

Case Study

Sustainability in a Post-Bloomberg New York City: What's Next?

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Introduction

Under Mayor Michael R. Bloomberg, New York City has undertaken one of the most aggressive sustainability policies in U.S. government. Responding to the needs of future New Yorkers, the city has analyzed its anticipated growth, the growth rate of services required to meet the needs of a growing population, and the impact of that population on aging infrastructure.

In particular, climate change presents a number of challenges to the “future New York”. As a city with over 500 miles of coastline, New York City is vulnerable to flooding. Heat in New York City, particularly in Manhattan, is at times hotter than its surrounding area, due to a phenomenon called “Urban Heat Island Effect,” leading not only to health risks to its inhabitants, but also to increased demand on the electricity grid. Heavy storms in urban environments pose risks to the wastewater system, sometimes resulting in overflows of sewage treatment areas. These issues, and others, are only exacerbated by climate change.

In October 2012, New Yorkers witnessed first-hand these risks in a very tangible way - Hurricane or Superstorm Sandy hit the city hard and demonstrated the potential impact of storms made more severe by global warming. However, the process for preparing New York to be more resilient to these risks and to minimize its carbon footprint began long before Hurricane Sandy. This planning and policy development was a major focus of the Mayor’s Office of Long-Term Planning and Sustainability, a special initiative of Mayor Bloomberg. This office, through the landmark sustainability plan, “PlaNYC 2030: A Greener, Greater New York” (PlaNYC), has served a model for urban sustainability planning and fostered international cooperation on the local level, bypassing international treaties for tangible, measurable and aggressive local action promoting urban sustainability. However, after three mayoral terms with Bloomberg ending in 2013, the future is not clear for PlaNYC and its successive laws and plans, including “Greener Greater Buildings” and the post-Sandy resiliency plan, “A Stronger, More Resilient New York”?

The Need for Urban Sustainability

By 2030, over sixty percent of the world’s population will reside in cities (World Health Organization, 2013). Adopting sustainability practices is central to urban vitality and to making cities desirable places both for businesses and residents. Increasing consumption and car ownership has resulted in urban sprawl

and the flight of the middle class to high-carbon living and working environments (Institute for Transportation & Development Policy, 2010). Cities must now turn to sustainable solutions that will attract residents, stimulate economic growth, and encourage more sustainable lifestyles.

As the providers of many important local services and operator of facilities, cities have a unique ability to take specific measurable action to reduce the use of fossil fuels and develop a more ecologically oriented waste management system. They have direct control over critical systems like water and wastewater, waste and recycling, building and zoning codes, among others. Many times, these initiatives also have health benefits for the community, economic benefits, and improve quality of life. For example, planning residential and mixed-use buildings around public transport, bike networks, and pedestrian facilities can reduce sprawl and carbon dependency (Institute for Transportation & Development Policy, 2010). Cities have the opportunity to redevelop existing areas through repurposing of vacant lots and urban infill - actions that return value to previously underutilized areas. Additionally, redeveloping brownfields (abandoned, contaminated industrial or commercial property) has proven to reduce crime, increase surrounding property values, create jobs, and encourage private investment (Zborel, 2011). Investment in green space and urban forestry can likewise have positive impacts not only on the environment, but also on local economies and property values. Green space reduces the urban heat island effect, reduces heating and cooling needs and costs, increases air and water quality, and provides a safe, welcoming environment for residents and visitors to enjoy (Zborel, 2011). A sustainable city is both livable and productive, and initiatives like these can result in both. City governments have been among the first to recognize that environmental quality and economic development go hand-in-hand.

Sustainability in New York City

During his tenure as mayor, Michael Bloomberg has assumed a central role in the development of urban sustainability policy by advocating action at the local level. Bloomberg has made sustainability and climate adaptation key priorities of his administration. The PlaNYC agenda and actions taken by the Office of Long-Term Planning and Sustainability have set an example for other cities to follow.

In 2005, the C40 Cities Climate Leadership Group was created by former Mayor of London, Ken Livingstone, and forged a partnership in 2006 with President Clinton's Climate Initiative. The organization has since expanded to include 63 cities across six continents. Mayor Bloomberg has been the Chair of C40 since 2010. His international engagement on climate change did not begin there, however. In 2007, Mayor Bloomberg addressed the UNFCCC in Bali, Indonesia, criticizing the lack of action at the federal level in the U.S., and the failure of the U.S. government to develop a comprehensive energy policy (Fuller, 2007). Bloomberg acknowledged the potential cities had already been unlocking in the move toward sustainable actions and policies:

“It is the cities, not just in the United States but around the world, that are making the changes,” he said in Bali. “America doesn’t seem to want to have the national government manage its streets and traffic flow. It’s going to be up to the mayors to find a way to do that with less pollution and less strangulation on the economy. The public doesn’t seem to want the national government to dictate what kind of heating unit you use or how you can get rid of your sewerage.” (Fuller, 2007).

An outspoken proponent of climate action at the local level, Bloomberg has led the C40 to adopt its current emphasis on accountability through outcome-driven performance metrics. Mayor Bloomberg’s close relationship to businesses and private sector actors combined with his ability to tap into federal policy circles has been an important factor in his ability to direct climate and sustainability actions.

The Mayor’s Office of Long-Term Planning and Sustainability

Since 2006, the Mayor’s Office of Long-Term Planning and Sustainability has led an effort to define sustainability for New York City, putting that vision into a plan, and implementing the steps outlined in the plan. The Sustainability Office’s mission is as follows:

“The Mayor’s Office of Long-Term Planning and Sustainability, City of New York, was created in June 2006 and was charged with developing and implementing PlaNYC, the City’s long-term sustainability plan. The Mayor’s Office of Long-Term Planning and Sustainability is responsible for developing and coordinating the implementation of policies, programs and actions to meet the long-term needs of the city, with respect to its infrastructure, environment and overall sustainability citywide. The Office is also charged with developing measurable sustainability indicators to assess the city’s progress in achieving sustainability citywide and is responsible for taking actions to increase public awareness and education regarding sustainability and sustainable practices”. (ICLEI, 2010, pp. 2).

The Sustainability Office is part of the Mayor’s Office and became formally recognized under local law in 2006. Its main purpose is to advance PlaNYC, the sustainability plan unveiled by Mayor Michael Bloomberg in 2007, and to ensure its implementation.

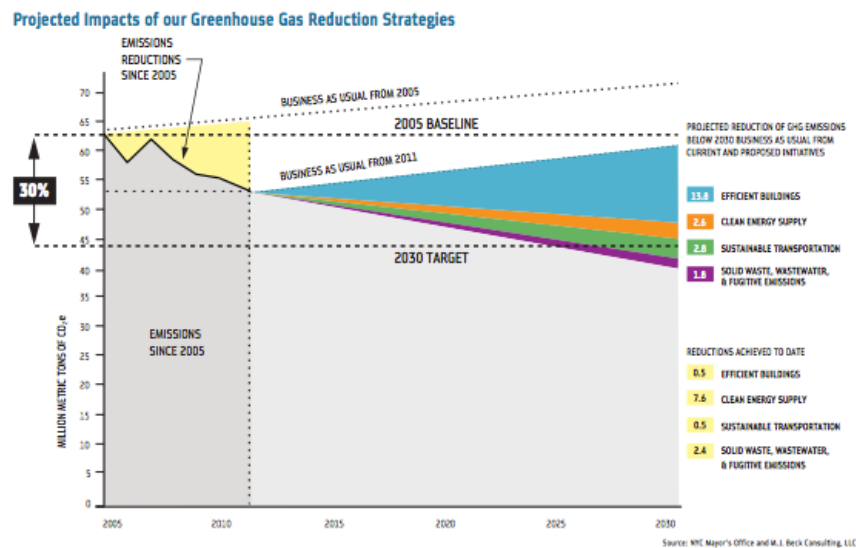
PlaNYC 2030: A Greener, Greater New York

PlaNYC 2030 brings together over 25 agencies across the city to incorporate sustainability and develop a “greener, greater city”. It targets each sector through specific initiatives and milestones that measure progress and success. Bloomberg has consistently shown his affinity for data-driven policy and analytics to drive measurable results, known for the Peter Drucker axiom, “if you can’t measure it, you can’t manage it.” It was with this spirit that PlaNYC was developed. However, the

initial plan was created by the Mayor’s office team and did not publicly consult constituents and community groups. Some of these groups were offended and some neighborhoods, like the South Bronx, felt it was not properly represented. Additionally, all initiatives that required upgrades and investments, met opposition as they were expected to make investments during the height of the recession.

The plan (updated in 2011) details 132 initiatives and more than 400 milestones. The plan includes initiatives in: housing and neighborhoods, parks and public spaces, brownfields, waterways, water supply, transportation, energy, air quality, solid waste, and climate change. One of its primary goals is to reduce the city’s greenhouse gas emissions 30% by 2030 – an ambitious goal for a city that was already considered one of the U.S.’s most carbon-efficient, primarily due to its high density and extensive use of mass transit. The central achievement of PlaNYC, is its success in integrating environmental protection and quality of life initiatives into an overall effort to promote urban economic development. At it’s heart, the plan is not designed to protect the environment, but to make the city better able to attract and retain economic growth. The plan maintains that a clean environment makes the city a more attractive place to live in and invest in.

Over 97% of the original 127 initiatives proposed in 2007 were launched within one year, and according to the City close to two-thirds of the initial 2009 milestones were achieved or mostly achieved (City of New York i, 2013). Progress to date includes the development or preservation of 64,000 housing units, the building of new neighborhoods that have access to transit, a greater array of transportation options for New York residents, laws requiring more efficient buildings, and the reduction of greenhouse gas emissions 13% below the levels in 2005 (City of New York i, 2013). PlaNYC is generating direct greenhouse gas results. The chart below shows the 2005 baseline, and what else is left to be accomplished by 2030:



(City of New York j, 2013)

Thus far, the office has been able to point to a number of measureable results. Some of PlaNYC's successful milestones include planting 750,000 trees, 300 miles of new bike lanes, the preservation of 92,000 units of housing, regulations to phase out the burning of the dirtiest fuel oil, and billions of dollars invested to protect the water supply (City of New York j, 2013). The following examples of initiatives depict the depth and breadth of the plan.

The *MillionTreesNYC* program aims to plant one million trees in the five boroughs over the next ten years, increasing the "urban forest" by 20%. The main goal of this initiative is to cool the city and reduce storm water (City of New York g, 2013). 70% of trees will be planted in parks and public spaces, while 30% will be from private organizations, homeowners, and community organizations. 220,000 will be street trees, 530,000 will be in parks (reforestation and landscape), and the last 250,000 will be with private partners. The lead sponsor of this initiative is Toyota (MillionTrees NYC, 2013). 750,000 trees have been planted as of the 2013 PlaNYC Progress Report (City of New York g, 2013). Though 20,000 trees were uprooted during Hurricane Sandy, causing setbacks, the project is still ahead of schedule.

The *Select Bus System* is a transit initiative that has provided buses to areas underserved by the subway system. The Municipal Transit Authority (a state-run organization) has partnered with the city on this and improved reliability and convenience for several routes. Traffic Signal Priority systems are used to reduce bus idling time by giving them green lights along heavily traveled routes. Now, commuters in boroughs outside Manhattan have reduced their commute times and walking times to the nearest subway station (City of New York j, 2013). This solution is a low-cost alternative to the capital-intensive extension of subways and is an adaptable solution. After monitoring its effectiveness, the City can adjust bus routes to better serve customers in need by simply moving a few bus stops.

The *Mayor's Carbon Challenge* was established to help the city to meet its carbon reduction goal by engaging with the private and nonprofit sector. Because building stock is a large source of carbon emissions out of the direct control of the city, the plan employs this voluntary approach, incentivized through promoting cost-reduction and competition. "In 2007, the City launched the Mayor's Carbon Challenge, inviting 17 local universities to match City government's GHG reduction target of 30% over ten years, and in 2009 the 11 largest hospital systems, composed of more than 50 individual hospitals, joined the Challenge. Together, these participants occupy 120 million square feet and account for 3.5% of the city's emissions. The university and hospital participants have achieved impressive results: five Challenge participants already reached their target—reducing annual citywide emissions by more than 86,000 metric tons and saving roughly \$20 million in annual energy costs. In April 2013, ten global corporations joined the Challenge, representing 20 million square feet of space and employing 70,000 people." (City of New York g, 2013). The corporations include AIG, BlackRock, Bloomberg L.P Credit

Suisse, Deutsche Bank, Goldman Sachs, Google, JetBlue, JP Morgan Chase, and PVH as of April 2013 (City of New York h, 2013). To lead by example, the Mayor set an even higher standard for the city's own portfolio of buildings in the 30x17 plan, which aims to cut GHG emissions from municipal sources 30% below the fiscal year 2006 levels by 2017. Also under this initiative, in 2008, the city started the Broadway Green Alliance as a way to encourage Broadway theaters to decrease emissions and educate the audiences. By the end of 2013, residential co-ops and condos will be incorporated into the Mayor's Challenge, reducing emissions as they account for 37% of emissions in NYC (City of New York f, 2013). While this effort is constructive, measurable, and actionable, it requires both voluntary participation and constant assistance and support to a variety of entities. The Mayor's Sustainability Office coordinates the effort by keeping track of progress, but the effort and success is largely left to the individual participants.

The Greener, Greater Buildings plan is an internationally recognized initiative that started in 2009 with the goal of increasing energy efficiency in large buildings in New York City. There are four parts of the plan: benchmarking, energy code updates, conducting energy audits, and submeter provisions (City of New York c, 2013). Local Law 84 requires large building owners to annually measure their energy consumption through benchmarking as a means of comparing their usage to buildings that are similar. Local Law 85 requires that buildings meet the most current energy code for any renovation or alteration project. Local Law 87 requires that buildings that are 50,000 gross square feet or greater to undergo periodic energy audit and retro-commissioning measures. The point of this is to generally lead to cost and energy savings for buildings. Local Law 88 requires non-residential buildings to upgrade lighting to meet NYC Energy Conservation Code standards. Electrical sub-meters must be installed in large non-residential tenant space with monthly energy statements. The law brings together requirements for lighting updates and sub-metering that will help buildings achieve large energy savings. (City of New York c, 2013). This plan should, in ten years, reduce greenhouse gases by 5%, result in \$7 billion in savings, and create 17,800 construction related jobs (City of New York c, 2013).

NYC Clean Heat, helps building owners meet new regulations passed in August 2011 that entered effect in July 2012, that aim to reduce air pollution from heating fuel. Through a phase-out approach, the regulations aim to reduce fine particulate matter emissions by 50% by eliminating the heaviest, dirtiest types of fuel oil (City of New York a, 2013). The NYC Clean Heat provides help for buildings in understanding conversion options, coordinating with utilities, and assembling financing (City of New York a, 2013).

Not all PlaNYC initiatives succeeded. Some programs, like congestion pricing and waste-to-energy, met political opposition and were not implemented. A contentious project is the pending waste-to-energy plant. On March 6, 2012, Mayor Bloomberg made a request for a proposal for a waste-to-energy plant as part of PlaNYC, which were due June 5, 2012. Overall, it "asks private sector firms to submit

plans for a pilot facility using reliable, cost-effective, sustainable and environmentally sound waste to clean energy technology, which will help the City meet its goal of doubling the amount of waste diverted from landfills” (City of New York d, 2012). Overall, the goal of the proposal was to seek the cleanest energy options, eliminating any “mass burn” proposals. While environmentally conscious, a waste-to-energy plant may incite “Not In My Backyard” syndrome from constituents, as well as equity issues depending on the location and populations affected.

Some sustainability projects require people to change their behavior. Composting is an example of a solution to a problem – food waste that could be diverted from landfills – but requires both infrastructural capacity and behavior shifts. Mayor Bloomberg announced a new initiative in the field of composting in June 2013. The proposal would entail the hiring of a composting plant to handle over 100,000 scraps of food from around the city each year. Food scraps would include “stale bread, fruit scraps, and even chicken bones, in containers [people] will have inside their homes. Once collected, the scraps are then deposited in larger bins on the curb for pickup” (Stevens, 2013). There are currently 150,000 single family homes that plan to participate in 2014 and by 2016 the program should spread across the entire city. The plan is for the Sanitation Department to then use the compost and hand it to city agencies and non-profits for the purposes of gardening, soil mitigation or habitat improvement programs (Stevens, 2013). It will take a culture change in New York to encourage and eventually require food sorting. This composting plan might become reality; however, without institutionalization in the Department of Sanitation prior to the end of Bloomberg’s administration, it is susceptible to changing priorities.

PlaNYC and Onward – Sustainability in a Post-Bloomberg NYC

In December 2012, following Hurricane Sandy, the Office introduced the *NYC Special Initiative for Rebuilding and Resiliency* to focus on rebuilding and improved climate resilience. The program sets out to improve infrastructure and resiliency in the medium and long term, as well as local rebuilding and resilience in communities that were hardest-hit by the storm. The initiative released a new report, “A Stronger, More Resilient New York” which addresses how we rebuild New York City to be more resilient, not only in the wake of Hurricane Sandy, but also with a long-term focus on improving citywide infrastructure and building resilience. In developing the report, the SIRR team investigated three key questions: 1) What happened during and after Sandy and why? 2) What is the likely risk to NYC as the climate changes and the threat of future storms and severe weather increases? 3) How do we rebuild post-Sandy and prepare for a future with climate change? (City of New York b, 2013). “A Stronger, More Resilient New York” outlines projected climate risks for the city from heat waves and cold weather events, intense precipitation and droughts, and coastal floods and storms. The plan outlines \$20 billion of recommended projects and policies, across 250 recommendations. A

climate resiliency plan of this magnitude will need a leader who values the gravity of the issue and the urgency to act.

On May 6, 2013, C40 announced a new Clinton Global Initiative Commitment to Action to create a common Risk Assessment Framework to assess climate risk and to help cities prioritize the risks before investing in climate action (mikebloomberg.com, 2013). The framework, global in scale but grounded in community-scale adaptation data and analytics, will enable comparability between cities. It will allow the financial sector to improve the way it structures lending for resilient infrastructure and will allow insurance companies to value risk in a uniform way (mikebloomberg.com, 2013). This new framework was introduced in a panel that included former President Bill Clinton, former Secretary of State Hillary Clinton, Mayor Bloomberg, Rio de Janeiro Mayor Eduardo Paes, and leading private sector executives.

What will happen to these initiatives without the drive, money, and power of Mayor Bloomberg himself? Forbes listed Bloomberg in 2013 as the world's thirteenth richest person, with a net worth of \$27 billion. Given his wealth, he's been a mayor that wasn't beholden to donors or interest groups and did not need to spend time fundraising. When he relinquishes his office in 2014, it is difficult to imagine that Bloomberg's replacement will have the level of political independence. A new mayor may not prioritize the same big-ticket items as Bloomberg. For instance, the Climate Adaptation plan Bloomberg released in early 2013 has a price tag of \$20 billion with detailed plans to create floodwalls and levees, institute new building codes to build buildings higher and more resilient, and provide incentives for moving existing electrical equipment farther from the ground (The Economist, 2013). Another initiative out of PlaNYC was the revitalization of public spaces such as the Governor's Island, the Chelsea High Line, and Brooklyn Bridge Park projects. A former parks commissioner commented that the aforementioned projects were so expensive and capital intensive that they could be financed only by the mayor's office (Foderaro, 2013). While the mayor's office did not finance the projects, the idea that Bloomberg can mobilize support through his network of wealthy individuals and corporate connections is singular to someone of Bloomberg's status. Additionally, he is willing to publicly defend these issues and demonstrate their importance. Finally, the recently unveiled composting plan faces a culture resistance that may only be powered through by a strong-headed Bloomberg. His latest cause is listed amongst his other signature projects that have been faced with slight culture backlash: soda consumption, smoking bans, and bike-riding.

The Mayor's Office of Long-Term Planning and Sustainability has helped New York City reach environmental and economic goals, and reduce emissions. The strength of the Office can be attributed to the fact that Mayor Bloomberg was not content with existing rules and regulations and decided to take a step forward- an initiative not seen in many other cities (Kellermann, 2013). His leadership was critical to the success of PlaNYC. An example of recognition given to this effort was the award of the Citizens Budget Commission's 2013 Prize for Public Service

Innovation (Kellermann, 2013). Its progress can also be attributed to the fact that the plan sets sustainability indicators and the need for regularly updated plans based on changing needs of the city and the need for improvements (FindLaw, 2013). Its ability to adapt to the changing environmental needs of the city with constant changes and program and initiative additions is essential to its success.

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