Clean Heat and Solar for Low-and-Moderate Income Bronx Households WEBINAR

Co-Sponsored By:
Heat/Cool Smart Brooklyn is one of many active NYSERDA CH&CC campaigns across New York State.
Beneficial Building Electrification and Energy Efficiency

100% zero-emissions electricity by 2040 under the Climate Act.

Electrification of heating and hot water systems is the key strategy for building decarbonization and energy efficiency improvements in all buildings.

Scope of Panel:

Eliminate on-site GHG emissions from the combustion of fossil fuels
- Residential
- Commercial and Institutional

The Panel adopted a building-level focus; further analysis is needed in campus and community thermal networks, and specialized uses in industry and critical care.
Small residential and commercial buildings comprise 40% of NYC’s building area and currently are without carbon emissions regulation.
Panelists

- Ryan Merkin: Director of Business Development, Blocpower
- Francis Rodriguez: Director Weatherization, Association of Energy Affordability
- Robert McCool & Bruno Estrada: Barrio Solar
- Betta Broad: Director of Advocacy, Association for Energy Affordability
WEBINAR GOALS

• Learn how clean heat, weatherization and solar can improve your home and how to sign up for services
• Understand various incentives and financing for LMI projects WAP, Assisted Home Performance, Empower and HEAP
LMI Programs to support Clean Heat Retrofits

- Assisted Home Performance <80% median county income
- Empower <60% median income
- HEAP ARPA Funds <60%
- Weatherization Assistance Program <60% median income
NYS PROGRAMS:

- NYSERDA
  - EmPower
  - Assisted Home Performance
  - HEAP Supplemental
  - Market Rate
- NYSERDA Subsidized
  - Financing EFS Low Interest Loans
- Clean Heat Program
<table>
<thead>
<tr>
<th></th>
<th>Income Guidelines</th>
<th>Income Eligible Discounts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assisted Home Performance</strong></td>
<td>&lt; 80% of household county median income (family of four - $95,450)</td>
<td>50% up to $5,000</td>
</tr>
<tr>
<td><strong>EmPower</strong></td>
<td>&lt; 60% of household state median income (family of four - $62,988)</td>
<td>100% up to $10,000</td>
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</tbody>
</table>
All HEAP customers with an award letter dated October 1, 2021 or later with a valid CIN are eligible to receive ARPA funding. All customers can receive envelope, health & safety, and HPWH measures. All homes receiving heat pumps must meet minimum insulation levels.

100% funding up to $20,000 can be combined with Clean Heat incentives.
CLEAN HEAT INCENTIVES

Con Edison

- Based on efficiency and size of system installed. Average of $10,000 to $20,000 in utility incentives. Can be combined with LMI incentives.
BlocPower

Smarter, greener, and healthier electric buildings for all

Ryan Merkin
About BlocPower

- BlocPower is a minority-owned clean tech company founded in 2014, focused on greening residential and small commercial buildings in the U.S.

- BlocPower develops and finances energy efficiency and clean energy projects for building owners in dense urban areas.

Our software platform streamlines the process of designing and installing these projects, cutting down the time and cost of completing an energy project.

BlocPower financing enables building owners to get much-needed energy-saving infrastructure improvements with no money upfront and projects can be profitable day one.
Environmental and social factors drive Building Electrification

- **Health** - Indoor air quality, compounded by deferred maintenance, pandemic, wildfires and natural disasters
- **Equity** - Mandates to direct benefits toward disadvantaged communities highlight gaps in building infrastructure
- **Climate Change** - Federal, state and city governments have identified building electrification as a critical component of their climate action plans and roadmaps and have enacted policies to reduce fossil fuel use
- **Financial incentives** - Over 1,800 incentive programs now exist across the US to support owners in electrifying their heating, cooling and hot water
- **Green Workforce Development** - Programs introducing electrification training
To electrify, property owners must hire 6-12 parties across multiple industries

The problem: complexity

- Government Incentive + Permit
- Utility Incentive + Permit
- Engineering
- Construction Contractor
- Equipment Purchase
- Lender / Investor

Fragmented datasets and communication prevent efficient project assessment and collaboration. This drives up costs, reduces profitability, and prevents 5 million SMEs from upgrading.

80% Project Cost Increase Potential
BlocPower delivers a one-stop solution for building owners, working with local partners

The solution: a steward of the customer experience

- Property Owner
- BlocPower
- Software streamlines project management and keeps costs low
- Financial offering eliminates upfront cost & structures payments to match savings
AIR SOURCE HEAT PUMPS: HOW THEY WORK
AIR TO AIR HEAT PUMPS: HEATING & COOLING

Multi-split system

VRF
HEAT PUMPS: HOT WATER
Our Process

1. Our Process

2. ASSESS
Take our quick survey to see how your building can save energy and money.

3. PRELIMINARY SOW
Get a free preliminary Scope of Work and estimated pricing.

4. FINAL SOW
BlocPower will deliver a final Scope of Work and pricing, including all eligible incentives.

5. INSTALLATION
BlocPower oversees your project to ensure a high-quality, permitted, on-time installation of energy improvements and commissioning.

6. Remote Walk-through
Our remote audit keeps everyone safe, while ensuring all necessary information is collected.

7. PEACE OF MIND
When using BlocPower Financing, BlocPower handles maintenance and guarantees system performance for 15+ years.
Heat Pumps

- 15 Year contract
- Low annual escalation in payment
- Full guarantee on equipment and service
- All O&M included
- Purchase, renew or remove options at end of term

As-A-Service

- No upfront capital needed to take action
- Easy entry to learn about unfamiliar technology
- System guaranteed to function for customer
- Significant savings compared to oil
Single Family Home, Bronx NY
Air Source Heat Pump + Solar Installation

BlocPower worked on a single-family home located in Bronx, New York City. The building was originally built in 1956 as a two-floor, three-unit home. The owner was experiencing uneven heating in the building and was lacking a reliable cooling system. BlocPower came to the rescue and replaced this system with brand-new air source heat pumps (ASHPs)!

Green Jobs Green NY
This home utilized NYSERDA's GJGNY program, which provides New Yorkers access to energy assessments, installation services, low interest financing, and pathways to training for various green-collar careers. GJGNY offers financing to help residential customers make energy upgrades.

Project Details:
- Project cost w/incentive: $23,814
- NYSERDA heat pump incentive: $1,000
- 15 year maintenance included
- 15 year BlocPower lease term
- The building owner will save approx. 15% on annual utility costs and maintenance.
- BlocPower provided technical assistance throughout this emergency project.
## Savings (8-unit HDFC Co-Op)

Air Source Heat Pumps will lower or eliminate many of your building’s costs and save you money.

<table>
<thead>
<tr>
<th>Cost Item</th>
<th>Current Spend</th>
<th>Post Install Spend</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel (oil)</td>
<td>$0 / year</td>
<td>$0 / year</td>
<td>+$0 / year</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>$6,720 / year</td>
<td>$1,680 / year</td>
<td>+$5,040 / year</td>
</tr>
<tr>
<td>Electricity</td>
<td>$758 / year</td>
<td>$3,674 / year</td>
<td>-$2,915 / year</td>
</tr>
<tr>
<td>O&amp;M + Repairs*</td>
<td>$2,000 / year</td>
<td>$0 / year</td>
<td>+$2,000 / year</td>
</tr>
<tr>
<td>Avoided Cost of Boiler Replacement***</td>
<td>$7,165 / year</td>
<td>$0 / year</td>
<td>+$7,165 / year</td>
</tr>
<tr>
<td>Average Total Saved Over the Lease Period</td>
<td></td>
<td></td>
<td>$11,290 / year</td>
</tr>
<tr>
<td>Total Saved Monthly on Average</td>
<td></td>
<td></td>
<td>+$941 / month</td>
</tr>
</tbody>
</table>

*BlocPower provides complimentary O&M services for 15 years.

***Assuming payments on a loan at 6.0% interest, 7 year repayment, and $40,000 cost.
### BlocPower Lease Payment Options (8-unit HDFC co-op)

Flexible financing can reduce your air source heat pump up-front costs to zero dollars.

<table>
<thead>
<tr>
<th>Money Down Scenario</th>
<th>BlocPower Lease Monthly Payment*</th>
<th>Monthly Savings After Lease Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Money Down</td>
<td>$325 / month</td>
<td>$616 / month</td>
</tr>
<tr>
<td>$10,000 Down</td>
<td>$225 / month</td>
<td>$716 / month</td>
</tr>
<tr>
<td>$54,560 Down</td>
<td>$0 / month</td>
<td>$941 / month</td>
</tr>
</tbody>
</table>

*Based on a 15-year term with 1% annual escalation.

### The BlocPower Lease Benefits

- **No Money Down. No Loan.**
- **No lien on home.**
- **Low, predictable monthly payments.**
- **15-year performance guarantee.**
- **Regular maintenance included in lease.**
BlocPower Impact

1,200+
Energy efficiency and electrification projects completed

- Air source heat pumps
- Solar installations
- Building envelope updates
- Deep retrofits including lead and asbestos removal
- LED lighting

$1,165
Estimated average annual energy bill savings to customers

- $0-down lease financing including installation, maintenance, and repair

155
Jobs created

- 1500+ Workforce trained
- Workforce development focusing on minorities, women, veterans and previously incarcerated citizens
Thank You!

ryan@blocpower.io
917-312-8187
Weatherization Assistance Program

WAP

Francis Rodriguez, Weatherization Director

August 18, 2022
What is WAP?

• Weatherization is a federal assisted program that enables low-income families, and landlords of low-income buildings, to reduce their energy bills by making their homes or buildings more energy efficient.

• The Weatherization Assistance Program (WAP) reduces energy costs by increasing the energy efficiency of their homes/building, while ensuring their health and safety.

• It is a free program for those families that meet the qualification guidelines, and it is a reduced cost program for landlords of buildings that meet these guidelines.
How to Qualify

1. For 1-4 family home
   - 50% of the units must meet the qualifications Eligibility
   - The work is free if the homeowner qualifies
How to Qualify

1. For Multifamily 5 or more units

   • 66% of the units must meet the qualifications Eligibility

   • The landlord pays at least 25% of the scope of work
Categorical Eligibility

A unit will be deemed eligible if any member of the unit receives any of the following:

- Supplemental Security Income
  - Current Year award Letter
- Public Assistance
  - Current Year award Letter
- Food Stamp
  - Current year award letter or copy of Electronic Benefit Transfer (EBT) card with a current debit purchase receipt
- HEAP – Regular Benefits
  - Current Year award Letter
**Income Guidelines**

The unit total income must be under this guidelines

<table>
<thead>
<tr>
<th>Household Size</th>
<th>Monthly Income</th>
<th>Annual Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$2,729</td>
<td>$32,748</td>
</tr>
<tr>
<td>2</td>
<td>$3,569</td>
<td>$42,828</td>
</tr>
<tr>
<td>3</td>
<td>$4,409</td>
<td>$52,908</td>
</tr>
<tr>
<td>4</td>
<td>$5,249</td>
<td>$62,988</td>
</tr>
<tr>
<td>5</td>
<td>$6,088</td>
<td>$73,056</td>
</tr>
<tr>
<td>6</td>
<td>$6,928</td>
<td>$83,136</td>
</tr>
<tr>
<td>7</td>
<td>$7,086</td>
<td>$85,032</td>
</tr>
<tr>
<td>8</td>
<td>$7,772</td>
<td>$93,260</td>
</tr>
<tr>
<td>9</td>
<td>$8,558</td>
<td>$102,700</td>
</tr>
<tr>
<td>10</td>
<td>$9,345</td>
<td>$112,140</td>
</tr>
</tbody>
</table>

*each additional person per household $9,440*
How does it work?

1. The homeowner/landlord applies to the local provider
2. The eligibility criteria is determined for the house/building
3. An energy audit is completed
4. Procurement is performed for the items in the audit
5. An agreement is signed with the owner of the property for the work deemed cost effective or health and safety related
6. Contractors/crew are deployed to complete the agreed scope of work
7. Work is construction managed by WAP staff and inspected by funder
WAP Eligible Measures

• Heating system repair/replacement
• Building Air Sealing
• Roof and sidewall insulation
• Windows repair/replacement
• Refrigerators Replacement
• LED bulbs and light fixtures

New Measures

• Heat Pumps Systems for Domestic Hot Water and Heating and Cooling
• Solar PV systems
• Mechanical Ventilation Equipment
Bronx

Northwest Bronx Community and Clergy Coalition
Northwest Bronx  718-584-0515

Association for Energy Affordability
South Bronx  718-292-6733
Queens:

HANAC
  West Queens  718-626-7575
  Astoria

Association for Energy Affordability, Inc
  Central Queens  718-292-6733
  Ridgewood thru Little Neck

Margert Community Corporation
  Rockaways  718-471-3724
  Eastern Queens
Thank You!

Francis Rodriguez
Frodriguez@aea.us.org
718-292-6733 ext. 8211
Barrio Solar Goals

- Help NYC 1 to 4-family homeowners reduce electricity costs
- Reduce cost barriers to installing solar
- Combat climate change
- Guide and support homeowners considering solar panels
- When solar panels are not feasible, help homeowners access community solar

www.barriosolar.com
646-820-1301
1. The sun LIGHT provides PHOTONS which react with the compounds of the solar cells in a solar panel.

2. The solar array produces Direct Current (DC -much like a battery in your cellphone or car). The DC is inverted in Alternating Current (AC) which is what is used in your homes, and what you receive from ConEdison.

3. The energy is measured in Watts/Kilo Watts to track production of your array.

4. Energy is first consumed directly by the property, and all unused energy is sent to the grid via a bidirectional meter that measures both consumption and production.
Solar Panels

• 25+ year operating life
  • Best on 0-5 year-old roofs

• Low maintenance

• Requires direct sunlight
  • No shading from trees or other buildings

• Grid-connected
  • Does not provide power in a blackout
Campaign Highlights

• Reduced costs with community-based buying group

• Up to $5,000 cash subsidy (for qualified homeowners)

• $0 down solar panel installations

• Free solar feasibility analysis

• Free savings estimate

• Campaign is open to **ALL** 1-4 family homeowners in New York City
  (Targeted outreach in LMI and BIPOC neighborhoods)

Image credit: New York Times

www.barriosolar.com
646-820-1301
Solar Incentives

There are generous incentives for solar in NYC! Between the NYSERDA NY-Sun Affordable Incentive, the Barrio Solar subsidy, and tax incentives, more than 90% of the cost of solar can be offset for a low-income homeowner.

Sample 4 kW Solar Project Costs and Incentives

<table>
<thead>
<tr>
<th>Cost Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Installed Cost</td>
<td>$15,800</td>
</tr>
<tr>
<td>NY-Sun Incentive (pre-payment discount)</td>
<td>$3,160</td>
</tr>
<tr>
<td>Barrio Solar LMI Incentive (pre-payment discount)</td>
<td>$3,500</td>
</tr>
<tr>
<td>Upfront Cost (amount due to installer)</td>
<td>$9,140</td>
</tr>
<tr>
<td>Federal Tax Credit (26%)</td>
<td>$3,286</td>
</tr>
<tr>
<td>State Tax Credit (25%, may be claimed over 5 yrs)</td>
<td>$3,160</td>
</tr>
<tr>
<td>City Property Tax Abatement (20%, must be claimed over 4 yrs)</td>
<td>$2,528</td>
</tr>
<tr>
<td>Post-Incentives Cost</td>
<td>$166</td>
</tr>
</tbody>
</table>
Thank you for joining us!

Contact Bruno Estrada to learn more about solar for your house:

• E-mail: Bruno@Solar1.org  OR

• Phone: 646-820-1301   OR

• Info request form: www.barriosolar.com   OR

• Scan:
Thank You!

Betta Broad
Betta@aeacleanenergy.org