



Community Solar by Municipalities

Sustainable Jersey Webinar
January 23, 2019

Webinar Speakers

- Ariane Benrey
Program Administrator
New Jersey Board of Public Utilities
- Ron Reisman
Solar Ombudsman
Sustainable CUNY



Municipal Program Energy Actions

	Climate Planning and Energy Efficiency	Renewable Energy	Alternative Fuel Vehicles
Municipal Operations	<ul style="list-style-type: none"> • Municipal Carbon Footprint • Energy Tracking and Management • Energy Efficiency for Municipal Facilities 	<ul style="list-style-type: none"> • On-Site Solar Energy • On-Site Geothermal • On-Site Wind Energy • Purchase Renewable Energy 	<ul style="list-style-type: none"> • Fleet Inventory • Purchase Alternative Fuel Vehicles (AFV)
Community Energy Use	<ul style="list-style-type: none"> • Community Carbon Footprint • Climate Action Plan • Residential Energy Efficiency Outreach • Commercial Energy Efficiency Outreach 	<ul style="list-style-type: none"> • Wind Ordinance • Renewable GEA • Make Your Town Solar Friendly • Community-Led Solar Initiatives 	<ul style="list-style-type: none"> • Make Your Town EV Friendly • Public EV Chargers

Gold Star Standard in Energy

- Municipal Operations

- Municipal buildings
- Fleet management
- Operations (landscaping, energy/water conservation, etc.)
- Route optimization
- Green building training

- Community Wide

- Make Your Town EV Friendly
- Public Electric Vehicle Chargers
- Make Your Town Solar Friendly
- Community Led Solar Initiatives
- Residential Energy Efficiency
- Commercial Energy Efficiency



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Program Underwriters



Grants Program



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New Jersey's Community Solar Energy Pilot Program

Wednesday, January 23, 2019

DISCLAIMER

The information and views in this presentation does not necessarily represent the views of the New Jersey Board of Public Utilities, its Commissioners, or the State of New Jersey. This presentation is provided for informational purposes only and does not provide a legal interpretation of any New Jersey Statutes regulations or policies.

Furthermore, this presentation is based on the Community Solar Energy Pilot Program Proposed Rules as published in the New Jersey Register on October 1, 2018.



NJCEP BACKGROUND

- Administered by the New Jersey Board of Public Utilities
- Funded from “Societal Benefits Charge” on utility bill
- Program Goals:
 - Promote increased energy efficiency and the use of clean, renewable sources of energy
 - Protect the environment and lower emissions
 - Change the business mindset



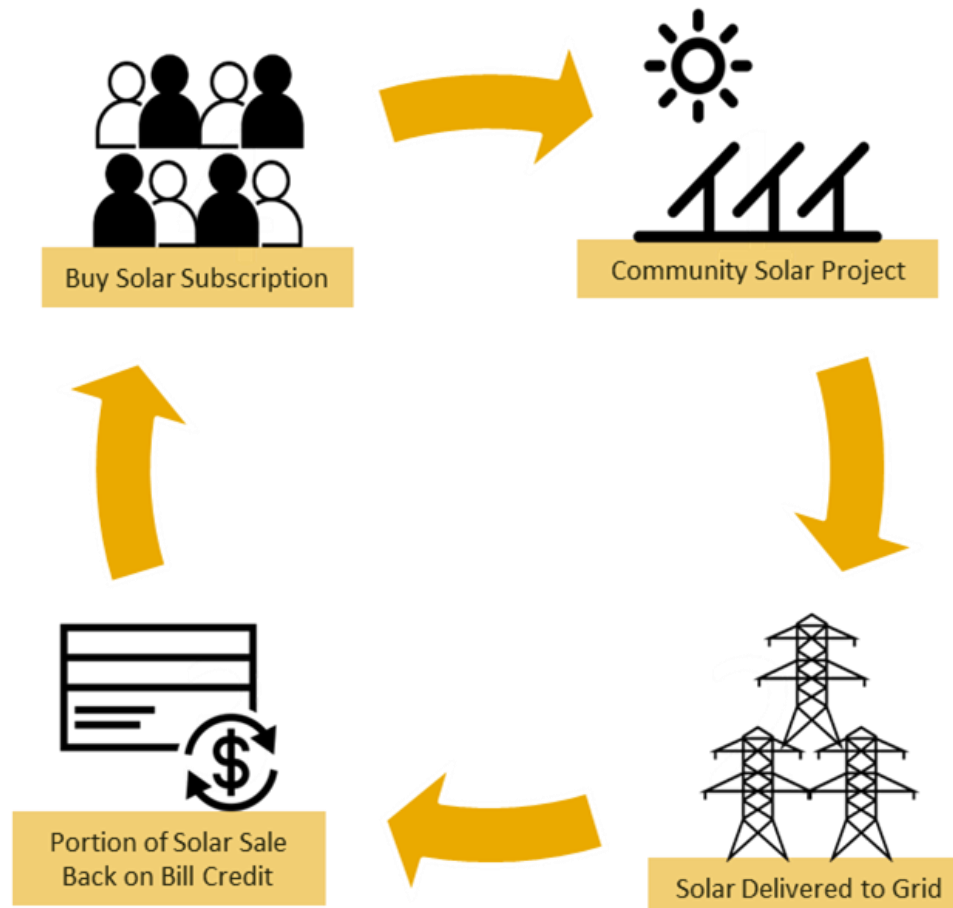
Clean Energy Act of 2018

- Signed into law on May 23, 2018
- Directs the BPU to adopt rules and regulations establishing a Community Solar Energy Pilot Program within 210 days
 - January 17, 2019 Board Agenda Meeting
- Directs the BPU to adopt rules and regulations establishing a Community Solar Energy Program within 36 months of the enactment of the Pilot Program

What is Community Solar?

- A larger, remotely located solar array or facility that is virtually divided among multiple participants (“subscribers”) by means of a credit on their utility bill.
- Participation can be in the form of:
 - **Ownership:** buying a direct share or portion of the community solar project or panels
 - **Subscription:** buying a portion or share of the electric output produced by the community solar project

What is Community Solar?





Pilot Program Characteristics

Structure

- 3-year Pilot Program
- Anticipated Pilot Program start: early 2019
- Projects selected via an application and competitive scoring

Size

- Individual community solar project capacity limit: 5MW
- Annual capacity limit: 75MW for PY1, at least 75MW PY2&3
- Min. 10 subscribers, max. 250 subscribers per 1MW capacity

Siting

- Prohibition of community solar on preserved farmland
- Siting on Green Acres open space subject to DEP approval

Credit Value

- Bill credit set at retail rate net metering, minus non-bypassable charges

Low & Moderate Income (LMI) Access

- At least 40% of program capacity reserved for LMI projects
- Option for further 10% reserved for LI projects



Pilot Program

Structure

- 3-year Pilot Program
- Project selection via competitive application process
- Draft Application Form released for public comment on November 28, 2018 and available at: <http://njcleanenergy.com/renewable-energy/programs/community-solar>
- Selected projects are expected to begin construction within 6 months of their approval by the Board, and be fully operational within 12 months of their approval by the Board



Evaluation Criteria	Max. Points
<p>Siting Higher preference: landfills, brownfields, areas of historic fill, rooftops, parking lots, parking decks Medium preference: rights-of-way, canopies over impervious surfaces (e.g. walkway), areas designated in need of redevelopment Not preferred: preserved land, wetlands, forested area, farmland</p> <p>Bonus points for: landscaping, land enhancement, pollination support, storm water management, decommissioning plan</p>	20
<p>Subscribers and Environmental Justice Higher preference: LMI project, with real benefits to the LMI subscribers, more than 50% kWh assigned to residential subscribers, in environmentally disadvantaged community (as defined by DEP)</p>	20
<p>Product Offering Higher preference: guaranteed savings >10%, flexible terms Medium preference: guaranteed savings >5% Not preferred: no Guaranteed savings</p>	20
<p>Cost in \$/kW installed Higher preference: lowest cost</p>	10
<p>Community and Environmental Justice Engagement Higher preference: partnership with municipality, partnership with local community organization(s), partnership with partnership with affordable housing provider, provides local jobs/job training Medium preference: letter of support from municipality, project owner is a government and/or public and/or quasi-public entity, project owner is an affordable housing developer</p>	10
<p>Other Benefits Paired with storage, micro-grid project, energy audit, EE measures</p>	10
<p>Geographic Limit Higher preference: municipality/adjacent municipality Medium preference: county/adjacent county No preference: any geographic location within the EDC service territory.</p>	5
<p>Project Maturity Higher preference: EDC feasibility study received, permits received, site control received Medium preference: EDC feasibility study applied for, permits applied for, conditional site control</p>	5



Pilot Program

Size

- Annual capacity limit: 75 MW for Program Year 1, at least 75 MW Program Years 2 and 3
- Maximum size of individual community solar projects: 5 MW. No minimum size
- Minimum 10 subscribers (possible exemption for multi-family buildings with a community solar project located on their property)
- Maximum 250 subscribers per 1MW capacity



Pilot Program

Subscriptions

- All rate classes are eligible to participate in a community solar project; account holders of a master meter are allowed to subscribe to community solar on behalf of their tenants (specific rules apply)
- Subscriptions cannot exceed 100% of the subscriber's 12-month historic annual usage
- Subscriptions cannot exceed 40% of the project's annual net energy
- Subscriptions are portable and transferable

Pilot Program

Siting

- Projects may have subscribers anywhere in the EDC service territory in which they are located, unless they have indicated otherwise in the Application to the Board.
- Prohibition of community solar on preserved farmland
- Siting on Green Acres open space subject to DEP approval





Mars Chocolate Headquarters 18-acre Solar Garden
Hackettstown, NJ



Solar Carport Rendition



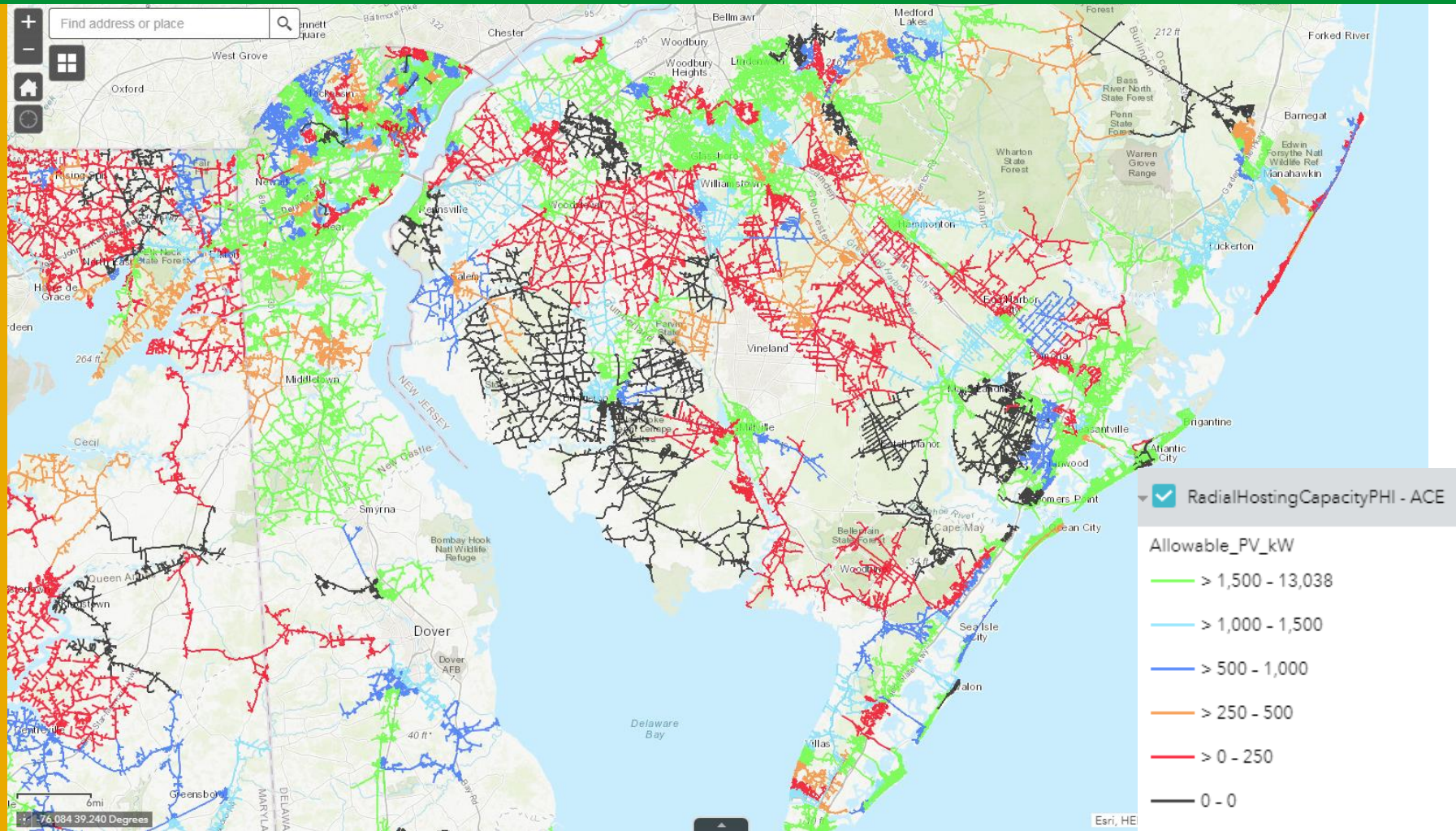
Vineland, NJ



Amazon Solar Warehouse



ACE Hosting Capacity





Pilot Program

Bill Credit

- Bill credit set at retail rate net metering, minus non-bypassable charges (Societal Benefits Charge)
- Bill credits can be carried over from month-to-month for one year
At the end of the year, excess credits are compensated at avoided cost of wholesale power
- Subscribers must agree to a remote read smart meter upon EDC request, purchased and installed at EDC cost
- Green Button Connect My Data



Pilot Program

Low- and Moderate-Income

- At least 40% of program capacity reserved for LMI projects
- An LMI project is defined as having at least 51% project capacity subscribed to LMI subscribers
- Affordable housing providers may, subject to specific rules, qualify as an LMI subscriber
- Individual qualifying criteria described in Pilot Program Rule



FOR MORE INFORMATION

Visit: NJCleanEnergy.com

Contact: communitysolar@njcleanenergy.com

Stay Informed: Sign up for community solar updates by emailing
webmaster@njcleanenergy.com

@NJCleanEnergy



Sustainable CUNY

Community Shared Solar in New York City

Ron Reisman, Solar Ombudsman



Sustainable CUNY



CUNY Sustainability

A map of New York City showing the locations of various CUNY campuses. The map is color-coded by borough: Manhattan (green), Bronx (light green), Queens (yellow-green), Brooklyn (yellow), and Staten Island (orange). Numerous campus names are marked with dots and labels across the city.

Modeling a CUNY transformation

Solar

A photograph showing a large array of solar panels installed on a flat rooftop. In the background, the New York City skyline is visible under a clear blue sky, with the Empire State Building being a prominent feature.

Removing the barriers to wide-scale solar adoption in New York

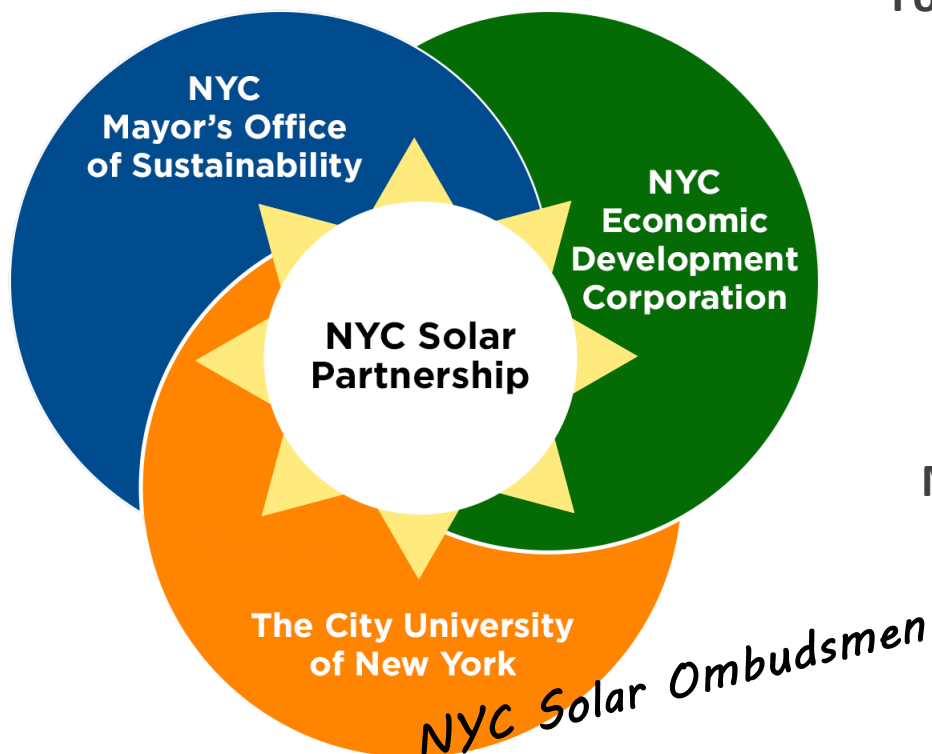
Energy Resiliency

A nighttime photograph of a city skyline, likely New York City, viewed from across a body of water. A bridge with illuminated lights spans the water in the foreground. The city buildings are lit up, and the sky is dark with some clouds.

Developing a pathway for resilient distributed generation

NYC SOLAR PARTNERSHIP

Solarize NYC | Shared Solar NYC



NYC GOAL: 1,000 MW by 2030

Formed in 2006 and led by Sustainable CUNY

- Objective third party that brings stakeholders to the table
- Market and data analysis
- Solar Ombudsmen as subject matter experts across solar and storage sectors
- Deep IT resources, i.e., NYC, NYS Solar Map and Portal

Mayor's Office and NYC EDC

- Strategic focus on policies and programs that support solar and economic development
- Actively engaged
- Vast network of resources

NYC SOLAR PARTNERSHIP

Solarize NYC | Shared Solar NYC



Start a Solarize Campaign in Your Community

Current **Solarize NYC** Campaigns

SOLARIZE NEHEMIAH

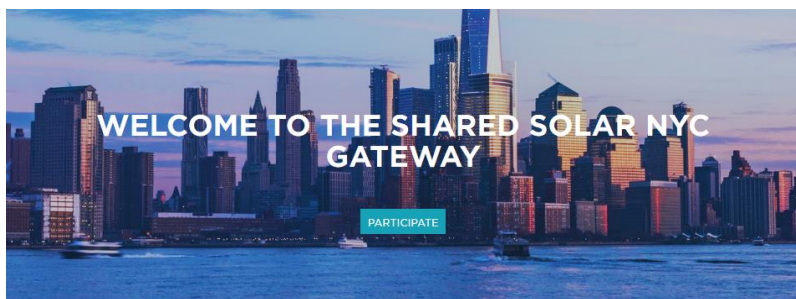
SOLAR UPTOWN NOW

Solarize NYC

- Community-based group purchasing program
- Competitive installer selection
- Tiered pricing structure (i.e., the more who join, the lower the price for all)
- Community-led outreach and education
- Limited-time program (generally 6-9 months)

Shared Solar NYC

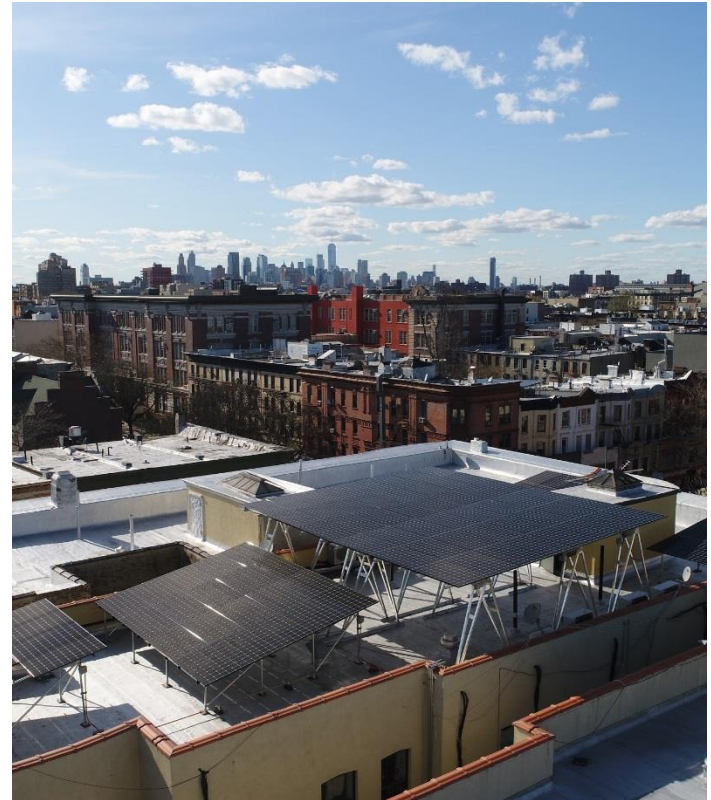
- Large-scale systems serving multiple customers
- Matching site hosts, developers and customers
- Expanding access to underserved communities



Benefits of Community Shared Solar



- Provides solar access to customers who previously had none
- Offers households, including LMI, the chance to reduce their energy costs
- Develops clean, community-based energy resources
- Creates good-paying green jobs for local residents





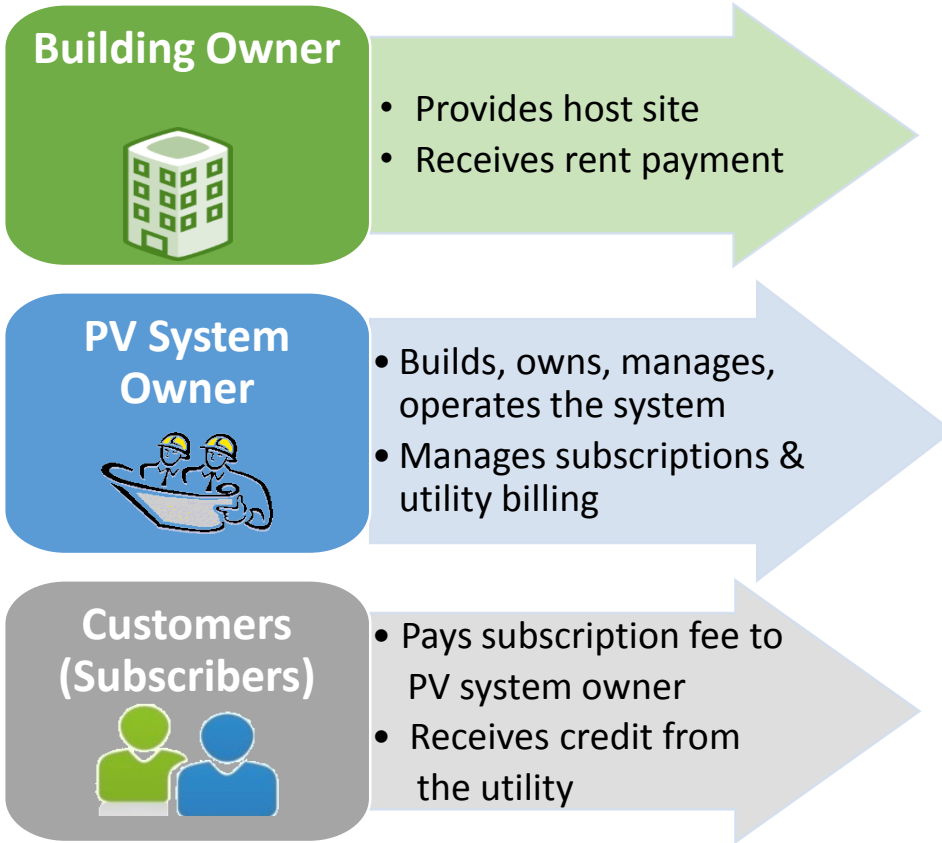
Community Shared Solar in New York State

- Authorized by Order of NY PSC in 2015 with effective date of 2016
- Allows multiple customers to be served by a single off-site solar system
- Minimum of 10 customers per system (exception for on-site systems)
- No individual customer can subscribe to more than 40% of system's output
- All customers must be in the same load zone as the system

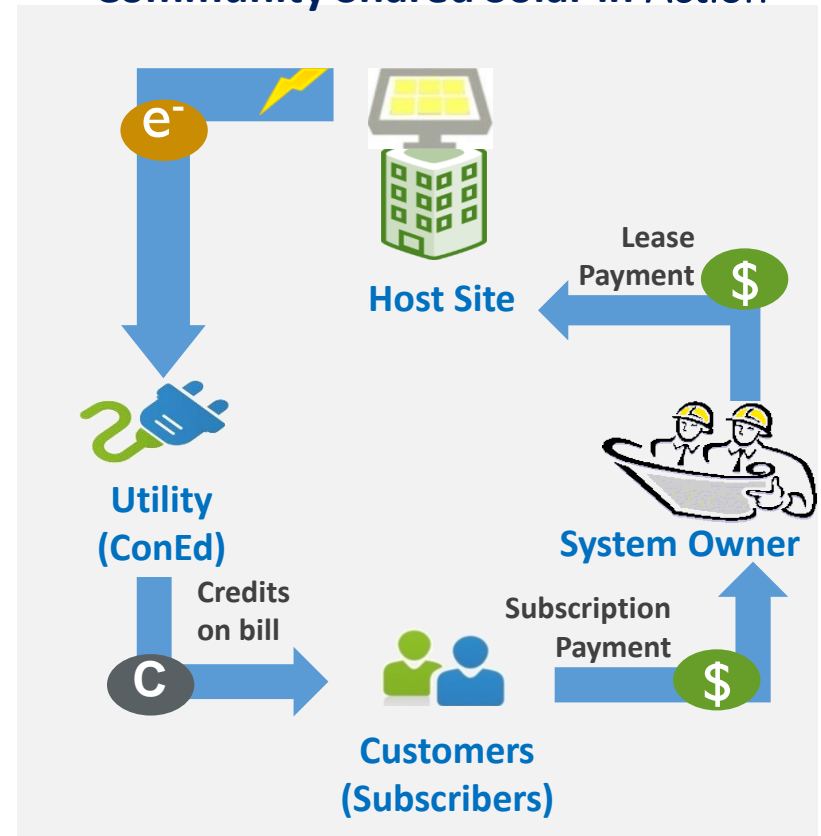


Community Shared Solar

How does it work?

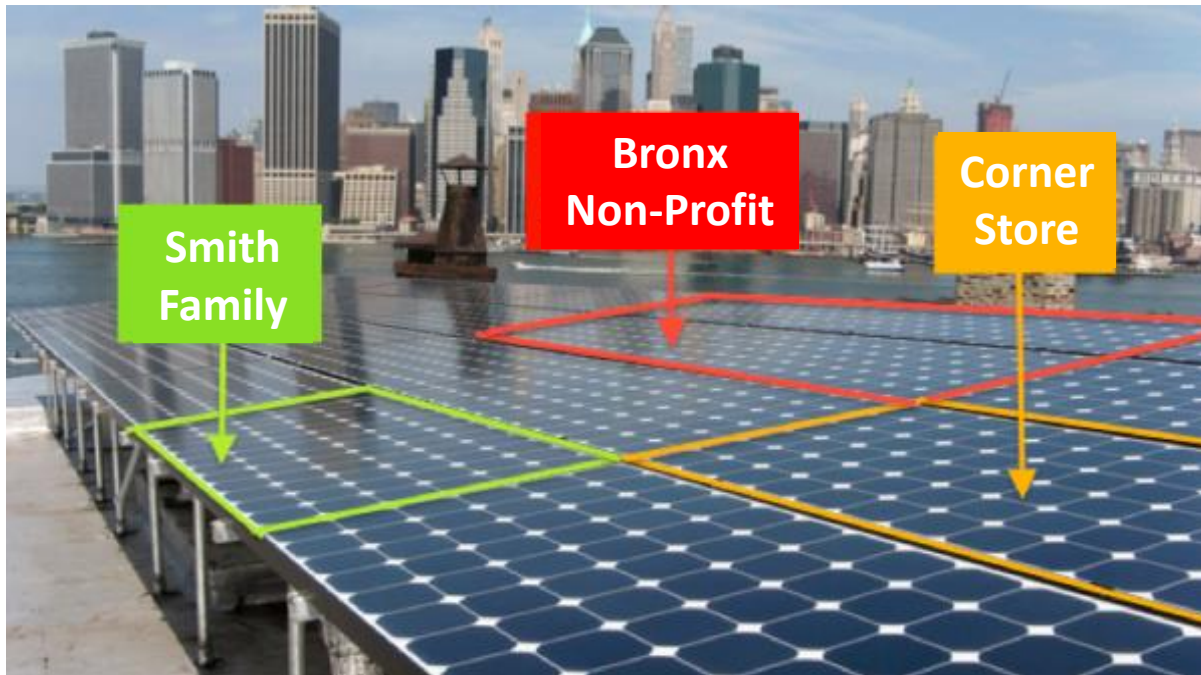


Community Shared Solar in Action



Community Shared Solar

Enables multiple off-site customers to buy solar power from a single installation





Shared Solar NYC Gateway
<https://shedsolarnyc.org/>

- Developed by Sustainable CUNY to promote shared solar in NYC
- Match hosts, developers, subscribers
- Dedicated ACCESSolar section to connect developers and CBOs

The screenshot shows the homepage of the NYC Solar Partnership Shared Solar NYC Gateway. At the top, the logo reads "NYC SOLAR PARTNERSHIP" with "SOLARIZE NYC | SHARED SOLAR NYC" below it. A navigation bar includes "Home", "Participate", "About", "NYC Solar Partnership", and "Login". The main header features a city skyline with the text "WELCOME TO THE SHARED SOLAR NYC GATEWAY" and a prominent "Participate" button.

Below the header are four main service categories, each with an icon and a brief description:

- HOST**: Represented by a building icon. Description: "Lease your roof space to generate revenue."
- SUBSCRIBE**: Represented by a building icon with a person. Description: "Sign up for community shared solar information."
- DEVELOPER**: Represented by a laptop and documents icon. Description: "See community shared solar developer options."
- ACCESSOLAR**: Represented by a group of people icon. Description: "Learn more about NYCHA's ACCESSolar program."

At the bottom, there are two sections:

- BRINGING SOLAR TO NEW YORK**: A text block explaining that community shared solar is a win-win opportunity to expand access to solar electricity to all, giving anyone interested in benefiting from solar energy the ability to do so. It also states that the Shared Solar NYC Gateway enables community shared solar to expand throughout NYC by solving the challenge of connecting interested customers with viable host sites built by trusted developers.
- ACTIVE COMMUNITY SHARED SOLAR PROJECTS**: A map of the New York City area showing the locations of active community shared solar systems. A legend indicates "ACTIVE COMMUNITY SOLAR SYSTEM" with a yellow pin icon. The map shows several project locations across the city, including areas like Hudson County, Manhattan, and the Bronx.

Shared Solar NYC Gateway ACCESSolar Landing Page



Participate in ACCESSolar

Select "Learn More" if you are interested in learning more about the ACCESSolar program.

Select "ACCESSolar Developer" if you are a developer interested in teaming up with ACCESSolar Community Board Organizations and Non-profits to install shared solar systems on smaller public housing sites.

Select "ACCESSolar CBO/Non-profit" if you are a CBO/Non-profit interested in teaming up with ACCESSolar Developers to install shared solar systems on smaller public housing sites.



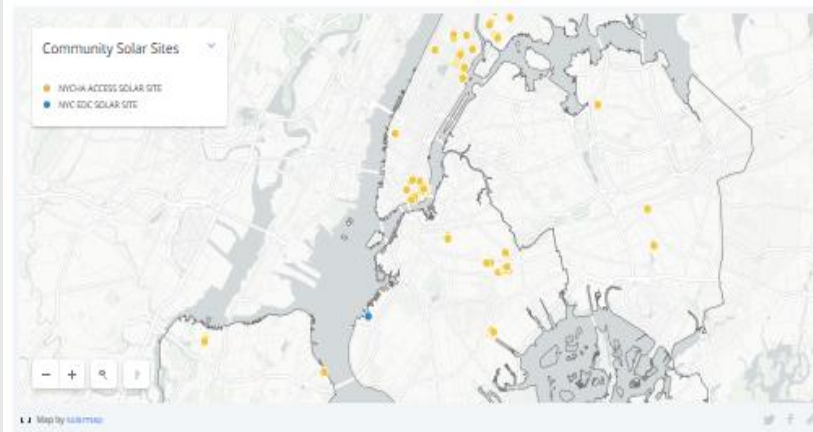
LEARN MORE ABOUT
ACCESSOLAR



ACCESSOLAR DEVELOPER



ACCESSOLAR
CBO/NON-PROFIT



See All Community Shared Solar Options

CBO or Non-Profit Sign-Up Form



First Name

Last Name

Title

Business Name

Business Address Line 1

Business Address Line 2

Business Address City

State



Zip Code

E-mail

Phone Number

Please indicate the borough(s) your organization serves:

- Manhattan
- Bronx
- Brooklyn
- Queens
- Staten Island

Please identify any specific neighborhoods or communities within a borough:

Please describe your organization and its experience with solar in NYC (75 words or less):

Please describe your interest in participating in the ACCESSolar Program (75 words or less):

Please describe the capabilities you are looking for in a partner developer/installer (75 words or less):

By checking this box, you agree to allow Sustainable CUNY to share the information you have provided with non-profits and community organizations that have expressed an interest in partnering with a solar developer/installer(s) in the ACCESSolar Program.

SUBMIT

Introduction to NYCHA

What is NYCHA?



60% OF NYCHA'S BUILDING ARE 50+ YEARS OLD



THE LARGEST DEVELOPMENT: A 26-BUILDING APARTMENT COMPLEX WITH 7,000 RESIDENTS

THE SMALLEST DEVELOPMENT: A SINGLE-STORY SENIOR BUILDING WITH 13 RESIDENTS

Introduction to NYCHA

Who is NYCHA?



77,000
SENIORS
62 YEARS OLD OR OLDER



110,000
CHILDREN
UNDER 18 YEARS OLD



40%
OF HEADS OF HOUSEHOLDS
ARE 62 YEARS OLD OR OLDER



25%
OF NYCHA EMPLOYEES
ARE RESIDENTS OF
PUBLIC HOUSING



\$23,000
AVERAGE
HOUSEHOLD
INCOME



61%
ARE EMPLOYED
(OF NON-DISABLED,
WORKING AGE ADULTS)



41%
ON FIXED INCOME
(SOC. SEC., SSI, PENSION, OTHER)



12%
RECEIVE PUBLIC
ASSISTANCE



Introduction to NYCHA

NextGeneration NYCHA and Sustainability Agenda



A 10-year strategic roadmap to deliver **safe, healthy, connected homes and communities** for NYCHA residents and to preserve and protect public housing for current and future generations of New Yorkers



NYCHA's **commitment** as a landlord to create healthy and comfortable homes that will withstand the challenge of climate change

An **invitation** to residents and surrounding communities to work with NYCHA to realize a shared long- term vision of equity, sustainability, and resiliency



NYCHA's 25 MW Solar Program

Two halves: Commercial and ACCESSolar

Commercial Solar Program

- Large sites (campuses with individual roofs over 40 kW)
- Commercial-scale developers
- Lease payment to NYCHA required
- Standard procurement process

Accelerating Community Empowered Shared Solar (ACCESSolar)

- Smaller and more scattered sites
- Focus on local developers working with CBOs/non-profits
- Lease payments a secondary concern
- Greater emphasis on LMI subscribers and job training

ACCESSolar Overview

Goals

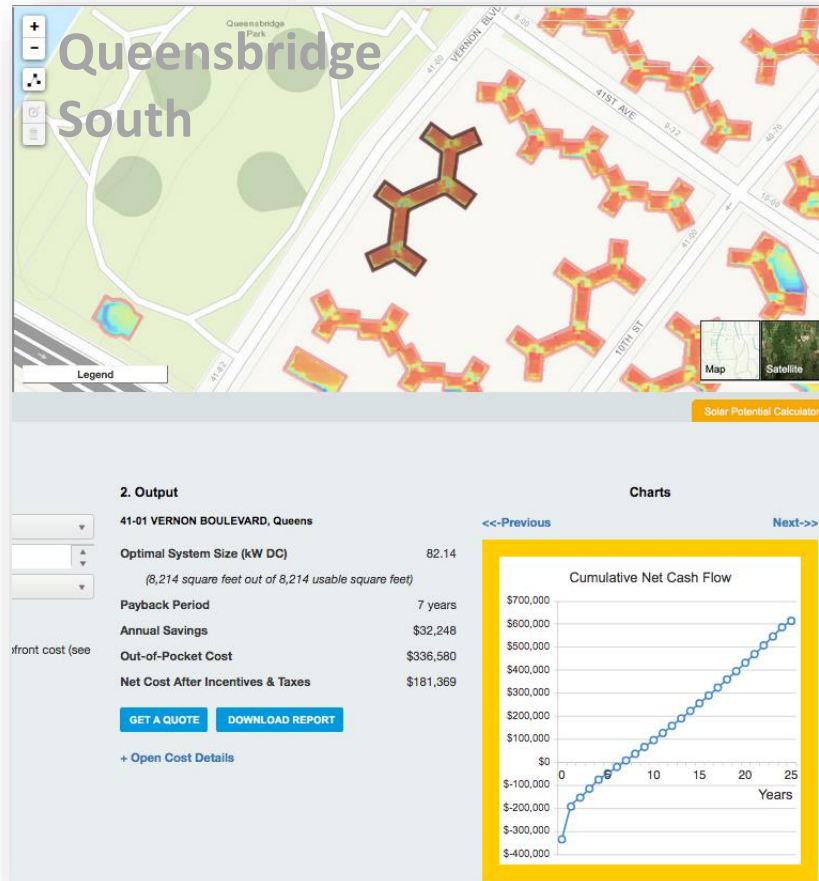


- Contribute to NYCHA's 25 MW goal by making smaller roofs available
- Expand solar business opportunities for small local businesses and MWBEs
- Provide job training and green job opportunities for NYCHA residents
- Offer renewable power to low- and moderate-income subscribers in NYC



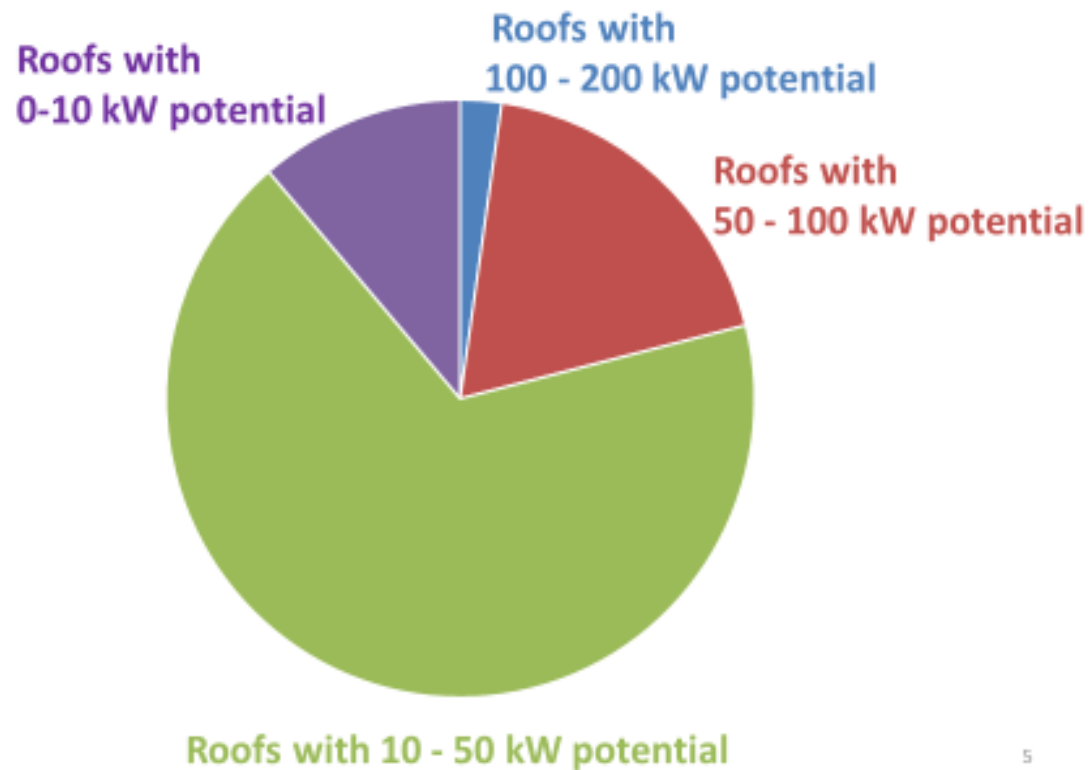
Sustainable CUNY Solar Analysis

NYC LiDAR



Sustainable CUNY Solar Analysis

Solar Potential of NYCHA's 2,500 Roofs



NYCHA's 25 MW Solar Program

Key Elements



- NYCHA will not own, maintain or manage any solar installations
 - It serves only as a site host, monetizing a valuable asset (its roof space)
 - Sets conditions for achieving public purpose goals
- NYCHA will not buy the electricity from the solar installations
 - NYCHA buys its electricity from the New York Power Authority (NYPA)
 - NYPA rate of 4 to 5 cents per kWh is cheaper than solar
 - NYPA tariffs prohibit power purchases from other sources
- 95% of NYCHA buildings are master metered
 - Unlikely that solar power will be used by tenants in buildings that host systems
 - Only 10,500 NYCHA households are billed directly by Con Edison

ACCESSolar Implementation Timeline



Questions to Consider



- Can the community shared solar strategies we've described be replicated in New Jersey, and specifically in your community?
- Can public housing authorities in Newark, Trenton, Camden and other urban centers adopt programs similar to NYCHA's ACCESSolar?
- What needs to be done on the state and local level in New Jersey – and by its utilities – to help bring solar to underserved communities?

**Sustainable CUNY
thanks you!**

nysolar@cuny.edu

**Ron Reisman, Solar
Ombudsman
ronald.reisman@cuny.edu
(646) 664-2805**



Upcoming Webinars

[Moving Up to Silver Certification](#)

January 30, 2019 - 1:00 pm to 2:00 pm

[Making a Game Plan for Getting Certified](#)

February 20, 2019 - 1:00 pm to 2:00 pm

[Stay In the Game! Strategize Your Recertification](#)

February 13, 2019 - 1:00 pm to 2:00 pm
February 13, 2019 - 7:00 pm to 8:00 pm

[Foundations for Using Technology Effectively in Your Town](#)

February 27, 2019 - 1:00 pm to 2:00 pm

[Green Team 2.0: Building Your Capacity & Promoting Your Team](#)

March 6, 2019 - 1:00 pm to 2:00 pm
March 6, 2019 - 7:00 pm to 8:00 pm

Grants Available

PSEG Municipal Grants

- Four (4) \$20,000 grants
- Eight (8) \$10,000 grants
- Twenty (20) \$2,000 grants

Application Deadline:

Friday, February 15, 2019

PSEG School Grants

- Four (4) \$10,000 grants
- Thirty (30) \$2,000 grants

Application Deadline:

Friday, March 15, 2019





FOR MORE INFORMATION

Visit: NJCleanEnergy.com

Contact: communitysolar@njcleanenergy.com

Stay Informed: Sign up for community solar updates by emailing
webmaster@njcleanenergy.com

@NJCleanEnergy



Appendix

VDER Value Stack

