



New York Solar Summit

Jeff Irvine, Manager of Solar Programs

June 20, 2016



Sustainable CUNY



Sustainable CUNY Conserves



NYSolar Smart



Smart DG Hub



**Modeling a
CUNY
transformation**

**Removing the
barriers to wide-
scale solar
adoption in NY**

**Developing a
strategic pathway
for resilient
Distributed
Generation**

NYSolar Smart Focus Areas



Solar Infrastructure

- Permitting
- Zoning
- Grid Analysis
- Policy Support
- Installer Roundtable



Mapping the Way

- One stop Portal
- Solar Maps
- Data Analytics
- Roadmaps



Accessing Solar

- Group Purchasing
- Community Shared Solar
- Education
- NY Solar Summit



Resiliency

- Smart DG Hub
- Solar-plus-storage
- Critical Facility Support

Find Your Solar Potential

➔ Enter your address

or jump to

New York State

Which best describes you?

☒ Residential

☐ Commercial


☐ Installer

☐ Municipal / Non-profit


Available map layers

Installed Capacity


> Add your system to the map



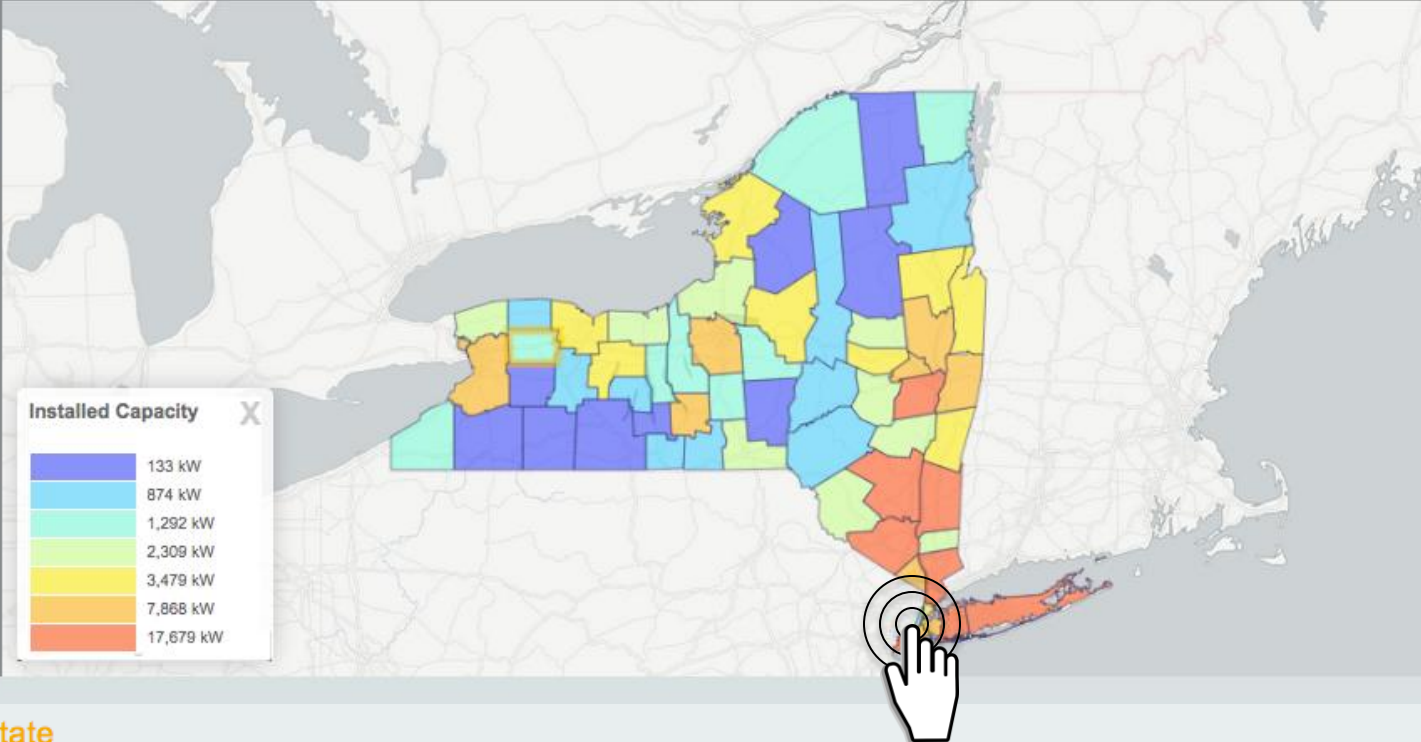
Solar Statistics



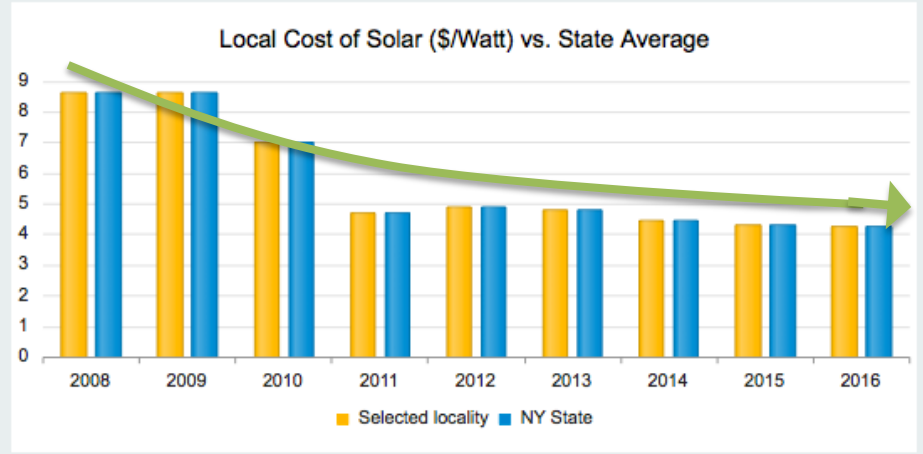
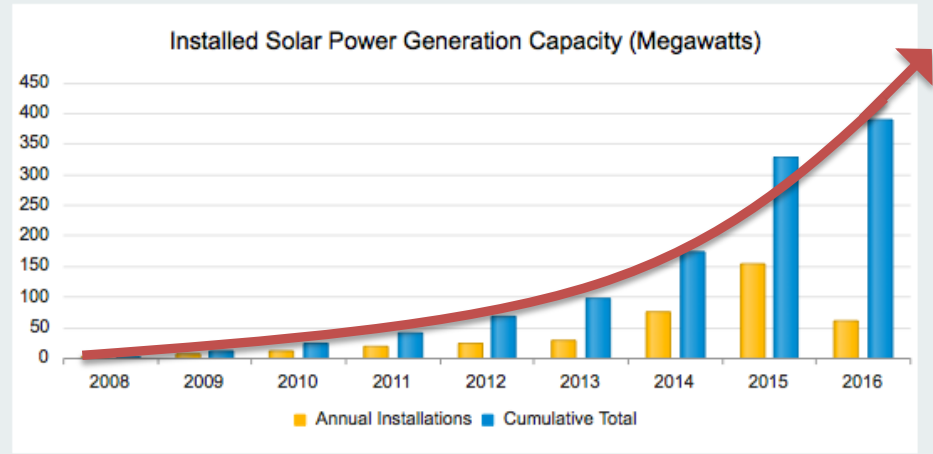
Calculator In Your Area



Advanced Tools



Solar Statistics for New York State



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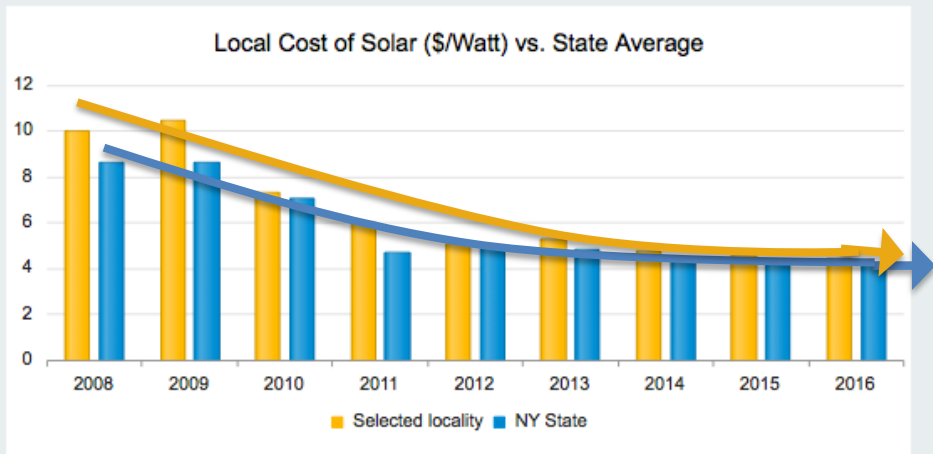
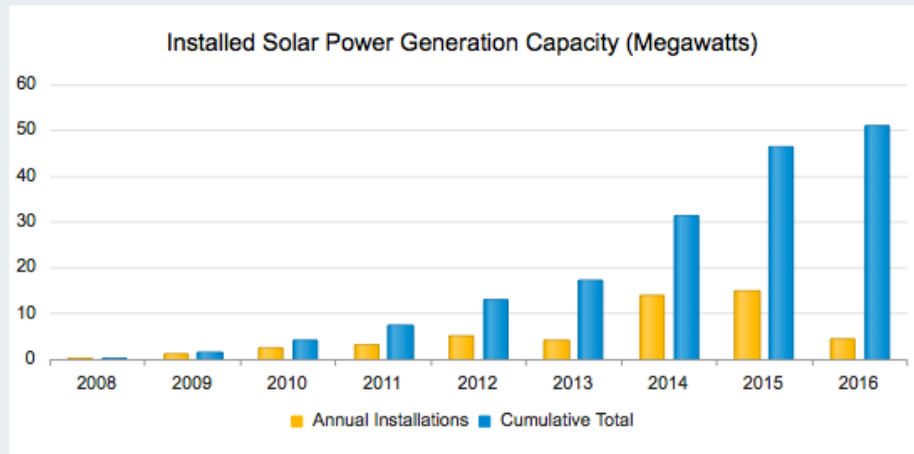

Solar Statistics


Calculator In Your Area

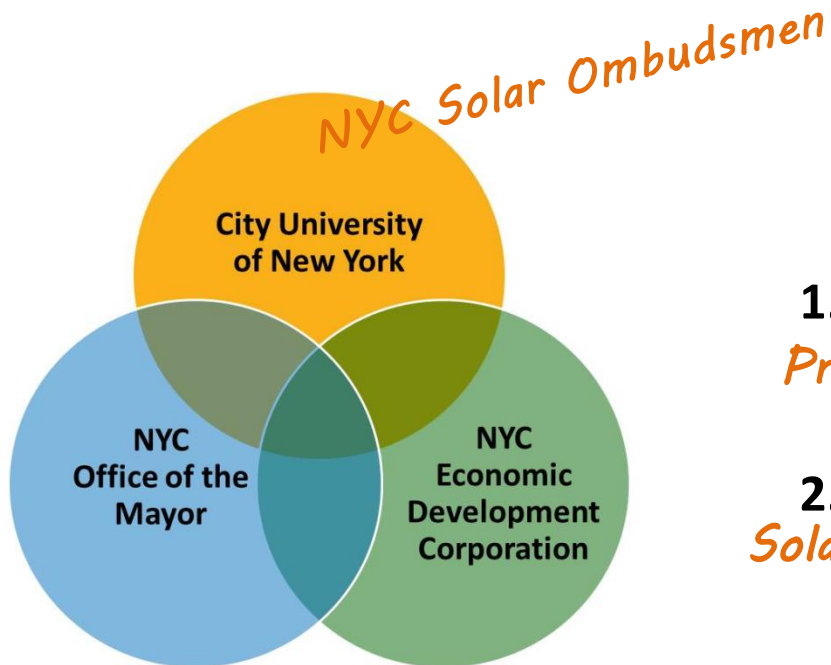

Advanced Tools



Solar Statistics for New York City



NYC Solar Partnership



Largest Mayoral Goal

250 MW on private NYC rooftops and communities by 2025

1. Further reduce the cost of solar in NYC

Pro-Cert Triggers Record Reviews: 1.2 Days!

2. Increase solar energy capacity

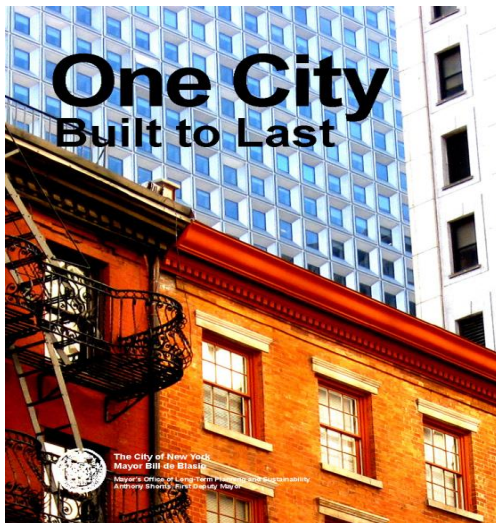
Solar grew from 24 MW in 2014 to a current 68 MW on Private Buildings

3. Attract solar energy companies

*Solar Installation Companies :58
NYC Solar Installer Roundtable::300*

4. Promote solar group purchasing (Solarize) and shared solar programs

*Solarize NYC Launched in April of 2016:
Up to 8 Solarize or Shared Solar Campaigns
annually through 2025*





The Opportunity



SAVE MONEY

Solarize typically reduces costs by 20%



GREEN YOUR COMMUNITY

Solar power is clean, renewable energy



JUMP START YOUR MARKET

Growth continues after the campaign



LOCAL DEVELOPMENT

Prioritize installers who hire locally

Expanding
access to
affordable
solar power
for all

Resources for Communities:

Financial Support from the City to
organize and run a campaign

Marketing Materials and templates for
outreach

Technical Assistance from NYC Solar
Ombudsmen

Volunteer Training to empower local
program administrators

Connections to Partners to assist
communities in running campaigns

Educational Materials and Workshops
with the City's Solar Ombudsmen

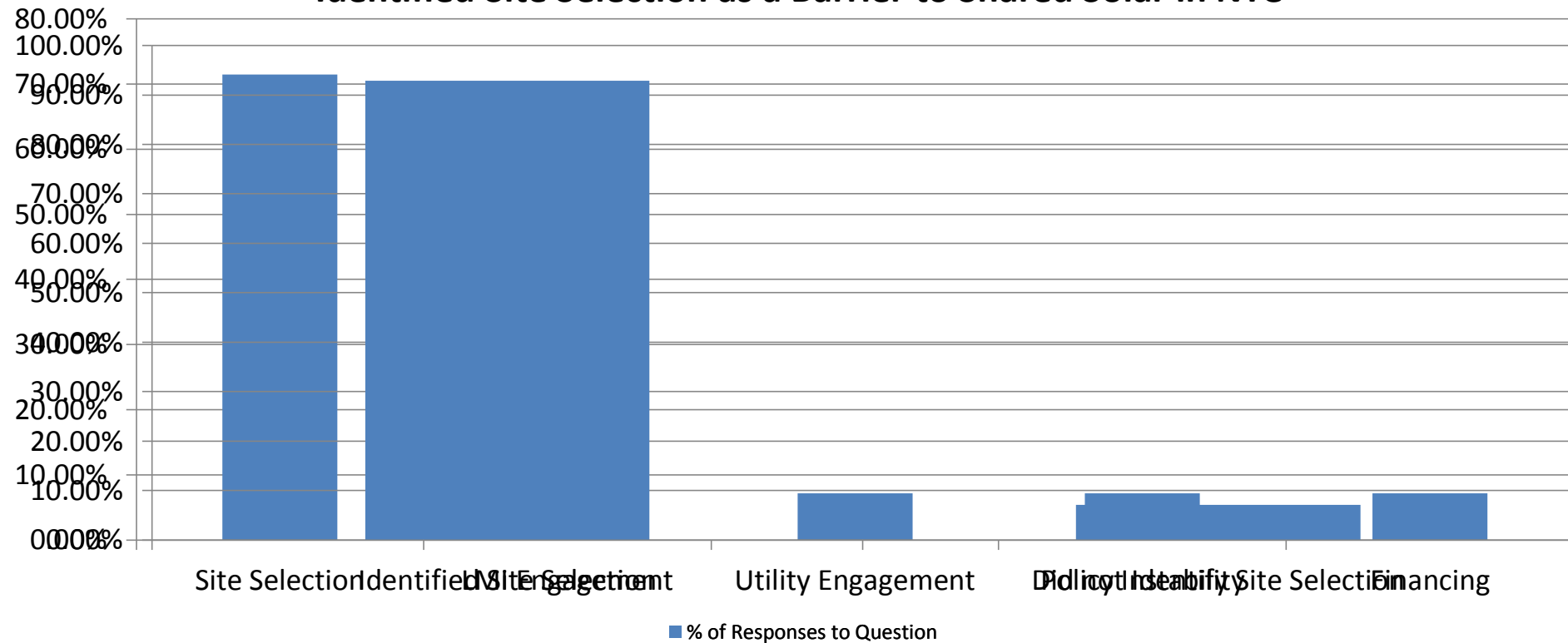
NYC Community Shared Solar



NYC Solar Partnership RFI on Shared Solar:

- 19 responses

Key Barriers to Shared Solar in NYC Identified Site Selection as a Barrier to Shared Solar in NYC





Solarize Brooklyn CB6: Sun For All

For residents and businesses of Carroll Gardens, Cobble Hill, Columbia Waterfront, Gowanus, Park Slope, and Red Hook



HOST

Lease your roof space to generate revenue

- Property tax abatement up to \$250,000
- Bids from vetted contractors
- Support clean energy in your community



DEVELOP

Apply to become a developer partner

- Connect with interested host sites
- Find subscribers
- Solar Ombudsmen support



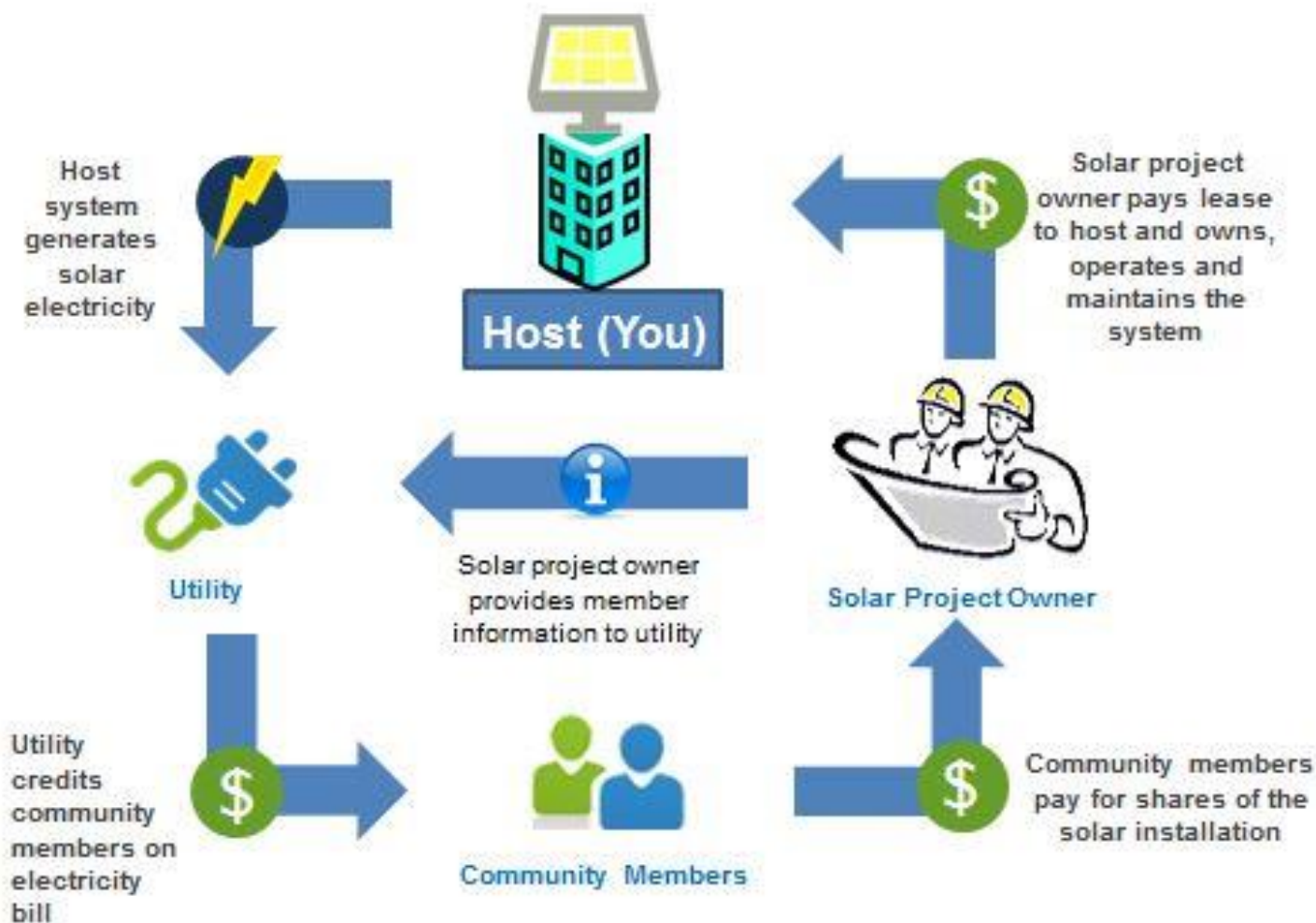
SUBSCRIBE

Sign up for community shared solar

- Save on energy bills
- Go green
- No roof required



Outreach and Education to Host Sites



Find Your Solar Potential

➔ Enter your address

or jump to

Kings

Which best describes you?

☒ Residential

☐ Commercial


☐ Installer

☐ Municipal / Non-profit


Available map layers

Installed Capacity


> Add your system to the map




Solar Statistics



Calculator



Area



Advanced Tools



In Your Area - Kings

- Solarize Brownsville**

A community effort aimed at bringing affordable solar to the residents and small business owners of Ocean Hill and Brownsville, Brooklyn.

Roger Wareham. Coordinator. Email: rsw.sunrasolar@gmail.com
- Solarize Brooklyn CB6: Sun for All**

A community program with a goal to reduce the cost of solar by leveraging the collective purchasing power of homeowners and small businesses in Brooklyn Community Board 6. Through partnerships with Sustainable CUNY and Here Comes Solar, this effort aims to bring more solar to the CB6 area of Brooklyn.

Craig Hammerman. Executive Director. Email: districtmanager@brooklyncb6.org
- Central Brooklyn Community Solar Campaign**

A community effort with a goal to reduce the cost of solar for all residents in the Central Brooklyn area.

Jeremy Friedman. Organizer. Email: jeremyadamfriedman@gmail.com



Find Your Solar Potential

➔ Enter your address

or jump to

New York State ▼

Which best describes you?

- ☒ Residential
 ☐ Commercial
 ☐ Installer
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Available map layers

Unified Solar Permit Map ▼

> Add your system to the map



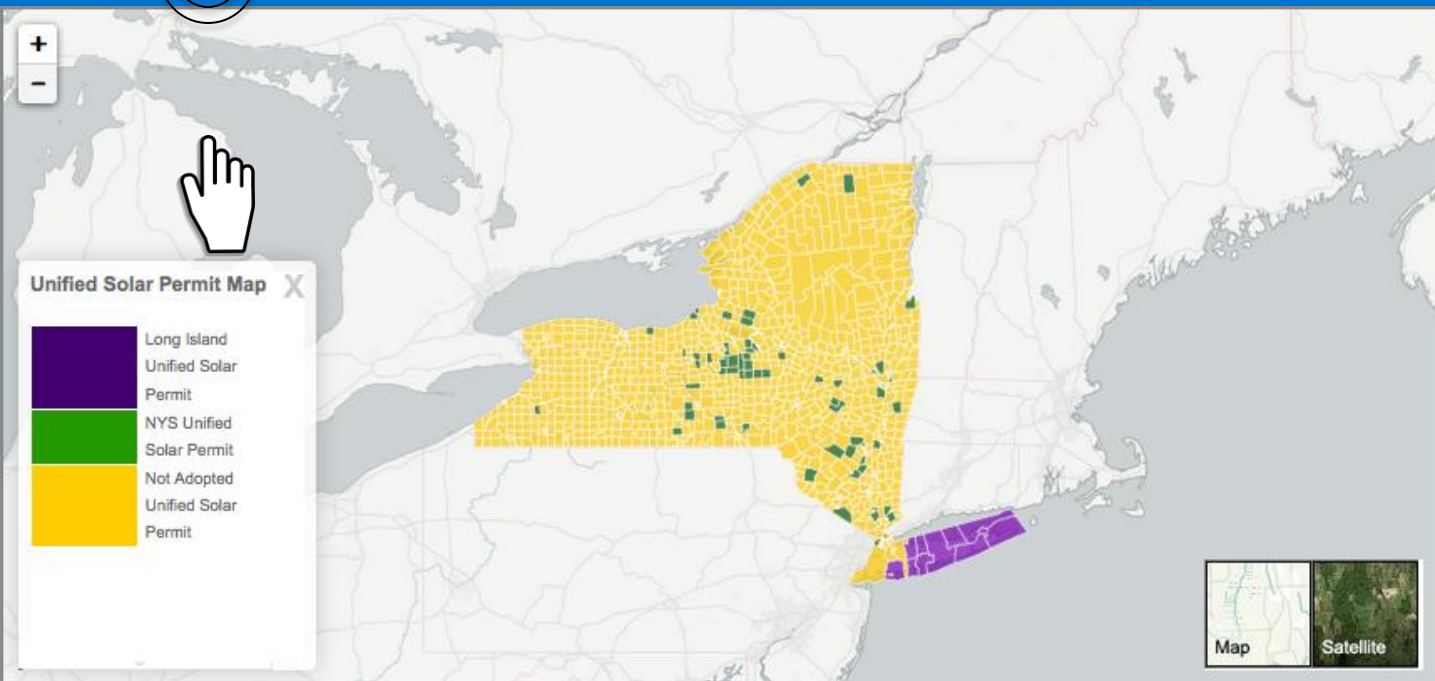
Solar Statistics



Calculator In Your Area

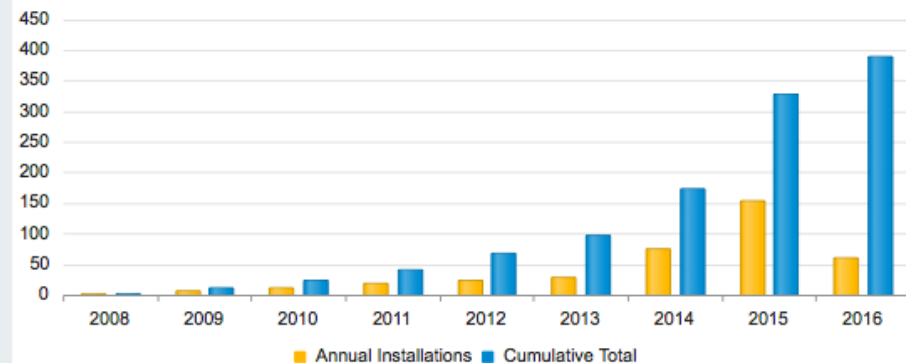


Advanced Tools

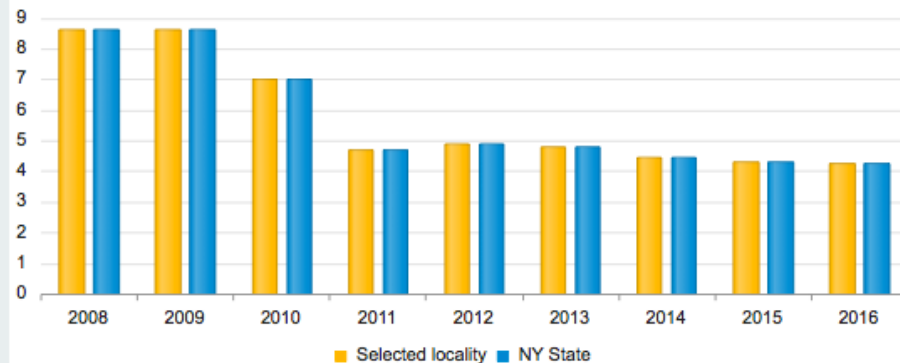


Solar Statistics for New York State

Installed Solar Power Generation Capacity (Megawatts)



Local Cost of Solar (\$/Watt) vs. State Average



The solar charts/graphs shown here are based on the partial data that was available at the time and may not include all statistics

NYSolar Smart Working Groups

NYS Permitting and Interconnection

- NYSERDA
- NYPA
- PSEG-LI
- NYSED
- Hatch Engineering
- Hempstead
- Red Hook
- Town of Warwick
- Rochester
- Yonkers
- Sustainable CUNY

NYS Net-metering and Interconnection Standards

- Con Edison
- Central Hudson
- National Grid
- PSEG-Long Island
- NYPA
- NYSEG
- Sustainable CUNY

NYS Financing Options

- NY Green Bank
- NYSERDA
- NYPA
- Empire State Development
- NYC Energy Effcy Corp
- Energize NY
- Westchester Solar
- Huntington
- Smart Power
- Sustainable CUNY

NYS Planning and Zoning

- Albany
- Clifton Park
- Hempstead
- Ithaca
- City of Poughkeepsie
- Rochester
- Schenectady
- Southampton
- Syracuse
- Village of Warwick
- White Plains
- PACE Land Use Law Cntr
- Sustainable CUNY

NYC Permitting and Interconnection

- NYC Department of Buildings
- Con Edison
- Fire Department of NY
- NYSERDA
- Sustainable CUNY

NYC Financing Options

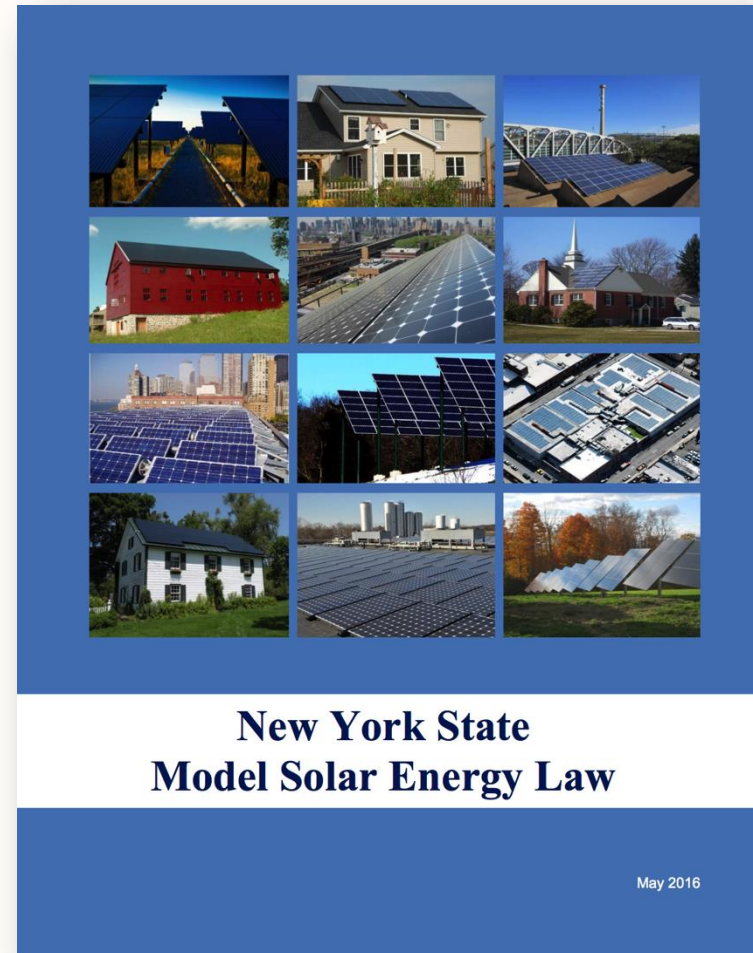
- NYC Mayor's Office
- NYC EDC
- GRID Alternatives
- NYSERDA
- Solar One
- Sustainable CUNY

NYS Planning & Zoning Working Group



Model Solar Zoning Law & Implementation Toolkit:

1. Model Solar Zoning language
1. Background information for municipal officials
2. Clear instructions with options for implementing each section of the law
1. Additional considerations, such as decommissioning
1. Appendix of external resources, including PVTN fact sheets



Find Your Solar Potential

Enter your address

40 S Broadway, Yonkers, NY 10701, USA

Jump to

Yonkers

Which best describes you?

☐ Residential

☐ Commercial

☐ Installer

☒ Municipal / Non-profit

Available map layers

Installed Capacity

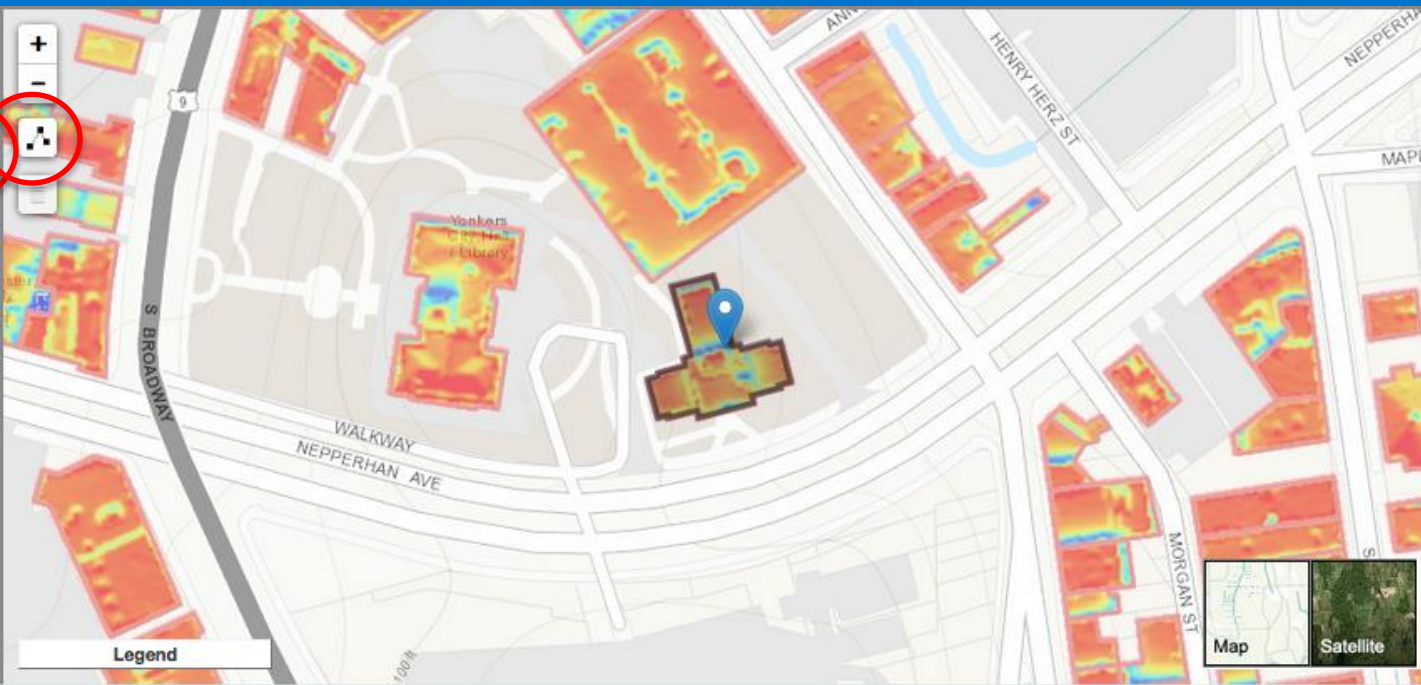
> Add your system to the map

Solar Statistics

Calculator

In Your Area

Advanced Tools



Solar Potential Calculator

1. Solar System Assumptions

Building / User Type ⓘ

Tax Exempt

Approx. Monthly Electric Bill ⓘ

\$6,000.00

Financing Type ⓘ

PPA

RESET

* financing options can change your required upfront cost (see below) to adjust payment type.

+ Open Advanced Assumptions

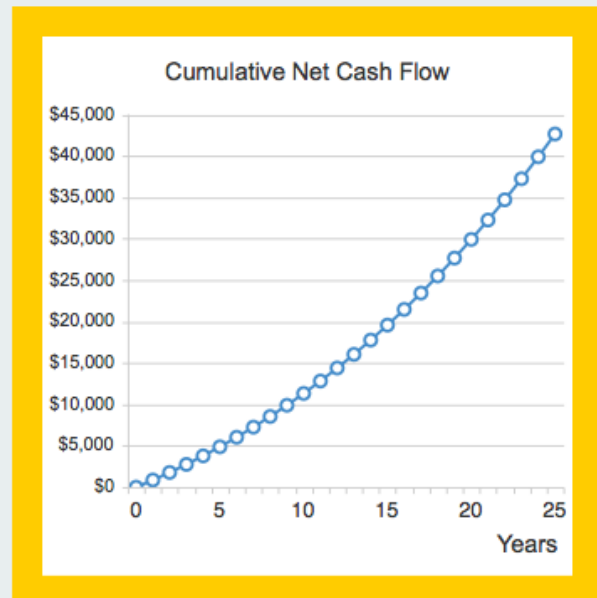
2. Output

40 S Broadway, Yonkers	
Optimal System Size (kW DC)	43.89
(2,986 square feet out of 2,986 usable square feet)	
Payback Period	0 years
Annual Savings	\$11,004
Out-of-Pocket Cost	\$0

GET QUOTE

DOWNLOAD REPORT

+ Open Advanced Details



Find a Solar Installer

- ☒ See installers who are participating in the NY Solar Map system to install solar in your area.
☐ See installers who have installed solar in your area.

Filter Solar Installers by (optional):

- Type of Project** ☒ All ☐ Residential and Small Commercial ☐ Large Commercial
Type of Solar ☒ All ☐ Solar ☐ Solar with Battery Storage

Show a List of Installers

☐ RER Energy Group

Service Provided: Solar PV - Install,Solar PV – Install,Solar PV and Battery Storage - Install

Phone Number: 315-247-8494

This company uses NABCEP Certified PV Installation Professional(s)

*Installations in your community are self-certified

*Participating in NY solar Map system

☐ AltPower, Inc

Service Provided: Solar PV - Install,Solar PV – Install,Solar PV and Battery Storage - Install,Solar PV – Repair & Maintenance

Phone Number: 212-206-0022

This company uses NABCEP Certified PV Installation Professional(s)

*Installations in your community are self-certified

*Participating in NY solar Map system

☐ High Peaks Solar

Proposed Solar Building/Ground Mount Location

Building Owner

Solar Project Details

Review and Submit

Address1*

524 W 59TH ST, NEW YORK

City*

New York

State*

New York

Zip Code*

10019

Building Latitude

40.7196659

Building Longitude

-73.941351

Next →

There's More to Come!



On-going Efforts by NYSolar Smart and Partners

NY Solar Map:

- Additional LIDAR areas, starting with Long Island
- Integration of more Solar Guides
- NYC Grid Ready



Advanced
Tools

NYC:

- PTA Extension
- FDNY Fire Path Flexibility for Brownstones
- Clarification around Special Flood Hazard Areas

NYS:

- NYS Unified Solar Permit V2
- PVTN trainings
- Developer trainings on large-scale interconnection

NYSolar Smart Board Members & RSC II Partners



The City University of New York

NYSERDA

New York Power Authority

ACE NY

Aeon Solar

Alliance for Clean Energy NY

Assoc. of Towns of the State of NY

Central Hudson

Central NY Regional Planning

Consolidated Edison

CUNY Ventures, Inc.

DCAS

Empire State Development

Fire Department NY

GE Global Research

Hatch Engineering

IBEW

IBM

Long Island Power Authority

Meister Consulting

Mercury Solar

Monolith Solar

National Grid

NY Conference of Mayors

NY Green Bank

NYC Department of Buildings

NYC Dept. of Citywide Planning

NYC EDC

NYC Mayor's Office

NYC OEM

NYS Business Council

NYS Education Department

NYSEG

NYSEIA

OnForce Solar

Pace University

Pratt

Solar Energy Systems

Solar One

State University of NY

Sun Edison

SWEAC

The Solar Energy Consortium

Vote Solar

Westchester County

City of Albany

City of Ithaca

City of Poughkeepsie

City of Rochester

City of Schenectady

City of Syracuse

City of White Plains

City of Yonkers

New York City

Town of Clifton Park

Town of Hempstead

Town of Huntington

Town of Red Hook

Town of Southampton

Town of Warwick

Village of Warwick

NYSOLAR SMART



Thank you

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