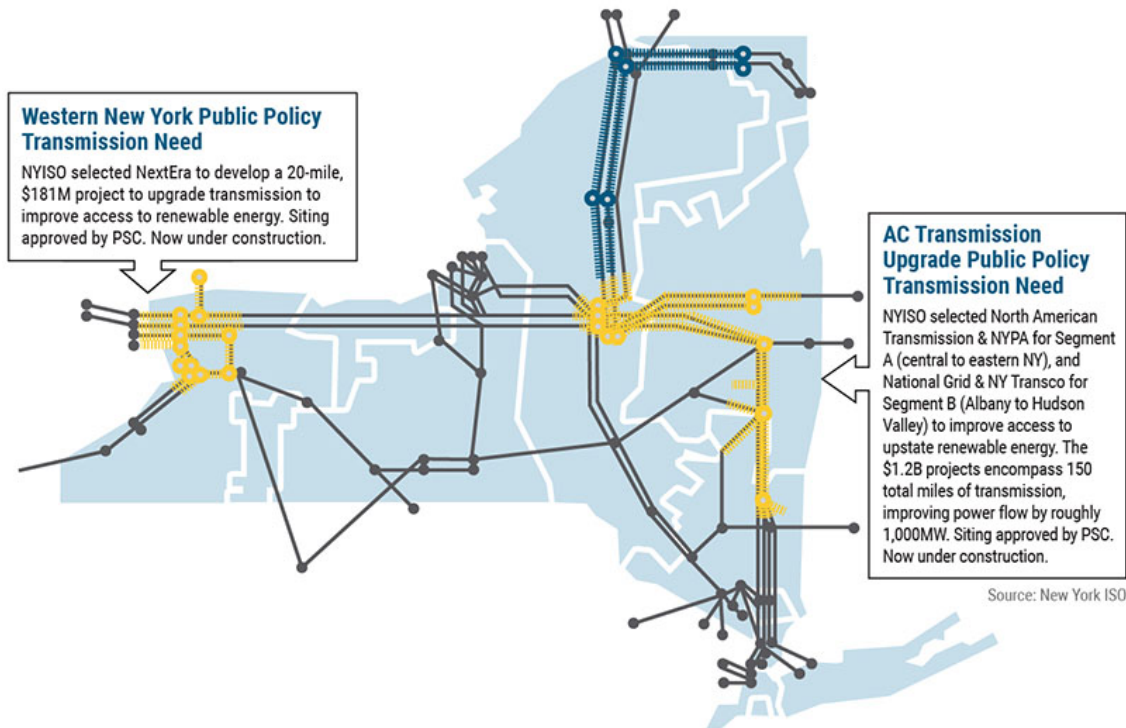


Step 3 The NYISO evaluates the proposals based on a wide range of defined criteria to identify the more efficient or cost-effective solution.

Step 4 Based on NYISO evaluations and stakeholder input, **the NYISO Board of Directors may select a project based on which is the more efficient or cost-effective** to meet the need identified by the PSC.



Completed Public Policy Transmission Projects



Long Island Public Policy Transmission Need (LI PPTN)

- **In March 2021, NYPSC declared Long Island Offshore Wind Export Public Policy Transmission Need**
 - Export 3,000 MW of offshore wind off Long Island
- **NYISO received 19 project proposals and evaluated projects against a wide range of defined criteria to identify the more efficient or cost-effective solution, including:**
 - Cost, operability, performance, expandability, transmission security, cost savings, emissions savings, etc.

Long Island Public Policy Transmission Project

- In June 2023 the NYISO Board of Directors selected the **Propel NY Alternate 5 Project** as the more efficient or cost-effective transmission solution
- Capital cost estimate: \$3.26B
- Required in-service date is May 2030

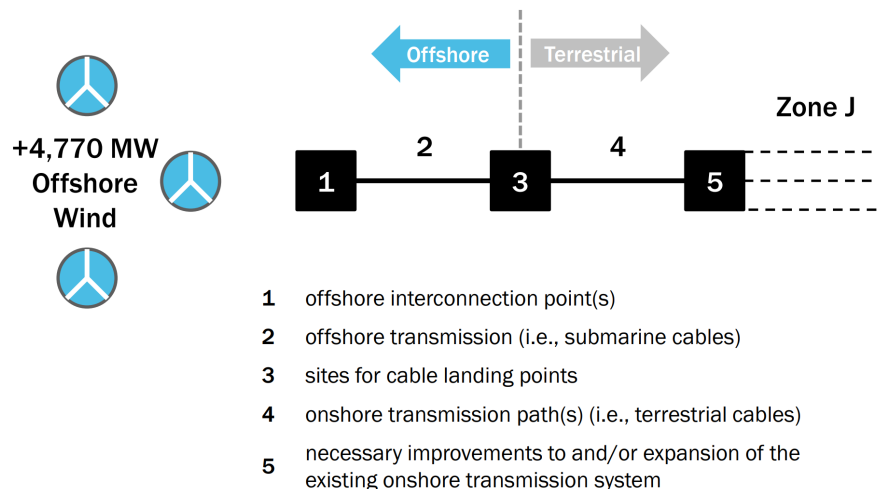
Propel NY Energy Line Map



Source: Propel NY Energy

New York City Public Policy Transmission Need (NYC PPTN)

- In July 2023, NYPSC declared New York City Offshore Wind Public Policy Transmission Need
- At least 4,770 MW of incremental offshore wind into New York City
- “End-to-end” project
- Complete construction by January 1, 2033



New York City Public Policy Transmission Projects Proposed

- In June 2024 the NYC PPTN solicitation window closed
- NYISO received 28 project proposals from 4 developers
- All projects include HVDC technology
- NYISO is currently performing technical evaluation of projects, which will continue into 2025
- Unique Challenges
 - Permitting
 - Supply chain
 - Timing

What's Next?

- **+7,000 MW Offshore Wind by 2035**
- **Long Island PPTN complete by 2030**
- **NYC PPTN complete by 2033**
- **100% Zero Emissions by 2040**

Our Mission & Vision



Mission

Ensure power system reliability
and competitive markets for New
York in a clean energy future



Vision

Working together with stakeholders
to build the cleanest, most reliable
electric system in the nation