From Disclosure to Mandates: PlaNYC's Impact on Building Energy Policy

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Abstract

Since the 1970s, governments and utilities have sought to increase energy efficiency, including in buildings. PlaNYC innovated on these earlier efforts by proposing policies to increase energy efficiency in New York City's large existing buildings. It aimed to reduce energy consumption in these buildings in the face of forecasts for rising demand and prices for electricity, and to help reduce citywide greenhouse gas emissions by 30%.

This paper analyzes the building energy policies that NYC legislated in 2009 following the path charted in PlaNYC. The most important laws required large buildings to annually disclose their energy consumption and benchmark it to comparable buildings, audit the performance of building systems and tune them up, and bring lighting systems up to the then-current energy code within 16 years.

Retrospective analyses of the impacts of the benchmarking and audit requirements show that these first generation policies had modest effects on building energy consumption and other quantitatively measurable metrics.

Nonetheless, the benchmarking and audit laws had three other significant impacts. First, they provided the city with extensive data about energy consumption and systems in large existing buildings. City officials subsequently used this data to understand the large building sector, design and implement Local Law 97 of 2019 (LL97) a second generation building policy that mandates ambitious GHG emission reductions in large existing buildings. Second, the benchmarking and audit laws helped to foster local communities of civil servants, private sector professionals, tradespeople, and advocates knowledgeable about building energy consumption. People in these networks helped to implement the first generation policies and make it possible to design, legislate and implement LL97. Third, people who worked on

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[****] Managing Technical Director, Built Environment & Industrial/Core, National Electrical Manufacturers Association; Principal Headway Advisors. From 2007 to 2018, Unger was Executive Director of the Urban Green Council, and from 2018-2019 he was Chief Strategy Officer at UGC. At the request of the city, Unger convened and managed the Green Codes Task Force to help implement commitments in PlaNYC. In addition, UGC led an expansive industry education program on the Greener, Greater Buildings Plan, which came out of PlaNYC, including developing compliance checklists and training a speakers bureau that delivered hundreds of presentations.

PlaNYC subsequently promoted similar policies in other cities, and other cities and states adopted policies similar to NYC's first generation policies that have laid the technical foundation for second generation policies mandating changes in existing buildings. In short, the indirect effects of PlaNYC's building energy policies were more influential than their direct effects on building energy use.

1. Introduction

On April 22, 2009, the New York Post reported that "Landlords Will Need More Green."[1] To celebrate Earth Day that year, Mayor Michael Bloomberg's administration and city council speaker Christine Quinn were proposing to require building owners to invest in improving the energy efficiency of their buildings as part of lowering the city's greenhouse (GHG) gas emissions.[2] An anonymous source told the Post that the Bloomberg aides who developed the proposals "are wild-eyed, starry-eyed idealists who have no idea how the real world operates when it comes to running a building."[3]

The April 2009 proposals, known as the Greener, Greater Buildings Plan (GGBP), came out of PlaNYC, published two years earlier in 2007. Focusing on the GGBP, this paper analyzes the building energy policies that PlaNYC proposed and that New York City (NYC) implemented immediately after the plan was released, and the impacts of these policies. The GGBP was a central, but not the only, component of the buildings policies that emerged from PlaNYC.

After the energy supply and price shocks in the 1970s, governments and utilities sought to increase energy efficiency, including in buildings and appliances.[4] PlaNYC's proposals for increasing building energy efficiency were distinct. They focused on increasing energy efficiency in large *existing* buildings, as opposed to new buildings which had often been the focus. They covered large *privately-owned* buildings, not just large government-owned buildings which had previously attracted attention.[5] In addition, they aimed to reduce GHG emissions as well as energy consumption, reflecting rising concern with climate change in the 2000s.

In 2009, as part of implementing PlaNYC, the Office of Long-Term Planning and Sustainability (OLTPS), worked with the staff and chair of the city council's environmental protection committee to legislate the proposals announced in April of that year. The most important laws were Local 84, the benchmarking law that requires large buildings to annually disclose their energy consumption and benchmark it to comparable buildings; Local Law 87, the audit and retro-commissioning law that requires large buildings to audit the performance of building systems and tune them up; and, and a lesser extent, Local Law 88,

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[1] Lois Weiss, Landlords Will Need More Green, New York Post (22 April 2009).
[2] Ibid.
[3] Ibid. True to form, the New York Times coverage of the proposals was more muted, although it recognized concerns among building owners and managers with the retrofit requirements in the April 2009 package in particular, which are discussed later in this paper. Andrew C. Revkin, City Plans to Make Older Buildings Refit to Save Energy, N.Y. Times (22 April 2009). See also Press Release, Mayor Bloomberg and Speaker Quinn Announce Major Package of Legislation to Create Greener, Greater Buildings Plan for New York City (22 April 2009).
[4] PlaNYC at 106, 135; Steven Nadel, Neal Elliott, and Therese Langer, Energy Efficiency in the United States: 35 Years and Counting 7, 9, 18-30 (June 2015)].
[5] By 2007, the federal government had already established standards to increase energy efficiency in federal buildings. The federal Energy Policy Act of 2005 included requirements to reduce energy consumption in federal buildings, which the federal Energy Policy Act of 2007 increased to require that federal buildings reduce energy consumption by 30% by 2015, compared to 2003. https://programs.dsireusa.org/system/program/detail/1616; 42 U.S. Code § 8253 (Energy and water management requirements).

which requires large buildings to bring lighting systems up to the then-current energy code within 16 years. These laws imposed limited costs on building owners.

Retrospective analyses of the impacts of the benchmarking and audit requirements show that they had modest effects on building energy consumption and other quantitatively measurable metrics.[6] The modest quantifiable impacts of these largely informational approaches is consistent with the limited effectiveness of similar approaches in other policy domains.[7]

However, the benchmarking and audit requirements had other major impacts. First, these requirements provided the city with extensive data about energy consumption and systems in large existing buildings. City officials subsequently used this data to design and implement Local Law 97 of 2019 (LL97), a second generation policy that mandates ambitious GHG emission reductions in large existing buildings. Second, the first generation policies helped to foster the growth of local networks of civil servants, private sector professionals and tradespeople, and advocates knowledgeable about building energy consumption. People in these networks helped to implement the first generation policies and make it possible to design, legislate and implement LL97. Third, people who worked on PlaNYC subsequently promoted similar policies in other cities, and other cities and states adopted policies similar to NYC's first and second generation building policies.

PlaNYC's building policies are an example of NYC's history of pioneering local environmental efforts. An interesting parallel is the steps NYC took in the 1960s to try to address the city's heavily polluted air.[8] These air pollution control efforts did not succeed in cleaning up the city's air. But they contributed to the momentum for the major federal environmental laws, such as the Clean Air Act, legislated in the 1970s. Perhaps in the future, New York City's early twenty-first century efforts to reduce building energy consumption and GHG emissions also will be regarded as an important stepping stone in the history of national decarbonization.

Plan for the paper

Part 2 describes the multi-pronged policy framework that PlaNYC proposed for increasing energy efficiency in large existing buildings. **Part 3** analyzes the first generation of building policies that the city adopted to implement PlaNYC's goal of reducing energy consumption in large existing buildings.

Part 4 addresses the impacts of the first generation of policies. It summarizes the quantitative studies finding that the benchmarking and audit laws had modest impacts on energy consumption, utility

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[6] Karen Palmer & Margaret Walls, Does Information Provision Shrink the Energy Efficiency Gap? A Cross-City Comparison of Commercial Benchmarking and Disclosure Laws, 3 (Res. For the Future, Disc. Paper RFF DP 15-12, 2015); Ting Meng, David Hsu, and Albert Han, Estimating Energy Savings From Benchmarking Policies in New York City, 133 Energy 415 (2017); Fátima Uriarte Cáceres, Estimating Energy Savings and Greenhouse Gas Emission Reductions From Energy Rating and Disclosure Policies, 21:2 Industrial Data 53 (2018); Constantine E. Kontokosta, Danielle Spiegel-Feld & Sokratis Papadopoulos, The Impact of Mandatory Energy Audits on Building Energy Use, 5 Nature Energy 309 (2020); Luming Shang et al., Assessing Office Building Marketability before and after the Implementation of Energy Benchmarking and Disclosure Policies—Lessons Learned from Major U.S. Cities, 15 Sustainability (2023).

[7] See, e.g., Annie Brett, Rethinking Environmental Disclosure, 112 Cal. L. Rev. 1535 (2024); Daniel E. Ho, Fudging the Nudge: Information Disclosure and Restaurant Grading, 122 Yale L.J. 574 (2012); Omri Ben-Shahar & Carl E. Schneider, The Failure of Mandated Disclosure, 159 U.Pa. L. Rev. 647 (2011).

[8] See Scott Dewey, Don't Breathe the Air: Air Pollution and U.S. Environmental Politics, 1945-1970 (2000).

expenditures and occupancy rates. It discusses qualitatively the policies' most significant impacts: the data that the policies generated about building energy consumption and energy systems in large buildings in the city, the formation of networks of professionals concerned with building energy consumption in the city, and the implementation of similar policies in other cities and states.

Part 5 concludes by underscoring that PlaNYC proposed local efforts to reduce building energy consumption as part of a broad effort by the city to work with New York State, privately owned utilities and the federal government to address the city's energy needs. This insight that the city needs willing partners in the State, utilities and the federal government carries over to today's challenge of decarbonizing the local building stock. Coordinated action by the City, State and federal agencies, private utilities and building owners ultimately may be required to decarbonize local buildings.

2. Buildings in PlaNYC

PlaNYC aimed to prepare NYC to accommodate a population of nine million in 2030. The plan forecast that demand for electricity in the city would increase significantly – in particular, that demand would be 44% higher in 2030 than 2005.[9] PlaNYC warned that the city's existing fleet of aging power plants would not supply enough power to meet demand by 2012.[10] It forecast that wholesale electricity prices for New York City would be 60% higher in 2030 than in 2005.[11]

The plan proposed "supply and demand-side strategies" to meet the expected increase in demand for power.[12] To boost supply, PlaNYC supported building new power plants.[13] It predicted that the city would rely increasingly on power generated by natural gas, which it described as "the cleanest-burning fossil fuel."[14] It recognized that solar and wind were even cleaner, but concluded that "they are not yet financially feasible to play a large role" in "energy generation."[15]

To help reduce demand for power, PlaNYC argued for increasing energy efficiency in the city's buildings. It pointed out that "[o]ver two thirds of our energy is used in buildings, compared to a national average of less than one third."[16] It argued in particular for upgrading energy efficiency in *existing* buildings because of the slow rate at which buildings turn over.[17] Drilling down even further, it argued for reducing

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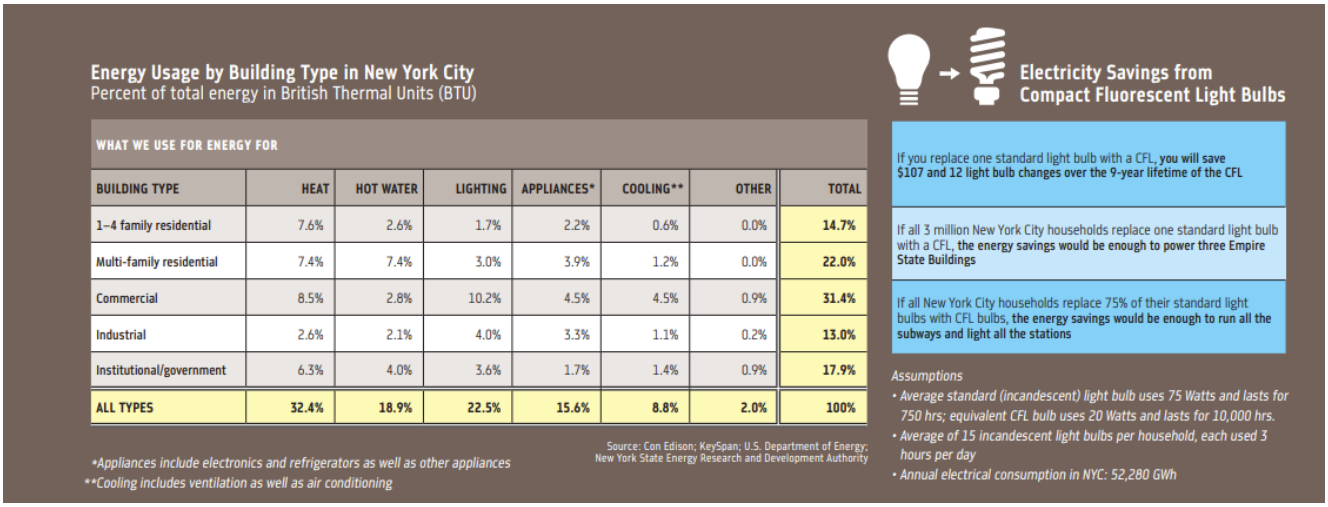
[9] PlaNYC at 102 (Projected New York City Energy Increase, Electricity Consumption). For context, in 2007, national demand for electricity had been rising for years, but it subsequently flattened. U.S. Environmental Protection Agency, Power Sector Evolution, https://www.epa.gov/power-sector/power-sector-evolution#demandtrends.
[10] PlaNYC at 101.
[11] PlaNYC at 103, New York City Price of Electricity.
[12] PlaNYC at 102. As it turned out, demand for electricity was essentially flat in the U.S. until recently.
[13] PlaNYC at 110-111.
[14] PlaNYC at 102. See also id. at 112 (supporting expanding the natural gas infrastructure in the City).
[15] PlaNYC at 102. The 2011 update to PlaNYC was more optimistic about the introduction of renewable sources of generation, in part because of the creation of state and local incentives. PlaNYC 2011 Update at 105, 113. Still, the update supported building new transmission lines to bring more natural gas to the city, and converting buildings to natural gas from heavily polluting oils for heating and hot water. PlaNYC 2011 Update at 104, 106, 116.
[16] PlaNYC at 106.
[17] PlaNYC estimated that "by 2030, at least 85% of our energy usage and carbon emissions will come from buildings that exist today." PlaNYC at 106. During the development of PlaNYC, staff made a back-of-the envelope estimate that 80% of the buildings existing in 2007 would be around in 2030. As Laurie Kerr explained, "With a 1% annual growth rate, compounded over 23 years, the building stock would grow by 25.7%, which translates into 80% of the buildings in 2030 would be buildings extant in 2007." Laurie Kerr, comment on draft paper, August 2, 2026.

energy consumption in *large* existing buildings, pointing out that "less than 4% of our buildings contain roughly 50% of the city's built area."[18] Targeting the relatively small number of large buildings would enable the city to achieve "the maximum impact … with minimal complexity." [19]



Energy Usage by Building Type in New York City
Percent of total energy in British Thermal Units (BTU)

WHAT WE USE FOR ENERGY FOR

BUILDING TYPE	HEAT	HOT WATER	LIGHTING	APPLIANCES*	COOLING**	OTHER	TOTAL
1–4 family residential	7.6%	2.6%	1.7%	2.2%	0.6%	0.0%	14.7%
Multi-family residential	7.4%	7.4%	3.0%	3.9%	1.2%	0.0%	22.0%
Commercial	8.5%	2.8%	10.2%	4.5%	4.5%	0.9%	31.4%
Industrial	2.6%	2.1%	4.0%	3.3%	1.1%	0.2%	13.0%
Institutional/government	6.3%	4.0%	3.6%	1.7%	1.4%	0.9%	17.9%
ALL TYPES	32.4%	18.9%	22.5%	15.6%	8.8%	2.0%	100%

*Appliances include electronics and refrigerators as well as other appliances
**Cooling includes ventilation as well as air conditioning

Source: Con Edison; KeySpan; U.S. Department of Energy; New York State Energy Research and Development Authority

Electricity Savings from Compact Fluorescent Light Bulbs

If you replace one standard light bulb with a CFL, **you will save $107 and 12 light bulb changes over the 9-year lifetime of the CFL**

If all 3 million New York City households replace one standard light bulb with a CFL, **the energy savings would be enough to power three Empire State Buildings**

If all New York City households replace 75% of their standard light bulbs with CFL bulbs, **the energy savings would be enough to run all the subways and light all the stations**

Assumptions
- *Average standard (incandescent) light bulb uses 75 Watts and lasts for 750 hrs; equivalent CFL bulb uses 20 Watts and lasts for 10,000 hrs.*
- *Average of 15 incandescent light bulbs per household, each used 3 hours per day*
- *Annual electrical consumption in NYC: 52,280 GWh*

Source: PlaNYC, page 107.

Increasing building energy efficiency also was integral to achieving PlaNYC's culminating objective of reducing citywide GHG emissions by 30% by 2030 as the plan estimated that 69% of these emissions came from buildings.[20] Furthermore, reducing building energy consumption would improve local air quality.[21]

Part 2.1 discusses the limited tools for increasing building energy efficiency in NYC before PlaNYC. Part 2.2 identifies key proposals in PlaNYC for increasing building energy efficiency.

2.1 The Limited Focus on Large Building Energy Consumption Before PlaNYC

Laurie Kerr, Senior Policy Advisor at OLTPS, was the member of the PlaNYC team most responsible for the building related policies in PlaNYC. She worked with others in and outside the Office in developing these proposed policies, including an informal kitchen cabinet of people outside of government. An architect by training, before joining the PlaNYC team, Kerr had worked at the NYC Department of Design and Construction (DDC), which is responsible for constructing new municipal buildings and infrastructure. She knew from this experience that there was significant unrealized potential to reduce energy consumption in buildings.[22] DDC had a sustainability program when Kerr was there, and DDC had tested Leadership in Energy and Environmental Design (LEED) and energy efficiency strategies in newly

[18] PlaNYC at 102.
[19] PlaNYC at 108.
[20] PlaNYC at 135.
[21] PlaNYC at 127 ("Buildings and industry are responsible for roughly 55% of our PM 2.5 emissions. Improvements in efficiency, as targeted for our energy and carbon goals, will result in a 15% reduction in PM 2.5 for this sector, for a reduction of approximately 6% of overall city PM 2.5 emissions."). The chapter on air quality also highlighted the potential to reduce local air pollution and GHG emissions by changing the types of fuel oil burned in buildings, and launching a local air quality study. Id. at 127-129. This paper does not address the impact of the clean heat program.
[22] Interview with Laurie Kerr, December 19, 2025.

constructed buildings. [23] The elements of the real estate industry interested in green buildings similarly tended to focus on new buildings, LEED's main concern at the time.[24]

In the early 2000s, the energy requirements for buildings in NYC "were weak to nonexistent."[25] New York State had had an energy code since the late 1970s.[26] However, when work on PlaNYC started, the State Energy Conservation Construction Code (SECCC or Code) was out of date.[27] Kerr had worked on projects that significantly exceeded the Code requirements, and knew there was room for improvement.[28] The Code focused on new buildings, and provided limited incentives to improve energy efficiency in existing buildings. [29] Although renovations to existing buildings had to comply with the SECCC, the Code "exempt[ed] renovations of 50% or less of the building system or subsystem from compliance."[30] This was a major loophole because many projects never reached the 50% threshold because they were partial renovations.[31] The SECCC also was under-enforced; New York City did not enforce the code because it was a New York State code.[32]

2.2 PlaNYC's Policy Framework for Reducing Building Energy Consumption

PlaNYC proposed a multipronged approach for improving building energy efficiency.

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[23] PlaNYC indicates that the City had already "established new standards for new municipal buildings" and that "Investments in LED stoplights and retrofits to City-owned buildings have already saved the City money and reduced the City's energy consumption." PlaNYC at 106. Local Law 86 of 2005, "the first green buildings law, [mandated] … green building standards for City capital projects with an estimated cost of two million dollars or more." Committee on Environmental Protection, Infrastructure Division, Briefing Paper of the Infrastructure Division, Proposed Int. No. 476-A etc, 21 (June 26, 2009).

[24] Russell Unger, personal communication, July 23, 2026.

[25] Interview with Laurie Kerr, December 19, 2025

[26] Chapter 397 of the New York State Laws of 1978 included the New York State Energy Conservation Construction Code Act of 1978, which is now codified (with amendments) in New York State Energy Law, § 11-101 – § 11-110. On the history, see Michael Bobker, Decoding the Code: How Can NYC's Building Code Help Meet PlaNYC 2030 Energy/Carbon Reduction Goals? 26 (2008), https://cunybpl.org/wp-content/uploads/2022/08/Decoding-the-Code-A-Report-Prepared-for-the-Sallan-Foundation.pdf.

[27] Interview with Laurie Kerr, December 19, 2025.

[28] Interview with Laurie Kerr, December 19, 2025.

[29] Interview with Laurie Kerr, December 19, 2025.

[30] Committee on Environmental Protection, Infrastructure Division, Briefing Paper of the Infrastructure Division, Proposed Int. No. 476-A etc, 5 (June 26, 2009); see also Laurie Kerr, interview December 19, 2025; Michael Bobker, Decoding the Code: How Can NYC's Building Code Help Meet PlaNYC 2030 Energy/Carbon Reduction Goals? 27-28 (2008), https://cunybpl.org/wp-content/uploads/2022/08/Decoding-the-Code-A-Report-Prepared-for-the-Sallan-Foundation.pdf.

[31] Laurie Kerr, comment on draft paper, August 2, 2026; Michael Bobker, Decoding the Code: How Can NYC's Building Code Help Meet PlaNYC 2030 Energy/Carbon Reduction Goals? 27-28 (2008), https://cunybpl.org/wp-content/uploads/2022/08/Decoding-the-Code-A-Report-Prepared-for-the-Sallan-Foundation.pdf.

[32] Interview with Laurie Kerr, December 19, 2025. See also Transcript of the Minutes of the Environmental Protection Committee, June 26, 2009 80 (Scott Frank, Jaros Baum Bolles) ("Since the New York State energy law was first enacted in 1976, New York City government took no action of any kind towards administering the energy code until 2007, 31 years later.") [hereinafter June 26 2009 Committee Transcript]; Michael Bobker, Decoding the Code: How Can NYC's Building Code Help Meet PlaNYC 2030 Energy/Carbon Reduction Goals? 27 (2008), https://cunybpl.org/wp-content/uploads/2022/08/Decoding-the-Code-A-Report-Prepared-for-the-Sallan-Foundation.pdf.

It recommended that the City lead by example in its own buildings, and commit to a 30% reduction in energy consumption "in buildings and operations by 2017" through "audits/retrofits, lighting upgrades, and improved maintenance."[33]

To spur the private sector to improve energy efficiency, PlaNYC proposed to use "challenges, requirements, and incentives."[34]

The City would "challenge the city's leading non-profit and commercial building owners to match the City's commitment to cut its own energy use by 30% in 10 years."[35] Kerr had read that London had launched a challenge for commercial buildings. She thought that a voluntary challenge would be a better fit for institutionally owned buildings, such as universities, given that such institutions often have publicly-oriented missions and can accept longer payback periods for investments because they own their buildings for long periods of time.[36]

For commercial and industrial buildings over 100,000 square feet, and multifamily buildings with over 50 units, PlaNYC proposed benchmarking and "retro-commissioning or audit[s]/retrofit[s]" that would payback within five years or less.[37] EPA had launched Portfolio Manager in 1999 and some commercial building owners in New York City were already using the tool to track their buildings' energy performance and benchmark it to that of other buildings.[38] In theory, benchmarking might lead to reductions in building energy consumption by providing owners information about how their buildings' energy efficiency compared to similar buildings. Publicly disclosing the information would enable tenants and investors to use the information, and potentially create a market incentive to upgrade buildings if private actors sufficiently value efficiency. Audits would enable the identification of measures to increase energy efficiency tailored to the circumstances of each building.[39] Conversations with industry experts convinced Kerr that that there were major opportunities to reduce energy consumption in existing buildings by altering operations, hence the commitment to retro-commissioning.[40]

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[33] Key Areas for Targeted Energy Efficiency Initiatives, in PlaNYC at 108. In the table "Key Ares for Targeted Energy Efficiency Upgrades" it is not clear whether the 30% reduction commitment was for energy consumption or GHG emissions. However, text on page 108 suggests that it was for energy consumption, referring to "the City's commitment to cut its own energy use by 30% in 10 years." PlaNYC at 108.

[34] PlaNYC at 108.

[35] PlaNYC at 108.

[36] Kerr, comment on draft paper, August 2, 2026.

[37] Key Areas for Targeted Energy Efficiency Initiatives, in PlaNYC at 108. See also id. at 110 ("We will make energy usage in buildings more transparent by encouraging building owners to file and Environmental Protection Agency Portfolio Manager survey, a web-based energy usage breakdown for buildings. This will enable us to analyze consumption patterns, and adapt our efficiency strategies to have the maximum impact.").

[38] https://portfoliomanager.energystar.gov/pdf/reference/Introduction_to_Exchanging_Data_en_US.pdf. At a June 2009 meeting of the city council's Environmental Protection Committee hearing on the GGBP, a representative from EPA testified that "in the New York City metropolitan region, more than 4,000 commercial buildings representing over 1 billion square feet of space have already benchmarked with Portfolio Manager." June 26 2009 Committee Transcript 42 (Alexandra Sullivan). See also id. at 84 (Marilyn Davenport, Senior Vice President, REBNY testifying that REBNY members have been benchmarking). Benchmarking started earlier for commercial than multifamily residential buildings. Id. at 43-44.

[39] Laurie Kerr, comments on draft paper, August 2, 2026.

[40] Laurie Kerr, comments on draft paper, August 2, 2026. Kerr also mentioned that the Lawrence Berkeley National Laboratory had published "a convincing meta-study on commissioning and retro-commissioning." This may have been Norman Bourassa, Mary Ann Piette & Naoya Motegi, An Evaluation of Savings and Measure Persistence from

Energy efficiency upgrades would be mandatory for large commercial, industrial and residential buildings by 2015.[41] PlaNYC proposed to create the New York City Energy Efficiency Authority, funded by a surcharge on ratepayers, to provide financial incentives for energy efficiency upgrades.[42]

Commercial and industrial buildings also would be required to upgrade their lighting to the energy code when renovating or tenants changed.[43] LED lighting was not widely in place in 2007.[44] Lighting accounted for 22.5% of city energy use across the city, and approximately a third of building energy use in commercial buildings in particular.[45] PlaNYC estimated that lighting upgrades in commercial and industrial buildings would pay back quickly, within one-and-a-half to two years.[46]

For new buildings, the city would increase the energy efficiency requirements in the next revisions to the city's building code, and seek changes to the State Energy Conservation Construction Code and other codes.[47]

Retrocommissioning of Large Commercial Buildings (2004), available at https://eta.lbl.gov/publications/evaluation-savings-and-measure.

[41] Key Areas for Targeted Energy Efficiency Initiatives, in PlaNYC at 108. See also PlaNYC at 108 ("In many cases, such as the energy upgrades for large commercial and industrial buildings, we will incent behavior to encourage early adoption and then mandate compliance by 2015.").

[42] Key Areas for Targeted Energy Efficiency Initiatives, in PlaNYC at 108. See id. at 107 (on the New York City Energy Efficiency Authority).

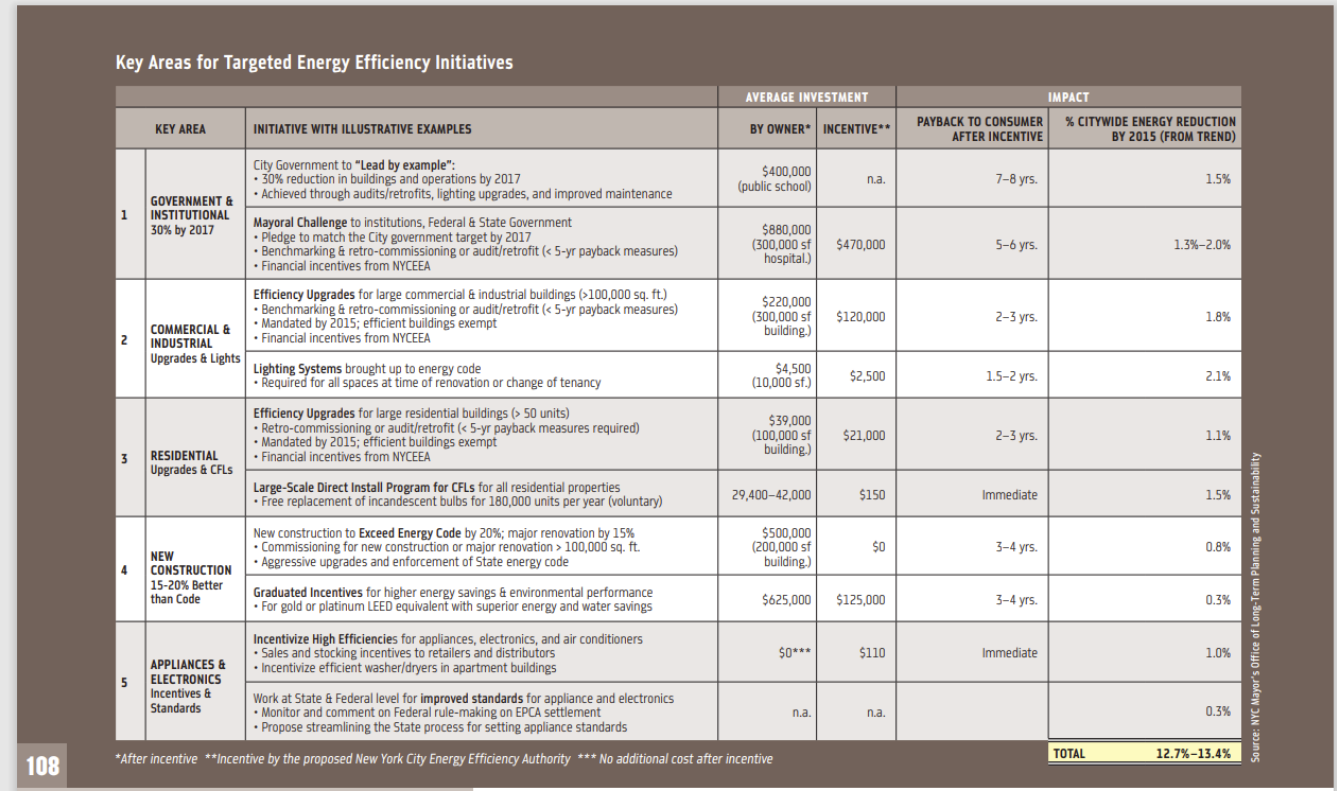
[43] Key Areas for Targeted Energy Efficiency Initiatives, in PlaNYC at 108.

[44] https://www.eia.gov/todayinenergy/detail.php?id=49816

[45] Energy Usage by Building Type in New York City, PlaNYC at 107; Laure Kerr, comments on draft paper, August 2, 2026. According to the 2011 update to PlaNYC, "In New York City, 27% of our electricity is used to light buildings, accounting for 12% of our overall carbon emissions." PlaNYC 2011 Update at 109.

[46] PlaNYC at 108 (Key Areas for Targeted Energy Efficiency Initiatives).

[47] Key Areas for Targeted Energy Efficiency Initiatives, in PlaNYC at 108. See also id. at 107



Key Areas for Targeted Energy Efficiency Initiatives

	KEY AREA	INITIATIVE WITH ILLUSTRATIVE EXAMPLES	AVERAGE INVESTMENT BY OWNER*	AVERAGE INVESTMENT INCENTIVE**	IMPACT PAYBACK TO CONSUMER AFTER INCENTIVE	IMPACT % CITYWIDE ENERGY REDUCTION BY 2015 (FROM TREND)
1	GOVERNMENT & INSTITUTIONAL 30% by 2017	City Government to **"Lead by example"**: • 30% reduction in buildings and operations by 2017 • Achieved through audits/retrofits, lighting upgrades, and improved maintenance	$400,000 (public school)	n.a.	7–8 yrs.	1.5%
		Mayoral Challenge to institutions, Federal & State Government • Pledge to match the City government target by 2017 • Benchmarking & retro-commissioning or audit/retrofit (< 5-yr payback measures) • Financial incentives from NYCEEA	$880,000 (300,000 sf hospital.)	$470,000	5–6 yrs.	1.3%–2.0%
2	COMMERCIAL & INDUSTRIAL Upgrades & Lights	**Efficiency Upgrades** for large commercial & industrial buildings (>100,000 sq. ft.) • Benchmarking & retro-commissioning or audit/retrofit (< 5-yr payback measures) • Mandated by 2015; efficient buildings exempt • Financial incentives from NYCEEA	$220,000 (300,000 sf building.)	$120,000	2–3 yrs.	1.8%
		Lighting Systems brought up to energy code • Required for all spaces at time of renovation or change of tenancy	$4,500 (10,000 sf.)	$2,500	1.5–2 yrs.	2.1%
3	RESIDENTIAL Upgrades & CFLs	**Efficiency Upgrades** for large residential buildings (> 50 units) • Retro-commissioning or audit/retrofit (< 5-yr payback measures required) • Mandated by 2015; efficient buildings exempt • Financial incentives from NYCEEA	$39,000 (100,000 sf building.)	$21,000	2–3 yrs.	1.1%
		Large-Scale Direct Install Program for CFLs for all residential properties • Free replacement of incandescent bulbs for 180,000 units per year (voluntary)	29,400–42,000	$150	Immediate	1.5%
4	NEW CONSTRUCTION 15-20% Better than Code	New construction to **Exceed Energy Code** by 20%; major renovation by 15% • Commissioning for new construction or major renovation > 100,000 sq. ft. • Aggressive upgrades and enforcement of State energy code	$500,000 (200,000 sf building.)	$0	3–4 yrs.	0.8%
		Graduated Incentives for higher energy savings & environmental performance • For gold or platinum LEED equivalent with superior energy and water savings	$625,000	$125,000	3–4 yrs.	0.3%
5	APPLIANCES & ELECTRONICS Incentives & Standards	**Incentivize High Efficiencies** for appliances, electronics, and air conditioners • Sales and stocking incentives to retailers and distributors • Incentivize efficient washer/dryers in apartment buildings	$0***	$110	Immediate	1.0%
		Work at State & Federal level for **improved standards** for appliance and electronics • Monitor and comment on Federal rule-making on EPCA settlement • Propose streamlining the State process for setting appliance standards	n.a.	n.a.		0.3%
					TOTAL	12.7%–13.4%

*After incentive **Incentive by the proposed New York City Energy Efficiency Authority *** No additional cost after incentive

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Source: NYC Mayor's Office of Long-Term Planning and Sustainability

Source: PlaNYC, page 108.

3. NYC's First Generation of Light Touch Building Policies

A hallmark of PlaNYC was the desire of its drafters to prepare a plan with concrete proposals that would be implemented and whose effects could be measured. Which of the policies outlined in PlaNYC were implemented? Which were not? Why?

In OLTPS, Laurie Kerr and Rohit Aggarwala, the director of the Office, led the implementation of the buildings policies. They carried forth many of the ideas in PlaNYC, with the notable exception of the proposal to mandate retrofits to reduce building energy consumption. Table 1, at the end of Part 3, summarizes key buildings-related proposals in PlaNYC, how these policies were implemented between 2007 and 2011, and key differences between the policies as proposed in PlaNYC and implemented. Section 3.1 focuses on the implementation of a subset of the buildings-related policies in PlaNYC, the four laws in the Greener, Greater Buildings Plan.

3.1 The Greener, Greater Buildings Plan

The GGBP, which the city council passed in December 2009, was a key component of OLTPS's implementation of PlaNYC's building energy policies.[48] OLTPS – in particular Rohit Aggarwala and Laurie

[48]See PlaNYC 2011 Update at 107 (referring to the four laws as the GGBP). In some documents, the GGBP is used to refer to the four laws and "creating a trained workforce that can reliably deliver improved energy performance" and the establishment of the New York Energy Efficiency Corporation. New York City Mayor's Office of Long-Term Planning and Sustainability, Overview of the Greener, Greater Buildings Plan at 1-2 (October 2014), https://www.nyc.gov/html/gbee/downloads/pdf/greener_greater_buildings_plan.pdf

Kerr – worked with council staff – including Rob Newman, Jeff Haberman and Laura Popa – and city council environmental protection committee chair Jim Gennaro to develop the laws.[49] Staff from OLTPS and the council committee repeatedly met with stakeholders in developing the laws.

Three of the four GGBP laws did not generate significant political controversy, perhaps because they imposed few costs on building owners. Several of the laws merely required building owners to undertake actions that some of them were already doing[50] and that stood to save owners money in short order after a minimal upfront investment. The most controversial legislative proposal would have required that building owners implement measures to retrofit their buildings.

Local Law 84: Benchmarking

Local Law 84 implemented PlaNYC's proposal that large buildings be required to disclose their energy performance and benchmark it. It required that buildings over 50,000 square feet annually disclose their energy consumption and benchmark it using Energy Star Portfolio Manager, and that the city publicly disclose the benchmarking data. The 22,000 properties over 50,000 square feet that it covered accounted for almost 50% of the city's energy consumption.[51] The benchmarking law diffused a practice that some building owners were already undertaking voluntarily.[52] Nonetheless, some real estate interests criticized the requirement to disclose building energy and benchmarking performance.[53] High energy users, such as television studios, were particularly concerned that they would suffer negative reputational repercussions if their energy use was publicly disclosed and they secured special treatment in the Local Law 84.[54] In 2016, the benchmarking requirement was extended to buildings over 25,000 square feet.[55]

Local Law 88: Lighting and Sub-Metering

Local Law 88 required non-residential buildings over 50,000 square feet to upgrade their lighting to code and sub-meter tenant spaces by 2025.[56] When the bill that became LL88 was introduced at the city

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[49] June 26 2009 Committee Transcript 16 (James F. Gennaro). Gennaro, the Committee chair, also thanked staff members Samara Swanston, Siobhan Watson, Nathan Toth, Anthony Hogrebe, Costa Constantinides, William Murray and Brad Groznik.

[50] Testimony of Russell Unger, Executive Director, Urban Green Council/U.S. Green Buildings Council, N.Y. Chapter, Before the New York City Council Committee on Environmental Protection, June 26, 2009.

[51] June 26 2009 Committee Transcript 24-25 (Rohit Aggarwala). While the transcript refers to 22,000 buildings rather than properties, the reference should be to properties. Laurie Kerr, comment on draft, August 2, 2026.

[52] See supra note 38.

[53] The Building Owners and Managers Association of Greater New York argued that "building owners should be able to release their benchmarking results at their discretion." June 26 2009 Committee Transcript 99 (Sylvester Giustino, Director of Legislative Affairs of the Building Owners and Managers Association of Greater New York). The Council of New York Cooperatives and Condominiums "question[ed] the usefulness of disclosing the energy statistics of comparable buildings." June 26 2009 Committee Transcript 196 (Maryann Rothman, Executive Director, Council of New York Cooperatives and Condominiums).

[54] While Local Law 84 requires that the city disclose to the public ratings of buildings' energy efficiency generated by Portfolio Manager, the city is not required to disclose the rating of a building in which over 10 percent of the square footage is occupied by a data center, television studio and/or trading floor until OLTPS finds that the benchmarking tool can adjust for the energy use of these facilities. Local Law 84 of 2009 (adding § 28-309.8).

[55] Local Law 133 of 2016. https://www.nyc.gov/assets/buildings/local_laws/ll133of2016.pdf

[56] Local Law 88 of 2009 (amending chapter 3 of title 28 of the administrative code of the city of New York by adding articles 310 and 311); June 26 2009 Committee Transcript 30 (Rohit Aggarwala).

council in April 2009, it did not include the sub-metering requirement.[57] This provision was added after, as discussed below, the city dropped the requirement to implement retrofits recommended in audits.[58] Sub-metering would provide tenants an incentive to reduce their energy consumption; without sub-metering, many tenants did not pay for energy use and therefore were not motivated to lower their consumption.[59] The law was amended in 2016 to require lighting upgrades and submetering in nonresidential buildings over 25,000 square feet, and lighting upgrades in common areas in residential buildings over 25,000 square feet.[60]

Local Law 85: City Energy Code

Local Law 85 created a New York City Energy Conservation Code, which exceeded the requirements of the State Energy Conservation Code. The City Code removed the loophole in the State Code for renovations that exempted replacements of less than 50% of a building's system or subsystem.[61] Henceforth, owners renovating their buildings would have to bring the renovated parts up to code and there would no exemptions for changes to 50% of less of a system or subsystem.[62] OLTPS argued that the Code changes would not significantly increase costs for buildings,[63] although one stakeholder warned the city council environmental protection committee that the code changes would be costly.[64]

Local Law 87: Mandatory Audits

Local Law 87 was the most politically contentious component of the GGBP. It required that buildings over 50,000 square feet audit their energy systems every ten years, and disclose the audits to the city. What was controversial was the requirement that building owners implement energy efficiency upgrades identified in the audits that would pay for themselves.[65] As mentioned above, PlaNYC proposed that energy efficiency upgrades be mandatory in large buildings by 2015.[66] This proposal was reflected in

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[57] See Intro. No. 973, introduced April 22, 2009, which focused entirely on requiring lighting upgrades.
[58] Laurie Kerr, comment on draft, August 2, 2026.
[59] Laurie Kerr, comment on draft, August 2, 2026.
[60] https://www.nyc.gov/html/gbee/html/plan/ll88.shtml
[61] June 26 2009 Committee Transcript 17-18 (Dan Garodnick).
[62] June 26 2009 Committee Transcript 26-27 (Rohit Aggarwala). PlaNYC also led to other actions concerning codes. After 2007, "[a]t the request of Mayor Bloomberg and Speaker Quinn, the Urban Green Council (UGC) assembled the New York City Green Codes Task Force, consisting of more than 200 experts in design and construction." PlaNYC 2011 Update at 108. Of its 111 recommendations for code changes, 22 were implemented by 2011. PlaNYC 2011 Update at 108. The report of the Green Codes Task Force is here.
[63] June 26 2009 Committee Transcript 51-52 (Rohit Aggarwala).
[64] June 26 2009 Committee Transcript 191 (Gregory Carlson, Executive Director, Federation of New York Housing Cooperatives and Condominiums) ("As far as the Intro 564-A, the New York City Energy Code, I think there is going to be a lot of hidden costs, such as the higher costs for equipment, your energy consultant because you have to bring one on now, and other hidden costs.") In the 2020s, there is a critique that green building and energy code requirements are adding to the cost of new housing construction, and may be discouraging new construction in cities, where new construction is desirable because density is associated with lower GHG emissions. Christopher Serkin, Climate Zoning, 99 Notre Dame L. Rev. 1093, 1118-1120 (2024). Even if codes are excessively stringent in the 2020s, that does negate the potential benefits of updating codes in the 2000s and 2010s, when they were less stringent.
[65] June 26 2009 Committee Transcript 42 (Marilyn Davenport, Senior Vice President, REBNY) 101 (expressing support for the audit and retro-commissioning requirements while opposing mandatory retrofits).
[66] PlaNYC at 108.

Intro. No. 967 from April 2009, the first version of the bill introduced in the council that later became Local Law 87. Intro. No. 967 required that building owners required to audit implement "all the retro-commissioning *and retrofit measures* identified in the audit report as having a simple payback of not more than 7 years, or at the option of the owner, retro-commissioning and retrofit measures that when combined equal or exceed the overall reduction in energy consumption of the retrofit and retro-commissioning measures with a simple payback of not more than 7 years."[67]

Many elements of the real estate industry opposed the mandatory retrofit requirement, even though it was cabined to measures that would pay back in a set period.[68] Marilyn Davenport, Senior Vice President of the Real Estate Board of New York (REBNY), whose members include leading commercial real estate interests, testified at a hearing on the GGBP in June 2009 before the city council committee on environmental protection. Davenport indicated that REBNY could support three of the four bills with changes, but that the audit bill with the retrofit mandates was "unworkable as written."[69] She argued that "the bill does not account for the different types of buildings, the different types of building systems, the different lease structures within the same building."[70] Buildings lacked access to financing to implement mandatory retrofits, and "the simple payback is really just not simple at all."[71] Another representative of the commercial real estate industry, the Building Owners and Managers Association of Greater New York, also opposed mandatory retrofits.[72] It warned that "[w]e are already struggling in a contracting economy and these additional costs, which would be partially absorbed in rentals, would cut into New York City's competitiveness in the marketplace."[73] Trinity Real Estate, a large commercial property owner, expressed a concern that OLTPS heard from other stakeholders that investments in energy efficiency would not pay back for owners because of the terms of commercial leases in the city. As Trinity explained, under many commercial leases, owners paid for capital investments, such as efficiency upgrades, while tenants paid operating costs, such as energy costs, meaning that tenants would benefit from the lower energy costs that owner investments in efficiency facilitated.[74]

There also was widespread opposition to mandatory retrofits from residential real estate owners and tenant advocates. At the June hearing, the Council of New York Cooperatives and Condominiums warned that the retrofit requirement "imposes large expenditures on buildings whose shareholders or unit

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[67] Intro. No. 967, Section 1 (adding section 28-308.3). Italics added. PlaNYC, and the April 2009 city press release announcing the GGBP (including Intro. No. 967) indicated that the retrofits would be required for measures that paid back in five years (as opposed to the seven years mentioned in the April 2009 bill). PlaNYC at 108; Press Release, Mayor Bloomberg and Speaker Quinn Announce Major Package of Legislation To Create Greener, Greater Buildings Plan for New York City (April 22, 2009).

[68] See Andrew C. Revkin, City Plans to Make Older Buildings Refit to Save Energy, N.Y. Times (April 22, 2009), https://www.nytimes.com/2009/04/22/science/earth/22green.html.

[69] June 26 2009 Committee Transcript 84 (Marilyn Davenport, REBNY)

[70] June 26 2009 Committee Transcript 87 (Marilyn Davenport, REBNY)

[71] June 26 2009 Committee Transcript 87 (Marilyn Davenport, REBNY). See also id. at 90 ("The variations in terms of the leases for commercial properties also make calculation of payback an attribution of cost extremely difficult, particularly where buildings are not sub metered.") (Ramon Cruz, Vice President for Energy and Environment, Partnership for New York City).

[72] June 26 2009 Committee Transcript 99 (Sylvester Giustino, Director of Legislative Affairs of the Building Owners and Managers Association of Greater New York).

[73] Id. at 98.

[74] Transcript of the Minutes of the Environmental Protection Committee, June 26, 2009 77 (Emily Lloyd, Chief Operating Officer, Trinity Real Estate). See also Kerr, comments on draft paper, August 2, 2026.

owners may be struggling to make ends meet."[75] It urged the Council "not to adopt vague legislation that will directly affect thousands of New York City homeowners, particularly in this time of financial crisis."[76] The Rent Stabilization Association "strongly opposed" mandating retrofits – and audits – because of the "potential cost to many low and moderate income rental and coop buildings."[77] Affordable housing developers decried the retrofit requirement as an "unfunded mandate" that buildings with income based rent restrictions would not have the capital to fulfill.[78] Advocates for low-income residential tenants worried that retrofit requirements would lead building owners to increase rents, including for rent-stabilized apartments, even if the retrofits resulted in net savings for building owners.[79] City council members echoed the tenant advocates' concerns that mandating retrofits would increase rents. [80]

In the end, the mandatory retrofit requirement was dropped from the audit bill. Buildings over 50,000 square feet would merely be required to undertake energy efficiency audits every ten years, and implement retro-commissioning measures. These are low-cost methods of upgrading energy efficiency that, unlike retrofits, do not entail major capital investments. They include "repairs of defects, cleaning, adjustments of valves, sensors, controls or programmed settings, and/or changes in operational practices."[81]

In an interview in 2026, Rohit Aggarwala recalled that "concerns about [the] enforceability [of a mandate requirement] were key" to the decision to drop it.[82] He remembers "sitting in [a] room with Laurie Kerr [and] Laura Popa and trying to figure out how to write … in a rule that we could defend" mandating retrofits estimated to payback in seven years.[83] "Top of mind was, if you're looking at [a] payback period for [an energy conservation measure], do you use today's prices or whose projection do you use?."[84] Aggarwala explained that the city did not drop the mandate requirement because of opposition from the real estate industry, but noted that there is "[n]o question that once we stepped back, a lot of real estate opposition fell back."[85] Reducing the opposition of the real estate industry likely eased the passage of the GGBP given the influence of the industry in NYC politics in the 2000s.

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[75] June 26 2009 Committee Transcript 197 (Maryann Rothman, Executive Director, Council of New York Cooperatives and Condominiums). See also the testimony of Gregory Carlson from the Federation of New York Housing Cooperatives and Condominiums. Id. at 212-216.

[76] June 26 2009 Committee Transcript 197-198 (Maryann Rothman, Executive Director, Council of New York Cooperatives and Condominiums).

[77] Rent Stabilization Association, Memorandum in Opposition Intro. 967 (written testimony from June 26 2009 Committee on Environmental Protection hearing)

[78] June 29 2009 Committee Transcript 238-240 (Camilla Kisco, New York State Association For Affordable Housing). See also id. at 249 (Aaron Behr, Community Development Officers, LISC).

[79] June 26 2009 Committee Transcript 56-57 (Daniel Garodnick); id. at 225-232 (David Robinson, Legal Services NYC; Maggie Russell-Ciardi, Executive Director, Tenants and Neighbors) (proposing measures to reduce the impact on tenants of mandatory audits, especially rent-stabilized and Mitchell-Lama tenants).

[80] Transcript of the Minutes of the Environmental Protection Committee, June 26, 2009 56-57 (Daniel Garodnick); id. at 65-66 (Melissa Mark-Viverito).

[81] Local Law 87

[82] Interview January 12, 2026.

[83] Interview January 12, 2026.

[84] Interview January 12, 2026.

[85] Interview January 12, 2026. [fell back or fell away?]. The New York Times reported that REBNY supported the GGBP after the retrofit requirement was dropped. Mireya Navarro, Bloomberg Drops an Effort to Cut Building

The idea of the city mandating that buildings invest in energy efficiency upgrades did not disappear after it was dropped from the GGBP. In 2013, on the Bloomberg administration's last day in office, OLTPS published a report contemplating a city commitment to reduce GHG emissions by 80% by 2050. The report revived the idea of mandating building-level changes to achieve the more ambitious climate goal.[86] Several years later, when Mayor Bill de Blasio's administration picked up the idea of building mandates, it confronted some of the same issues that stymied the proposal for mandates in the GGBP: Can buildings afford retrofits? How could tenants in rent-stabilized apartments, which constitute over 40% of the city's residential rental stock, be protected from rent increases if rent-stabilized buildings were required to retrofit?[87] The mandates debate in 2009 was a dry run for the debate about LL97 a decade later. But the outcome was different in 2019, in part because the political landscape changed, and the implementation of the GGBP facilitated the adoption of mandates in LL97.

Table 1 Key proposals in PlaNYC, how these policies were implemented between 2007 and 2011, and key differences between the policies as proposed in PlaNYC and implemented.

	PlaNYC	**Policies implemented 2007-2011**	**Key differences between proposals in PlaNYC and implemented policies**
City buildings			
	City to reduce energy consumption 30% in city buildings by 2017	The city adopted a goal of reducing city GHG emissions by 30% below 2006 levels by 2017[88]	The city defined the 30% reduction goal as applying to GHG emissions (vs energy consumption) and for all operations (fleets, waste water treatment etc.) and not only buildings[89]
Private buildings			
Carbon Challenge	City to challenge institutions and governments to match	In 2007, the city challenged leading universities and hospitals to reduce carbon	The challenge focuses on reducing carbon emissions (vs energy consumption)[92]

Energy Use, N.Y. Times (December 4, 2009), https://www.nytimes.com/2009/12/05/science/earth/05bloomberg.html.

[86] City of N.Y., New York City Pathways to Deep Carbon Reductions 46 (2013)

[87] Testimony of the Mayor's Office Before the New York City Council Committee on Environmental Protection, December 4 2018 (testimony of Mark Chambers, Director, Mayor's Office of Sustainability) (expressing interest in working with the council to devise ways of encouraging GHG emission reductions from buildings with rent stabilized or income restricted units "without unnecessarily burdening tenants"); NYC Rent Guidelines Board, https://rentguidelinesboard.cityofnewyork.us/resources/apartment-hunting/housing-types/#:~:text=About%20one%20million%20of%20New,living%20in%20market%20rate%20housing (1 out of 2.3 million rental units are rent-stabilized).

[88] PlaNYC 2011 Update at 111.

[89] PlaNYC 2011 Update at 111.

[92] Officially, the metric was emissions but energy efficiency was preeminent because the grid coefficients were held constant, except for fuel switching. Cecil Scheib.

	PlaNYC	Policies implemented 2007-2011	Key differences between proposals in PlaNYC and implemented policies
	city's commitment to cut energy use by 30%	emissions by 30% by 2017.[90] By 2011, 29 institutions were participating.[91]	
Benchmarking requirement[93]	For commercial & industrial buildings over 100,000 sq ft	Local Law 84 requires buildings over 50,000 sq ft to benchmark and disclose their performance	Local Law 84 requires residential, in addition to commercial and industrial, buildings to benchmark. It applies to buildings 50,000 sq ft and over (vs buildings over 100,000 sq ft)[94]
Audit and retro-commissioning requirements	For commercial & industrial buildings over 100,000 sq ft	Local Law 87 requires audits and retro-commissioning by buildings 50,000 sq ft and over	Audit and retro-commissioning requirements apply to residential buildings over 50,000 sq ft (not just industrial & commercial buildings meeting the size threshold)
Mandatory energy efficiency upgrades by 2015	For commercial & industrial buildings over 100,000 sq ft & residential buildings with over 50 units	Not implemented	No mandatory energy efficiency upgrades
Lighting upgrades	Commercial & industrial buildings to bring lighting up to code	Local Law 88 requires nonresidential buildings over 50,000 sq ft to bring lighting up to code by 2025	Local Law 88 limits lighting upgrades to buildings over 50,000 sq ft
Free distribution of compact fluorescent lightbulbs to residential properties	City to establish a "[l]arge-[s]cale [d]irect [i]nstall [p]rogram" for compact fluorescent lightbulbs "for all	The city worked with Con Edison and General Electric to offer $1-off coupons for compact fluorescent lightbulbs to	The city launched a lightbulb program that provided residential customers with discounts

[90] PlaNYC 2011 Update at 111-112.

[91] PlaNYC 2011 Update at 104, 111. Id. at 112 (showing graphs of "New York University's Energy Reductions" and "Key Components of NYU's Energy Reduction Strategy"). According to the Mayor's Office of Climate and Environmental Justice website, there are currently "102 partner organizations" from seven sectors participating in the Carbon Challenge. https://www.nyc.gov/content/climate/pages/initiatives/nyc-carbon-challenge (accessed November 9, 2026).

[93] Under Local Law 84, the city was required to benchmark the energy performance of its buildings over 10,000 square feet starting in 2010. Thus, the size threshold for benchmarking city buildings is lower, and the city had to start benchmarking a year earlier than private building owners required to start in 2011. Local Law 84, Section 1.

[94] The threshold may have been lowered from 100,000 to 50,000 square feet after the city recognized that covering buildings over 50,000 square feet would capture approximately half the city's built area. Laurie Kerr, comment on draft, August 2, 2026;
https://www.nyc.gov/html/unccp/gprb/downloads/pdf/NYC_Environment_GreenBuildings.pdf.

	PlaNYC	Policies implemented 2007-2011	Key differences between proposals in PlaNYC and implemented policies
	residential properties," including a voluntary program to replace incandescent light bulbs for free	2.4 million Con Edison residential customers[95]	for compact fluorescent bulbs, not free bulbs
Codes	"New construction to Exceed Energy Code by 20%, major renovations by 15%"; "[a]ggressive upgrades and enforcement of State energy code"[96]	Local Law 85 created a New York City Energy Conservation Code, which exceeded the requirements of the State Energy Conservation Code[97]	The initial New York City Energy Conservation Code included only a few items that were more stringent than the State Code, such as the non-exemption for most renovations[98]
Other			
New York City Energy Efficiency Authority	City to establish Authority funded by ratepayer surcharges to fund incentives to reduce energy demand	In 2011, the City established the New York City Energy Efficiency Corporation using over $37 million in surplus federal American Recovery and Reinvestment Act of 2009 funding. It has a revolving loan fund and offers credit enhancements. [99]	The city created a corporation (not an authority) and it seeded it with surplus federal stimulus funds for recovering from the 2008 financial crisis, not surcharges on ratepayers

4. The Impacts of PlaNYC Building Energy Policies

PlaNYC's light touch building energy policies were developed in an era when there was considerable optimism in policy circles in the U.S. that mandating the disclosure of information would help to change behavior and address a wide range of problems. The theory of change was that providing people with information would lead them to alter their behavior, especially if they could save money or otherwise benefit from acting based on the information.[100] Contemporaneous with the passage of the GGBP, New York City required restaurants to publicly display health and safety grades and calorie counts. Other governments, including the federal government, similarly required disclosure of information in the hopes of addressing public health and environmental problems.[101]

[95] PlaNYC Progress Report 2008 at 28.
[96] PlaNYC at 108 (Key Areas for Targeted Efficiency Initiatives).
[97] Local Law 32 of 2018. Laurie Kerr, Comments on draft paper, August 2, 2026.
[98] Local Law 32 of 2018 mandated that New York adopt a code that was much more stringent, according to Laurie Kerr. Laurie Kerr, comments on draft paper, August 2, 2026.
[99] https://www.c40.org/case-studies/c40-good-practice-guides-new-york-city-new-york-city-energy-efficiency-corporation/
[100] See, e.g., Richard B. Stewart, A New Generation of Environmental Regulation?, 29 Capital University L. Rev. 21 (2001).
[101] Eg federal calorie counts

Retrospective studies of the impacts of the benchmarking and audit requirements show they reduced building energy consumption to some extent, but not significantly compared. The limited effectiveness of these informational approaches in achieving their primary goal is consistent with the limited effectiveness of such approaches in changing targeted behavior in other policy domains.[102]

However, PlaNYC's building energy policies should not be judged by their impacts on building energy consumption and other quantifiable metrics alone. These policies had important consequences, even if they were not the consequences most in the minds of the originators of the policies. The policies created datasets about building energy consumption and systems, helped to build networks of building energy professionals incentivized to reduce building energy consumption, and contributed to the diffusion of building energy policies in other cities and states.

Part 4.1 summarizes the published studies showing that mandatory benchmarking and audits had limited effects on energy consumption and other quantifiable metrics. Part 4.2 qualitatively discusses the more significant, if hard to quantify, impacts of PlaNYC's building energy policies.

4.1 Quantitative Studies of Impacts on Energy Consumption, Greenhouse Gas Emissions, Utility Expenditures and Occupancy Rates

Several quantitative empirical studies attempt to isolate the impacts of Local 84's benchmarking and Local Law 87's audit requirements on energy consumption, utility expenditures, greenhouse gas emissions, and occupancy rates in covered buildings. These studies are different from reports documenting declines in energy consumption and GHG emissions in buildings covered by Local Laws 84 and 87 after the laws were passed, such as a recent publication indicating that GHG emissions from buildings reporting under Local Law 84 declined by 26% between 2010 and 2024.[103] Such reports establish that there have been declines in consumption and emissions, not that these declines are due to the benchmarking and audit requirements. [104] Many factors other than the GGBP could be responsible for the reported reductions in energy consumption and GHG emissions, such as other governmental policies and utility programs to improve energy efficiency, the introduction of building energy systems

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[102] See, e.g., Annie Brett, Rethinking Environmental Disclosure, 112 Cal. L. Rev. 1535 (2024); Daniel E. Ho, Fudging the Nudge: Information Disclosure and Restaurant Grading, 122 Yale L.J. 574 (2012); Omri Ben-Shahar & Carl E. Schneider, The Failure of Mandated Disclosure, 159 U.Pa. L. Rev. 647 (2011).

[103] See, e.g., City of New York, New York City Local Law 84 Benchmarking Report (August 2012), https://www.nyc.gov/html/gbee/downloads/pdf/nyc_ll84_benchmarking_report_2012.pdf; K. Seiden, J. Luboff, D. Chwastyk, E. Merchant, R. Russell, S. Cooper, A. Szlachetka, S. Winter Associates, M. Rode, New York City Benchmarking and Transparency Policy Impact Evaluation Report (May 2015); Richard Leigh, Sean Brennan, Megha Jain, Laurie Kerr, Jamie Kleinberg, Xiaoyu Qin, Cecil Scheib, Urban Green Council, Benchmarking and Audit Data Inform Building Science, in ACEEE Summer Study on Energy Efficiency in Buildings 3-11 (2016); Mayor's Office of Sustainability, New York City's Energy and Water Use 2013 Report (August 2016), https://www.urbangreencouncil.org/wp-content/uploads/2022/11/2016.08.24-Energy-and-Water-Use-Report.pdf; Urb. Green Council, New York City's Energy and Water Use 2014 and 2015 Report (2017), https://www.nyc.gov/html/gbee/downloads/pdf/UGC-Benchmarking-Report-101617-FINAL.pdf; Urban Green Council & City of New York, New York City's Energy and Water Use Report: 10 Years of Data 7 (2020), https://www.urbangreencouncil.org/wp-content/uploads/2022/08/2020_nyc_benchmarking_report.pdf; Urban Green Council, Explore Our NYC Building Data Hub, https://www.urbangreencouncil.org/what-we-do/explore-nyc-building-data-hub/ (GHG emissions from buildings reporting under Local Law 84 declined by 26% between 2010 and 2024).

[104] On the inadequacy of before and after results to establish policy impacts, see Palmer & Walls.

and equipment due to market forces, and reductions in the carbon intensity of grid-supplied electricity due to increased use of natural gas to generate electricity.

Focusing on the empirical studies designed to isolate the effects of LL84 and LL87 in particular, there are more studies of the impacts of benchmarking[105] than audits[106] on building energy consumption and other building performance metrics. The studies, which use data from the first several years in which the benchmarking and audit laws were in force, find the laws had modest effects. The studies tend to focus on the laws' effects in samples of office buildings,[107] whose behavior may have been more affected by the laws than multi-family residential buildings.[108] Because the studies rely on data from the 2010s, the long-term impacts of benchmarking and audits on buildings are unknown.[109]

Energy Consumption

Published studies show that the **benchmarking and audit** requirements resulted in limited reductions in building **energy consumption**.

In a study published in 2017, **Meng et al.** analyzed **energy savings** attributable to Local Law 84 from 2011 to 2014 in **office buildings** using a difference-in-differences approach.[110] Meng et al. found that "the total disclosure of energy use and Energy Star scores can be credited with a 6% reduction in building energy use intensity (EUI) three years later and a 14% reduction in EUI four years later. The disclosure of Energy Star scores decreased building EUI by 9% three years later and 13% four years later."[111] These findings are "independent" of each other; Meng et al. explained that their finding that disclosing Energy Star scores alone had slightly different effects than disclosing these scores and energy use may have been related to their use of different control groups in testing the two mechanisms. Meng et al. underscored that the reduction in energy use was "statistically significant only in the third and fourth years of NYC's benchmarking ordinance," perhaps because it took time for people to absorb the information and assimilate it into decision-making. [112]

In a less-known study published in 2018, **Cáceres** estimated the impacts of disclosing Energy Star scores under NYC's benchmarking law on **energy consumption and greenhouse gas emissions** in **multifamily housing buildings** between 2011 and 2016.[113] The study used a difference-in-differences matching approach, and had three years of data on Energy Star scores.[114] It found that "[t]he disclosure of Energy

[105] Palmer & Walls; Meng et al.; Cáceres; Shang et al.
[106] Kontokosta, Spiegel-Feld & Papadopoulos.
[107] Palmer & Walls; Meng et al.; Shang et al.
[108] Kontokosta, Spiegel-Feld & Papadopoulos (analyzing the impacts of LL87 audit requirements on office and multifamily buildings).
[109] See Kontokosta, Spiegel-Feld & Papadopoulos at 312 (hypothesizing about the impacts of audits over time).
[110] Ting Meng, David Hsu & Albert Han, Estimating energy savings from benchmarking policies in New York City, 133 Energy 415 (2017).
[111] Ting Meng, David Hsu & Albert Han, Estimating energy savings from benchmarking policies in New York City, 133 Energy 415, 416 (2017).
[112] Ting Meng, David Hsu & Albert Han, Estimating energy savings from benchmarking policies in New York City, 133 Energy 420 (2017).
[113] Fátima Uriarte Cáceres, Estimating Energy Savings and Greenhouse Gas Emission Reductions From Energy Rating and Disclosure Policies, 21:2 Industrial Data 53 (2018).
[114] Fátima Uriarte Cáceres, Estimating Energy Savings and Greenhouse Gas Emission Reductions From Energy Rating and Disclosure Policies, 21:2 Industrial Data 53 (2018).

Star Scores to the public decreased the source EUI by 0.58 percentage points" and "increased … GHG emissions [by] … 0.35 percentage points. However, these impacts are not statistically significant. From the results obtained, it seems that the Energy Star Scores have not attracted the attention of market actors to energy use."[115]

In an article published in 2020, **Kontokosta, Spiegel-Feld and Papadopoulos** analyzed the impacts of Local Law 87's **audit** requirement on **energy consumption** in **multifamily residential and office buildings** using data from 2011 through 2016.[116] They found that properties required to implement an audit experienced "postaudit energy use reductions of 2.5% for multifamily and 4.9% for office buildings compared to non-audited properties. The magnitude of the savings is found to be consistent with what could be achieved through low-cost and no-cost energy efficiency improvements."[117] In a 2022 article, Lai, Papadopoulos, Fuerst, Pivo, Sagi and Kontokosta use "four years of energy audit reports" and building permit data to analyze the extent to which buildings adopted energy conservation measures recommended in the mandatory audits.[118] They find that office buildings are more likely to adopt measures recommended in audits than multifamily residential buildings.[119] This finding suggests that the greater reduction in postaudit energy consumption in office than multifamily buildings (reported in the 2020 article by some of the same authors) might be related to greater adoption by office buildings of recommended energy conservation measures. The 2022 article includes many other findings drawing on the audit data, including that the office and multifamily buildings that adopt measures recommended in audits "tend to be larger, higher value properties with higher initial EUI."[120]

In an article published in 2018, **Papadopoulos, Bonczak and Kontokosta** used NYC benchmarking data from 2011 through 2016 to **cluster office and multifamily buildings** into groups with similar energy performance, and **identify the characteristics of buildings** whose energy performance improved or declined in this period. [121] They did not examine the impacts of the benchmarking on building energy consumption, but rather identified patterns in building energy use during the early years when LL84 required benchmarking and the characteristics of buildings with similar patterns. They use weather normalized site EUI to assess energy performance. They "find that energy reductions are mostly driven by Office buildings, with larger, newer, and higher-value buildings showing significant improvement in terms of energy use intensity between 2011 and 2016."[122]

Utility Expenditures and Occupancy Rates

[115] Fátima Uriarte Cáceres, Estimating Energy Savings and Greenhouse Gas Emission Reductions From Energy Rating and Disclosure Policies, 21:2 Industrial Data 53 (2018).
[116] Constantine E. Kontokosta, Danielle Spiegel-Feld & Sokratis Papadopoulos, The Impact of Mandatory Energy Audits on Building Energy Use, 5 Nature Energy 309 (2020)
[117] Kontokosta et al.
[118] Lai, Papadopoulos, Fuerst, Pivo, Sagi and Kontokosta.
[119] Lai, Papadopoulos, Fuerst, Pivo, Sagi and Kontokosta.
[120] Lai, Papadopoulos, Fuerst, Pivo, Sagi and Kontokosta.
[121] Sokratis Papadopoulos, Bartosz Bonczak, Constantine Kontokosta, Pattern Recognition in Building Energy Performance Over Time Using Energy Benchmarking Data, 221 Applied Energy 576 (2018). See also Sokratis Papadopoulos & Constantine Kontokosta, Big Buildings and Big Data: Do Energy Disclosure Policies Impact Energy Use Over Time?, in ASCE International Workshop on Computing in Civil Engineering 248 (2017).
[122] Papadopoulos, Bonczak & Kontokosta at 585.

In a 2015 discussion paper for Resources for the Future, **Palmer & Walls** analyzed the impacts of **benchmarking** laws in Austin, New York City, San Francisco and Seattle on **quarterly utility expenditures** per square foot in **investor-owned office buildings** between the first quarter of 2012 and the third quarter of 2013.[123] The data came from the National Council of Real Estate Investment Fiduciaries; utility expenditures cover spending on "natural gas, electricity, and water and sewer," but water and sewer are only 10 percent of "overall utility costs."[124] Palmer & Walls find that, in their "central specification, which includes a large set of buildings in cities across the country as controls, average utility expenditures per square foot are approximately 3 percent lower in buildings covered by the laws." In New York City, Palmer & Walls report that benchmarking reduced average utility expenditures by 3.5%. Palmer & Walls suggest that since they are looking at the impacts of the laws shortly after they were implemented, they are picking up the effects of buildings focusing on their energy consumption due to the need to report it, which they call "the attentiveness effect."

In a 2023 article, **Shang et al**. analyzed the effects of benchmarking laws in New York City, Washington D.C., San Francisco and Seattle on the **annual occupancy rate** of different classes of **office buildings**. For New York City, they had occupancy data from 1994 to 2017; they seem to assume NYC implemented benchmarking in 2009, when the city council legislated Local Law 84, rather than when the law required benchmarking.[125] They did not find strong impacts of benchmarking on occupancy rates in NYC; as they mention, the 2008 financial crisis and its after-effects might have confounded their results. This study suggests that Local Law 84 had limited effects on real estate market performance in the years after the law was passed, assuming occupancy rate is a good proxy for such performance.

4.2 Qualitative Discussion of the Impacts on Data, Professional Networks and Other Jurisdictions

While the empirical studies discussed above suggest that LL84 and LL87 only modestly achieved their intended goal of reducing building energy consumption, mandatory benchmarking and audits had other effects. The laws produced data about building energy consumption and systems for large buildings in the city that was integral to the design and early implementation of Local Law 97 in 2019. They contributed to the formation in the city of networks of people knowledgeable about building energy consumption and how to reduce it. The laws also served as a precedent for diffusing benchmarking and audit requirements to other cities and states. These other effects are likely more consequential than the apparently limited improvements in building energy performance that LL84 and LL87 directly incentivized in the years immediately following their passage.

Data

Before mandatory benchmarking and audits, NYC did not have in-depth data about the energy use, GHG emissions and energy systems of large buildings in the City. Mandatory benchmarking generated data about the amount and sources of energy consumption and greenhouse gas emissions by large existing

[123] Pamer & Walls. They assume Local Law 84 required benchmarking for privately-owned buildings starting in December 2011.
[124] Palmer & Walls.
[125] Luming Shang et al., Assessing Office Building Marketability before and after the Implementation of Energy Benchmarking and Disclosure Policies – Lessons Learned from Major U.S. Cities, 15 Sustainability (2023) (Table 1: Summary of the integrated database).

buildings covering "almost half of [the city's] … total floor area."[126] Mandatory audit requirements generated data about large building envelopes (such as the types of windows, and walls and frames), energy systems (such as types of lighting technology, and heating and hot water systems), potential energy conservation measures (ECMs) for improving the energy performance of these buildings, and estimates of the costs and savings from these measures. While the benchmarking data provide information about the energy consumption of buildings, the information about the energy systems in buildings in the audit data sheds light on the drivers of building energy consumption. Facilitating the use of the audit data, Laurie Kerr and Hilary Firestone (formerly Beber) arranged for digitizing this data, working with a group of experts including Adam Hinge, Dick Leigh, Mike Bobker and Marc Zuluaga.[127]

Soon after the benchmarking and audit data became available, city policymakers, policy organizations, such as the Urban Green Council, and academics used the data to track trends in building energy consumption and GHG emissions, understand some of the building characteristics behind these trends, and identify options for improving building energy performance using the audit data.[128] The studies discussed Part 4.1 would not have been possible without the benchmarking and audit data. One, among many, interesting findings from the data is that steam systems, which are hard to decarbonize, heat 70% of NYC's large building stock (i.e. buildings over 50,000 square feet).[129]

The benchmarking and audit data enabled policymakers to adopt new policies aimed at reducing building energy consumption and reducing GHG emissions. The policy-relevance of the data may be one reason that four mayoral administrations with wide diverging policy priorities have maintained benchmarking and audits (Bloomberg, de Blasio, Adams and Mamdani). [130]

Local Law 33 of 2018 is an example of a policy built on the data that the city obtained from requiring benchmarking. This law requires that buildings display letter grades (A, B, C, D etc.) near their entrances that visibly signal their energy efficiency compared to other similar buildings.[131] A building's benchmarking score is the basis of the building's letter grade.[132]

Local Law 97 is a considerably more significant policy designed and initially implemented using the benchmarking and audit data. Legislated in 2019, twelve years after PlaNYC, LL97 picks up the idea of individualize building mandates dropped from the draft audit law in 2009, albeit requiring GHG, not energy consumption, reductions.[133] Local Law 97 was the principal component of the Climate

[126] Richard Leigh, Sean Brennan, Megha Jain, Laurie Kerr, Jamie Kleinberg, Xiaoyu Qin, Cecil Scheib, Urban Green Council, Benchmarking and Audit Data Inform Building Science, in ACEEE Summer Study on Energy Efficiency in Buildings 3-11 (2016) (referring to the coverage of LL84 and LL87 data).
[127] Laurie Kerr, comments on draft paper, August 2, 2026; Laurie Kerr, personal communication, August 4, 2026.
[128] See supra note 103.
[129] https://www.urbangreencouncil.org/what-we-do/explore-nyc-building-data-hub/inside-nycs-large-buildings/
[130] Laurie Kerr, Comment on draft paper, August 2, 2026.
[131] Local Law 33 of 2018. See also Urban Green Council & City of New York, New York City's Energy and Water Use Report 10 Years of Data 5 (2020, https://www.urbangreencouncil.org/wp-content/uploads/2022/08/2020_nyc_benchmarking_report.pdf.
[132] https://www.nyc.gov/site/buildings/codes/benchmarking.page
[133] The first version of the bill introduced in the city council that ultimately became LL97 would have established whole energy caps on building energy use – as well as caps on fossil fuel use in buildings. Int. No. 1745, introduced by council member Costa Constantinides on October 30, 2017. Other cities and states that have passed mandatory building performance standards to address climate change formulate the standards as requirements to improve

Mobilization Act, the local version of the Green New Deal. It passed during the first Trump administration, when climate activists turned to local and state governments to advance climate policy in the face of the administration's withdrawal from climate policy.[134] Starting in 2024, LL97 caps the GHG emissions of buildings 25,000 square feet and larger – the same buildings required to benchmark their energy consumption since 2016 -- and requires that these buildings essentially eliminate their GHG emissions by 2050. The law aims to decarbonize these buildings by electrifying them, on the assumption that grid-supplied electricity will decarbonize over time.

In the de Blasio administration, the Mayor's Office of Sustainability (MOS), the successor to OLTPS, used the benchmarking data to design LL97, and indeed it is virtually impossible to imagine LL97 existing without this data. The existence of data about GHG emissions from the thousands of large buildings in NYC enabled MOS to design a law regulating these emissions, with an awareness of how far the regulated buildings were from achieving the city's ambitious emission reduction goals. The data also enabled the city to design a glidepath to achieve the 2050 goal. For example, MOS intentionally designed the first set of LL97 building caps, which took effect in 2024, to require actions by only 20% of covered buildings to ease the initial implementation of the law. MOS used the benchmarking data to define in the law the GHG emission limits per square foot for different building types for 2024 to enable most covered buildings to comply with their 2024 caps from the start.[135] MOS also used the benchmarking data to define more stringent GHG emission limits per square foot in the law to take effect in 2030.[136] The Department of Buildings (DOB) also has used the benchmarking data in implementing LL97. For example, DOB used the benchmarking data to help define the GHG emissions limits per square foot for 2035-2050 for different building types consistent with the law's goal of gradually reducing building GHG emissions.[137]

LL97 establishes ambitious mandates that portend major costs for building owners if the targets are consistently enforced. PlaNYC expressly justified its proposals, including or mandatory building upgrades to improve energy efficiency, as benefitting building owners, and included projected payback periods for many of its recommendations.[138] In 2023, the city estimated that buildings would need to invest $12-$15 billion to meet the 2030 LL97 caps, and that "only $5-6 billion would pay for itself through energy savings. Roughly 25% of buildings that have to make investments will find their costs fully covered by energy savings."[139] The challenges that the LL97 caps present for many building owners suggest the lesser political power of the real estate industry in 2019 compared with 2007-2009. The city's ability to

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energy efficiency, rather than reduce GHG emissions. Christine Billy et al., The Implementation of Local Building Performance Standards: An Analysis of Progress to Date and Guide for Future Policy (2026).

[134] Wyman & Spiegel-Feld, Local Greens.

[135] §28 -320.3.1 Annual building emissions limits 2024 -2029. [Need to confirm the points in the text.]

[136] §28 -320.3.2 Building emissions limits for calendar years 2030 through 2034. [Need to confirm the points in the text. Are there other concrete examples of how the benchmarking data was used in designing LL97? Are there examples of the use of the audit data in designing LL97?]

[137] [Need to confirm the points in the text.] §28 -320.3.4 Building emissions limits for calendar years 2035 through 2050; §28 -320.3.5 Building emissions limits on and after calendar year 2050. See 1 RCNY §103-14, https://www.nyc.gov/assets/buildings/rules/1_RCNY_103-14.pdf.

[138] PlaNYC at 108.

[139] City of N.Y. Mayor Eric Adams, Getting 97 Done: A Plan to Mobilize New York City's Large Buildings to Fight Climate Change 2 (2023), https://www.nyc.gov/assets/climate/downloads/pdfs/Getting_LL97_Done.pdf.

estimate in 2023 how much buildings had to reduce their GHG emissions to achieve LL97's caps illustrates the utility the benchmarking data, which provided the basis for the estimates.[140]

Communities of experts in building energy efficiency

In implementing the GGBP, OLTPS sought to create communities of people with the expertise to improve building efficiency.

At the request of the city, the Urban Green Council assembled the Green Codes Task Force, which helped to socialize the GGBP by bringing industry participants into conversations about it. UGC also led an expansive industry education program on the GGBP, including developing compliance checklists and training a volunteer speakers bureau that delivered hundreds of presentations.[141]

OLTPS created Green Light New York to diffuse the use of more energy efficient lighting systems, working with "the Natural Resources Defense Council, New York State authorities, and … professional associations."[142] In 2009, Green Light New York evolved into the Building Energy Exchange (Be-Ex). Be-Ex remains a focal point for the city's "real estate and design communities" to exchange information about energy efficiency in the built environment.[143] The city also sought to develop a workforce to green buildings through "Amalgamated Green, a group of 30 stakeholders, including … unions" to educate people about "the new specialties of energy efficiency."[144]

While it is hard to measure the impact of the communities that PlaNYC spawned, such as Be-Ex, the communities meant there was a forum for people in the real estate industry and government to meet and discuss building energy efficiency, and share ideas for promoting it. The communities that PlaNYC helped to grow, such Be-Ex, and that helped to disseminate the ideas in PlaNYC, such the Urban Green Council, continue to participate in promoting building energy efficiency and GHG emission reductions. UGC was involved in the development of LL97, and UGC and Be-EX currently takes part in its implementation.[145]

Diffusion to Other Jurisdictions

[140] https://www.nyc.gov/assets/climate/downloads/pdfs/Getting_LL97_Done.pdf
[141] Russell Unger, personal communication, November 13, 2026.
[142] 2011 Update to PlaNYC at 110.
[143] https://be-exchange.org/about-us/
[144] 2011 Update to PlaNYC at 110. On Amalgamated Green as a workforce development tool, see https://www.nyc.gov/html/ia/gprb/downloads/pdf/NYC_Environment_GreenBuildings.pdf.
[145] For example, Urban Green Council, led a "consensus-based process" involving over 70 stakeholders that produced a report Blueprint for Efficiency (2018) that included ideas incorporated in LL97, such as the option made available to rent-stabilized buildings to undertake "low-cost energy savings" rather than comply with building caps. Id. at 16. For examples of UGC and Be-Ex contributions to implementing LL97, see, e.g. https://www.urbangreencouncil.org/what-we-do/driving-innovative-policy/ll97/, https://be-exchange.org/insight/press-release-resource-launch-cutting-carbon/.

New York City was not the first large city to legislate benchmarking and audit requirements for large buildings. In 2008, Austin, Texas required benchmarking and audits and Washington, D.C. required benchmarking.[146]

However, after New York City legislated the GGBP, other cities adopted mandatory benchmarking and audit laws.[147] The diffusion of benchmarking and audit laws to local governments in the U.S. was no accident. People who worked on buildings policy in the Bloomberg administration, such as Laurie Kerr, worked to spread benchmarking and audit requirements and other policies to improve building energy efficiency to other cities after they left the administration, and Bloomberg Philanthropies helped to fund the dissemination of these policies.[148] Between 2014 and 2021, Bloomberg Philanthropies, the Doris Duke Charitable Foundation and the Kresge Foundation provided $20 million for the City Energy Project.[149] The Natural Resources Defense Council and the Institute for Market Transformation jointly administered this project to develop and implement policies to improve energy efficiency in large buildings in 20 cities, with the specific mix of policies tailored to the city.[150] The participating cities, which joined in two rounds in 2014 and 2016, received multi-year funding to pay for local, and policy support from the Project office.[151] The Project's 2013 solicitation for proposals from cities to join in the first round required that, to be considered, cities submit a plan for increasing building energy efficiency that drew from a framework of policies that featured policies NYC had implemented with PlaNYC.[152] The request for proposals specifically stated that "To quality for participation in the City Energy Project, each city must commit to adopting and implementing an energy benchmarking and public disclosure mandate for large buildings."[153]

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146 https://publicservice.vermont.gov/sites/dps/files/documents/Energy_Efficiency/BEDWG/bedwg_ACCDReportonUS_CanadaBEDrequirements09162011.pdf; https://www.dcseu.com/resource-library/beps

147 For example, after 2009, 11 of the 20 most populous cities adopted benchmarking laws. Six of the 11 cities also legislated audit requirements. Katrina M. Wyman & Danielle Spiegel-Feld, Local Greens: Cities and Twenty-first Century Environmental Problems 179 (2025).

Seattle and New York developed their proposals for benchmarking roughly contemporaneously. See Press Release, Mayor Bloomberg and Speaker Quinn Announce Major Package of Legislation To Create Greener, Greater Buildings Plan for New York City (April 22, 2009) (quoting Seattle mayor Greg Nickels and indicating that Seattle was announcing its plan for improving building energy efficiency the same day).

148 Laurie Kerr, comments on draft paper, August 2, 2026.

149 https://imt.org/public-policy/policy-design-and-adoption/city-energy-project/. On the City Energy Project, see https://kresge.org/wp-content/uploads/2020/06/cep_model_memo_external_final.pdf; https://www.aceee.org/wp-content/uploads/proceedings-1980-2020/2016/9_1169.pdf.

150 https://imt.org/public-policy/policy-design-and-adoption/city-energy-project/

151 Natural Resources Defense Council & Institute for Market Transformation, City Energy Project Handbook 9 (May 2013); Natural Resources Defense Council, News Release, Ten New Cities Ten New U.S. Cities Join the City Energy Project to Cut Climate Pollution from Buildings (November 15, 2016), https://www.nrdc.org/press-releases/ten-new-us-cities-join-city-energy-project-cut-climate-pollution-buildings;
Natural Resources Defense Council, News Release, Mayors from 10 Major Cities United to Cut Climate Pollution From Buildings, (January 29, 2014), https://www.nrdc.org/press-releases/mayors-10-major-cities-unite-cut-climate-pollution-buildings#:~:text=January%2029%2C%202014%20%E2%80%93%20The%20mayors,vehicles%20every%20year%2C%20and%20lower

152 City Energy Project Request For Proposals: A Joint Project of NRDC + IMT 8 (June 2013).

153 City Energy Project Request For Proposals: A Joint Project of NRDC + IMT 8 (June 2013).

As of 2026, 19 of the 20 City Energy Project local governments have laws mandating benchmarking. To be sure, the positive correlation between participation in the Project and having a benchmarking law does not establish that participation caused a city to pass the law, and indeed three of the 19 had legislated benchmarking before the Project announced their participation (Boston, Chicago and Philadelphia). Nonetheless, the correlation is striking.

Table 2: The 20 cities in the City Energy Project and if, and when, they legislated benchmarking

City	**Year City Joined City Energy Project**	**Year Benchmarking Legislated**
Atlanta	2014	2015[154]
Boston	2014	2013[155]
Chicago	2014	2013[156]
Denver	2014	2016[157]
Des Moines, Iowa	2016	2019[158]
Fort Collins, Colorado	2016	2018[159]
Houston	2014	2022[160]
Kansas City, Missouri	2014	2015[161]
Los Angeles	2014	2016[162]
Miami-Dade County	2016	No mandatory benchmarking[163]
New Orleans	2016	2025[164]
Orlando	2014	2016[165]
Philadelphia	2014	2012[166]
Pittsburgh	2016	2016[167]
Providence, Rhode Island	2016	2023[168]

[154] https://www.atlantaga.gov/Home/Components/News/News/3699/
[155] https://www.scribd.com/doc/140241795/Boston-Docket-726-Building-Energy-Benchmarking
[156] Wyman & Spiegel-Feld, Local Greens 179.
[157] Wyman & Spiegel-Feld, Local Greens 179.
[158] https://www.mwalliance.org/iowa/iowa-benchmarking-policies
[159] https://library.municode.com/co/Fort_Collins/codes/municipal_code?nodeId=CH12HEEN_ARTXIBUENWASC
[160] Wyman & Spiegel-Feld, Local Greens 179.
[161] https://www.kcmo.gov/programs-initiatives/energy-and-water-benchmarking/about
[162] Wyman & Spiegel-Feld, Local Greens 179.
[163] Miami-Dade County has a voluntary benchmarking program. https://touchstoneiq.com/miami-dade-county-energy-benchmarking The City of Miami has mandatory benchmarking. https://southeastfloridaclimatecompact.org/wp-content/uploads/2025/03/Benchmarking-Summary-Document-Final.pdf
[164] https://nola.gov/next/mayors-office/news/articles/2025/july-2025/2025-07-10-city-of-new-orleans-adopts-building-energy-benchmarking-ordinance-to-cut-emissions-and-bo/
[165] https://www.nrdc.org/bio/kimi-narita/orlando-takes-major-step-building-efficiency (mentioning Orlando is part of the City Energy Project).
[166] Wyman & Spiegel-Feld, Local Greens 179.
[167] https://www.leechtishman.com/wp-content/uploads/2016/12/Legislation-Details-With-Text-161221-585aab9c95c00.pdf; https://pittsburgh.legistar.com/LegislationDetail.aspx?ID=2850117&GUID=82AAA760-0E5B-4AF3-87BB-0FD69AE9E599&FullText=1
[168] https://www.providenceri.gov/sustainability/building-energy-reporting/

City	Year City Joined City Energy Project	Year Benchmarking Legislated
Reno, Nevada	2016	2019[169]
Salt Lake City	2014	2017[170]
San Jose, California	2016	2018[171]
St. Louis, Missouri	2016	2017[172]
St. Paul, Minnesota	2016	2019[173]

Since the spread of local benchmarking and audit laws, a small number of local governments – 12 as of 2025[174] – have adopted building performance standards mandating reductions in GHG emissions similar to LL97, or improvements in energy efficiency. As in NYC, local governments with building performance standards often first legislated benchmarking.[175] Insofar as the City Project contributed to the diffusion of benchmarking, the Project's legacy may include facilitating the spread of buildings performance standards. Notably, three of the 12 cities with building performance standards were City Energy Project cities (Boston, Denver and St. Louis). New York City, whose PlaNYC helped inspire the Project, is a fourth city among the 12.[176]

Since PlaNYC, benchmarking laws also have diffused vertically upward from cities to the state level. Eight states have legislated benchmarking, six since 2009.[177] The spread of subnational benchmarking and audit laws also contributed to federal action on buildings energy efficiency. In the 2010s, the federal Department of Energy developed an open source platform that local governments can use to manage data that they collect (the Standard Energy Efficiency Data (SEED) Platform) and a template for audits.[178]

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[169] https://www.reno.gov/community/environmental-services/energy-water-efficiency.php
[170] https://www.usgbc.org/articles/salt-lake-city-passes-ordinance-benchmarking-energy-use-usgbc-utah
[171] https://www.sanjoseca.gov/your-government/departments-offices/energy/climate-smart-san-jose/energy/benchmarking-transparency-policy
[172] https://www.stlouis-mo.gov/government/city-laws/ordinances/ordinance.cfm?ord=70474
[173] While St. Paul legislated benchmarking in 2019, the city now allows the state to manage benchmarking since the state has passed mandatory benchmarking. https://climateaction.stpaul.gov/actions/9
[174] For a map of cities and states with building performance standards as of 2025, see https://imt.org/wp-content/uploads/2021/01/IMT_BPS_MAP_DEC2025.pdf.
[175] https://guarinicenter.org/wp-content/uploads/2026/03/2026-Local-Building-Performance-Standards-Report-Mar-2026.pdf
[176] https://imt.org/wp-content/uploads/2021/01/IMT_BPS_MAP_DEC2025.pdf.
[177] **California** (2007, replaced 2015): Rebecca Ruff, Commercial Building Energy Benchmarking and Disclosure Policies in the United States, 8:1 Journal of Science Policy & Governance (2016); **Washington State** (2009): https://www.lexology.com/library/detail.aspx?g=966a9600-a63f-435a-a567-aae30574642b; Rebecca Ruff, Commercial Building Energy Benchmarking and Disclosure Policies in the United States, 8:1 Journal of Science Policy & Governance (2016); **New Jersey** (2018): https://www.nj.gov/bpu/newsroom/2022/approved/20220907.html; **Colorado** (2021): https://leg.colorado.gov/bills/hb21-1286; **Maryland** (2022): https://energy.maryland.gov/Pages/BuildingEnergyPerformance.aspx; **Massachusetts** (2022): https://imt.org/news/massachusetts-adopts-statewide-building-benchmarking-and-transparency-law/; Oregon (2023): https://www.oregon.gov/energy/save-energy/pages/bps.aspx; **Minnesota** (2023): https://energyfave.com/energy-benchmarking-compliance/minnesota-large-building-energy-benchmarking/.
[178] https://seed-platform.org/resources/Long-2020-Standardizing_City_Benchmarking.pdf; https://www.energy.gov/documents/bto-peer-2023-25150b-audittemplate-pnnl-goelpdf

Kerr and staff from other cities advised DOE on the development of SEED,[179] providing a concrete link between PlaNYC and the federal initiative.

5. Conclusion

This paper argues that the most consequential impacts of PlaNYC's building energy policies were not their direct impacts on building energy efficiency, but the ways in which the policies created data and communities that facilitated the development of LL97, and provided models for other jurisdictions.

Two decades after PlaNYC, existing building energy regulation in NYC is in a quandary.[180] The city is committed to achieving net zero GHG emissions from large buildings covered by LL97 by 2050.[181] However, the city lacks the legal authority to require that grid-supplied electricity, a major source of building emissions, is generated from zero GHG emission sources. New York State, which has more control of the mix of electricity generation sources, is behind in achieving its goals to decarbonize grid-supplied electricity. Moreover, there are many concerns about the costs of decarbonizing the buildings covered by LL97. As mentioned above, the city has estimated that the 2030 caps will require building owners to invest $12-$15 billion.[182] Other cities that have adopted building performance standards comparable to LL97 are facing similar challenges as the standards' costs to building owners become apparent.[183]

In thinking about a path out of the current morass, it is worth remembering that PlaNYC initiated city regulation of energy consumption in the city's large existing buildings as part of a broad strategy to meet the city's demands for energy and reduce GHG emissions. PlaNYC did not envision building owners alone bearing the burden of achieving these goals. It envisaged the city working with a range of actors in addition to building owners, including State agencies such as the Public Service Commission and the New York Power Authority, and utilities such as Con Edison. It also recognized that federal assistance would be required, such as Federal Energy Regulatory Commission approval of the new natural gas infrastructure that the plan favored to help boost energy supplies.[184]

Decarbonizing the city's buildings will likely similarly require actions by multiple parties in addition to building owners and the city. As in the mid-twentieth century, when city policies were insufficient to address the city's air and water pollution problems,[185] addressing climate change will likely necessitate willing partners at higher levels of government. Perhaps the city's efforts, through LL97 and other tools, will help to make the case for state and federal action. To the extent the city's policies are successful, they may be models for other jurisdictions. If the local tools fail, the failure may strengthen the arguments for assistance from the State and the federal governments. Alternatively, failure may inspire a

[179] Laurie Kerr, personal communication, August 4, 2026.
[180] https://www.cityandstateny.com/policy/2026/02/residential-buildings-struggle-meet-nycs-decarbonization-goals/411578/
[181] https://www.nyc.gov/assets/buildings/pdf/article_320_guide.pdf
[182] Mayor Adams Launches "Getting 97 Done," Comprehensive Mobilization Strategy To Reduce Building Emissions (September 12, 2023), https://www.nyc.gov/mayors-office/news/2023/09/mayor-adams-launches-getting-97-done-comprehensive-mobilization-strategy-reduce-building
[183] Christine Billy et al., The Implementation of Local Building Performance Standards: An Analysis of Progress to Date and Guide for Future Policy 44-45 (2026).
[184] PlaNYC at 111-112.
[185] See Scott Dewey, Don't Breathe the Air: Air Pollution and U.S. Environmental Politics, 1945-1970 (2000).

new generation of “wild-eyed” local “idealists” to develop another set of municipal building energy policies.