PRESENTATION OVERVIEW

AGENDA

1. Framework and Guiding Principles
2. Program Models and Partners
3. Program Goals
4. Volunteer Engagement
5. Workforce Development
6. Sustainability
7. Resiliency
8. Benefits Overview
9. Marketing & Outreach Strategies
10. Questions
In 2007, the City released the first PlaNYC, which outlined measures to address the city’s aging infrastructure, support parks, improve the quality of life and health for New Yorkers, and for the first time ever, commit to a goal for reducing greenhouse gas emissions 30% by 2030.
**SEPTEMBER 2014**

The City’s commitment to cut its greenhouse gas emissions expanded to 80 percent by 2050.

**NOVEMBER 2014**

A plan to create a more comprehensive, integrated workforce development system and policy framework focused on skills building and job quality.
FOUR GUIDING PRINCIPLES

Growth
Population growth, real estate development, job creation, and the strength of industry sectors

Equity
Fairness and equal access to assets, services, resources, and opportunities so that all New Yorkers can reach their full potential

Sustainability
Improving the lives of our residents and future generations by cutting greenhouse gas emissions, reducing waste, protecting air and water quality and conditions, cleaning brownfields, and enhancing public open spaces

Resiliency
The capacity of the city to withstand disruptive events, whether physical, economic, or social

#ONENYCNYC
# PROGRAM MODELS

<table>
<thead>
<tr>
<th>Program Years</th>
<th>Program Model</th>
<th>Funding Model</th>
<th>Administering Agency</th>
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<tr>
<td>2009-2014</td>
<td>Volunteer: Engage volunteers to coat rooftops with a white, reflective coating</td>
<td>City Investment + Corporate Sponsorships</td>
<td>NYC Department of Buildings</td>
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<tr>
<td>2015-Present</td>
<td>Workforce Development: support local jobseekers through a paid and transitional work-based learning experience to install cool roofs</td>
<td>Full City Investment</td>
<td>NYC Department of Small Business Services</td>
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PROGRAM PARTNERS

Research Partners

Corporate Sponsors

Government Partners

Community Partners
ANNUAL PROGRAM GOALS

Coat 1,000,000 square feet of New York City rooftops

Train 70 workforce participants for 10 weeks

Host multiple “Community Coating Days” to provide opportunities for the public to volunteer

Photo Credit: Dana Ullman for UNHP

NYC Cool Roofs
VOLUNTEER ENGAGEMENT

2009
224 volunteers

2010
1,596 volunteers

2011
1,239 volunteers

2012
1,417 volunteers

2013
1,138 volunteers

2014
238 volunteers

2015
10 volunteers

2016
72 volunteers

5,934 VOLUNTEERS ENGAGED
300 hours of paid training installing energy saving reflective coating on NYC roofs

- Perform manual labor including but not limited to climbing multiple flight of stairs and lifting and carrying sixty pound buckets
- Follow safety guidelines and protocols
- Arrange and organize supplies
- Transport supplies to and from buildings and storage
- Provide support in completing operational tasks such as daily progress reports and supply inventories
- Stencil/grid rooftops and understand general layout of building
- Plan trips to different work sites in the five boroughs
WORKFORCE DEVELOPMENT

ORGANIZATIONAL SKILLS
RELATIONSHIP MANAGEMENT
QUALITY ASSURANCE
LEADERSHIP
TEAMWORK
COMMUNICATION
MULTITASKING
ADAPTATION
TIME MANAGEMENT
Over 20 hours of unpaid training to attain certifications and credentials in the construction sector

- OSHA 10-Hour Construction
- 4-Hour Scaffolding
- First Aid & CPR
- 4-Hour Flagger
WORKFORCE DEVELOPMENT

CAREER DEVELOPMENT SUPPORT

- Develop job search skills
- Advance resume development and interviewing skills
- Connect jobseekers to employers with open positions

WORKFORCE
INDUSTRIAL & TRANSPORTATION
WORKFORCE DEVELOPMENT

129 JOBSEEKERS ENROLLED

119 COMPLETED PROGRAM
Buildings are responsible for roughly three-fourths of NYC’s GHG emissions

By installing a cool roof, buildings can reduce air conditioning costs by 10% to 30% on hot summer days

This can reduce energy consumption and GHG emissions from NYC’s building sector

Contribute to goal of reducing NYC GHG emissions 80% by 2050
MINIMIZING THE WINTER HEAT PENALTY

WINTER
In the winter, NYC is tilted away from the sun. This means it receives less intense sunlight than in the summer.

9 HOURS OF SUNLIGHT

SUMMER
In the summer, NYC is tilted towards the sun. This means it receives more intense sunlight than in the winter.

15 HOURS OF SUNLIGHT

WHAT DOES THIS MEAN FOR A COOL ROOF?
On a roof, this difference in angle results in the same amount of energy being distributed over a larger area in the winter. Because a white Cool Roof coating works by reflecting sunlight, the cooling effect is minimized during the winter.
RESILIENCY

STRATEGIC RESILIENCY PLAN
2017 – 2018

- Prioritize cool roof installations in heat vulnerable neighborhoods
- Reduce internal building temperatures by up to 30%
- Help New Yorkers become resilient during periods of extreme heat
- Decrease summertime peak energy demand and reduce likelihood of city- or neighborhood wide power outages
- Help NYC jobseekers become financially resilient

NYC°CoolRoofs
URBAN HEAT ISLAND EFFECT
SPATIAL ANALYSIS

HEAT VULNERABILITY ZONES

Heat Vulnerability Factors

- Age
- Socio-economic status
- Local surface temperature
- Tree cover
- Household health

RESILIENCY

NYC°CoolRoofs
1. **Building Benefit**
   - Reduce energy needs & save money

2. **Neighborhood Benefit**
   - Lower ambient air temperatures

3. **Environmental Benefit**
   - Contribute to GHG reduction goals

4. **Social Benefit**
   - Provide wages and job training

**The CoolRoofs Program**
NATIONAL & GLOBAL IMPACTS

Support of cool roofs projects in the United States

Cool Roofs Initiative Launch in Hyderabad, India
MARKETING & OUTREACH STRATEGIES

IMPLEMENT MARKETING CAMPAIGN

- Represent program at trade shows and conferences
- Utilize website and social media channels to promote program
- Distribute flyers and postcards to spread the word
- Highlight no and low-cost installation options available to building owners
- Provide guidelines for building owners installing cool roofs on their own
- Cross promote other opportunities offered by New York City

DEVELOP & LEVERAGE PARTNERSHIPS
Save up to 30% on cooling costs for your building by installing a cool roof.
NYC°Cool Roofs

No-cost and low-cost reflective rooftop installations for NYC buildings

Building Benefits

- Lower air conditioning costs by 10% to 30%
- Up to 30% reduction in internal building temperatures during the summer
- Increased longevity of roof and building cooling equipment

ROOFTOP ELIGIBILITY REQUIREMENTS

- Flat and in good condition with minimal cracking
- Easily accessible (no hatch, window, or ladder access)
- Free of dangerous machinery or equipment that could impede work or put workers at risk
- Surrounded with appropriate 3’8” parapet
- Covered with one of the following roof types: granulated cap sheet, asphalt, bitumen, or modified bitumen

TRAINED NEW YORKERS ARE AVAILABLE TO APPLY COOL ROOFS AT NO-COST* TO:

- Non-profits
- Affordable housing
- Select cooperatively-owned housing
- Select organizations providing public, cultural, and/or community services

*Technical assistance and low-cost installation options are available for other privately owned buildings

#ONE NYC

This initiative supports NYC’s goal to reduce greenhouse gas emissions 80% by 2050, as outlined in Mayor de Blasio’s One New York: The Plan for a Strong and Just City.

Call 311 or visit nyc.gov/coolroofs to learn more or tell us about your existing cool roof
What can you achieve by painting your roof white?

**SAVE MONEY**
- Cool roofs can reduce air conditioning costs by 10% to 30% on hot summer days when air conditioning accounts for up to 40% of daily electricity use. Cool roofs can reduce internal building temperatures as much as 30%.

**REDUCE ENERGY**
- By decreasing summertime peak energy demand, cool roofs reduce utility grid stress and thus the likelihood of power outages. Cool roofs also reduce carbon emissions in New York City at a rate of 0.5 lbs. per square foot of rooftop coated.

**IMPROVE ROOF DURABILITY**
- Because cool roofs don’t reach such high temperatures, the thermal shock stress associated with large temperature changes is reduced, thereby prolonging the life of cooling equipment and limiting a roof’s expansion and contraction that results from those temperature changes.

**IMPROVE NEIGHBORHOODS – COMBAT THE URBAN HEAT ISLAND EFFECT**
- Because cities like New York have greater amounts of dark surfaces, city temperatures are five to seven degrees warmer than surrounding areas on an average summer day. Coating all eligible dark rooftops in New York City could result in up to a 1 degree reduction of ambient air temperature.

NYC COOLROOFS

www.nyc.gov/coolroofs

NOTE FOR QUALIFYING BUILDING:
- Building roofs must be flat, non-ballasted and free of any major obstructions such as AC or HVAC units and must have a parapet of at least 3 ft.
OUTREACH WITH COATING VENDORS

Solicitation Requirements

Coating Demos

Coating Discounts
COOL IT YOURSELF KIT

COOL IT YOURSELF

Saving energy and reducing costs are a key part of the NYC °CoolRoofs initiative. Dark-colored roofs absorb heat and increase cooling costs while °cool roofs" reflect heat and keep buildings cooler and more comfortable. Cool Roof coatings also:

- Increase the efficiency of roof-mounted air conditioning equipment
- Protect roofs against thermal expansion and UV radiation, making them more durable and longer-lasting
- Decrease the risk of brownouts and blackouts during the warmer months by reducing peak energy use

STEP 1: Identify your Roof's Eligibility
The cool roof coating can be applied to a flat roof covered with smooth asphalt, EDPM Rubber, or smooth aluminum.

STEP 2: Check your Roof's Warranty
Before you coat, check current roof warranty to make sure that coating the roof will not void the warranty.

STEP 3: Follow the Forecast
You will need three days (72 hours) of rain-free weather to properly coat your roof. The temperature should be over 50°F for the coating to dry properly.

STEP 4: Plan for Safety
Safety is of utmost importance. Familiarize yourself with the building's roof. Be aware of any tripping hazards and always stay alert.

STEP 5: Inspect and Repair your Roof
Your roof must be free of any blisters, cracks, or peeling paint before you can begin to coat. It is also a good idea to check for loose screws, poor drainage, and any other issues that may need to be addressed before beginning the coating process.

STEP 6: Measure your Roof
The amount of coating needed is determined by the square footage of your roof. Use this number to calculate the amount of coating you need based on the manufacturer's directions.

STEP 7: Clean your Roof
Before you can begin coating your roof, you should clean and wash the surface using brooms and pressure washers. When washing the roof, pay attention to drainage and make sure there is no puddling.

STEP 8: Grid your Roof
Grid your rooftop into square sections to ensure the coating is applied evenly. Most coating products suggest gridding your roof into 100 square feet sections. Read the manufacturer's directions to determine how much area one container of coating material will cover.

STEP 9: Coat your Roof
Start coating the furthest away from the roof entrance and work backward. Be sure not to paint yourself into a corner. The first coat must dry overnight before applying a second.

STEP 10: Clean your Roof Annually
To sustain your roofs coating, clean it once a year. This is also a good time to look for leaks, puddling, or other issues that could damage your roof if left unaddressed.

NYC °CoolRoofs
www.nyc.gov/coolroofs
CROSS PROMOTE OTHER NYC INITIATIVES

NYC BUILDING OPERATOR
TRAINING
No-Cost Energy Efficiency Training for Multifamily Operations & Maintenance

COMMUNITY RETROFIT  NYC
BETTER BUILDINGS, BLOCK BY BLOCK

NYC Retrofit ACCELERATOR
MAKING ENERGY EFFICIENCY EASIER
QUESTIONS?

www.nyc.gov/coolroofs  coolroofs@sbs.nyc.gov