

# Urban Green Council: Equitable, Carbon-Free Hot Water in NYC

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# Buildings UP Prize

Multi-stage pilot program developed by the U.S. Department of Energy Building Technologies Office to build capacity to rapidly and equitably transform U.S. buildings.

- Actionable and scalable efficient electrification upgrades
- Address persistent administrative, financial, social, and other barriers
- Equity-centered pathway requires upgrades in disadvantaged communities with a strong emphasis on community engagement



# Equitable, Carbon-Free Hot Water in NYC

## Concept:

Scale heat pump water heaters in old, low-rise multifamily buildings located in New York City's disadvantaged communities

## Key Points:

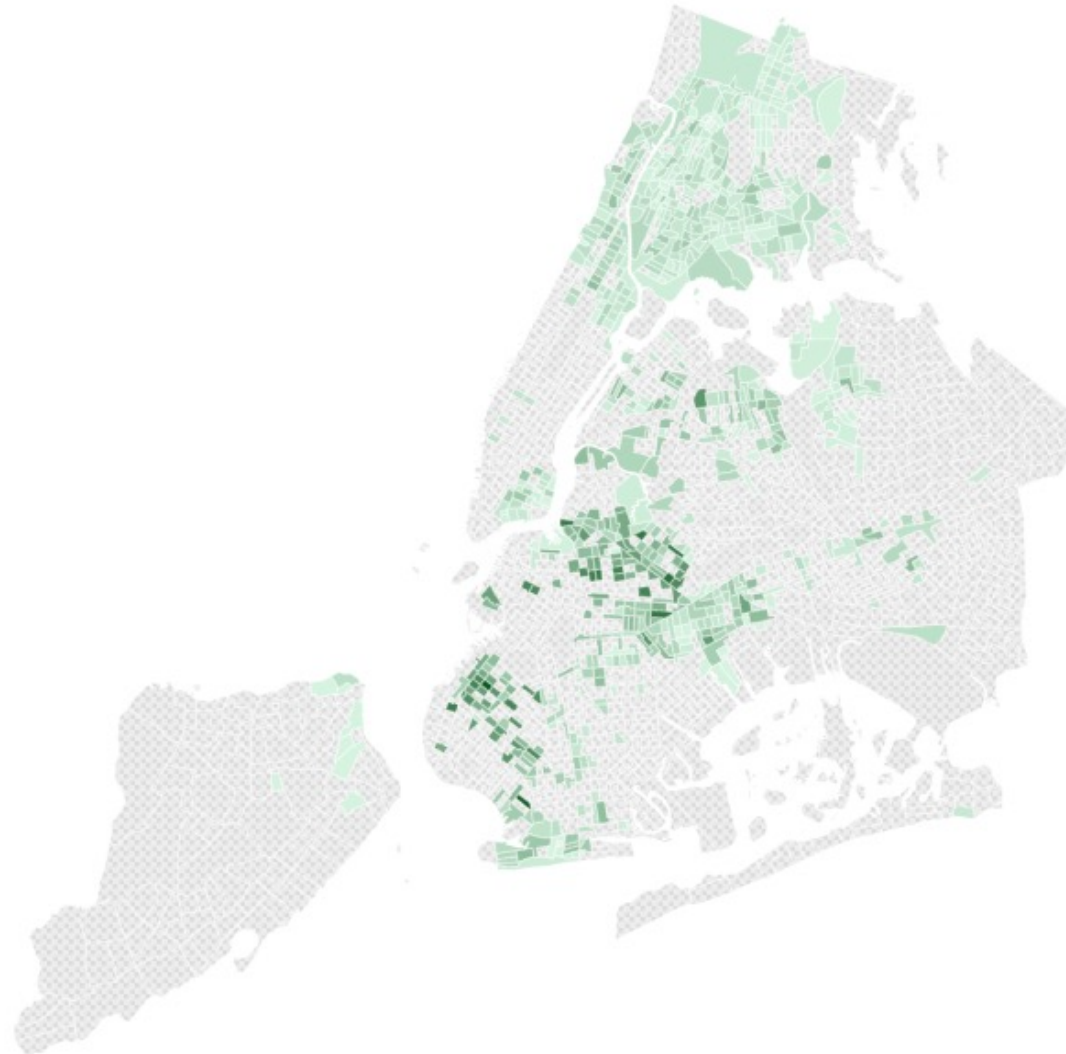
- 3–10-unit buildings with centralized domestic hot water systems;
- Integrate thermal storage to lower peak DHW demand;
- Minimize operating cost increases;



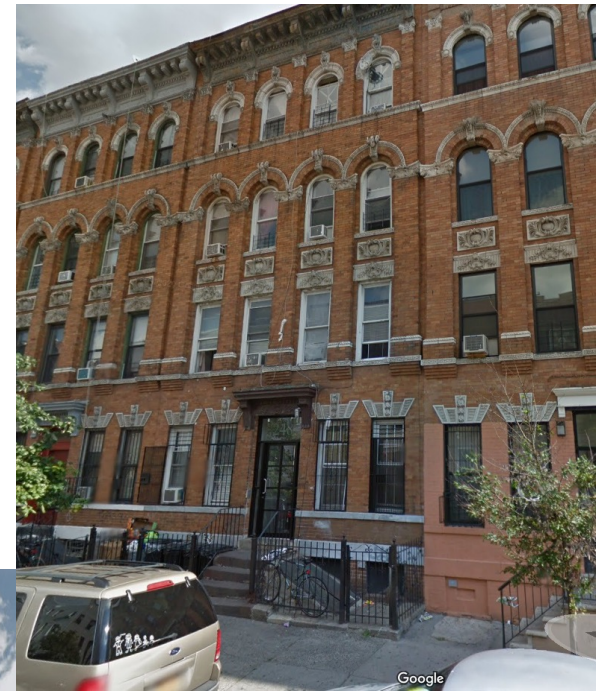
## The Building Upgrade Zone for *Equitable, Carbon-Free Hot Water in NYC* includes 100,000 buildings across all five boroughs

This map shows the number of old low-rise multifamily buildings in each disadvantaged community census tract in NYC

Number of Buildings 1  309



Source: DOE Energy Justice Mapping Tool, NYC PLUTO



# Key Challenges

## **Technology Gap:**

Existing heat pump water heater technology is targeted at single family homes and larger multifamily buildings

## **Operating Costs:**

Efficiency improvements of heat pump water heaters are unlikely to cover operating cost increase of switching from gas to electric

## **Design and Installation Lead Time:**

Answering key questions around the building's peak DHW demand, space for heat pump equipment, and electrical capacity require time and prior planning, which is not possible during an emergency replacement scenario (i.e. most replacements)

The logo for Urban Green, featuring the words "URBAN" and "GREEN" stacked vertically in a bold, white, sans-serif font. The letters are stylized with a grid-like pattern, where the vertical bars of the letters are connected at the top and bottom, creating a mesh effect.

URBAN  
GREEN

Thank  
You



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