



**WESTERN NEW YORK
SOLAR SYMPOSIUM
August 1, 2024**

1:00 PM - Welcome and New York Solar Industry Briefing

Welcome: Daniel Montante, President of Montante Solar and NYSEIA Board President

Opening Remarks: Senator Sean Ryan, New York State Senate, 61st Senate District

NY Solar Industry Briefing: Noah Ginsburg, Executive Director, NYSEIA



New York Distributed Solar Market Briefing

Western NY Solar Symposium | August 1, 2024

Noah Ginsburg, Executive Director



Agenda

About NYSEIA

New York's Distributed Solar Market

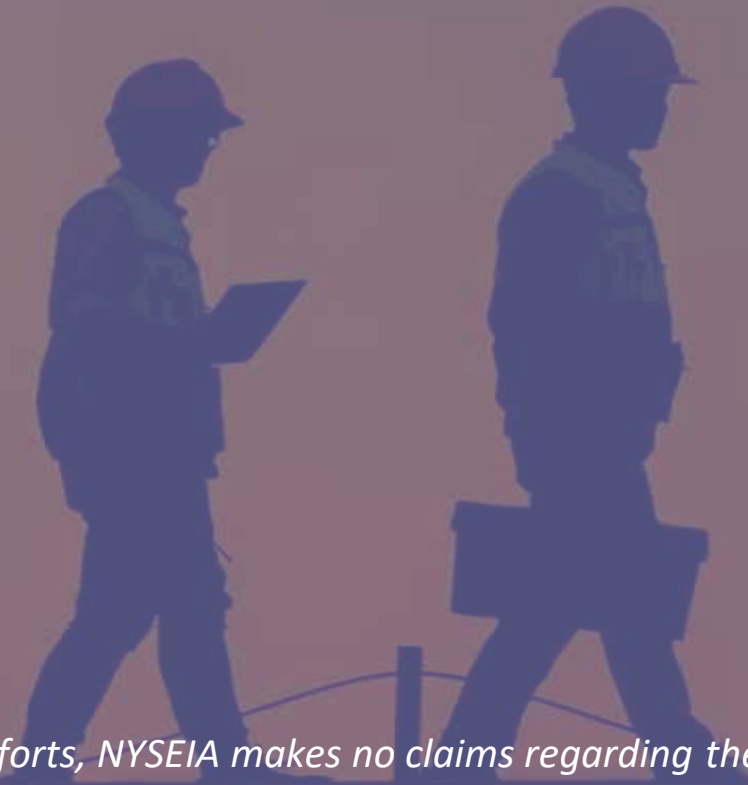
Market Statistics and Trends

Strategies to Accelerate Solar Deployment

New York Solar Energy Industries Association

www.nyseia.org | info@nyseia.org

Disclaimer: this presentation is for educational purposes only. Despite best faith efforts, NYSEIA makes no claims regarding the accuracy of data or information provided herein.

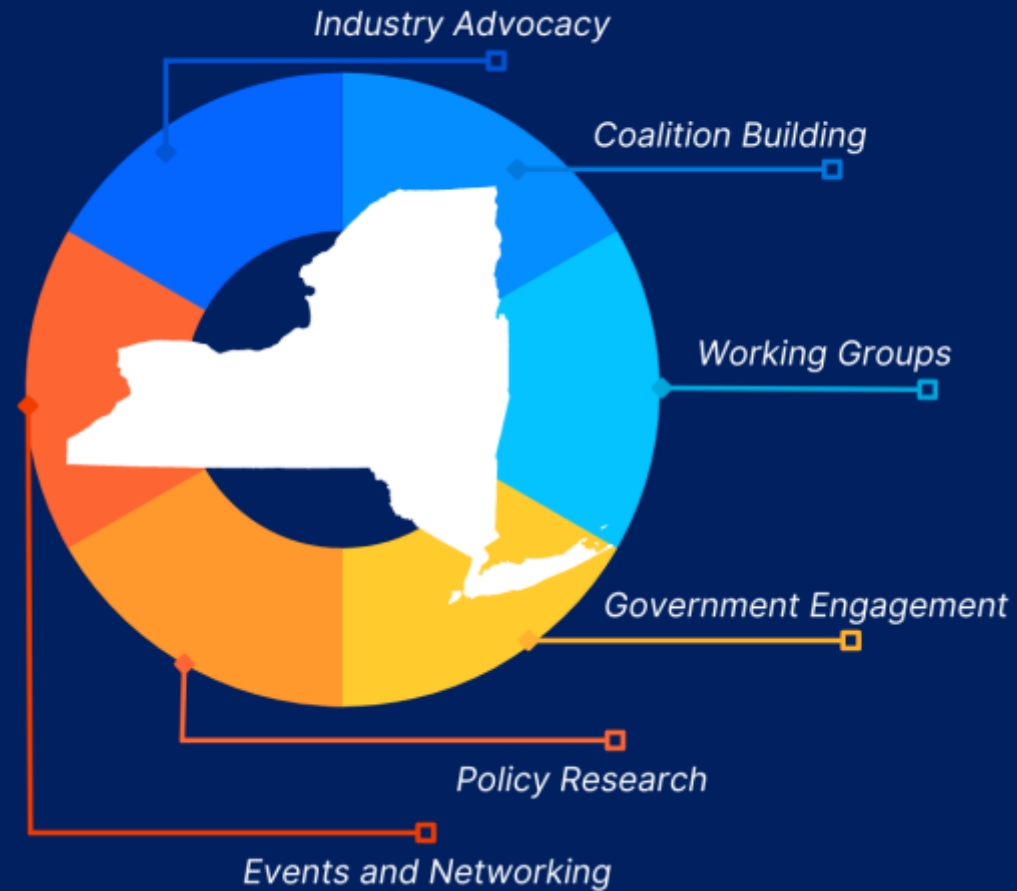


About NYSEIA

ADVANCING SOLAR ENERGY FOR NEW YORK



New York Solar Energy Industries Association advocates for sustainable growth of solar energy across New York State. Join our trade association to accelerate the solar revolution.



NY Distributed Solar + Storage Policy Framework

New York has a robust policy framework to support distributed solar + storage deployment.

New York has strong foundational policies, including: net metering for onsite solar; a Value of Distributed Energy Resources (VDER) tariff for exporting solar + storage projects; a standardized interconnection process; community solar and remote crediting framework; and NYSERDA's NY-Sun program which provides capacity-based incentives for diverse project types.

In 2019, New York's legislature enacted the Climate Leadership and Community Protection Act (CLCPA), climate legislation that requires New York to achieve the following outcomes:

- 70% renewable electricity supply by 2030
- 100% emissions free electricity supply by 2040
- 100% emissions free economy by 2050
- 35-40% of New York's clean energy benefits must accrue to disadvantaged communities

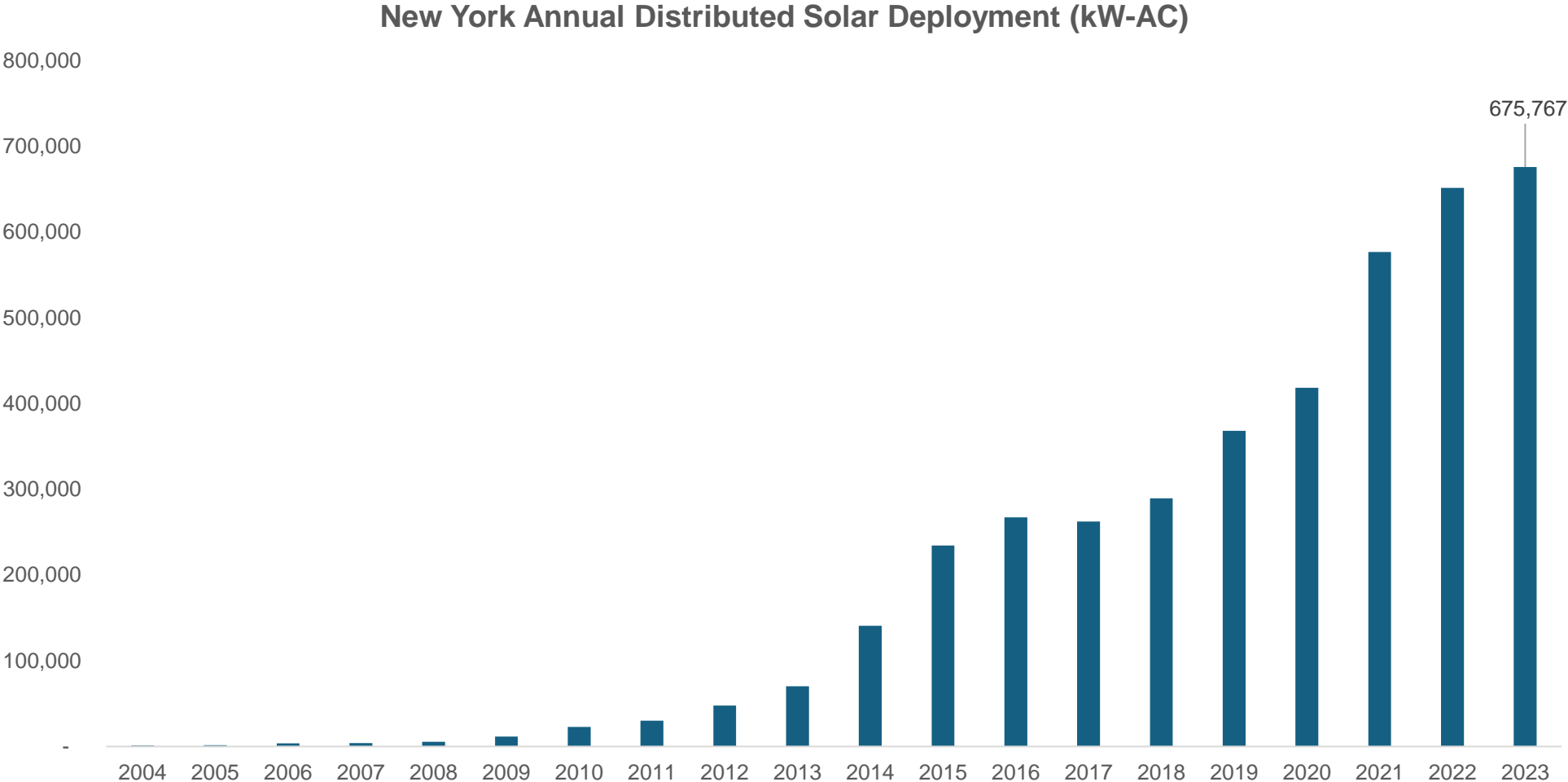
The CLCPA also codified a distributed solar goal of 6 gigawatts by 2025 and 3 gigawatts of energy storage by 2030.

In 2021, Governor Hochul raised New York's distributed solar goal to 10 gigawatts by 2030.

In 2024, New York raised our energy storage goal to 6 gigawatts by 2030.

NY Distributed Solar Market: Statewide Statistics

New York deployed more distributed solar in 2023 than any prior year, nearly one gigawatt DC:

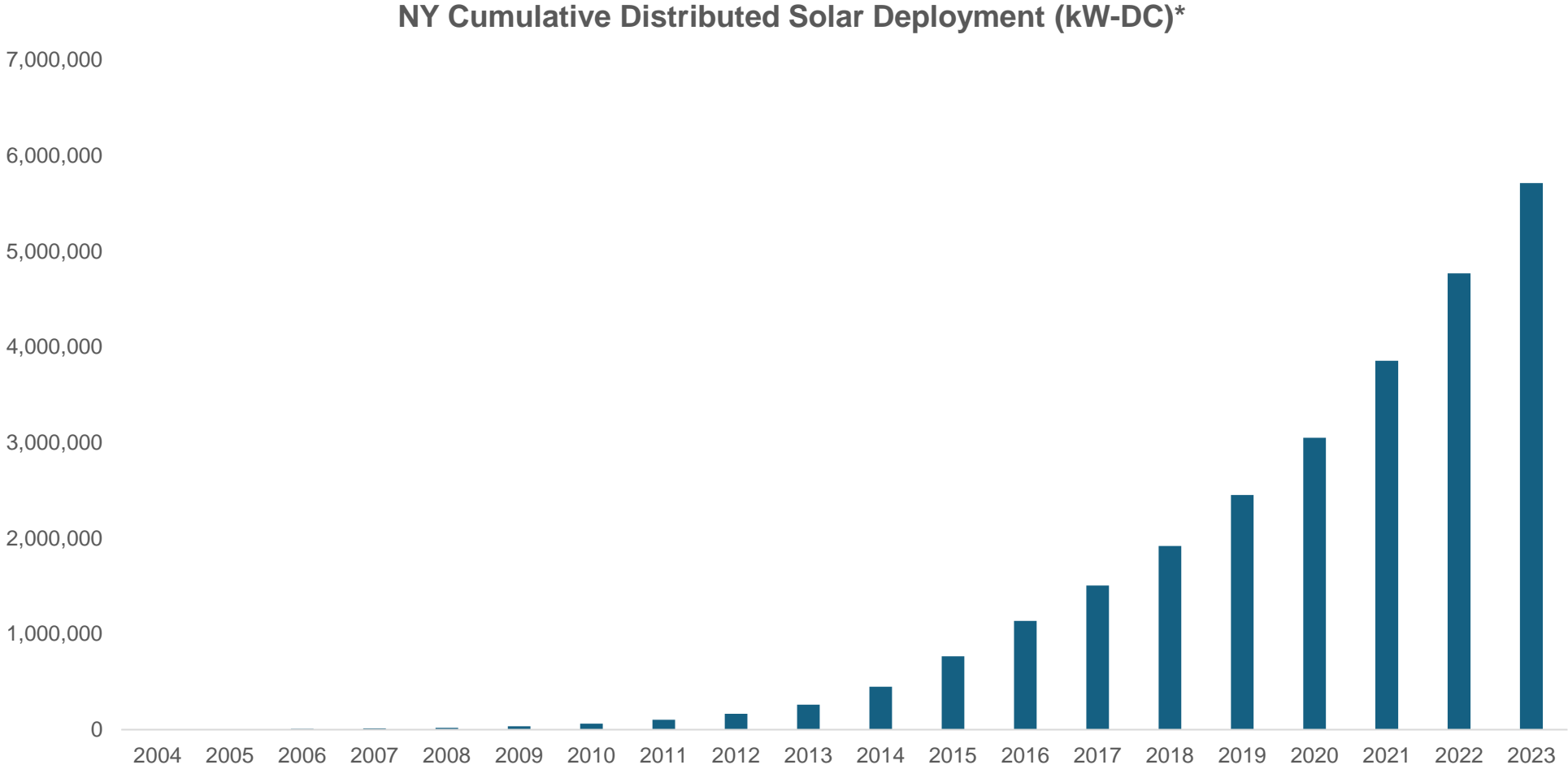


Data source: New York Department of Public Service. Distributed Generation SIR Inventory. February 2024.



NY Distributed Solar Market: Statewide Statistics

New York’s cumulative installed distributed solar capacity is rapidly approaching six gigawatts ahead of schedule:

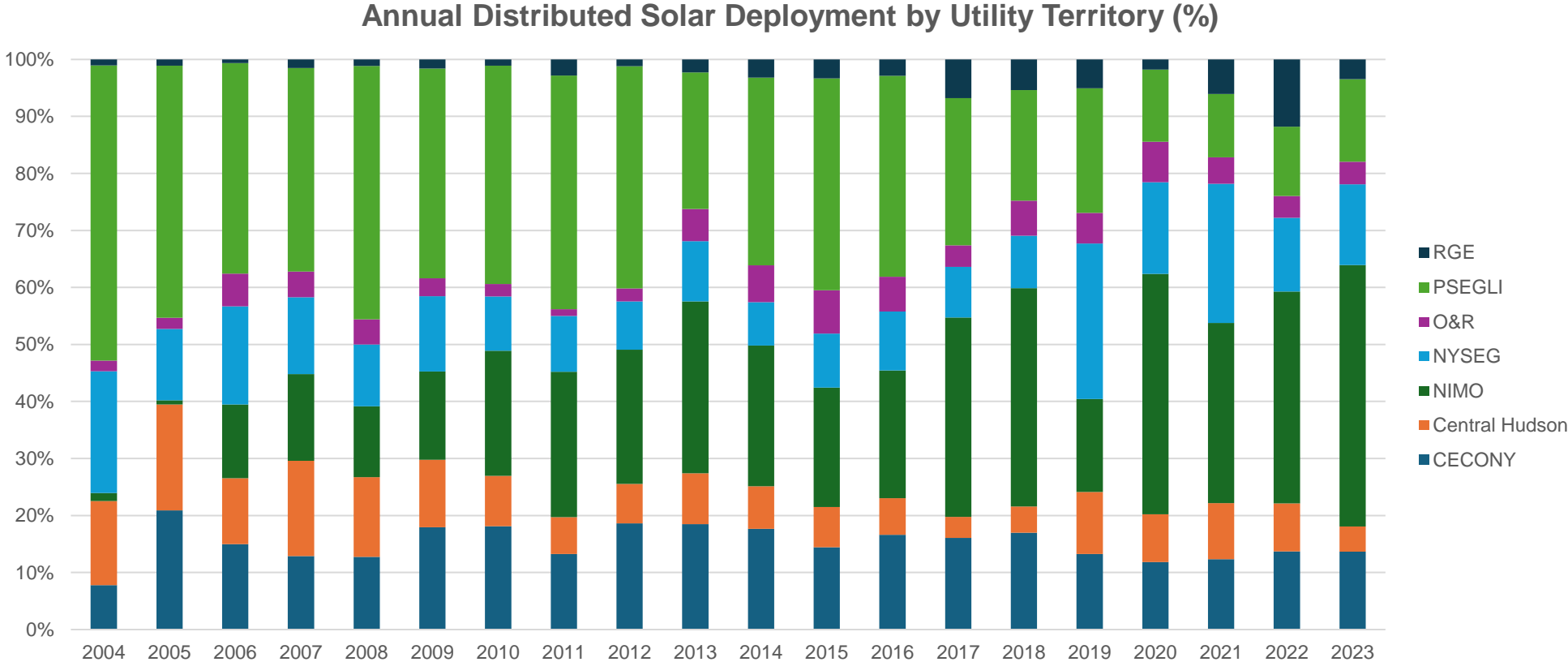


Data source: New York Department of Public Service. Distributed Generation SIR Inventory. February 2024.
*Source data is in kW-AC. NYSEIA estimated DC/AC ratio by year, ranging from 1.20 in 2004 to 1.40 in 2023



NY Distributed Solar Market: Regional Trends

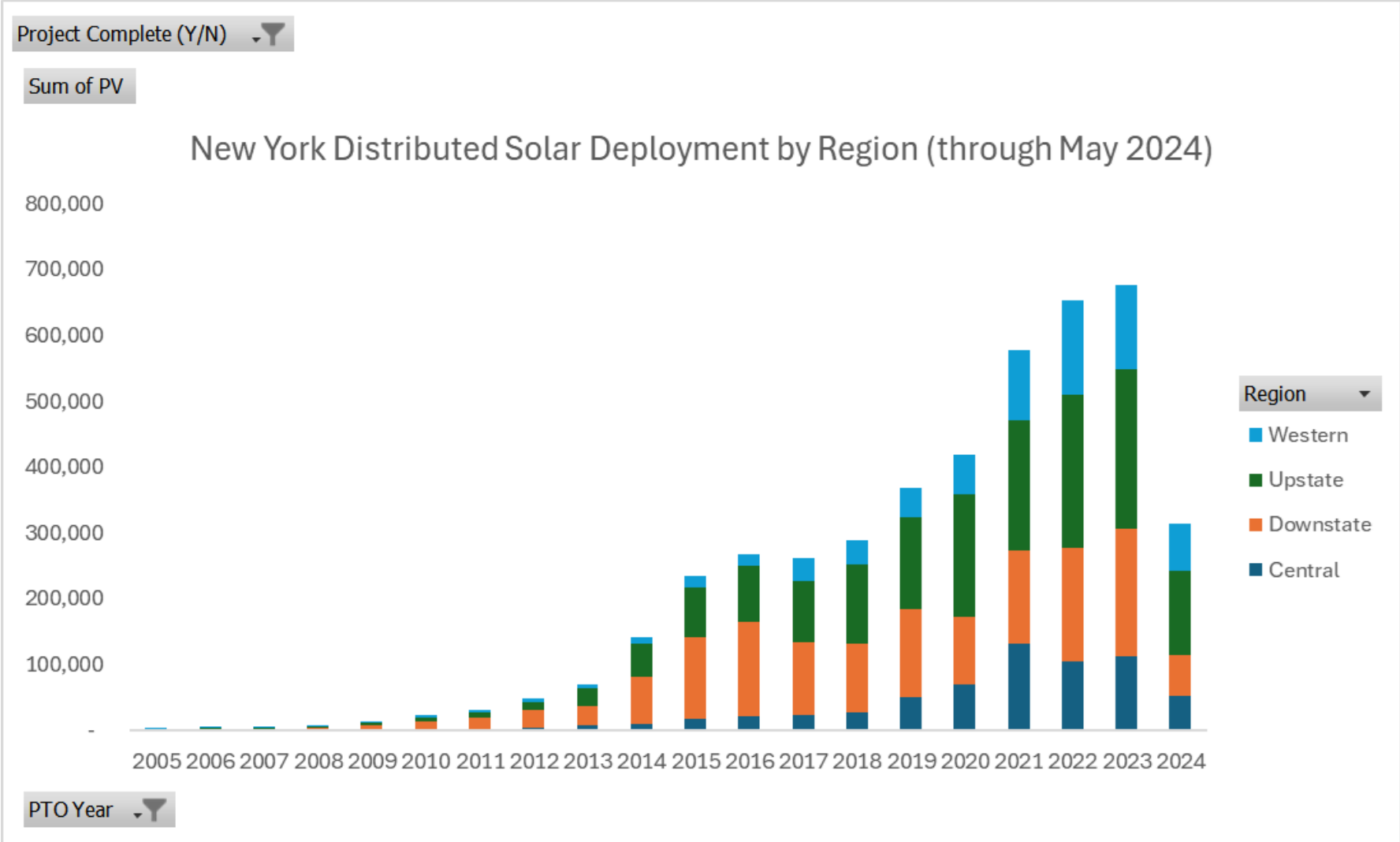
Over the last decade, community solar deployment has accelerated significantly, supplanting rooftop solar as the primary contributor of solar capacity. This trend has resulted in a greater share of New York’s solar capacity being installed Upstate and in Western NY:



Data source: New York Department of Public Service. Distributed Generation SIR Inventory. February 2024.



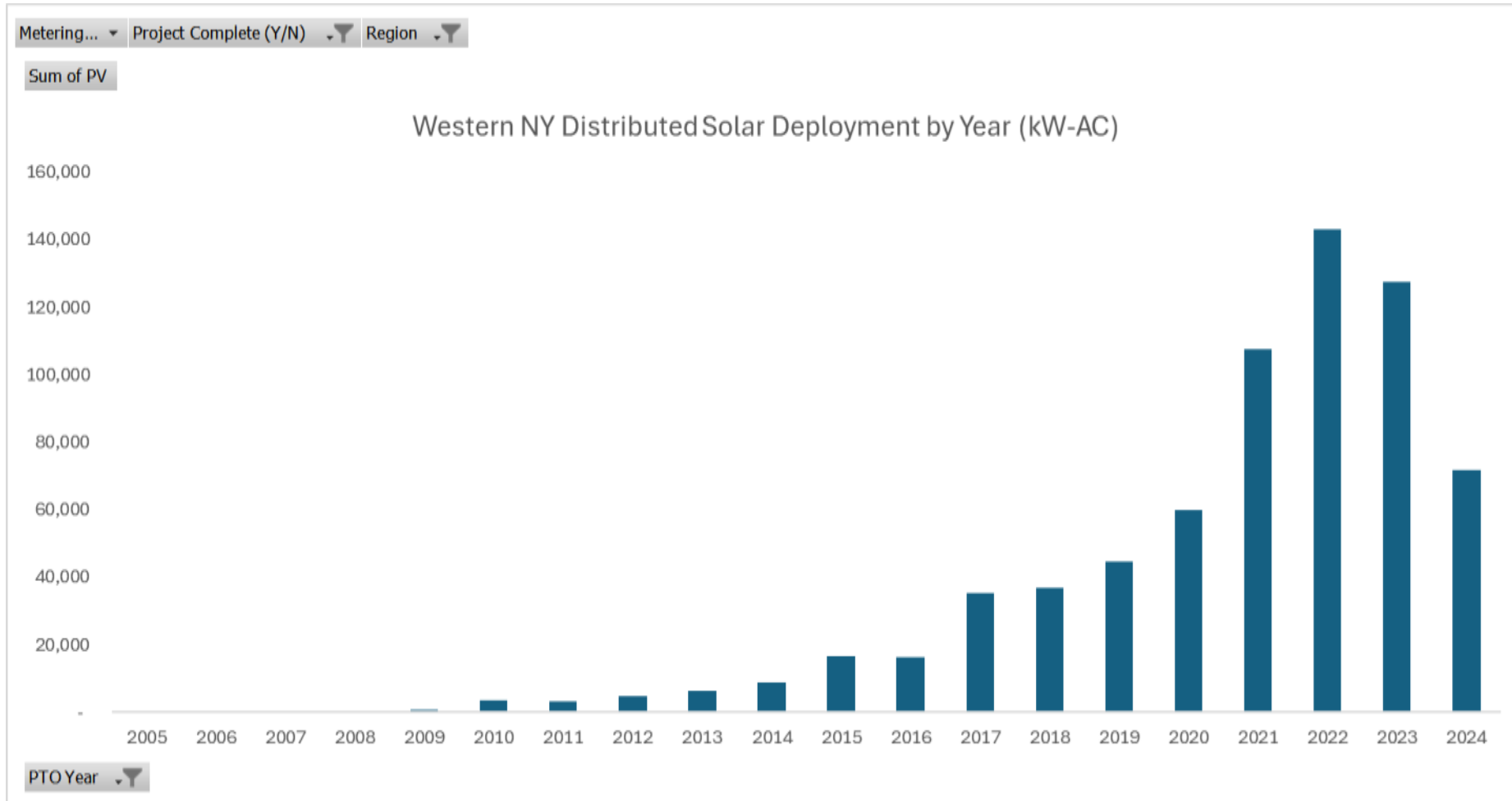
NY Distributed Solar Market: Regional Trends



Data source: New York Department of Public Service. Distributed Generation SIR Inventory. July 2024.



Western NY Solar Deployment by Year



Data source: New York Department of Public Service. Distributed Generation SIR Inventory. July 2024.

Distributed Solar Deployment is Impressive, but a Lagging Indicator

New York is a strong, maturing distributed solar market. 2023 was New York's best year yet based on installations; however, deployment is a lagging indicator (especially for community solar).

Key threats to the sustained distributed solar deployment include:

- **Rising costs** due to macro trends of inflation and higher interest rates;
- **Declining incentives and solar compensation;**
- **Rising interconnection costs**, as “low-hanging fruit is picked” and multi-year/multimillion dollar substation upgrades are increasingly being required by New York's utilities; and
- **Permitting barriers**, as municipalities adopt restrictive local laws to prevent solar as a land-use.

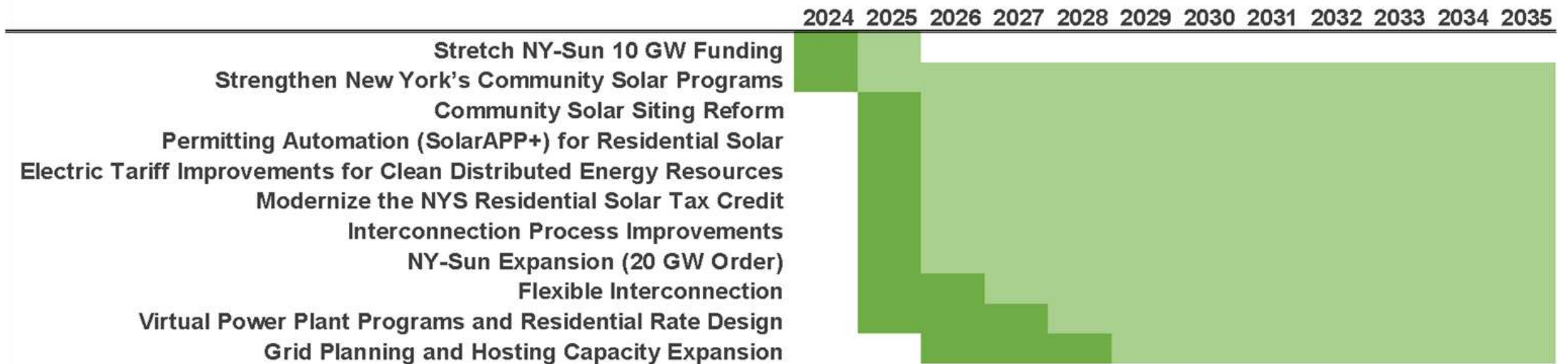
New York can overcome these challenges with the right policy interventions.



New York Needs a 20 Gigawatt Roadmap

On June 26, 2024, NYSEIA published 20X35, a roadmap for New York to double its distributed solar goal and accelerate deployment. The 20X35 roadmap outlines specific policy proposal, including permitting reform, interconnection reform, rate design and solar program design improvements, and incentives to support cost-effective and equitable deployment.

New York 20 Gigawatt Solar Roadmap: High Impact Policy Interventions



New York governor urged to double solar deployment goal

Currently New York has a state target of 10 GW deployed by 2030. The state's Solar Energy Industries Association has called for a new target of 20 GW of distributed solar by 2035.

JUNE 26, 2024 RYAN KENNEDY

COMMERCIAL & INDUSTRIAL PV COMMUNITY INSTALLATIONS RESIDENTIAL PV NEW YORK



Image: Department of Energy

New York Solar Energy Industries Association

RAISING NEW YORK'S DISTRIBUTED SOLAR GOAL

20 GIGAWATTS BY 2035 NYSEIA

New York has installed more than 5.65 gigawatts of rooftop and community solar, enough for nearly one million New York families. This includes more than 225,000 individual systems, ranging from solar on individual homes to community solar projects that deliver utility bill savings to hundreds of families.

20X35 calls on New York's leaders to raise the distributed solar goal from 10 gigawatts by 2030 to 20 gigawatts by 2035 and outlines policy interventions to enable rapid and cost-effective progress.



In New York, small is big: 93% of New York's installed solar capacity is rooftop and community solar.

Solar is an economic development engine: the solar industry invests billions in New York State and employs more than 13,400 workers in high quality blue-collar and white-collar jobs.



Solar generates emissions-free electricity, reducing New York's reliance on fossil fuels, mitigating climate change and improving public health through pollution reduction.

NYSEIA, June 2024, Statewide Distributed Solar Projects, NY 19F0004

US Energy Information Administration, 2020 Residential Energy Consumption Survey

Department of Public Service, June 2024, New York Standardized Interconnect Requirements (SIR) Inventory, <https://nysir.ny.gov/>

NYSEG, New York Independent System Operator, June 2024, Interconnection Queue

NYSEIA, New York State Energy Industry Report, 2024, <https://www.nyseia.org/nyseia/>

NYSEIA, June 2024, Analysis compiled using NYSEIDA Value of Distributed Energy Resources (VDER) Calculator

Robert Cleary Energy LLC, (October 2021) Decarbonizing New York through Optimized Distributed Resources, <https://www.nyseia.org/nyseia/>

NYSEIA, June 2024, Member Survey

NYSEIDA, (December 2021) 30 GW Reaching: Solidify NYSEIDA's greenhouse gas emissions reduction estimate and job creation estimate from a 1 GW of incremental capacity by 2030.

BENEFITS OF 20X35

\$50 billion

in direct electric bill savings for New Yorkers and \$28 billion in indirect savings through wholesale market impacts

\$3-4 billion

in revenue for rural landowners, municipalities and school districts

145 million

metric tons of avoided greenhouse gas emissions and improved public health outcomes in environmental justice communities

15,000 jobs

including blue-collar and white-collar jobs across the state

Improved land use

through community-scale projects and beneficial siting practices, including solar on the built environment and the co-location of solar and agriculture





RAISING NEW YORK'S
DISTRIBUTED SOLAR GOAL

20 GIGAWATTS
BY 2035



ADVANCING SOLAR ENERGY FOR NEW YORK



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<https://www.nyseia.org>

1:30 PM - Community Solar Challenges and Opportunities

- **Jon Powers**, President, CleanCapital (Moderator)
- **Shyam Mehta**, Assistant Director, DER/Energy Storage, NYSERDA
- **Ty Baccille**, Director of Solar Development, New Energy Equity
- **Ben Cuzzo**, Director, NYPA
- **Dawn Timm**, Environmental Coordinator, Niagara County
- **Kevin Peterson**, Mayor, Village of Depew





2:45 PM - NYPA Renewables: A New Paradigm

Vennela Yadhati

Vice President of Renewables

New York Power Authority





The New NYPA Paradigm

- **Vennela Yadhati, P.E.**
- Vice President, Renewable Project Development

August 1, 2024

NYPA by the Numbers

16

Generating
Facilities

1,460

Circuit-Miles of
Transmission
Lines

1,091

Customers

2,000+

Employees

NYPA's Unique Attributes



Largest supplier of renewable energy in the State through hydroelectric



In-depth knowledge of the NYISO system and robust grid modernization efforts



Proven experience in 3P through competitive transmission business

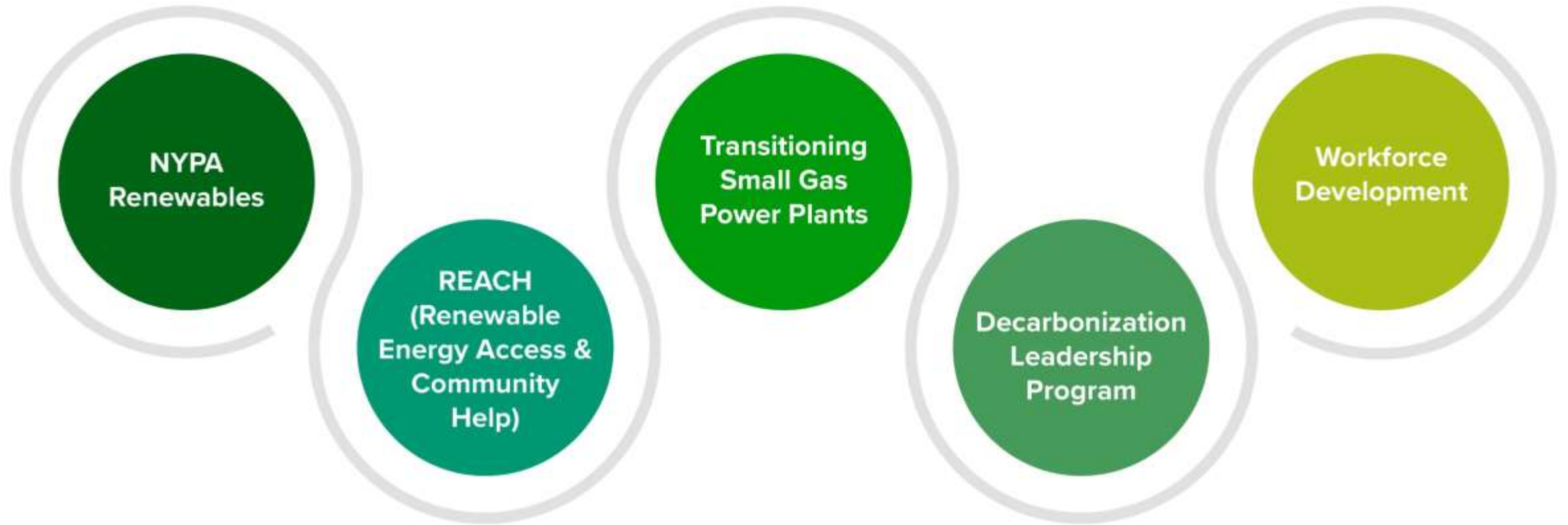


Experience developing distributed solar and BESS projects on customer sites



Strong community relationships, inclusive stakeholder engagement; and statewide customer base

NYPA's Expanded Authority: Our Opportunity & Clean Energy Promise



NY State Enacted
Budget 2023-24

Expanded Authority

Build New Renewables

Authorizes and directs NYPA to develop new renewable energy generation projects

- Either alone, or jointly with other entities through public-private agreements;
- NYPA or NYPA subsidiary **must have majority ownership** of any renewable energy generating project;
- Development on farmlands, if any, will be limited to **agrivoltaics**
- Development will be **monetized through VDER programs or NYSERDA solicitations or bi-lateral PPAs**
- Annual **stakeholder conferral process and bi-annual strategic plan**

Renewable Energy Opportunities RFI (Q23-7521KM) Summary

- Issued on January 2nd, 2024
- Gauge private sector's interest in collaborating with NYPA
- Open to all relevant private participants
- 170+ responses received on February 7th, 2024
- No evaluation of responses or procurement action performed
- Informed structuring of future procurements including the current RFQ

Renewables Co-development & Co-investment Pre-qualification

RFQ Q24-7540KM Results Overview

RFQ Issued: March 12th, 2024

Initial Due Date: April 19th, 2024

of Responses Received: 94+

Pre-qualified Respondents: 79 to date

NYPA's RFQ Evaluation Team

Comprised of members from:

- Strategic Supply Management
- Renewables Project Development and,
- Project Finance

Preferred Qualification Category¹

- Co-development (including build-transfer)
- Co-investment
- Preferred technology (solar PV, offshore wind, land-based wind, battery or other energy storage technologies (specify other), green hydrogen and e-fuels, transmission)

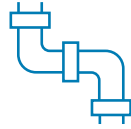
Response Elements & Qualifications²

- Experience
 - Depth & years of experience
 - Technical capabilities
 - Experience working with public entities
- Financial Overview³
 - Information supporting financial strength of the company
 - Company's bonding capacity, liquidity support, etc.,
- Partnership Structure/s
 - Preferred collaborative structure
 - Typical investment strategy
- Applicable Legislative and Legal Compliance

1. Developers could choose more than one category and technology
2. Sub-bullets are indicative and non-exhaustive of relevant qualifications requested
3. Additional qualifications are requested from financial investors and developers interested in co-investment opportunities

Ideal Developer Partner

Well-filled pipeline



- Ambitious **NY State-based renewable pipeline** across development stages
- Advanced project opportunities with expected **COD prior to 2027**
- **Willingness to partner** on specific projects and portfolios

Cross-disciplinary capabilities



- Established **capabilities across the Renewables value chain**
- Mature organization with **wealth of experience and talent**
- **Strategic partnerships** with EPCs and OEMs (e.g., domestic content strategy)

Appetite for true partnership



- Openness to **creative development partnerships and ownership structures**
- **Collaboration in a long-term partnership** to further NY State's energy goals
- Ability to identify win-wins and share benefits, economic and otherwise

Partnership Approach: Matured Projects

Characteristics of NYPA priority projects



Mature development opportunities with advanced interconnection application

Offtake secured or actively participating in NYSERDA solicitation or other revenue mechanism

Ability by Developer and plan in place to take project to COD



Benefits to Developer



Bring projects to COD quickly which would have otherwise stalled

Recycle capital in high-interest-rate environment

Share your risk exposure with experienced partner

Option to retain partial ownership incl. first right of refusal to provide O&M services

Ability to receive direct pay vs ITC, saving tax equity margin

Partnership Approach: Long-term development

What long-term development partnership may look like

Shared early-stage pipeline with input from both NYPA and Developer

Shared development capital commitments starting at project identification

Right of first refusal on project sell-downs or shared long-term ownership models



Benefits to developer

Potential capital availability at attractive, tax-advantaged rates

Ability to focus on most promising opportunities leveraging NYPA's deep knowledge of NYISO system needs and constraints

Uplifted community standing given NYPA's trust-based relationships with NYS communities and regulatory bodies

Strong access to large, unique, proprietary customer base for offtake agreements and other revenue mechanisms



Path Forward

Evaluate RFQ responses and notify pre-qualified developers*

May'24



Q2'24



Project specific procurement¹

Diligence specific project opportunities and negotiate terms with interested partners

Q2'24



Q3-Q4'24



Public commenting period for draft 2025 Renewables Strategic Plan

Publication of NYPA's 2025 Renewables Strategic Plan

By Jan'25



*RFQ for co-development and co-investment remains open to accept proposals on a rolling basis

1. Project specific procurements will be on a rolling basis – aligning w/ biennial strategic plans



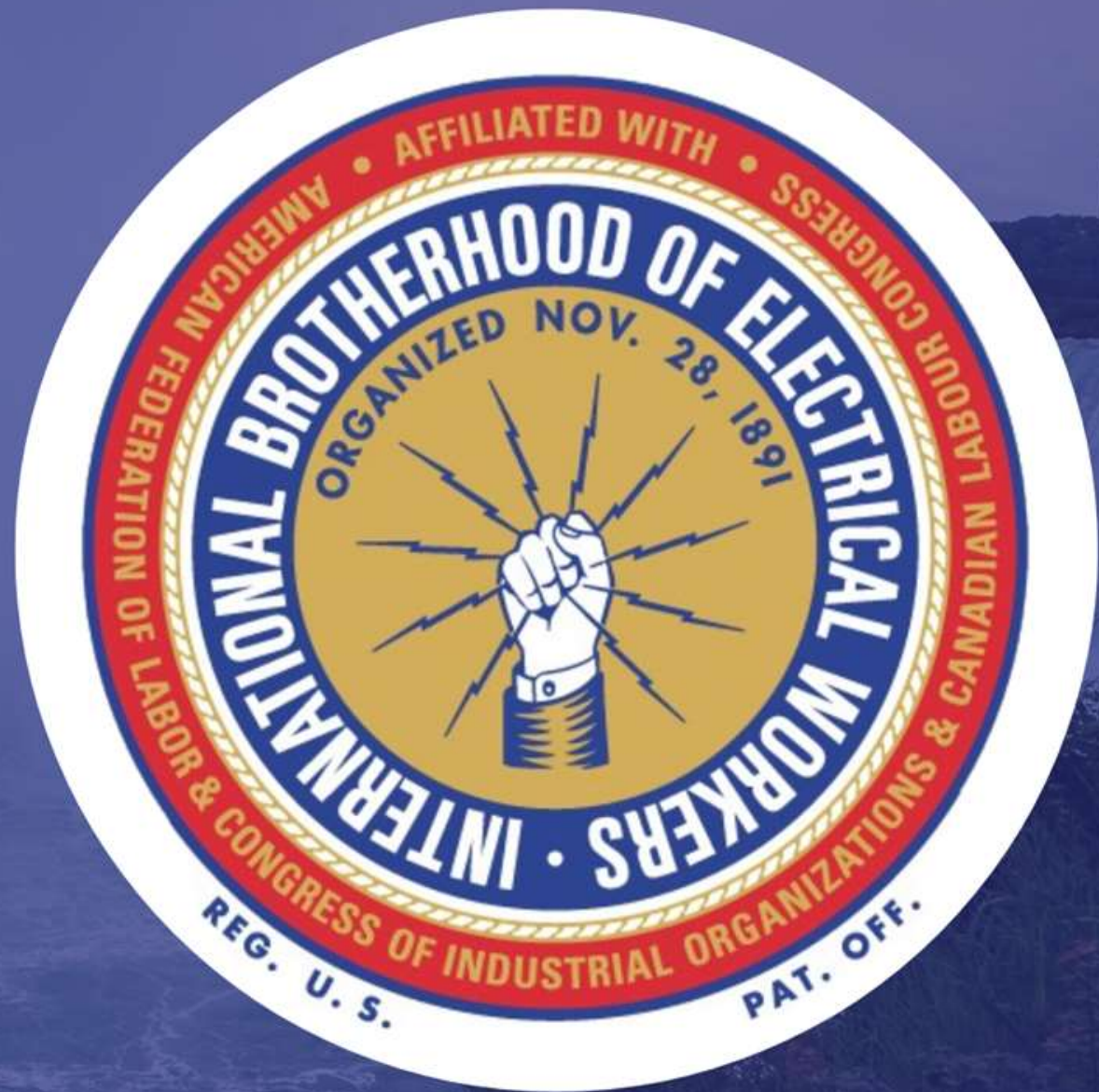
**NY Power
Authority**

VISION

A thriving, resilient New York
powered by clean energy



IBEW's Growing Role in the Solar Industry



3:15 PM - Rooftop Solar for Western NY Homes and Businesses

- **Noah Ginsburg**, Executive Director, NYSEIA (Moderator)
- **Katie Soscia**, Executive Director, Solar Development, Montante Solar
- **Justin Richardson**, Supervisor, Rochester, Greentech Renewables
- **Katie Stelick**, Residential Sales Manager, GreenSpark
- **Terry Galanis**, Chairman & CEO, Sealing Devices





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