



Green Building

INITIATIVES **Housing and Neighborhoods** • Increase the sustainability of City-financed and public housing • Preserve and upgrade affordable housing | **Parks and Public Space** • Support ecological connectivity • Incorporate sustainability through the design and maintenance of all public space | **Waterways** • Build public green infrastructure projects • Engage and enlist communities in sustainable stormwater management • Modify codes to increase the capture of stormwater • Provide incentives for green infrastructure | **Water Supply** • Increase operational efficiency with new technology • Increase water conservation | **Energy** • Implement the Greener, Greater Buildings Plan • Improve our codes and regulations to increase the sustainability of our buildings • Improve compliance with the energy code and track green building improvements citywide • Improve energy efficiency in smaller buildings • Improve energy efficiency in historic buildings • Provide energy efficiency financing and information • Create a 21st century energy efficiency workforce • Make New York City a knowledge center for energy efficiency and emerging energy strategies • Provide energy efficiency leadership in City government buildings and operations • Expand the Mayor's Carbon Challenge to new sectors | **Air Quality** • Promote the use of cleaner-burning heating fuels • Update our codes and regulations to improve indoor air quality | **Solid Waste** • Promote waste prevention opportunities • Improve the convenience and ease of recycling • Revise City codes and regulations to reduce construction and demolition waste • Identify additional markets for recycled materials • Remove toxic materials from the general waste stream | **Climate Change** • Assess opportunities to further reduce greenhouse gas emissions by 80% by 2050 • Partner with the Federal Emergency Management Agency (FEMA) to regularly update Flood Insurance Rate Maps • Update regulations to increase the resilience of buildings • Work with the insurance industry to develop strategies to encourage the use of flood protection in buildings • Protect New York City's critical infrastructure • Mitigate the urban heat island effect

In days past, buildings were made out of natural, locally available materials and designed to take advantage of daylight and natural ventilation. Abundant cheap energy, electric lighting, plentiful water supplies, and innovative new building products dramatically changed building design and construction. Inexpensive energy made it possible to design buildings without considering the direction of the sun, winds, or other local conditions.

Because of these changes, the construction and operation of our buildings now strain much of our energy and water supplies, generate much of our waste, and sometimes expose us to toxic materials. In New York City, energy used in buildings accounts for 75% of our greenhouse gas emissions and 85% of our water use. At least half of our solid waste is construction and demolition debris, some of which we throw away

even as new buildings are requiring the use of newly-mined or harvested resources. By finding better ways to use and reuse materials in buildings, from construction to demolition, we can significantly improve our environment.

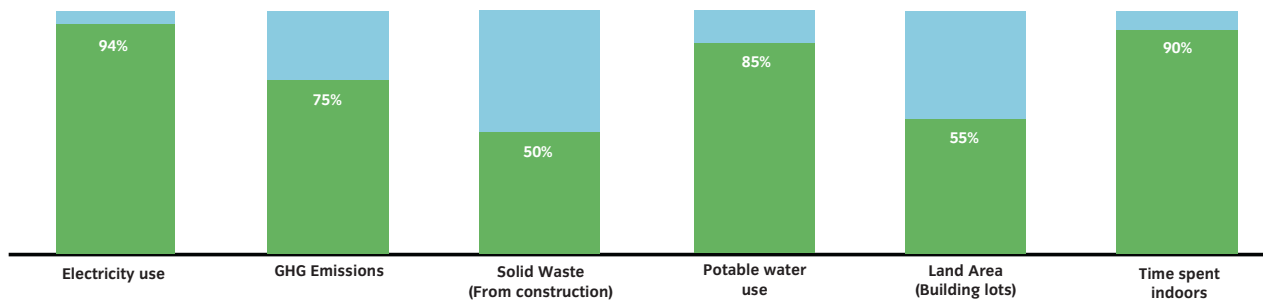
Green building, a discipline that has emerged over the last several decades, aims to improve the impact of buildings on the environment and our health. An integrated design process that considers the interaction between form, climate, site, and building systems, green building practices have multiple benefits. They include improving indoor and outdoor air quality, increasing water conservation, and reducing waste.

Implementing green building practices throughout New York City's one million buildings takes the commitment of both the public and private sectors. For the 6.5% of the building square footage that is owned and operated by the City, we will pilot



Impact of Buildings in New York City

■ PERCENT FROM BUILDINGS
 ■ PERCENT FROM OTHER



Source: Mayor's Office; NYC Dept. of Environmental Protection; NYC Dept. of Sanitation; U.S. Environmental Protection Agency

new strategies and establish more stringent standards for ourselves. To bring green building practices to private buildings, we will use the City's building codes and regulations to raise standards across the board.

The New York City Green Codes Task Force, composed of over 200 building experts, reviewed the City's codes and regulations. The task force developed proposals on topics from site design to energy and water conservation, as well as new issues like making our buildings more resilient to climate change. Many of PlaNYC's initiatives to improve the efficiency of our buildings are derived from this task force's ideas.

Through many other initiatives ranging from piloting deep energy retrofits in City projects to the comprehensive tracking of progress in greening the city's buildings, we will make our buildings more energy-efficient, reduce operating expenses, and cut our greenhouse gas emissions.

Green building practices improve the relationship between buildings and their surroundings, thereby reducing the impact of buildings on municipal infrastructure. Our initiatives for handling stormwater, increasing recycling, improving indoor air quality, accommodating more active transportation, and expanding the city's vegetative cover all align with various green building techniques.

To achieve many of our objectives, we must keep New York's buildings industry at the forefront of innovation and address the life cycle of our buildings—how they are constructed, how they are operated and what happens when they are torn down. In addition to the initiatives in the plan, the City recently released the Active Design Guidelines to encourage the inclusion of physical activity in our neighborhoods, streets, and buildings.

Just as integrated design can produce better buildings, integrating green building strategies throughout the City's sustainability efforts can contribute significantly toward the achievement of PlaNYC's goals.