

THE NEW YORK CITY

# GREENER, GREATER BUILDINGS PLAN

New York is a city of buildings. They are where we live, work, and play; they make up the skyline that identifies our city to the world.

The electricity, heating, and hot water we consume in buildings accounts for almost 80% of our greenhouse gas footprint, and \$15 billion per year in energy costs. The city's largest buildings – over 50,000 square feet – comprise nearly half of our total space.

Making these existing buildings energy efficient is the biggest step we can take towards a greener, greater New York.

Working together, Mayor Bloomberg and City Council Speaker Quinn and her colleagues have proposed a six-part plan to make our existing large buildings energy efficient. Buildings will have to make certain improvements – but only those that pay for themselves. The plan relies on existing technology only, and low-cost measures that have proven track records.

This plan will save New Yorkers \$750 million in energy costs, improve conditions for tenants, create 19,000 construction jobs, and reduce our greenhouse gas emissions by 5% – the largest single advance towards our 30% goal.



The New York City Council  
Speaker Christine C. Quinn



The City of New York  
Mayor Michael R. Bloomberg

# The Greener, Greater Buildings Plan promotes cost-effective steps to create significant economic and environmental impacts.

## CREATES JOBS

This package will create 19,000 construction-related jobs in energy auditing, doing retrofits, upgrading lighting, and maintaining equipment. Some of these will be new jobs, while some will be additional work for current skilled workers.

## SAVES MONEY

Efficiency upgrades will pay for themselves and building owners will start saving money quickly. With the high energy prices New Yorkers pay, using less energy is critical to staying competitive.

## IMPROVES OUR ENVIRONMENT

Almost 80% of New York City's carbon footprint comes from energy used in buildings. The 5% citywide carbon reduction impact of this package is equivalent to the entire carbon emissions of Oakland, CA.

## STIMULATES THE ECONOMY

Building owners will be encouraged to comply in advance, to create jobs and savings now. Upgrades would only begin to be required by 2013.

## WHAT KINDS OF IMPROVEMENTS PAY FOR THEMSELVES?

Being green isn't about being fancy or high-tech. The most effective improvements are often the cheapest – lighting upgrades, better thermostats, improved insulation. Low-cost upgrades can make a huge difference.

IMPROVEMENT	FREQUENCY <sup>1</sup>	COST PER SQ FT <sup>2</sup>	PAYBACK <sup>3</sup>
Efficient faucets and showerheads	56%	\$0.04	1.3 years
Lighting fixture upgrades	46%	\$0.06	2.5 years
Exterior weather-stripping and sealing	41%	\$0.07	2.5 years
Domestic hot water controls	39%	\$0.01	1.1 years
Exhaust fan timers	31%	\$0.03	0.8 years
Lighting controls	20%	\$0.06	2.3 years
Pipe insulation	19%	\$0.02	2.0 years
Energy management systems	19%	\$0.23	2.0 years
Boiler cleaning and tuning	17%	\$0.07	1.0 years
Lightbulb upgrades (e.g. CFLs)	15%	\$0.04	1.0 years

<sup>1</sup> The likelihood an energy audit would recommend such improvements

<sup>2</sup> The average cost of the improvement divided by the building's gross square footage

<sup>3</sup> The number of years for the projected annual energy savings to pay back the amount invested in the improvement

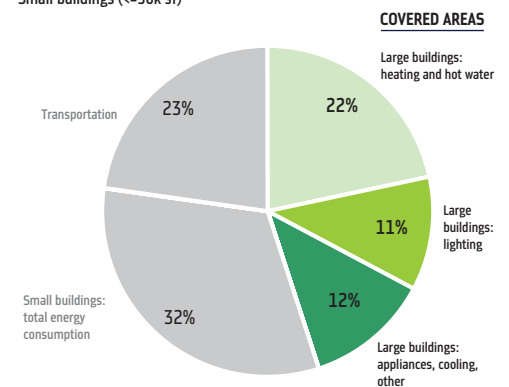
Source: New York State Energy Research and Development Authority data on multi-family buildings

## WHERE DO WE USE ENERGY?

New York City's large buildings account for approximately 45% of our total energy consumption. Everybody needs to save, but the Greener, Greater Buildings Plan addresses almost half of our consumption by improving the largest users first.

### ENERGY USE IN NEW YORK CITY, 2007\*

Total = 738 million MMBTU  
 Large buildings (>=50k sf)  
 Small buildings (<=50k sf)



\* Energy use (BTU) and carbon emissions are closely related but not exactly the same

# New York City's comprehensive six-point plan to improve energy efficiency in existing buildings:

## 1 New York City Energy Code

Today, our energy standards are controlled by a New York State code that includes a critical loophole – one that no other state has – that allows inefficient equipment to be replaced with similarly inefficient equipment. This legislation will create a local New York City Energy Code and eliminate this unique loophole. This means when a renovation takes place in one of NYC's one million buildings, new equipment will have to meet current standards, resulting in energy reductions and cost savings.

## 3 Benchmarking

You can't manage what you don't measure. This legislation will require large buildings to conduct an annual analysis of energy consumption using a free, online tool provided by the U.S. Environmental Protection Agency. Building owners need only know basic information about their building and have their energy bills on hand. Benchmarking provides a simple and effective tool for owners and potential purchasers alike to compare buildings' energy consumption with similar buildings, to start to understand how efficiently it is running. The law will not require residential tenants to disclose information to a landlord.

## 5 Green Workforce Development Training

These energy-saving upgrades will require a skilled workforce and create 19,000 construction-related jobs. To ensure that New Yorkers have these skills, the City is partnering with real estate and labor to identify the qualifications and training workers will need to perform these new green jobs. Because building retrofits will be a key economic driver in the new green economy, the New York State Energy Research and Development Authority (NYSERDA) and the U.S. Green Building Council will work with us to design and fund the training that is required.

## 2 Lighting Upgrades

A fifth of all NYC's energy is used in lighting – and lighting upgrades routinely pay for themselves in a year or two. This legislation will require all large buildings to upgrade all of their lighting over the next 12 years. The bill proposes that upgrades be completed with other renovations, and thus will not inconvenience building users. The requirement will not apply to residential living spaces.

## 4 Audits and Retrofits

Smart energy-saving retrofits pay for themselves, but knowing which ones work in an individual building requires an analysis called an energy audit. This legislation will require large buildings to conduct an energy audit once every ten years, and to undertake those improvements that pay for themselves. The law will apply to the central systems the building shares, to minimize impacts on individual tenants and ensure that the owner who makes the investment will realize the savings. On average, energy audits cost 15¢ per square foot; required retrofits will average less than one dollar per square foot – and save 20¢ a year in energy costs.

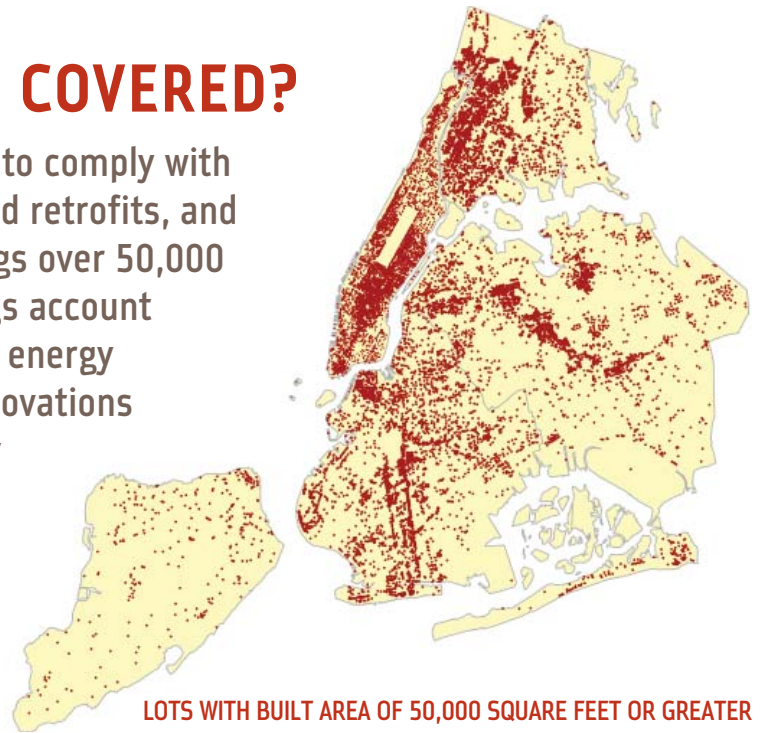
## 6 Green Building Financing

By definition, smart retrofits pay for themselves, reduce utility bills and improve buildings' financial health; every building can profit from this kind of improvement. However, some owners may not be able to obtain financing to make these upgrades. To begin to assist these owners, New York City will apply for federal stimulus funds to establish a pilot revolving loan fund. Loans will be offered to owners who demonstrate financial need or have already completed an energy audit. Energy savings data will be collected to encourage private sector lending in the long-term.

# WHAT BUILDINGS WILL BE COVERED?

Buildings over 50,000 square feet will need to comply with new legislation for benchmarking, audits and retrofits, and lighting upgrades. There are 22,000 buildings over 50,000 square feet in New York City. These buildings account for roughly 45% of our total floor space and energy consumption. All buildings that undergo renovations will be covered under the new New York City Energy Code.

While these large buildings are most concentrated in Manhattan, buildings like this are all over the city.



“New York’s ambitious program will greatly reduce greenhouse gas emissions and improve the lives of city residents. Once again, New York and Seattle are showing that cities are leading the way in the fight against climate change.” **Greg Nickels, Mayor, City of Seattle**

“The business community agrees with the need to upgrade the city’s building stock in order to reduce energy consumption, lower business operating costs and combat climate change. By ensuring that all buildings are more energy-efficient, this plan will make New York a more efficient and economic place to do business.” **Kathryn Wyld, President, Partnership for New York City**

“New York City is offering a game-changer in the effort to cut energy demand and carbon emissions from America’s buildings. Literally billions of square feet of New York real estate could be harnessed to solve global warming in ways that also save families and businesses money on their energy bills and create thousands of jobs.” **Fred Krupp, President, Environmental Defense Fund**

“Our nation’s mayors are showing leadership from coast to coast regardless of their backgrounds or the very different cities they represent. We know they hold one thing in common: a passionate commitment to cutting wasted energy energy, reducing carbon pollution, and increasing jobs for their citizens. We are proud to support these efforts as they help to lead American cities to a better future. President Obama shares this dedication to a green recovery.” **Van Jones, Special Advisor for Green Jobs, Enterprise and Innovation at the White House Council on Environmental Quality**

“Buildings must be part of the solution to the climate crisis and the economic crisis. There are millions of buildings that can be upgraded to save money and save energy, which can create millions of green jobs that cannot be sent overseas. New York City’s leadership will encourage other communities to try to take action.” **Richard Fedrizzi, President and CEO, U.S. Green Building Council**

“By seeking efficiencies in existing buildings, New York can make a real difference in carbon emissions, and hopefully bring us a step closer to solving the climate crisis.” **Al Gore**

To learn more visit: [www.nyc.gov/planyc2030](http://www.nyc.gov/planyc2030)  
[www.council.nyc.gov](http://www.council.nyc.gov)

