



### The Story

In December of 2017, a super and board member of Joseph Cardona Memorial HDFC, a small cooperative in the East Village, attended a workshop put on by Cooper Square Committee and Solar One about solar for limited-equity co-ops. The coop had been interested in solar for many years and had reached out to solar installers years ago, but they refused to work with a small flat-roofed building in Manhattan. With the improved technology and pricing of recent years, it was much simpler to turn the dream into reality. Through the Here Comes Solar program, Solar One provided the co-op with free comprehensive technical assistance including an onsite roof assessment, estimates of costs and savings for different solar designs, and assistance soliciting bids from qualified local solar installation companies.

In February of 2018 the board voted to move forward with a solar installation, and Solar One issued a Request for Proposals for a small mechanically integrated solar array to cover the building's common area electricity. The co-op received three proposals from qualified solar installers and selected Brooklyn Solar Works as their installation contractor. Throughout the spring of 2018, Brooklyn Solar Works designed, engineered, and secured all the necessary approvals and permits for the system, and the installation was completed in June 2018.

### Project Snapshot

**Client:** Joseph Cardona Memorial HDFC  
**Building Type:** Limited-income cooperative  
**Location:** East Village, NY  
**Financing:** Direct purchase  
**Solar Installer:** Brooklyn Solar Works

**System Size:** 6.8 kilowatts-DC  
**Modules:** LG 360 Watt-DC  
**Inverter:** SMA

**Lifetime Solar Production:** 180,881 kWh  
**Lifetime CO2 Reduction:** 220,675 tons

*"When I was trying to do this 8 years ago, no one was onboard, including the installers, because they were all doing residential in NJ but I couldn't get them to come into the city. So thank God, getting involved with Solar One expedited everything. That's really key because they're the ones handing the solar installers and getting the free estimate, and all we had to do is look at the materials and make a decision."*

- Dennis, Super and 20 Year Resident

Simultaneously, the building completed a resurfacing of their roof through the Habitat for Humanity roof preservation program, which extended the roof warranty of their 10-year-old roof by an additional 20 years. The roofing contractor and the solar installer coordinate the installation so that the base of the solar racking was installed first, connecting to the underlying roof structure, then the roof was resurfaced, then the rest of the solar installation was completed, so that the integrity of the roof was maintained.

## Details

This project has several unique characteristics:

### *Model for other buidings...*

The combination of roof preservation and solar installation is a model for other buildings with mid-cycle roofs.

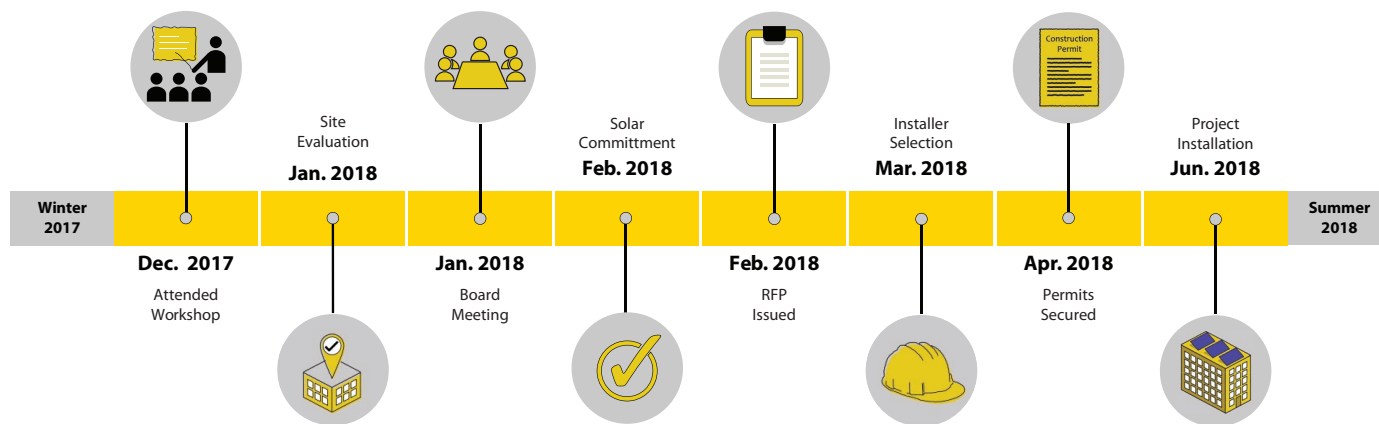
### *Designed for the future...*

Having experienced flooding during Superstorm Sandy, the co-op valued the ability to maintain power in the event of a blackout. While batteries are not currently possible for this building, the installation was designed with a future battery storage system in mind, so that a battery could be connected if and when it became feasible.

### *Affordable Housing incentive...*

It is also one of the first buildings to receive the Affordable Housing incentive from New York State Energy Research and Development Authority, first implemented in June 2018.

## Timeline



## Economics

Project Cost	\$33,372
Incentives	\$26,649
Net Cost	\$6,723
Annual Savings	\$1,856
Payback Period	4 years
Lifetime Savings	\$55,256

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