

The State of New York Solar: 2019 and Beyond

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Central Hudson Solar Summit

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Agenda

- About NYSEIA
- New York Solar Market: History and Context
- Central Hudson DG Snapshot
- CHGE: What's Coming Down the Pipeline?
- Meeting Climate Targets
- The Road Ahead: Industry Challenges

About NYSEIA

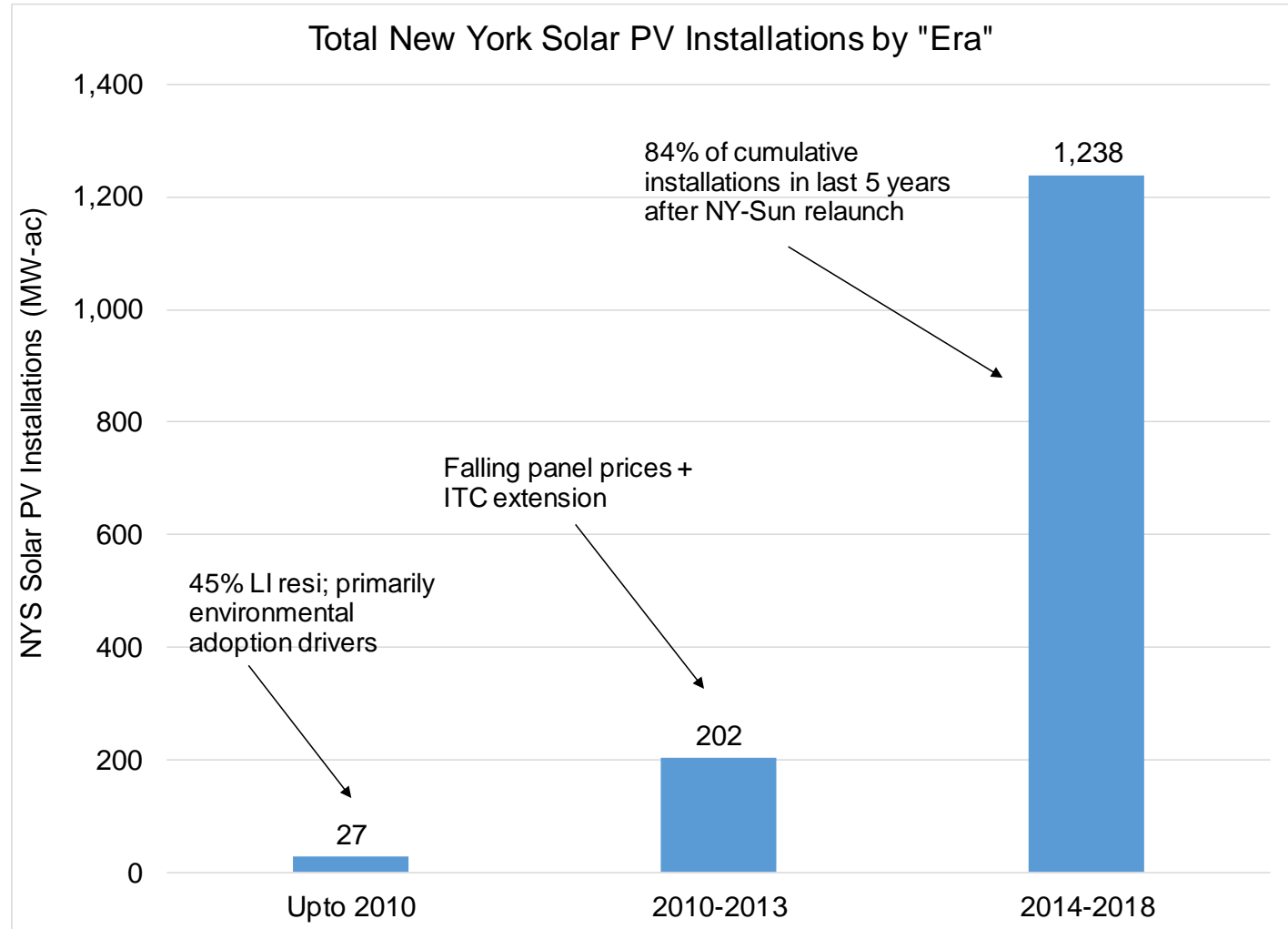
- Only statewide membership and trade association solely deployed to advancing solar energy deployment and use in New York State
- Founded in 1994, represent ~100 member firms employing 3000 workers across entire spectrum of sizes, market segments and geographic locations in New York
- Membership and leadership drive policy initiatives towards achieving significant, long-term and sustainable growth of solar energy in New York
- Represent NY solar industry in stakeholder proceedings and discussions with legislators, regulators, utilities and general public



Source: BQ Energy

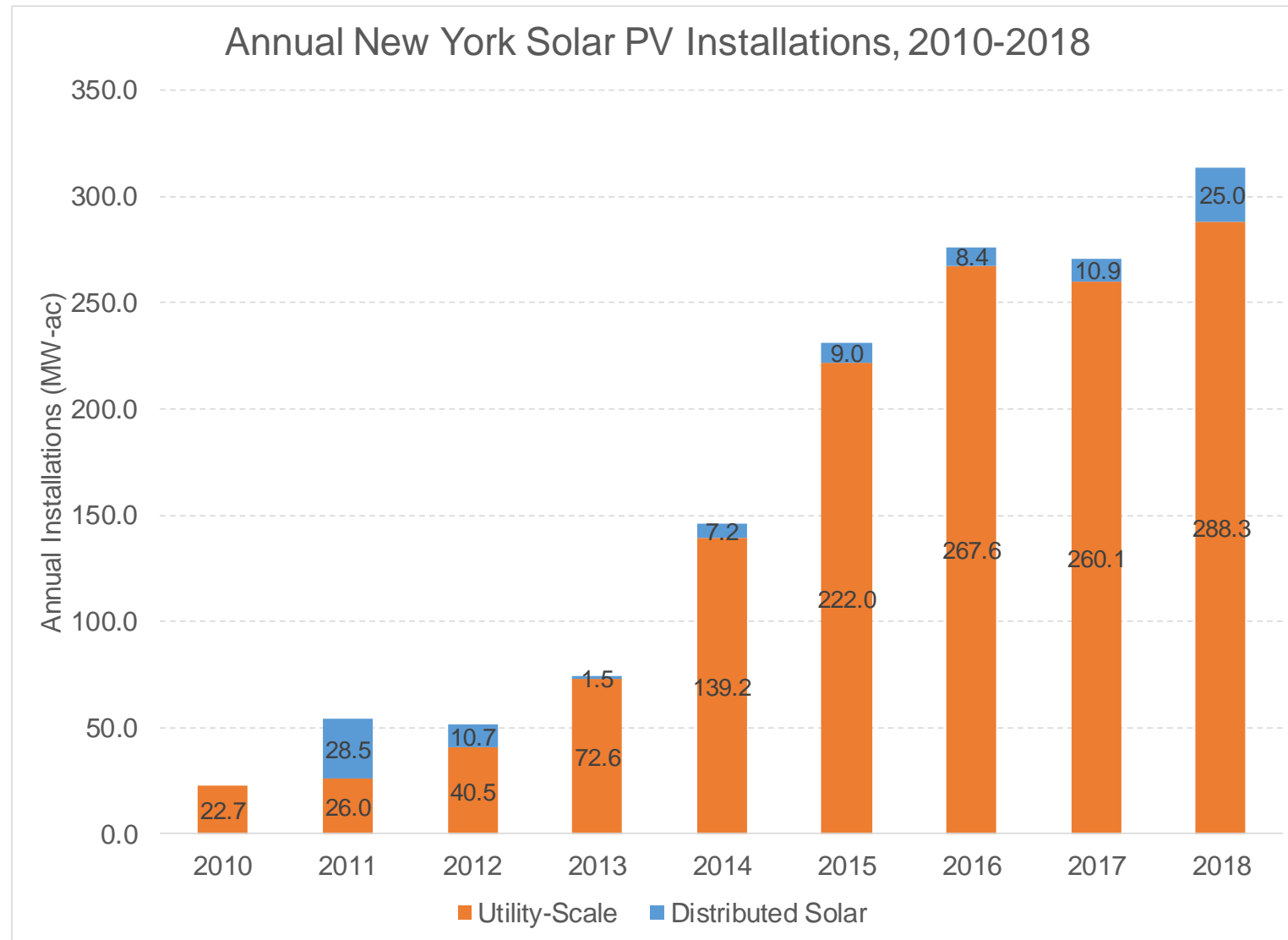
New York's Solar PV Market: History and Context

- 1.47 GW-ac installed solar PV capacity as of December 2018, including 101 MW of utility-scale installations (>5 MW-ac)
- 84% of existing capacity installed in just last five years
- 313 MW-ac installed in 2018: 16% Y/Y growth overall, 11% for DG systems
- Overall, solar still only makes up 1.4% of total NY electricity generation (up from 1.1% in 2017)



Source: NYSEIA, DPS, NYISO, SEIA, Wood Mackenzie

NY Solar Installations, 2010-2018

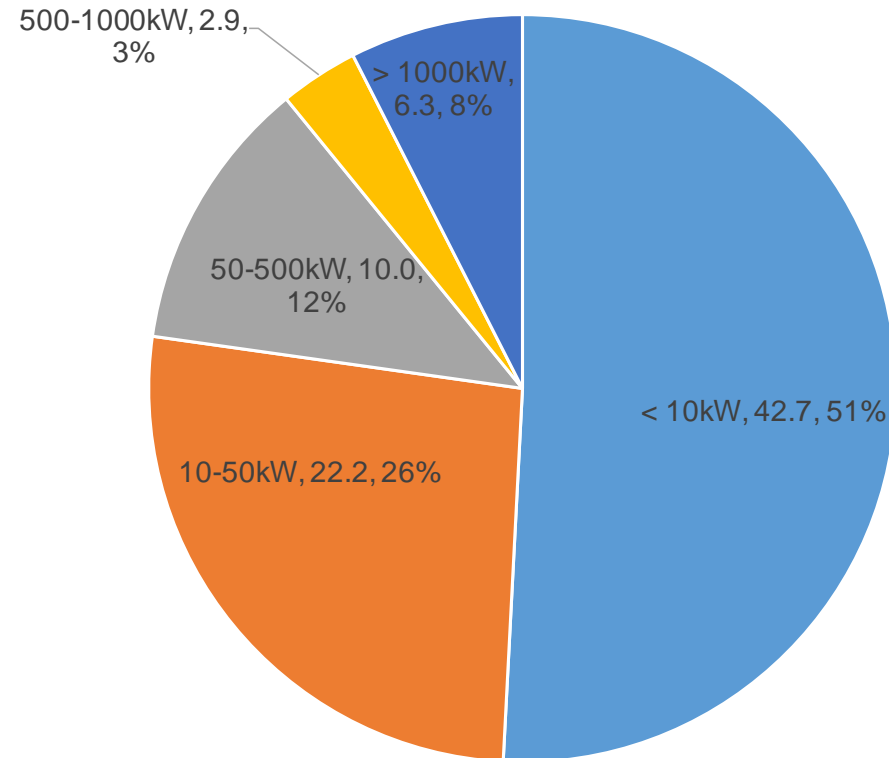


Source: NYSEIA, DPS, NYISO, SEIA, Wood Mackenzie

Central Hudson DG Snapshot

- Total of 84 MW-ac DG PV installed in CHGE territory as of Dec 2018 representing 6% of total NYS installed PV capacity)
- Current segment mix: roughly 65% residential, 35% non-residential
- Overall more than three-quarters of installed CHGE capacity is under 50kW (residential + small commercial/industrial)
- Systems from 50-500kW make up 12% of installed CHGE capacity
- Currently only 8 installed systems >500kW (1 CDG); stark contrast with pipeline

CHGE Installed DG Solar Capacity by System Size
December 2018

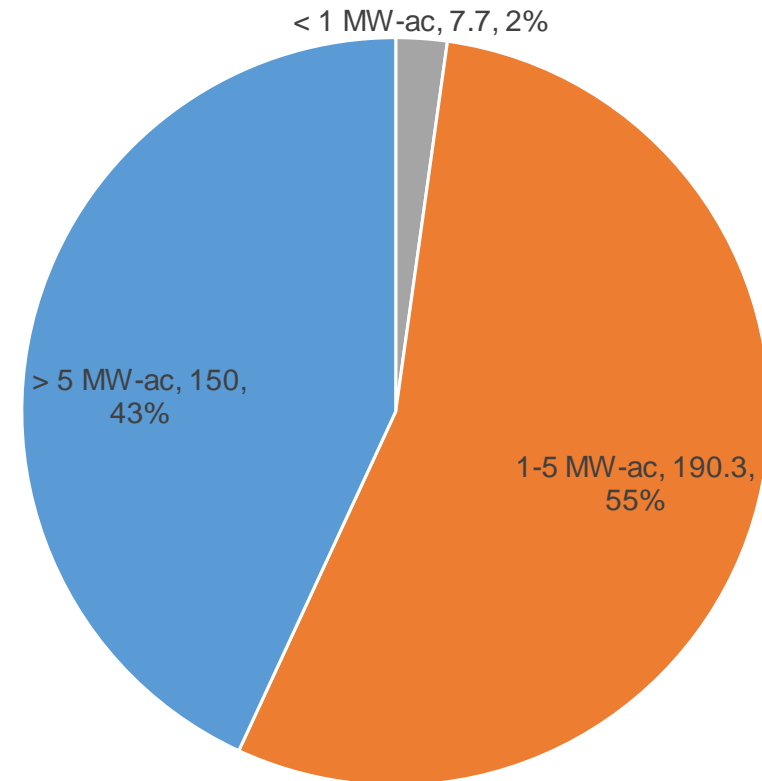


Source: NYSEIA, DPS

CHGE: What's Coming Down the Pipeline?

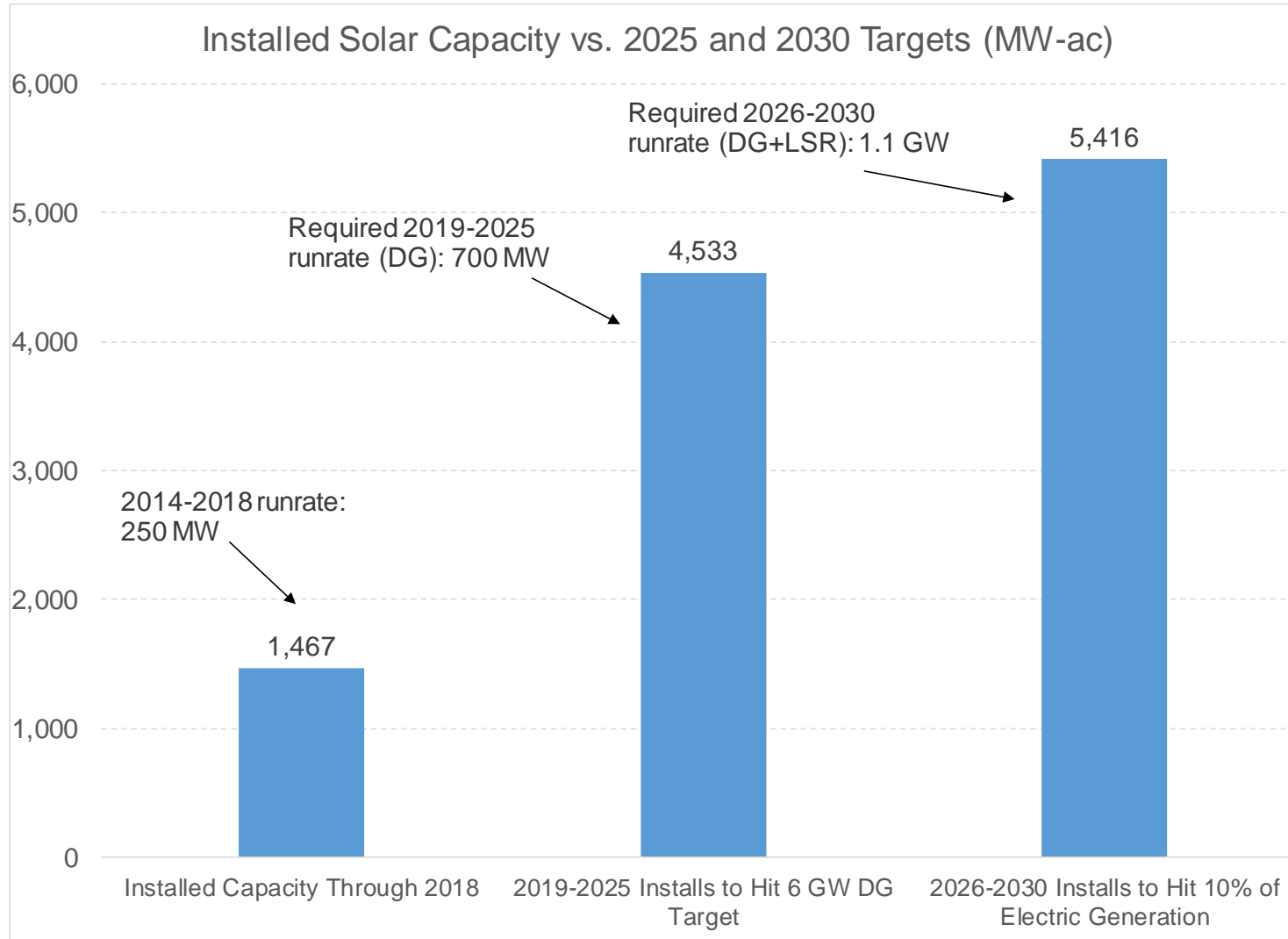
- As of December 2018, 198 MW-ac of DG solar in CHGE IX pipeline, of which 190 MW is >1 MW and 95% is CDG
- 150 MW of utility-scale solar in NYISO queue from NYSERDA LSR Program to be placed in-service in CHGE in 2019/2020
- So far, 37 PV+ES systems installed; expect significantly more PV projects to adopt storage going forward
- Fundamentally different project profiles than what has been installed to date and will pose challenges on both policy and technical side

CHGE Solar PV Pipeline by System Size
December 2018



Source: NYSEIA, DPS, NYISO

Meeting Climate Targets: The Need to Accelerate Deployments



Source: NYSEIA, DPS, NYISO, SEIA, Wood Mackenzie

What Do We Need to Get There?

- Codify Governor's 6 GW DG target and a long-term solar goal in legislature with intermediate targets
- Ensure that compensation for DER projects is economically viable, transparent and attractive to sell and finance and proceeds in conjunction with rate design reform
- Bolster the CDG market by encouraging commercial anchor tenants, introducing consolidated billing, and implementing cross-utility crediting
- Continue streamlining processes for interconnection, siting, permitting and property tax
- Ensure that Prevailing Wage expansion does not damage solar project economics

Thank You!

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Source: Renovus Energy