Cambridge Multifamily Retrofit Program

Informational Webinar

City of Cambridge
Community Development Department
March 2021
• **Submit questions** throughout the webinar using the Q&A button
  • **Phone-only** enter * 9 to Raise Hand during the Q&A
    • A staff member will then enable you to speak and you will have to unmute before speaking.

• **Tech support** [Nikhil Nadkarni](mailto:nnadkarni@cambridgema.gov)
Introductions

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Matt Connolly, Solar Advisor, Resonant Energy
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Program Background

- Program launched as a pilot in 2017 as part of the City's Net Zero Action Plan
- Cambridge Energy Alliance is the City’s initiative to help residents and small businesses connect to energy efficiency and renewable energy
Retrofit Program in 2021

• Retrofit and Solar Advisors have worked with over 60 buildings encompassing hundreds of units
• The City was awarded a one-year Innovate Energy Efficiency grant from the Massachusetts Department of Energy Resources to expand the Program
Program Offerings

5-49 unit apartment or condo buildings are eligible for:

• No-cost retrofit advising services
• No-cost solar advising services
• Help identify financing options through Cambridge's local bank partners or through other channels
• One-year subscription to a utility tracking platform to monitor outcomes
As a mission-driven nonprofit, New Ecology works nationally to bring the benefits of sustainable development to the community level, with a concerted emphasis on underserved populations.

*We seek to make the built environment more efficient, healthy, durable, and resilient.*
Energy Efficiency Retrofit Advisor

• Advice and guidance to multifamily owners motivated by energy efficiency
• 5-49 unit buildings
• Assistance with incentives such as MassSave, MassCEC, DOER
• We meet you wherever you are!
Energy Efficiency Retrofit Advisor

• We can advise on:

• Holistic green rehabs or additions
• Targeted retrofit projects, e.g...
  • Window replacements or upgrades
  • Roof insulation, basement insulation
  • Air source heat pumps
  • High-efficiency boilers and DHW equipment
• Electrification of HVAC systems
• Troubleshooting existing central systems
• And more
Step 1
Join a 30 Minute Intake Call

Step 2
Review a Summary of Opportunities

NEWECOLOGY
Community-Based Sustainable Development
Step 2

Summary

- Discuss with Condo Board
- Estimated Potential Savings
- Scope a Project ("RFP")
- Review Financing Options
- Construction QA/QC
- Coordinate with Solar Advisor (Resonant)
- Guidance on Incentive Programs
- Targeted Site Visits by NEI

Step 3

"The Menu"
Energy Efficiency Retrofit Advisor

• Example A: **Targeted Project**
  • 15 unit midrise building circa 1975
  • Original aluminum-frame windows
  • Deteriorated, drafty, inefficient

• **What we can offer:**
  • Scope for window replacement
  • Drafting of Request For Proposals
  • Coordinate bids from contractors
  • Review of proposals
  • QA/QC for installation
Energy Efficiency Retrofit Advisor

• Example B: **Holistic Rehab**
  • 6 unit ‘double-triple’ decker
  • Trustees are motivated!
  • Siding replacement needed
  • Gas-fired central boiler

• **What we can offer:**
  • Facilitate discussion on priorities
  • Help navigate MassSave program
  • Estimate potential savings
  • Bids and contractor coordination (see previous slide)

**OPPORTUNITIES**
• Add Insulation and Air Barrier during re-siding
• Replace windows/frames
• Electrify HVAC system
• Install solar PV
Additional Notes

• Most impactful on full-building level
• Get your neighbors and your condo board involved!
  • Advisor can attend Condo board meetings to assist
• Cap of 30 hours time
• Income Eligible properties over 5 units:
  • LEAN Multifamily program
Cambridge Solar Advisors: RESONANT ENERGY
Agenda

- Resonant Introduction
- Building Representative Engagement Process Overview
- Available Financing Options for Multifamily Buildings
- Case Study
Mission: To expand access to clean energy in underinvested communities

About: Boston-based development company building projects in MA, NY

Focus: Multifamily, Affordable Housing, Nonprofit, Small Commercial

Mechanics: Aggregating solar projects for low-cost, high quality installations and impact financing
Building Representative Engagement Process

- **Goal:** Complete a solar feasibility study for your multifamily building & consult with building owners on the benefits of solar

- **Steps:**
  1. Reach out to Cambridge’s Retrofit Advisor at retrofit@cambridgeenergyalliance.org or fill out this web form.
  2. Solar Advisor (SA) will follow up with intake questionnaire to get an understanding of your building (i.e. electrical usage, roof age, building ownership structure, etc.)
  3. SA team creates a no-cost solar feasibility study for your building
  4. SA will schedule a consultation to go over the study in detail and answer questions you may have
  5. If building is interested in moving forward with solar, the SA team will submit the study and other information to the EnergySage marketplace on the resident’s behalf
EnergySage Marketplace

- **An online solar marketplace** that allows for multiple vetted solar installers to bid on a solar installation for your home/building.
  - provides multiple “apples to apples” quotes from different installers to give you an idea of what your solar options are
- Once you have decided to move forward with solar via the Cambridge Solar Advisor program, we will submit your information to the EnergySage marketplace
- Solar Advisor will be able to **answer any questions about the bids as they come in**
Multifamily Solar Financing
Option #1: Direct Purchase

- **Direct Purchase (DP)**
  - Simplest financing option
  - Pay out-of-pocket or take out a loan to cover system’s full cost
  - **Benefits**: Electricity savings, SMART Revenue, Federal Tax Credit (and potentially State Tax Credits, if system is owned by individual condo members)
# Direct Purchase Benefits in Depth

<table>
<thead>
<tr>
<th>Incentive Program</th>
<th>How it Works</th>
<th>Where it Applies</th>
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<tbody>
<tr>
<td><strong>Electricity Savings/Net Metering</strong></td>
<td>Offsetting electricity usage with solar and selling excess electricity back to the grid</td>
<td>Value of electricity costs paid to Eversource. Excess credit depends on utility zone</td>
</tr>
<tr>
<td><strong>SMART Incentive Revenue</strong></td>
<td>Monthly cash payment based on kWh production of solar array</td>
<td>Massachusetts Only</td>
</tr>
<tr>
<td><strong>Federal Solar Investment Tax Credit (ITC)</strong></td>
<td>26% tax credit for the total cost of the installation through 2022</td>
<td>Nationally to tax-eligible individuals &amp; entities</td>
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Multifamily Solar Financing Option #2: PPA

- **Power Purchase Agreement (PPA)**
  - A 3rd party financier pays for and owns the system installed on your roof **(No cost upfront to building owner)**
  - Customers pay the financier monthly for every kWh produced by the array at a discounted rate from your electricity rate
  - **Benefits:** Electricity Savings (~10-15% off your monthly bill)
  - **Note:** PPA not offered by every solar installation company
# Feasibility Study Example

<table>
<thead>
<tr>
<th>Feature</th>
<th>Direct Ownership</th>
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<tbody>
<tr>
<td>Array Size</td>
<td>15 panels (6.3 kW)</td>
</tr>
<tr>
<td>Estimated Annual Output</td>
<td>346% of your common meter usage (6,785 kWh)</td>
</tr>
<tr>
<td>Equivalent CO₂ Reduction</td>
<td>Preserving 6 Acres of Forest</td>
</tr>
<tr>
<td>Upfront Cost</td>
<td>$18,743 - $25,358 ($2.98 - $4.03 per Watt)</td>
</tr>
<tr>
<td>Estimated 25-Yr Total Savings</td>
<td>$56,086</td>
</tr>
</tbody>
</table>

Direct Ownership Layout (6.3 kW, Tier 1, 420 Watt Panels)
Questions?
Q&A

Get in touch to learn more and get started:

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617-301-6207