

GREENING A BLOCK

A “COMPREHENSIVE ENERGY TARGET ZONE” IN COMMUNITY BOARD 3

A groundbreaking energy-efficiency demonstration project to turn an ordinary Lower East Side block south of the Con Edison 14th Street Power Plant into an urban showcase for energy efficiency, pollution reduction, job development and community sustainability.

PROJECT OVERVIEW

Greening A Block is a first-of-a-kind project to demonstrate and quantify the achievable gains in air quality, energy conservation, jobs, and dollars from concentrated community-based energy-efficiency investments. Using environmental mitigation funds from Manhattan Community Board #3’s settlement with Con Edison over the East River (14th Street) Plant expansion, the project will install state-of-the-art energy-efficiency measures throughout buildings on an ordinary city block. With support from the New York State Energy Research & Development Authority (NYSERDA) and with the participation of Community Board #3 (CB3) and the Neighborhood Energy Network (NEN), Greening A Block will develop a model urban Comprehensive Energy Target Zone¹ in CB3. Our goal is for this first block to serve as a template for similar efforts throughout CB3 and other New York City neighborhoods.

Feasibility Study - the First Step

Before any of the Con Ed settlement fund can be dedicated to this project, Greening A Block must complete a thorough feasibility study to assess the full costs, benefits and organization of such a project. The feasibility study will also address community concerns of landlord/tenant relations and determine how to best secure strong community participation from an ethnically and economically diverse population. We are currently raising \$40,000 to complete this study, which is sponsored by the NYC-based non-profit Association for Energy Affordability (AEA).

Primary Elements of the Project

Energy-Efficiency Improvements:

- Energy Surveys (audits) to determine improvements to be made on each building.
- Reducing the consumption of heating fuel and electricity by at least 30%, through measures such as:
 - replacing power-hogging equipment and appliances with energy-efficient ones.
 - weatherizing or insulating windows and other parts of building “envelopes.”

¹ Note: “Energy Target Zones” are established by an agreement with the local NYSERDA Energy Smart Communities representative. Buildings within Energy Target Zones are eligible for certain additional state financial incentives for energy efficiency improvements. However, this only covers a small portion of the cost. The Energy Target Zone we propose to create is special in that it will have money from the settlement fund to comprehensively cover every participating building on the selected block.

- upgrading and adding boilers, thermostats and other elements of state-of-the-art heat- and hot-water-delivery systems.
- Installing completely non-polluting renewable energy systems (e.g. solar electric or solar water heating systems) on selected buildings.
- Stimulating community-based energy awareness, with neighbors educating and encouraging each other in more efficient energy usage.

Other Air Quality Improvement Measures to be Considered:

- Planting Street Trees
- Green (Planted) roofs on select buildings

Financial Strategy Development:

- Payment structures for the systems that include funds from the Con Edison East River Power Plant settlement fund, federal and state weatherization and energy-efficiency programs, and from the tenants and building owners themselves.
- Partnerships with local banks and credit unions to offer loans for energy-efficiency improvements.
- Partnership with NYSERDA, which has ongoing programs that can cover the costs of some of this work.

Additional benefits:

- Creation of a template for maximizing state and federal incentive-program benefits.
- Establishment of a model for other neighborhoods to use in urban energy-efficiency improvements and non-polluting renewable energy installation.
- Creation of new jobs.

Project Approach

Scope

Greening A Block will focus on a single city block (or the two facing sides along adjacent streets) to demonstrate the gains in air quality, public health and economics possible through community-based energy-efficiency measures because a single block:

1. is large enough to encompass a broad sample of buildings and residents and provide a reasonable cross-section of the entire Lower East Side.
2. is large enough to create the economies in project administration that can make large-scale energy efficiency cost-effective.
3. fits the funds available from the power plant settlement with Con Edison.
4. allows for “co-operative competition” between neighboring buildings that will help maximize participation and savings rates.
5. circumvents concerns over “cherry-picking” — pushing up the numbers by choosing easy-to-retrofit buildings.

Community Participation

We intend to harness the energy of established community institutions to maximize tenant and landlord participation in the project, to heighten its impact on the community and to develop relationships for follow-on projects on other blocks throughout the Lower East Side. Community organizations already involved include:

- The Neighborhood Energy Network (NEN), a Lower East Side-based endeavor to encourage environmentally sound, community-based approaches to meeting New York City's energy needs. NEN's volunteer network will host forums to help educate the community about Greening A Block.²
- Open Road of New York, a Lower East Side-based organization that educates and trains youth to care for the community's natural, physical and human environment. Students from Open Road will work with NEN.
- The East River Environmental Coalition (EREC), which contested the Con Ed East River Power Plant expansion in both the New York State certification proceeding and the political arena during 2000-02, and fought to establish the environmental mitigation fund. EREC members formally endorsed this project at a meeting on Jan. 29, 2005.

We have received letters of support for the feasibility study from the following local entities:

- Manhattan Community Board #3
- U.S. Congresswoman Nydia Velazquez
- NYS Senator Martin Connor
- NYC Councilwoman Margarita Lopez

We also intend to work with area businesses, particularly hardware stores on or near the model block, encouraging them to stock energy-saving materials and equipment.³ This will help tenants and residents maintain energy savings and trouble-shoot problems, and will also extend resources for energy improvements to the surrounding blocks.

Project Funding

Con Edison / East River Project Settlement Fund

In 2002, as part of a settlement permitting it to expand electricity production at the East River

² NYSERDA has invited the Neighborhood Energy Network to create an "Energy Target Zone" — a one- or two-block area in which energy-efficiency measures are implemented in homes, apartments and stores with the active participation of residents, landlords and business-owners. The local community group supporting the ETZ receives \$1,000 to \$2,000 for publicity costs, and buildings within the ETZ become eligible for special financial incentives in addition to the dozens of NYSERDA programs that are available to all New York buildings. This suite of NYSERDA programs will reduce the costs of the energy efficiency and renewable energy improvements.

³ To ensure that energy-efficient compact fluorescent light (CFL) bulbs aren't later replaced with inefficient but standard incandescent bulbs, the contractors will be instructed to maximize use of light fixtures that accept only plug-in CFLs rather than screw-in models. These will be specified in a handful of standard sizes, both for simplicity and to make it simple for the hardware store(s) to keep replacement stocks.

Power Plant, Con Edison set aside \$3.75 million for environmental mitigation projects. Most of this fund has been earmarked to subsidize Con Edison's purchases of cleaner natural gas to displace fuel oil burned in older East River boilers during the fall and winter heating season.⁴ The environmental benefits of this expenditure will disappear once the fund is spent.

Fortunately, the settlement provides that the monies may be used for other purposes that "relate to local air quality improvement, health improvement, or amenities programs in the vicinity of the East River [Power Plant] Complex."⁵ We believe that our Comprehensive Energy Target Zone proposal provides a compelling alternative to the natural gas displacement plan.

Our intent is to leverage the settlement fund money to maximize investments in energy efficiency. The exact mechanisms for funding the projects will be worked out in the feasibility study, in conjunction with NYSERDA and others with experience in energy project financing. We will leverage all available state, federal and other funding sources in addition to the settlement fund money. Our goal is to minimize the costs to the tenants and landlords, thereby maximizing participation and avoiding Major Capital Improvement (MCI) claims by landlords.

Ongoing Benefits

Based on a preliminary analysis, we believe our demonstration project can deliver these benefits:

- A one-third reduction in energy use (36% for heat and hot water, 30% for electricity)
- Total energy savings of 175,000 gallons of petroleum products — equivalent to removing 300 cars off the road
- Total reduction of \$270,000 in annual energy bills (\$700 per participating apartment)

Using a preliminary model for a sample block near the East River power plant, we estimate that the air quality improvement from Greening A Block will far exceed the likely improvement from the natural gas purchase plan.⁶ Furthermore, we expect this demonstration project to serve as both a model and a catalyst for follow-on projects covering much of Community Board 3. The enactment of follow-on projects will see CB3 and all of NYC benefiting from cleaner air through improved energy efficiency for many years to come. Contrast this to the transient air quality improvement from burning up the settlement fund in Con Ed's boilers over just several years.

⁴ One million dollars from the fund has been committed to installing smokestack nozzles to increase the "exit velocity" of exhaust gases from the East River Plant, and to connect a handful of large apartment buildings to the Con Ed steam system.

⁵ The terms of the settlement may be downloaded from the following link; the language cited in the text is from Section VI.E.7. [http://www3.dps.state.ny.us/pscweb/WebFileRoom.nsf/ArticlesByCategory/44A1453A8517783A85256DF1007562F0/\\$File/doc11552.pdf?OpenElement](http://www3.dps.state.ny.us/pscweb/WebFileRoom.nsf/ArticlesByCategory/44A1453A8517783A85256DF1007562F0/$File/doc11552.pdf?OpenElement).

⁶ Particulate matter (soot) in the air on the Lower East Side averages 15,000 nanograms per cubic meter over the course of the year. The Con Ed "gas burn" alternative would reduce this by 20 nanograms for four years, assuming that is the period over which the funds are drawn down, at Village East Towers, several blocks from the East River plant. The Energy Target Zone project would reduce particulates by eight as much, 165 nanograms, on the model block, and this reduction would persist over the lifetimes of the energy-saving measures. If the savings persist as we expect, the pollution reduction from the energy efficiency project will be at least a dozen times greater than the reduction from the Con Ed gas burn.

Greening A Block: FEASIBILITY STUDY

A Project of the Association of Energy Affordability, Inc.

As a key step in developing Greening A Block, the feasibility study will outline the project's structure, administration and costs. The study's authors will:

- Create a “Menu of Energy Projects”
 - consult with local energy-efficient/renewable energy construction experts to define included items
 - research costs (for large/small buildings, per apartment, etc) per project
 - breakdown projects by actionable party (landlord/tenant/custodial staff)
 - include tree-planting, green roofs and other indirect energy projects
- Develop an Energy Survey protocol in terms of
 - items/areas covered
 - approximate time per building/unit
- Outline a Financial Modeling of Savings
 - for each menu item/apartment/building type
 - model expected savings per building type under different scenarios
- Estimate Project Costs/Budget
 - make preliminary estimates of cost of measures per apartment and per building
 - establish number of apartments and buildings
 - estimate contractor costs
 - estimate project management costs
 - estimate other costs
- Analyze Potential Barriers and how to address them, including
 - landlord/tenant issues (including ensuring that rents do not increase due to “Major Capital Improvement”)
 - occupancy transience
 - reducing initial up-front cost through financing
- Conduct Focus Groups of local residents/landlords/tenants to
 - establish realistic baselines and fully ground the project in actual conditions
 - gather support for the project
 - identify potential opposition to the project
 - refine pitch to larger community
- Survey Contractors Capable of Performing Surveys and Installation Work

- Analyze Community Benefits, including
 - job creation (types/numbers/etc.)
 - pollution reduction — all relevant pollutants
 - community education
- Forge Partnerships with
 - Community groups
 - Environmental organizations
 - financing institutions
 - public officials
 - Con Edison
 - local hardware stores and other businesses
- Cultivate Financial Partners, including
 - a lending agency
 - New York State Energy Research & Development Authority (NYSERDA)
 - Federal Weatherization Assistance Program (WAP)
 - Grant-making organizations
 - Definition of loan criteria
- Outline Mechanism for Selection of Block. *NOTE: Block selection will involve input from CB3 and occur after completion of Feasibility Study*
 - analyze candidate blocks
 - identify strong block communities
 - identify a diverse population (ethnic/age/income)
 - sketch plan for broader application to other city blocks
- Complete Final Draft and Assemble Proposal

Proposed Finances

- \$40,000 for feasibility study

Timetable

- Spring 2005: Raise \$40,000 for feasibility study (note: \$20,000 has been raised to date)
- May 15, 2005: Begin feasibility study
- June 2005: Hold focus groups and forums.
- July 1, 2005: Present preliminary results to CB3
- Sept. 15, 2005: CB3 votes to notify Con Ed to suspend (or postpone) gas burn
- Fall 2005: CB3 applies to Con Edison to use settlement funds for Greening A Block

About the Authors of the Study

The two authors of the study and co-originators of the project bring extensive experience in energy efficiency, experience in partnering with NYSERDA, and affiliation with the Neighborhood Energy Network, a coalition of renewable energy, environmental, housing, health, social-justice and community activists promoting better energy solutions. They are both active members of the Neighborhood Energy Network (NEN).

Charles Komanoff

Economist and environmental activist Charles Komanoff was an expert witness for EREC (East River Environmental Coalition) in contesting Con Ed's East River Power Plant expansion. He has researched and reported on energy-efficiency policies at the local and national levels since the 1970s, and managed a comprehensive NRDC (Natural Resources Defense Council) study of Con Edison residential and commercial energy-efficiency programs conducted with the cooperation of Con Ed. Charles has published numerous monographs and journal articles along with popular pieces on air pollution technology, policy and health effects. An economics graduate of Harvard, Charles is a leading practitioner of environmental and energy cost-benefit and financial analysis. He lives with his wife and two children in lower Manhattan and has an office in NoHo.

Jeff Perlman

Jeff is President of Bright Power, Inc., an energy-efficiency and renewable energy consulting company. He is co-founder and former co-executive director of Big Apple Solar Installation Commitment (BASIC), a non-profit that teaches New Yorkers the benefits and practicality of installing and using solar energy systems on buildings. Jeff has designed, installed and/or obtained financing for solar and energy-efficiency projects on over half-a-dozen buildings in the New York area. As co-executive director of BASIC, he organized and promoted well-attended events about developing solar energy in NYC, made presentations to numerous audiences around the city, and managed a team of over twenty volunteers. As a consultant with Capital E he co-authored the ground-breaking report, "The Costs and Financial Benefits of Green Buildings," the findings of which are referenced in pending New York City Council green building legislation. A native New Yorker (he spent his early years in Stuyvesant Town), Jeff holds a degree in Applied Physics from Yale. He lives in Brooklyn and has an office in Manhattan.

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