



**NYSERDA**

# **Solar Energy Drivers and Patterns in the Hudson Valley**

**March 27, 2018**

# Net Metering – Established in NYS in 1997



Central Valley, 531 kW



West Nyack, 2 MW

Located at the customer location, offsets one meter, available to residential and commercial customers

# Remote Net Metering – Authorized in 2011

Located remotely from the customer,  
can credit to multiple accounts of  
that one customer, only available to  
commercial customers



Esopus, 875 kW



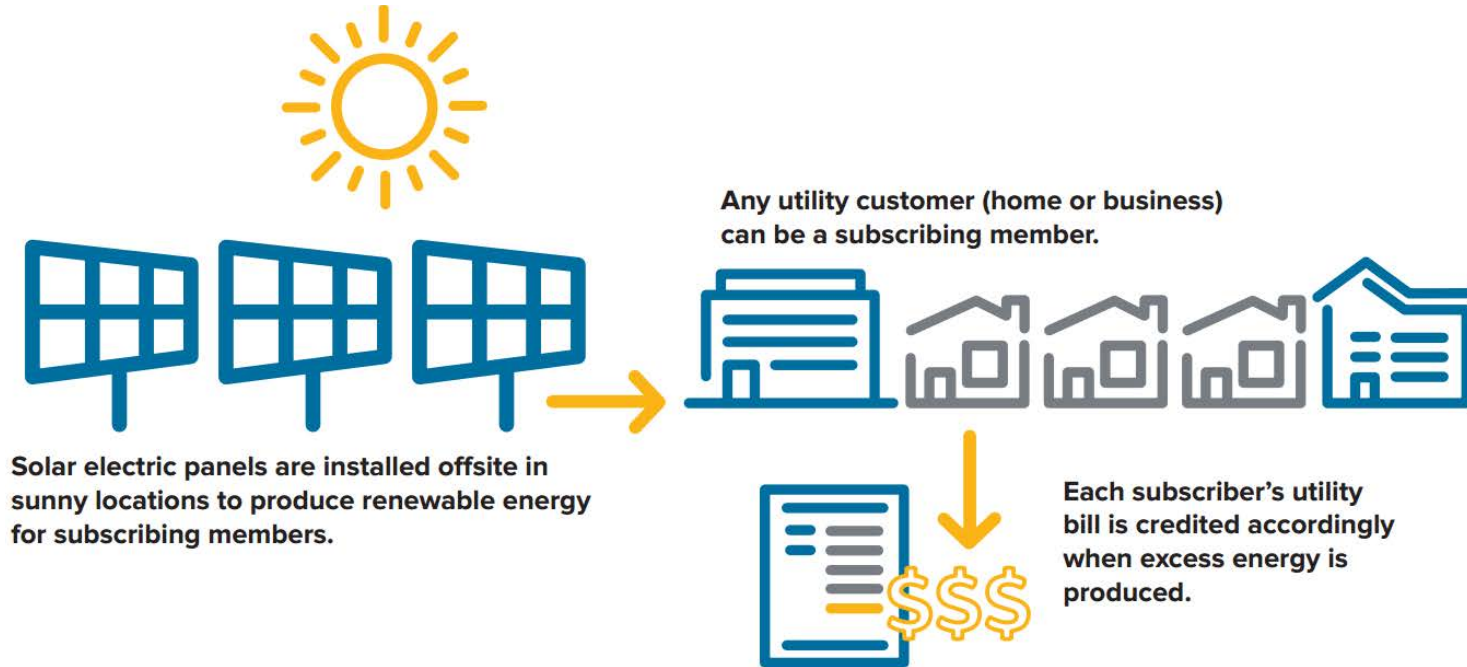
Middletown, 2 MW

# NY Sun Initiative – 2014

- Governor Cuomo committed \$1 Billion to NY Sun to achieve over 3GW of customer-sited solar installations by 2023
- NYSERDA managed incentive program supports solar projects for homes, multifamily buildings, commercial and industrial companies, and municipalities
- Protect the environment and lower energy costs by improving the efficiency and reliability of the electric grid, through solar energy



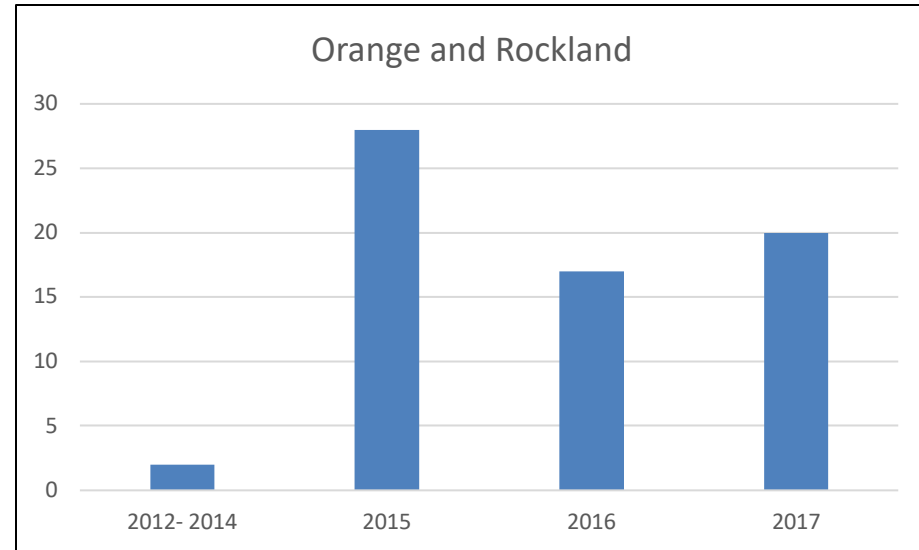
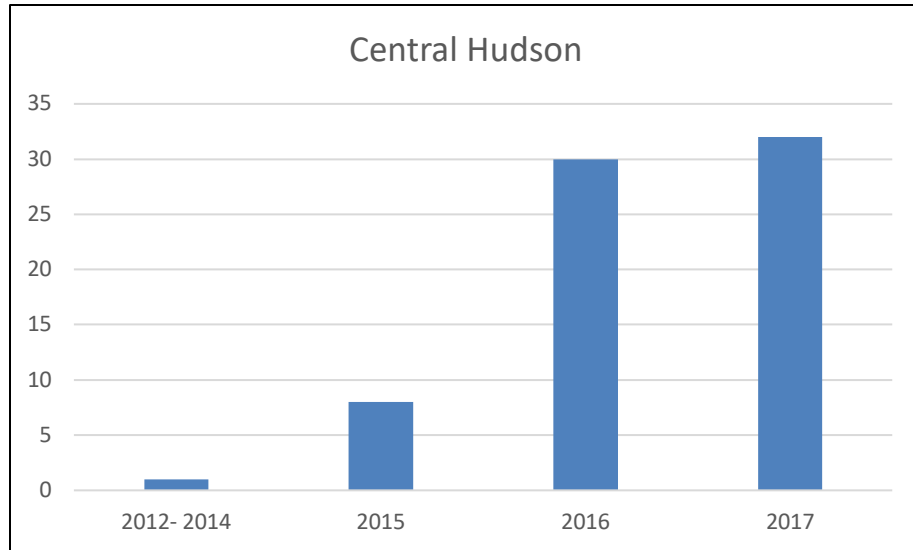
# Community Distributed Generation – Instituted in 2015



**Expansion of Remote Net Metering – one project can serve multiple customers, available to residential and commercial customers**

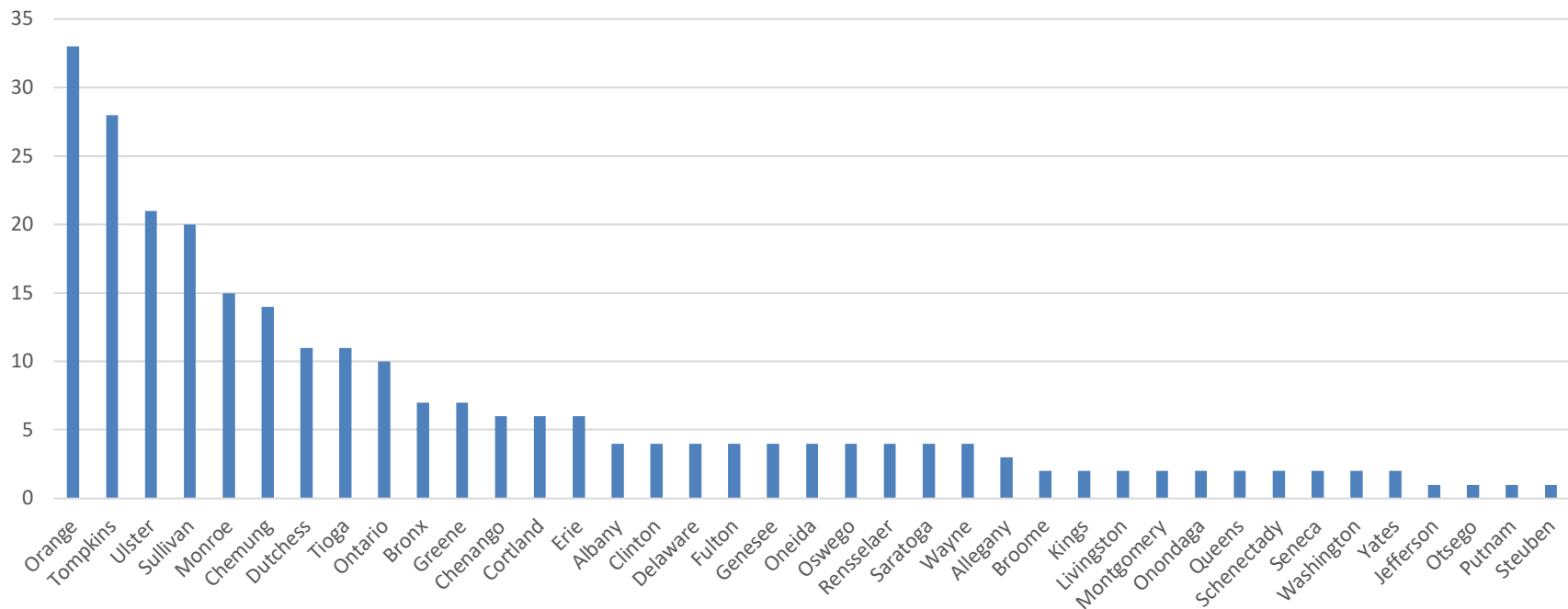
# Interconnection Applications - PV Greater than 1 MW

## NYS Standard Interconnection Requirements Inventory January 2018



This represents potential solar projects, only 7 have been completed

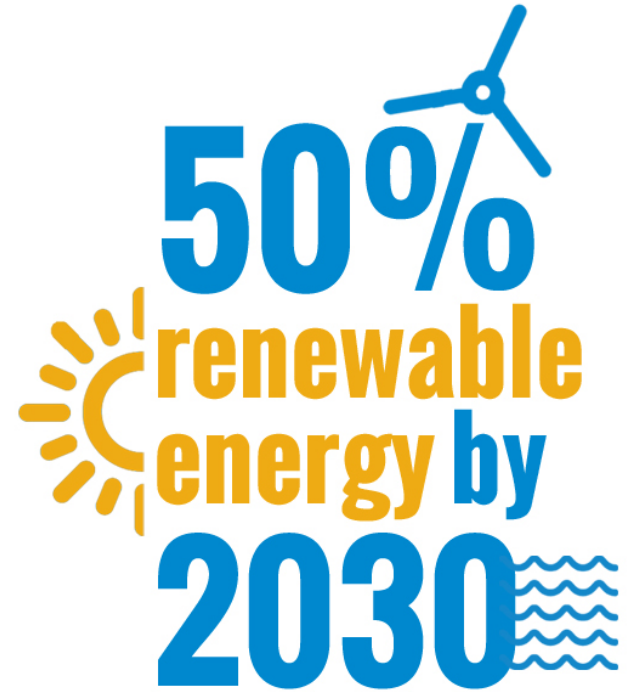
# CDG Projects in the NY Sun Incentive Program



- There are proposed community solar projects in 39 counties
- Majority are about 2 MW AC

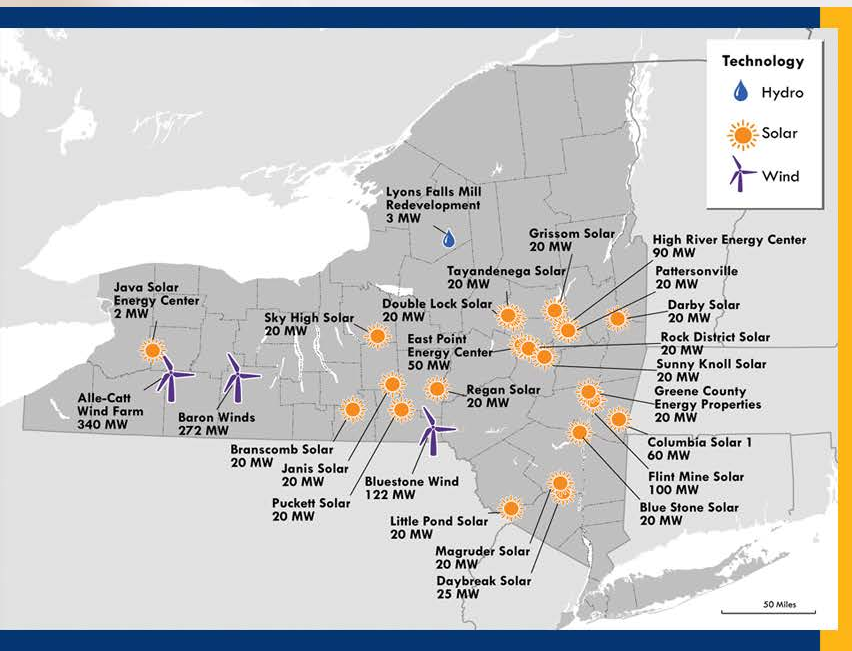
# Clean Energy Standard - 2016

- Governor Cuomo's ambitious clean energy mandate
- Renewable Energy Standard (RES) requires 50% renewable energy by 2030
- Obligation on Load-Serving Entities (utility companies, ESCOs)
- Starting in 2017, annual procurements by NYSERDA to support renewable energy development
- Wind, Solar, Hydroelectric, Offshore Wind, Biomass, Fuel Cells





# Large-Scale Renewable Awards – 2017 Renewable Energy Standard Solicitation



## \$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

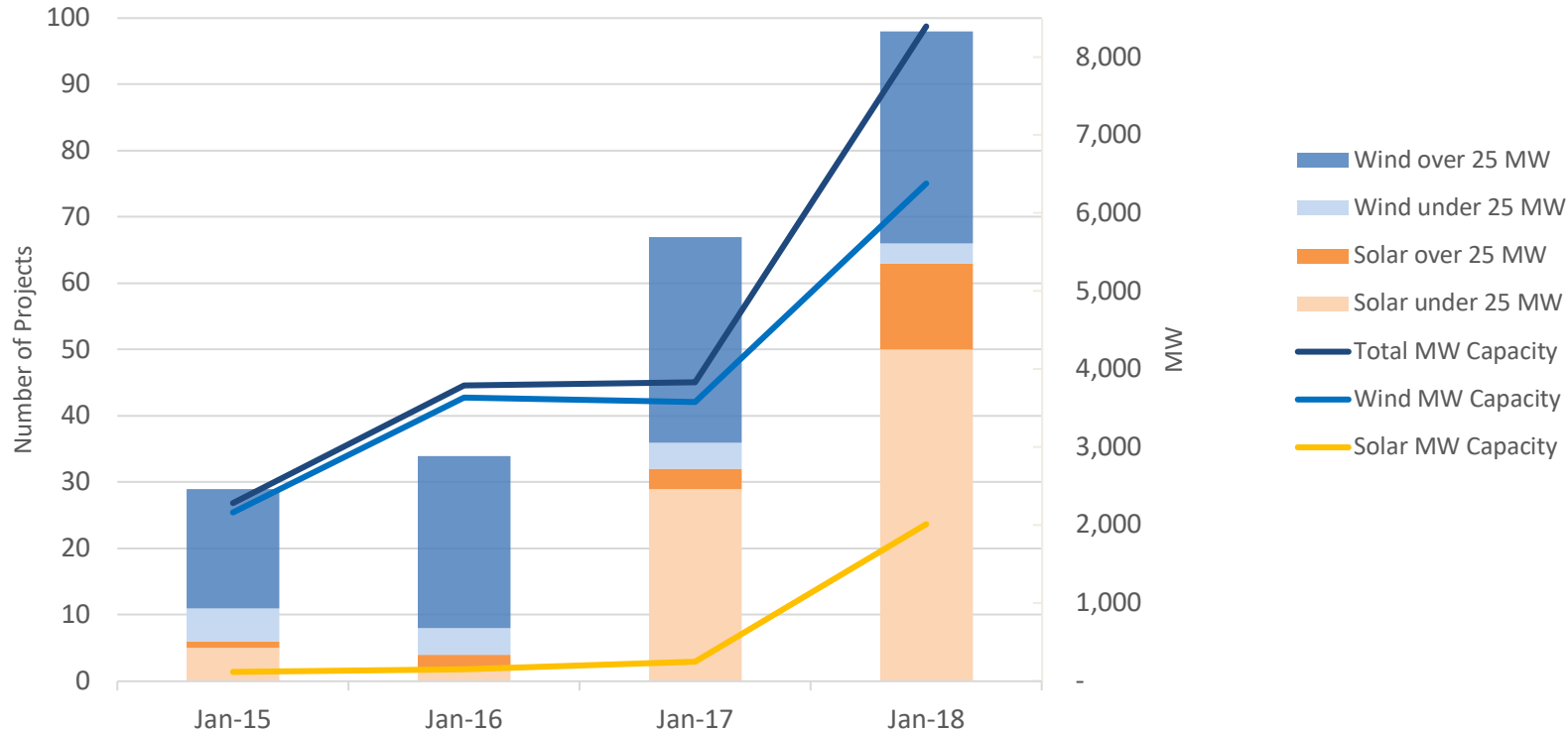
- > **22** solar farms
- > **3** wind farms; one features energy storage
- > **1** hydroelectric facilities

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**

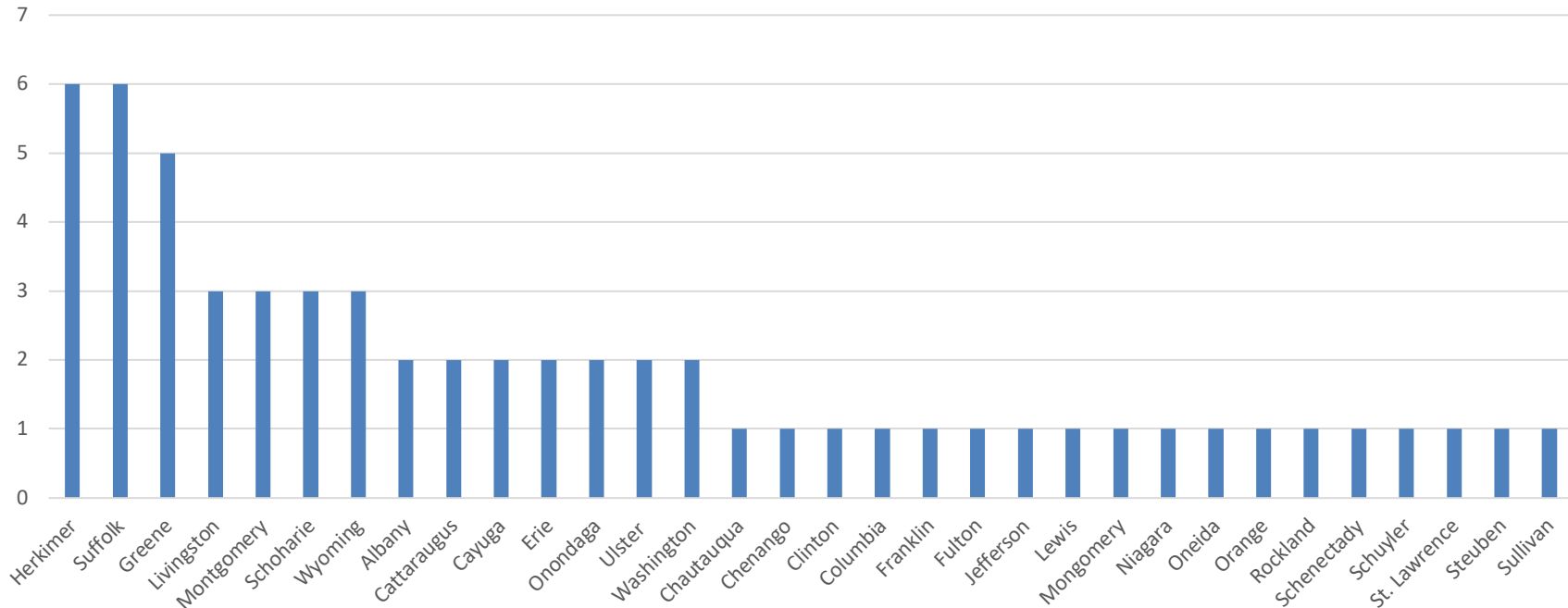
Create **over 3,000** short- and long-term **well-paying jobs**

# NYISO Interconnection Queue - Wind and Solar



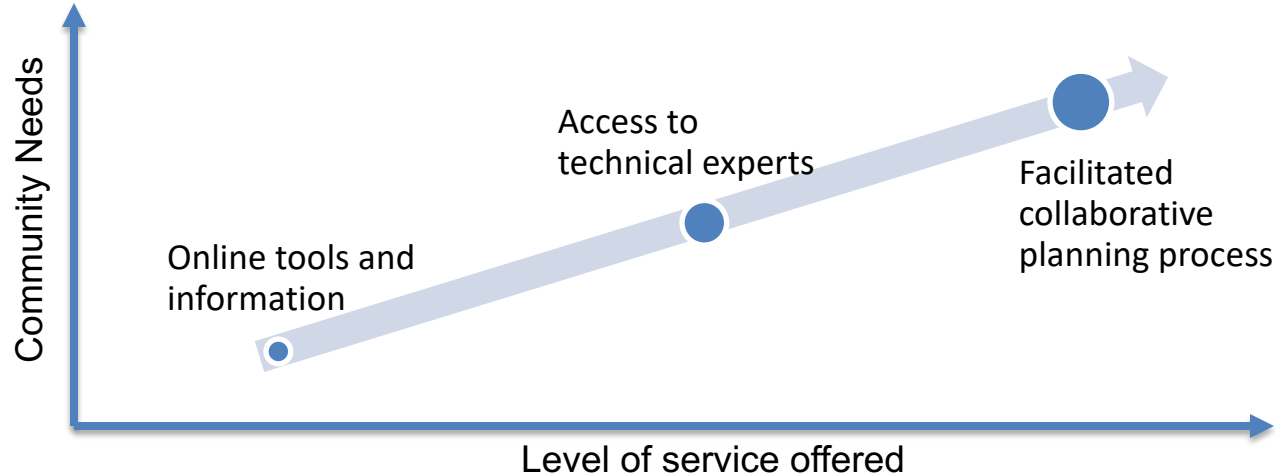
This represents potential renewable energy projects

# NYISO Queue Solar Projects by County



- There are proposed large scale solar projects in 32 counties
- Majority are about 20 MW AC

# Technical Assistance for Local Governments



Collaborative planning:

- Identify community and developer interests
- Address legitimate issues
- Mitigate for unavoidable impacts
- Build consensus solutions

# Technical Assistance for Local Governments

## Online solar energy tools

<https://www.nyserda.ny.gov/SolarGuidebook>

1. Adopting a Payment-In-Lieu-Of-Taxes (PILOT) law and agreement
2. Completing the SEQR process for large solar installations
3. Planning and Zoning for Solar
  - Adopting a Model Solar Energy Law
  - Siting PV in Agricultural Districts and agricultural areas
  - Updating master plans and zoning regulations
4. Municipal Solar Procurement
5. Decommissioning

## Free one-on-one Technical Assistance

<https://www.nyserda.ny.gov/ny-sun-technical-assistance>



NYSERDA

# Thank you

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

<https://www.nyserda.ny.gov/All-Programs/Programs/NY-Sun>

# Supplemental Slides

# NYSERDA RES Annual Procurement Requirements

Year	Distribution Utilities & ESCOs	LIPA	NYPA	Direct Customers	Anticipated Procurement Target (MWh)*
2017	1,424,555	242,766	281,087	18,041	1,966,449
2018	1,464,801	249,624	289,028	18,551	2,022,004
2019	1,505,047	256,483	296,969	19,061	2,077,560
2020	1,545,293	263,342	304,911	19,570	2,133,116
2021	1,585,539	270,200	312,852	20,080	2,188,671

**RESRFP17-1  
Procurement Target**

**1,500,000 MWh**

\* Assumes that NYSERDA will be procuring RECs for NYPA and LIPA customer loads. In the event that NYPA and LIPA do not participate in NYSERDA's procurements, the procurement targets will be adjusted accordingly by reviewing the NYPA or LIPA portions shown in this table.



# NYISO Energy Demand by Zone

## Zonal Loads & Interface Flows

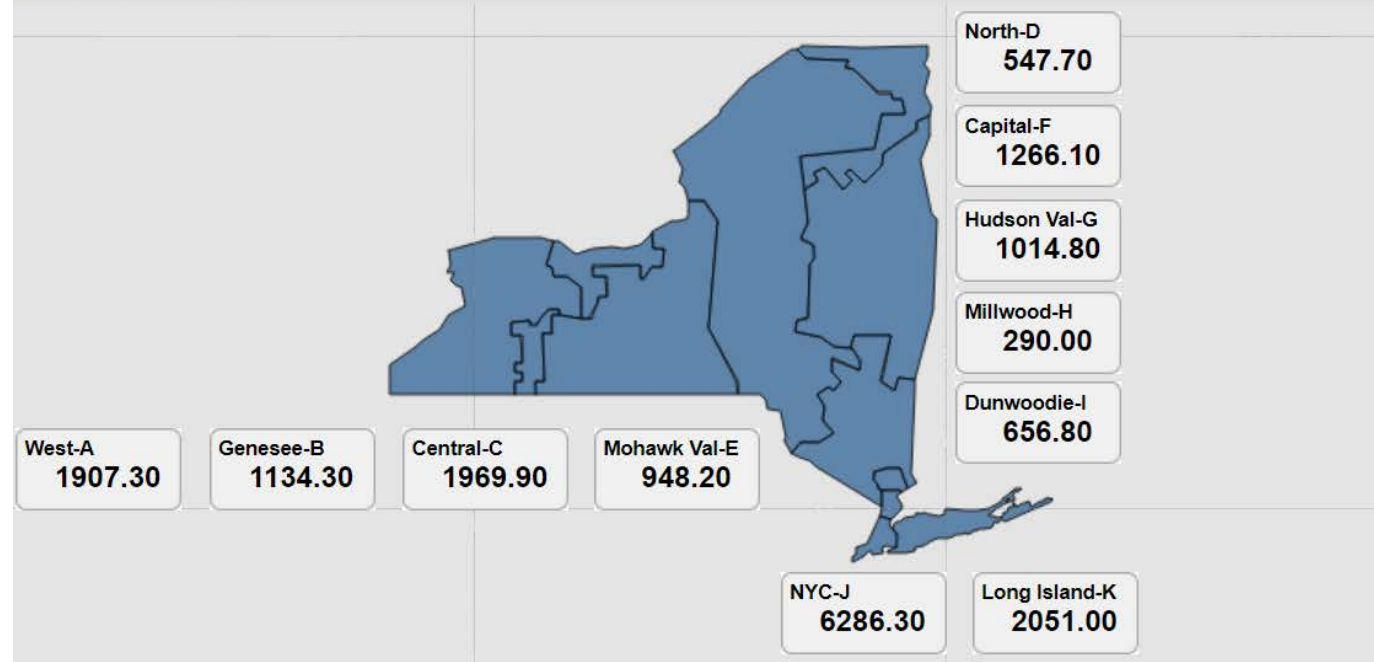
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Click on zone box for graph.

New York State Load: 18,072.40 MW

Zonal Load  Interface Flows



# NYISO Energy Price by Zone

