

SOLAR BENEFITS FOR OWNERS AND TENANTS OF AFFORDABLE HOUSING

November 19, 2020

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NYSERDA Low-and-Moderate Income Solar Programs

Christopher Rogers, NY-Sun

November 18, 2020



Background

Background

- > The Public Service Commission's May 2020 NY-Sun Order approved the **Solar Energy Equity Framework** proposed by NYSERDA to fulfill the CLCPA mandate that disadvantaged communities receive a minimum **35%** of overall benefits associated with clean energy investments
- > Over **\$200 million** in NY-Sun funding will benefit low- to moderate-income (LMI) households, affordable housing, and disadvantaged and environmental justice communities
- > The Solar Energy Equity Framework includes a **two-part community solar strategy** that acknowledges differences in barriers faced by low income (<60% of State Median Income) households and moderate income (<80% of Area Median Income) households:
 - utility-managed program for low-income households
 - "adder" incentives for inclusive community solar projects serving LMI households, affordable housing and disadvantaged communities

Background

NY-Sun has implemented multiple programs serving LMI households and disadvantaged communities:

> **Predevelopment and technical assistance support:**

- Funding to address gaps and barriers to solar and energy storage projects benefitting LMI households, affordable housing and disadvantaged communities
- **\$2,746,342** committed to date

> **Solar for All:**

- No-cost community solar for low-income households
- **\$11,639,368** committed to date

> **Affordable housing adder and Affordable Solar residential adder:**

- Additional NY-Sun incentives for affordable housing properties and LMI homeowners
- **\$12,082,929** committed to date (total incentives to eligible projects)

Implementation

- Predevelopment
- Community Solar
- Multifamily Affordable Housing



NYSERDA

Predevelopment

What we've done:

- > **Affordable Solar and Storage Predevelopment and Technical Assistance:** provides funding to address resource gaps and solve market barriers preventing the development of solar and energy storage installations benefitting LMI households.
- > **REVitalize:** helps community-based organizations (CBOs) plan for, develop, and implement clean energy projects for the areas they serve.*

What we're doing:

- > Recently added energy storage as an approved technology
- > New quarterly submission schedule
- > New online application submission portal

What we're planning:

- > Expanding LMI outreach
- > Expanding REVitalize*

Community Solar

What we've done:

- > **Solar for All:** utility bill assistance program providing easy, no-cost access to solar for low-income households
 - To date: 2,217 customers are receiving credits

What we're planning:

- > **Pilot program with National Grid:** developing an opt-out program in which HEAP customers are automatically enrolled in Community Solar, resulting in major cost-savings for low-income customers (2021)
- > New targeted intervention and support to make the community solar market more broadly accessible to LMI households, affordable housing providers, and facilities serving disadvantaged communities
- > LMI Adder using geo-based verification (2021)

Community Solar Strategies

Low Income Community Solar Concept with National Grid:

- > Automatic enrollment in community solar for all National Grid low-income bill discount (EAP) customers
- > Program managed by National Grid, projects owned/managed by private developers, with NY-Sun funding to ensure reliable customer savings
- > **Estimated Impact: ~140,000** low-income households will receive electricity and guaranteed bill savings from over **500** MWdc of community solar

Adder for Inclusive Community Solar Projects:

- > NY-Sun adder for community solar projects that provide community solar to low-to-moderate income households and disadvantaged communities
- > Reduces barriers for program participation with “geo-eligibility” option
- > **Estimated Impact: 25,000–50,000** LMI households, affordable housing providers, and facilities serving disadvantaged communities will receive bill savings from **~250–500** MWdc of community solar

Multifamily Affordable Housing

What we've done:

- > **Multifamily Affordable Housing Adder:** additional incentive for solar installations available for nonresidential projects serving multifamily affordable housing properties.

What we're doing:

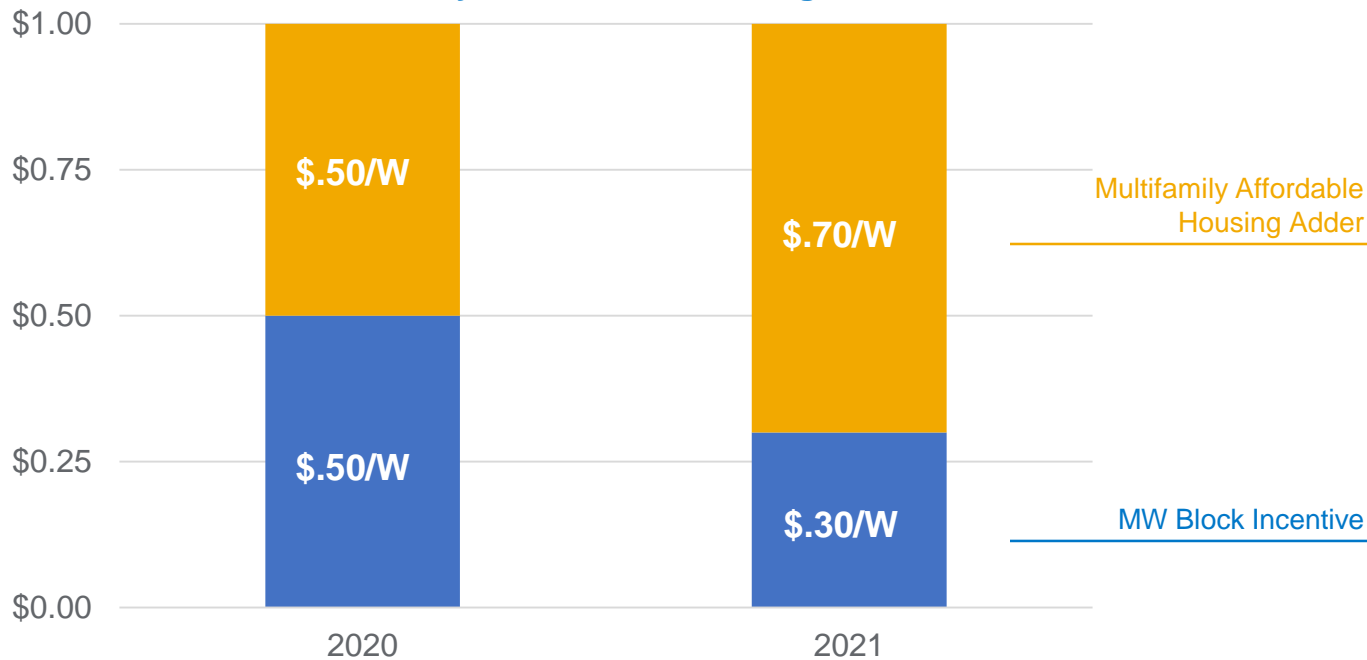
- > Recently increased the adder to a fixed \$1.00/W when combined with the standard Nonresidential MW Block incentive
- > Recently increased the adder capacity to 200 kW

What we're planning:

- > Additional incentives for community solar sited on affordable housing that serves LMI
- > Expanding Technical Assistance
- > Increasing partnerships with housing agencies

The Multifamily Affordable Housing Adder

How the Multifamily Affordable Housing Adder Works



As the MW Block incentive changes over time, the Multifamily Affordable Housing Adder will adjust to maintain a total incentive rate of \$1.00/W.

Solar for Affordable Housing: An Industry Overview

November 19th, 2020

Rob Crauderueff, Crauderueff Solar



Crauderueff Background

CRAUDERUEFF

- NYC-based affordable solar consultants & community solar developers
- Innovative deal structures for affordable housing
- 60+ years solar experience
- LL92 + 94 Solar & Green Roof Expertise

Crauderueff Team

- Rob Crauderueff – CEO & Founder
- Sam Dorbor – Solar Engineer
- Will Cardona – Solar Electrician
- Steve Schwerd – Consulting Solar Engineer
- Kathleen Bakewell – Chief Design Officer, RLA, LEED AP
- Mark Lacey, Landscape Designer
- Strategic partners

Mission-
aligned
partners

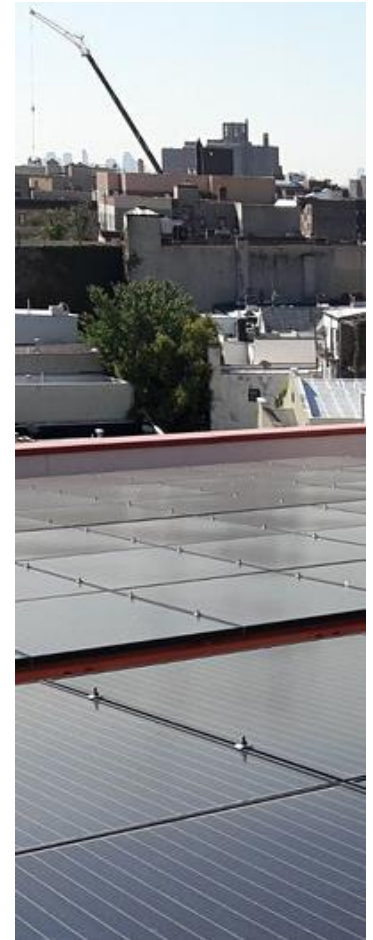
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Solar for Affordable Housing: An Opportunity

CRAUDERUEFF

- Portfolio approach
- Centralized structure
- Multiple financing structures available
- NYSERDA leadership
- Solar + storage



Solar regulations



**June
2019**

NYC Climate Mobilization
Act enacted + NYS Zero
Emissions Target created

**November
2019**

LL 92 - solar assessments
required for new
affordable housing roofs

May, 2020

Additional NYSERDA
grant money allocated
to affordable housing
+ LMI sector

2025

Building Code
requires solar
for all new roofs
on affordable
housing

2025

NYSERDA solar
incentives run out

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AFFORDABLE HOUSING + LOW-INCOME REQUIREMENTS

LL92 – Affordable Housing

- HPD 10-year payback requirement
- Ground-up construction cash deal can make sense
 - LIHTC basis, ITC syndicated through project
 - Creative ways to incorporate community solar
 - 3 to 7 year typical payback period
- Retrofit market
 - Cash deals don't typically pencil without tax credits
 - RAD developments, existing portfolios
 - Important role of 3rd party financed and owned community solar models

Lessons from the field: Enterprise- Crauderueff- NHT Initiative

- NYSERDA-funded (PON 3414) Technical Assistance to 20+ affordable housing organizations statewide over two years – focus on retrofits
- Learning Lesson #1: Affordable housing organizations need to expend significant time, cost and risk to develop their own solar retrofit projects at the portfolio scale
- Learning Lesson #2: Tax appetite for Solar Investment Tax Credit and accelerated depreciation can be limited for for-profit housing organizations, making self-financing difficult. But when available, returns can be strong.
- Learning Lesson #3: Third-party financed community solar presents an opportunity



Competitive Bid Cash Purchase: 2700 Grand Concourse

45kW System

Multifamily Housing, Rent
Stabilized housing

Bronx, NY

In front of the meter

30% variability in price among
bids

17% IRR

ITC, depreciation, PTA, NY-
Sun incentive

Community Solar Background

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Community Solar – Subscription Model

How it works

1. Subscribe to the community solar project. Solar panels on one are assigned to your electric account.
2. Receive a credit on your electric bill based on the value of the solar generated by your solar panels each month.
3. Receive your Community Solar bill, worth 90% of the bill credit value.
4. Keep the remaining 10% as savings.

For Example

- Suppose you are allocated 50 solar panels that generate \$1,000 of bill credits in February. You receive a reduction of \$1,000 on your February electric bill. In turn, you pay the community solar provider \$900 and keep the \$100 in savings.

Community Solar – Rooftop Model

- Affordable housing as system hosts
- 3rd party financed, owned and operated
- Stack the benefits
 - Lease income
 - Bill credit discount (subscription)
 - Property Tax Abatement (NYC)
 - Up-front one time payment
- Viable in NYC area based on higher bill credit (VDER) value (.20-.27/kWh) vs. .07-.11/kWh in Upstate New York
- Few providers for smaller-scale projects

Questions?

Rob Crauderueff, CEO

rob@crauderueff.com

CRAUDERUEFF



Solar Benefits for Owners and Tenants of Affordable Housing Seminar November 19th, 2020



Real Estate. Real Value.



Company Overview

L&W Background

- Founded in 1938
- Full service real estate firm specializing in the development, construction and management of affordable housing
 - Preservation & Ground-Up Construction
- Manage over 6,000 units across the city



Overview of Recent Solar Projects

Types of Solar Projects

- Completed 4 Solar Thermal projects and 1 Solar PV Project
- The solar systems are incorporated when there is an existing repositioning and financing strategy
 - Agency funded (i.e. LIHTC, PLP etc.) substantial renovation projects with available hard cost contingency savings
 - Refinancing/Energy retrofit programs

Key Challenges

- Model cannot be replicated portfolio wide
- Particularly on preservation deals, funding agencies will typically not agree to incorporate solar due to high upfront costs
- Maintenance contracts are harder to place after initial 5 year period
- Property owners have less appetite for solar tax incentives



Community Solar Initiative

Scope of Current Project

- Partnered with Crauderueff Solar and OYA Solar to implement a portfolio level Community Solar project
- Lemle has a mixed portfolio of older and new construction buildings which we believe are viable candidates for solar PV
- Current scope consists of 29 affordable, multi-family residential properties located in upper Manhattan and the Bronx.
 - Total units: 1,380
- The average site will be 31 kW, for a total of 892 kW across the portfolio

Example Site



401 Bronx River Avenue, Bronx, NY 120 unit building

Community Solar Initiative

Key Benefits

- Lease payments - new source of revenue for buildings
- Utility bill savings for the properties and the low moderate income tenants who live in the buildings
- Property tax abatements
- Management to re-invest the savings and lease revenues into building improvements
- Management is not responsible for day to day maintenance of the system

Timing Key Next Steps

- Project timeline
 - 3-6 month for design phase
 - Installation by 2Q 2021
 - Target completion by 2022
- Next steps:
 - Finalize design and feasibility for each building

Example Site



401 Bronx River Avenue, Bronx, NY – 111kW system

SOLAR BENEFITS FOR OWNERS AND TENANTS OF AFFORDABLE HOUSING



Christopher Community, Inc.™

Fred Zolna, Consultant
November 19th, 2020

CHRISTOPHER COMMUNITY BACKGROUND

- ▶ Founded: 1974
- ▶ Mission: to develop and manage low and moderate income housing where there is a need
- ▶ Scope: 100+ buildings, 3,000+ units, administer Section 8 for Onondaga County (1200 vouchers)
- ▶ Geography: Central New York – appx. 100 mile radius of Syracuse



Malta House, North Syracuse, Senior Housing



Housing Demonstration, Family Housing,
Syracuse

CCI COMMUNITY SOLAR

PROJECT SCOPE

- ▶ Partnered with Crauderueff Solar and OYA Solar to subscribe Community Solar at the portfolio scale
- ▶ Projects in National Grid and NYSEG Territories
- ▶ Scope consists of 35 affordable, multi-family residential properties located greater Syracuse region
- ▶ Total project scope – 2.5MW of solar subscriptions



Eighty Parrish Street, Senior Housing, Canandaigua

SOLAR MODELS CONSIDERED

MODELS CONSIDERED

1. Self-finance, own and operate – rooftop solar
2. Self-finance, own and operate – off-site solar
3. 3rd Party Community Solar subscriptions



Moses Dewitt House, Family Housing, Syracuse



Redfield Village Apartments, Senior Housing, Fayetteville

Challenges

- Difficult to develop off-site solar
 - Costs, risk vs. return
- Outside of core business of affordable housing
- On-site: coordination with utilities, operations and maintenance, performance risk
- Lack of tax appetite

CCI COMMUNITY SOLAR

Benefits

- ▶ Utility bill savings for the properties – 10% guaranteed bill credit savings
- ▶ Total \$1M savings over 25 years across portfolio
- ▶ No operations or maintenance
- ▶ Simple subscription agreement
- ▶ Consolidated billing in near future
- ▶ Potential to expand benefits to tenants

Next Steps

- Finalize subscription agreements
 - Board approvals completed by Jan 2021
- Project go on-line and receive bill credits
- NYSEG sites – Q1 2021
- National Grid sites – Q4 2021

