

📽 How Solar Works



Kilowatts vs Kilowatt-Hours

Kilowatt (kW) - A solar energy system's capacity is the amount of power that the system could produce in an instant under ideal conditions. System Capacity is measured in Watts, or *kilowatts*, like lightbulbs.

Kilowatt Hours (kWh) - Over time, solar arrays produce a flow of energy, measured in *kilowatt hours*. One kilowatt hour of solar energy offsets the need to purchase one kilowatt hour from the utility.

🎬 Three Types of Solar Installations

Ballasted Array



- Low profile
- Limited roof penetrations
- Cheaper and easier for low-rise buildings <100 ft

Mechanically Attached Planar Array



- More solar production
- No inter-row spacing
- Best for space-constrained roofs

Raised Canopy Array



- Raised at least 9' above roof
- Can cover entire roof area
- Most expensive, but has cobenefits

Solar Operations and Maintenance

- Almost no maintenance for solar arrays and inverters
- Online monitoring allows remote diagnosis of performance issues
- Solar company should do walkthrough with building staff
- 25-year panel warranty
- ▶ 5 to 10-year workmanship warranties
- Solar company can work with roofer to maintain existing roof warranty



5 Solar Financials

\$/Watt increases when...

- Smaller system
- Mechanically integrated system
- Taller buildings (>7 stories)
- Prevailing Wage
- Creative system designs like canopy

\$/Watt decreases when...

- Larger system
- Ballasted installation
- Competitive and bulk procurement
- Solar-Ready design

Solar Incentives

Sample System Costs							
System Size	Mounting Method	\$/Watt	Turnkey Price	Annual Savings			
8 kW	Planar	\$5.00	\$40,000	\$2,000			
30 kW	Ballasted	\$3.50	\$105,000	\$8,000			
40 kW	Canopy	\$4.50	\$116,000	\$11,000			

Building Type	NYSERDA	Federal Tax Credit*	State Tax Credit	Accelerated Depreciation	NYC Property Tax Abatement		
	NY-SUN Incentive (paid directly to installer)	(30% of system cost)	(25% of system cost)	(Federal and State Bonus Depreciation)	(20% of system cost)		
OWNER-OCUPIED COOP/CONDO	\$1.20/Watt (\$1.60/Watt for affordable housing)	Likely distributed to shareholders	Must be distributed to shareholders	Only available to businesses	Only eligible if taxes are owed, not compatible with some other abatements		
FOR-PROFIT RENTAL	\$1.20/Watt (\$1.60/Watt for affordable housing)	Commercial Tax Credit can be taken	N/A (homeowners only)	Available, pending owners' income tax liability	Only eligible if taxes are owed, not compatible with some other abatements		
NON-PROFIT RENTAL	\$1.20/Watt (\$1.60/Watt for affordable housing)	Tax Credit can only be monetized if project has LIHTC investor	N/A (homeowners only)	No tax liability	No tax liability		
*Federal Investment Tax Credit is 30% + adders for certain buildings in low-income census tract or projects benefitting low-income tenants. See Inflation Reduction Act IRS guidance.							

Questions?

In partnership with HPD, Solar One provides free technical assistance to all affordable housing considering solar.

- Resources available on HPD's Solar Where Feasible webpage
 - Solar Feasibility Analysis Tool
 - HPD Technical Requirements
 - o PV System Owner's Guide
 - o Instructional Webinar Recordings
- Email affordable@solar1.org with any questions or to request technical assistance





REDUCE YOUR OPERATING COSTS WITH SOLAR POWER

Multifamily affordable housing providers and Housing Development Fund Corporation (HDFC) co-ops can now access low-cost rooftop solar power. Solar One, through its Here Comes Solar program, provides FREE comprehensive technical assistance for affordable housing properties in New York City that are considering solar.



SOLAR ASSESSMENT Is solar an attractive option for your building(s)? We will find out for you by completing remote and onsite technical assessment. During an onsite technical assessment we will visit your property to do an assessment on the rooftop to understand the solar potential of your building(s).



BUILDING DECISION-MAKER EDUCATION Here Come Solar (HCS) staff provides free consultation, empowering building decision-makers and project champions with information regarding solar technology, costs, incentives and savings potential.



FINANCING OPTIONS CONSULTATION HCS staff will prepare a detailed estimate that outlines the costs, incentives and financing options available for solar on your building(s). HCS staff will meet with you to explain the financing options that can make solar affordable, even for organizations or co-ops with limited reserves.



CONTRACTOR ENGAGEMENT After you decide to move forward with a solar project, HCS staff will work with you to prepare a request for proposals and solicit competitive bids from qualified local solar installation companies.



ENJOY CLEAN, AFFORDABLE POWER After your system is installed, it will produce clean, affordable energy for 25 years, reducing your long-term operating costs.

Get started today by completing the survey at: www.herecomessolar.nyc



Solar One, a leading environmental nonprofit organization in New York City, was founded in 2004 and runs diverse pro-gramming including K-12 environmental education, green workforce training and technical assistance programs that help building owners adopt clean energy solutions. Here Comes Solar provides comprehensive technical assistance to community organizations, building owners, and renters to make solar cost-effective and accessible to all. We focus on low-income communities and communities of color who face disproportionate challenges to accessing the economic benefits of solar. Since 2014 Here Comes Solar has helped more than 500 NYC buildings adopt solar.