

Project Name:

COMMUNITY SOLAR AT QUEENSBRIDGE HOUSES

Largest Community Solar on public housing in the United States expands benefits to LMI households

Size:

1.8 MW_{AC}

Location:

40 10th Street, Queens, NY 11101

of LMI customers:

125

Project Website:

<https://www1.nyc.gov/site/nycha/about/press/pr-2021/pr-20210422.page>

BEST PRACTICES

- State technical assistance grants
- Community solar on multi-family housing
- Corporate, social bond



Overview

The [New York City Housing Authority](#) (NYCHA) implemented the largest public housing community solar project in the United States at the Queensbridge North and Queensbridge South developments located in Queens, New York. Forty percent of the roughly 7,000 NYCHA residents at Queensbridge live below the federal poverty line and 96% are non-white. The Queensbridge Houses are located one mile from Ravenswood Generating Station, historically exposing residents to toxic emissions. This community solar project was implemented via NYCHA's Commercial Solar Request for Proposals (RFP), which focused on solar leases at large buildings.

In 2021, NYCHA granted 1.8 MW of solar power to be developed on the rooftops of 27 buildings across the two Queensbridge developments. Total project cost was \$7 million. The program focuses on earning revenue from rooftop leases, providing green jobs for residents, and expanding the availability of low-cost renewable power to low-to-moderate income (LMI) New Yorkers, including NYCHA residents that pay their own electricity. Enrollment of LMI households is 25%, which exceeded the goal of 20%. The program is available to NYCHA residents who pay their own utility bills as well as LMI households in privately-managed housing across New York City. Those living in master metered housing, such as the residents of Queensbridge Houses, cannot enroll. The project was energized incrementally over a year with individual rooftops

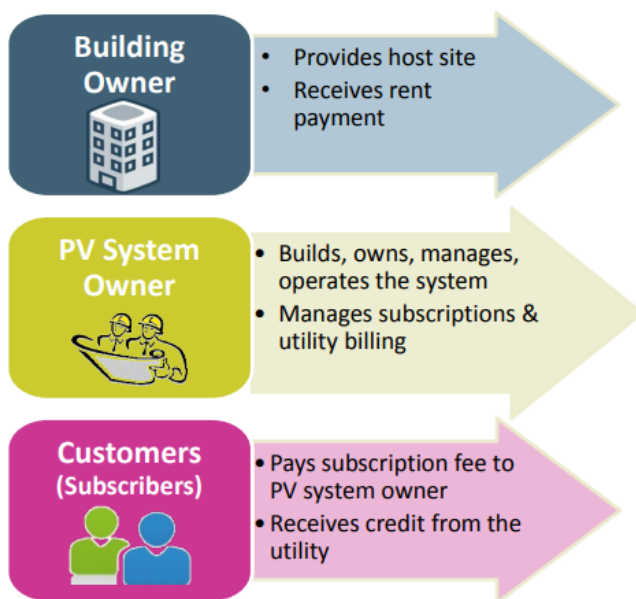


going online throughout 2021. The project supports the State's climate and clean energy agenda to deploy 6 GW of solar energy by the end of 2025.

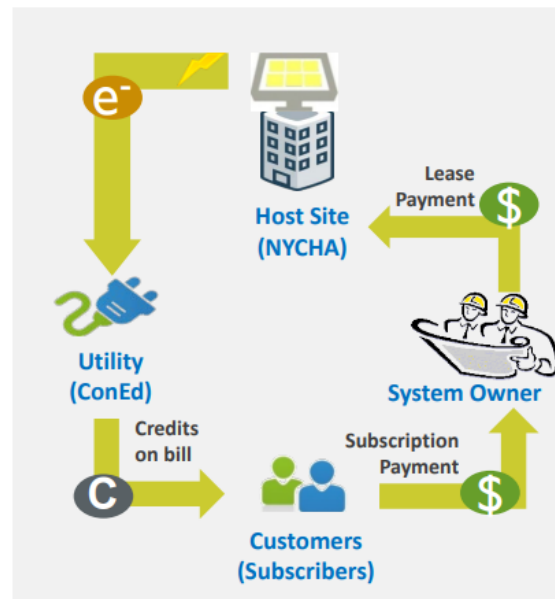
Con Edison, the utility participating in the program, provides bill credits to subscribers based on energy production. Subscribers receive 10% of the credit, and 90% is allocated to the program for maintenance and operations. It's free to participate and savings are guaranteed, but savings vary monthly with the amount of energy the solar panels produce. To be eligible for the program, the subscriber must be a Con Edison customer, be up to date on their Con Edison bill, not be master metered, and have a checking account or method of electronic/online payment. The figure below provides a simple model of how the program operates:

Community Shared Solar

How does it work?



Community Shared Solar in Action



Initial enrollment was done by subscriber management organizations Arcadia and Solstice. Despite the challenges presented by COVID, Solstice conducted in-person outreach focusing on privately managed affordable housing. Although this project is fully subscribed, an interested party can get on a waitlist for community solar via [Arcadia's](#), or [Solstice's](#) websites.

In April 2019, the state Public Service Commission authorized a community solar credit, which provides compensation for energy generated from community solar projects in Con Edison's territory, which includes New York City and Westchester. The program covers 350 MW of community solar projects in total, amounting to about \$68 million annually, according to the state Department of Public Service. The projects collect the credit for 25 years. The Queensbridge project receives approximately \$350,000 annually from this program.

NYCHA initiated this community solar project with a standard RFP procurement process. NYCHA agreed to lease the roof space (20 years with an optional 5 year extension) on Queensbridge Houses to [Sunwealth](#), who owns and maintains the solar panels with the support of the other partners. In turn, Sunwealth pays NYCHA to lease the roof space, and the revenue goes toward operations at the host development. Additionally, the solar project was required to hire and train NYCHA residents for the construction of the systems as per the terms of the lease.

Photo Credit: NYCHA



Many partners were involved in the project:

- A solar developer team led by [Bright Power](#) (engineering and design), [Sol Purpose](#) (developer), and Sunwealth Power (financier and project owner) worked with NYCHA to design, install, and maintain the solar installation. [Venture Solar](#) was contracted by Sunwealth to carry out the installation.
- [Green City Force](#), an AmeriCorps program that prepares young adults who reside in NYCHA properties for careers through green service, provided community engagement and workforce training.
- [Solar One](#), a green energy education center in New York City, worked with Green City Force to develop a training curriculum.
- Arcadia and Solstice provide customer outreach and subscriber management tools.
- [The New York State Energy Research and Development Authority](#) (NYSERDA) provided a \$100,000 grant towards technical assistance and support. This grant was provided through the [Affordable Solar and Storage Predevelopment and Technical Assistance Program](#). The program supports affordable housing providers who experience early-stage development challenges on projects targeting low and moderate income households. The grant funded technical assistance from [Sustainable CUNY](#) and [ICF](#) on topics such as proposal evaluation, installation best practices, subscriber outreach, and stakeholder engagement.
- Sustainable CUNY assisted by developing the [New York Solar Map and Portal](#), which evaluates the solar potential of NYCHA's rooftops.

Innovative Approaches

- **Bundling solar projects into a single investment vehicle.** Sunwealth uses innovative financing on their projects, and has funded around \$100 million in community solar projects. They bundle solar projects together into a single investment vehicle (Solar Impact Fund), which allows investors to finance specific, clean energy projects ranging in size. Sunwealth is an [Environmental Finance Bond Awards 2022 winner](#). Total cost of the project was \$7 million.
- **Workforce development.** For NYCHA residents who do not pay their own electric bills (and thus could not receive the reduced energy cost benefit), the project team found another way to drive value for residents: workforce development. A cohort of NYCHA residents received in-person solar installation training and OSHA 30 certification. Thirteen residents, a majority of which live at Queensbridge's public housing, were brought on as full-time employees with benefits over the year-long installation. At the end of construction of the Queensbridge solar projects, Venture Solar extended contracts to five of these residents.

Lessons Learned

- Partnerships with social benefit organizations multiplied the benefits of the project beyond utility bill credits.
- Utility bill savings expectations need to be realistic. Con Edison initially experienced difficulties in applying the bill credits correctly, leading to unmet expectations of subscribers.
- For NYCHA, financing for projects should be settled at contract signing.
- Standardizing and streamlining the leasing negotiation process would benefit NYCHA in future projects.
- During the development process, flexibility is needed to swap out rooftop sites as needed.



LIFT
by Groundswell

This case study is a part of the LIFT Toolkit initiative. To explore more case studies and best practices visit LIFT.Groundswell.org
research@groundswell.org