

NY's Clean Energy Standard: Where We Are & Where We're Going

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New York's Clean Energy Standard (CES)

- By Order issued August 1, 2016, the New York Public Service Commission adopted the State Energy Plan (SEP) goal -- mandated 50% renewables by 2030 (RES) and instituted a zero-emission credit (ZEC) compliance mechanism.
- Includes obligations upon LSEs and opportunities for voluntary contributions.
- The RES component and the ZEC component goals are additive – i.e., ZECs do not count toward satisfying the CES 50% requirement.
- Order Establishing Offshore Wind Standard and Framework for Phase 1 Procurement was issued July 12, 2018, and set a separate LSE compliance mechanism.

2019 State of the State

100% Clean, Carbon-Free Electricity by 2040

- Clean Energy Standard mandate to increase to **70% renewable electricity by 2030**
 - Up from 50% by 2030
- Nearly quadrupling New York's offshore wind target to **9,000 megawatts by 2035**
 - Up from 2,400 megawatts by 2030
- Doubling distributed solar deployment to **6,000 megawatts by 2025**
 - Up from 3,000 megawatts by 2023
- Deploying **3,000 megawatts of energy storage by 2030** (announced Dec. 2018)
- Maximizing the contributions and potential of New York's existing renewable resources
- Expanding and enhancing the Solar For All program

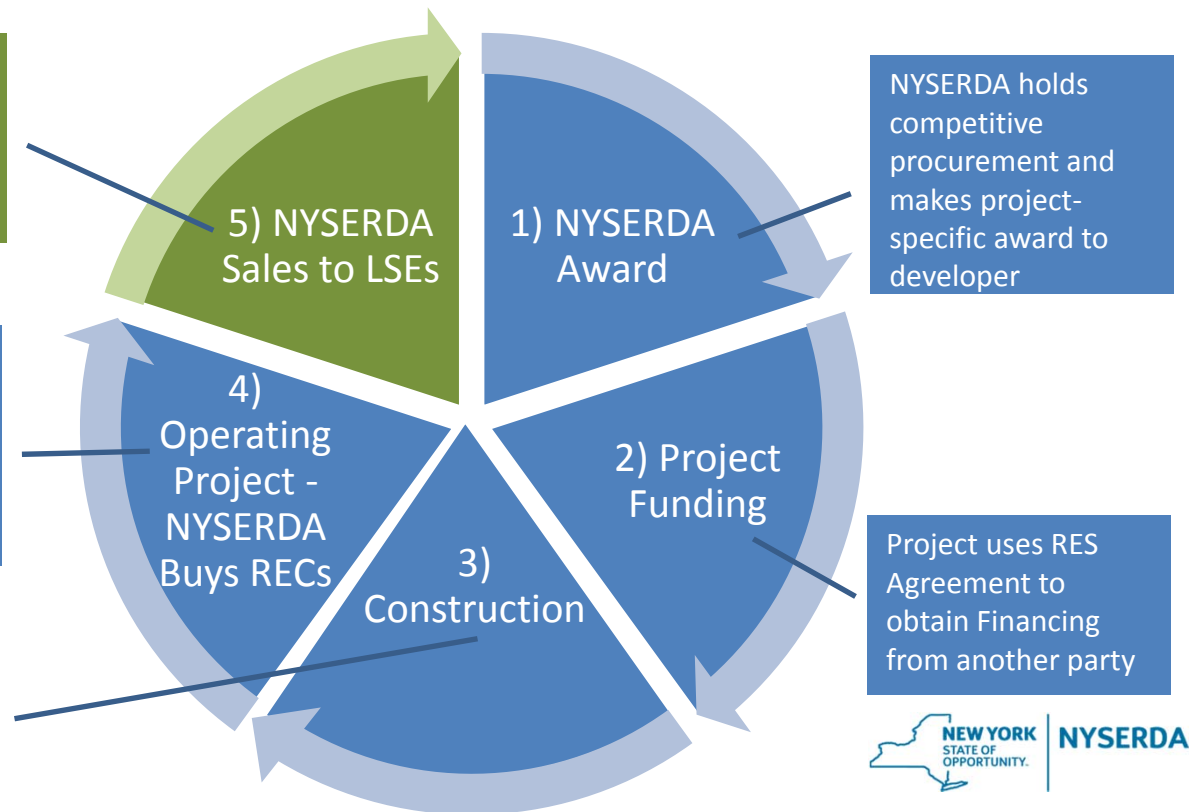
Tier-1 REC Cycle:

Sales to LSEs fund the procurement of Tier 1 renewable energy in NYS

NYSERDA sells to jurisdictional LSEs the Tier 1 RECs for compliance as Ordered by the PSC. NYSERDA sells Tier 1 RECs to LSEs at an average price of the produced RECs from Step 4. NYSERDA (+\$)

Upon CO, NYSERDA purchases Tier 1 RECs at Bid Prices determined by the competitive solicitation in Step 1. The RECs are generated by the project per the Agreement resulting from the original Procurement Award in Step 1. NYSERDA (-\$)

Project is built and applies for NYGATS Statement of Qualification and Operational Certification (OpCert); Seller declares Commercial Operation (CO)



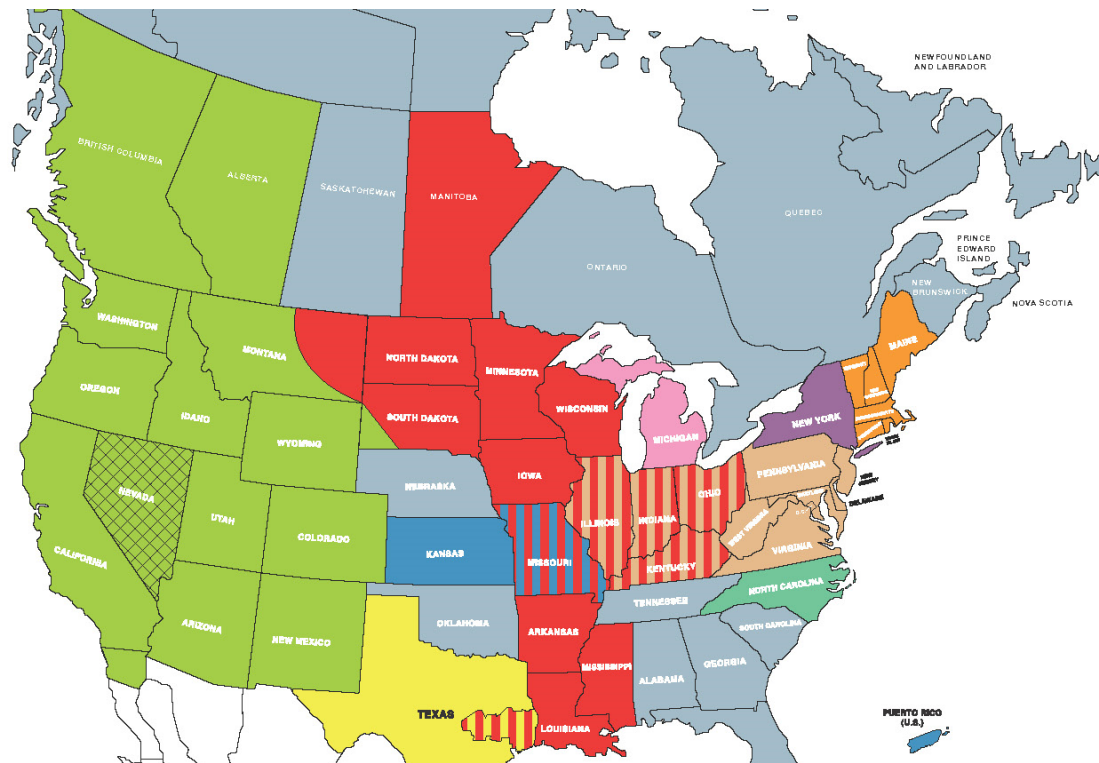
New York Generation Attribute Tracking System & the RES

- Resources apply for Tier 1 certification through NYGATS
- Only Certified resources can create Tier 1 RECs in NYGATS or submit proposals to RES RFP
- RECs procured through RES RFPs are transferred to NYSERDA through NYGATS
- RECs procured by NYSERDA then sold to LSEs via a sales platform built in NYGATS
- LSEs retire Tier 1 RECs to demonstrate RES compliance
- NYGATS data is used in the CES progress reporting -- annual statewide fuel mix calculation & compliance activities

North American Tracking Systems

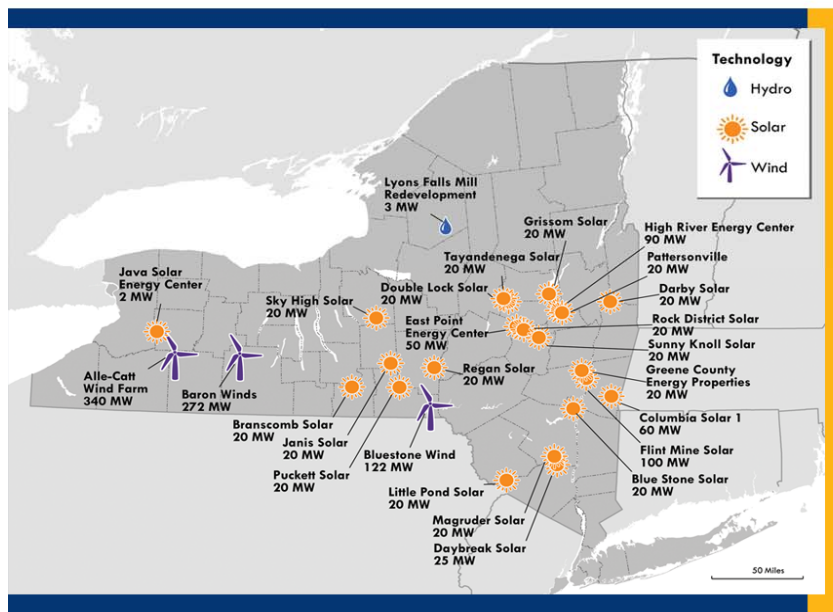
KEY

- ERCOT:** Electric Reliability Council of Texas
- MIRECS:** Michigan Renewable Energy Certification System
- M-RETS:** Midwest Renewable Energy Tracking System
- NAR:** North American Renewables Registry
- NC-RETS:** North Carolina Renewable Energy Tracking System
- NEPOOL-GIS:** New England Power Pool Generation Information System
- NVTREC:** Nevada Tracks Renewable Energy Credits
- NYGATS:** New York Generation Attribute Tracking System
- PJM-GATS:** PJM EIS's Generation Attribute Tracking System
- WREGIS:** Western Renewable Energy Generation Information System
- No tracking system formally adopted.** NAR allows registration from generators located anywhere in the U.S. and Canada. Other tracking systems may allow registrations from outside their geographic territory.



2017, Center for Resource Solutions <https://resource-solutions.org/wp-content/uploads/2017/03/Tracking-System-Map.pdf>

LSR Solicitation Award Set No. 1



\$1.4 billion
single largest commitment to renewable energy by a state in the U.S.

26 large-scale renewable energy projects across New York

- > 22 solar farms
- > 3 wind farms; one features energy storage
- > 1 hydroelectric facilities

Generate enough energy to power **more than 430,000 homes**

Reduce carbon emissions by **1.6 million metric tons**, equivalent to taking nearly **340,000 cars off the road**

Create **over 3,000** short- and long-term well-paying jobs

LSR Solicitation Award Set No. 2

\$1.5 billion

single largest commitment to renewable energy by a state in the U.S.

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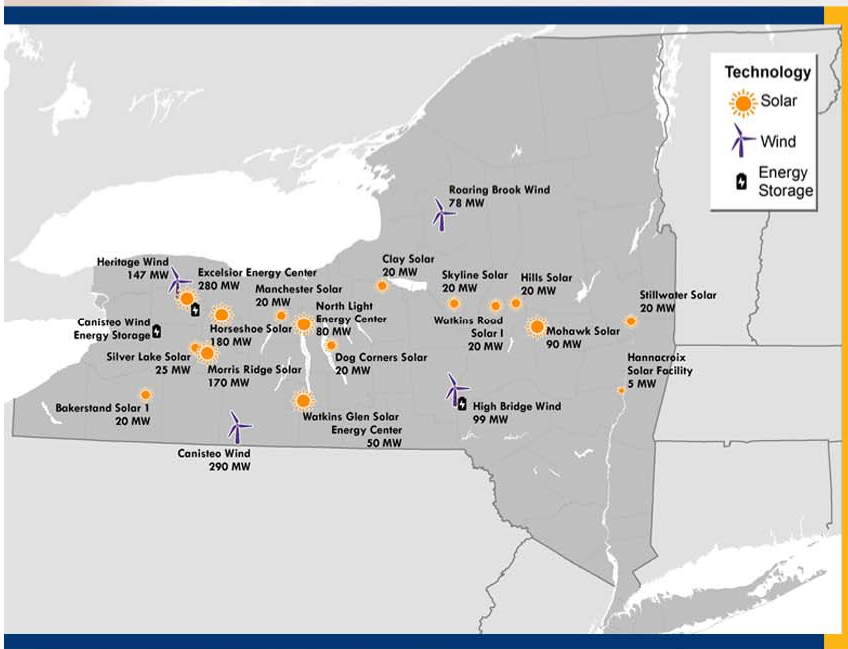
large-scale renewable energy projects across New York

- > 16 solar farms; one features energy storage
- > 4 wind farms; two feature energy storage

Generate enough energy to power nearly **550,000 homes**

Reduce carbon emissions by **2 million metric tons**, equivalent to taking nearly **437,000 cars off the road**

Create over **2,600** short- and long-term well-paying jobs



The Siting Challenge: Building Community Support

Host communities sometimes experience:

- Lack of information to evaluate projects
- Diminished negotiating position
- Fear of loss of control

Which can lead to:

- Distrust of developer
- Sense of powerlessness in the process
- Erosion of support for LSR development

NYSERDA Initiatives to increase citizen awareness and engagement

- Provision of Information Resources
 - Broadly applicable, coordinated with NY Sun, CEC, and Clean Energy Siting
- Community Engagement
 - Direct assistance, targeted approach, local workshops
- Direct Economic Benefits
 - Community ownership/investment, energy benefits through a CCA

2018 RES RFP – New Siting Requirements

- Threshold Requirements to demonstrate engagement with host communities
 - Community Outreach Plan – Proposers will include a comprehensive plan that addresses localized support/opposition (including local ordinances, prohibitions, or moratoria) that could impact the project and an overview of outreach activities.
 - Public Release of Bid Proposal Information – Proposers will populate a standardized form providing a public project overview and basic information.
- New Site Character subcategory encourage solar development that avoids prime agricultural areas or parcels that hold an agricultural tax assessment
- NYSERDA Outreach:
 - Public Release forms on CES website and Staff engaged host communities
 - Host community local governments contacted to inform about the project and NYSERDA's solicitation, offer NYSERDA's siting tools and resources, and to gauge local sentiment.
 - Performed jointly with new Clean Energy Siting team
 - Follow up workshops on local law development and property taxes are being scheduled

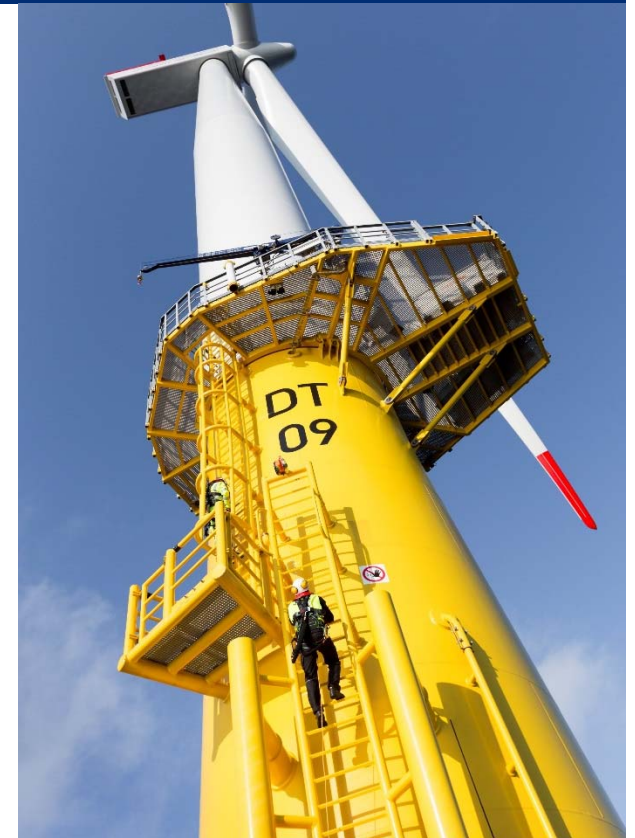
Offshore Wind Order & RFP

PSC Order issued July 12, 2018 Establishing Offshore Wind Standard and Framework for Phase 1 Procurement (Case 18-E-0071).

- Established the 800 MW Phase goal
- Describes an “Index OREC” for the procurement of attributes
- Identifies NYSERDA as the state entity to administer Phase 1
- Establishes the LSE obligation (similar to the CES)
- Identifies wet transmission for consideration in Phase 2
- Provides for interconnection outside the NYCA
- Provides NYSERDA discretion in the RFP and contracting process, including with respect to economic benefits, labor and other issues

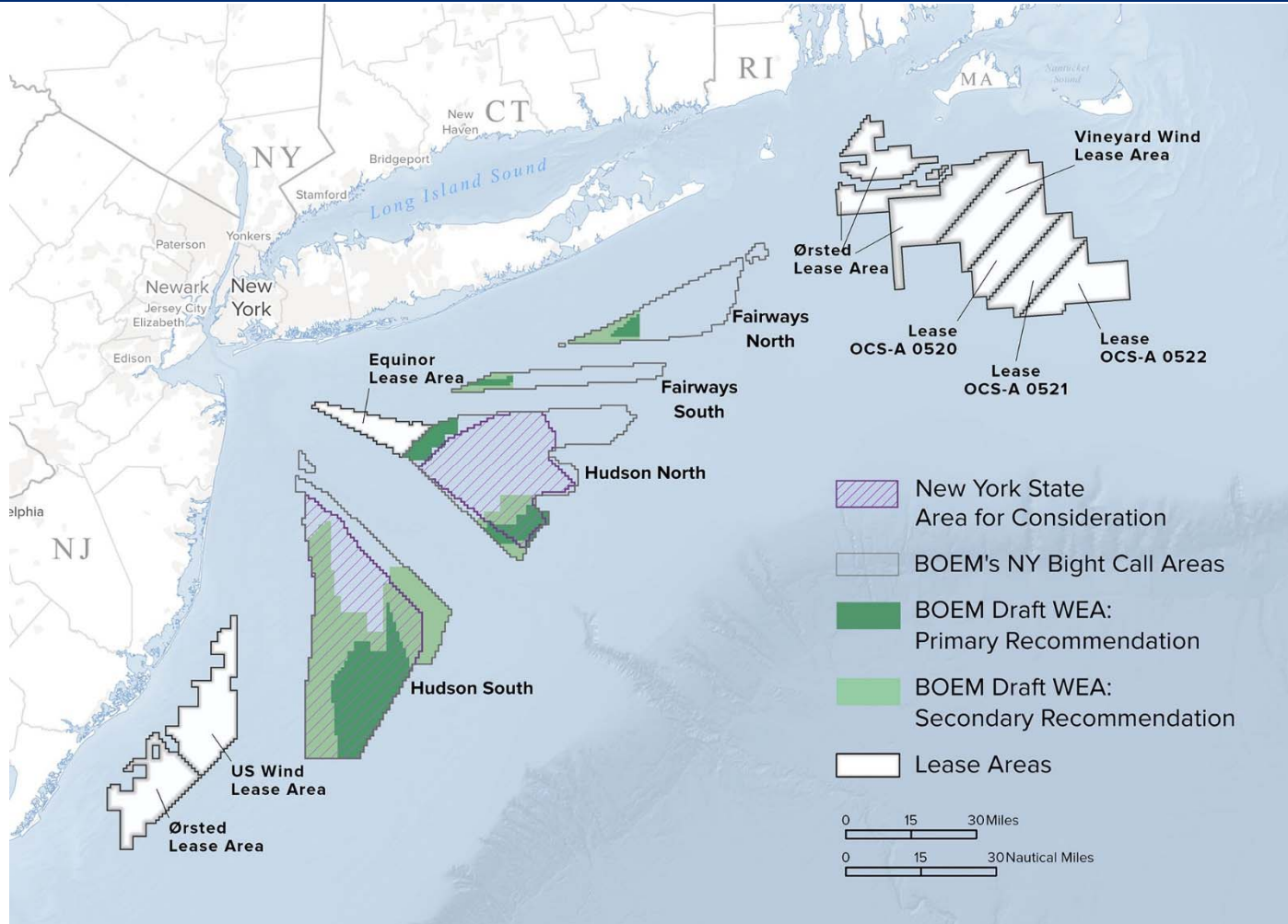
ORECRFP18-1 Issued November 8, 2018

- Bids due February 14, 2019
- Five entities (most of any U.S. RFP yet) submitted NOIs
- 70% cost; 20% economic benefits; 10% viability
- Requires PLAs and prevailing wage
- Conditional award(s) expected April 2019
- Contract(s) execution expected by June 2019



Offshore Wind – State of the State 2019

- Increase Goal from 2,400 MW in 2030 to **9,000 MW by 2035**, enough to power more than 3 million households. By far the largest goal in the country.
- Invest **\$200 million in port infrastructure** to unlock private supply chain capital and capture long-term economic benefits of regional development.
- Establish a **New York State Advisory Council on Offshore Wind Economic and Workforce Development** and invest in an offshore wind training center that will provide New Yorkers with the required skills and safety training.
- Evaluate and facilitate the **development of an offshore transmission grid** that can benefit New York ratepayers by driving down offshore wind generation and integration costs.



New York State Solar Market Update

- 281 MW of PV completed in 2018 vs. 228 MW in 2017 (which was a record for NYS) -- 23% year-on-year growth, and the trajectory continues upward
- Pipeline is nearly 1000 MW, approximately 80% of which is community solar
- July and August 2018 biggest months ever for NYS solar project completions
- More PV installed in 2nd half of 2018 (153 MW) than any other half year in NY's history
- 24 community solar projects with over 100 MW under construction or complete
- NYS is currently the #3 state in solar jobs (9,012 in 2017) – an increase of nearly 1,000 jobs and from our #6 position in 2016
- Average price per Watt of completed projects fell 15% from 2017 to 2018, from \$3.16 to \$2.68
- Average NY-Sun incentive fell 19% from 2017 to 2018, from \$0.42 to \$0.34.

Updates to NY-Sun Program

- In 2018, NYSERDA redesigned **the** MW Block program to adapt to the VDER landscape -- increased incentive for C&I, adders for landfills & brownfields, and accelerated payments.
- Two white papers in December 2018 (Matter #15-02703; comments due 2/25/19), regarding:
- CDG expansion
 - Provides a Community Credit for a larger number of projects than the current MTC structure
 - Allows CDG projects to take both a Community Credit & Demand Reduction Value, encouraging well-designed projects like those that serve anchor tenants & small members
 - Alternative incentive mechanisms for CDG in Central Hudson and O&R
- Improvements to distribution value
 - Project revenue more predictable and bankable: based on statewide system peak hours
 - Distribution compensation would be more stable and consistently-calculated
- Improvements to capacity value: more consistently-calculated across utilities
- Onsite projects up to 750kW can choose NEM

Thank you!

<https://www.nyserra.ny.gov/Clean-Energy-Standard>

