RETROFIT
NYC | BLOCK BY BLOCK

RETROFIT BEDFORD STUYVESANT, BLOCK BY BLOCK: 2009-2010 PILOT SUMMARY REPORT

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Pratt Center for Community Development, based at Pratt Institute, works for a more just, equitable, and sustainable New York City. Pratt conducted this project in its role as Coordinator of the New York State Energy and Research Development Authority's Energy $mart Communities program for Brooklyn and Queens.

The Bedford Stuyvesant Restoration Corporation catalyzes economic, educational and cultural improvements for Central Brooklyn. It has created more than 2,200 units of housing, attracted more than $375 million, placed more than 20,000 young people in jobs, and runs the only comprehensive arts education academy in Central Brooklyn. Restoration has been Central Brooklyn's Weatherization Assistance Provider for 30 years.

The New York City Justice Corps is an initiative of the Mayor's Center for Economic Opportunity and John Jay College of Criminal Justice. The Justice Corps brings young adults involved with the criminal justice system together with their communities to identify and address unmet community needs. Through meaningful and reparative service to their communities, internships, and job and educational opportunities, the NYC Justice Corps provides Corps members with practical skills, social support and leadership training. Restoration is one of three organizations city-wide that offer an NYC Justice Corps program.

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PILOT PROGRAM DESIGN

Block by Block Approach

The Retrofit Bedford Stuyvesant Block by Block initiative was developed and implemented by Pratt Center for Community Development and the Bedford Stuyvesant Restoration Corporation (BSRC), including BSRC's NYC Justice Corps program. The initiative was designed to create a model for increasing the scale and speed of energy-efficiency retrofits at the neighborhood level and to generate job opportunities in the retrofit sector for local workers. The community-based outreach approach takes advantage of neighborhood networks, urban density, and New York City's common housing types to achieve increased up-take of financial incentives, reduce costs in the implementation of the retrofits, and create jobs.

New York City's residential buildings generate 30 percent of the city's greenhouse gas emissions, the catalyst of global warming. Much of the energy generating these emissions is wasted, placing a drain on household budgets. Nationally, energy bills account for about 14 percent of a low-income family's gross income, and can account for 20 percent or more.

Energy retrofits – home improvements to reduce the use of heating fuel, electricity, and water – can reduce energy use by 20 to 50 percent and lower household energy costs by as much as $1,200 per year in New York City. Retrofits reduce the pollution that leads to asthma and other health problems, increase the safety and durability of homes, and reduce the prospect of climate change. However, few residents know that they can reduce energy waste or how to go about it.

Even though the cost of retrofits is paid for by energy savings, the upfront cost is a barrier for many homeowners and few people are aware of existing incentive programs that can help defray costs. More than 600,000 of New York City's nearly one million buildings are one- to four-family homes but only a small fraction has been retrofitted for energy efficiency.

The Block by block approach is a delivery system for retrofitting urban neighborhoods. It is designed to:

1) Make retrofits easy by packaging financial incentives and delivering retrofits to the building owners' doors;
2) Target retrofits geographically to plug into social networks and lower the costs and time needed to do the work; and
3) Train and employ neighborhood residents in weatherization work.

Major Program Strategies

The primary goal of Retrofit Bedford Stuyvesant was to create a model "green block" to demonstrate and quantify the benefits of energy upgrades and to test methods of marketing, programming, and financing retrofits. The project centered on Herkimer Street, on the two contiguous blocks between Bedford and Nostrand Avenues in Bedford Stuyvesant, which include a total of 105 residential buildings. The blocks were chosen because of their close proximity to Restoration; the presence of a block association, church, and community garden; existing WAP projects in multifamily buildings on the block; and a lack of street trees. Most of the buildings on the block are three- and four-family brownstones.

The similar structure and close proximity of these homes (many are attached row houses) offered untapped opportunities for increasing the scale, speed and cost-effectiveness of implementing home efficiency upgrades. The pilot program attempted to address these issues by providing free energy assessments, by clustering retrofits, taking advantage of economies of scale, and enhancing incentives.

The project provided incentives to homeowners to participate via free energy audits as well as visible upgrades to beautify the block in the form of street trees, graffiti removal, and improvements to the community garden. These projects were implemented by the NYC Justice Corps program of BSRC, which engages young people with criminal justice histories in job readiness, community-service learning, internships, and job placement.

In the pilot, Pratt's Energy $mart Communities Coordinator conducted outreach and developed and materials in conjunction with BSRC to help homeowners access existing incentive programs to finance home retrofits. These include the Division of Housing and Community Renewal's Weatherization Assistance Program; NYSERDA's Home Performance with ENERGY STAR® and NYSERDA's Assisted Home Performance with ENERGY STAR® programs, utility company incentives, Federal tax credits, and labor and materials from the NYC Justice Corps.

Neighborhood Context

Bedford Stuyvesant's 11,465 one- to four-family homes are among the city's oldest housing stock. The buildings audited during this pilot were typical of the neighborhood: nearly all 100-plus–year-old, one- to four- family brownstones. This community's residents stand to benefit tremendously from providing even modest improvements to reduce energy use. ; Owner occupants, comprising about 25 percent of the owners, stand to benefit most from energy upgrades in the form of improved comfort, health and lower costs. Many of Bedford Stuyvesant's residents –like those in other

predominantly low-income neighborhoods - are ill-equipped to afford the skyrocketing costs of heating fuel, electricity, and water. According to American Community Survey 2008 data collected by the U.S. Census Bureau, residents of the New York's 10th U.S. Congressional District, which includes the targeted blocks on Herkimer Street, face significant housing expenses. Three-quarters of all housing units have a mortgage and nearly 65 percent of owners pay more than one-third of their household income on monthly ownership costs, including mortgages, insurance, and property taxes. The foreclosure rate here is now the second-highest in New York City.

CLIMATE FOR RESIDENTIAL RETROFITS IN NEW YORK CITY

Retrofit Bedford Stuyvesant has done much to inform and is now integrated into a larger program called Retrofit NYC Block by Block. The Pratt Center is launching Retrofit NYC at a time of growing local support and ingenuity in residential retrofit programs and in a complex and quickly changing policy and program environment. While residential retrofits have reliably been used to reduce energy use and costs since the 1970s, primarily through the federal Weatherization Assistance Program for low-income households, retrofitting has yet to achieve wide-scale interest or adoption by homeowners in the U.S. Now, in the face of increasingly alarming evidence of climate change and upward trends in oil prices, the Obama administration and state and local governments have placed a new urgency on the need to retrofit existing buildings.

As this report is written, owners of one- to four-family homes in New York City—the primary target of Retrofit NYC—are eligible for one or more of a half-dozen incentive programs, while major new retrofit programs are on the horizon. The New York State Energy and Research Development Authority (NYSERDA) is about to launch the Green Jobs, Green New York (GJGNY) program, funded at $112 million, a large portion of which will be used to create a revolving loan fund for low-cost loans for retrofits. GJGNY will include support for local constituency-based organizations to conduct outreach and consumer education regarding residential retrofits. Legislation to permit on-bill recovery, which enables building owners to finance retrofits on their utility bills, is under consideration by the state legislature. In addition, New York State has been awarded $40 million in federal energy efficiency block grant funds to launch property- assessed clean energy (PACE) programs, including one for New York City. Retrofit NYC Block by Block aims to connect its efforts with these forthcoming programs and ensure that our community-based partners are well-positioned to connect property owners with emerging funding opportunities.

MAJOR PROGRAM ACTIVITIES AND PROGRESS

Retrofit Bedford Stuyvesant Pilot Program Results at a Glance

15 residential buildings received free energy audits

- 12 received Home Performance Comprehensive Home Assessments from BPI-Certified Contractors
- 3 received audits from the Weatherization Assistance Program at Bedford Stuyvesant Restoration Corporation

13 residential buildings have or plan to receive one or more energy efficiency improvements

- 1 received full set of recommended energy efficiency and health and safety measures, completed by BPI-Certified contractors
- 2 plan to receive partial set of recommended energy efficiency and health and safety measures, completed by BPI-Certified contractors
- 5 received partial set of recommended energy efficiency and health and safety measures, completed by Justice Corps
- 4 received partial set of recommended energy efficiency and health and safety measures, completed by building owners
- 1 received full weatherization services from WAP program
- 2 received partial weatherization services from WAP program

8 owners have or plan to use incentive programs in completion of energy efficiency improvements

- 1 used Home Performance with Energy Star
- 1 plans to use Assisted Home Performance with Energy Star
- 3 used WAP
- 4 plan to use Federal tax credits

5 residential buildings and **1** church received free labor and materials from Justice Corps

4 Community Benefits project components completed by NYC Justice Corps members

- 10 to 15 hours of work completed at individual residential buildings
- Completed renovations at Friendship Baptist Church over 8 to 10 weeks
- Upgraded "Children's Garden" community garden on Herkimer Street
- Painted two murals, one in the community garden, and removed graffiti

48 new street trees planted by MillionTrees NYC on Herkimer Street

Outreach

Between March 2009 and May 2010, residential building owners on select blocks of Herkimer Street were sent five mailings by Pratt and BSRC, received approximately three phone calls each, and received invitations to at least three meetings at either Friendship Baptist Church (located on the targeted blocks) or Restoration Plaza (located one block away). Homeowners who chose to participate in the program received substantially more outreach. Mailings were directed to the owner listed on the tax rolls; all the owners who responded or participated were living in their property at the time. Approximately 14 percent of the 105 residential buildings on targeted blocks of Herkimer Street participated in the program. Owners who participated in the program and received an energy audit received additional outreach to coordinate audits, review options for recommended energy efficiency and financing, and schedule energy efficiency work to be completed by the NYC Justice Corps program of the Bedford Stuyvesant Restoration Corporation.

Energy Incentive Program Offerings

At the time of the Retrofit Bedford Stuyvesant pilot, energy efficiency incentives available for one- to four-family homes in New York City included the following:

- Weatherization Assistance Program (WAP), which covers complete energy retrofits for owners with incomes of less than 60 percent of area median income
- NYSERDA Home Performance with Energy Star, which offers cash rebate incentives of up to 10 percent regardless of homeowner income
- NYSERDA Assisted Home Performance with Energy Star, which offers cash rebates of up to 50 percent for homeowners and/or tenants below 80 percent of the area median income.
- Senior Citizen Homeowner Assistance Program (SCHAP), which provides deferred loans to cover energy retrofits for homeowners over sixty years old with incomes of less than 120 percent of the area median income.

Additional information on benefits and eligibility requirements for each of these programs is included in Appendix A.

Energy Audits and Improvements

Fifteen residential building energy audits were completed during the pilot; three by the Weatherization Assistance Program and 12 by participating BPI-certified contractors. After completing the energy audit on each building, the participating contractor sent copies of the audit report (Comprehensive Home Assessment) to both the building owner and program staff at Restoration and the Pratt Center. Information on energy efficiency measures commonly recommended through these

audits is available in Appendix B. Program staff from either Pratt Center or Restoration followed up with each homeowner by phone to offer in person or phone-based assistance in reviewing in audit results and relevant incentive programs. Four of 12 recipients of Home Performance Comprehensive Home Audits chose to meet with the program staff in person to review their audit results and options for completing energy-efficiency measures.

Some homeowners pursued energy-efficiency improvements without the help of incentive programs. At least four homeowners reported making energy efficiency improvements such as changing from standard light bulbs to CFLs themselves. Two of these had already made or were prepared to make additional improvements such as weather stripping and adding cellulose insulation, either independently or with the help of family. Several additional homeowners noted that they had made other significant home improvements within the previous year (before participation in the program) such as window replacement and replacement of boilers or other major appliances, without knowing about the opportunity to access financial incentives and without full knowledge of energy- efficiency considerations.

Those who did take advantage of incentive programs and other assistance most frequently used the Justice Corps support and/or Federal tax credits. Although several building owners on Herkimer Street were potentially eligible for the Senior Citizen Home Assistance Program (SCHAP) program, none of the participating owners took advantage of this program to complete energy efficiency measures in their homes.

Additional Block Improvements

Additional work on the block completed by the Justice Corps included cleanup and upgrade of the Children's Garden on Herkimer Street. This included graffiti removal in the garden and another large building on the block, and painting two murals in their place.

In collaboration with the MillionTrees NYC program, the program also coordinated the planting of 48 new street trees on the block and providing tree stewardship training for the Justice Corps. This provides significant benefits for street beautification and public health, an important need of the area. According to the Furman Center's State of New York City's Housing and Neighborhoods, Bedford Stuyvesant has the 10th highest rate of asthma hospitalizations in New York City.

In addition to work on the community garden and individual homes, Justice Corps contributed to the program with substantial work in renovation of a large church on the target blocks. Already engaged as a program partner in providing meeting space and

outreach to congregants, Reverend Gaddy of the Friendship Baptist Church had previously expressed interest in energy efficiency improvements and received a free energy audit through the Pratt Center's Sustainable Houses of Worship initiative. At Friendship Baptist Church at 92 Herkimer Street, the Justice Corps provided labor and materials for renovation of a community dance room and did repair, construction, and painting of new and existing walls and ceilings. Pratt Center staff proceeded to help the church implement selected energy-efficiency measures and secure guidance on roof repairs.

Materials Development

As part of this pilot, the Pratt Center and partners developed several outreach materials including a trifold brochure and several handouts for homeowners on topics such as "What is a retrofit?", "Quick guide to financing programs," and several letters with energy efficiency incentive information. The project was also documented through photography and video taken by a former Herkimer Street resident.

Feedback from Participants and Block Residents

The following sets of "lessons learned" result from review of all program documentation, as well as 11 in-depth interviews with participating homeowners, 11 brief surveys with other Herkimer Street residents, and conversations with program partners. In-depth interview and survey instruments and results are available in Appendix C and Appendix D.

LESSONS LEARNED FOR PROGRAM DESIGN AND IMPLEMENTATION

Expand Geography and Scope

Attracting an adequate number of homes is central to the block-by-block premise and to achieving the economies of scale desired in order to integrate with workforce efforts.. A second pilot, conducted by Cypress Hills Local Development Corporation, targeted about 10 blocks with nearly 400 buildings following similar outreach protocols. It achieved similar rates of program take-up – upwards of 15 percent. Goals for the desired number of participating homes in each neighborhood should be determined in conjunction with program staff, community group partners, and participating WAP and BPI-certified contractors. Expanding the scope of the program may include offering incentives for renters and owners in all building types as well as small business and houses of worship.

Offer More Generous Incentives to Increase Uptake of Comprehensive Retrofits

The most significant barrier indicated by participating homeowners is the cost of retrofit work. At the time of the pilot, homeowners with incomes above 80 percent of the area median income were eligible for rebates of up to 20 percent of the cost of the cost of the improvements or low-cost financing through NYSERDA's Home Performance with ENERGY STAR program. While many of those who received the Home Performance audit expressed interest in implementing the audit recommendations, the incentives were insufficient to induce most to join the program.

Offer Tiered Options for Participation

It is essential that audit reports listing recommended measures offer options for "packaged measures" at low and medium price points. We observed that owners experienced sticker shock in cases in which audit reports recommended a single package in the range of $20,000. Reports with packages starting at $1,000 or less, and including measures with short, medium, long-term payback, will prevent homeowners from becoming fixated on high-priced comprehensive packages and encourage them to focus attention on completing low-cost/high impact initial measures.

Know your Audience

Achieving a thorough understanding of the overall income and housing trends in each targeted neighborhood is also helpful. U.S. Census and American Community Survey data on mortgage amounts and monthly ownership costs are especially useful, as is Home Mortgage Disclosure Act data on mortgage lending, home improvements, and estimated income, by census tract, available at the Federal Financial Institutions Examination Council (http://www.ffiec.gov).

Address Existing Concerns of Homeowners in Retrofit Options

Increasing homeowners' understanding of energy efficiency improvements is a core program objective. At the same time, several homeowners presented existing concerns for their buildings at the time of their enrollment. In order to present the most relevant set of options to each homeowner, the program should offer information on incentives available to help homeowners complete not only the most cost-effective measures, but also those that are of greatest concern to them. For example, several homeowners reported interest in installing new exterior doors or windows to increase comfort. Although these measures may not offer the highest savings to investment ratio, homeowners will appreciate help in addressing these issues. Regular inquiry and response to specific owner concerns for their buildings should be built into the program design.

Circle Back to Homeowners to Maximize Outcomes

Homeowners who enrolled in the pilot program responded to offers of free audits, assistance in reviewing options, and free labor and materials from the Justice Corps at various times over the course of the 15-month pilot, citing the need to address other family or building priorities. Urgent personal matters (childbirth, care for elderly parents) or economic hurdles (job loss) were not uncommon and led some homeowners to "take a break" from the program for several months before resuming contact with program staff. In addition, many homeowners who have not completed recommended measures yet report that they plan to do so once they've had adequate time to save money or address other building priorities. Information on the homeowner's desired timeline might be solicited during the intake process, at which point outreach workers can also inform homeowners about any approaching deadlines for specific incentive opportunities. This will enable outreach staff to contact them when they are ready to act. In addition, staff can circle back if changes in incentives might affect property owners' decisions.

Address Issues of Debt Aversion among Homeowners

One elderly homeowner made a revealing comment: "Financing is murder." While not every homeowner interviewed offered such an extreme point of view, many expressed some level of aversion to taking on debt for energy efficiency improvements. They made mention of the "housing and financial crises" and described loans to be repaid as a "financial burden or bind." Homeowners in Bedford Stuyvesant are likely to have felt impacts of these crises close to home. Out of every 1,000 homeowners in Bedford Stuyvesant, 63 faced a foreclosure action in 2009 – the second highest rate of any community district in the city. Nearly 7 percent of owners are more than one year late in paying property taxes. One senior homeowner remarked that older people on fixed incomes in particular might be especially deterred from taking on loans, even

if they already own the buildings outright. At the same time, homeowners express a desire to avoid "lump sum payments" up front. Inquiries about homeowners' interest in nontraditional loan products such as PACE and on-bill financing revealed that at least some would be more open to these types of financing than to traditional loans currently offered by NYSERDA Home Performance. Details on this feedback are provided in a later section on Lessons Learned for Supporting Energy Efficiency Improvements.

Bring Diverse Advisors and Skills to the Program Team

The complex nature of developing, marketing, implementing, and evaluating neighborhood retrofit programs requires a staff with strong skills and advisors in diverse areas. Successful programs maintain staff or consultants with a range of skills including organizing, marketing, workforce training, energy-auditor training, utility coordination, contractor relations, and retrofit quality control. In addition, many programs have assembled an advisory body, comprised of policymakers, community leaders, and weatherization and utility industry representatives, that can aid them in engaging various stakeholders and lend additional credibility to their program. Consider involving homeowners and other stakeholders in an advisory board to increase buy-in and provide regular insights into homeowner needs.

Collaboration with Local WAP Provider and BPI-certified Contractors is Key

As the most generous incentive program, the Weatherization Assistance Program is a natural first choice for any income-eligible homeowner, so reliable access to WAP services is essential. Like their counterparts at the local WAP program, BPI-certified contractors are attracted to the block by block model because of the potential to provide clusters of similar types of contracting tasks and, in effect, maximize the efficiency of the contractor's time spent in the area.

Link to Re-entry and Other Workforce Programs to Increase Project Impact

Incorporation of the Justice Corps in the program added positive impacts not only to the volume of energy efficiency measures successfully completed, but also to the social objectives of the program. Owners that received free labor and materials from the Justice Corps did not express concern about the Justice Corps members' lack of experience in installing energy efficiency measures. They understood that the Corps members would receive relevant training prior and be supervised during the installations. Nor did the knowledge that Justice Corps members had previous involvement with criminal justice system appear to be a deterrent for building owners. On the contrary, several owners expressed satisfaction with the inclusion of this group in the program as they felt it offered the Justice Corps valuable job experience and skills. They noted interactions with the Justice Corps and coordinating staff as being "very professional."

LESSONS LEARNED FOR ENGAGING HOMEOWNERS

Energy Savings and Financial Incentives Are Primary Motivations

More than half of survey homeowners noted savings on energy bills as the primary motivator for their participation, noting that current bills were "sky high." During a door-to-door survey, eight of ten additional respondents, both owners and renters, also noted savings on energy bills as a primary reason they would consider making energy improvements. See Appendix D for additional results from the door-to-door survey. Other reasons for initial enrollment in the program included the offer of a free energy audit and incentive programs to help owners save money on energy-efficiency measures that they were already considering.

Take Buildings' Significant Needs into Account

Most building owners came to the program with existing concerns for their buildings, related to energy efficiency and otherwise. In addition to interest in replacing windows and exterior doors to improve comfort and reduce draftiness, other items on owner's existing "to-do" lists included renovation of rental units and replacement of appliances as needed. It should also be noted that at least two building owners who initially expressed interest in the program were not able to participate during the pilot phase because their buildings were already undergoing significant renovation and could not be properly audited. Several participating buildings presented health hazards such as asbestos or physical barriers such as excessive clutter preventing insulation installation. Another set of concerns expressed by building owners was preservation of the original character of the historic brownstones through maintenance of original fixtures and wall molding. Understanding common concerns among owners of buildings of a similar type and age can provide insight into incentive design and messaging by determining which types of energy efficiency improvements may already be top of mind among owners.

Recognize That Property Owners Don't Typically Use the "Retrofit" Label

While several participants indicated previous interest in making specific energy-related improvements to their buildings, only one of 11 surveyed owners said they were considering having a whole-building energy audit done before learning about this program. Five noted some previous knowledge of "energy retrofits for homes" prior to this program, largely from the general media surrounding the "green revolution." Even after their participation in the energy audit, no surveyed owners used the terms "retrofit" or "energy efficiency improvements," but instead referred to specific measures that they were considering or have already taken. Several noted their expected benefits from the energy audit to be to "find out what was wrong" or "what problems" their building had. This is different from, for example, referring the

audit as providing information on "opportunities" to save and might be of interest for program message development.

Program Offerings Should Be Crystal Clear

Several building owners emphasized the importance of presenting the program offerings in plain and precise terms. They recommended that information on incentive programs be presented with details on the savings offered, repayment terms, and eligibility requirements, including the need to include tenants' financial information with applications. Given the various incentive programs available for owners of different incomes, ages, utility service areas, and building types, an important part of making the program clear is ensuring adequate understanding of the economic situation and building needs of each homeowner. Several homeowners who did not qualify for income-based programs expressed frustration about their perception that there were "no programs for me" despite Pratt and Restoration's repeated efforts to convey that there was a program for everyone.

A more thorough intake process, tools like the web-based energy efficiency incentive finder Pratt Center is developing, and individual consulting on each audit report that includes specific financial costs would facilitate this increased understanding and prevent building owners and program staff from spending time on incentive programs that may not be available or attractive to each particular owner.

Utility Account Information Is a Reasonable Request

Nearly all surveyed homeowners said they would agree to share their utility account information for a limited amount of time, for the purpose of tracking energy usage. Two expressed interest in receiving updates from those doing the energy tracking, and thought this might help other households agree to release the information as well. Two others said they were not sure and would need time to think about it. One suggested providing future participants the same opportunity to consider the decision, rather than putting participants "on the spot" for an answer.

Listening Happens Close to Home

At least five surveyed owners were encouraged to participate in the program by their family members, usually adult children. A few owners who had financial challenges with their buildings noted that their adult children (generally in their twenties or thirties) "thought it was a good idea" for them to attend meetings and participate in the program. Other adult children who were making decisions for their senior parent(s) often came to meetings themselves and coordinated all aspects of their family's participation in the program.

Neighborhood Networks are Critical Sources of Information

Owners confirmed that the block association and churches are important influences outside the family. Nearly all participating owners initially learned about and signed on to the program during a meeting organized by the Herkimer Street Block Association with Pratt and Restoration and hosted by Friendship Baptist Church. One owner noted that outreach to houses of worship should not be limited to the churches located on targeted blocks, but to all nearby churches, as congregants do not always attend services on the block where they live but count on local friends and neighbors to inform them about block and neighborhood affairs. This point sheds light on another frequently noted suggestion for outreach—word of mouth among neighbors. Several owners expressed an interest in sharing their experience with this program with their neighbors on the block and might be recruited for future outreach efforts. A few owners noted substantial distrust of government, from city to federal, and were wary of programs that sounded "too good to be true."

Block by Block Outreach is a Vehicle for Increasing Awareness About Community Resources.

Fewer than half of surveyed homeowners were aware of Bedford Stuyvesant Restoration Corporation before their participation in the program. Of these, at least one had only found out about it recently despite being a longtime resident, two recognized it in affiliation with Senator Robert Kennedy, Jr., one of the organization's founders, and two had more extensive knowledge of the arts and cultural programs offered. Regardless of their previous awareness of Restoration, owners were pleased to see Restoration involved in this program and noted that they gained "a better understanding of what Restoration is trying to do." A few owners suggested that Restoration increase its local outreach efforts and even engage block residents door-to-door and through mailings with information on this and other programs.

Retrofit Outreach Provides a Vehicle to Learn About Other Resident Concerns

Surveyed owners offered commentary on additional social, economic, and environmental issues their neighborhood is facing. Connections between the environment and block appearance were evident; concerns about maintenance of new and older street trees, especially litter and dog waste, were mentioned several times. For the most part, block residents expressed great satisfaction with the newly planted trees and several took initiative in planting flowers to further beautify the spaces. At least one homeowner expressed appreciation of the work completed in the community garden and specifically the mural artwork that "shows us great historical leaders of our community." Homeowners also expressed concern about groups of certain ages, seniors and young people in particular. The need to prevent seniors who are struggling financially from "falling through the cracks" and "being put out of their homes" was

mentioned several times. Another issue that was mentioned by a few senior homeowners is the lack of employment and "direction" for young men in the neighborhood. One homeowner who runs a youth dance program shared her interest in "something for kids to do." Another owner was closely involved in organizing and outreach for Census 2010. Finally, a few homeowners mentioned the presence of the nearby men's homeless shelter in association with increased pedestrian traffic and litter on the block and one expressed concern about a plan to expand a local homeless shelter's catchment area to include all of New York City, noting it was more than the neighborhood's "fair share."

LESSONS LEARNED FOR SUPPORTING ENERGY EFFICIENCY IMPROVEMENTS

Financing is a Sticking Point

All 11 surveyed owners indicated that lack of funding was a major barrier to completing the work recommended in energy audits. Many owners referenced the total cost estimate for all energy efficiency improvements recommended, revealing that the total estimated cost, averaging around $20,000 per building, was the figure owners zeroed in on when considering funding for improvements. The generosity and type of financial incentives available (see Appendix A) did not seem to meet the needs of most participating homeowners. At least two owners who were not eligible for means-tested incentive programs like Assisted Home Performance or WAP specifically noted that the 10 percent rebate incentive offered by the Home Performance program was simply "not enough" to encourage them to complete energy efficiency improvements not already on their "to-do" lists. One particularly investment-minded owner questioned the financial rationale behind investing over $28,000 to save $1,700 annually on energy bills, an approximate payback time of 17 years, as noted on the audit report he received. This and other owners with an explicit investment interest in their building noted that they believe a "good investment" should pay for itself within 8 to 10 years.

Regardless of whether they see their buildings primarily as an investment or as shelter, most participating owners indicated a preference to pay for home improvements over time in cash installments or to have the opportunity to save up for a particular improvement and then pay the contractor in full. Owners were not interested or outright disdainful of financing through traditional bank loans. One owner applied for a loan to cover costs of most recommended measures but was denied for credit reasons. One owner who did complete the full scope of measures recommended through the Home Performance program paid out of pocket for all costs.

Mixed Reviews for On-Bill and PACE Financing Models

In addition to their use of existing incentive programs, surveyed owners were asked to comment on potential future financial models: PACE, which would allow owners to pay for retrofits on their property tax bills, and on-bill recovery, which would allow owners to pay for upgrades via their utility bills. Most owners were curious and expressed an interest in staying informed as programs become available. More than half of surveyed homeowners said that on-bill recovery would be something they might participate in. They noted it was attractive because it "might motivate me to have all the work done, rather than piecemeal." A few said that this model was not attractive because "no one wants to see a high bill" every month and it may diminish the impact of savings on bills. About half of surveyed homeowners also said they might participate in a PACE

financing model. They noted it was attractive because it may appear more manageable on their quarterly bills and would make repayment more efficient. Three noted that this model was not attractive because property taxes are already "too much and rising" and increases would present financial hardship. One owner also expressed concern about the impact of PACE on home resale value as she perceived it as adding another cost to buyers, in addition to the actual price of the home. Several owners said they wanted answers to questions on additional details, such as the interest rates, payback time, and opportunities for accompanying cost reductions, in order to fully consider these programs.

Energy Efficiency Improvement Options and Timing Should Be Flexible

The majority of participating owners, despite receiving a free Comprehensive Home Assessment, plan to continue making energy efficiency improvements to their homes, or in "bite-sized chunks," as they deem necessary and affordable. Measures that owners identified as next on their "to-do" lists often reflected their previously existing agendas such as replacing windows, exterior doors, and non-working appliances. At least four owners added installation of insulation or weather stripping to their lists following the audits since they learned these types of measures can have "big impacts on their heating bills" and can be "do-it-yourself." Owners reported plans to make changes that also related to the comfort of their home, e.g. exterior door and window replacements, before the winter. As far as appliance replacement, owners seemed to prefer to replace them as needed, as opposed to when program incentives were available; they did note interest in energy-efficient products. Owners expected to spend around $100 for minor improvements such as weather stripping and between $1,000 and $2,000 for more major improvements. This reveals an important price point at which to offer owners a written estimate of recommended energy efficiency improvements. The do-it-yourself measures implemented over time as a result of the audits present a challenge to program coordinators seeking to document program outcomes. Incentives to owners to report their energy savings improvements, such as energy-saving giveaways like power strips and the like, might be considered.

Owners Value Audits But May Question Paying for Them

Several homeowners noted that their primary use for their energy audit report would be as a building "to-do" list or "action plan." They appreciated the "straightforward" and "detailed" information offered through both the audit reports and the contractors as they performed the audits. All owners reported keeping their reports, though several noted that they did not review them carefully enough and plan to revisit them. Some owners reported that they might pay $50 to $100 for an energy audit, though noted that it seems strange to charge owners for information that is essentially a work order that owners might purchase. At least two owners remarked that the audit

should be a complimentary part of contractor's service and questioned whether the program was focused too much on trying to generate business for the participating contractors.

Knowledge is a Key Benefit of Participation

Several owners cited their participation as a source of new knowledge about their buildings' needs and home energy efficiency in general. For example, a few owners appreciated learning which energy efficiency improvements are most cost effective in terms of energy savings. While most building owners came to the program with concerns about heat escaping through windows and exterior doors, each audit report recommended insulation, particularly of attic and basement, as the most cost-effective type of energy efficiency improvement. In addition to new information on which types of energy efficiency improvements to pursue, the audit reports provided owners with assessment of health and safety-related issues such as smoke and CO detectors and proper ventilation of kitchens and bathrooms. In at least one case, an owner corrected a gas leak identified by the auditors in order to enable the auditors to continue their work.

Life Can Get in the Way

Significant life events or issues that confronted participants in the pilot included birth of a child, impending or actual loss of employment, severe illness of family members, and unforeseen, urgent building or sidewalk repairs. For example, two participating buildings had broken windows or portions of exterior walls fall off of the building during the pilot. Given the age of the buildings, homeowners are confronting serious maintenance issues. Many owners also referred to the larger economic and housing crises as a barrier to additional efforts. One senior owner noted constant financial pressure of "being one illness away from being out of my home." In addition to financial implications of illness, emotional stress can also be a hurdle. One adult daughter of a homeowner in the pilot noted that she "psychologically could not deal" with her mother's illness and think about energy efficiency improvements at the same time.

LESSONS LEARNED FOR WORKING WITH THE JUSTICE CORPS

Increased Flexibility and Funding for Justice Corps Participation Expands Opportunities

The Justice Corps made significant contributions to this pilot program yet noted that their effectiveness could be increased through greater flexibility in scheduling work, selecting measures, and funding. Justice Corps' function as a job development program necessitates participants to follow a typical weekday work schedule. This schedule often conflicted with owners' schedules and as a result, required extensive coordination for program staff. Similarly, work at the church was difficult to schedule due to ongoing church activities. As it seems unlikely that typical schedules of building owners or the church will change, it may be beneficial to include the possibility of weekend or evening work in the Community Benefits project request so that Justice Corps members can adequately adjust their schedules in advance and owners can be informed of specific time slots during which the Justice Corps is available. Justice Corps coordinators also expressed interest in the opportunity to dedicate more funding to individual buildings, granting them more flexibility about which measures to install. This would result in both a more diverse range of training for Justice Corps members and more significant economic and energy-saving impacts for building owners.

Coordination of Homeowners and Suppliers Maximizes Impact

In addition to increased flexibility and funding, Justice Corps coordinators suggested developing a relationship with a local materials supplier to maximize both efficiency and cost of purchasing materials. Other residential retrofit programs, including Restoration's Weatherization Assistance Program, maintain such a relationship. They potentially offer benefits such as pre-packaged retrofit "kits" containing common supplies needed for installing energy efficiency measures and bulk order prices, making both the Justice Corps' available time and budget go farther.

Meaningful Connections between Trainees and Contractors Amplify Opportunities

Justice Corps coordinators noted that providing members with opportunities to be trained by and work directly with BPI-certified contractors and WAP staff would likely increase their enthusiasm for the work and encourage better relationships, possibly leading to future employment opportunities for members. In addition to on-site training, members would benefit from direct meetings with contractors and WAP, during which they could pose questions about jobs in the industry and demonstrate their interest in being hired as interns or apprentices.

LESSONS LEARNED FOR WORKING WITH BPI-CERTIFIED CONTRACTORS

Contractors Can Collaborate in Training and Program Development

BPI-certified contractors have a great deal of knowledge to offer both building owners and trainees seeking to improve building performance and energy efficiency. They have the potential to contribute to programs like Retrofit Bedford Stuyvesant in meaningful ways beyond conducting energy audits and installing energy efficiency measures. Each contractor's interest in contributing to the program as trainers, educators, and overall community partners should be gauged and incentivized appropriately before inviting them to participate.

Ongoing Communication between Contractor and Program Staff Is Essential

In programs with many moving pieces and players, it is important to stay in touch. While the pilot program incorporated somewhat regular meetings of outreach program staff, communication with contractor partner was ad hoc and less efficient than it could have been. Regular interaction provides the forum program staff need to be fully updated on the status of audits and installation of measures. It also provides an opportunity for contractors to relay successes or challenges they are experiencing, along with their general satisfaction with the program

More Choices and Price Points Increase Likelihood of Implementation of Measures

In acknowledgement of homeowners' difficulty in covering up-front costs and their common aversion to debt, it is critical to ensure they are aware of all their options for energy efficiency packages, from the most comprehensive to the most minimal measures. Participating homeowners frequently referred to the total amount quoted for installation of all recommended energy efficiency improvements (averaging approximately $21,000 per building, see Appendix B), without mentioning other, less costly options for achieving energy savings. This is not surprising, given that nine of 12 comprehensive home assessments completed during this pilot only presented the total amount as an option in writing. Although contractors and outreach staff made efforts to inform homeowners of less expensive package options during phone or in-person meetings, it important that homeowners also receive written documentation of these options on the audit report itself as they often put off energy efficiency improvements for several months, but do save the audit report.

QUICK GUIDE to Financing Sources for Energy Improvements in One- to Four- Family Homes in New York City

INCOME LEVEL			PROGRAM	TYPE OF ASSISTANCE	Agency	MORE INFORMATION
% of State Median Income	Household Size	Annual Income				
At or below 60% of State Median Income	1 Person 2 Persons 3 Persons 4 Persons 5 Persons 6 Persons	$23,556 $30,804 $38,064 $45,312 $52,560 $59,808	Weatherization Assistance Program (WAP)	Free energy assessment; Free weatherization measures	NYS Division of Housing & Community Renewal	www.dhcr.state.ny.us
			National Grid Low Income Gas Efficiency Program	Free heating load reduction measures (up to $1800 value)	National Grid	www.aeanyc.org
			EmPower New York℠	No cost electric reduction (e.g. refrigerator, lighting); No cost home performance (e.g. insulation)	NYSERDA	www.getenergysmart.org
At or below 80% of State Median Income	1 Person 2 Persons 3 Persons 4 Persons 5 Persons 6 Persons	$43,000 $49,150 $55,300 $61,450 $70,060 $79,744	Assisted Home Performance with ENERGY STAR®	Subsidized costs; Low Cost Financing	NYSERDA	www.getenergysmart.org
Seniors Only (Age 60+)	1 Person 2 Persons 3 Persons	$59,600 $68,000 $76,600	Senior Citizen Homeowner Assistance Program (SCHAP)	Low- and no-cost financing	The Parodneck Foundation	www.parodneckfoundation.org
	1 Person 2 Persons 3 Persons 4 Persons	$23,556 $30,804 $38,064 $45,312	Weatherization, Referral and Packaging Program (WRAP)	Free energy audit; No cost repairs for energy, health, and safety measures	NYC Department for the Aging	www.nyc.gov/aging Or call 311
Above 80% (not qualified for above programs)			Home Performance with ENERGY STAR®	Cash incentive for measures taken; or Low cost financing	NYSERDA	www.getenergysmart.org
			National Grid Residential Energy Efficiency Programs	Rebates for the purchase and installation of eligible high-efficiency gas and solar equipment.	National Grid	www.thinksmartgreen.com
			Con Edison Residential HVAC Programs	Rebates for the purchase and installation of eligible high-efficiency gas equipment.	Con Ed	http://www.coned.com/energyefficiency/ Or call 1-800-643-1289
ALL Income Levels			Federal Tax Credits for Energy Efficiency	Federal tax credits available at 30% of the cost, up to $1,500 for energy efficiency measures	ENERGY STAR (U.S. Dept. of Energy & EPA)	www.energystar.gov/taxcredits

Contact: Wendy Fleischer, Coordinator,
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Updated 8/6/2010

Information Reflects Programs Available Before December 31, 2009

Average Total Cost of All Measures Recommended per Building	**$21,025**
Average Annual Energy Cost Savings Expected from Recommended Measures	**$1,362**
Average Simple Payback Time for Recommended Measures in Years (before incentives)	**16.9**

Individual Measures	**Average Cost Estimate for Specific Measure Recommended per Building**	**% of Audited Buildings Where Measure was Recommended**	**Party Installing Measure**		
			Building Owner	**Justice Corps**	**BPI-Certified Contractor**
Roof Insulation	$814	42%			■
Basement/Attic Insulation	$2,154	83%			■
Air Sealing	$2,623	100%	■	■	■
Window/Skylight replacement	$6,379	92%			■
Replacement of Light Bulbs with CFLs	$156	83%	■	■	■
Air Quality Improvements: Fans/Return Vents/ Exhaust	$1,919	75%			■
Pipe Insulation	$1,365	100%		■	■
Exterior Door Replacement	$942	50%			■
Walls or Stairwell Insulation	$2,390	67%			■
Chimney Cap & Liner Replacement	$90	33%			
CO & Smoke Detector Installation	$287	92%		■	
Appliance Replacement	$0	0%	■		
Boiler or Hot Water Heater Replacement	$138	8%			
OTHER: Roof Repair; Gutter Repair; Sealing Unused Chimney; Exterior Door Lentil Replacement	$603	50%			

Does not include WAP Participants

Hi my name is _____ and I work with Bedford Stuyvesant Restoration and the Pratt Center on the "Retrofit Bedford Stuyvesant: Block by Block" program that offered the free energy audits this past year.

Restoration is planning to extend this program to other parts of Bedford Stuyvesant, but before we expand it we want to find out how the program worked for you, so we can be sure to repeat the things that worked and change anything that didn't. Do you have about 10 or 15 minutes to talk with me about this right now? [If NO: No problem, I understand. Do you think we could set up another time that I could call you or come by to talk?
CONTINUE TO SCHEDULING]

Great, thank you! When we're done, I'd also like to ask you about your electricity and heat providers, to see if you might be able to help us access energy usage information that we can use to think about more affordable energy options for people in this neighborhood.

We are not going to identify you or your building specifically, so we'd like to start with a couple general questions on the building you had audited so we can understand more about what might be most helpful for other people in similar buildings in the future.

1. How many units are in your building?

2. Do you live in the building that was audited through the Retrofit Bedford Stuyvesant program?

3. Had you heard of 'energy audits, energy retrofits, or energy efficiency improvements' before this program?

   If YES, where did you first hear about 'energy audits, energy retrofits or energy efficiency improvements'?

   Were you thinking about getting an energy audit of your building before you heard about the Retrofit Bedford Stuyvesant program?

4. How did you first find out about the Retrofit Bedford Stuyvesant program?
   - Block Association meeting
   - Block party
   - Church
   - Mailed letter
   - Phone call
   - Other (i.e. Neighbor, Community Garden, etc)

5. What piece of information made you want to schedule a free energy audit? We know it may be more than one.
   PROMPT: For example...
   - You can receive a free energy audit
   - Your neighbors are participating in the program
   - The program is offered by BSRC and Pratt Center
   - You can save money on energy bills by making energy efficiency improvements
   - There are incentive programs to help reduce costs of energy improvements

6. What did you expect the benefits of performing an audit would be?
   Did the actual benefits of completing an audit differ from what you expected?

7. Did anyone you know encourage you to participate in the program?
   Did anyone you know express concern about your participation in the program?

8. What concerns or worries did you have about participating in the program?
   PROMPT: About having an energy audit of your building completed? About making energy improvements to your building?

9. When you received the audit report, what was your first reaction?
   PROMPT: What information from the audit report was most useful to you? What questions did you have about the information in your audit report?

10. Did you want to move forward with any of the energy efficiency measures recommended?
    Why?

11. Did you complete any energy efficiency improvements on your building between the time you first heard about the program and today?

    If YES:

    Which?

    Why did you select that/those measure(s)?

    Who else shares in making these kinds of decisions for your building?

    Who performed the actual work?

    Did you use any of the incentive programs from NYSERDA, Con Ed, National Grid or Federal tax incentives to reduce the costs of the work?

    Approximately, how much money did you spend (cash or loans) making these improvements (if any)?

    Was this more or less than you expected to spend before you scheduled your audit?

    Have these changes benefitted you?

    If NO, why not?

    Are you considering making any of the recommended energy efficiency improvements within the next year? In the next 2 to 3 years? In five years or more?

12. Now that you know the type and quality of information a Comprehensive Home Assessment energy audit report gives you, how much do you think you would pay for it?

13. How would you describe your overall experience with the Retrofit Bedford Stuyvesant program?
    PROMPT: Was anything particularly difficult about working through this program?
    Was anything particularly valuable about working through this program?
    Did you receive any written material from the program that you still use or keep a copy of?
    Did you learn about any additional resources from participating in this program?

14. How did your participation in the Retrofit Bedford Stuyvesant program change your perception of Bedford Stuyvesant Restoration Corporation?

As I mentioned, there are plans to expand this program to other blocks on the neighborhood toward the same goals of reducing energy use and cost and increasing green jobs. You've been very generous with your time already. Do you have a few more minutes to help us think about how to conduct this program in the future?

1. If we wanted to expand this program to other blocks in the neighborhood, what information should we give other homeowners and how should we try to reach them?

2. Which groups or individuals are leaders in your neighborhood?

3. What additional support or information do you think should be offered the next time around?

4. What is the biggest environmental issue your neighborhood is facing today?
   Heath issue?
   Economic issue?
   Social issue?

5. Is there any specific information that you are curious about related to energy or the environment? About how they relate to your health? To your economic stability?

We plan to track energy use and energy reductions over time throughout Bedford Stuyvesant. It would be really helpful to us to have your electric account number and gas account number so that we can monitor energy use over time for the neighborhood. We will only use the energy use information for research purposes. If you are amenable, we would ask you to sign a form giving us the acct number (or attaching a recent bill) and signing the form.

Thank you very much for your time. Your feedback is extremely helpful. I'll leave you with [mail you] the program brochure, it also has web site addresses for NYSERDA where you can get more information on what programs are out there to reduce the costs of energy retrofits. I'll also leave you with information n about Restoration's programs, like Single Stop and others, and information from the Coalition to Improve Bedford Stuyvesant (CIBS).

OWNERS

Which 2 reasons below are the most important to you when thinking about making energy efficiency improvements to your building?

A. Reduce your utility bills — **Ranked #1 reason by 2 owners; Ranked #2 by 1 owner**

B. Improve your building's comfort — **Ranked #1 by 1 owner**

C. Make the air inside your house cleaner and reduce triggers of allergies and asthma

D. Reduce pollution outside that causes allergies and asthma

E. Reduce the emissions that cause global warming

F. Be more "green" — **Ranked #2 by 2 owners**

Which 2 reasons below most make you want to schedule an energy audit of your building?

A. The audit is free — **Ranked #1 by 2 owners**

B. Getting specific information on how different energy efficiency improvements can save you money on your energy bills — **Ranked #2 by 1 owner**

C. Help finding out about rebates and other financial incentives for energy efficiency improvements — **Ranked #1 by 1 owner**

D. Making your block one of the greenest in New York City — **Ranked #2 by 2 owners**

E. Participation in community project that could lead to local green jobs

RENTERS

Which 2 reasons below are the most important to you when thinking about reducing your energy usage at home?

A. Reduce your utility bills — **Ranked #1 by 6 renters; Ranked #2 by 1 renter**

B. Improve your building's comfort — **Ranked #1 by 1 renter; Ranked #2 by 1 renter**

C. Be more 'green' — **Ranked # 2 by 2 renters**

D. Reduce pollution outside that causes allergies and asthma — **Ranked #2 by 1 renter**

E. Reduce the emissions that cause global warming — **Ranked #2 by 2 renters**

Which 2 reasons below most make you want to use a CFL bulb?

A. The CFL bulb is free — **Ranked # 1 by 2 renters**

B. Getting information on how using CFLs can help you reduce your energy usage — **Ranked #1 by 1 renter**

C. Getting information on how using CFLs can save you money on your energy bills — **Ranked #1 by 3 renters; Ranked # 2 by 2 renters**

D. Believing you are using a green product — **Ranked # 2 by 2 renters**

E. Making your block one of the greenest in New York City

ADDITIONAL RESULTS

0 of 5 homeowners had heard of program previously

0 of 10 renters had heard of program previously

3 respondents shared positive comments about street trees

Relating to Individual Homeowners

- Being a homeowner is challenging
- Dealing with emergency expenses
- Homeowners know a lot about their building already
- Energy bills are "sky high"
- Property taxes are going up all the time
- Using the air conditioner "like it's going out of style"
- Replacing doors and windows and appliances as needed
- Preserving brownstone character
- Listening to younger family members
- Supporting and caring for older family members
- Making all the decisions myself
- Financial uncertainty is out there
- Have not heard of energy audits or retrofits and not on my agenda

Promoting the Benefits of the Program

- Knowing up-front what program offers and my eligibility
- Knowing what help is available before making major home improvement purchases saves money
- Giving me an action plan or to-do list
- How to pay for the things I already know I need and learning what other things I can do
- Program and partners that can be trusted
- Program staff/representatives that actually "are in my same shoes" (i.e. neighbors, homeowners)
- Additional investment and care for the neighborhood
- Address issues of trash and litter on my street
- Assistance for seniors who are struggling financially
- Opportunities for employment and direction for young people
- "Being part of something positive"
- Connection to other services of Restoration
- Demonstrate "before and after" through photographs or statistics

Recognizing the Challenges of Making Energy Efficiency Improvements

- Financing can be scary or unavailable
- Looking for a program for "me" – my income, building type, age, etc
- Need to make changes on my own timeline
- Financial incentives that significantly reduce costs of work, "10% is not enough"
- I can only do things in "bite-sized chunks"
- "I almost threw up when I saw total estimated cost"
- Asking tenants for their income information feels strange

Additional "Block-Greening" Resources for Consideration

BrooklynShade
http://www.brooklynshade.org/

Greenest Block in Brooklyn Annual Contest
http://www.bbg.org/greenbridge/greenestblock/#/tabs-3

Green & Healthy Homes Initiative
http://www.ghhi.org

New York Interfaith Power & Light
http://www.nyipl.org/

Frequently Used Acronyms and Abbreviations

BPI	Building Performance Institute
NYSERDA	New York State Energy Research and Development Authority
Pratt Center	Pratt Center for Community Development
PACE	Property Assessed Clean Energy
Restoration	Bedford Stuyvesant Restoration Corporation
WAP	Weatherization Assistance Provider (Federally- and State-funded)

Booth Ferris Foundation

Bank of Tokyo-Mitsubishi UFJ, Ltd.

Mertz Gilmore Foundation

New York State Department of Environmental Conservation

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