

# NYISO Offshore Wind Generation Development Update

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# US DOI BOEM Controls Lease Areas

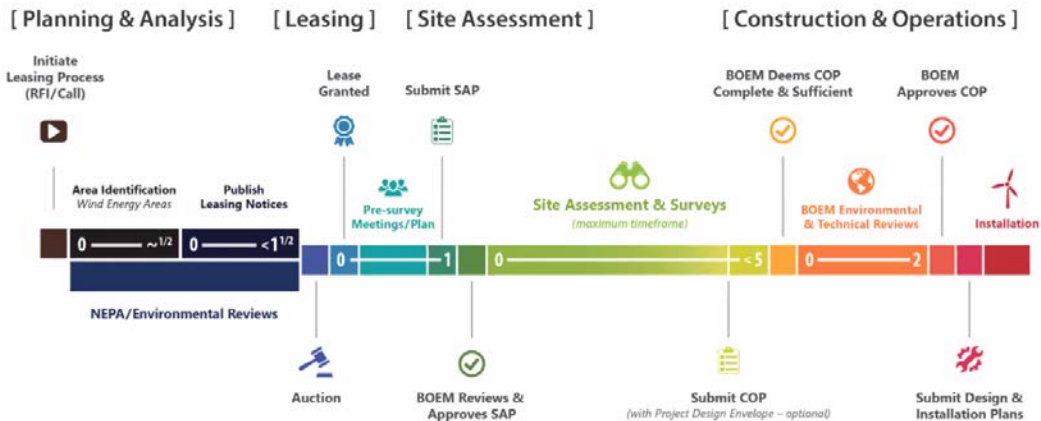
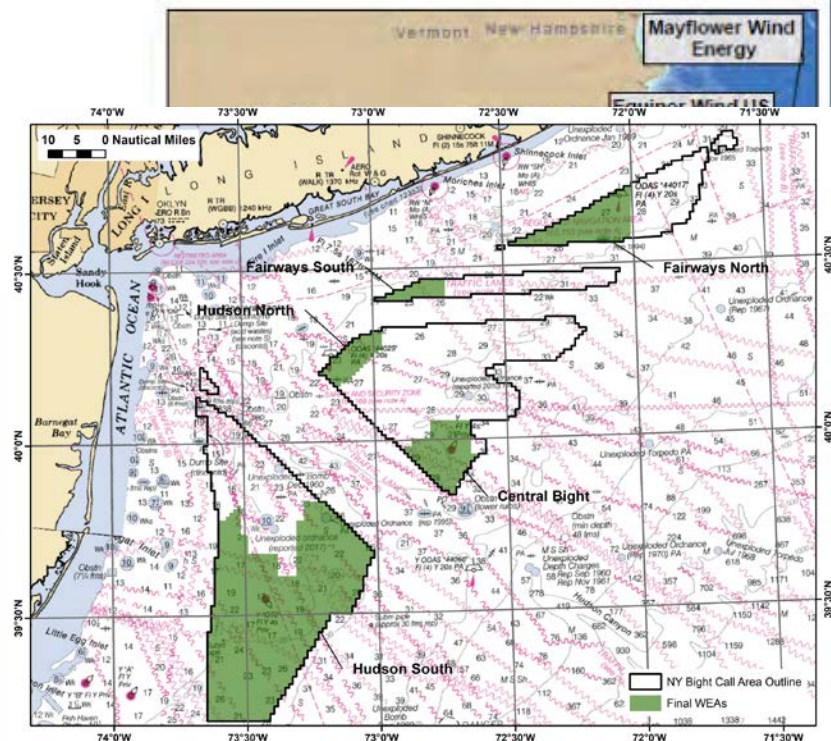
- Oversees OSW development in federal waters
- Process for creating OSW lease areas

<https://www.boem.gov/sites/default/files/boem-newsroom/Wind-Energy-Comm-Leasing-Process-FS-01242017-%281%29.pdf>

- Information specific to NY Bight

<https://www.boem.gov/renewable-energy/state-activities/new-york-bight>  
<https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Developer-Summaries-Compiled.pdf>

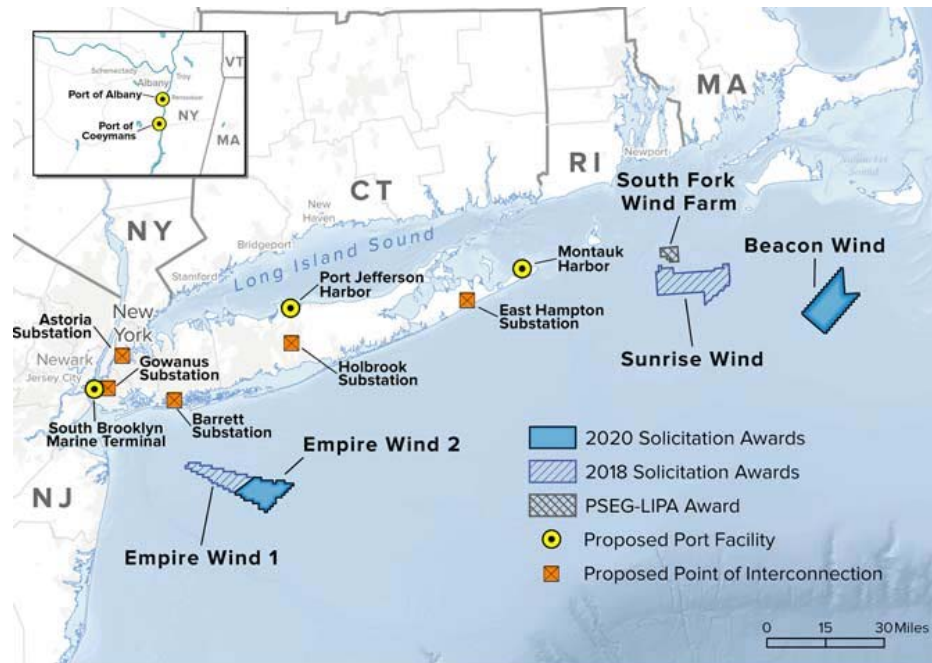
Figure 4-1. BOEM Offshore Wind Lease Areas and Additional Primary/Secondary Areas of Interest



# NY OSW Project Awards

- To-date NY entities have announced contacts with five OSW projects representing nearly half of the 9GW 2035 target

Offshore Wind				
OSW Project	Capacity (MW)	Solicitation	Expected COD	Zone (POI)
South Fork	132	2017 LIPA	2023	K (LIPA Buell)
Empire 1	816	2018 OREC	2024	J (Gowanus)
Sunrise	880	2018 OREC	2024	K (Holbrook)
Empire 2	1,260	2020 OREC	2026	K (Barrett)
Beacon	1,230	2020 OREC	2028	J (Astoria)
Zone J	2,046			
Zone K	2,272			



<https://www.nyserda.ny.gov/All-Programs/Programs/Offshore-Wind/Focus-Areas/NY-Offshore-Wind-Projects>

# Offshore Wind Generation in NYISO Interconnection Queue

Offshore Wind Generation Project	Queue Number(s)	Zone(s)	Proposed I/S Date	MW
South Fork Wind Farm	0612	K	2022/01	96
New York City Offshore Wind	0679	J	2026/07	1200
Long Island Offshore Wind	0680	K	2025/07	1200
South Fork Wind Farm II	0695	K	2022/01	40
El Sunset Park	0737	J	2023/06	816
El Melville	0738	K	2023/06	816
NY Wind Holbrook	0766	K	2024/03	880
NY Wind Gowanus	0767	J	2023/01	1200
Atlantic Shores Offshore Wind 7	0788	K	2025/06	880
Atlantic Shores Offshore Wind 8	0789	J	2025/06	880
Atlantic Shores Offshore Wind 9	0790	J	2025/06	880
Long Island Offshore Wind Connection	0792	K	2025/07	800
El Oceanside	0958	K	2024/06	1000
El Oceanside 2	0959	K	2024/06	500
NY Wind Holbrook 2	0987	K	2023/01	924
Vineyard Wind I	1010	K	2026/07	1403
Vineyard Wind II	1011	K	2026/07	1403
El Steinway 1	1016	J	2026/12	1300
El Steinway 2	1017	J	2027/12	1300
El Glenwood Landing	1022	K	2026/12	1300
NY Wind Holbrook 2	1045	K	2023/01	1050
NY Wind - East Garden City	1056	K	2026/01	1272
NY Wind - Pilgrim	1058	K	2026/01	1276
NY Wind - Mott Haven	1066	J	2026/01	1272
East Wind 1	1087	K	2028/02	1200

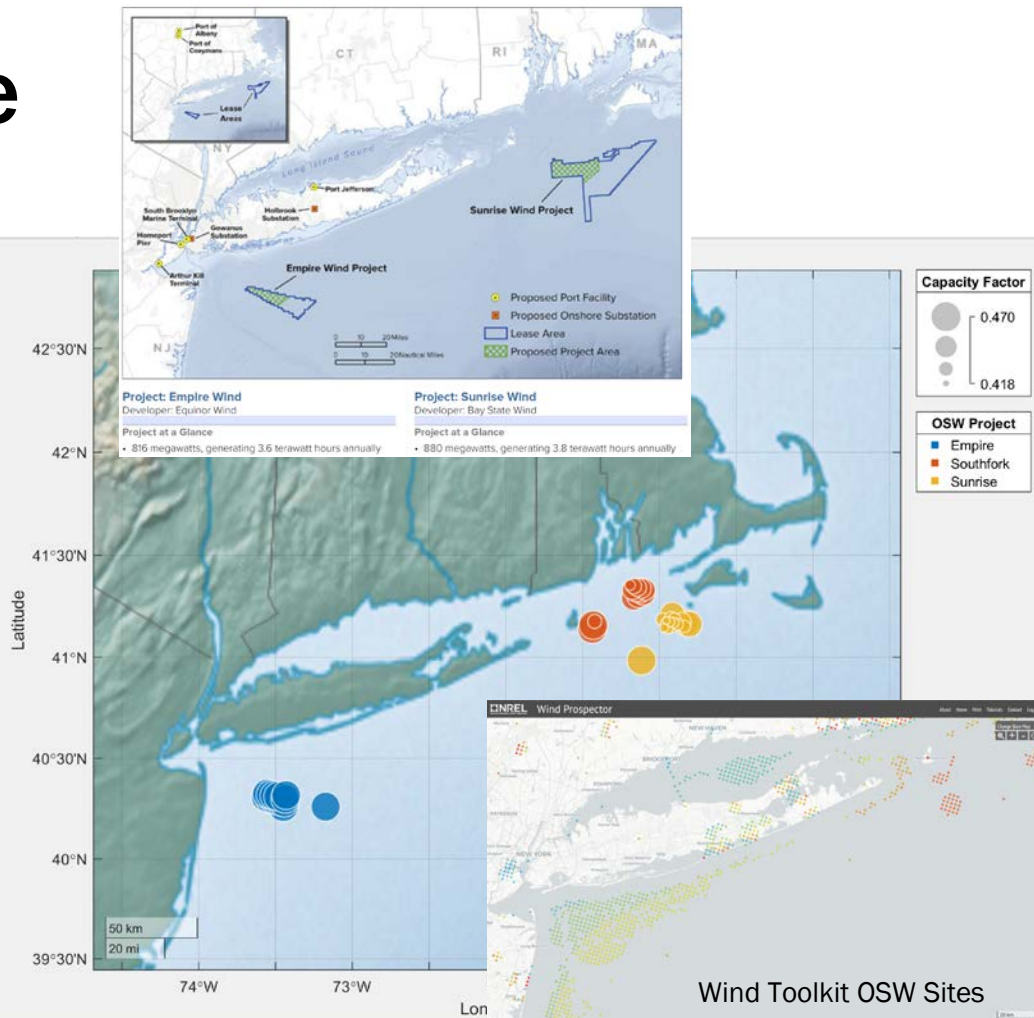
Green projects have been awarded by NY entities; however, there may be multiple queue entries for each project.

# NREL Wind Data

- **Wind profiles obtained from NREL's *Wind Toolkit***
  - Database was developed specifically to model wind in renewable integration studies
  - Data is freely available to the public
- ***Wind Toolkit* - <https://www.nrel.gov/grid/wind-toolkit.html>**
  - 5-minute profiles for sites in the US (to be aggregated to hourly level)
  - Land Based Wind (LBW) and Offshore Wind (OSW) available

# NREL OSW Database

- Selected sites in the NREL database approximating location of announced OSW projects
  - South Forks (130 MW over 14 sites)
  - Empire (816 MW over 15 sites)
  - Sunrise (880 MW over 18 sites)
- Aggregated hourly profiles to OSW project level - scaled to project capacity
- Additional OSW capacity added up to assumed 6,000 MW
- Database used in 2019 CARIS Phase I and 2020 RNA 70x30 scenarios

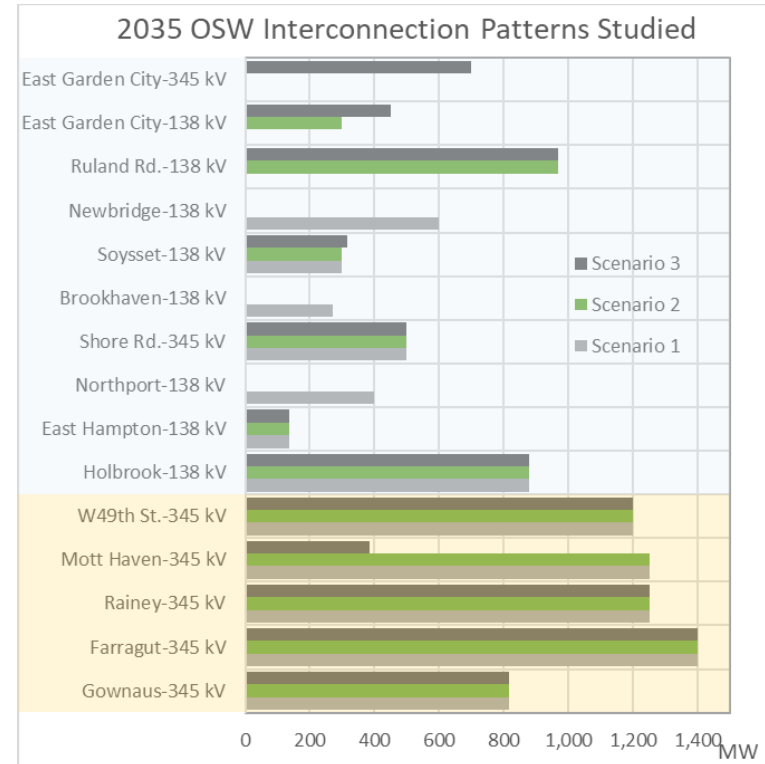


<https://www.nysedra.ny.gov/All-Programs/Programs/Offshore-Wind/Offshore-Wind-Solicitations/Generators-and-Developers/2018-Solicitation> , <https://maps.nrel.gov/wind-prospector/>

# New Information for Future Studies

- Empire 2 and Beacon Wind OREC Awards
- NYS Power Grid Study—studied OSW and local integration issues—contains valuable insights and information
  - TOs examined feasibility of OSW integration at specific sites
  - A range of sites and build out patterns were studied

<http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=20-E-0197&CaseSearch=Search>



# Questions?



# Our mission, in collaboration with our stakeholders, is to serve the public interest and provide benefit to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the power system

