

Let's Get This Revolution Started

How Will New York Ramp Up Energy Efficiency Retrofits?

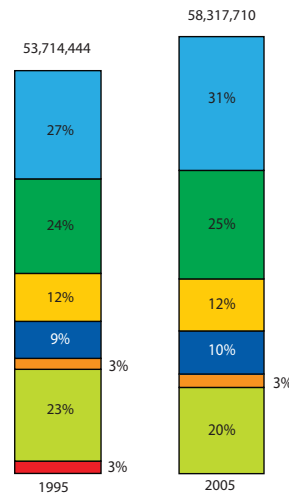
Reducing energy consumption, increasing the use of renewable energy and moving toward a low-carbon economy demand both a cultural shift in routine behavior and an infrastructure to support that change. Households are the number-one source of greenhouse gas emissions in New York City, accounting for more than 14 million metric tons each year. In a growing city, that number will only shrink if a critical mass of New Yorkers weatherize their homes and apartments for energy efficiency. That act must become as normal as recycling garbage.

This Pratt Center issue brief focuses on a critical ingredient in building the infrastructure: financing mechanisms that help property owners and renters retrofit their homes for energy efficiency. Retrofits – caulking windows, insulating walls, installing energy-saving lighting and appliances – result in significant cost savings. The average retrofit under the New York State Energy and Research Development Authority (NYSERDA) Home Performance program pays back within four to six years. The return on energy investments is greater than that of a typical savings account or mutual fund. For most people, home retrofits make good financial sense.

Yet home retrofits have yet to reach mass scale in New York. Last year, fewer than 50,000 households out of 8 million in New York State took advantage of government incentive programs and made home improvements to conserve energy. The reason most property owners have not yet taken the plunge is that retrofits cost money up front, while the savings only come over time. What they have lacked so far is a way to get up-front expenses fully covered, and then pay them back from savings generated by reduced energy use, without spending money out of pocket.

Homes Hold the Key to Greenhouse Gas Reduction in New York City

Greenhouse Gas Source:
Residential
Commercial
Institutional
Industrial
Transit
On-Road Vehicles
Incineration



Home energy consumption represents the greatest share of New York City's greenhouse gas emissions, and its impact has been accelerating, increasing from 14.5 million to 18 million metric tons of CO₂ in a single decade.

To reverse this trend, New Yorkers will have to retrofit their homes to make them more energy efficient.

Data: Mayor's Office of Long-Term Planning and Sustainability

To meet this challenge, New York City will use part of a \$40 million grant from the U.S. Department of Energy's Retrofit Ramp-Up initiative to finance Property Assessed Clean Energy (PACE), a bond program designed to enable property owners to finance energy retrofits on their property tax bills. PACE will join a major new state program, Green Jobs/Green NY, that finances retrofits through a revolving loan fund. If the state legislature acts and utilities cooperate, consumers will be able to pay those loans back on their utility bills.

Green Jobs/Green NY seeks to retrofit 1 million homes statewide over the next five years. In their Retrofit Ramp-Up proposal, the city and state aimed to take on 30,000 commercial and residential buildings. These resources join the Weatherization Assistance Program for low-income households, which received a boost from the federal stimulus.

What will it take to move retrofits mainstream in New York City? The Pratt Center has assessed the major new energy efficiency initiatives and recommends a far-reaching role for the programs' stewards, to make sure that homeowners and tenants get strong support as they choose among financing and contractor options, and the investments bring maximum benefit to New Yorkers and their homes, businesses, neighborhoods and environment.

Green Jobs/Green NY

Last year, the New York State legislature agreed to use \$112 million in proceeds generated by the Regional Greenhouse Gas Initiative cap-and-trade program to launch Green Jobs/Green NY, which aims to retrofit 1 million homes statewide over five years and create some 30,000 jobs. Green Jobs/Green New York, which emerged from the research and advocacy of the Center for Working Families, will be administered by NYSERDA and is expected to launch this summer. NYSERDA will make loans for energy retrofits from a fund that replenishes itself as consumers pay back the debts over time. NYSERDA intends to use \$60 million of the funds as a loan loss reserve to secure private bond investment.

New York State will pay to prepare workers for energy efficiency work and help them get jobs.

Creating job opportunities is a central part of Green Jobs/Green NY. The law calls for New York State to contract with employment training and placement organizations to prepare workers to conduct audits and retrofits and help them secure jobs with certified contractors. It also provides for grants to community-based organizations to market retrofits and refer customers to qualified contractors, including those committed to hiring and training programs to help build a green workforce. Free or low-cost energy audits will be available to income-qualified households.

To reach the target of one million homes in five years, NYSERDA and its partners are simultaneously developing three different methods through which property owners can finance their property upgrades:

Owners will have three ways to upgrade their properties without paying money up front.

Unsecured Loans

NYSERDA plans to offer property owners loans of up to: \$13,000 for one- to four-family homes; \$5,000 a unit for multifamily (to a maximum of \$500,000 a project); and \$26,000 for small businesses and non-profits. These loans will be “unsecured” – that is, they are not backed by the value of the owner’s property but made on the basis of the owners’ ability to pay. The loan products will be backed by Fannie Mae.

Because they are not backed by collateral, unsecured loans typically have high interest rates. Under NYSERDA’s existing Home Performance with ENERGY STAR program for owners of one- to four- family properties, rates are currently between 13.75 and 15 percent depending on the credit rating of the borrower. A second program, the Energy \$mart Loan Fund, offers a secured loan at an interest rate that NYSERDA reduces by 4 points off market rate. However, neither of these loan products has been widely used. Fewer than 10 percent of homeowners enrolling in the Home Performance program use the financing option. NYSERDA is now working with prospective lenders on cost-effective strategies to lower interest rates for unsecured loans. One approach would offer a guarantee on the loan, resulting in an 8 percent interest rate for borrowers.

On-Bill Recovery

On-bill recovery allows utility customers to pay for retrofit work over time on their gas or electric bills. Since consumers widely view utility bills as a manageable and familiar obligation, on-bill recovery has the potential to make retrofits attractive to debt-averse homeowners. On-bill recovery enables even homeowners with poor credit ratings or in homes that have lost value to nonetheless qualify for retrofit financing, and tenants may also be able to participate.

Under Green Jobs/Green NY, a yet-to-be-designated entity or entities will pay the up-front costs for approved contractors to perform energy efficiency upgrades. The property owner will then repay that investment through a small monthly surcharge on their electric or gas bills. That payment obligation would be set at a rate lower than the projected savings from energy-efficiency measures to produce immediate cost savings for the consumer and would remain with the meter, a measure intended to encourage investment in long-term improvements regardless of how long an occupant intends to continue living in the residence.

While National Grid has voluntarily launched an on-bill pilot upstate, the option is not yet available elsewhere in New York State. A bill that would require gas and electric utilities to offer the option awaits action in the State Assembly’s Committee on Energy.

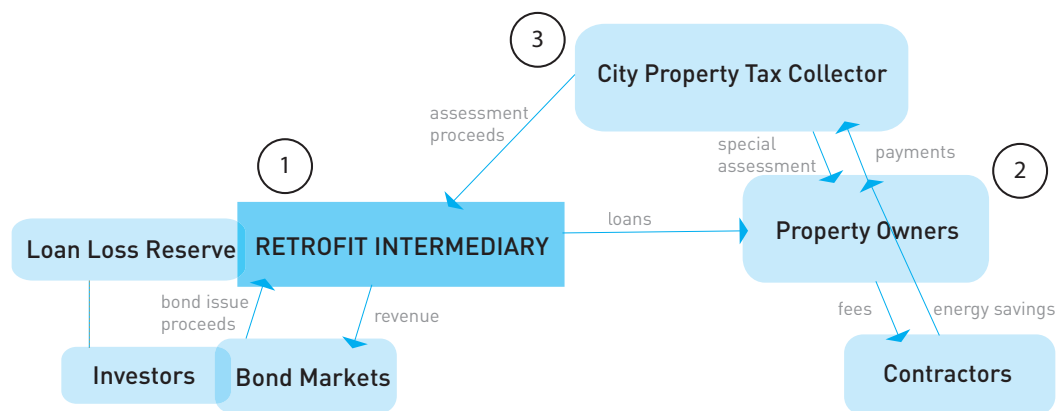
Property Assessed Clean Energy

Last year, the New York State legislature authorized municipalities to offer Property Assessed Clean Energy (PACE)

financing, which allows homeowners to pay for energy upgrades over 15 to 20 years through a surcharge on their annual property taxes. PACE is financed by bonds that are sold to investors. The proceeds from the bond sales generate funds that allow households to pay for retrofits. To date, 18 states have passed PACE-enabling legislation, and proposals are pending in several others.

Under its Retrofit Ramp-Up block grant program, the U.S. Department of Energy (DOE) has awarded New York State \$40 million to establish PACE, slightly more than half of which will be administered by the City of New York and the rest elsewhere in the state by NYSERDA. Much of the DOE award will be used for a reserve fund used to repay bond investors in the event of losses. Homeowners, other property owners and businesses will receive loans to pay for the audits and retrofit work. Owners then see special assessments on their property tax bills, generating revenues that the city uses to pay back the bonds. As with on-bill financing, the surcharge is lower than projected cost savings resulting from energy-efficiency measures, generating immediate financial gain to the household without out-of-pocket spending.

New York City's PACE program will have to make bond investors and property owners confident that the retrofits will produce reliable long-term savings on energy bills. It will need to develop verifiable standards of quality for the energy assessments and improvements, and provide referrals to dependable contractors.



How PACE Works

Property Assessed Clean Energy (PACE) programs finance home energy retrofits by raising funds through bond sales. In a typical PACE program, an intermediary entity [1] sells bonds to investors and lends the proceeds to [2] property owners, who use the funds to pay contractors to make energy-saving improvements to their homes or apartment buildings.

The local property tax collector [3] adds a special assessment to the tax bill of participating property owners, which owners pay back over time using the funds saved on energy bills.

Mission for a New Retrofit Intermediary

New York City's capacity and strategy to promote retrofits are critical to achieving PlaNYC's ambitious greenhouse gas reduction goals, which call for a 30 percent decline by 2030. The Pratt Center for Community Development is proud to have played a small role in assisting New York City with its successful application with NYSERDA to the federal Retrofit Ramp-up block grant program for funds to implement a strong PACE program New York City.

The city and state have already committed to promising measures to insure the success of PACE and Green Jobs/Green NY. These include strong, standardized monitoring and verification of customers' energy cost savings, a block-by-block approach to marketing that taps the influence of existing community-based organizations, and an emphasis on one-stop service to streamline the application process. The Bloomberg administration is also pressing the state legislature to make changes to last year's PACE authorization that will allow the city to combine private funds with the public support, allowing the program to reach a much larger scale than it otherwise would be able to.

But there remains potential to do much more. The City of New York now has the opportunity to create a locally controlled intermediary organization charged with leading the way on home energy retrofits, much like one already proposed by the Natural Resources Defense Council. That entity's work can go far beyond persuading building owners to retrofit their properties. It's in a position to achieve environmental and economic goals for the city, if it embraces the following principles from its inception:

1. Streamline and Simplify

The city's commitment to one-stop shopping for retrofits, via community-based organizations, is a promising start. It can be enhanced through a web-based application directing property owners to the optimum package of financial benefits, regardless of building type. Most homeowners will also need help from advisers to navigate the system.

2. Advance best practices

An intermediary should provide leadership in technological innovation by funding demonstrations and advancing best practices tailored to New York City's distinctive and varied building types. In partnership with NYSERDA, it should keep New York architects, engineers and contractors up to date with best practices from around the nation and world, and advocate for regulatory and programmatic improvements to keep up with new technologies. At the same time, it should help city housing and buildings agencies establish consistent policies insuring that the city's own financing, permitting and inspections support best practices.

3. Ensure green jobs are good jobs

An intermediary should develop and uphold labor standards for a growing field, ensuring that these new jobs are living wage, career-track positions that support a diverse New York City labor force and economy, while making sure that the work performed is up to high standards. Training is crucial to both the quality of energy upgrades, which involve many small measures requiring attention to detail, and to the quality of the jobs being created. An intermediary should engage CUNY, labor unions and other training providers to prepare a highly skilled workforce. This new field is a wide-open opportunity to make jobs available to disadvantaged workers.

4. Make data publicly available

In a field where neither consumers nor investors are educated about what to expect in energy saving "returns," or how to ensure that maximum energy savings are achieved, it's essential to maintain and analyze a database of building types and successful retrofit strategies, costs and energy savings, enabling building owners to benchmark their properties against comparable buildings and to choose the optimum upgrade strategies. That data should also be used for program development, through continuous improvement mechanisms that frequently analyze where maximum efficiencies are achieved per dollar invested and revise program structure accordingly.

5. Reach out to all neighborhoods and building types

Both the state and city are looking toward community outreach to bring retrofits to scale in a concentrated area, generating efficiencies in implementation and multiplier effects from environmental improvements, such as cool roofs and street trees. The Pratt Center has found that by working with community development partners and through houses of worship and block, homeowner and neighborhood associations, we are able to substantially increase homeowner interest in energy efficiency upgrades as well as create an engaged constituency for the city's broader environmental agenda.

Last year's Greener, Greater Buildings laws positioned buildings larger than 50,000 square feet to move toward energy efficiency by requiring audits and facilitating upgrades, and those buildings are likely candidates for PACE. But PACE also must target the 68 percent of New York City's housing stock located in smaller buildings. Investment in smaller buildings yields larger results: A dollar invested in an energy-saving measure yields \$2.26 in energy savings in a one- to-four family home, compared with \$1.83 in an apartment building. Small property owners struggling with soaring electric, heat and water bills need the city's full support.

This issue brief is one in a series periodically published by the Pratt Center to provide in-depth information and new perspectives on an emerging challenge or opportunity for New York City.