



**NY-Sun**

# **LMI Solar Stakeholder Webinar**

**Affordable Solar Predevelopment  
and Technical Assistance Program**



12/18/2017

# Agenda

- Program Overview
- In-Depth Project Presentations
- Brief Project Presentations
- Q&A

# Program Overview

- Provides funding to support the development of solar projects serving LMI households through multifamily affordable housing and community solar installations
- \$4.4 million allocated at program launch December 2016
- Applications accepted from affordable housing providers, community organizations and local agencies, municipalities, technical service providers and solar project developers
- 22 applications formally reviewed or under review - 7 approved
- Roughly equal quantity of standalone community solar vs. multifamily affordable housing-focused proposals

# Current Projects Funded

- \$132,995 **Solar One and JOE NYC**
- \$200,000 **Riseboro Community Partners**
- \$83,000 **BlueSea Development Company**
- \$81,600 **Binghamton Regional Sustainability Coalition**
- \$103,484 **ICF and Saratoga Springs Affordable Housing Solar Initiative**
- \$190,000 **Akwesasne Housing Authority**
- \$130,700 **Sustainable CUNY and NYCHA Commercial Solar Initiative**

Total Funding Approved: \$921,779

# Solar One - Joint Ownership Entity of NYC

Anika Wistar-Jones  
Noah Ginsburg  
Allison Van Hee

A series of five yellow circles of varying sizes are arranged in a descending line on the left side of the slide.

## **JOE SOLAR:** RAPID SOLAR ADOPTION ON URBAN HOUSING PORTFOLIOS



## SOLAR ONE

**Solar One is an environmental education non-profit that was established in 2004 with the belief that all New Yorkers can help overcome our environmental challenges. Our programs, include:**

- K-12 environment education (Green Design Lab)
- Green Workforce Training Program
- Here Comes Solar**
- Outreach for the Retrofit Accelerator
- Stuyvesant Cove Park

We believe solar power should be accessible  
to all New Yorkers.



Solar One launched Here Comes Solar to  
make that a reality.





## THE JOINT OWNERSHIP ENTITY OF NYC

JOE NYC is a non-profit initiative that assembles ownership of affordable housing projects owned by local Community Development Corporations (CDCs) into one entity of substantially greater scale.

By consolidating ownership, JOE is able to improve management and financial outcomes and save money for the participating CDCs and their low-income residents.

# JOE NYC

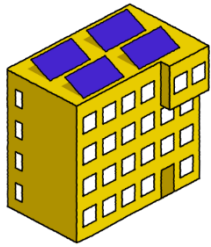
JOINT OWNERSHIP ENTITY

## MEMBERS INCLUDE

- 220 buildings
- 3,500 units
- 1.8 MW of solar potential



# THE JOE SOLAR GOALS



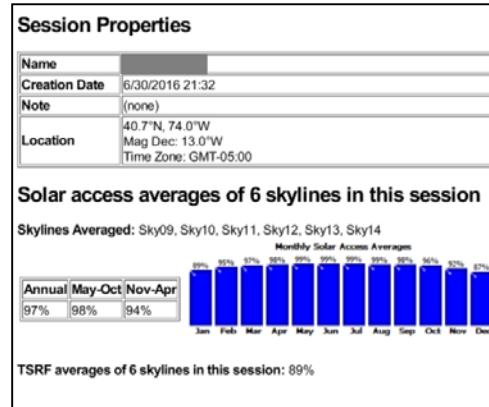
JOE Solar is a two-pronged project to:

- Install cost-effective solar project on a Target List of buildings (at least 400 kilowatts)
- Develop Solar Roadmap that will enable JOE to easily adopt solar for additional buildings in their >220 building portfolio, while empowering member CDCs to do the same.



# JOE SOLAR – CORE ACTIVITIES

- Analyze JOE portfolio for solar potential



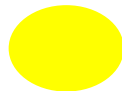
# JOE SOLAR – CORE ACTIVITIES

- Financing divided into 2 segments:
  - City-backed HPD
  - Third-party financing
- Install cost-effective solar for Target  
List of buildings

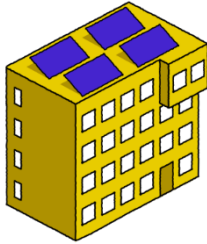


# JOE SOLAR – CORE ACTIVITIES

- Write Solar Roadmap for future solar adoption



# PROJECT IMPACT

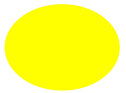


## Scope:

- 48 buildings in 3 boroughs
- A wide variety of building types
- Total of 850 kW of solar

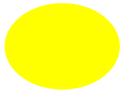
## Benefits:

- \$4.3 million in net savings over 25 years
- 10 JOE member organizations benefitted
- Over 860 units of LMI housing indirectly supported



# LONG-TERM IMPACT

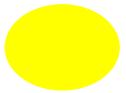
- The JOE Solar Roadmap will make it possible for hundreds more buildings to go solar by:
  - Making JOE solar-ready as an organization
  - Incorporating solar into planned retrofits of all buildings over the years
  - Demonstrating viable methods of solar adoption for other affordable housing providers





## SETBACKS AND SOLUTIONS

- ***Setback:*** Our non-profit installation partner closed down in October
- ***Solution:*** Expand the Request for Proposals to incentivizing installers to achieve low-costs
  
- ***Setback:*** Nearly all of JOE's buildings are ineligible for the original HPD financing method.
- ***Solution:*** Expand the Third-Party Financed segment and only use HPD financing through existing retrofit programs.



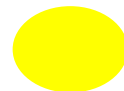
## ACHIEVEMENTS TO DATE

- ☑ Conducted solar viability assessments of the entire JOE portfolio, including shade analysis and estimated solar capacity
- ☑ Gathered roof information and Con Edison account numbers from all viable buildings
- ☑ Explored various financing strategies
- ☑ Compiled a Target List of buildings
  - Buildings with “solar-ready” roofs
  - Buildings with at least 10 kW solar potential



## NEXT STEPS – WINTER 2018

- Finish all site assessments for Target List
- Create and release RFP to select a solar installer
- Finalize financing strategy





**THANK YOU!**

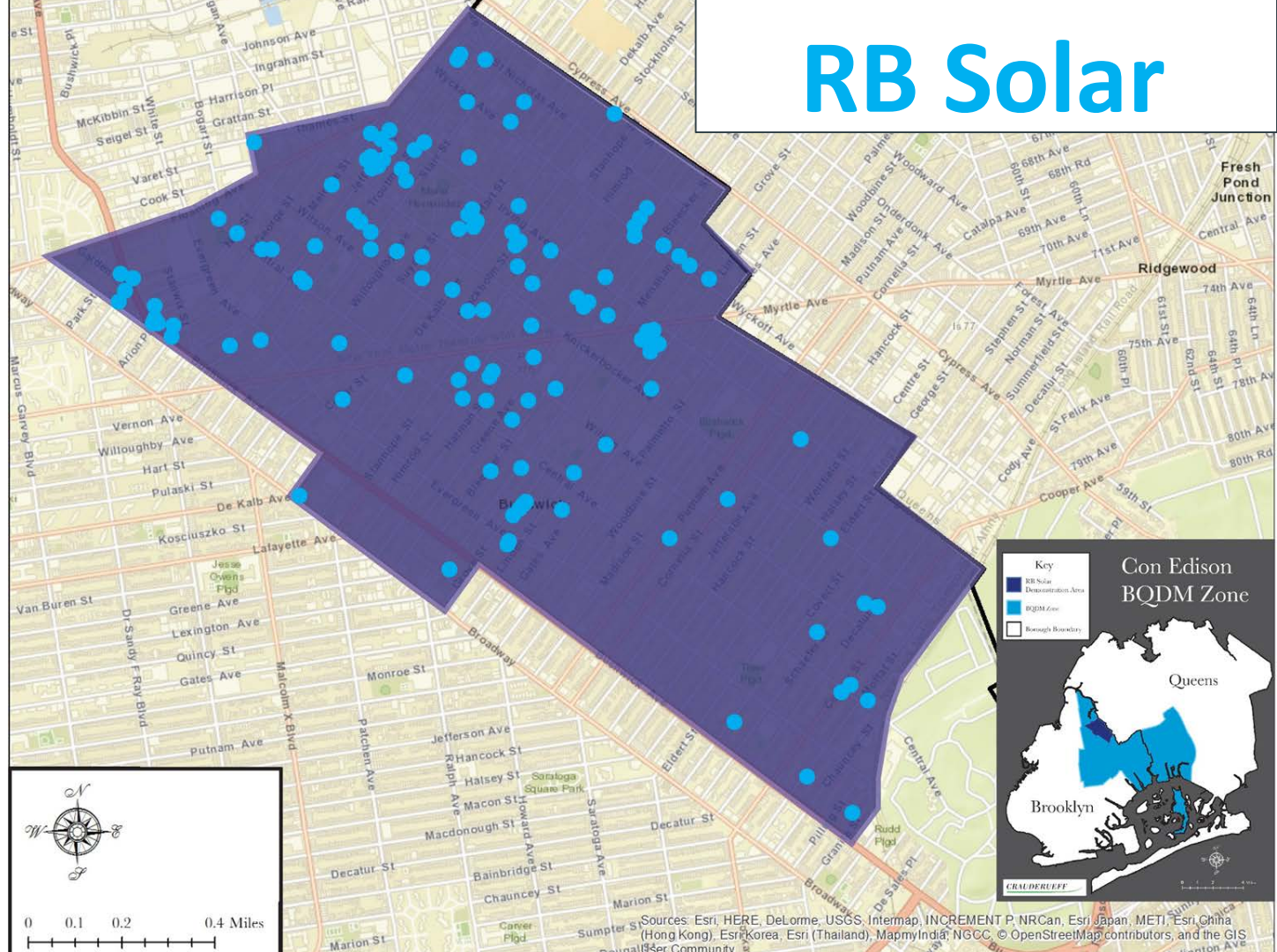
Anika Wistar-Jones, [anika@solar1.org](mailto:anika@solar1.org)

Allison Van Hee, [avanhee@joenyc.org](mailto:avanhee@joenyc.org)

# Riseboro Community Partners

Ryan Cassidy

# RB Solar



# BQDM Zone Map



# RB Solar Project Map

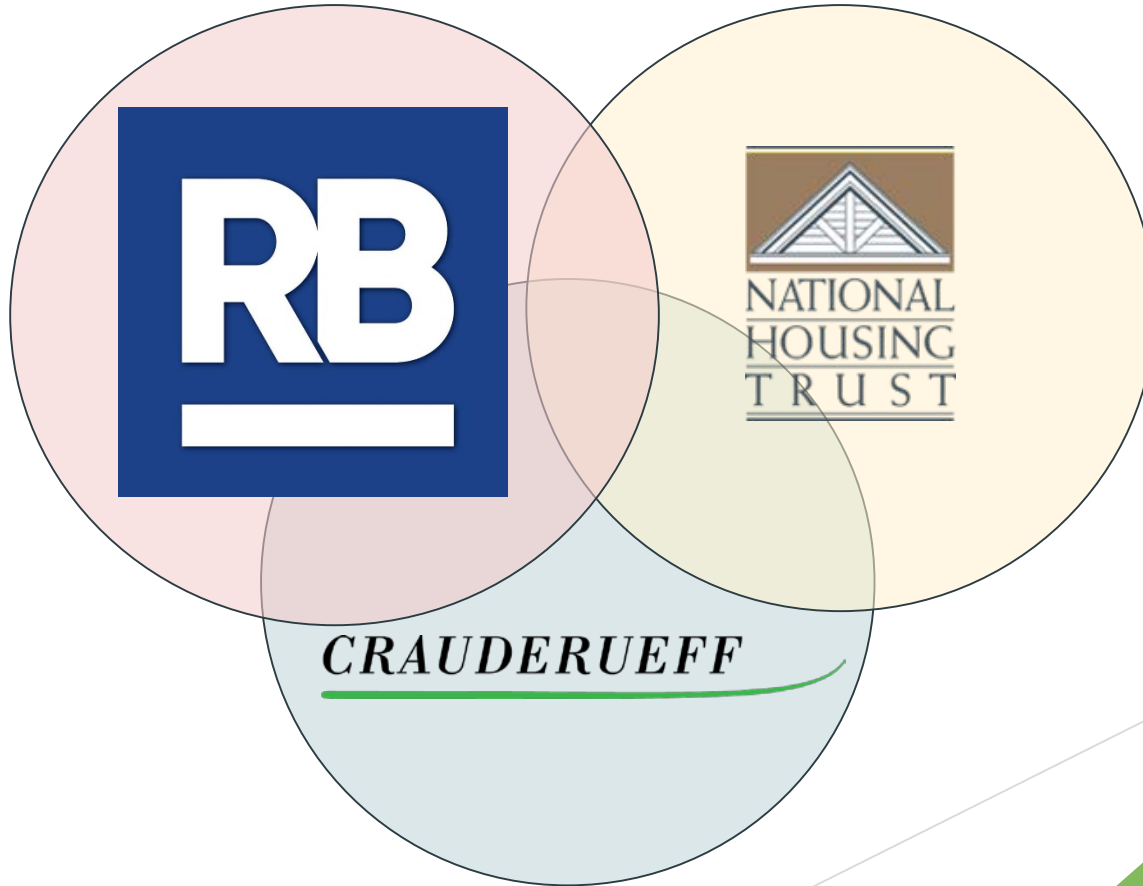




# Agenda

- Introduction and Team
- Business Plan
  - Scope of Work
  - Benefits
  - Schedule
  - Key Risks
- Additional Project Benefits
  - Sustainability
  - Scalability
  - Engagement and Impact
  - Access & Affordability
- Reference Slides

## Project Team



# RBSCC: A Con Edison Customer

## **RBSCC**

2015: 10,374,893 kWh

\$1,080,000 / year

\$600 / unit

2016: 9,622,464 kWh

\$944,348 / year

\$497 / unit

Over 2,200 metered accounts  
(residents and buildings)



Knickerbocker Commons, Brooklyn

# Crauderueff & Associates

- NYC-based
- Green systems technical assistance provider
- Innovative, replicable business models focusing on the LMI Sector



517-521 West 159th Street, New York

# National Housing Trust

- Affordable Housing Advocacy, Lending, & Development
- Owns & Operates 3,500 units across the U.S.
- 1.5 Megawatts of solar complete since 2015
- NHT Renewable Solar Financing Model

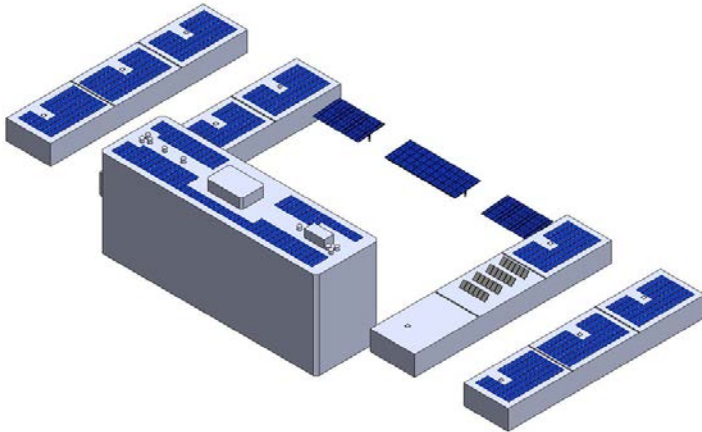


St. Dennis Apartments, Washington, D.C.



# National Housing Trust: Channel Square

- 500 kW of solar PV on an apartment complex
- Largest privately-owned system in D.C.
- \$1.3 million project

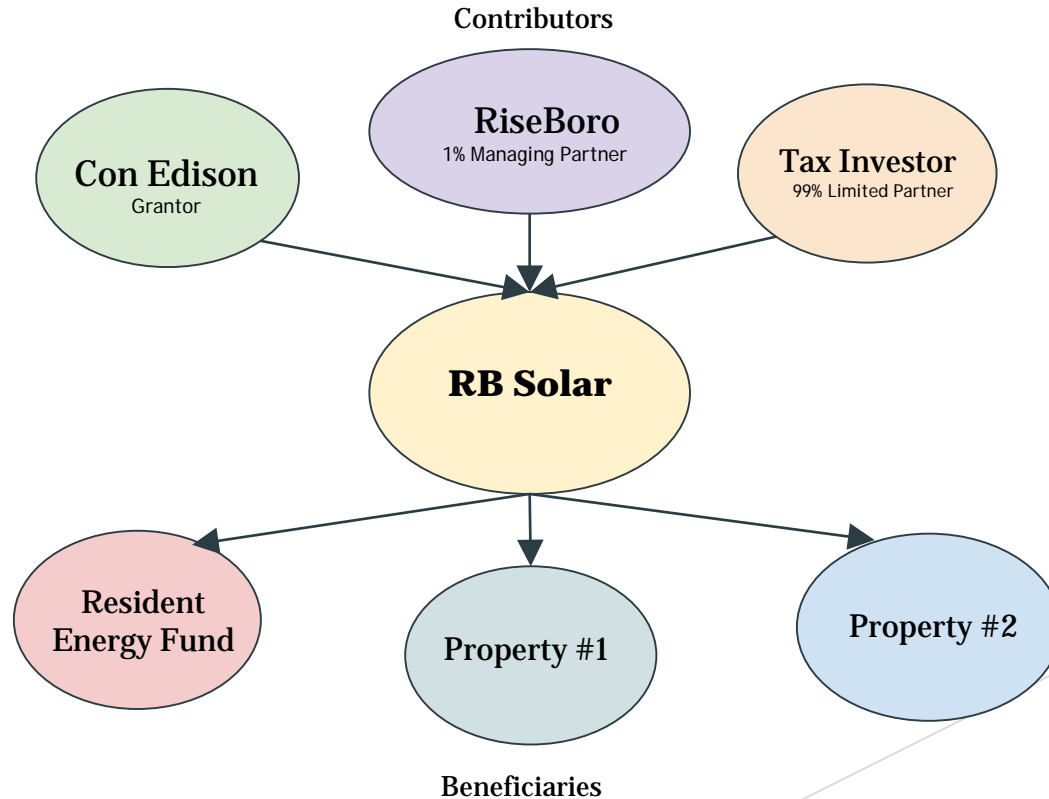


Channel Square Apartments, Washington, D.C.



Former HUD Secretary Julian Castro

# RB Solar Organizational Structure



# RB Solar Business Plan

- RB Solar to install 1.2 MW of solar PV on RBSCC properties
- Partner with a tax credit investor to utilize the Solar ITC
- Create new benefits for residents, properties, and RiseBoro





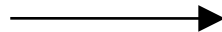
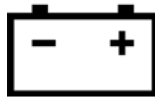
## Scope of Work



**94** Solar PV Projects  
**1.2 MW** total



**\$2.05 million** investment in the  
Resident Energy Fund



**1** Battery Storage Pilot Project  
(28 Potential Projects)

# Economic Benefits

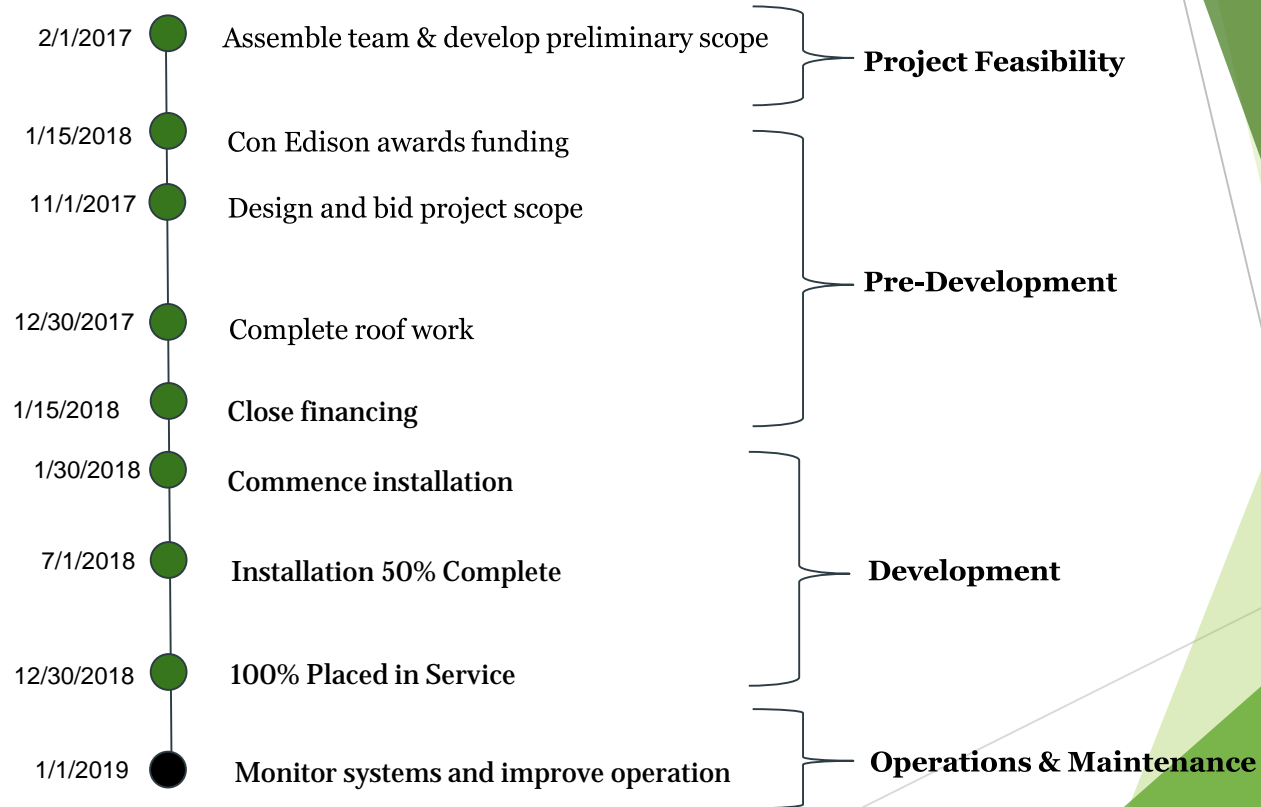
## Economic Benefits

Savings to Residents from Resident Investment Fund (3.5X Leverage on Spend)	\$	7,175,000
RBSCC Property Savings	\$	3,027,796
New York Sun State Rebate	\$	709,062
RBSCC Equity Contribution	\$	352,166
Tax Credit Equity	\$	2,227,517
<b>Total Benefits</b>	<b>\$</b>	<b>13,491,541</b>

**ConEd Grant Request** \$ 4,250,000

**ConEd Leverage On Investment** 3.2 to 1

# Project Schedule



# Key Risks

- Incentives:
  - NYSERDA predevelopment grant
  - NY Sun grant
- Solar PV Module pricing
- Permitting/DOB
- Property Investor/Lender Approvals
- Battery Storage Approvals



# Sustainability

- Solar PV -- Energy savings - 1,411,783 kwh of solar power annually
- GHG Emissions: 992 Metric Tons annually\*
- Residential upgrades and savings - \$7.18 million
- Peak load management in BQDM Zone

*\*Based on solar PV upgrades*



# Sustainability:

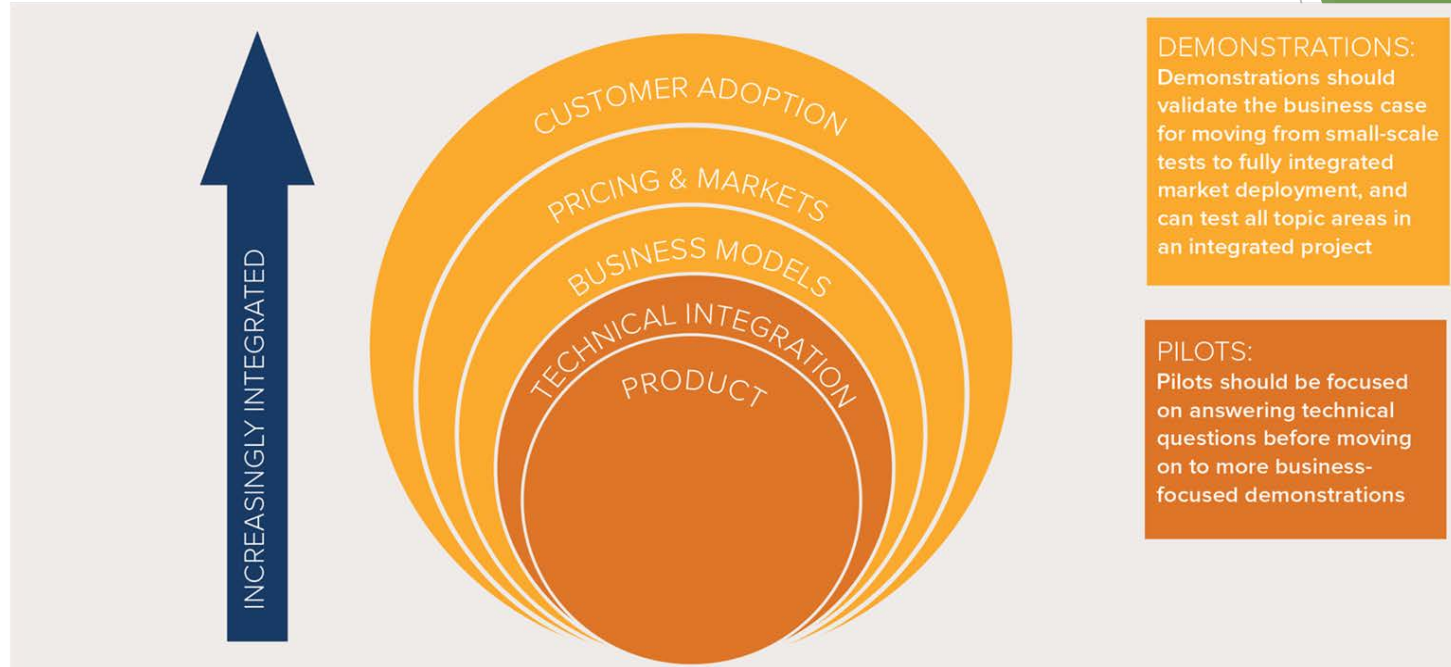
## Solar PV + Battery Storage Pilot

- Diana Jones Senior Center (9 Noll Street, Brooklyn)
- Designated Cooling Center
  - PV: 50 kW Capacity
  - Battery Storage: 30 kW or 50 kW system
- Connect to critical systems



Diana Jones Senior Center (9 Noll Street, Brooklyn)

# Scalability



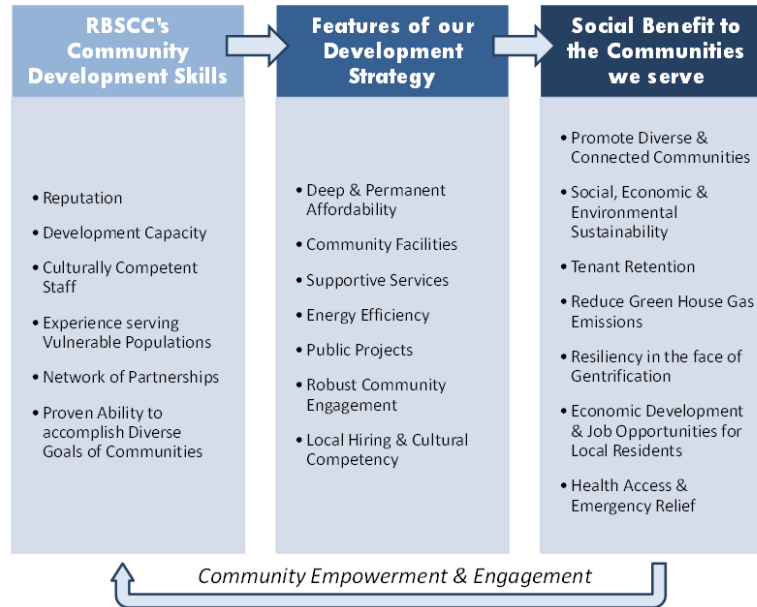




# Community Benefits

- Backup battery power/ resiliency
- Fixed cost of energy for budgeting
- Decreased resident expenditures on electricity
- Resident health and improved air quality

## HOW OUR APPROACH DELIVERS SOCIAL BENEFITS

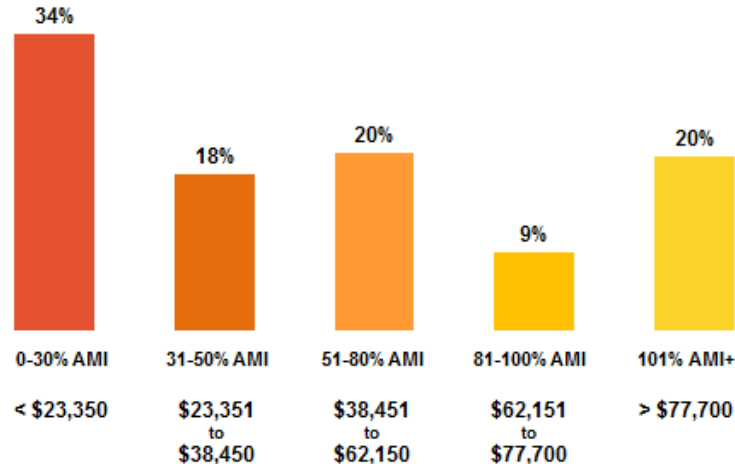


# Access and Affordability

- 98% of RiseBoro tenants are below 80% AMI
  - Tenants are recertified annually
- RB Solar shares benefits of renewable energy with over 4,000 residents

## BUSHWICK

### Household Income by AMI Band



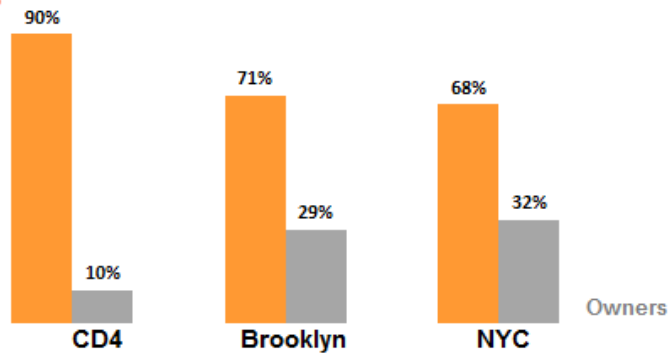
## Access and Affordability (cont.)

- Sharing the benefits of renewable energy with residents
- Aligned with community development model

### BUSHWICK

Renters and Owners: Community District 4\*

#### Renters



# Conclusion

- Scalable financing opportunity
- Direct community impact
- Long-term solution for Con Edison - LMI + BQDM



143 Himrod Street, Brooklyn

# Reference Slides

## RB Solar: Large Properties ( > 10 kW)



## RB Solar: Small Properties ( < 10 kW)



# Binghamton Regional Sustainability Coalition – Southern Tier Solar Works

Adam Flint



**Project Team:** Southern Tier Solar Works (STSW), BRSC, Binghamton, NY

**Project Location:** Initial site not economically viable due to VDER undervaluing and inadequate incentives for sub-mw scale upstate. 2mw Sites in NYSEG Load Zone C and E are being considered. Currently vetting approximately 20 sites in Broome, Tioga, and Chenango counties.

**Project Beneficiaries:** A minimum of 50% of the project will be allocated for LMI participants (150 households). We will partner with local advocacy and service agencies such as the Office for Aging, Citizen Action, a group of local churches, and others. Also possibility of inserting community solar into the existing charity pathways. With community shared solar, energy can be treated as a basic need such as food, clothing, or shelter which can be potentially be donated to beneficiaries.

**Key project activities:**

- Site acquisition
- Interconnection application
- Initial site and system engineering
- CESIR study
- Secure financing via Energy Democracy Fund investors
- Develop beneficiary effort in conjunction with REVitalize program.



# ICF – Saratoga Springs Affordable Housing Initiative

**Ben Foster**



NEW YORK  
STATE OF  
OPPORTUNITY.

**NYSERDA**

Supported

## **2018 Saratoga Springs Affordable Housing Solar Power Purchasing Initiative**

***Project Overview - December 2017***



# Saratoga Springs Affordable Housing Solar Power Purchasing Initiative - Overview

## Project Deployment Goals

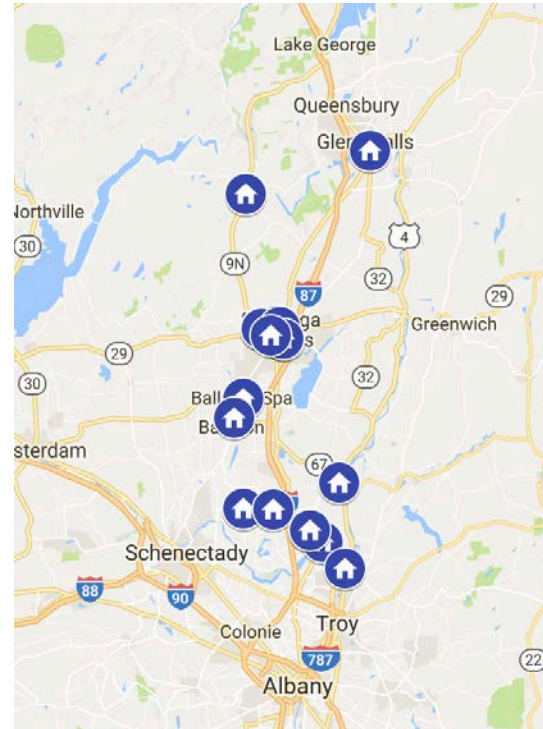
1.2 MW+ of solar PV contracted in 2018 from on-site, remote net metered, and/or off-site projects

## Project Team

City of Saratoga Springs  
Housing Authority  
Affordable Housing Task Force  
Climate Smart Task Force  
ICF (Technical Assistance Provider)  
Ben Foster, Project Leader

## Eligible Affordable Housing Multi-Family Developments (23 properties in total)

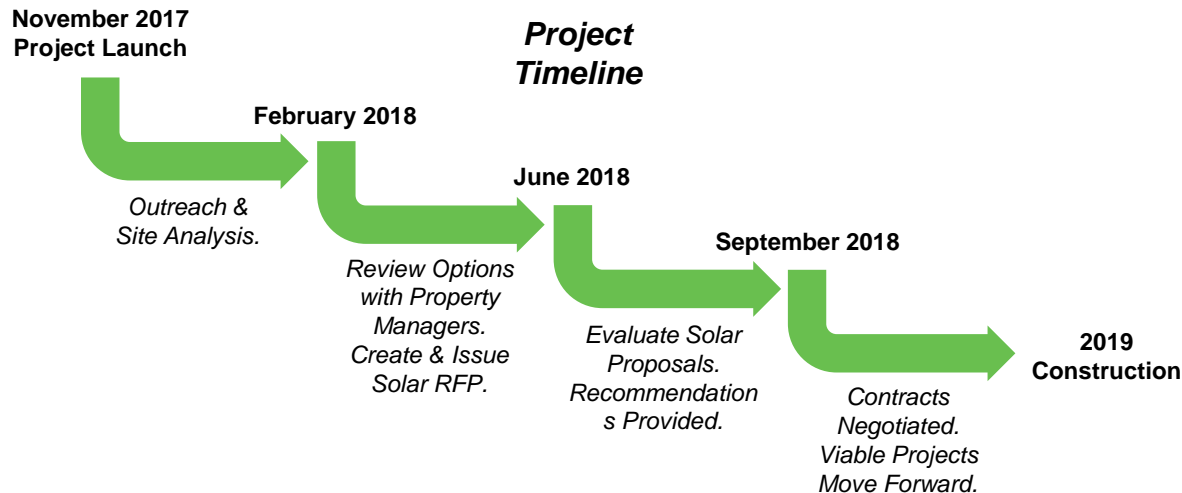
- Private, non-profit, and public properties
- 12 in Saratoga Springs
- 11 in Saratoga County



# Saratoga Springs Affordable Housing Solar Power Purchasing Initiative - Project Goals and Approach

## Project Approach and Outcomes:

- **Educate affordable housing managers** about solar power opportunities in the Saratoga Springs area
  - **Analyze opportunities to save money** for building common areas and tenants from solar power
  - Engage with **regional financing partners** that can provide solutions to developers and buyers
  - Evaluate **regional community solar power** providers for off-site opportunities
  - Request for proposals from solar developers that can **deploy viable on-site projects**
- *Accelerate achievement of Saratoga Springs environmental goals*
- *Create savings opportunities to drive down utility costs for properties and residents*
- *Document solar development processes for other small & mid-sized NYS communities*



# Akwesasne Housing Authority

Retha Leno

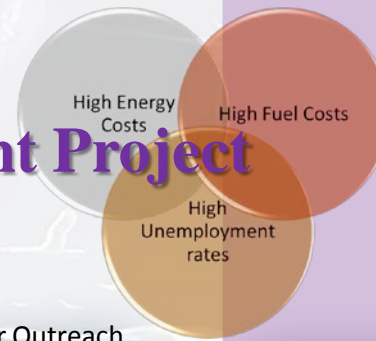


# Akwesasne Housing Authority Affordable Solar Pre-development Project

- Team:
  - Akwesasne Housing Authority
  - St. Regis Mohawk Tribe
  - Godfrey & Kahn, S.C.
  - Beardsley A & E, Inc.
- Project Location:
  - 8-10 acre parcel set aside by the St. Regis Mohawk Tribe's first PV Development
  - Area nearby the Akwesasne Mohawk Casino
- Background:
  - Secured funding from 2 DOE grants – capital/tax credit financing of PV generation farm
  - Secured funding from HUD ICDBG program – capital
  - NAHASDA IHBG match funding
- Beneficiaries:
  - Sunrise Acres Complex
  - Akwesasne Boys & Girls Club
  - 165 LMI Tribal Families



# AHA - NYSERDA Affordable Solar Pre-development Project Goals



- Establish Project Management Plan
- Operating Procedures
  - Capital Plan – tax equity investors, NYSERDA, federal grants
  - Operational and financial roles of AHA and LMI participants
  - Large tribal/community input & participation
- Project Economics
  - Analysis and Planning using NYSERDA Value of DER Calculator
  - Estimating PV production, costs, value of incentives/credits, etc.
- Business Plan
  - Site Lease, PPA, Design/build or EPC services agreement
  - Legal structure and agreements between the project investor, AHA, and LLC
  - LMI household shared solar
- Shared Solar
  - LMI Customer Outreach
  - Develop agreements for shared solar subscriptions
  - Participant Agreements – family participation
- Remote Net Metering
  - Net Zero Buildings
  - Sunrise Acres III – Supportive Housing
  - Akwesasne Boys & Girls Club
- Partnered Efforts
  - DOE Grant will allow installation of valuable EEMs.





# Sustainable CUNY – New York City Housing Authority

Ron Reisman

# NextGeneration NYCHA Sustainability Agenda

## Goals of NYCHA Commercial Solar Program

- Contribute to meeting NYCHA's commitment of **25 MW** of solar PV capacity installed by 2025
- Generate **revenue** for NYCHA through lease payments
- Provide job training and **green jobs** for NYCHA residents
- **Reduce energy costs** for NYCHA residents who pay their own utility bills



# Project Overview

## NYCHA to host solar PV systems

14 housing developments available for solar PV systems

- Grouped into 3 bundles
- To be developed as community/shared solar projects

NYCHA will lease roofs and parking lots (for solar canopies)

- 20-year Lease Agreements (plus five additional one-year renewals)
- NYCHA will not buy power from the solar PV systems – only a host

Solar developer will design, build, finance, own, and operate

- Provide job opportunities for NYCHA residents
- Recruit LMI residents to subscribe to community/shared solar

# Project timeline

## RFP process

**Oct. 6,  
2017**

**RFP Issued**

**Oct 2017**

**Proposers'  
Conference  
Site Visits**

**Jan. 8,  
2018**

**Proposal  
Submission  
Deadline**

**Jan-Feb  
2018**

**Proposal  
Evaluations  
Interviews**

**April  
2018**

**Anticipated  
Award**

**May-Dec  
2018**

**Design and  
Permitting**

**2019**

**Construction  
Operation**

# Questions and Feedback

- Submit questions about the project using the webinar chat feature
- For more details about the program and the application, visit [www.nyserda.ny.gov/ASPTA](http://www.nyserda.ny.gov/ASPTA)
- Send feedback or general questions about the program to [affordablesolar@nyserda.ny.gov](mailto:affordablesolar@nyserda.ny.gov)
- Feedback requested by January 23, 2018