

# Using Partnerships to Drive Energy Efficiency and Preserve Affordability

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## ABSTRACT

New York City (NYC) has two significant commitments that impact building owners: to build or preserve 300,000 units of affordable housing over 10 years and to reduce the city's greenhouse gas emissions by 80% by 2050. To reach these goals, the NYC Mayor's Office of Sustainability (MOS) worked hand in hand with the agency responsible for preserving and developing affordable housing, the NYC Department of Housing Preservation and Development (NYC HPD), to develop programs and financing products that reduce emissions while keeping rents affordable.

MOS launched the NYC Retrofit Accelerator in 2015 and Community Retrofit NYC in 2016. Both programs provide technical assistance to decision makers (e.g., owners, operators, and co-op members) in privately owned buildings to identify and implement projects promoting energy efficiency, water conservation, and clean energy.<sup>1</sup> In 2015, MOS and NYC HPD launched the Green Housing Preservation Program (GHPP), a financing program that provides small and midsize multifamily buildings with no- and low-cost financing for energy efficiency and rehabilitation projects.

This paper explores how the NYC Retrofit Accelerator, Community Retrofit NYC, and GHPP rely on strategic partnerships to overcome the barriers of market pressure and funding access that prevent scaling energy efficiency projects in affordable housing.<sup>2</sup> Two case studies demonstrate the importance of these partnerships.

## Introduction

In September 2014, NYC Mayor Bill de Blasio committed to reducing the city's greenhouse gas (GHG) emissions by 80% below 2005 levels by 2050 (80x50), with an interim target to reduce emissions by 40% by 2030 (NYC MOS 2014). In a recent analysis, the city found that nearly all buildings will need retrofits to reach its climate reduction goals (NYC MOS 2015). To achieve this goal, the city recognized the importance of reducing the energy used in its existing building stock. Nearly 70% of the city's GHG emissions come from the energy used to power, heat, and cool its nearly one million buildings. About 90% of the buildings that exist today will still be here in 2050, so retrofits were deemed essential.

Simultaneously, NYC suffers a housing crisis. The vacancy rate is below 5%, and a significant portion of the housing stock that does exist is unaffordable to those who require it (NYC HPD 2014).<sup>3</sup> As a result, in 2014, the mayor committed to building or preserving 200,000

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<sup>1</sup> This paper focuses on buildings over five units only.

<sup>2</sup> Affordable housing in this context is defined as privately owned rental and limited-equity cooperative buildings that are under rent control, rent stabilization, and/or city, state, or federal regulation See Appendix A for definitions.

<sup>3</sup> *Affordable* does not have a strict definition; housing is considered affordable when the rent and utility costs are no more than 30% of a household's income.

affordable housing units by 2024. Because of the success of this effort thus far, the mayor increased the goal to 300,000 units by 2026 (NYC HPD 2017). This includes units affordable to New Yorkers who are “very low income” up to “middle income,” with most units affordable to “low income” New Yorkers (see Appendix A).

A key component of preserving currently affordable units is to help owners keep operating costs low to mitigate the need to raise rents while providing access to the financing needed to maintain the structural integrity of their buildings. Utility costs for NYC tenants increased more than 61.43% between 2005 and 2017 (Census Bureau 2018). Implementing energy efficiency upgrades can defray rising utility costs. Building owners can save an average of 20% to 30% in energy costs if they implement energy efficiency measures (EEFA 2015).

To reduce GHG emissions citywide and preserve affordable housing, buildings must be retrofitted more quickly than has occurred to date. Without any further interventions, the city will fall short of its 80x50 and affordability goals (NYC MOS 2016a).

## **Background**

### **Affordable Housing**

Energy efficiency retrofits can be particularly difficult to implement in affordable housing buildings due to a range of issues. Two of the challenges are overcoming market pressure and the ability to access funding.

### **Market Pressure**

Since 1990, housing costs have risen significantly throughout NYC (NYU Furman 2016). Over the past 28 years, NYC has gained an influx of higher income residents due to the steady expansion of the economy, a new supply of professional jobs requiring degrees, and a decline of crime. The demand for housing has grown to exceed the existing supply. Gentrified neighborhoods have seen a 34% rent increase from 1990 to 2014.<sup>4</sup> This has had a significant effect on buildings that house low-income New Yorkers. Building owners in gentrified neighborhoods can experience aggressive sales tactics, frequent advertising, and canvassing by real estate professionals trying to purchase buildings to profit from the potential to increase rents. Given this environment, owners of affordable housing multifamily units often distrust individuals inquiring about their buildings.

### **Access to Funds**

Building owners can access financing and incentives for energy efficiency projects through federal, state, and city agencies, as well as utilities and private lenders. To access these funds, building owners must go through multiple complex application processes. In addition, owners of smaller buildings (less than 50,000 sq. ft.) who are interested in energy efficiency have a difficult time acquiring funds due to private lending restrictions and strict credit standards.

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<sup>4</sup> Gentrified neighborhoods are neighborhoods that were low income in 1990 and have experienced rent increases between 1990 and 2014 that were higher than other borough areas. The neighborhoods that have experienced the greatest change are Williamsburg, Greenpoint in Brooklyn, Central Harlem, Lower East Side, Chinatown in Manhattan, Mott Haven, Hunts Point in the Bronx, and Astoria in Queens.

Most private lenders do not provide loans smaller than \$1,000,000 to multifamily building owners in NYC. These loans have high predevelopment costs, high interest rates, and short repayment terms. In addition, private lenders require specific credit standards for their financing products. Regulated and naturally occurring affordable housing building owners generally operate with tight profit margins, have low credit scores, and have low reserve funds, making it difficult to meet these standards.<sup>5</sup>

As a result, building owners have fallen victim to predatory lenders, setting them on a spiral of increasing debt and operating expenses. The lack of inexpensive and long-term financing for smaller building owners in the private market indicates a market failure in need of local government intervention.

### **City Programs for Privately Owned Buildings**

NYC has implemented policies and programs to improve privately owned buildings. *One City: Built to Last*, the city's ten-year plan released in 2014, included 21 initiatives to start the city on a pathway to 80x50. These included three city-funded programs aimed at providing owners of privately owned buildings with the guidance and resources needed to implement energy upgrades:

- *The NYC Retrofit Accelerator* is a ten-year program launched in September 2015 which aims to reduce GHG emissions by one million metric tons of carbon dioxide equivalent (CO<sub>2</sub>e) by 2025. The Retrofit Accelerator is a one-stop resource for owners and operators of privately owned buildings who want to both increase the value and sustainability of their properties through energy and water efficiency upgrades and improve the environment. The program's efficiency advisors work one-on-one with owners, property management companies, and co-op boards to help them identify projects, select contractors, and obtain financing and incentives. As of April 2018, the Retrofit Accelerator has engaged with decision makers for nearly 5,000 buildings, helping nearly 1,800 start or complete energy retrofits. Over 30% of those buildings currently in the pipeline are affordable housing developments that were previously financed by the city, state, or federal governments.
- *Community Retrofit NYC* is the sister program to the Retrofit Accelerator. Community Retrofit NYC provides similar services to small and midsize buildings in neighborhoods that are particularly threatened by increasing rents. Community Retrofit NYC engages in grassroots outreach to churches, small businesses, community leaders, and other neighborhood associations to support scaling up sustainability projects to help lower utility costs, preserve affordable housing, and improve the quality of life for residents. The program offers free services to owners and operators of multifamily buildings in Central Brooklyn and Southern Queens that have between 5 and 50 apartments. Community Retrofit NYC has engaged owners of over 800 buildings, eight of whom are working with NYC HPD to receive financing for a larger rehabilitation scope.
- *NYC HPD's Green Housing Preservation Program* is a financing program that was launched in May 2015. GHPP provides low- and no-interest loans to finance energy

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<sup>5</sup> Naturally occurring housing is multifamily buildings not regulated by any government agency. Rents in naturally occurring housing are affordable for the neighborhoods served.

efficiency and water conservation improvements, lead remediation, and moderate rehabilitation work. To acquire these funds, building owners must agree to maintain affordable rents in their buildings for low- and moderate-income New Yorkers. The program was explicitly designed to help owners of small and midsize buildings improve building conditions and lower operating expenses to ensure the long-term physical and financial health of their buildings and to preserve safe, affordable housing for low- and moderate-income New Yorkers. To date, the program has closed on financing and preserved 229 units of housing.

## **Addressing Market Pressure: Working with Community-Based Organizations to Build Trust**

### **Overview**

New housing programs struggle to break through market pressure to engage with building decision makers, particularly those in gentrifying neighborhoods. In NYC, local community-based organizations (CBOs), e.g., faith-based establishments, housing advocacy organizations, neighborhood organizations that implement city and state efficiency programs, and community development finance institutions, have a history of providing services to residents and being a voice for their constituents. CBOs are trusted because they tend to foster similar interests, purposes, and orientation as the communities they serve (Bryce 2016). Building decision makers turn to their local CBOs for trusted advice on housing repairs or energy efficiency, even if CBOs lack expertise in these areas (NYC MOS 2016). To overcome market pressure, the NYC Retrofit Accelerator, Community Retrofit NYC, and the Green Housing Preservation Program developed partnerships with CBOs to gain trust with building decision makers.

Affordable housing efficiency advisors from the NYC Retrofit Accelerator, Community Retrofit NYC, and the Green Housing Preservation Program met with over 20 CBOs to understand their core missions and sets of services, gain trust, and develop a partnership. The programs demonstrated their support of CBOs in several ways. First, they shared goals aligned to the CBOs' missions, such as improving air quality and the living environment, reducing climate change, and preserving affordable housing. Second, they lent support to the existing services or programs offered by the CBOs. The programs worked with CBOs to provide training to CBO staff, informational sessions to constituents, and free staff at events to expand the CBOs' services.

Third, they showed commitment to the partnership through developing resources such as marketing materials and setting up meetings with other CBOs to provide a platform for dialog. CBOs operate on tight budgets, but they are tasked with providing critical resources to their constituents. When CBOs trust the programs, the programs can provide CBOs with resources that improve their services. For example, HPD, with its partner, Enterprise Community Partners, developed a program that funds three local CBOs to connect building owners who were already seeking help with NYC HPD loan programs, including GHPP.

The city programs maintained these relationships by demonstrating that they could deliver on their commitments. The programs used case studies, examples of past partnerships with CBOs and community leaders, and frequent meetings with CBO staff members to retain the trust of CBOs. To date, CBO-program partnerships have co-hosted 40 events, which were marketed through newsletters, local press, and word of mouth.

The case study below highlights how the NYC Retrofit Accelerator developed a partnership with the Urban Homesteading Assistance Board (UHAB) to establish trust with building decision makers.

### **Case Study: Building Trust with UHAB**

The NYC Retrofit Accelerator and UHAB met to explore ways to collaborate and support UHAB's current services. Established in 1973, UHAB is a local community nonprofit that empowers low- to moderate-income residents to take control of their housing by creating permanently affordable Housing Development Fund Corporation (HDFC) limited-equity cooperatives.<sup>6</sup> Their work focuses on ensuring that building owners are equipped with the right tools to preserve their homes, establishing and maintaining transparent and democratic leadership, and providing access to high quality resources to sustain buildings in an efficient manner.

The NYC Retrofit Accelerator invested a substantial amount of time with UHAB before working directly with its HDFC members. Over the course of five months, the program staff met with UHAB staff, presented their goals in the context of UHAB's organizational mission, and explained how the program could help HDFC building owners preserve their homes. Efficiency advisors provided information on lowering operating costs and improving building conditions by retrofitting heating systems. Program staff provided support to expand UHAB's services by offering training to UHAB staff on common building systems. They also supported UHAB programs by developing marketing and educational collateral in multiple languages.

Once UHAB and the NYC Retrofit Accelerator established their partnership, they hosted a joint energy efficiency training and educational session for the HDFC building owners community. During the training, the Retrofit Accelerator met with building owners from a nine-unit building in Harlem who expressed interest in working with the program. This building is in the second most gentrified neighborhood in New York (NYU Furman 2016) and had already faced market pressure. The HDFC board had encountered an unpleasant experience working with an energy service company in the past, and so was somewhat skeptical moving forward.

UHAB was critical in helping the NYC Retrofit Accelerator staff develop a relationship with the building owners. Their staff coordinated communication between the program and the HDFC board. The NYC Retrofit Accelerator met with the building owners in person, exchanged emails, and held phone calls to understand all their energy concerns. The program also provided information on how they could improve their heating distribution system.<sup>7</sup> Because of this partnership, specifically because of the trust UHAB had in the NYC Retrofit Accelerator, the building owners decided to retrofit their one-pipe steam heating system to reduce overheating and lower their heating bills. The NYC Retrofit Accelerator coordinated with Con Edison to access incentives and contractors that implemented master venting, installed thermostatic radiator valves, and cleaned boilers. The building owners were grateful to the NYC Retrofit Accelerator for explaining how they could maximize the efficiency of their heating system

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<sup>6</sup> HDFCs are a special type of limited-equity housing cooperative in New York State, incorporated under the New York State Housing Finance Law. Under this law, the city of New York can sell buildings directly to tenants or community groups to provide low-income housing. Many but not all HDFCs are organized as co-ops. All HDFCs are required to provide housing affordable to low-income residents.

<sup>7</sup> The HDFC had an opportunity to be a part of Con Edison's One-Pipe Steam Retro-commissioning pilot program launched in 2016.

operations. Now, they no longer have overheating concerns and have reduced their monthly energy cost. Today, this building's shareholders represent themselves as advocates for the NYC Retrofit Accelerator (UHAB 2017). They encourage other HDFC shareholders to speak with the NYC Retrofit Accelerator about energy upgrades. This success would not have been possible without establishing a partnership with UHAB to act as a trusted messenger throughout the relationship.

## **Addressing Access to Funds: Intergovernmental Partnerships Work to Align Financing**

### **Overview**

Roughly 70,000 buildings in NYC fall within the 5 unit to 50 unit range. Many of these buildings are subject to rent regulation and house low- to moderate-income New Yorkers (see Appendix B). Only limited financial products are accessible to buildings within this size range. MOS and NYC HPD had not previously partnered on any major initiatives, so they collaborated closely to understand each agency's challenges and opportunities in relation to assisting smaller building owners. By linking the city's affordable housing targets with its climate commitments, the agencies developed a plan to reach both goals.

In 2014, NYC HPD partnered with MOS to explore how NYC HPD could create more effective tools and initiatives to strategically preserve naturally occurring affordable housing, particularly among the small to midsize building stock, in rapidly gentrifying neighborhoods. NYC HPD conducted further research to understand the barriers faced by owners of smaller buildings. The study focused on accessing financing to lower operating expenses by improving energy and water efficiency, while maintaining physical viability through rehabilitation. Because of this research, the city established the Green Housing Preservation Program (GHPP). This program was designed to assist owners of small and midsize buildings (5 to 50 units) in completing energy efficiency and water conservation projects, lead remediation, and moderate rehabilitation work by offering financing targeted to these goals in several ways.

First, the financing offered zero-interest forgivable loans for energy efficiency work and low-interest repayable loans for rehabilitation work. Second, it provided access to a variety of technical assistance services that would perform a roof-to-cellar physical needs assessment and energy audit, facilitate the contractor bidding process, provide owner's representation services during construction, train building staff and residents on the proper operation of the newly installed systems, and complete a follow-up report one year post-construction completion to ensure the project was achieving its savings projections. Third, the program offered access to predevelopment financing to cover any costs needed to complete the transaction,<sup>8</sup> such as the physical needs assessment and energy audit, environmental testing, technical assistance fees, and legal fees. Finally, this loan product commits owners of a building to reducing its energy

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<sup>8</sup> The NYC Energy Efficiency Corporation (NYCEEC) partnered with NYC HPD to offer financing for any predevelopment expenses associated with participating in GHPP. Eligible expenses included green physical needs assessments, property appraisals and surveys, lead and asbestos testing, and engineering studies. NYCEEC, a nonprofit specialty financing company focused on energy efficiency, can finance up to \$40,000 in predevelopment expenses for up to 12 months with a simple and straightforward approval process.

consumption by 20% below its current baseline. It also commits owners to keeping rents affordable to low- and moderate-income tenants for a 15- or 30-year period.

The city did not have an existing network of buildings to connect with the program and had little information on how to develop one, so the agencies partnered to develop Community Retrofit NYC. For those building owners who would not pursue financing through GHPP, Community Retrofit would encourage them to implement energy efficiency upgrades through other financing and incentive programs.

The following case study demonstrates how the Community Retrofit program helped a building owner gain access to financing from GHPP. The building owner was able to fund desperately needed capital repairs and energy efficiency improvements, control rising utility costs, and restore the physical viability of the property.

### **Case Study: Financing Opportunities through NYC HPD**

In the summer of 2017, staff from Community Retrofit NYC attended various community events tailored to owners of small multifamily buildings. Efficiency advisors spoke with building owners about the benefits of being proactive with energy efficiency improvements. They also provided information on HPD's new GHPP program. Owners of one small building contacted Community Retrofit NYC to learn how to improve the building's operational efficiency while addressing emergency and critical repair needs. The owners had inherited the property from family in the early 2000s and began occupying and managing the building several years ago, after another family member drove the building to the brink of foreclosure. The owners could not afford to make capital upgrades. Their boiler was completely corroded and operated at very low efficiency, and the gas line that was feeding the boiler was illegally connected to one of the first floor apartments. Given the emergency conditions, they contacted Community Retrofit, who in turn referred them to GHPP. At the beginning, GHPP connected the building to HPD's Emergency Repair Program to remediate the existing hazardous conditions. The GHPP scope of work consisted of new double-paned windows, roof replacement, insulation, lead abatement, a new domestic hot water system, and an electrical upgrade. This would reduce the building's energy consumption by at least 20%.

In addition to NYC HPD's financing options, Community Retrofit NYC identified other funding sources. Con Edison and National Grid programs covered the cost of installing LED lighting, low-flow fixtures, and pipe insulation in the basement. This reduced the size of the owners' GHPP loan. Following completion of this work, the building is expected to achieve at least 20% in energy and water savings. They will also keep the rents affordable to low- and moderate-income households for the next 30 years. Without Community Retrofit NYC, the owners may never have learned about the GHPP or the utility incentive programs. The owners would have faced a tradeoff: either raise rents or jeopardize the housing quality of the building.

### **Conclusion**

Preserving affordable housing and fighting climate change represent monumental goals, particularly in a city as large and diverse as New York. Energy efficiency improvements can advance both goals by reducing operating costs and energy use in buildings. Building decision makers of affordable housing, particularly those in gentrifying neighborhoods, are inhibited from initiating energy efficiency retrofits because of today's market pressure and the lack of

appropriate financing. The city of New York developed the NYC Retrofit Accelerator, Community Retrofit NYC, and the Green Housing Preservation Program to overcome these barriers. These programs rely on partnerships to overcome existing barriers to engage and serve building decision makers in need of support. They develop partnerships with trusted CBOs so that the programs themselves become a resource trusted by the CBO members and the community. And through the partnership between the Mayor's Office of Sustainability and the NYC Department of Housing Preservation and Development, the city developed the Green Housing Preservation Program, a financing tool specifically created for owners of affordable housing to reduce energy use and improve housing quality. These programs and partnerships are advancing the city closer to achieving its housing and climate goals.

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## Appendix A

Table 1. Income categories for NYC households

Income Categories	Area Medium Income (AMI) Range
Very Low Income	50% below AMI
Extremely Low Income	30% below AMI
Low Income	50% to 80% of AMI
Moderate Income	81% to 120% of AMI
Middle Income	121% to 165% of AMI

Source: NYC HPD 2017.

## Appendix B

Table 2. Description of regulated housing in NYC

Private Market Unregulated		Unregulated apartments are available on the private market without any government regulation as to how much rent can be charged or whether a lease is offered. Roughly 850,000 of NYC’s two million-plus rental units are market rate.
Private Market Regulated		Rent regulated housing includes both rent controlled and rent stabilized apartments. Rent increases are set by a government agency and tenants in regulated housing have greater legal protection than those living in market rate housing. These units are available on the private market (i.e., tenants obtain a rent stabilized apartment the same way as any other apartment, and there are no income limits), but rent increases and lease renewals are regulated by both the state and city. Roughly 1,000,000 of NYC’s two million-plus rental units are rent regulated.
	Rent Controlled	For rent controlled apartments, the tenant (or the tenant’s family if the apartment has been passed down to a qualified family member) must have been living in that apartment continuously since before July 1, 1971. When a rent controlled apartment becomes vacant, it either becomes rent stabilized or, if it is in a building with fewer than six units, it is generally removed from regulation.
	Rent Stabilized	Rent stabilized apartments are in buildings that were built before 1974, have six or more apartments, and have new rent below \$2,733.75 (as of January 1, 2018) per month. Apartments can also become rent stabilized if a developer utilizes the J-51 or 421-a tax incentive programs. The tax incentive program provides developer with a tax abatement for 15 or 30 years.
Subsidized		Rents in these apartments may be tied to income and may include other qualifying conditions, such as age or disability. In some programs, participants pay a portion of their income towards rent, in other programs participants pay a fixed rent, but participation is limited to those within certain income guidelines. Roughly 300,000 of NYC’s two million-plus rental units are subsidized by a government entity.
	Section 8	Section 8 refers to the federal housing allowance program that provides rent subsidies in the form of vouchers and certificates for low-income households.

		Established in 1974 as part of the Housing and Community Development Act, at the heart of the program is a housing allowance that enables a low-income household (usually based on a percentage of income) to rent a housing unit of better quality than it could unassisted.
	Mitchell-Lama	Created in 1955, the Mitchell-Lama program provides affordable rental and cooperative housing to moderate- and middle-income families.

Table 2. Different types of housing in NYC: private market unregulated, private market regulated, and subsidized. *Source:* NYC HPD 2017.