



**NY-Sun**

**NYSERDA**

# **NY-Sun Overview**

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NYS Interconnection Ombudsman



# Agenda

- Reforming the Energy Vision (REV)/ Clean Energy Standards (CES)
- NY-Sun Overview
  - MW Block Incentive Program
  - Solar Market Acceleration Program
    - Interconnection Ombudsmen services
    - Local government support
- Phase 1 Order--Value of Distributed Energy Resources
- Q&A

# Reforming the Energy Vision (REV)

*Governor Cuomo's strategy to build a clean, resilient and affordable energy system for all New Yorkers*

## Clean Energy Standard

*New York will generate 50 percent of its electricity from renewable sources by 2030*

# NY-Sun Initiative

- Significantly expand installed solar capacity
- Attract private investment
- Enable sustainable development of a robust industry
- Create well-paying skilled jobs
- Improve the reliability of the electric grid
- Reduce air pollution
- Make solar available to all New Yorkers

Reduce Soft Costs

Approx. \$1 Billion Total Budget



Self-Sustaining Market



Statewide Goal of 3 GW by 2023

# NY-Sun Incentive Program: MW Block

# NY-Sun Incentive Program: MW Block

Capacity-based cash incentive available to eligible contractors.

## Three Regions:

- Con Edison (New York City and South Westchester)
- Long Island (complete)
- Upstate (Rest- of-State or ROS)

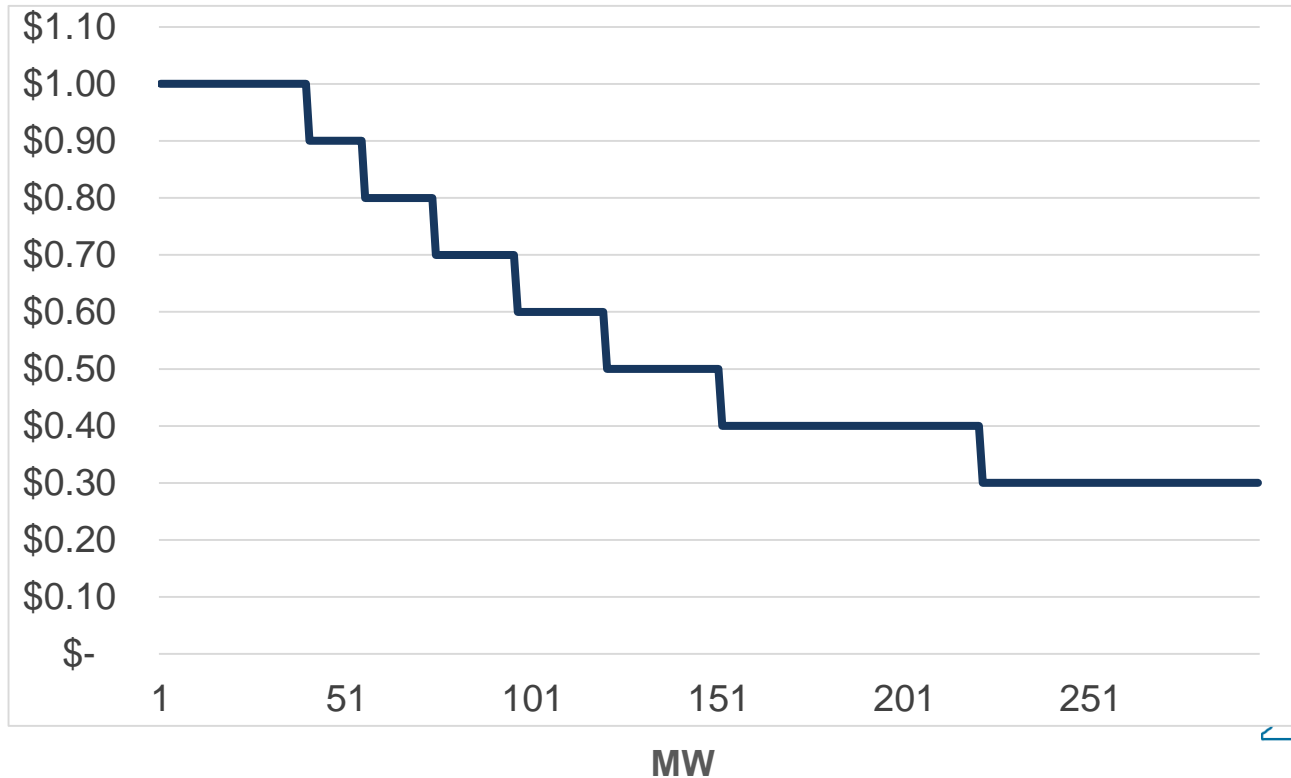
## Three Sectors:

- Residential: up to 25 kW
- Small Non-residential: up to 200 kW
- Commercial/Industrial: >200 kW

Incentive is available through Dec 29, 2023, or until funds are exhausted.

# NY-Sun Incentive Program: MW Block

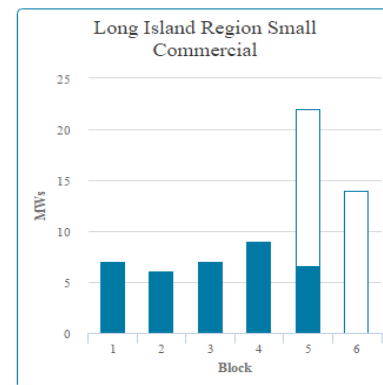
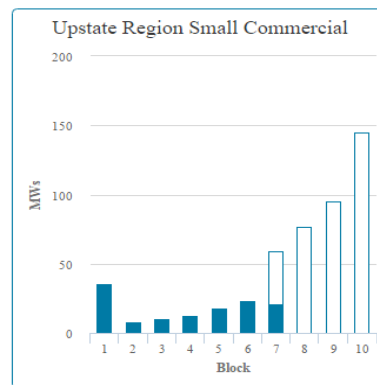
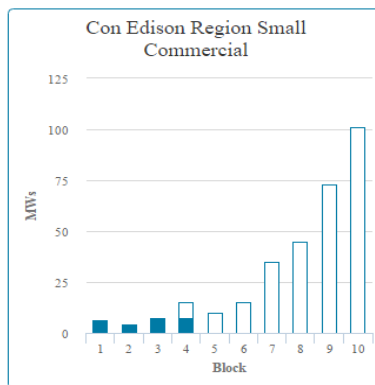
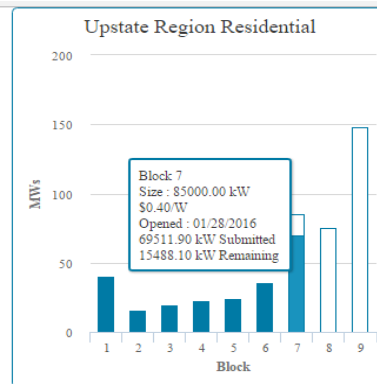
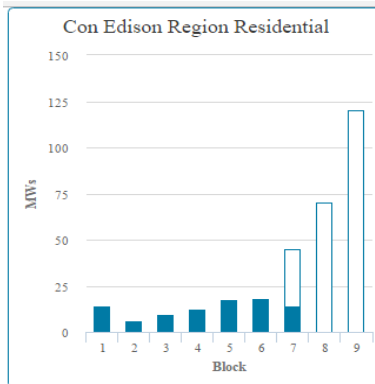
Example: Upstate Residential MW Block Structure



# Res/Small Commercial MW Dashboard

*Data as of 5/5/2017*

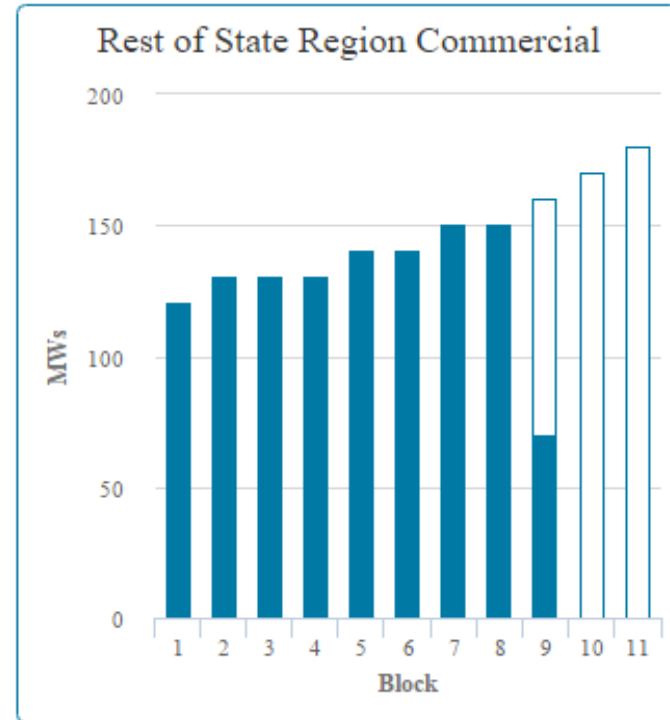
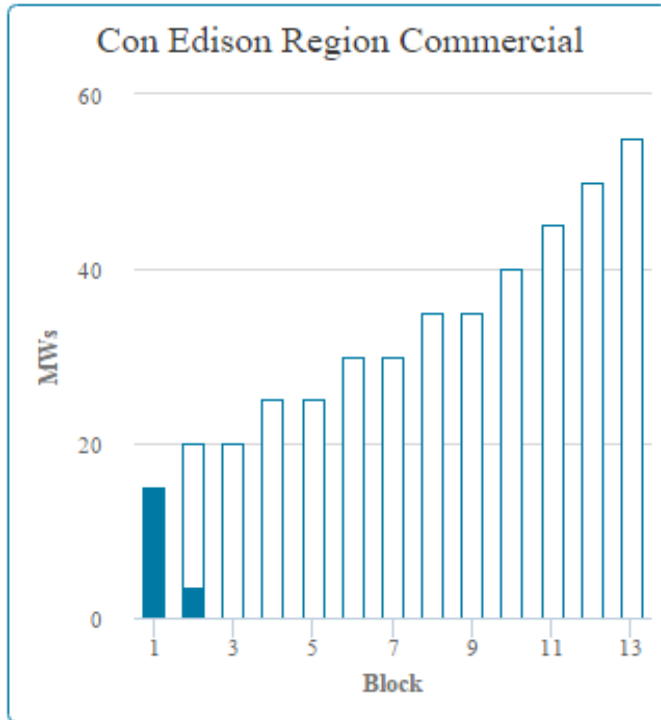
- Incentives step down over time as capacity goals are achieved
- Real-time dashboard provides transparency and predictability
- Incentives move separately per sector and geographic region, based on actual market activity





# Commercial/Industrial MW Dashboard

*Data as of 5/5/2017*

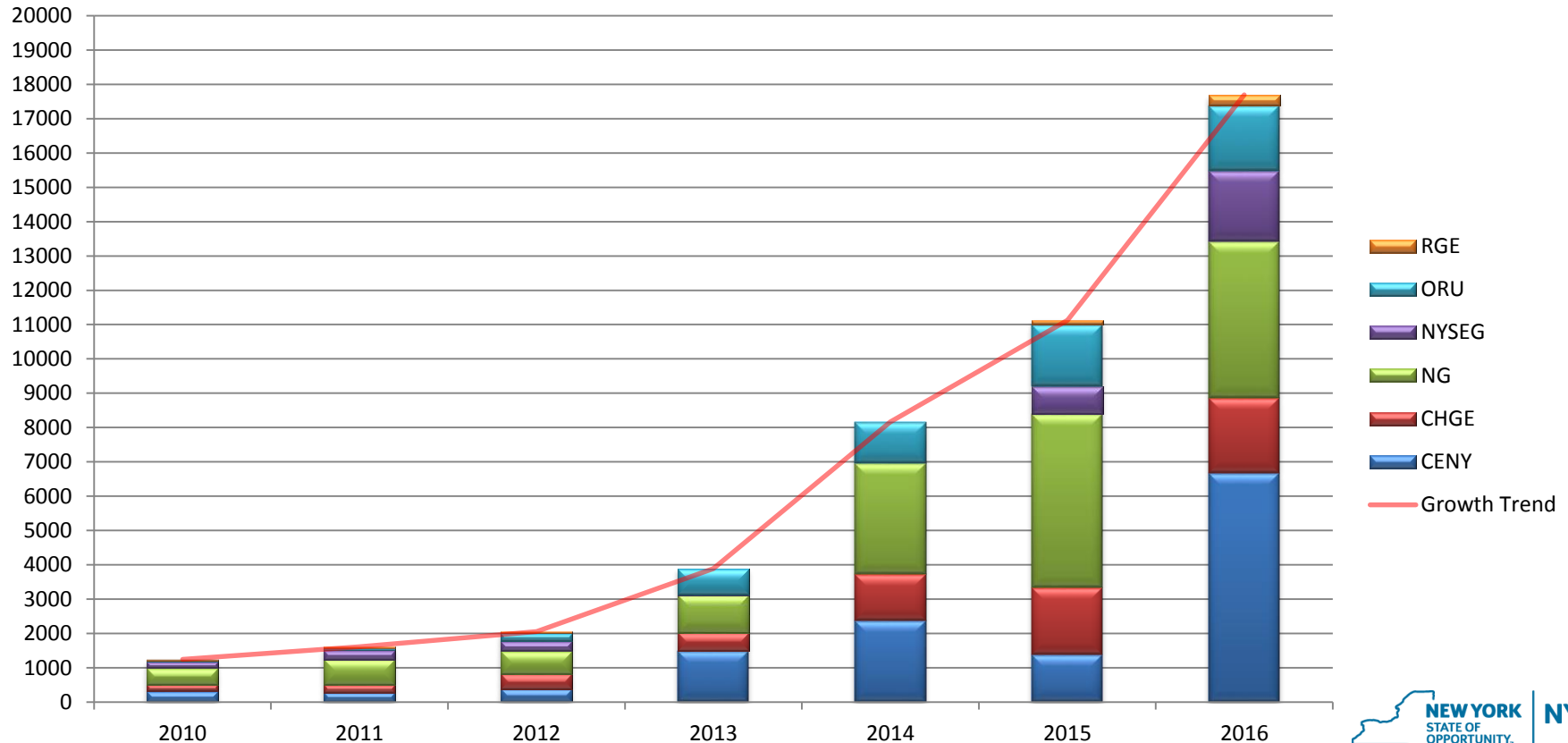


# Solar Market Accelerations

# Solar Development Obstacles & Solutions

- Interconnection costs and delays
  - Interconnection Ombudspersons
  - Interconnection Policy Working Group
  - Interconnection Technical Working Group
- Local government solar adoption
  - NY-Sun Solar Guidebook for Local Governments
  - Provide technical assistance

# Trend of Interconnection Applications 2010-2016



# New York State Interconnection Queue

SIR Inventory Queue: Number of Projects (PV Only) by kW Range as of December 2016

| <u>Company</u>      | <u>kW Range</u> |            |            |              |           | Total Projects | Total kW         |
|---------------------|-----------------|------------|------------|--------------|-----------|----------------|------------------|
|                     | 0-50            | 50-300     | 300-1000   | 1000-2000    | 2000-5000 |                |                  |
| National Grid       | 1,845           | 247        | 60         | 638          | -         | 2,790          | 1,344,431        |
| Con Edison          | 2,514           | 197        | 55         | 7            | -         | 2,773          | 84,670           |
| Central Hudson      | 575             | 17         | 12         | 372          | 1         | 977            | 750,957          |
| Orange and Rockland | 796             | 12         | 12         | 261          | 1         | 1,082          | 534,228          |
| NYSEG               | 361             | 38         | 22         | 397          | 5         | 823            | 820,047          |
| RGE                 | 70              | 15         | 4          | 38           | 4         | 131            | 89,292           |
| PSEG                | 662             | 5          | -          | 1            | -         | 668            | 7,075            |
| <b>Total</b>        | <b>6,823</b>    | <b>531</b> | <b>165</b> | <b>1,714</b> | <b>11</b> | <b>9,244</b>   | <b>3,630,700</b> |

# Interconnection Ombudspersons

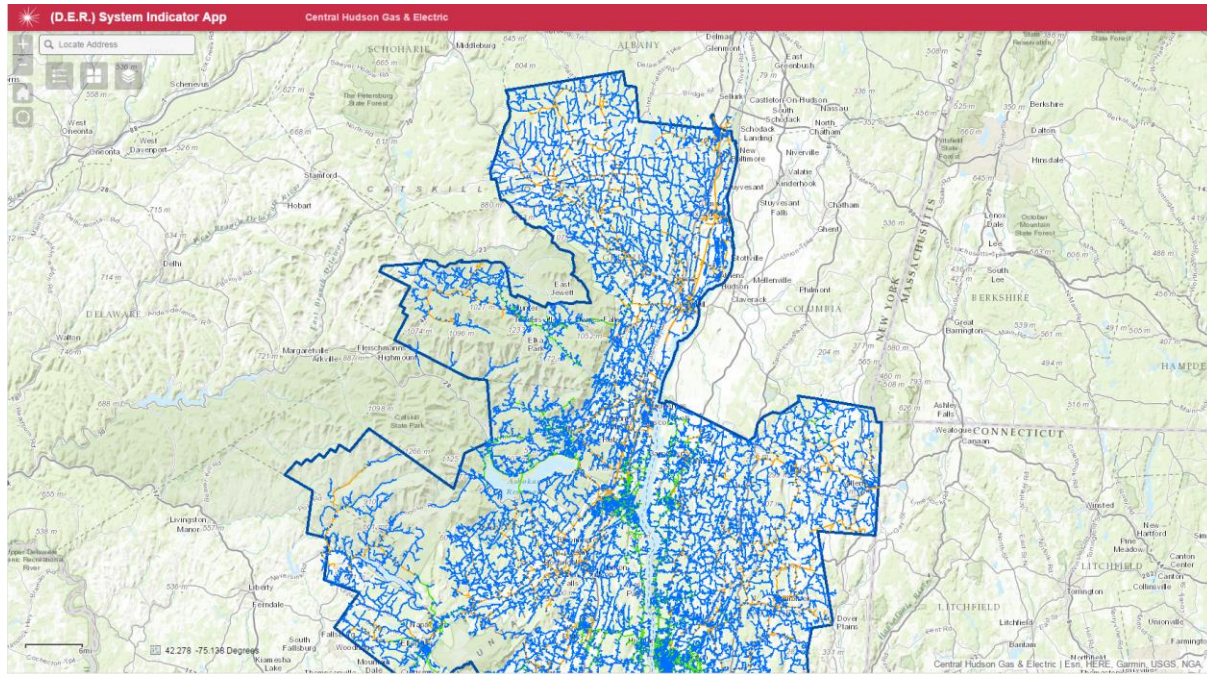
- NYSERDA and DPS have a NYS Interconnection Ombudsperson
- Each utility has created an Interconnection Ombudsperson
- Assist DG customer/developers with complaints, questions, or delays on a project by project basis.
- Assist DG customer/developers, primarily in solar PV, better understand the process and timeline for interconnection on the electrical system per the State's Standardized Interconnection Requirements (SIR).
- Publish queue information and develop a reporting mechanism

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# DER System Indicator Map

- Illustrate the areas/circuits where DERs have a greater likelihood of not being easily accommodated on the distribution system

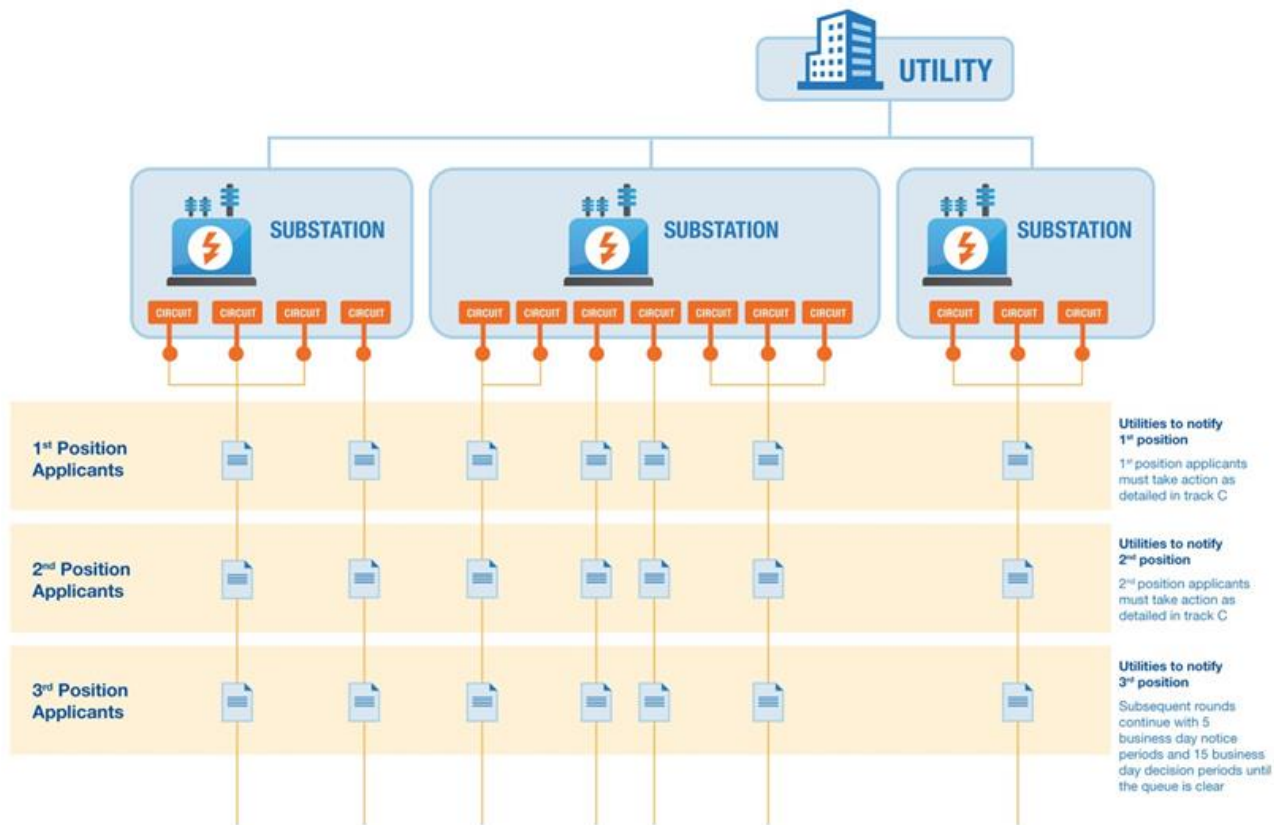




# Interconnection Policy Working Group

- Goal: develop consensus-based solutions and recommendations on policy issues related to the interconnection of DG
- Includes representatives from utilities, DG developers, trade associations, non-governmental organizations, and customer representatives
- Developed a queue management proposal
  - Manage the backlog of applications
  - Interim cost sharing methodology
- Developed a Monetary Remote Net Metering Grandfathering proposal
  - Extend in-service deadline for certain projects
- More information on IPWG at:  
<http://www3.dps.ny.gov/W/PSCWeb.nsf/All/0D7596DBBEF0380885257FD90048ADFA?OpenDocument>

# Cost Allocation Mechanism



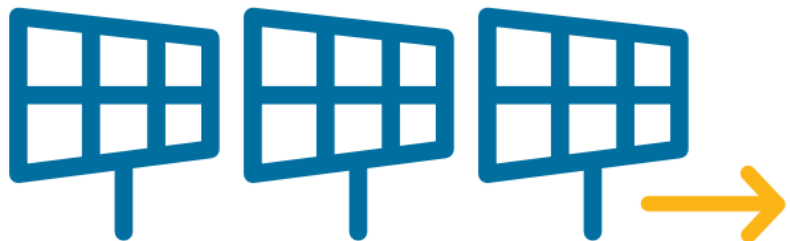
# Interconnection Technical Working Group

- Goal: identify, discuss, and resolve technical barriers and challenges affecting the interconnection of distributed generation
- Includes representatives from State Agencies, Utilities, and DG developers
- Technical consultant (NREL) to assist evaluation process and technical document development
- Technical consultant (EPRI) to support effort to streamline aspects of the interconnection process
- Initial Topics: Substation Back-feeding / Anti-Islanding Protections / Control & Monitoring
- More information on ITWG at:  
<http://www3.dps.ny.gov/W/PSCWeb.nsf/All/DEF2BF0A236B946F85257F71006AC98E?OpenDocument>

# NY-Sun Solar Guidebook for Local Governments

- Real Property Tax Law Section 487
  - Highlights pertinent information for local governments considering opting out of RPTL § 487
- Land Lease Considerations
  - Assists in identifying key questions and potential impacts of leasing land for solar projects
- Decommissioning Fact Sheet
  - Assists in identifying key questions and potential impacts of leasing land for solar projects
- Free Technical Assistance to Local government officials and authorities having jurisdiction (AHJs)
- Additional Resources
  - Land Use Planning for Solar Energy
  - NYS Model Solar Energy Law Toolkit

# Community Solar: How it Works



Solar electric panels are installed offsite in sunny locations to produce renewable energy for subscribing members.

Any utility customer (home or business) can be a subscribing member.



Each subscriber's utility bill is credited accordingly when excess energy is produced.

# *Value of Distributed Energy Resources*

## *Phase 1 Order*

# Context of Order

- As part of Reforming the Energy Vision (REV), NYS is transitioning away from net energy metering (NEM)
- NYS' Public Service Commission (PSC) recently released an order to start this transition
  - *Phase One* (issued March 9, 2017)
  - *Phase Two* (to come)

# Net Energy Metering - *How to Qualify*

- All projects already interconnected or completed as of 3/9/2017 will retain NEM for the life of the system
  - Must have notified utilities of finished projects by 3/17/2017
- No action is required for already-interconnected projects to keep NEM





# Phase One Net Energy Metering – *How to Qualify*

## Mass Market

- Projects installed between 3/9/2017 and 1/1/2020 are eligible for Phase One NEM
  - Subject to MW allocation, limits specified by order



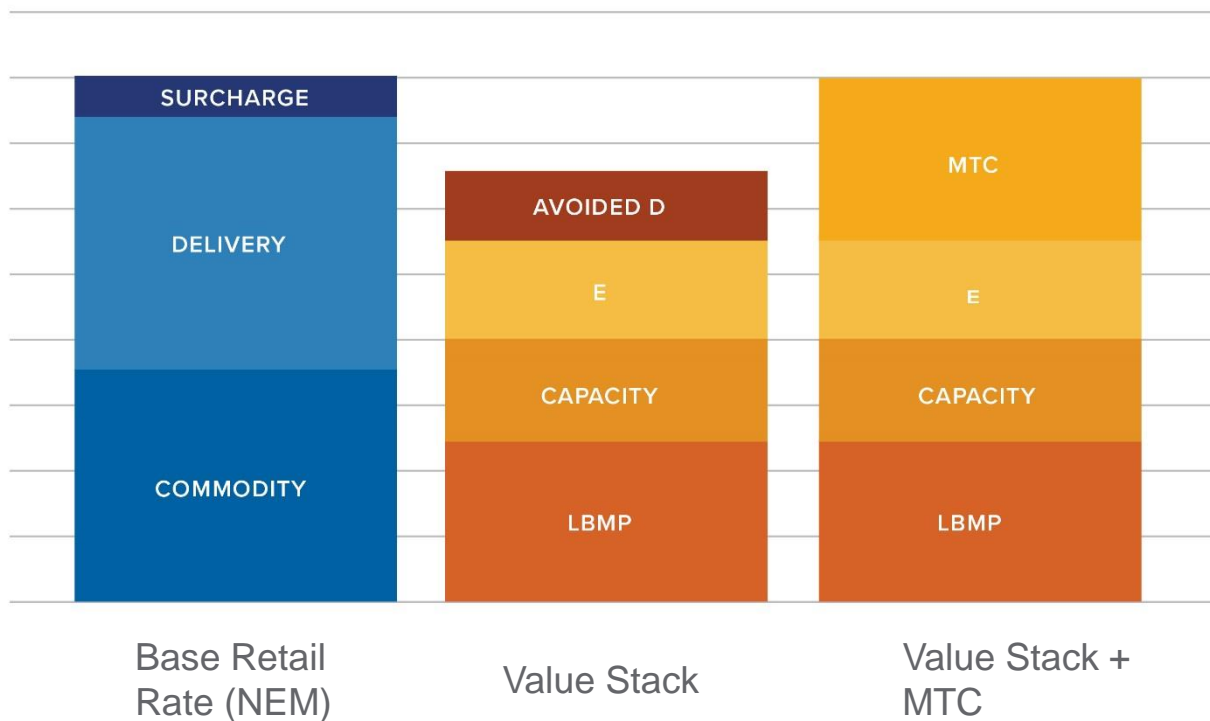
## Commercial



- A non-grandfathered RNM, large-scale, onsite, CDG project (subject to capacity limits) is eligible Phase One NEM if makes payment of at least 25% of interconnection upgrade costs, or have executed an interconnection contract (SIR) by July 17<sup>th</sup> 2017.

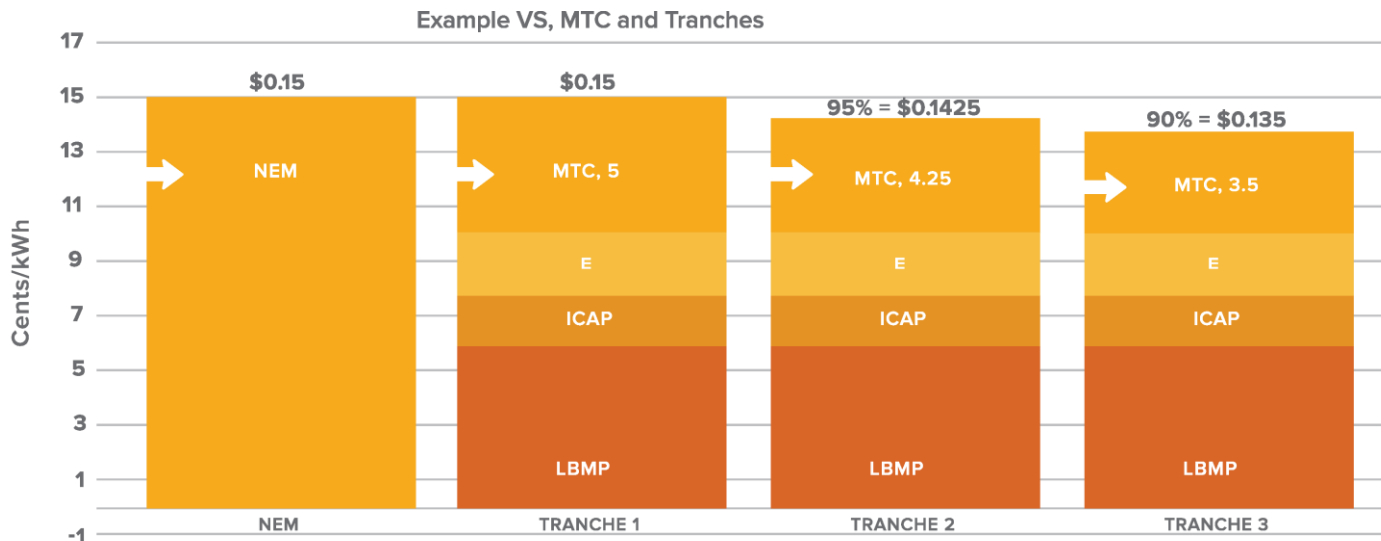
# Phase One Value Stack - *How to Qualify*

- Projects that do not receive NEM or Phase One NEM will receive the Value Stack



- Avoided D – avoided demand
- E – environmental benefit
- Capacity – ICAP
- LBMP – energy commodity
- MTC – market transition credit for CDG

# CDG Tranche Design



- MTC = Difference between *Base Retail Rate* and *Estimated Value Stack*
- Intended to make estimated CDG compensation...
  - equal to *Base Retail Rates* (NEM) in Tranche 1
  - 5% less than NEM in Tranche 2
  - 10% less than NEM in Tranche 3
- MTC reflects values not yet identified or calculable, especially value of D

# NY-Sun Progress to Date

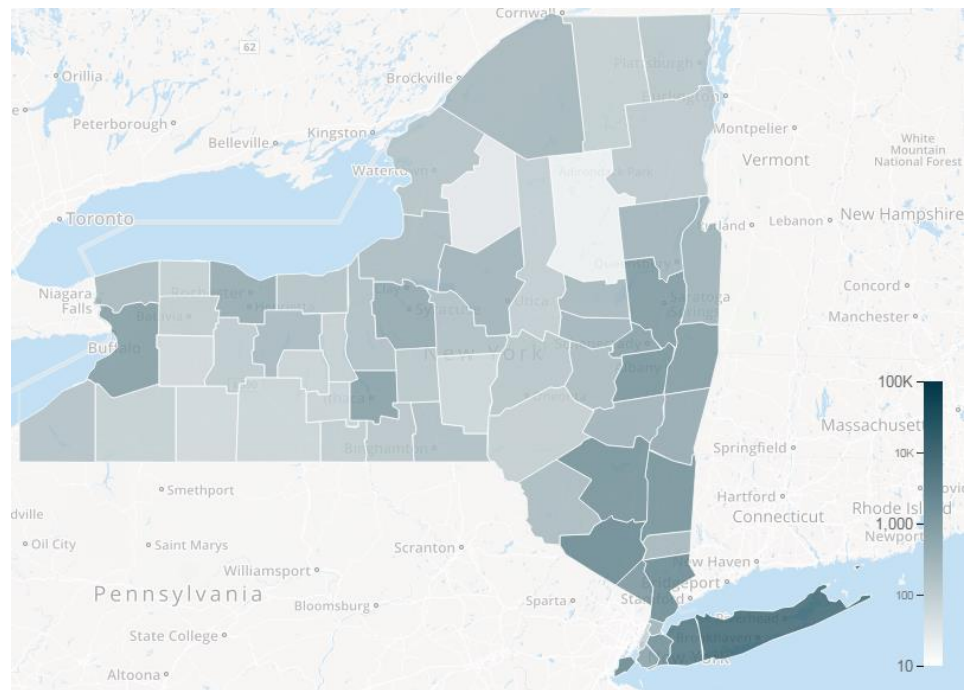
# NY-Sun Progress to Date

- Unprecedented solar growth: 800% capacity growth from 2012 to 2017
- 814 MW installed – enough to power more than 120,000 homes
- 64,926 solar projects installed in 2016
- Strong job growth – over 8,100 employed in solar industry in 2016 – New York ranked 6<sup>th</sup> in the U.S. for number of solar workers

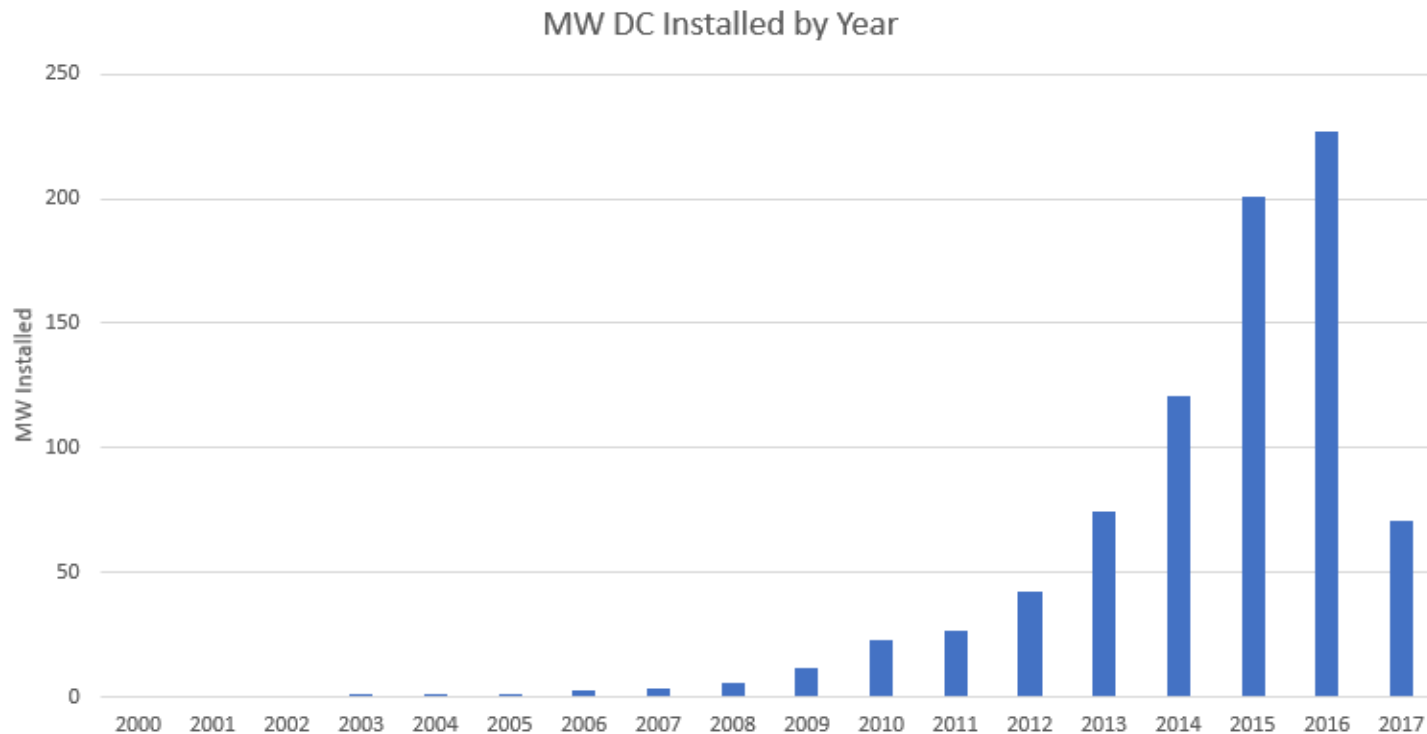
# NY-Sun Program Activity to Date

- 814 MW installed statewide with NYSERDA support
  - 483MW of residential PV (64,144 projects)
  - 331MW of non-residential PV (4,682 projects)
- 1,143MW currently in NY-Sun pipeline
- Installations all 62 counties and in 1,658 different zip codes

*Completions by County, 4/30/2017*



# MW Installed Statewide by Year, as of 4/30/2017





**Thank you**

**For additional questions, please contact me at:**

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