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LOCAL ACTION, GLOBAL PROBLEM: WHY AND HOW NEW YORK CITY IS TACKLING CLIMATE CHANGE

Danielle Spiegel-Feld & Katrina M. Wyman*

Scholars often characterize local action to mitigate climate change as a puzzle. No locality's greenhouse gas emissions (GHGs) are sufficiently large to materially affect climate change; cities that reduce their emissions will therefore bear the costs of doing so, while deriving few climate benefits. This Article analyzes why New York City has taken on the task of reducing GHGs, and the evolution of its policies in the first two decades of the 21st century. This Article argues that the city's initial climate measures imposed few costs on private actors and were largely linked to the traditional local government objective of promoting economic growth. In contrast, the city's move in 2019 to impose legally binding requirements on local building owners to decarbonize their buildings portend material costs and cannot easily be explained in economic terms. These building mandates arose from the work of committed policymakers inside city government and the city council, and the grassroots activism of community groups motivated to oppose President Trump and his stance on climate change. With a new, more real estate-friendly mayor in office and a difficult economic climate in

^{*} This Article is based on a chapter in a forthcoming book by Danielle Spiegel-Feld and Katrina M. Wyman on the role of cities in environmental law that will be published by Cambridge University Press. Wyman is the Wilf Family Professor of Property Law at New York University School of Law. When this article was drafted, Spiegel-Feld was Executive Director of the Guarini Center on Environmental, Energy and Land Use Law at New York University School of Law. The authors thank Sara Savarani and the editors of the *Fordham Urban Law Journal* for their work on the Article.

In light of the topic of this article, the authors note that Spiegel-Feld was the lead author of a 2021 report for New York City that examined whether the city should develop a carbon trading program to help implement its building performance standard, Local Law 97 of 2019. DANIELLE SPIEGEL-FELD ET AL., CARBON TRADING FOR NEW YORK CITY'S BUILDING SECTOR: REPORT OF THE LOCAL LAW 97 CARBON TRADING STUDY GROUP TO THE NEW YORK CITY MAYOR'S OFFICE OF CLIMATE AND SUSTAINABILITY (2021). Wyman was also an author of the report.

the city, there is uncertainty about whether the city will enforce the building mandates. However, federal and New York State actions since the city passed its building mandates in 2019, such as the federal Inflation Reduction Act and state-led electricity decarbonization, may reduce the costs to building owners of lowering building emissions, and therefore increase the political and economic viability of New York City's building mandates. In sum, the history of New York City's decarbonization efforts emphasizes the potential for local action to address climate change and the difficult political economy of such action.

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INTRODUCTION

Scholars have treated local government actions to reduce GHG emissions in the 21st century as a puzzle. No single city contributes enough to global GHG emissions that its actions alone can materially impact the trajectory of global change. Since GHGs produced in any particular location mix globally and create global impacts, cities that take action to reduce GHG emissions will bear the full cost of whatever investments they make towards reducing GHGs but will only receive a small fraction of the benefit. If, as many scholars argue, cities adopt policies to advance local economic interests, it seems surprising that they would enact policies to fight against global climate change.¹

^{1.} For scholarship suggesting that subnational (meaning state and/or local) actions to decarbonize are a puzzle, see, e.g., Jonathan B. Wiener, *Think Globally, Act Globally: The Limits of Local Climate Policies*, 155 U. PA. L. REV. 1961, 1965 (2007); Richard B. Stewart, *States and Cities as Actors in Global Climate Regulation: Unitary vs. Plural Architectures*, 50 ARIZ. L. REV. 681, 690 (2008); Daniel A. Farber, Yuichiro Tsuji & Shiyuan Jing, *Thinking Globally, Acting Locally: Lessons from the U.S., Japan, and China*, 82 OHIO ST. L. J. 953, 956 (2021). Some scholars have even argued that local governments have a "disincentive to pursue climate protection because its costs are local but the benefits of GHG reduction are shared globally." Rachel M. Krause et al., *Applying Policy Termination Theory to the Abandonment of Climate Protection Initiatives by U.S. Local Governments*, 44 POL'Y STUD.

In the U.S. context, there is another reason local actions to reduce GHG emissions are puzzling: U.S. cities are legally constrained in their ability to regulate GHG emissions. American cities generally cannot directly regulate emissions from the production of electricity or the use of motor vehicles, which are under federal or state control.² Yet, together, electricity generation and transportation account for more than half of U.S. GHG emissions.³ Cities have far more power to regulate the demand for fossil fuels through measures including land use planning, procurement policies, educational campaigns, and subsidies for low-carbon alternatives. But due to limits on local taxation authority, many cities cannot unilaterally impose taxes on carbon intensive products, which many economists believe to be the most efficient means of spurring decarbonization.⁴ In short, cities that want to engage in regulating GHG emissions must operate within a sea of second bests.

Given all these limitations, why have some U.S. cities, most notably New York City, taken on the global threat of climate change in the 21st century, as we describe below?⁵ Why are they trying to cut climate warming

3. See Sources of Greenhouse Gas Emissions, ENVT'L PROT. AGENCY, http://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions [https://perma.cc/2BP6-Q9A8] (last updated Apr. 28, 2023).

4. See, e.g., Emma Newburger, A Carbon Tax Is 'Single Most Powerful' Way to Combat Climate Change, IMF Says, CNBC (Oct. 10, 2019, 10:30 AM), https://www.cnbc.com/2019/10/10/carbon-tax-most-powerful-way-to-combat-climate-change-imf.html [https://perma.cc/2BP6-Q9A8]; Erin Adele Scharff, Green Fees: The Challenge of Pricing Externalities Under State Law, 97 NEB. L. REV. 168, 180–81 (2018).

5. We say "some" U.S. cities have taken on climate change advisedly because many cities have not done so. "[A]lmost 45 percent" of the 584 cities with populations exceeding 20,000 that responded to a "Smart and Sustainable Cities Survey" in 2015–2016 "considered" "climate change mitigation or adaptationlow or nonexistent priorities." RACHEL M.

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J. 176, 180–81 (2016). Of course, many activities that produce GHG emissions also emit local air pollutants, and so the reduction of GHG emissions can produce perceptible co-benefits; making buildings more energy efficient so that they burn less oil for heat is an example of an action that produces both GHG benefits and local air pollutant benefits. *See* Stewart, *supra*, at 690.

^{2.} See Katherine A. Trisolini, All Hands on Deck: Local Governments and the Potential for Bidirectional Climate Change Regulation, 62 STAN. L. REV. 669, 674 (2010) ("Local governments lack power to regulate vehicle technology, fuel composition, and power plant technology and licensing, all critical determinants of transportation and energy emission levels."); see also Peter John Marcotullio et al., *The Geography of Global Urban Greenhouse Gas Emissions: An Exploratory Analysis*, 121 CLIMATIC CHANGE 621, 623 (2013) (noting that "the electricity and heat used in urban areas often is produced outside of urban boundaries"); Danielle Spiegel-Feld & Katrina M. Wyman, *Building Better Building Performance Standards*, 52 ENVT'L L. REP. 10268, 10269 (2022) ("[L]ocal governments and building owners have only limited control over the stringency of BPSs [Building Performance Standards] that peg compliance to GHGs. Electricity is a major source of energy for most buildings, yet cities typically do not control the carbon intensity of electricity that is supplied by the electricity grid.").

pollutants when any individual city's actions won't influence global temperatures? Using New York City's experience over the past two decades as our central case study, we discern two distinct motivations—one economic and one political—for its efforts to mitigate climate change.⁶ Neither of these motivations provides a complete explanation for the City's efforts. Only when combined does the full picture come into view.

Looking first at the economic rationale, upon close analysis, it appears that many of the City's early 21st century "climate measures" were primarily geared towards protecting city infrastructure and promoting economic growth.⁷ Few, if any, of these early measures imposed significant costs on regulated entities.⁸

Some of the City's more recent climate policies, by contrast, portend real costs on certain stakeholders — namely building owners, including of residential properties — and are far more difficult to explain on the basis of local economic interests alone.⁹ These more aggressive actions, we believe, emerged in part in response to political pressure from local progressive interest groups that were motivated by a mixture of environmental, social justice, and labor concerns. During the Trump presidency, when progressive politicians were ascendant in deep-blue enclaves like New York City, local environmental and social justice activists found many allies in city

8. *See* HUGHES, *supra* note 6, at 35–37 (discussing the importance of the co-benefits that localities may experience in acting to reduce GHG emissions as a factor driving local actions).

9. See, e.g., Natalie Wong, NYC Landlords Bracing for Millions in Fines with New Climate Law, BLOOMBERG (Jan. 19, 2023, 9:00 AM), https://www.bloomberg.com/news/articles/2023-01-19/nyc-landlords-bracing-for-millions-in-fines-with-new-climate-law [https://perma.cc/6CNJ-TQ2Q]; Carl Campanile, NYC Co-op Owners, Covering Over 800K Apartments, Rebel Against Massive Climate Law Costing Millions, N.Y. POST (Apr. 30, 2023, 8:05 PM), https://nypost.com/2023/04/30/co-op-owners-rebel-against-massive-nyc-climate-law-costing-millions/ [https://perma.cc/KBX2-SJH8].

KRAUSE & CHRISTOPHER V. HAWKINS, IMPLEMENTING CITY SUSTAINABILITY 23, 25–26 (2021).

^{6.} We are by no means the first to consider why cities have taken on climate change. Surveying the existing literature on the question, political scientist Sara Hughes identifies five explanations: "opportunities for leadership, entrepreneurship, and city branding;" "a desire to capture the local co-benefits;" "a sense of responsibility to address a threat;" and responding to (in)action at other levels of government. SARA HUGHES, REPOWERING CITIES: GOVERNING CLIMATE CHANGE MITIGATION IN NEW YORK CITY, LOS ANGELES, AND TORONTO 32–38 (2019). Accurately reflecting the state of the literature, Hughes does not mention local political dynamics in large progressive American cities as a factor, a point that we stress based on what we learned from researching the history of climate legislation New York City adopted in 2019 and 2021. Other scholars have considered the characteristics of the cities that are, and are not, addressing climate change. *See, e.g.*, Krause et al., *supra* note 1, at 181 ("These studies generally find that cities with larger, more educated and liberal populations, higher capacity governments, and economies that put less stress on the environment are more likely to engage on this issue.").

^{7.} See infra notes 28–37 and accompanying text.

government, and the political power of large property owners waned with an unpopular real estate developer in the White House.¹⁰ This particular allocation of political power made way for progressive local climate action that might not otherwise have been possible. The big question going forward is whether the progressive climate policies enacted in the late 2010s will be enforced in the small number of cities that legislated them and replicated elsewhere. With the Biden administration having passed a significant climate law in the form of the Inflation Reduction Act (IRA) in 2022,¹¹ some local policymakers may feel less compulsion to act. On the other hand, if the IRA's tax credits and grant programs are implemented in ways that help to defray the costs of building decarbonization, then the IRA may provide local policymakers with more scope for action by enabling them to externalize some of the costs of climate policy to taxpayers beyond local borders. The precarity of aggressive local decarbonization policies in places such as New York that have adopted them reinforces the difficulty of mitigating global climate change through local actions.

Parts I and II of this Article trace the different economic and political motivations of cities such as New York that have acted to address climate change. Part III analyzes the actions that cities have taken to reduce GHG emissions since the early 1990s. It divides local policies into three categories and suggests that there has been an evolution over time from declarations and establishing GHG reduction targets, to estimating city emissions and educating people about them, and, in a limited number of cities such as New York, to a third type of policy in which the city mandates that private actors reduce their emissions. We pay particular attention to innovative policies that cities have adopted to decarbonize buildings, a traditional object of local regulation where many cities have broad scope to act. The tools that New York City developed in the first decade of the 21st century to track building energy use rippled through dozens of American cities and states in the decades that followed. However, as Part IV emphasizes, the jury is still out on whether mandates that buildings reduce emissions, the most recent and

^{10.} On the decline in the political power of real estate interests in New York City (and State) in 2019, see John Leland, *Real Estate Thought It Was Invincible In New York. It Wasn't.*, N.Y. TIMES (Nov. 29, 2019), https://www.nytimes.com/2019/11/29/nyregion/real-estate-industry-nyc.html [https://perma.cc/A68D-QZPY].

^{11.} FACT SHEET: One Year In, President Biden's Inflation Reduction Act is Driving Historic Climate Action and Investing in America to Create Paying Jobs and Reduce Costs, THE WHITE HOUSE (Aug. 16, 2023), https://www.whitehouse.gov/briefing-room/statements-releases/2023/08/16/fact-sheet-one-year-in-president-bidens-inflation-reduction-act-is-driving-historic-climate-action-and-investing-in-america-to-create-good-paying-jobs-and-reduce-

costs/#:~:text=The%20Inflation%20Reduction%20Act%20is,making%20the%20tax%20co de%20fairer [https://perma.cc/55SQ-AQPF].

aggressive of the local policies, will be enforced and scaled up given the costs of removing fossil fuels from existing buildings and blowback from local property owners. To overcome political opposition to the implementation of stringent building performance standards, city governments may need financial assistance for building owners from higher levels of government. Thus, even in areas, such as building policy, where cities traditionally have significant control, economic and political circumstances may constrain city governments' space to maneuver. The political economy of local decarbonization efforts that impose costs on local actors is no simple matter.

I. GREEN GROWTH

When Michael Bloomberg first took office as the mayor of New York City in 2002, he was not known as an environmentalist. In fact, the mayor's most famous environmental "initiative" during the first term was to cut the city's recycling program.¹² By 2007, the mayor had created a pioneering Office of Long-Term Planning and Sustainability, published a groundbreaking plan to increase sustainability throughout the city, and committed to reducing the city's GHG emissions by 30 percent below 2005 levels by 2030.¹³ It was a 180-degree turn. Writing in 2009, a journalist for *The New Yorker* mused,

Who would have guessed, back in 2002, when the businessman Mayor seemed to regard recycling as a discretionary luxury, that his physical legacy might come to be defined as much by the planting of a million trees and by lawn chairs in the middle of Times Square as by gleaming (and empty) new office towers.¹⁴

What sparked the change of heart? The biggest change, we would argue, is that key voices in the administration came to believe that the city's long-term growth hinged on using resources more efficiently and getting climate change under control. Daniel Doctoroff was an important voice in this respect. Doctoroff, who worked in investment banking and private equity before joining city government, was Deputy Mayor for Economic

^{12.} See Geraldine Sealey, Is Recycling Worth the Trouble, Cost?, ABC NEWS (Mar. 8, 2002) https://abcnews.go.com/US/story?id=91824&page=1 [https://perma.cc/WW5L-UNQM]; N.Y.C. INDEPENDENT BUDGET OFF., REFUSE AND RECYCLING: COMPARING THE Costs 2 (Feb. 2004), https://www.ibo.nyc.ny.us/iboreports/refuseandrecycle.pdf [https://perma.cc/CD4K-TCDL].

^{13.} See NEW YORK CITY MAYOR MICHAEL R. BLOOMBERG, PLANYC 9 (2007), https://www.nyc.gov/html/planyc/downloads/pdf/publications/full_report_2007.pdf [https://perma.cc/92ZR-QHE3].

^{14.} Ben McGrath, *The Untouchable*, NEW YORKER (Aug. 29, 2009), https://www.newyorker.com/magazine/2009/08/24/the-untouchable [https://perma.cc/75S6-CAVF].

Development and Rebuilding during the first seven years Bloomberg was in office.¹⁵ Odd as it might seem, the roots of New York City's climate agenda trace back to Daniel Doctoroff and his failed efforts to bring the 2012 Olympic Games to New York City.

Back in the 1990s, when Doctoroff still worked in the private sector, he became "obsessed" with the idea that New York City should host the Olympics.¹⁶ As Doctoroff recounts the story in his memoir, *Greater than Ever*, even after crime rates fell in the 1990s and the city began to prosper economically, it failed to make the infrastructural upgrades needed to unbury itself from three decades of economic hardship and decay. "The terrible toll of neglect was still apparent everywhere,"¹⁷ he explained. In Doctoroff's view, the City needed major new development projects to bring it out of its slump, yet the city seemed to have a "development phobia," and its antiquated land-use processes made such projects all but impossible.¹⁸ "Hosting the Olympics could be the antidote to New York's development phobia," he believed, bringing New York the types of major public works projects that were necessary to revitalize the city and bring it into the 21st century.¹⁹

Once Doctoroff joined the Bloomberg administration, he had the full support of City Hall behind the Olympic bid.²⁰ Eventually, New York City won the support of the United States Olympic Committee as well, which meant that the City would represent the United States in its bid to the International Olympic Committee.²¹ But that still left several other stiff competitors, including from London, the world's other financial capital. In a crushing defeat for Doctoroff and his team, London ultimately won the Games.²²

It is here that sustainability entered the scene. By 2004, London had a sustainability plan in place as well as an innovative congestion-pricing plan.²³ When a staffer at the NYC Economic Development Corporation

^{15.} See Daniel Doctoroff, LINKEDIN, https://www.linkedin.com/in/dandoctoroff [https://perma.cc/66Z8-BKSK] (last visited Sept. 8, 2023).

^{16.} DANIEL DOCTOROFF, GREATER THAN EVER: NEW YORK'S BIG COMEBACK 9 (2017).

^{17.} Id. at 10.

^{18.} Id. at 9-11.

^{19.} Id.

^{20.} See Jim Rutenberg, Mayor Says Olympic Bid was Worth a Shot, N.Y. TIMES (July 7, 2005), https://www.nytimes.com/2005/07/07/nyregion/mayor-says-olympic-bid-was-worth-a-shot.html [https://perma.cc/SK4F-ZGNU].

^{21.} See DOCTOROFF, supra note 16, at 30.

^{22.} See id. at 268.

^{23.} See MAYOR OF LONDON, THE LONDON PLAN: SPATIAL DEVELOPMENT STRATEGY FOR GREATER LONDON 4–5, 121 (Greater London Authority eds., Feb. 2004), https://www.london.gov.uk/programmes-strategies/planning/london-plan/past-versions-and-

brought up London's advances in this field, it set off Doctoroff's competitive instincts. "I was acutely sensitive to anything London did that would make us less competitive because it had just beaten us out of the Olympics," he later explained.²⁴

There were other pressures pushing towards sustainability too. Throughout Bloomberg's first term in office, the city's economy rebounded from the September 11th attacks and its population steadily grew.²⁵ In fact, studies that the city conducted during the time of the preparation of the Olympic bid indicated that the city's population would grow by a million more before 2030, bringing the total number of inhabitants to over 9 million.²⁶ That meant 1 million more people traveling through the city streets, competing for scarce green space, drawing water from the city's reservoirs, and taking electricity from the city's grid. Looking at these forecasts, Doctoroff came to believe that "it was logical to think that if we didn't manage the growth, we might even choke off the virtuous cycle of [growth] we had set in motion."²⁷

Future energy constraints were of particular concern to local officials. In 2004, the New York City Energy Policy Task Force concluded that "New York City has adequate electricity resources today, but only by a slim margin."²⁸ The report went on to explain that "a projected increase of approximately 1.5% annual in electricity demand in the next five years will necessitate new generation and transmission facilities and expanded distribution resource measures."²⁹ The following year, oil prices reached

25. See generally Michael L. Dolfman & Solidelle F. Wasser, 9/11 and the New York City Economy: A Borough-by-Borough Analysis, MONTHLY LAB. REV. (June 2008).

26. See DOCTOROFF, supra note 16, at 274 ("At one of the pre-Olympic decision meetings, the City Planning Department brought in Joe Salvo, the head of its Population Division, to make a presentation. Salvo's series of PowerPoint slides told a compelling story: the virtuous cycle of the successful city was taking hold. Crime was down; housing starts, particularly in the outer boroughs, were up; and newcomers were pouring in much faster than people were leaving, at an accelerating pace. The result was that population was growing more quickly than we had anticipated. In fact, he predicted the city would have a startling nine million people by 2030 (up from 8.1 million when we took office)."); see also Katherine Bagley & Maria Gallucci, Bloomberg's Hidden Legacy, INSIDE CLIMATE NEWS (Nov. 18, 2013), https://insideclimatenews.org/news/18112013/bloombergs-hidden-legacy-climate-change-and-future-new-york-city-part-1/ [https://perma.cc/EKM6-D5AQ] (indicating that predictions of population growth provided an impetus for what became PlaNYC).

27. DOCTOROFF, *supra* note 16, at 319.

28. N.Y.C. ENERGY POLICY TASK FORCE, NEW YORK CITY ENERGY POLICY: AN ELECTRICITY RESOURCES ROADMAP 9 (Jan. 2004), http://www.nyc.gov/html/om/pdf/energy_task_force.pdf [https://perma.cc/2SYK-V4DC]. 29. *Id.*

alterations-london-plan/london-plan-2004 [https://perma.cc/L8UR-VX6K]; *Congestion Charge in London*, POLITICS.CO.UK, https://www.politics.co.uk/reference/congestion-charge/ [https://perma.cc/647Q-W76B] (last visited Aug. 14, 2023).

^{24.} DOCTOROFF, *supra* note 16, at 322.

record highs and concern about the US dependence on foreign energy sources pervaded the halls of Congress.³⁰ In the words of Laurie Kerr, who was a chief architect of New York City's first green buildings legislation, between the looming energy crisis, competition with London, and concerns about the impact of population growth on the city's infrastructure, the idea that New York City would develop a sustainability plan was "almost overdetermined."

The sustainability plan that materialized, named PlaNYC, contained 127action items which were grouped in six different areas.³¹ Climate change, including a reduction in GHG emissions, was one of these six areas.³² Yet it would be a mistake to view the city's climate initiatives as independent from its broader concerns about promoting growth. Bloomberg administration officials themselves made no secret of the fact that their plans to reduce energy use were motivated in large part by a desire to safeguard the city's energy supply. Testifying at a City Council hearing regarding a proposed bill that would arguably become the Bloomberg Administration's signature climate law, Rohit Aggarwala, who headed the Mayor's Office of Long-Term Planning and Sustainability, explained the rationale behind the proposal as follows:

When we think about energy infrastructure, it is critical and one of our key findings from PlaNYC that we cannot think about energy infrastructure without treating our buildings as part of that infrastructure, because you can't just think about the power plants and the transmission lines, you also have to think about demand, whenever you think about energy challenges. And as we experience our peak load days this summer, and we've already done a couple of weeks ago, a day that had the fourth highest electricity demand in our history, and that was even before it was officially summer.³³

PlaNYC itself proffered a similar economic rationale for its climate actions. "These efforts will require substantial investments—but each will provide an even greater return,"³⁴ the plan's authors noted.

None of this is to suggest that New York City officials were not genuinely motivated to reduce climate change. They were. As a coastal city, NYC officials were deeply concerned about the risk of flooding that climate

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^{30.} See generally CONG. RSCH. SERV., RL3302, Energy Policy Act of 2005: Summary and Analysis of the Enacted Provisions, (Mar. 8, 2006).

^{31.} See CITY OF N.Y.C., PLANYC: A GREENER, GREATER NEW YORK 142 (2007) [hereinafter PLANYC 2007] (grouping the action items into six areas: land, water, transportation, energy, air, and climate change).

^{32.} *Id*.

^{33.} Testimony of Rohit T. Aggarwala, Dir. of Long-Term Planning and Sustainability, Transcript of the Minutes of the Committee on Environmental Protection, New York City Council 13 (June 27, 2008) (Transcribed by Cindy Millelot, CSR).

^{34.} PLANYC 2007, supra note 31, at 133.

change would bring.³⁵ But the actions that the City proposed to tackle climate change also directly aligned with its economic priorities.

Notably, local governments (like some higher levels of government) have proffered other economic arguments for limiting climate change apart from reducing energy costs. In particular, some local governments have presented decarbonization as an industrial strategy that will build new industries within their borders and create well-paying middle-class jobs. In 2007, Los Angeles' first climate action plan referred to the potential for city leadership in reducing GHG emissions to pay economic dividends in the form of new export industries, noting that adopting a GHG reduction policy would lead the city to "invest in cutting edge green technology that can be marketed to the global community."³⁶ Viewed in this light, even very small jurisdictions' efforts to reduce GHG emissions could be economically rational. But the ecological payoff is less certain than it is in the context of traditional environmental problems and the economic incentives are more tenuous.

There is some evidence that New York City officials have also envisioned climate action as promoting local industrial development. In 2009, for example, Aggarwala touted that the four bills in the Greater Greener Buildings package that Mayor Bloomberg urged the council to adopt would create "19,000 construction-related jobs over12 years."³⁷ Similarly, in 2018, while testifying in support of a bill to decarbonize large buildings in New York City, Mark Chambers, then the director of the mayor's office of sustainability, argued that "[c]limate change is an enormous challenge but if addressed meaningfully, it's also an opportunity to provide our residents with lifelong skills they can use for careers that put them solidly in the middle class."³⁸ Chambers went on to state that the bill in question would "create approximately 14,700 good paying, green jobs like retrofitting windows and building envelopes, installing green energy, and improving the efficiency of our heating and hot water systems."³⁹ The predictions of job increases are

^{35.} According to PlaNYC, "With almost 600 miles of coastline and over half a million New Yorkers living within our current flood plain, this change is especially dangerous to New York . . . According to one estimate, a Category 2 hurricane would inflict more damage on New York than any other American city except Miami." *Id.* at 8.

^{36.} CITY OF LOS ANGELES, GREEN LA: AN ACTION PLAN TO LEAD THE NATION IN FIGHTING GLOBAL WARMING 3 (May 2007); *see also* HUGHES, *supra* note 6, at 25 (also quoting the 2007 Los Angeles climate action plan). Officials in California, which has been a leader among states in decarbonization efforts, have also suggested that addressing climate change would produce economic benefits. *See* Stewart, *supra* note 1, at 691.

^{37.} Testimony of Rohit T. Aggarwala, Dir. of Long-Term Planning and Sustainability, Written Testimony before the Committee on Environmental Protection, New York City Council 5 (June 26, 2009).

^{38.} Testimony of Mark Chambers, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018).

^{39.} Id.

hard to assess because economic modeling of job impacts from government policies is subject to many uncertainties;⁴⁰ what is interesting is the effort to portray reducing GHG emissions as an economic and a social opportunity, which is consistent with local government's traditional focus on promoting economic development.

II. PROTEST POLITICS

Some of New York City's strongest actions to mitigate climate change do not fit neatly within the green growth paradigm. These commitments appear primarily geared towards fulfilling political goals by protesting federal inaction on climate rather than promoting economic development. Looking back at the last two decades of climate action in U.S. cities, there appear to be two distinct pathways through which politics motivate change: a topdown pathway, where elected leaders take it upon themselves to call for action, and a bottom-up pathway through which grassroots groups pressure leaders to act. As we will see, the top-down pathway seems to have led many mayors to set lofty GHG reduction targets and start gathering the data needed to measure progress towards those targets. But if New York's experience is any guide, it is only when the desire of local leaders to protest federal footdragging combines with powerful grassroots pressure that cities will go further and impose hard-hitting mandates on industry.

New York City has a vibrant community of climate activists in the 21st century.⁴¹ The Natural Resources Defense Council (NRDC) and the

^{40.} Economic modeling regarding the impacts of government policy is generally subject to uncertainty. *See, e.g.*, Neil R. Ericsson, *Forecast Uncertainty in Economic Modeling* 1 BD. GOVERNORS FED. RSRV. SYS., INT'L FIN. DISCUSSION PAPERS NO. 697 (2001), https://www.federalreserve.gov/pubs/ifdp/2001/697/ifdp697.pdf [https://perma.cc/G9NY-WK5N] ("Economic forecasts feature prominently ingovernment policy analysis . . . Economic forecasts typically differ from the realized outcomes, with discrepancies between forecasts and outcomes reflecting forecast uncertainty."). Notwithstanding the uncertainties, there are efforts to estimate the employment opportunities created through decarbonization policies. *See, e.g.*, UCLA Luskin Center for Innovation, *Workforce Impacts of Decarbonization*, https://innovation.luskin.ucla.edu/environmental-equity/workforce-impacts-of-decarbonization/ [https://perma.cc/J4YC-MBH5] (last visited Aug. 10, 2023); HUGHES, *supra* note 6, at 23 (referring to a study of the jobs created from expenditures on energy efficiency in Los Angeles).

^{41.} The environmental groups testifying at city council environmental protection committee hearings on proposed climate legislation provide an indication of the groups interested in local climate policy. The following 12 environmental groups testified at the December 4, 2018 committee hearing on Local Law 97 (capping greenhouse gas emissions from large buildings): New York Communities for Change; Sierra Club of New York City; New York League of Conservation Voters; Alliance for a Greater New York; Environmental Defense Fund; Natural Resources Defense Council; 350 Brooklyn; 350 New York City; WE ACT for Environmental Justice; NYC Environmental Justice Alliance; NYC Climate Action Alliance; and Jewish Climate Action Network. *See generally* Transcript of the Minutes of the Committee on Environmental Protection, New York City Council (Dec. 4, 2018). The

Environmental Defense Fund (EDF), two established public interest environmental groups that were founded mainly by graduates of elite law schools in the late 1960s and early 1970s, have their national headquarters in Manhattan, close to the financial and real estate elites that historically helped to fund them.⁴² These groups work mainly on climate policy at the federal and state levels. But they also have programs that address climate policy in the New York City area, especially NRDC.⁴³ The New York League of Conservation Voters is also active on some local climate policy issues in New York City.⁴⁴

The city also has an array of environmental justice groups centered outside of lower Manhattan. WE ACT for Environmental Justice was founded in West Harlem in 1988 to address the harms to the area from a sewage

42. PAUL SABIN, PUBLIC CITIZENS: THE ATTACK ON BIG GOVERNMENT AND THE REMAKING OF AMERICAN LIBERALISM 127 (2021) ("In the fall of 1977, the Environmental Defense Fund established its new national headquarters in New York City, close to crucial financial supporters. . . .While it maintained a large Washington, DC, office, the Natural Resources Defense Council also kept its national headquarters in Manhattan, near to major supporters in the finance and real estate industries.").

43. *See, e.g., supra* note 41 and accompanying text (listing the Natural Resources Defense Council as among the environmental groups testifying at New York City council hearings on local climate bills).

following 15 environmental groups testified at the November 17, 2021 hearing on Local Law 154 (banning natural gas connections in new construction): Natural Resources Defense Council; WE ACT for Environmental Justice; New York Communities for Change; New York Public Interest Research Group; Food and Water Watch; United for Action; Sane Energy Project; Earthjustice; Stand.earth; WE ACT for Environmental Justice; El Puente; 350 NYC; Jewish Climate Action Network NYC; Alliance for a Green Economy; 350 Brooklyn. *See* Transcript of the Minutes of the Committee on Environmental Protection, New York City Council (Nov. 17, 2021).

The presence of a large number of environmental interest groups in New York City is broadly consistent with the recent findings of political scientist Sarah Anzia on interest group activity at the local level. Anzia's surveys of city officials found that "environmental groups average between 'slightly' and 'somewhat' active." SARAH ANZIA, LOCAL INTERESTS: POLITICS, POLICY, AND THE INTEREST GROUPS IN US CITY GOVERNMENTS 94 (2022). However, Anzia's empirical findings that interest groups in general (not specifically environmental groups) are more active in larger cities imply, by extension, that environmental groups should be more active in New York than in other cities. She concludes that "[1]arger cities and cities that make policy on a larger number of issues have significantly more interest group activity, as do cities with more Democratic and liberal residents." *Id.* at 73; *see also id.* at 106 ("Democratic presidential vote is also positively associated with greater activity by. . . . environmental groups. . . . It may be that some groups, such as environmental groups, are more active in Democratic places because Democrats tend to have more pro-environment policy views.").

^{44.} See Issues, N.Y. League of Conservation Voters, https://nylcv.org/issues/ [https://perma.cc/C3UW-6UK8] (last visited Aug. 10, 2023); see generally N.Y. League of Conservation Voters & N.Y. League of Conservation Voters Educ. Fund, New York City Policy Agenda 2023 (2023), https://nylcv.org/wpcontent/uploads/NYLCV_2023_NYC_Policy_Agenda_WEB.pdf [https://perma.cc/3LLF-SZRZ] (last visited Aug. 10, 2023).

treatment plant that the city built to comply with the Clean Water Act.⁴⁵ The New York City Environmental Justice Alliance was established in 1991 by people who had been involved in campaigns against waste and sludge treatment facilities and other noxious facilities in Brooklyn and other parts of the city.⁴⁶ UPROSE is "a Puerto Rican-originated, Latino-based, multiethnic community organization in Sunset Park[,]" Brooklyn established over fifty years ago.⁴⁷

Importantly, in the 2010s, multiracial community and labor organizations in New York City, such as the Alliance for a Greater New York (ALIGN) and New York Communities for Change,⁴⁸ also began working on climate policy at the local level, often in coalitions with environmental justice groups in the City.⁴⁹ These community, labor, and environmental justice organizations link limiting climate change by reducing GHG emissions with promoting economic, racial, and social justice by creating employment for low-income workers in industries spawned by the need to decarbonize the economy.⁵⁰ In particular, these organizations have sought to reduce GHG emissions from buildings, the city's largest source of emissions, and potentially create jobs for low-income workers in upgrading buildings.⁵¹

47. Kenneth Gould & Tammy Lewis, Green Gentrification: Urban Sustainability and the Struggle for Environmental Justice 135 (2017).

48. See About, ALIGN, https://alignny.org/about/ [https://perma.cc/422X-VJBU] (last visited July 30, 2023); see also History, N.Y. CMTY'S. FOR CHANGE, https://www.nycommunities.org/about [https://perma.cc/UD7E-LYCC] (last visited July 30, 2023).

49. See, e.g., Climate Works for All, ALIGN, https://alignny.org/campaign/climateworks-for-all/ [https://perma.cc/86N2-7N59] (last visited Sept. 8, 2023) ("After the 2014 People's Climate March, community groups, environmental justice organizations, labor unions and other allied advocates joined together to form the Climate Works For All coalition.").

50. See, e.g., id.; The Climate, Jobs & Justice Package: The Pro-worker Climate Plan, ALIGN (Mar. 2, 2023), https://alignny.org/resource/the-climate-jobs-justice-package-the-pro-worker-climate-plan/ [https://perma.cc/V4NB-U5A6]; Campaigns: Green Jobs, N.Y. CMTY'S. FOR CHANGE, https://www.nycommunities.org/green-jobs [https://perma.cc/F6DK-WUAQ] (last visited Aug. 10, 2023).

51. In uniting environmental, social, racial, and economic objectives, the coalitions reflect longstanding concerns of environmental justice organizations in the United States, which have been broader than the concerns of the established, mainstream environmental groups. See Julian Agyeman et al., *Trends and Directions in Environmental Justice: From Inequity to Everyday Life, Community, and Just Sustainabilities*, 41 ANN. REV. ENV'T & RES. 321, 325–26 (2016); see also Dorceta Taylor, *The Rise of the Environmental Justice Paradigm:*

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^{45.} See generally Our Story, WE ACT FOR ENVT'L JUST., https://www.weact.org/whoweare/ourstory/ [https://perma.cc/7PBZ-9N4R] (last visited July 30, 2023).

^{46.} See 30th Anniversary Gala, N.Y.C. ENVT'L JUST. ALLIANCE, https://nyc-eja.org/30thanniversary-gala/ [https://perma.cc/48P4-5379] (last visited Aug. 10, 2023); see also JULIE SZE, NOXIOUS NEW YORK: THE RACIAL POLITICS OF URBAN HEALTH AND ENVIRONMENTAL JUSTICE 115 (2006).

To understand how and why community-based coalitions in particular mobilized for new local climate laws in the 2010s, and why insiders within city government were motivated to supply them in the 21st century, it is useful to step back and consider the evolution of climate politics at the national level.

In the last decade of the 20th century, when climate change emerged as the defining environmental concern in the United States, there was broad bipartisan support at the federal level for reducing GHG emissions. In fact, it was a Republican President, George H.W. Bush, who negotiated and signed the landmark United Nations Framework Convention on Climate Change (UNFCCC) in 1992 under which countries broadly agreed to stabilize the climate (although the signatories did not commit to any specific obligations to reduce their emissions).⁵² The Senate ratified the treaty later that year by a simple voice vote without any recorded objections.⁵³

Climate politics became a partisan issue after the 1990s.⁵⁴ In his very first State of the Union Address in February of 1993, when the Democrats controlled the House and the Senate, President Bill Clinton announced support for a new "broad-based energy tax"⁵⁵ that came to be known as the "BTU Tax." The tax was intended to raise money to help close the deficit and reduce carbon emissions, among other goals.⁵⁶ The tax passed the House although not a single Republican voted for it; the Senate never voted on the tax.⁵⁷ Faced with mounting opposition from manufacturing, energy, and

vjpJ7M8Vkd9HfExUw6NE [https://perma.cc/PW5S-JWHV].

56. See MILDENBERGER supra note 54, at 107–13.

Injustice Framing and the Social Construction of Environmental Discourses, 43 AM. BEHAV. SCIENTIST 508, 509–10 (2000).

^{52.} Public Papers: Statement on Signing the Instrument of Ratification for the United Nations Framework Convention on Climate Change, GEORGE H.W. BUSH PRESIDENTIAL LIBR. & MUSEUM (Oct. 13, 1992), https://bush41library.tamu.edu/archives/public-papers/4953?fbclid=IwAR3vp0zzELT8zzmJL-RYqw6-qDY-h-c3o5D5Oowin77M92/rd01ETrLlw6NE [https://papers.co/DW55_UWLW1]

^{53.} *See* United Nations, Framework Convention on Climate Change, S. TREATY DOC. NO. 102–38, at 1 (Oct. 1, 1992); *see also* United Nations Framework Convention on Climate Change, S. EXEC. REP. NO. 102–55 at 15 (1992).

^{54.} See MATTO MILDENBERGER, CARBON CAPTURED: HOW BUSINESS AND LABOR CONTROL CLIMATE POLITICS 123 (2020) ("From the 1990s forward, a partisan gradient in climate policy preferences did exist: Democrats were more likely than Republicans to propose and support costly climate reforms.").

^{55.} Dawn Erlandson, *The BTU Tax Experience: What Happened and Why It Happened*, 12 PACE ENV'T L. REV. 173, 173 (1994); *see also* David Rosenbaum, *Clinton Backs off Plan for New Tax on Heat in Fuel*, N.Y. TIMES (June 9, 1993), https://www.nytimes.com/1993/06/09/us/clinton-backs-off-plan-for-new-tax-on-heat-in-fuels.html [https://perma.cc/JA5M-HJJS].

^{57.} See Roll Call 199, H.R. 2264, 103rd Cong. (1993) (final vote results), https://clerk.house.gov/Votes/1993199 [https://perma.cc/QZS2-MGHG] (last visited Aug. 11, 2023); see also MILDENBERGER, supra note 54, at 112–13; Erlandson, supra note 55, at 174; Robinson Meyer, History's Greatest Obstacle to Climate Progress Has Finally Fallen,

agricultural sectors — as well as from the senators representing states where these sectors predominate — the Democratic leadership came to realize that the bill was doomed to fail.⁵⁸ The episode was politically costly for House Democrats; Republicans chastised Democratic opponents who had voted in favor of the "Big Tax on U" in the 1994 midterm elections in which Democrats lost 54 seats in the House.⁵⁹

Republican opposition to climate policy solidified in the years that followed.⁶⁰ Shortly after taking office in 2001, President George W. Bush declared that the United States would not implement the Kyoto Protocol to the UNFCCC, which Vice President Gore had helped to negotiate, and which established binding GHG emissions obligations for developed countries.⁶¹

When President Barack Obama took office in 2009, the Democrats controlled both the House and Senate as they had at the beginning of Clinton's presidency, and Democrats sought to advance cap and trade legislation. Although a cap and trade bill to regulate GHG emissions passed the House in Obama's first term, the Senate never took up cap and trade

50 See Drace Thermore Herror

59. See Bruce Thompson, House Democrats Should Be Careful They Don't Get BTU'd, ROLL CALL (Sept. 20, 2021, 10:00 AM), https://rollcall.com/2021/09/20/house-democrats-should-be-careful-they-dont-get-btud/ [https://perma.cc/Z8JA-C56B].

60. In fact, by the time George W. Bush was running for President in the summer of 2000, the Republican National Committee's platform pledged to "increase domestic supplies of coal, oil, and natural gas" and included only passing reference to the benefits of renewable energy tax credits and energy efficiency. 2000 Republican Party Platform, AM. PRESIDENCY PROJ. (July 31, 2000), https://www.presidency.ucsb.edu/documents/2000-republican-party-platform [https://perma.cc/FM6P-5ZSB]. By 2016, the Republican Party had jettisoned even gestures towards climate policy. Instead, the 2016 platform declared that government policies that favored renewable energy represented "the triumph of extremism over common sense," and demanded an "immediate halt to U.S. funding for the U.N.'s Framework Convention on Climate Change." 2016 Republican Party Platform, AM. PRESIDENCY PROJ. (July 18, 2016), https://www.presidency.ucsb.edu/documents/2016-republican-party-platform

[https://perma.cc/67WL-7PHT]. The Democratic Party's platform from the same year called climate change an "urgent threat" and promised "bold steps to slash carbon pollution." The contrast could hardly be clearer. *2016 Democratic Party Platform*, AM. PRESIDENCY PROJ. (July 21, 2016), https://www.presidency.ucsb.edu/documents/2016-democratic-party-platform [https://perma.cc/AE9A-UDE4].

61. *See* Julian Borger, *Bush Kills Global Warming Treaty*, THE GUARDIAN (Mar. 29, 2001, 3:28 PM), http://www.theguardian.com/environment/2001/mar/29/globalwarming.usnews [https://perma.cc/5C68-BB84].

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THE ATLANTIC (Aug. 7, 2022, 5:19 PM), https://www.theatlantic.com/science/archive/2022/08/senate-climate-implation-reductionbill-passed/671073 [https://perma.cc/L6DU-A4V9] ("The House of Representatives passed the [BTU tax] proposal, but the Senate never took it up.").

^{58.} See David S. Hilzenrath, Miscalculations, Lobby Effort Doomed BTU Tax Plan, WASH. POST (June 11, 1993), https://www.washingtonpost.com/archive/business/1993/06/11/miscalculations-lobbyeffort-doomed-btu-tax-plan/d756dac3-b2d0-46a4-8693-79f6f8f881d2/ [https://perma.cc/C9V2-48PK].

legislation.⁶² Once again, federal climate legislation was doomed by the Senate, where the rural areas in which Republicans tend to cluster,⁶³ are overrepresented compared to their share of the national population.⁶⁴ Obama never made another serious attempt to get a climate bill through Congress during his remaining years in office. Instead, he used the regulatory authority of agencies, such as the Environmental Protection Agency under the Clean Air Act, to reduce GHG emissions. Although Obama succeeded in promulgating regulations to reduce GHG emissions from new motor vehicles, the Supreme Court blocked his effort to regulate power plant emissions under the Clean Power Plan.⁶⁵ Trump Administration regulatory rollbacks⁶⁶ and Supreme Court decisions⁶⁷ made the limits of the administrative approach painfully clear.

64. See Nate Silver, *The Senate's Rural Skew Makes It Very Hard for Democrats to Win the Supreme Court*, FIVETHIRTYEIGHT (Sept. 20, 2020, 9:42 AM), https://fivethirtyeight.com/features/the-senates-rural-skew-makes-it-very-hard-for-

democrats-to-win-the-supreme-court/ [https://perma.cc/FRR9-4CSG] ("The Senate is an enormous problem for Democrats given the current political coalitions, in which Democrats are dominant in cities while Republicans triumph in rural areas."); *see also* FRANCES E. LEE & BRUCE I. OPPENHEIMER, SIZING UP THE SENATE: THE UNEQUAL CONSEQUENCES OF EQUAL REPRESENTATION 10 (1999).

65. See West Virginia v. EPA, 577 U.S. 1126, 1126 (2016) (granting stay of the Environmental Protection Agency's Carbon Pollution Emission Guidelines); see also West Virginia v. EPA, 142 S. Ct. 2587, 2604, 2616 (2022) (holding that the Environmental Protection Agency could not regulate carbon emissions without a clear delegation from Congress and discussing the 2016 stay that originally prevented the rule from "taking effect"); Robinson Meyer, *The Supreme Court's Devastating Decision on Climate*, THE ATLANTIC (Feb. 10, 2016), https://www.theatlantic.com/technology/archive/2016/02/the-supreme-courts-devastating-decision-on-climate/462108/ [https://perma.cc/5CPC-YRNN].

66. See Amanda Reilly & Kevin Bogardus, Seven Years Later, Failed Waxman-Markey Bill Still Makes Waves, E&E DAILY (June 27. 2016, 7:00 AM). https://www.eenews.net/articles/7-years-later-failed-waxman-markey-bill-still-makeswaves/ [https://perma.cc/9P7F-X8HW]; see generally Nadja Popovich et al., The Trump Administration Rolled Back More Than 100 Environmental Rules. Here's the Full List, N.Y. 20, 2021), https://www.nytimes.com/interactive/2020/climate/trump-TIMES (Jan. environment-rollbacks-list.html [https://perma.cc/FC3D-9PKD].

67. See West Virginia, 577 U.S. at 1126; see also West Virginia, 142 S. Ct. at 2616.

^{62.} See Maxine Joselow, *Why the Inflation Reduction Act Passed the Senate but Cap-and-Trade Didn't*, WASH. POST (Aug. 10, 2022, 8:10 AM), https://www.washingtonpost.com/politics/2022/08/10/why-inflation-reduction-act-passed-senate-cap-and-trade-didnt/ [https://perma.cc/G7E2-WZ7Z].

^{63.} See, e.g., Jacob Brown & Ryan D. Enos, *The Measurement of Partisan Sorting for* 180 Million Voters, 5 NATURE HUM. BEHAV. 998 (2021). A recent study of partisan sorting between 1856 and 2016 found that, "geographic sorting within states is at a historic high." Ethan Kaplan et al., *Partisan Spatial Sorting in the United States: A Theoretical and Empirical Overview*, 211 J. PUB. ECON. 1, 2 (2022). Democratic voters tend to cluster in urban areas of their states, whereas Republicans dominate in rural areas. See Brown & Enos, supra, at 998.

In August of 2022, 30 years after George H.W. Bush signed the UNFCCC, Congress finally passed the first significant federal climate bill, the Inflation Reduction Act (IRA), a spending bill that establishes a broad suite of tax credits, grants, and other incentives for low-carbon technologies. The legislation, which includes "\$369 billion in climate and energy related funding,"⁶⁸ was a stunning victory for the Democrats, with President Biden having succeeded in getting the Congressional legislation on climate that had eluded Clinton and Obama. Even so, the vote tally for the IRA underscores the ongoing partisan divide over climate: not a single Republican senator voted for the IRA, which was passed through a budget reconciliation process that allowed Senate Democrats to bypass the filibuster.⁶⁹ Moreover, because it was passed through the reconciliation process, the IRA does not include any regulatory caps on GHG emissions; it seeks to incentivize, rather than to mandate, GHG emission reductions.⁷⁰

As of 2023, there is little evidence that the partisan divide over climate change is abating. In May of 2022, the news site FiveThirtyEight published a poll of Americans' political priorities.⁷¹ The pollsters had asked the respondents what issue or issues were most important to them.⁷² Looking at the sample as a whole, 16% of respondents stated that climate change was one of the most important problems facing the country.⁷³ But there was a huge difference between the percentage of Democrat and Republican respondents on the question: 30% of Democrats stated that climate change was among the most important issues compared to only 6% of Republicans.⁷⁴ Only two other issues — election fraud and immigration — showed such a large partisan divide.⁷⁵

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^{68.} Brady Dennis, As Congress Funds High-Tech Climate Solutions, It Also Bets on a Low-Tech One: Nature, WASH. POST (Aug. 14, 2022, 7:00 AM), https://www.washingtonpost.com/climate-solutions/2022/08/14/nature-climate-solutions-inflation-reduction-act/ [https://perma.cc/CS7E-VC4W].

^{69.} See Joselow, supra note 62.

^{70.} See Kent Hughes, Wilson Center Expert Analysis of the Inflation Reduction Act: The IRA and Competitiveness WILSON CTR. (Aug. 15, 2022), https://www.wilsoncenter.org/article/wilson-center-expert-analysis-inflation-reduction-act [https://perma.cc/CGD7-Q37Z]; see also Joselow, supra note 62.

^{71.} See Geoffrey Skelley & Holly Fuong, We Asked 2,000 Americans about Their Biggest Concern, FIVETHIRTYEIGHT (May 17, 2022, 6:00 AM), https://fivethirtyeight.com/features/we-asked-2000-americans-about-their-biggest-concern-the-resounding-answer-inflation/ [https://perma.cc/MW8C-49WC].

^{72.} See id.

^{73.} See id.

^{74.} See id.

^{75.} See id. Note that some commentators dispute that there is such a stark partisan divide over beliefs about climate change. See LEISEROWITZ ET AL., POLITICS & GLOBAL WARMING, APRIL 2022, 14–15 (Yale Univ. & George Mason Univ., eds. 2022); Gregg Sparkman et al.,

Scholars and advocates should view U.S. cities' efforts to tackle climate change with the above history of partisanship and federal policy stagnation in mind. As will be described in the following section, many of these cities' biggest climate policy announcements were preceded by federal backtracking on climate change, in particular President Bush's withdrawal of the U.S. from the Kyoto Protocol⁷⁶ and President Trump's withdrawal of the U.S. from the Paris Agreement.⁷⁷ Even some of the most zealous advocates for local leadership on climate change have been explicit about the fact that they have urged local governments to engage in climate policy design more out of necessity than choice. In the words of the political scientist Benjamin Barber, who founded the Global Parliament of Mayors, cities have been forced to take on the climate crisis because "national leaders have defaulted in dealing with the big issues of an interdependent world.... [including] climate change."⁷⁸ With time, Barber hoped, cities would set an example for their "laggard mother states" that would spur them into action.⁷⁹

Interviews with current and former New York City government officials buttress Barber's sense that federal foot-dragging contributed to local action. When asked what motivated New York City to take on GHG emissions, one long-time environmental policy staffer echoed the sentiments quite precisely. "The federal government has been the world's worst laggard," the staffer said. "Since Kyoto, it's been China and us. The leadership has to come from somewhere." Pete Sikora, a veteran grassroots climate change organizer for New York Communities for Change, was even blunter in his assessment: "Trump being in the White House helped us because it removed

Americans Experience a False Social Reality by Underestimating Popular Climate Policy Support by Nearly Half, 13 NATURE COMMC'NS 4–5 (2022).

^{76.} See supra note 61 and accompanying text.

^{77.} See Press Release, White House, President Trump Announces United States Withdrawal from the Paris Climate Accord (June 1, 2017), https://trumpwhitehouse.archives.gov/articles/president-trump-announces-u-s-withdrawal-paris-climate-accord/ [https://perma.cc/3BRQ-Q699].

^{78.} BENJAMIN R. BARBER, COOL CITIES: URBAN SOVEREIGNTY AND THE FIX FOR GLOBAL WARMING 10 (2017). Barber addressed this criticism to nation states in general, not just the United States. *Id.* But he also makes clear throughout the book that the United States, which at the time that he was writing had just elected Donald Trump, had been deeply irresponsible with respect to climate change policy. *Id.* Note that a decade earlier, in the waning days of the George W. Bush administration, the political scientist Miranda Schreurs offered a similar explanation for American cities' leadership on climate. *See* Miranda A. Schreurs, *From the Bottom Up: Local and Subnational Climate Change Politics*, 17 J. ENV'T & DEV. 343, 350 (2008). In her words, American cities had taken up the cause of climate change in response to the federal government's "failure. . . . to play a strong leadership role on climate change politics." *Id.*

^{79.} BARBER, supra note 78, at 71.

the idea that the Feds would come in and save us,"80 according to Sikora. "Trump also got people really revved up," he added. If advocates could persuade New York City to act, they might be able to scale up to the state level, where Republicans have often had a stronger toehold on power than in the city.⁸¹ Climate activists have scored victories at the state level in recent years, most notably in 2019 when the state legislated an aggressive plan to decarbonize by the mid-twentieth century, shortly after the New York city council passed its bold law to decarbonize buildings.⁸²

Local actors were not naive to the fact that their individual efforts could have only a limited impact on global emissions and did not cast local action as a perfect substitute for federal initiatives. But they sought to be first movers in the fight to reduce emissions and inspire other governments to follow suit. New York City's first climate focused plan made this theory of change quite explicit. "No city can change these forces, but collective effort can," the report explained.⁸³ Displaying the bravado for which New Yorkers are famous, the report went on to declare that "New York has always pioneered answers to some of the most pressing problems of the modern age. It is incumbent on us to do so again and rise to the definitive challenge of the 21st century."⁸⁴ In an interview in 2022, Cas Holloway, who led the New York City Department of Environmental Protection under Bloomberg, echoed the sentiment: "New York City has always seen itself as a model for the urban world," Holloway explained. "We always thought that ambitiously, hoping to inspire others."

There is evidence that other marquee cities bought into the same theory of change as New York City (i.e., that they could impact the trajectory of global climate change by inspiring others to emulate their actions). For instance, Chicago's first Climate Action Plan, published in 2008, stated that the initiatives "already under way in Chicago and the strategies and goals outlined in this plan can inspire similar initiatives in cities around the

82. N.Y. Climate Leadership and Community Protection Act (CLCPA), 2019 N.Y. Sess. Laws 3, 8 (McKinney).

83. PLANYC 2007, supra note 31, at 133. 84. Id. at 9.

^{80.} Pete Sikora, Senior Advisor, N.Y. Cmtys. for Change, Remarks at a New York University Class on "What Should Cities Do to Protect Against Climate Change" (Oct. 12, 2022).

^{81.} See Katrina M. Wyman & Danielle Spiegel-Feld, The Urban Environmental Renaissance, 108 CALIF. L. REV. 305, 332-33 (2020) ("[P]rior to the November 2018 elections, 92 percent of the State senators representing New York City were members of the Democratic Party, while only 49 percent of senators throughout the State were Democrats, and Republicans had controlled the State Senate virtually without interruption for decades."). Republicans' relative strength at the state level conforms to national trends in which Democrats dominate urban areas and Republicans rural areas.

world."⁸⁵ Dade County, which includes Miami, articulated a similar rationale in 1993 when it became one of the first local governments in the United States to adopt a climate action plan after Hurricane Andrew; "[b]y using this plan as a guide to specific actions across several important policy areas, Metro-Dade can provide important leadership for its residents and other local governments,"⁸⁶ the report declared. In essence, these local leaders hoped to inspire a wave of municipal action that in the aggregate could make a real difference.

III. EASING IN

Consistent with the evolving nature of cities' motivations for tackling climate change, major American cities, including New York, steadily intensified their efforts in the early 21st century to reduce GHG emissions as the federal foot-dragging on climate intensified.

For more than a decade after the United States signed the UNFCCC in 1992, cities' climate policy focused primarily on declaring their intent to help facilitate global efforts to reduce emissions and setting targets for doing so. In other words, there was a lot of talk during those years, but not so much action. During the Obama Administration, after Congress failed to pass cap and trade legislation, local efforts became more action-oriented. Rather than merely establishing targets, as they had done previously, cities started to take preparatory steps to implement these targets by producing inventories of local GHG emissions that highlighted the main sources of emissions within local borders — buildings and transportation — and educating their consumers about opportunities for reducing emissions. Still, most of these regulations took a light-touch or voluntary approach and there were no mandates that emissions decline. After President Trump took office, at which point the executive branch was openly hostile to the idea of reducing GHG emissions, some cities finally started to move beyond target setting and data collection to actually mandate reductions. In short, if we look at the arc of cities' climate activities over the past three decades, we can discern three main periods that roughly correspond to the dates listed below:

- 1992–2008: Cities declare their intention to participate in climate policy development and set targets for reducing citywide emissions;
- 2009–2018: Cities begin collecting the data necessary to evaluate progress towards emissions targets and educating individuals and businesses about their emissions;

^{85.} City of Chicago, Chicago Climate Action Plan 5 (2008).

^{86.} URBAN CO₂ Reduction Project Steering Committee, A Long Term CO₂ Reduction Plan for Metropolitan Dade County 44 (1993).

• 2019–ongoing as of 2023: Cities begin to adopt regulations that mandate emissions reductions.

We review how each of these different phases unfolded in the following sections.

A. Declarations and Targets

Many observers identify the 1992 United Nations Conference on Environment and Development held in Rio de Janeiro as the starting point for cities' engagement with climate policy development.⁸⁷ At the Rio conference, 178 nations adopted Agenda 21, "a nonbinding international agreement" which established a range of developmental and environmental objectives for the international community to pursue in the 21st century.⁸⁸ Chapter 28 of Agenda 21 called upon local governments to assist the international community in implementing its environmental goals.⁸⁹ The same chapter also called upon international organizations to help mobilize support for local efforts to advance the sustainable development agenda.⁹⁰ Pursuant to this charge, the United Nations established the Urban CO₂ Reduction Program, which helped cities develop "strategies" for measuring and reducing greenhouse emissions.⁹¹ Yet, over the following decade, "only a small number of 'pioneer cities' in the United States were actively engaged in climate protection."⁹² Of the 20 most populous cities in the United States as of 2020–2021,⁹³ only one city (Philadelphia) established a GHG reduction

90. Id. at ch. 28.4.

92. Id.

^{87.} *See, e.g.*, Krause et al., *supra* note 1, at 180. Note that a small number of cities, including Toronto, established climate action targets after the 1988 international conference, "On the Changing Atmosphere." *See* HARRIET BULKELEY, CITIES AND CLIMATE CHANGE 74 (2013).

^{88.} U.N. Conference on Environment and Development, U.N. Sustainable Development Agenda 21, ch. 1.3, U.N. Doc. A/CONF.151/26 (June 14, 1992).

^{89.} *Id.* at ch 28.3. Among other charges, Chapter 28 calls upon local governments to "enter into a dialogue with ... citizens, local organizations and private enterprises and adopt a "local Agenda 21." *Id.* It further specifies that "[1]ocal authority programmes, policies, laws and regulations to achieve Agenda 21 objectives would be assessed and modified, based on local programmes adopted." *Id.*

^{91.} See Krause et al., *supra* note 1, at 180 (The Urban CO₂ Reduction Program was "a United Nations-led effort that worked with a small number of cities to develop comprehensive GHG mitigation strategies and measurements.").

^{93.} Based on data from the U.S. Census defining the most populated cities and towns in the United States for 2020–2021. See Annual Estimates of the Resident Population for Incorporated Places of 50,000 or More, Ranked by July 1, 2022 Population: April 1, 2020 to July 1, 2022, U.S. CENSUS BUREAU, https://www.census.gov/data/tables/time-series/demo/popest/2020s-total-cities-and-towns.html#tables [https://perma.cc/5BPF-7JU6] (last visited July 30, 2023). The governmental units assessed in this date include "both incorporated places (such as cities, boroughs, and villages) and minor civil divisions (such as

target in the 1990s.⁹⁴ In short, urban climate policy was a niche (and largely aspirational) enterprise in the United States during the 1990s. And even among those cities that did put climate change on the agenda in this era, there was more talk than concrete action.

President George W. Bush's election heralded a new era of climate politics that engaged a larger number of cities. In March of 2001, just a few months after his inauguration, Bush announced that he had "no interest" in implementing the Kyoto Protocol.⁹⁵ The announcement enraged green groups. "Bush is turning his back. . . . [on] the world's scientists, who warn this problem is more serious than we previously thought," said a senior scientist with the NRDC.⁹⁶ Progressive U.S. mayors were similarly disappointed. Soon after Bush made his intentions clear, the mayor of Seattle declared that the city would meet what would have been the U.S. emissions target (a 7 percent reduction below 1990 levels by 2012) itself.⁹⁷ "We are sending a message to the federal administration that it's time to act, just like the rest of the world," Seattle's mayor, Paul Schell, declared in 2001.⁹⁸ Other cities also pledged to reduce their emissions after Bush took office. Nearly

towns and townships)." Methodology for the Subcounty Total Resident Population Estimates (Vintage 2021): April 1, 2020 to July 1, 2021, U.S. CENSUS BUREAU, https://www2.census.gov/programs-surveys/popest/technical-

documentation/methodology/2020-2021/2021-subco-method.pdf [https://perma.cc/KD34-8VPE] (last visited July 30, 2023). The 20 most populous cities are: Austin, Charlotte, Chicago, Columbus, Dallas, Denver, Fort Worth, Houston, Indianapolis, Jacksonville, Los Angeles, New York City, Oklahoma City, Philadelphia, Phoenix, San Antonio, San Diego, San Francisco, San Jose, and Seattle. *Id.*

^{94.} In 1999, Philadelphia committed to reduce GHG emissions to 10% below 1990 levels by 2010 as part of its participation in the International Council for Local Environmental Initiatives (ICLEI) "Cities for Climate Protection" campaign, which was the successor to the Urban CO₂ Reduction Program. *See* CITY OF PHILADELPHIA, LOCAL ACTION PLAN FOR CLIMATE CHANGE 3 (2007), https://www.montcopa.org/DocumentCenter/View/3284/Philadelphia-Climate-Change-Local-Action-Plan-2007?bidId [https://perma.cc/FT3K-ZXAV] (last visited July 30, 2023);

see also Krause et al., supra note 1, at 180.

^{95.} See Julian Borger, Bush Kills Global Warming Treaty, THE GUARDIAN (Mar. 29, 2001), https://www.theguardian.com/environment/2001/mar/29/globalwarming.usnews [https://perma.cc/V8UC-GAT2].

^{96.} Douglas Jehl & Andrew C. Revkin, *Bush, in Reversal, Won't Seek Cut in Emissions of Carbon Dioxide*, N.Y. TIMES (Mar. 14, 2001), https://www.nytimes.com/2001/03/14/us/bush-in-reversal-won-t-seek-cut-in-emissions-of-carbon-dioxide.html [https://perma.cc/2T4R-55PX].

^{97.} Seattle to Achieve Kyoto Targets, EDIE NEWSROOM (July 27, 2001), https://www.edie.net/seattle-to-achieve-kyoto-targets/ [https://perma.cc/N2AS-JUGE]; see also Schell Game, GRIST (July 24, 2001), https://grist.org/article/game2/ [https://perma.cc/F69V-58E6].

^{98.} Id.

half of the 20 most populous cities, including New York City,⁹⁹ adopted their first GHG reduction targets between 2001, when Bush took office, and 2008, Bush's last full year in office.¹⁰⁰ Small cities joined the movement as well. By the end of 2009, 1,017 U.S. cities had signed on to the Mayors' Climate Protection Agreement, which committed cities to achieving the GHG reduction targets that would have applied to the United States if it had implemented the Kyoto Protocol.¹⁰¹

American cities also asserted their climate ambitions in other ways during the Bush years. While the Bush administration retreated from the international community, U.S. cities, including New York City, joined the U.N.-affiliated International Council for Local Environmental Initiatives (ICLEI) network in large numbers.¹⁰² New York City and Los Angeles

Professor Hari Osofsky provides useful context for understanding the significance of the number of mayors that signed the Mayors' Climate Protection Agreement. In a 2013/2014 article, she indicates that "[i]n the United States, . . . 1,054 mayors, representing a total population of more than 88,920,962 citizens, have joined the U.S. Conference of Mayors Climate Protection Agreement ("Mayors Agreement") in which they pledge to meet what the U.S. commitments under the Kyoto Protocol would have been: reducing emissions to 7% below 1990 levels by 2012. While this number is impressive against the current political backdrop in which U.S. political leaders cannot agree on a coherent pathway forward, these mayors represent only about 5% of U.S. cities and 28% of the total U.S. population. The vast majority of cities and people are not participating in the Mayors Agreement." Hari M. Osofsky, *The Geography of Solving Global Environmental Problems*, 58 N.Y.L.S. L. REV. 777, 784–85 (2014).

102. See Krause et al., supra note 1, at 177 (ICLEI's "membership peaked in 2010 with nearly 700 local governments, 565 of which were cities and towns. By 2012, city membership had declined by 22 percent."). New York City participated in ICLEI's Climate Protection Program. N.Y.C. MAYOR'S OFF. OF LONG-TERM PLAN. & SUSTAINABILITY, INVENTORY OF Greenhouse NEW YORK CITY GAS **EMISSIONS** (2007).https://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/GHG%20Inventory %20Report%20Emission%20Year%202005.pdf [https://perma.cc/QZ93-AKX2] (last visited July 30, 2023) [hereinafter N.Y.C. GHG INVENTORY]. On the history of ICLEI, which created "the first global programme supporting cities in pursuing climate action" in 1993, see JOLENE LIN, GOVERNING CLIMATE CHANGE: GLOBAL CITIES AND TRANSNATIONAL LAWMAKING 109

^{99.} See Annual Estimates of the Resident Population for Incorporated Places of 50,000 or More, Ranked by July 1, 2022 Population: April 1, 2020 to July 1, 2022, *supra* note 96 and accompanying text. Specifically, nine of the 20 most populous cities adopted their first greenhouse gas reduction target between 2001 and 2008. *Id.*

^{100.} See *infra* Fig. 1.

^{101.} See, e.g., Jonathan Hiskes, America's Greenest Mayor, Laid Off and Looking On, GRIST (Dec. 4, 2009), https://grist.org/article/2009-12-03-greenest-mayor-greg-nickelsseattle/ [https://perma.cc/6XSG-JWJC]; Krause et al., *supra* note 1, at 180. The Mayor's Climate Protection Agreement was an initiative of the U.S. Conference of Mayors, which is a non-profit organization that represents cities with 30,000 inhabitants or more. *About the Conference*, U.S. CONF. OF MAYORS, https://www.usmayors.org/the-conference/about/ [https://perma.cc/4BYX-XNCT] (last visited July 30, 2023). The Mayors' Climate Protection Agreement was unanimously passed by the U.S. Conference of Mayors on June 13, 2005. *See* Press Release, Mayor Signs Climate Protection Agreement, BLOOMINGTON, IND. (Apr. 21, 2006), https://bloomington.in.gov/news/2006/04/21/2438 [https://perma.cc/HM3Y-8YHC].

participated in the institutionalization of the C40 Group for Climate Leadership, which began with an initial meeting in 2005 held at the initiative of Ken Livingstone, the then Mayor of London, England,¹⁰³ Part of the attraction of these networks may have been the information and technical support they could provide local governments, for example, for tasks such as inventorying GHG emissions within local borders.¹⁰⁴ Joining these networks also may have been linked with a broader effort to assert the standing of cities in the international community, independent from national governments, in the polycentric global governance regime that some scholars suggest blossomed around the turn of the 21st century.¹⁰⁵ Indeed, at the ceremony at which Mayor Bloomberg announced his first major plan for creating sustainable New York City, known as PlaNYC, British Prime Minister Tony Blair and Governor Schwarzenegger — but not politicians from the federal government¹⁰⁶ — provided words of praise. "This would mark out New York as a global leader in halting climate change," Mr. Blair said via videotaped remarks at the event launching the plan.¹⁰⁷ Out of step

^{(2018);} *see also* Krause et al., *supra* note 1, at 180–83 (discussing the opposition of the Tea Party Movement to ICLEI). *See generally* Elaine B. Sharp, Dorothy M. Daley & Michael S. Lynch, *Understanding Local Adoption and Implementation of Climate Change Mitigation Policy*, 47 URB. AFF. REV. 433 (2011) (analyzing the reasons for joining ICLEI and the impacts of ICLEI membership); Rachel M. Krause, *An Assessment of the Impact That Participation in Local Climate Networks Has on Cities' Implementation of Climate, Energy, and Transportation Policies*, 29 REV. OF POL'Y RSCH (2012) (impact of joining ICLEI and the Mayors' Climate Protection Agreement). On the distinction between ICLEI and the Mayors' Climate Protection Agreement, see Krause et al., *supra* note 1, at 180.

^{103.} See MICHELE ACUTO, GLOBAL CITIES, GOVERNANCE AND DIPLOMACY: THE URBAN LINK 87, 100, 102, 108, 113–15 (2013); see also id. at 103, 113–14 (New York City was chair of the C40 starting in 2010, and New York City and Los Angeles were members of the Steering Committee as of 2012). On the history of C40, see LIN, *supra* note 102, at 105–26.

^{104.} ACUTO, *supra* note 103, at 107–09 (discussing the "technical dimension" of C40); Krause et al., *supra* note 1, at 181 (referring to the "technical assistance" that ICLEI offers "member cities"). Out of 504 cities responding to a 2015–2016 survey of cities with populations exceeding 20,000, 57% had completed inventories of local government GHG emissions and 47% percent had inventories of community-wide GHG emissions, which are more complicated to undertake because they measure emissions throughout the jurisdiction, not just from city operations. *See* KRAUSE & HAWKINS, *supra* note 5, at 28–29.

^{105.} See, e.g., Helmut Philipp Aust, Shining Cities on the Hill? The Global City, Climate Change, and International Law, 26 EUR. J. INT'L L. 255, 261–62 (2015); Michele Acuto & Benjamin Leffel, Understanding the Global Ecosystem of City Networks, 58 URB. STUD. 1758, 1760-67 (2021).

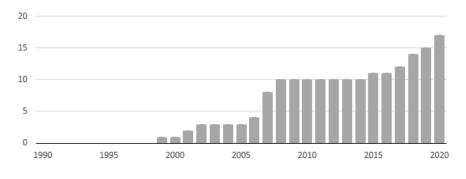
^{106.} New York Mayor Unveils Master Plan for Greener City, INST. FOR TRANSP. DEV. POL'Y (July 1, 2007), https://www.itdp.org/2007/07/01/new-york-mayor-unveils-master-plan-for-greener-city/ [https://perma.cc/68NT-GYG8].

^{107.} Thomas J. Lueck, *Bloomberg Draws a Blueprint for a Greener City*, N.Y. TIMES (Apr. 23, 2007), https://www.nytimes.com/2007/04/23/nyregion/23mayor.html [https://perma.cc/3URN-PD7K].

with the leadership in Washington, it seems that Bloomberg sought to play on a global stage.

Figure 1: Cumulative Number of Cities Among the 20 Most Populous Cities in the United States that Established GHG Reduction Targets, by Year¹⁰⁸

^{108.} Data collected by determining the year that a GHG target was first established in each city and charting how many targets were established in each given year. This chart does not reflect whether a city stopped having a GHG reduction target after establishing one and does not reflect whether a city increased or reduced the stringency of its GHG reduction target after adopting its first target. See, e.g., Austin, Tex., Res. No. 20070215-023 (2007); CITY OF CHARLOTTE OFF. OF SUSTAINABILITY, SUSTAINABLE AND RESILIENT CHARLOTTE BY 2050 RESOLUTION (2018); CHI. CLIMATE TASK FORCE, CHICAGO CLIMATE ACTION PLAN 9 (2008) https://www.chicago.gov/city/en/progs/env/climateaction.html [https://perma.cc/ZUC6-BFYP] (last visited July 30, 2023); COLUMBUS CLIMATE ACTION PLAN (2021), https://www.columbus.gov/sustainable/cap/ [https://perma.cc/T8PM-YKMU] (last visited July 30, 2023); Memorandum from City of Dallas to Transp. and Env't Comm., Greenhouse Gas Emissions (2012)http://www3.dallascityhall.com/committee_briefings/briefings0612/TEC_GreenhouseGasE missions_061112.pdf [https://perma.cc/EXG2-2WR8]; CITY AND CNTY. OF DENVER, 80x50 CLIMATE GOAL: STAKEHOLDER REPORT, 5 (2017),https://www.denvergov.org/content/dam/denvergov/Portals/771/documents/EQ/80x50/80x5 0%20Stakeholder%20Report.pdf [https://perma.cc/Y4A8-GCEY] ("In 2007, Denver established its first GHG emission reduction goal with the 2007 Climate Action Plan."); Kristin Musulin, Houston Unveils First Climate Action Plan, UTILITYDIVE (Apr. 25, 2020), https://www.utilitydive.com/news/houston-unveils-first-climate-action-plan/576752/ [https://perma.cc/W3ZS-DAJT]; Indianapolis, Ind., Res. No. 10 (Feb. 27, 2017), https://citybase-cms-prod.s3.amazonaws.com/1f0e56b8bddd40cb903c679344b0f328.pdf [https://perma.cc/E4G4-KUG2]; CITY OF L.A., GREEN LA: AN ACTION PLAN TO LEAD THE NATION IN FIGHTING GLOBAL WARMING (2007); PLANYC 2007, supra note 31, at 9; CITY OF PHOENIX, CLIMATE ACTION PLAN FOR GOVERNMENT OPERATIONS, 8 (2009) ("In December 2008, the City Council adopted a goal to: Reduce emissions from city operations to 5 percent below the 2005 levels by 2015."); CITY OF PHILA., LOCAL ACTION PLAN FOR CLIMATE CHANGE (2007) ("In 1999 the City committed to a goal to reduce Philadelphia greenhouse gases to 10 percent below 1990 levels by 2010"); CITY OF SAN ANTONIO, SA CLIMATE READY: A PATHWAY FOR CLIMATE ACTION & ADAPTATION (2019); Overview: SD Sustainability, CITY OF SAN DIEGO, https://www.sandiego.gov/sustainability/overview [https://perma.cc/LJZ9-BHS6] (last visited July 30, 2023) ("In 2015, the City Council approved San Diego's Climate Action Plan, which calls for the City to cut half of all greenhouse gas (GHG) emissions by 2035"); S.F., CAL., RES. NO. 158-02 (2004); Climate Smart San Jose, CITY OF SAN JOSÉ, https://www.sanjoseca.gov/your-government/departments-offices/environmentalservices/climate-smart-san-jos [https://perma.cc/Y9P8-DMJA] (last visited July 30, 2023); Seattle, Wash., Ordinance No. 125002 (Apr. 30, 2015). Note that the following cities do not appear to have established a GHG reduction target: Fort Worth, Jacksonville, and Oklahoma City. See ACEEE, 2021 CITY CLEAN ENERGY SCORECARD: FORT WORTH, TX (2021), https://www.aceee.org/sites/default/files/pdfs/2021_CityScorecard_OnePagers/CS_2021_Fo rt%20Worth.pdf [https://perma.cc/9DNE-X5U5] ("[T]he city has few initiatives to reduce GHG emissions and energy use in local government operations. Fort Worth has not established goals for GHG emissions reductions in municipal operations."); Sydney Boles et al., What Jacksonville Can Learn from Nashville about Fighting Climate Change, WUSF PUB. MEDIA (May 30, 2021), https://wusfnews.wusf.usf.edu/environment/2021-05-30/what-



B. Data Collection

Released in April of 2007, PlaNYC was a landmark moment in New York City's environmental history. The plan also marked a general turning point for the urban environmental movement in the United States. PlaNYC established a target for New York City to reduce emissions by 30 percent below 2005 levels by 2030.¹⁰⁹ This target was certainly ambitious at the time.¹¹⁰ Yet this ambition is not what made PlaNYC distinctive. What made it different from other municipal climate plans that came before was its data driven approach to tracking progress towards the stated goal and educating

jacksonville-can-learn-from-nashville-about-fighting-climate-change

[[]https://perma.cc/MU4Q-PNRK] ("Jacksonville is doing relatively little to reduce its carbon footprint and does not have a climate action plan"); *Air Quality*, CITY OF OKLA. CITY (2020), https://www.okc.gov/departments/planning/programs/sustainability/adaptokc/air-quality [https://perma.cc/3PYK-KSXC] (noting that Oklahoma City's efforts to establish a GHG target are still in progress).

^{109.} PLANYC 2007, supra note 31, at 134.

^{110.} New York City's 30% by 2030 reduction target was more ambitious than targets established by other cities in the 1990s and early 2000s. See, e.g., CITY OF PHILA., LOCAL ACTION PLAN FOR CLIMATE CHANGE (2007) ("In 1999 the City committed to a goal to reduce Philadelphia greenhouse gases to 10 percent below 1990 levels by 2010."). MAYOR'S GREENPRINT DENVER ADVISOR COUNCIL, CITY OF DENVER CLIMATE ACTION PLAN 3, (2007), https://www.austintexas.gov/sites/default/files/files/Sustainability/Climate/Denver_Greenpri nt.pdf [https://perma.cc/L9XK-9VEE] (introducing a target in 2007 for Denver to reduce GHG emissions by 10% per capita by 2012); S.F. DEPT. OF ENV'T, CLIMATE ACTION PLAN FOR S.F.: LOCAL ACTIONS TO REDUCE GREENHOUSE GAS EMISSIONS ES-1 (2004), ("In 2002, the San Francisco Board of Supervisors passed the Greenhouse Gas Emissions Reduction Resolution, committing the City and County of San Francisco to a greenhouse gas emissions reductions goal of 20% below 1990 levels by the year 2012."). But see CITY OF BOS., CLIMATE: CHANGE: THE CITY OF BOS.'S CLIMATE ACTION PLAN, 21 (2007),https://www.cityofboston.gov/climate/pdfs/capjan08.pdf [https://perma.cc/KM5U-E9HU] (in April 2007, the mayor of Boston signed an executive order committing Boston to reducing its GHG emissions by 80% by 2050).

the private sector.¹¹¹ That the Bloomberg administration would emphasize the collection of energy and emissions data was perhaps natural given that the mayor built his fortune collecting data about financial markets for Wall Street.¹¹²

The first step in the process of collecting data was to establish an inventory of GHGs emitted throughout the city, which is a necessary precursor to tracking implementation of a GHG reduction target.¹¹³ Thus, in 2007, the same year in which the city announced PlaNYC, it published its first GHG inventory, which reports emissions released from activities in the city and electricity supplied to it.¹¹⁴ Shortly thereafter, the city council passed a law that codified the requirement to publish periodic updates to the inventory and established a mandate — not just a target — to reduce citywide emissions by 30 percent below 2005 levels by 2030.¹¹⁵

^{111.} See, e.g., PLANYC 2007, supra note 31, at 140; The Editors, OneNYC Needs More Data, Fewer Slogans, OBSERVER (Apr. 29, 2015), https://observer.com/2015/04/onenyc-needs-more-data-fewer-slogans/ [https://perma.cc/S8VE-3P7N] ("In 2007, Mayor Michael Bloomberg released PlaNYC, an unprecedented analysis and agenda that addressed three of the city's challenges: growth, an aging infrastructure and a precarious environment. The report was data-heavy, examining trends about water supply and quality, energy usage and air pollution, land use, housing and transportation. It made recommendations to make New York a more livable and sustainable city; and it set measurable goals.").

^{112.} See Emily Stewart, *How Mike Bloomberg Made His Billions: A Computer System You've Probably Never Seen*, Vox (Dec. 11, 2019), https://www.vox.com/2020-presidential-election/2019/12/11/21005008/michael-bloomberg-terminal-net-worth-2020 [https://perma.cc/PW2B-KZY5].

^{113.} On the importance of GHG inventories for tracking emissions for policy, see BULKELEY, *supra* note 87, at 110–12.

^{114.} New York City seems to have relied on assistance from the International Council for Local Environmental Initiatives (ICLEI) in undertaking its first inventory. *See* N.Y.C. GHG INVENTORY, *supra* note 102, at 2 ("This report presents the results to date of New York City's participation in ICLEI – Local Governments for Sustainability's Cities for Climate Protection Campaign"). In fact, New York City's efforts to quantify and assess its GHG emissions began years before, in 2002. *Id.* at 2 ("Efforts to quantify New York City's greenhouse gas emissions began in 2002 with an initial assessment of emissions from City government operations. Further research and analyses were conducted in subsequent years, including the completion of 2001 and 2006 government operations inventories and 1995, 2001, and 2005 citywide inventories, the development of emissions forecasts, the quantification of current government emissions reduction measures, and the establishment of emissions reduction targets for both New York City as a whole and for New York City government operations.").

ICLEI, along with the World Resources Institute (WRI) and C40 Cities Climate Leadership Group (C40), created what is now the standard protocol used by local governments to track their GHG emissions. The development of the protocol began in 2011 between C40 and ICLEI; WRI joined the partnership in 2012. *See, e.g.*, WEE KEAN FONG ET AL., GLOBAL PROTOCOL FOR COMMUNITY-SCALE GREENHOUSE GAS INVENTORIES: AN ACCOUNTING AND REPORTING STANDARD FOR CITIES (2021), 26 https://ghgprotocol.org/sites/default/files/standards/GPC_Full_MASTER_RW_v7.pdf [https://perma.cc/6UHK-M4ZD]; LIN, *supra* note 102, at 121–22.

^{115.} N.Y.C., NY Local Law No. 22 (amended by N.Y.C. NY Local Law No. 97, 2019).

In 2009, at the urging of a Bloomberg administration seeking to implement PlaNYC, the city council passed a suite of regulations known as the *Greater, Greener Buildings Plan* (GGBP)¹¹⁶ that enlisted the support of the real estate industry to achieve the city's climate goals.¹¹⁷ New York focused its efforts on real estate, as opposed to other sources of emissions such as transportation, because energy use in buildings accounts for the lion's share of local GHG emissions in New York and other densely populated urban areas under the standard approach to measuring city emissions.¹¹⁸ Cities also have relatively greater authority to regulate emissions from buildings than transportation, which makes buildings a more natural regulatory target.¹¹⁹ Indeed, around the same time that the city passed the GGBP, the Bloomberg administration tried to adopt rules to regulate

^{116.} The following three paragraphs draw from Danielle Spiegel-Feld, *Reducing Greenhouse Gas Emissions from Buildings in New York City: An Evolving Regime, in* GLOBAL SUSTAINABLE CITIES: CITY GOVERNMENTS AND OUR ENVIRONMENTAL FUTURE 259, 260 (Danielle Spiegel-Feld et al. eds. 2023).

^{117.} On the connection between the suite of Greener, Greater Buildings laws and PlaNYC, see Testimony by Rohit T. Aggarwala, Transcript of the Minutes of the Committee on Environmental Protection, New York City Council, 15 (June 27, 2008); Testimony by Rohit T. Aggarwala, Transcript of the Minutes of the Committee on Environmental Protection, New York City Council, 137–38 (June 26, 2009). On December 8, 2009, when the City Council Environmental Protection Committee voted on the package of bills, the committee chair, Jim Gennaro, mentioned that EPA had announced the day before that greenhouse gases endangered public health, and that world leaders were meeting at a conference in Copenhagen. *See generally* Transcript of the Minutes of the Committee on Environmental Protection, New York City Council (Dec. 8, 2009) (noting that the committee voted 9–0 on all the bills, except for the bill requiring audits and retro-commissioning which passed 8–1, with Council member Ulrich, a Republican, voting no).

^{118.} For example, in Boston, Chicago, New York, Philadelphia, and Washington, D.C., buildings account for over 70 percent of local GHG emissions. *See, e.g., Building Emissions Reduction and Disclosure*, CITY OF Bos. (June 28, 2023), https://www.boston.gov/departments/environment/building-emissions-reduction-and-disclosure [https://perma.cc/XD4U-BYFL]; Press Release, City of Chicago Office of the Mayor, Mayor Lightfoot Announces a Building Decarbonization Working Group, 1 (June 2, 2021).

https://www.chicago.gov/city/en/depts/mayor/press_room/press_releases/2021/june/Decarb onizationWorkingGroup.html [https://perma.cc/UJM7-KULM]; *Climate Mobilization Act*, N.Y.C. COUNCIL, https://council.nyc.gov/data/green/ [https://perma.cc/59YT-A7XC] (last visited Aug. 14, 2023); Helena Rudoff, *Philadelphia's 2019 Greenhouse Gas Inventory Reports 20% Reduction in Emissions Since 2006*, CITY OF PHILA., (Apr. 21, 2022) https://www.phila.gov/2022-04-21-philadelphias-2019-greenhouse-gas-inventory-reports-20-reduction-in-emissions-since-2006/ [https://perma.cc/GMG8-8HU4]; *Greenhouse Gas*

Inventories, D.C. DEP'T. OF ENERGY & ENV'T, https://doee.dc.gov/service/greenhouse-gasinventories [https://perma.cc/95JF-6DNX] (last visited Aug. 14, 2023).

^{119.} See Danielle Spiegel-Feld, Frontiers in Regulating Building Emissions: An Agenda for Cities, 47 WM. & MARY ENV'T L. & POL'Y REV. 103, 107–08 (2022) (noting that "cities have more power to address emissions from buildings than they do from other sectors, such as transportation. Cities that seek to develop policies to reduce GHG emissions must operate within a thicket of preempting federal and state regulations.").

emissions from taxis and introduce congestion pricing, but these efforts were thwarted by the federal courts¹²⁰ and the state legislature,¹²¹ respectively.

The GGBP included four distinct components:

- 1. Local Law 84, which requires buildings to annually report to the city how much energy and water they consume; the buildings then receive a "benchmarking" score that indicates how their consumption compares to similar properties.
- 2. Local Law 85, which requires buildings to meet the requirements of the most current energy code when they conduct major renovations.
- 3. Local Law 87, which requires buildings to conduct periodic energy audits that identify opportunities for cost-effective retrofits and retro-commissioning of heating, ventilation, and air conditioning (HVAC) equipment.¹²²
- 4. Local Law 88, which requires non-residential buildings to make certain lighting upgrades and separately charge large tenants for their electricity consumption (i.e., "submeter") instead of charging them a fixed percentage of the building's total electricity bill (which had previously been common practice).¹²³

The legislative package also established two programs to assist building owners in making energy upgrades: a jobs training program to bolster the local workforce with the required technical expertise, and an energy efficiency financing corporation known as the New York City Energy Efficiency Corporation (NYCEEC) to provide low-cost funding for energy upgrades.¹²⁴

^{120.} *See, e.g.*, Metro. Taxicab Bd. of Trade v. City of New York, No. 8 Civ. 7837, 2008 WL 4866021, at *1 (Oct. 31, 2008); Metro. Taxicab Bd. of Trade v. City of New York, 615 F.3d 152, 158 (2d Cir. 2010).

^{121.} Katrina M. Wyman & Danielle Spiegel-Feld, *The Urban Environmental Renaissance*, 108 CALIF. L. REV. 305–77 (2020).

^{122.} Retro-commissioning essentially requires buildings to tune-up the existing HVAC systems. Retro-commissioning does not require owners to invest in new systems. N.Y.C., NY LOCAL LAW NO. 87 § 1 (2019) (adding §28-308.3 (retro-commissioning required)).

^{123.} N.Y.C., NY LOCAL LAW NO. 88 § 1 (2009) ("[M]ost large buildings have one master meter for electricity that measures building-wide usage, as opposed to separate meters that provide such information on a per tenant basis.").

^{124.} New York City Mayor's Office of Long-Term Planning and Sustainability, Overview of the Greener, Greater Buildings Plan (2014) http://www.nyc.gov/html/gbee/downloads/pdf/greener_greater_buildings_plan.pdf [https://perma.cc/L8JP-X5BH]; New York City Mayor's Office of Long-Term Planning and Sustainability, Greener, Greater Buildings Plan (2014), https://sallan.org/pdf-docs/Greener_Greater_workforce_and_financing.pdf [https://perma.cc/K3ZC-DBBN].

The GGBP was groundbreaking. At the time it was passed, the buildings that it covered accounted for 45% of energy usage in New York City.¹²⁵ Local Law 84 was also among the first benchmarking laws in the U.S. and the first to be implemented¹²⁶ (Austin, Texas and Washington, DC enacted benchmarking laws the year before LL84 was passed).¹²⁷ Together with Local Law 87, this benchmarking law created a vast repository of data on energy use and retrofit opportunities throughout the building stock that could educate the public and inform future emissions mandates.

But the GGBP was also modest. Apart from the requirements to tune up HVAC equipment and make lighting upgrades in non-residential buildings, none of the regulations actually obligated building owners to reduce energy consumption. Nor did the regulations create a direct financial incentive for owners to reduce their energy consumption. Instead, the laws' principal aim was to overcome information deficits among building owners regarding how inefficient their properties may be to incentivize voluntary cost-effective improvements.¹²⁸ As a testament to just how non-confrontational the GGBP regulations were, at a City Council hearing about the benchmarking bill, Russell Unger, who led the industry-connected Urban Green Council, stated that there was a "strong drive" for benchmarking in the industry.¹²⁹ "Buildings are already going this way,"¹³⁰ he explained.

It was far from accidental that the GGBP adopted such a nonconfrontational approach. Mayor Bloomberg would have preferred to impose legally binding obligations on building owners to implement measures to improve their energy efficiency, but he backed down in the face

^{125.} See New YORK CITY MAYOR'S OFFICE OF LONG-TERM PLANNING AND SUSTAINABILITY, OVERVIEW OF THE GREENER, GREATER BUILDINGS PLAN, *supra* note 124. As initially adopted, Local Law 84 applied to buildings with more than 50,000 square feet; it was subsequently amended to cover buildings with greater than 25,000 square feet as well.

^{126.} About Benchmarking in New York, URBAN GREEN, https://metered.urbangreencouncil.org/site/about [https://perma.cc/FR6A-6U7T] (last visited Aug. 14, 2023) ("In 2009, as part of a suit of energy efficiency laws called the Greener, Greater Buildings Plan, New York passed Local Law 84 (LL84) — one of the earliest benchmarking laws in the country and the first to be implemented.").

^{127.} See *infra* Table 1.

^{128.} N.Y.C. GLOBAL PARTNERS, BEST PRACTICE: NYC GREENER, GREATER BUILDINGS PLAN (2010),

https://www.nyc.gov/html/unccp/gprb/downloads/pdf/NYC_Environment_GreenBuildings. pdf [https://perma.cc/X55X-9EYR] ("Benchmarking provides the basis for empowering building owners to take steps towards minimizing energy use and maximizing the economic benefits of energy conservation.").

^{129.} Testimony of Russell Unger, Transcript of the Minutes of the Committee on Environmental Protection, New York City Council, at 59 (June 27, 2008).

^{130.} Id.

of opposition from real estate owners and an economic recession.¹³¹ Instead of taking on the industry, the city "join[ed] forces with the real estate industry" in its quest to make their buildings greener.¹³²

Although the cooperative approach was a second-best approach adopted in the face of the real estate industry's political clout, there was an economic rationale for thinking it might yield some improvements in energy efficiency. Contrary to other polluting industries like energy producers, real estate does not inherently benefit from intensive energy consumption and could actually benefit from lower energy costs by reducing its energy use. In any event, the mayor who had made a fortune in supplying data to the finance industry would be responsible for the collection of a large amount of data about building energy usage in New York City that would enable his successor to mandate building performance standards.

The GGBP had a catalytic effect, perhaps in part because Bloomberg Philanthropies helped to fund work to export ideas about improving building energy efficiency that the Bloomberg administration had developed in New York City.¹³³ As Table 1 below indicates, 13 of the 20 most populous cities, including New York City, adopted some sort of benchmarking law between 2009, when the GGBP was passed, and 2022. Combined, these laws covered billions of square feet.¹³⁴ Eight of these cities also adopted some sort of energy audit law in the years that followed as well or included an audit requirement as a component of their benchmarking law.¹³⁵

^{131.} See Mireya Navarro, Bloomberg Drops and Effort to Cut Building Energy Use, N.Y. TIMES (Dec. 4, 2009), https://www.nytimes.com/2009/12/05/science/earth/05bloomberg.html [https://perma.cc/52VV-DR2H]. Section 28-308.3 of Intro. 967 in 2009 would have required buildings to implement energy efficiency measures that would pay back in seven years or less. Intro 967 became Local Law 87, which requires audits, and minimal retro-commissioning. *Id.*

^{132.} Mayor Bloomberg's 2008 State of the City Address, N.Y. TIMES (Jan. 17, 2008), https://www.nytimes.com/2008/01/17/nyregion/17stateofnyc.html [https://perma.cc/ZN26-75Q9].

^{133.} See Mayors from 10 Major Cities Unite to Cut Climate Pollution from Buildings, NRDC (Jan. 29, 2014), https://www.nrdc.org/media/2014/140129-0 [https://perma.cc/J2YA-XJJP].

^{134.} Id.

^{135.} See *infra* Table 1.

City	Benchmarking Law ¹³⁶	Building Audit Law ¹³⁷
Austin	2008	2008
Charlotte	None ¹³⁸	None

Table 1: List of Benchmarking and Auditing Laws in the 20 Most Populous Cities in the United States, by Year First Adopted

136. See INST. FOR MKT. TRANSFORMATION, COMPARISON OF U.S. COMMERCIAL BLDG. ENERGY BENCHMARKING AND TRANSPARENCY POL'YS (2022), https://www.imt.org/wp-content/uploads/2022/06/IMT-Benchmarking-Matrix_July-2022.pdf

[https://perma.cc/4DDY-BYLB]; see also Energy Conservation Audit and Disclosure (ECAD) Ordinance, AUSTIN, TEX., CITY CODE §§ 6-7 (2008); Chicago Energy Use Benchmarking Ordinance, CHI., ILL. MUN. CODE ch.18-14 (2017); Energy and Water Benchmarking & Transparency Ordinance, COLUMBUS, OHIO, CODE OF ORDINANCES tit. 41 ch. 4117 (2020); Energize Denver Benchmarking Ordinance, DENVER, COLO., REV. MUN. CODE chs. 4, 10 (2016): Press Release. Mayor's Office of Resilience and Sustainability. Mayor Sylvester Turner Signs Sweeping Decarbonization Policy for City Buildings (Apr. 22, 2022); INDIANAPOLIS, IND., Ordinance No. 25, REV. CODE TIT. 3 ch. 710 (2021), https://media.graphassets.com/m86B23MS4unBIMk7TLc2 [https://perma.cc/NQ2Y-86K6]; Existing Buildings Energy and Water Efficiency Ordinance, L.A., CAL. MUN. CODE div. 97 §§ 91.9701–9712 (2016); N.Y.C., NY LOCAL LAW NO. 84, N.Y.C. ADMIN. CODE tit. 28 ch. 3 art. 309 (2009); N.Y.C., NY LOCAL LAW NO. 133, N.Y.C., ADMIN. CODE tit. 28 ch. 3 art. 309 (2016); Energy Benchmarking and Disclosure Law, PHILA., PA., CODE § 9-3402 (2012); Building Energy Benchmarking Ordinance, SAN DIEGO, CAL., MUN. CODE ch. 14 art. 12 div. 1 (2019); Existing Commercial Buildings Energy Performance Ordinance, S.F., CAL. ENV'T CODE ch. 20 §§ 2000–2009 (2011); Energy and Water Building Performance Ordinance, SAN JOSE, CAL. MUN. CODE tit. 17 ch. 17.85 §§ 200, 300, 410, 420, 510, 520, 540 (2018); Building Energy Benchmarking and Reporting Program, SEATTLE, WASH. MUN. CODE tit. 22 ch. 22.920 (2010).

137. See INST. FOR MKT. TRANSFORMATION, COMPARISON OF U.S. BUILDING AUDIT, TUNE-UPS, AND RETROCOMMISSIONING POLICIES (2021), https://www.imt.org/wp-content/uploads/2021/01/IMT-Comparison-of-Audit-TuneUp-RCx-Policies-January-

2021.pdf [https://perma.cc/YMG2-WAE8]; *see also* Energy Conservation Audit and Disclosure (ECAD) Ordinance, AUSTIN, TEX., CITY CODE §§ 6–7 (2008); Existing Buildings Energy and Water Efficiency Ordinance, L.A., CAL. MUN. CODE div. 97 §§ 91.9701–9712 (2016); N.Y.C., NY LOCAL LAW NO. 87, N.Y.C. ADMIN. CODE tit. 28 ch. 3 art. 308 (2009); Building Energy Performance Program, PHILA., PA., CODE § 9-3404 (2019); Building Energy Benchmarking Ordinance, SAN DIEGO, CAL., MUN. CODE ch. 14 art. 12 div. 1 (2019); Existing Commercial Buildings Energy Performance Ordinance, S.F., CAL. ENV'T CODE ch. 20 §2000 – 2009 (2011); Energy and Water Building Performance Ordinance, SAN JOSE, CAL. MUN. CODE tit. 17 ch. 17.85 §§ 200, 300, 410, 420, 510, 520, 540 (2018); Energy Audit Ordinance, SAN JOSE, CAL. MUN. CODE tit. 17 ch. 17.85 §§ 200, 300, 410, 420, 510, 520, 540 (2021); Seattle, Wash., Ordinance No. 125002, SEATTLE, WASH. MUN. CODE tit. 22 ch. 22.920 (2016).

138. Note that a voluntary benchmarking program was launched in 2023. *City of Charlotte Launches New Program to Cut Energy Use*, CITY OF CHARLOTTE (Apr. 20, 2023), https://www.charlottenc.gov/CS-Prep/City-News/City-of-Charlotte-Launches-New-Program-to-Cut-Energy-Use [https://perma.cc/75U6-FEK6].

2023] LOCAL ACTION, GLOBAL PROBLEM

City	Benchmarking Law ¹³⁶	Building Audit Law ¹³⁷
Chicago	2013	None
Columbus	2020	None ¹³⁹
Dallas	None	None
Denver	2016	None
Fort Worth	None ¹⁴⁰	None
Houston	2022	None
Indianapolis	2021	None
Jacksonville	None	None
Los Angeles	2016	2016
New York	2009	2009
Oklahoma City	None	None
Phoenix	2015 ¹⁴¹	None
Philadelphia	2012	2019
San Antonio	None ¹⁴²	None
San Diego	2019	2019

139. Home energy audits in Columbus appear to be voluntary only, as of 2020. *See* SUSTAINABLE COLUMBUS, 2020 ANNUAL REPORT (2020), https://www.columbus.gov/WorkArea/DownloadAsset.aspx?id=2147521859 [https://perma.cc/HUV6-MW2N].

140. The city's benchmarking program appears to be voluntary only. *See State and Local Building Efficiency Regulations & Policies: Texas*, AQUICORE, https://www.aquicore.com/blog/state-and-local-building-efficiency-regulations-policies-texas [https://perma.cc/4XLK-VVAT] (last visited Aug. 14, 2023).

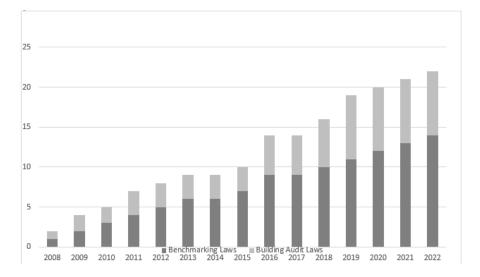
142. An ordinance is in development. *See* CITY OF SAN ANTONIO, PRIMER: SAN ANTONIO BENCHMARKING 2 (2020), https://www.sanantonio.gov/Portals/0/Files/Sustainability/EnergyBenchmarking/PrimerSAB enchmarking2020.pdf?ver=2020-11-19-105017-767 [https://perma.cc/RBJ3-LGF6].

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^{141.} Phoenix's law was blocked by Arizona. *See* Erin Stone, *From Hero to Zero: Arizona Was a Leader in Climate Policy 15 Years Ago. What Happened?*, AZ CENT. (June 11, 2021, 1:27 PM), https://www.azcentral.com/story/news/local/arizona-environment/2020/09/25/arizona-was-once-climate-policy-leader-in-west-what-happened/5841376002/ [https://perma.cc/XR49-WACN].

City	Benchmarking Law ¹³⁶	Building Audit Law ¹³⁷
San Francisco	2011	2011
San Jose	2018	2018
Seattle	2010	2016

Figure 2: Cumulative Number of Benchmarking and Auditing Laws in the 20 Most Populous Cities, by Year First Adopted¹⁴³



Important as these developments were, by the mid-2010s, it was evident to people following climate policy in New York City that the GGBP's light-touch approach was not going to get the city all the way to where it wanted to go. Building emissions fell 19% below 2005 levels between 2005 and 2014, but much of the decrease was attributed to reductions in the carbon intensity of electricity brought about by greater use of natural gas to generate electric power due to the fracking revolution and decline in the price of natural gas, rather than actions that building owners had taken.¹⁴⁴ Benchmarking itself was associated with more modest impacts; a 2016 City-funded study of properties that regularly submitted benchmarking between 2010 and 2015 found that such properties reduced their energy use by 10%

^{143.} Figure populated by Table 1 data.

^{144.} See City of New York Mayor's Office of Long-Term Planning and Sustainability, One City: Built to Last 6 (2014).

during the time period.¹⁴⁵ Another study that examined the effects of benchmarking laws in Austin, New York, San Francisco, and Seattle found that, on average, the benchmarking laws led to a 3% decline in utility expenditures between 2012 and 2013.¹⁴⁶ As for the energy audits that LL87 mandated, the only study to have systematically studied their impact found the audits to have modestly reduced energy use by between 2.5% and 4.9%, depending on the type of building.¹⁴⁷

Late in the Bloomberg administration, it started to contemplate more ambitious GHG reduction targets, as climate scientists underscored a need for deeper reductions and Hurricane Sandy decimated large parts of the city in 2012.¹⁴⁸ In fact, on December 31, 2013 — the very last day in which Bloomberg was in office — the Mayor's Office of Long-Term Planning and Sustainability published a report titled "New York City's Pathways to Deep Carbon Reductions," which suggested a 80 x 50 target (80% reduction below 2005 emissions by 2050) and laid out steps the city could take to reduce its emissions by this much.¹⁴⁹ To achieve the 80 x 50 goal, the city would have to adopt stricter, more politically complicated regulations than it had to date. Reviving a strategy that was laid to waste in the GGBP negotiations, the report mentioned mandatory building performance targets as an option for helping to achieve an 80% reduction in citywide GHG emissions by 2050.¹⁵⁰

Notably, New York City was far from the only city to have achieved lackluster results from its early climate policies; a Brookings Institute study from 2020 that surveyed the climate action plans for the 100 most populous

^{145.} See City of New York, Urban Green Council, New York City's Energy and Water Use 2014 and 2015 Report 5 (2017).

^{146.} See Karen Palmer & Margaret Walls, *Does Information Provision Shrink the Energy Efficiency Gap? A Cross-City Comparison of Commercial Building Benchmarking and Disclosure Laws* 27 (Res. For Future, Discussion Paper RFF DP 15-12, 2015).

^{147.} See Constantine E. Kontokosta, Danielle Spiegel-Feld & Sokratis Papadopoulos, *The Impact of Mandatory Energy Audits on Building Energy Use*, 5 NATURE ENERGY 309, 310 (2020).

^{148.} See CITY OF NEW YORK, MAYOR'S OFFICE, NEW YORK CITY'S PATHWAYS TO DEEP CARBON REDUCTIONS 126 (2013), https://s-media.nyc.gov/agencies/planyc2030/pdf/nyc_pathways.pdf [https://perma.cc/N4FA-X3RJ] (stating the rationale for the target was to limit the rise in temperature and "prevent 'dangerous anthropogenic interference' with the climate system," and also referring to the potential to both decarbonize and improve resiliency against storms like Sandy).

^{149.} See Daniel Aldana Cohen, New York City as "Fortress of Solitude" after Hurricane Sandy: A Relationship Sociology of Extreme Weather's Relationship to Climate Politics, 29 ENVT'L POL. 1, 11 (2020).

¹⁵⁰ See id. ("Without fanfare, on the last day of Bloomberg's administration (31 December 2013), the Mayor's Office of Long-Term Planning and Sustainability uploaded a report titled 'New York City's Pathways to Deep Carbon Reductions.' It outlined an 80% cut in GHG emissions by 2050, a significant acceleration of the original PlaNYC's target, largely through increased building retrofits." (citing CITY OF NEW YORK, NEW YORK CITY'S PATHWAYS TO DEEP CARBON REDUCTIONS 46 (2013))).

U.S. cities found that roughly two-thirds of those cities were lagging behind their emissions targets.¹⁵¹ President Trump's election provided the political context that enabled local leaders in New York and several other cities to pledge stronger action. With an avowed climate skeptic¹⁵² in the White House, the protest politics that were somewhat muted while Obama was in power came back in full force.

C. Mandates

On June 1, 2017, news broke that President Trump had formally decided to withdraw the United States from the Paris Agreement on Climate Change.¹⁵³ The news angered climate activists who had hoped that some of the more progressive members of Trump's inner circle might prevail upon him to uphold the agreement.¹⁵⁴ New York City's Mayor Bill de Blasio channeled this disappointment in a speech delivered the same day. "This is a dagger aimed straight at the heart of New York City," de Blasio declared.¹⁵⁵ He went on to explain that Trump's decision had amplified the need for local actions:

^{151.} See Sam Markolf et al., Brookings, Pledges and Progress: Steps toward Greenhouse Gas Emission Reductions in the 100 Largest Cities across the United States (2020), https://www.brookings.edu/research/pledges-and-progress-steps-toward-greenhouse-gas-emissions-reductions-in-the-100-largest-cities-across-the-united-states/ [https://perma.cc/7QZG-6VKW].

^{152.} See Clare Foran, Donald Trump and the Triumph of Climate-Change Denial, THE ATLANTIC (Dec. 25, 2016), https://www.theatlantic.com/politics/archive/2016/12/donald-trump-climate-change-skeptic-denial/510359/ [https://perma.cc/7Y4H-6LRR] (stating that Trump "has called global warming a 'hoax,' insisted while campaigning for the Republican nomination that he's 'not a big believer in man-made climate change,' and recently suggested that 'nobody really knows' if climate change exists"); see also Dylan Matthews, Donald Trump Has Tweeted Climate Change Skepticism 115 Times. Here's All of It, Vox (June 1, 2017, 5:00 PM), https://www.vox.com/policy-and-politics/2017/6/1/15726472/trump-tweets-global-warming-paris-climate-agreement [https://perma.cc/T82C-EJQH].

^{153.} *See* Press Release, White House, President Trump Announces U.S. Withdrawal from the Paris Climate Accord (June 1, 2017), https://trumpwhitehouse.archives.gov/articles/president-trump-announces-u-s-withdrawal-paris-climate-accord/ [https://perma.cc/DRY6-B6TP].

^{154.} Robbie Gramer & Dan de Luce, *In Closed-Door Climate Showdown, It's Jared and Ivanka vs. Bannon and Pruitt*, FOREIGN POL'Y (May 8, 2017, 4:21 PM), https://foreignpolicy.com/2017/05/08/in-closed-door-climate-showdown-its-jared-and-ivanka-vs-bannon-and-pruitt-climate-change-trump-paris-agreement/

[[]https://perma.cc/M8EX-NC3T0] (noting the debate among members of Trump's inner circle regarding a U.S. withdrawal from the Paris Agreement, and noting that, "[u]ntil a couple of weeks ago, supporters of the climate agreement were cautiously optimistic the administration would opt to stay in the accord").

^{155.} See Bill de Blasio, Mayor of New York City, *Transcript: Mayor de Blasio Delivers Remarks on NYC Ferry's New South Brooklyn Route* (May 31, 2017), in N.Y.C. OFF. OF THE MAYOR.

We in New York City are going to have to take matters into our own hands. And by the way, that's what cities all over the country and all over the world are going to do. That's what states and provinces are doing. It shouldn't be this way, but it's what is necessary. We have to take matters into our own hands when it comes to climate change.

We plan, later this week, to sign an executive order maintaining New York City's commitment to the Paris Agreement. We will partner with cities big and small around the country to support them in doing the same. It's obvious that when our federal government fails us, local governments have to step up.¹⁵⁶

History was repeating itself. Just as Seattle and other cities had pledged to reduce their emissions to align with the Kyoto Protocol's targets after Bush withdrew from the agreement,¹⁵⁷ New York, Chicago, Dallas, and hundreds of other cities were pledging to reduce their own emissions to align with the Paris targets in an effort partly organized this time by Bloomberg Philanthropies.¹⁵⁸ Once again, cities were promising to take up climate change in protest against federal backsliding.

But there were also some important differences this time around. With the climate crisis intensifying — 2017 was the hottest summer New York City had ever recorded to that date¹⁵⁹ — scores of available data on energy usage throughout the city's buildings, the memory of 2012's Hurricane Sandy still plainly in view, and a deeply unpopular president who for many personified the excesses of the real estate industry, the stars were finally aligned for New York City to impose stricter climate regulations to curtail building emissions.

In September 2017, two months before he was handily re-elected to a second term, Mayor Bill de Blasio sketched the centerpiece of a more aggressive climate strategy: New York City would set a cap on the amount of fossil fuels that large buildings could use each year and fine buildings that exceeded their caps.¹⁶⁰ The caps would apply to buildings with more than

^{156.} Id.

^{157.} See Hiskes, supra note 101.

^{158.} See America Is All In, BLOOMBERG PHILANTHROPIES, https://www.bloomberg.org/environment/supporting-sustainable-cities/america-is-all-in/ [https://perma.cc/WCW6-XT9M] (last visited Aug. 7, 2023).

^{159.} See Hottest Summer Ever for New York City, DAILY BEAST (Apr. 24, 2017, 5:50 PM), https://www.thedailybeast.com/cheats/2010/09/01/hottest-summer-ever-for-new-york-city [https://perma.cc/D5F4-HUC4].

^{160.} See William Neuman, De Blasio Vows to Cut Emissions in New York's Larger Buildings, N.Y. TIMES (Sept. 14, 2017), https://www.nytimes.com/2017/09/14/nyregion/deblasio-mayor-environment-buildings-emissions.html?mcubz=3 [https://perma.cc/JQP6-V56P]; see Samar Kurshid, Mapping the Mayoral: Where de Blasio and Malliotakis Each Did Well, GOTHAM GAZETTE, (Nov. 10, 2017), https://www.gothamgazette.com/city/7313-

25,000 square feet, thus capturing tens of thousands of buildings.¹⁶¹ The mayor offered few details about the plan at that time. But he made clear that the fines could be substantial, up to millions of dollars per year. "We gave people a very fair amount of time for the private sector to come forward and really agree to voluntary goals that will be sufficient,"¹⁶² de Blasio said. "It [is] time to move to mandates."¹⁶³ Eighteen months later, the city council passed a bill known as Local Law 97 of 2019 (LL97) that wrote the envisioned mandate into law. The bill passed by a vote of 45–2, with only two nos from the Republican-tending borough of Staten Island.¹⁶⁴

As indicated above, the idea of mandating that buildings meet certain performance standards was far from new;¹⁶⁵ Bloomberg officials wanted to require certain efficiency improvements as part of the GGBP and revived the idea in their waning days in office.¹⁶⁶ In a sense, the de Blasio administration was just picking up where Bloomberg left off. While in other policy areas

[https://perma.cc/9H58-RR9S].

mapping-the-mayoral-where-de-blasio-and-malliotakis-each-did-well [https://perma.cc/V939-ZQ82].

^{161.} Portions of the following text draw from Spiegel-Feld et al., supra note 116.

^{162.} Press Release, New York City Press Office, *Mayor de Blasio: NYC Will Be First City to Mandate That Existing Buildings Dramatically Cut Greenhouse Gas Emissions* (Sept. 14, 2017), https://www.nyc.gov/office-of-the-mayor/news/587-17/mayor-de-blasio-nyc-will-be-first-city-mandate-existing-buildings-dramatically-cut#/0 [https://perma.cc/DFK2-WVNH]. Later in the fall, Council member Costa Constantinides introduced Intro 1745, which established mandatory targets for buildings. *See* Stas Zakrzewski, *NYC Climate Mobilization Act: A Brief History*, PASSIVE HOUSE ACCELERATOR (Feb. 4, 2020), https://passivehouseaccelerator.com/articles/nyc-climate-mobilization-act-a-brief-history [https://perma.cc/C46H-52J7].

^{163.} Transcript: Mayor de Blasio Announces NYC Will Be First City to Mandate that Existing Buildings Dramatically Cut Greenhouse Gas Emissions, N.Y.C. OFF. MAYOR (Sept. 14, 2017), https://www.nyc.gov/office-of-the-mayor/news/589-17/transcript-mayor-deblasio-nyc-will-be-first-city-mandate-existing-buildings [https://perma.cc/4Z8Q-ZC6K]; Zakrzewski, supra note 162 (noting there were no members of the City Council standing with de Blasio when he made his announcement, and the chair of the council's environmental protection committee, Costa Constantinides, who ultimately oversaw the complex process of drafting of the law mandating building emissions reductions, was reported in the New York Times as "taken aback" that the mayor had come out so soon for mandates before a bill had been drafted); see also William Neuman, Big Buildings Hurt the Climate. New York City Hopes to Change That. N.Y. TIMES (Apr. 17. 2019). https://www.nytimes.com/2019/04/17/nyregion/nyc-energy-laws.html

^{164.} Transcript of the Minutes of the City Council Meeting, New York City Council 1503 (Apr. 18, 2019).

^{165.} The following paragraphs expand on material previously published in a condensed form in Katrina Wyman, *Building Efficiency*, 40 ENVT'L F. 24 (2023).

^{166.} See N.Y.C., N.Y., Intro. 967 s.1 (2009) (draft bill requiring buildings to implement energy efficiency measures that would pay back in seven years or less); see Navarro, supra note 131 (reporting that Bloomberg had wanted mandatory targets). On the idea that administration officials revived the ideas of mandates in the waning days of the administration, see Cohen, supra note 149, at 11.

de Blasio distanced himself from Bloomberg, who de Blasio portrayed as a Manhattan-centered elitist, on climate, the new administration drew heavily upon its predecessor's work.¹⁶⁷ As a case in point, the de Blasio administration's very first sustainability report, *One City Built to Last*, issued in 2014, formally adopted the 80 x 50 goal that Bloomberg officials had floated earlier and signaled that building mandates might be necessary to achieve the goal.¹⁶⁸ The continuity in climate policy was facilitated by a continuity in policy- and law-makers between the two administrations. Council member Costa Constantinides, the chair of the council's environmental protection committee starting in 2015 — who spearheaded the drafting of Local Law 97 — had worked as a staffer for the chair of the committee he was now heading in 2009 when the Bloomberg era building laws were adopted and mandates were considered but dropped.¹⁶⁹ Inside the mayoral offices working on climate change, Dan Zarrilli and John Lee were both key figures in the Bloomberg administration and stayed on well into the

^{167.} See Michael Barbaro, Seeking to Succeed Bloomberg, While Keeping Him at a Distance, N.Y. TIMES (Sept. 4, 2013), https://www.nytimes.com/2013/09/05/nyregion/seeking-to-succeed-bloomberg-while-keeping-him-at-a-distance.html [https://perma.cc/8NJR-DBTN].

^{168.} See ONE CITY: BUILT TO LAST, *supra* note 144, at 10; *see also* Matt Flegenheimer, *De Blasio Orders a Greener City, Setting Goals for Energy Efficiency of Buildings*, N.Y. TIMES (Sept. 20, 2014), https://www.nytimes.com/2014/09/21/nyregion/new-york-city-plans-major-energy-efficiency-improvements-in-its-

buildings.html?action=click&module=RelatedCoverage&pgtype=Article®ion=Footer [https://perma.cc/X3V6-6ZYE]. In December 2014, the NYC council passed legislation increasing the goal for reducing citywide emissions from 30% by 2030, to an 80% reduction by 2050. Intro 78-2014 (Local Law 66). *See* ONE CITY: BUILT TO LAST, *supra* note 144, at 9–10.

^{169.} See Costa Constantinides, LINKEDIN, https://www.linkedin.com/in/costaconstantinides-abbb554 [https://perma.cc/YJR7-LWVK] (last visited Sept. 10, 2023) (identifying Constantinides as Deputy Chief of Staff to Councilmember James Gennaro from December 2007 to December 2013). Councilmember James F. Gennaro was chair of the City Council's Environmental Protection Committee from January 2002 to December 2013. See James F. Gennaro, LINKEDIN, https://www.linkedin.com/in/james-f-gennaro-70ba4461 [https://perma.cc/A4US-VTNS] (last visited Sept. 10, 2023). Local Law 87, which required retro-commissioning but not building retrofits, was passed in 2009, while Gennaro was chair and Constantinides was his deputy chief of staff. See Navarro, supra note 131; Testimony of Brad Lander, Council Member, Transcript of the Minutes of the Committee on Environmental Protection, New York City Council 41 (Dec. 4, 2018) (describing the history of how the proposal for mandatory retrofits was dropped in 2009). Constantinides had personal reasons for working hard to pass a law to remove fossil fuels from buildings. Removing them would not only reduce GHG emissions and help the climate, but also reduce local air pollution and therefore prevent more children from getting asthma, which afflicted his own son. See Costa Constantinides, From Asthma Alley to Renewable Row: Transform This Stretch of Queens, N.Y. DAILY NEWS (Jan. 16, 2022, 5:00 AM), https://www.nydailynews.com/opinion/nyoped-20220116-ucjx47uc7felbl2wfwxbwzw2fq-story.html [https://perma.cc/3MYN-4QCQ].

de Blasio era.¹⁷⁰ So why were city policymakers and legislators more successful in pushing through mandates in 2019 than their predecessors in the Bloomberg era? Part of the answer, we think, is political activity by community-based interest groups in New York City.¹⁷¹

A number of key political developments, both inside and outside of New York City, laid the groundwork for performance mandates to finally pass in 2019. For starters, One City Built to Last was published on the very same day in September of 2014 as the People's Climate March, which brought 300,000 climate activists pouring into New York City streets.¹⁷² The People's Climate March, which occurred ahead of a UN climate summit in New York,¹⁷³ was hailed as the "biggest ever call to action on climate change."¹⁷⁴ After the march, pressure from grassroots interest groups in the city for GHG mandates began to coalesce.¹⁷⁵ A turning point in this regard came in 2015 when ALIGN, an alliance of labor and community groups, formed the Climate Works for All coalition and issued a report calling for mandatory "energy use performance targets" for buildings.¹⁷⁶ The Alliance saw mandatory targets for buildings as a way of addressing climate change while also creating jobs in the city.¹⁷⁷ To them, mandatory building targets were not only a climate policy, but also an economic and social policy that would benefit low-income New Yorkers and people of color.¹⁷⁸ Retrofitting buildings would increase demand for labor, and more efficient buildings would reduce utility costs for their inhabitants. It was the perfect alignment

^{170.} See John Lee, LINKEDIN, https://www.linkedin.com/in/john-lee-87771636/ [https://perma.cc/J5LK-24FU] (last visited Aug. 20, 2023); see Dan Zarrilli, LINKEDIN, https://www.linkedin.com/in/danielzarrilli/ [https://perma.cc/3ZXU-83NU] (last visited July 30, 2023).

^{171.} See generally ANZIA, supra note 41 (analyzing the impact of interest groups on local governments); see also Kent E. Portney & Jeffrey M. Berry, *The Impact of Local Environmental Advocacy Groups on City Sustainability Policies and Programs*, 44 POL'Y STUD. J. 196, 201 (2016) (finding that environmental advocacy groups have influenced city commitments to sustainability).

^{172.} Melissa Davey et al., *People's Climate March: Thousands Demand Action Around the World*, THE GUARDIAN (Sept. 21, 2014),

https://www.theguardian.com/environment/live/2014/sep/21/peoples-climate-march-live [https://perma.cc/63SN-W9TJ]; *see also generally* ONE CITY: BUILT TO LAST, *supra* note 144 (announcing publication of One City Built to Last, which established the 80 x 50 goal, on September 21, 2014).

^{173.} Davey, et al., supra note 172.

^{174.} ONE CITY: BUILT TO LAST, *supra* note 144, at 1017.

^{175.} See Cohen, supra note 149, at 14 ("The massive September 21st, 2014 People's Climate March set the developments [towards LL97] in motion.").

^{176.} Climate Works for All, supra note 49, at 10.

^{177.} Id. at 9.

^{178.} See id. at 4, 26.

of their members' climate and economic interests.¹⁷⁹ Sensing the growing momentum behind mandates, mayoral staff deployed the experts to flesh out an operational approach for reducing emissions from buildings. In 2015–2016, the mayor's office of sustainability created a "technical working group" that included representatives from the real estate industry, building engineers, and other experts, to establish bespoke data about the opportunities for efficiently reducing building emissions in New York City.¹⁸⁰

Trump's election in late 2016 and his withdrawal from the Paris Agreement greased the wheels further.¹⁸¹ After Trump announced that the U.S. would withdraw from the Paris Agreement, progressive Council Member Jumaane Williams proclaimed that mandatory energy efficiency standards for buildings were "one of the immediate ways New York City can really lead" on reducing GHG emissions "and truly resist."¹⁸² Activists at ALIGN used the Trump family's real estate holdings in New York City as a reason to mandate building energy improvements, warning that "[w]ithout requiring significant energy use reductions at Trump Tower, Trump International Hotel, Kushner's 666 Fifth Avenue office tower, and others, the city will not be able to meet its ambitious 80 x 50 goal."¹⁸³

In short, by mid-2017, political momentum was moving quickly in the direction of mandates. However, there were still disagreements between various interest groups over the details that needed to be worked out. ALIGN, for its part, praised de Blasio's coming out for building performance mandates but wanted to make sure that any such mandate would count emissions from electricity used in buildings, not just fossil fuels burned on-site.¹⁸⁴ They also insisted that tenants in rent regulated buildings would not

^{179.} See id. at 11.

^{180.} David Giambusso, *Trump's Paris Withdrawal Sparks New Push for Energy Mandates in Buildings*, POLITICO (June 19, 2017), https://alignny.org/press/trumps-paris-withdrawal-sparks-new-push-for-energy-mandates-in-buildings/ [https://perma.cc/VL5Y-MZ2E]; *see also* ONE CITY BUILT TO LAST: TECHNICAL WORKING GROUP REPORT: TRANSFORMING NEW YORK BUILDINGS FOR A LOW CARBON FUTURE (2016), https://www.nyc.gov/assets/sustainability/downloads/pdf/publications/TWGreport_0421201 6.pdf [https://perma.cc/WV6S-F969] (last visited July 30, 2023).

^{181.} See Giambusso, supra note 180; see also City Council Members Call on de Blasio to Implement Stronger Energy Efficiency Standards, CITY & STATE N.Y. (June 8, 2017), https://www.cityandstateny.com/politics/2017/06/city-council-members-call-on-de-blasioto-implement-stronger-energy-efficiency-standards/180549/ [https://perma.cc/RE4D-LMWC].

^{182.} City Council Members Call on de Blasio to Implement Stronger Energy Efficiency Standards, supra note 181.

^{183.} *The Trump Family's Dirty Buildings: A Major Climate Threat to NYC*, ALIGN, at 4 (Mar. 2017), https://alignny.org/wp-content/uploads/2017/04/Trumps-Dirty-Buildings-Report.pdf [https://perma.cc/J8H5-W495].

^{184.} Id. at 2, 16.

face any rent increases as a result of the mandates; such rent hikes could harm low-income tenants.¹⁸⁵ Meanwhile, the Urban Green Council, a nonprofit with connections to sustainably-minded real estate owners that promotes building energy efficiency, produced a "consensus" report in August 2018 including building owners and climate activists that recommended that large buildings collectively be required to improve their energy efficiency by 20% by 2030 with additional improvements to follow.¹⁸⁶

As 2018 wore on, progressive Democrats scored eye-popping victories in Democratic Party politics in the New York area. In June 2018, insurgent progressive Alexandria Ocasio-Cortez unexpectedly defeated long-time Democratic incumbent Joe Crowley in the Democratic primary for a federal House seat covering the Bronx and Queens;¹⁸⁷ after she won, Ocasio-Cortez urged Speaker Nancy Pelosi to introduce a resolution calling for a Green New Deal to decarbonize the country.¹⁸⁸ In September primaries for state offices, progressives defeated six moderate Democratic state senators who had caucused with Republicans¹⁸⁹ and in the November election, the Democrats took control of the New York State senate for "the first time in a decade" after campaigning against Trump.¹⁹⁰ Climate activists in New York

^{185.} See Press Release, Mayor de Blasio: NYC Will Be First City to Mandate that Existing Buildings Dramatically Cut Greenhouse Gas Emissions, ALIGN (Sept. 14, 2017), https://alignny.org/press/leading-advocate-for-greater-energy-efficiency-at-new-york-citys-large-buildingsresponds-to-mayor-de-blasios-announcement-today/ [https://perma.cc/7TNN-CNXQ]; see also The Only Way to Meet NYC's Climate Targets: A Whole Building Approach to Emissions, ALIGN (Oct. 30, 2017), https://alignny.org/resource/9748/ [https://perma.cc/YDF7-AL3G].

^{186.} See URBAN GREEN COUNCIL, BLUEPRINT FOR EFFICIENCY: AN 80 x 50 BUILDINGS PARTNERSHIP REPORT 10 (2018), https://www.urbangreencouncil.org/content/projects/blueprint-efficiency-80x50-buildingspartnership-report [https://perma.cc/WK98-FW29]; Who We Are, URBAN GREEN, https://www.urbangreencouncil.org/who-we-are/ [https://perma.cc/6E7U-QEZ5] (last visited July 30, 2023).

^{187.} See Shane Goldmacher & Jonathan Martin, Alexandria Ocasio-Cortez Defeats Joseph Crowley in Major Democratic House Upset, N.Y. TIMES (June 26, 2018), https://www.nytimes.com/2018/06/26/nyregion/joseph-crowley-ocasio-cortez-democratic-primary.html [https://perma.cc/9TP7-PZCT].

^{188.} See David Roberts, Alexandria Ocasio-Cortez is Already Pressuring Nancy Pelosi on Climate Change, Vox (Nov. 15, 2018), https://www.vox.com/energy-and-environment/2018/11/14/18094452/alexandria-ocasio-cortez-nancy-pelosi-protest-climate-change-2020 [https://perma.cc/A533-DT62].

^{189.} See Jen Kirby, The Primary Defeat of New York's "Independent Democrats," Explained, Vox (Sept. 14, 2018), https://www.vox.com/policy-and-politics/2018/9/14/17859200/idc-new-york-primaries-democrats-biaggi-klein [https://perma.cc/MXR3-PB4H].

^{190.} Vivian Wang, *Democrats Take Control of New York Senate for First Time in Decade*, N.Y. TIMES (Nov. 7, 2018), https://www.nytimes.com/2018/11/07/nyregion/democrat-ny-senate.html [https://perma.cc/N86C-52GJ].

City emphasized the connection between building mandates and standing up to Trump, linking their goal with the broader wave of popular progressive politics. Testifying at a December 2018 City Council Environmental Protection Committee hearing on the proposed legislation, grassroots organizer Pete Sikora said that "[w]ith Trump in office, this legislation rises to the challenge of the climate crisis where the federal government is destroying the progress the world needs at the exact moment when there's no time left."¹⁹¹ "The world will be watching this bill," he continued. "It will be a model for bold action worldwide it truly is a green new deal for New York City."¹⁹²

Sikora had spent the prior two years working on climate change at New York Communities for Change, an ideologically progressive multiracial community group in New York City that works on a range of issues, including housing, racial justice, and immigration, that are often more tangible to people than climate.¹⁹³ A community organizer who went to Cornell and has an MBA from New York University, Sikora started his career with New York Public Interest Research Group (an activist group built up in the 1970s by one of the original "Nader Raiders"),¹⁹⁴ and worked for the Communications Workers of America as a labor organizer for over nine years before he joined New York Communities for Change.¹⁹⁵ Sikora's

195. Pete Sikora, LINKEDIN, https://www.linkedin.com/in/pete-sikora-6b88851/ [https://perma.cc/MCB2-D9RM] (last visited Sept. 10, 2023); Pete Sikora Talks About His Campaign for the 52nd AD Seat, BROOKLYN HEIGHTS BLOG (Aug. 28, 2014), http://brooklynheightsblog.com/archives/69718 [https://perma.cc/X99H-RRTH].

Sikora had supported requiring buildings to invest in energy efficiency for several years. In 2014, Sikora ran unsuccessfully in the Democratic primary for a seat representing Brooklyn in the New York State assembly. *See* Will Brunelle & Josefa Velasquez, *Simon Defeats Sikora for Brooklyn Assembly Seat*, POLITICO (Sept. 9, 2014), https://www.politico.com/states/new-york/albany/story/2016/05/simon-defeats-sikora-for-brooklyn-assembly-seat-049230,

[https://perma.cc/232P-ATXV]. In campaigning, he stated that one of his goals was to get the state to pass a law requiring buildings to invest in increasing their energy efficiency as Bloomberg had backed away from doing in New York City. *See Pete Sikora Talks About His Campaign for the 52nd AD Seat, supra*; Will Bredderman, *WFP Will Back Pete Sikora Over Jo Anne Simon in Race for Joan Millman Seat*, OBSERVER (June 12, 2014), https://observer.com/2014/06/wfp-will-back-pete-sikora-over-jo-anne-simon-in-race-for-joan-millman-seat/ [https://perma.cc/KHR8-WSGA].

^{191.} Testimony of Pete Sikora, Transcript of the Minutes of the Committee on Environmental Protection, New York City Council (Dec. 4, 2018).

^{192.} Id.

^{193.} See generally About NYCC, N.Y. CMTY'S. FOR CHANGE, https://www.nycommunities.org/about [https://perma.cc/C5KU-4F82] (last visited July 30, 2023).

^{194.} See Douglas H. Phelps, *Donald Ross*, 1943–2022, PIRG (May 15, 2022), https://pirg.org/articles/donald-ross-1943-2022/ [https://perma.cc/7LLY-GMQG]. On Nader's role in encouraging the establishment of Public Interest Research Groups on college campuses, see SABIN, *supra* note 42, at 88.

climate work seems to be premised on the theory that in a deep blue city in a blue state such as New York City, where a majority of the residents are members of racial and ethnic minorities,¹⁹⁶ a multiracial coalition comprised of people of color and white progressives that targets key decision-makers can persuade the city government to adopt climate policy even if the coalition has a relatively small number of active members at any given time.¹⁹⁷ Sikora recognizes that activists like him can exert such power because local Democratic politicians in early 21st century New York paid attention to groups that can credibly claim to influence the outcomes in the low-turnout Democratic primaries that largely determine who wins political office in the city.¹⁹⁸ Under Sikora's theory of social change, local climate laws emerge from local interest groups wielding — or threatening to wield — influence in Democratic primaries, not the Democratic leanings of the majority of the city's voters, most of whom rarely vote in Democratic primaries or local general elections.¹⁹⁹

197. See Sikora, supra note 196 and accompanying text.

198. See id. On his history of the successful campaign to persuade the New York City Council to ban natural gas connections in new buildings, Sikora states: "The campaign combined activists from communities of color with predominantly white progressive climate activists. In a politically 'blue' place, that combination packs a real punch: it's an electoral coalition that can dominate a Democratic party primary. In blue places, most legislators and mayors are politically vulnerable only in primaries." *Id*.

199. See, e.g., Rachel Holliday Smith, *Turnout in NYC's Primary Was Tragically Low* — Again. Here are 6 Experts' Ideas on How to Fix That, THE CITY (Aug. 24, 2022), https://www.thecity.nyc/2022/8/24/23320921/turnout-new-york-primary-low-voting-rights [https://perma.cc/TU2B-NK45] (noting that New York was "a city with years of notoriously low voting rates under its belt"); In NYC's 2021 Election, Voter Turnout was Low, But Democrat's Spirit Was High, THE TABLET (Nov. 4, 2021), https://thetablet.org/new-york-city-2021-election-low-voter-turnout/ [https://perma.cc/WS5Q-JKDD] ("The news analysis concluded that the voter participation rate in 2021 was 'in line with the previous abysmal turnouts posted in every mayoral election since 2005."); Frederick P. Schaffer, Low Voter Turnout in NYC Elections is a Problem, and It Can Be Solved, GOTHAM GAZETTE (Jan. 12, 2022), https://www.gothamgazette.com/130-opinion/11004-low-voter-turnout-nyc-elections-problem-can-solve [https://perma.cc/D5XY-9X3V].

Sikora's theory that interest groups can prompt the adoption of local environmental policy is consistent with the findings of academics that interest groups influence local policy under

^{196.} See Pete Sikora (@PeteSikora1), TWITTER (Feb. 10, 2022, 12:17 PM), https://twitter.com/PeteSikora1/status/1491823692531351553 [https://perma.cc/V228-DW9W] including Pete Sikora, How #GasFreeNYC Won a Gas Ban in New York City, https://twitter.com/PeteSikora1/status/1491823692531351553 [https://perma.cc/T2CU-U55H] ("We flipped the usual script, where climate action can be perceived as wellintentioned, but also out of touch or even elitist. We made this fight more compelling through a multi-racial, justice-oriented coalition led by groups based in working class Black/Latino communities. We highlighted that a gas ban would create jobs and cut air pollution, especially in low-income communities of color."). On the demographics of New York City, see Quick Facts New York City, U.S. CENSUS BUREAU, https://www.census.gov/quickfacts/newyorkcitynewyork [https://perma.cc/46RG-ZK23] (last visited July 30, 2023).

The Climate Works for All coalition that advocated for building performance mandates embodied the multiracial model in which Sikora believes; it included ALIGN, New York Communities for Change, District Council 37, the largest public sector union in the city, WE ACT for Environmental Justice and the New York City Environmental Justice Alliance, among others.²⁰⁰ The coalition's ability to credibly assert that representatives of low-income communities, people of color, *and* a prominent local union supported the bill likely signaled to some Council Members that it was safe to support it.

The mainstream environmental advocacy groups like NRDC and the League of Conservation Voters were not part of the Climate Works for All coalition. While supportive of the bill's goals, some of these more well-established groups had different visions for what the mandates should look like. They also seemed to espouse a different theory of change than Sikora and his allies, continuing to believe that collaboration with industry players was key. As a case in point, at a 2018 hearing of the City Council Committee on Environmental Protection on a draft of the legislation to establish the mandates, NRDC testified jointly with the Real Estate Board of New York (REBNY), the main group representing building owners targeted by the

certain conditions. *See* ANZIA, *supra* note 41. For a study finding that environmental advocacy groups have influenced city commitments to sustainability, see generally Portney & Berry, *supra* note 171.

^{200.} See e.g., Climate Works for All, supra note 49 (identifying as authors ALIGN, New York City Environmental Justice Alliance, New York City Central Labor Council, BlueGreen Alliance, American Federation of Labor and the Congress of Industrial Organizations); Testimony of New York Communities for Change, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018) (identifying New York Communities for Change as a member of the Climate Works for All coalition); Testimony of N.Y.C. Environmental Justice Alliance, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018) (identifying the Alliance as a co-founder of "the Climate Works for All coalition with Align and the New York City Labor Congress"); Testimony Jon Forster, Co-Chair, DC37 Climate Justice Committee, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018) (supporting 1253, stating: "We have been working with CW4A Coalition on this Legislation for 3 years."); Testimony of Aditi Varshneya on Intro 1253, Community organizer at WE ACT for Environmental Justice, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018) (identifying WE ACT as a member of the coalition); see generally NY WORKING FAMILIES. ALIGN-NY & NYCC, CLIMATE WORKS FOR ALL, CONSTRUCTING A GREENER NEW YORK, BUILDING BY BUILDING

https://www.nyclimateworks.org/_files/ugd/f10969_53e457d2f3fd46d588fc226fe6b244b2.p df [https://perma.cc/MMM6-FJS]; *About Us*, DISTRICT COUNCIL 37, https://www.dc37.net/about/whoweare/ [https://perma.cc/F76G-VVPR] (last visited Aug. 1, 2023) ("DC 37 is New York City's largest public employee union.").

proposed law.²⁰¹ The largest private sector union in the city, Service Employees International Union Local 32BJ, which represents building employees such as doorpersons who often work for REBNY members, also testified alongside REBNY and NRDC.²⁰² NRDC's testimony with REBNY may have reflected a pragmatic desire to craft a policy that industry could effectively implement, while also advancing the goal that NRDC shared of equitably decarbonizing buildings.²⁰³ During the Bloomberg era, collaborating with industry might have seemed like a strategy for success.

REBNY may also have made it relatively palatable for NRDC to collaborate with them this time around because they did not outright oppose the bill or try to strike down the bill in its entirety (at least not publicly).²⁰⁴ Instead, they took aim at specific aspects of the draft bill. REBNY was particularly against the idea of exempting all rent-regulated buildings from the performance mandates,²⁰⁵ which was a key demand of members of the

^{201.} *See generally* Transcript of the Minutes of the Committee on Environmental Protection, New York City Council (Dec. 4, 2018) (referring to joint testimony of REBNY, NRDC, and 32BJ).

^{202.} See id. On 32BJ's approach to Local Law 97, see Noah Berman, Powerful Head of Building Workers Union Takes on Critics, Explains Positions, GOTHAM GAZETTE (June 13, 2019), https://www.gothamgazette.com/state/8594-powerful-figueroa-building-workers-union-32bj-takes-on-critics [https://perma.cc/A89E-VGX2].

It is not unusual for unions to align with their employers in debates about environmental regulation; costly regulations could affect the bottom lines of employers and their employees. For example, in a 1970 book, Esposito and Silverman maintained that coal companies and the United Mine Workers of America funded the same lobby group to oppose environmental regulation. LARRY G. ESPOSITO & JOHN C. SILVERMAN, RALPH NADER'S STUDY GROUP REPORT ON AIR POLLUTION – VANISHING AIR 279 (1970). Esposito & Silverman's book was the report of Ralph Nader Task Force on air pollution; Nader was highly critical of the United Mine Workers of America as corrupt, too close to coal mine operators, and not working to protect coal miners. SABIN, *supra* note 42, at 60–65. For another example of unions opposing environmental regulations that would impose costs on their employers, see WILLIAM BOYD, THE SLAIN WOOD: PAPERMAKING AND ITS ENVIRONMENTAL CONSEQUENCES IN THE AMERICAN SOUTH 210 (2015) (describing the opposition of labor unions to environmental regulations of the pulp and paper industry).

^{203.} Not referring specifically to the groups' New York City offices, historian Paul Sabin observes that public interest environmental groups such as NRDC and the Environmental Defense Fund that were founded in the late 1960s and early 1970s moved "away from a more movement-centered approach to social change. They embraced professional expertise, elite knowledge production, and inside-the-Beltway strategies, rather than mass protests and political action." SABIN, *supra* note 42, at 103. NRDC and EDF established "membership programs" but primarily to help with litigation and funding. *Id.* at 105, 127.

^{204.} *See generally* Testimony of Carl Hum, General Counsel & Senior Vice President, Real Estate Board of New York, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018).

^{205.} See Testimony of Carl Hum, General Counsel & Senior Vice President, Real Estate Board of New York, Transcript of the Minutes of the Committee on Environmental Protection, New York City Council 104–05 (Dec. 4, 2018); see also Testimony of Carl Hum, General Counsel & Senior Vice President, Written Testimony before the Committee on

Climate Works for All coalition, who wanted to protect low-income tenants from rent hikes.²⁰⁶ Real estate officials opposed exemptions for rent regulated housing because they believed that if "too many types of buildings were given exemptions. . . .[it would place] an undue burden for reducing the city's GHG output on the remaining buildings."207 NRDC and 32BJ joined REBNY in opposing the exemption for rent regulated exemptions.²⁰⁸ The final bill that was passed in 2019 exempted all buildings with one or more rent-regulated units from having to meet the emissions caps.²⁰⁹ In a

206. See, e.g., Testimony of Brett Thomason, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018); Testimony of N.Y.C. Environmental Justice Alliance, Written Testimony before the Committee on Environmental Protection, New York City Council 1 (Dec. 4, 2018).

207. Neuman, supra note 163.

208. See Testimony of David Cohen, Transcript of the Minutes of the Committee on Environmental Protection, New York City Council 105-07 (Dec. 4, 2018); see also Testimony of Lindsay Robbins, Transcript of the Minutes of the Committee on Environmental Protection, New York City Council 109-10 (Dec. 4, 2018). On NRDC's reasons for opposing the exemption from the caps of rent regulated buildings, see Testimony of Donna De Costanzo, Director, Eastern Region, Climate and Clean Energy Program, Natural Resources Defense Council, Written Testimony before the Committee on Environmental Protection, New York City Council 60 (Dec. 4, 2018) ("We join others in voicing concern over the bill's blanket exemption of buildings with a least one rent-regulated unit. The City will not be able to achieve its greenhouse gas reduction goals with this exclusion. The exemption directly contradicts the conclusion made by the Mayor's Technical Working Group and reiterated by the Urban Green 80x50 Buildings Partnerships report that in order to achieve citywide GHG reductions of 40% by 2030, buildings of all types and sizes must participate. With this exemption, the majority of the burden of meeting our emissions reduction goals from buildings will rest upon less than 40% of New York City's total building stock - and over a third of the GHG emissions that come from buildings over 25,000 square feet will not be addressed. It is also important that these buildings and tenants get the benefits of energy efficiency. These are the buildings that often need energy efficiency upgrades the most and these are the tenants that would benefit most from lower energy and operating costs, and better functioning apartments."). NRDC supported requiring that rent regulated buildings implement "low-cost prescriptive measures" as had been recommended by the Urban Green Council's 2018 consensus report Blueprint for Efficiency. Id. The New York League of Conservation Voters took a similar position to NRDC on the importance of including rentregulated buildings and similarly supported requiring these buildings to implement low-cost prescriptive measures. See Testimony of Adriana Espinoza, New York City Program Director, New York League of Conservation Voters, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018).

209. N.Y.C., N.Y., LOCAL LAW NO. 97 §§ 5-6 (2019) (amending N.Y.C., N.Y., ADMIN. CODE to add §§ 28-320, 28-321). After New York State passed amendments to rent regulation in 2019 that protected tenants against rent increases for capital improvements, the New York City Council amended Local Law 97 to circumscribe the buildings excluded from the caps to

Environmental Protection, New York City Council (Dec. 4, 2018) ("REBNY shares other concerns, in particular, the bill's exclusion of buildings with at least one rent-regulated unit which effectively means that over a third of GHG emissions from buildings over 25,000 sf will not be addressed."); see also Neuman, supra note 163 ("Real estate industry executives say that while they support reducing emissions, they believe too many types of buildings were given exemptions, placing an undue burden for reducing the city's greenhouse gas output on the remaining buildings.").

provision supported by ALIGN and New York Communities for Change, among others, the law requires these buildings to implement low-cost measures to increase energy efficiency that would not meaningfully increase rents.²¹⁰ Real estate's power was clearly on the wane in 2019.²¹¹ With progressive activists electrified and Trump symbolizing for many the excesses of the New York City real estate industry, the time was ripe to

210. While not subject to the emissions caps, buildings with large numbers of rent regulated units are instead required to implement a limited number of prescriptive upgrades such as "[r]epairing all heating system leaks" and "[i]nsulating pipes for heating and/or hot water." N.Y.C., N.Y., ADMIN. CODE § 28-321.2.2. The original version of Local Law 97 did not mandate any penalties for non-compliance with these prescriptive upgrades. N.Y.C., N.Y., ADMIN. CODE § 28-321.4 ("Penalties that may be assessed for violations of section 28-321.2 shall be determined by department rule.").

The compromise provision requiring that rent regulated buildings implement a list of prescribed measures is consistent with the recommendation in the Urban Green Council's 2018 consensus report "Building for Efficiency" that rent stabilized apartment buildings be required to implement "low-cost, energy-saving measures that" would not trigger rent increases under New York State rent regulation law, "instead of the percent reductions applicable to other sectors." URBAN GREEN COUNCIL, BLUEPRINT FOR EFFICIENCY: AN 80 X 50 BUILDINGS PARTNERSHIP REPORT, supra note 186, at 16. In their testimony in December 2018 to the City Council Environmental Protection Committee, NRDC and 32BJ expressed support for requiring these low-cost prescriptive measures until the advisory board created by the law could come up with another approach to including the rent stabilized apartment stock. See Testimony of Donna De Costanzo, Director, Eastern Region, Climate and Clean Energy Program, Natural Resources Defense Council, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018); Testimony of David Cohen, Political Manager for SEIU 32BJ, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018); see also Testimony of John Mandyck, CEO, Urban Green Council, Written Testimony before the Committee on Environmental Protection, New York City Council 4 (Dec. 4, 2018). ALIGN - and fellow Climate Works for All coalition members New York Communities for Change and the New York City Environmental Justice Alliance — also expressed support in their testimony for such prescriptive measures as an interim approach until state rent regulation laws were amended to protect tenants against rent hikes to offset the costs of decarbonizing buildings. See Testimony of Brett Thomason, ALIGN on Intro 1253, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018); see also Testimony of New York Communities for Change, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018); see also Testimony of N.Y.C. Environmental Justice Alliance, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018).

211. In addition to the passage of Local Law 97 in New York City in 2019, another indication of the waning political power of major property owners that year was the passage of new tenant protection laws at the State level, which significantly increased protections for tenants in rent-regulated and market-rate housing in New York City and other parts of the State. *See generally* New York Housing Stability and Tenant Protection Act of 2019, 2019 N.Y. SB 6458.

buildings "in which more than 35% of dwelling units" are rent stabilized. *See Housing Stability & Tenant Protection Act of 2019*, N.Y. STATE HOMES & COMM. RENEWAL (Oct. 2, 2019), https://hcr.ny.gov/system/files/documents/2021/08/rent-laws-overview-english-10-2019.pdf [https://perma.cc/S9BU-DFV3]; N.Y.C., N.Y., LOCAL LAW NO. 116 § 1 (2020).

mandate performance standards aligned with the preferences of the left flank of the local environmental movement.

Consistent with the priorities of the Climate Works for All coalition, Local Law 97 explicitly incorporates environmental justice concerns. As mentioned above, to protect low-income tenants from rent increases, the law exempts properties with large numbers of rent regulated tenants from the emissions caps, while providing these tenants with some benefits by requiring that the owners of their buildings implement a series of low-cost energy efficiency measures.²¹² Local Law 97 requires the creation of an advisory board to oversee implementation of the law and requires that environmental justice organizations be represented on that board in addition to advocates from traditional environmental groups.²¹³ Strikingly, the law calls for two environmental justice representatives as contrasted with "one building owner or manager" to participate in the advisory board.²¹⁴ This is a marked change in tenor from the Bloomberg era. Whereas the Bloomberg administration went through pains to collaborate with real estate, the de Blasio administration and the city council that was in office during the Trump presidency seemed concerned with other stakeholders.²¹⁵

^{212.} N.Y.C., N.Y., ADMIN. CODE § 28-320.1; N.Y.C., N.Y., ADMIN. CODE § 28-321.2.2; *supra* notes 209–210 and accompanying text.

^{213.} N.Y.C., N.Y., ADMIN. CODE § 28-320.2.1 ("The mayor shall appoint one architect, one operating engineer, one building owner or manager, one public utility industry representative, one environmental justice representative, one business sector representative, one residential tenant representative, and one environmental advocacy organization representative. The speaker shall appoint one architect, one stationary engineer, one construction trades representative, one green energy industry representative, one residential tenant representative and one not for profit organization representative." (emphasis added)).

^{214.} Id.

^{215.} Notably, environmental justice concerns have continued to be prominent in local climate politics since Mayor de Blasio left office. With respect to Local Law 97, environmental justice advocates, joined with mainstream environmental advocates, were influential in steering city officials away from permitting emissions trading under the law, which real estate interests had once hoped would be allowed. See Ciara Long, NYC Could Soften Local Law 97's Controversial Fine Structure, BISNOW (Apr. 14, 2022), https://www.bisnow.com/new-york/news/sustainability/nyc-city-council-hints-at-flexibilityon-local-law-97-compliance-112619 [https://perma.cc/TMG2-K9RW]; see also Testimony of Carl Hum, Real Estate Board of New York, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018). More generally, the office that catalyzed discussions around Local Law 97, which was once called the Mayor's Office of Sustainability, was renamed the "Mayor's Office of Climate and Environmental Justice" at the start of 2022 under Mayor Eric Adams. There are many possible explanations for why environmental justice concerns have become more central to local climate policies and politics during the past few years, but one plausible theory is that "[a]s climate change's effects became more visible in the U.S., it has also become clearer that those effects are disproportionately hitting minority communities." Alejandra Borunda, The Origins of

Mechanically, Local Law 97 embodies a traditional approach to environmental regulation. It imposes regulatory requirements on buildings without incorporating economic ideas popularized at the federal and state levels since the 1990s about allowing pollution sources to re-allocate responsibility for achieving pollution reductions among themselves to lower the cost of achieving the environmental objective.²¹⁶ The law works as follows: buildings are grouped into different categories based on their type of use (multifamily residential, museums, financial offices, etc.).²¹⁷ Each building type is permitted to emit up to a specified amount of carbon dioxide equivalent (CO₂e) per square foot.²¹⁸ For example, laboratories are allowed to emit more than hotels per square foot.²¹⁹ A building's limit (or cap) is determined by multiplying the building's square footage and the allowable amount of CO₂e for its type of use. Building owners that exceed their emissions caps are liable to pay up to \$268 per ton of excess emissions, an amount intended to incentivize building upgrades.²²⁰ To calculate a building's annual emissions, owners must multiply the total amount of energy purchased by the carbon intensity coefficient that the city assigns for the relevant type of energy (i.e., electricity procured from the grid, natural gas, fuel oil, etc.).²²¹ The first compliance period runs from 2024 to 2029, and the caps get progressively stricter until 2050.²²² The law also contains

216. *See generally* Elizabeth Popp Berman, Thinking Like an Economist: How Efficiency Replaced Equality in U.S. Public Policy (2022).

218. See N.Y.C., N.Y., Admin. Code § 28-320.3.1.

[https://perma.cc/3UKR-HSWH].

222. See id.

Environmental Justice — and Why It's Finally Getting the Attention It Deserves, NAT'LGEOGRAPHIC(Feb. 24, 2021),

https://www.nationalgeographic.com/environment/article/environmental-justice-originswhy-finally-getting-the-attention-it-deserves [https://perma.cc/A2SY-AQT5]. In New York City, Hurricane Sandy made these disproportionate impacts abundantly clear. After Sandy, it was much more difficult to develop a climate policy that ignored the vastly different vulnerabilities of communities across New York City. *See* Cohen, *supra* note 149, at 12 (quoting an organizer with the New York Alliance for a Just Rebuilding as stating, "hopefully we can learn from. . . .Sandy and from some upcoming storms and get to a place where can really call ourselves resilient and we can really. . . .prioritize low-income folks and vulnerable populations and make sure they're okay after disaster").

^{217.} N.Y.C., N.Y., RULES OF THE CITY OF NEW YORK tit. 1, ch. 100, § 103-14(c)(3)(i) (2022).

^{219.} In late 2022, the city's Department of Buildings promulgated an important set of regulations for implementing Local Law 97 that specifies the "emissions factors" for different "property types." N.Y.C., N.Y., RULES OF THE CITY OF NEW YORK tit. 1, ch. 100, § 103-14(c) (2022), https://a856-cityrecord.nyc.gov/RequestDetail?RequestId=20221213011 [https://perma.cc/3UKR-HSWH].

^{220.} N.Y.C., N.Y., Admin. Code § 28-320.6.

^{221.} N.Y.C., N.Y., RULES OF THE CITY OF NEW YORK tit. 1, ch. 100 103-14(c) (2022), https://a856-cityrecord.nyc.gov/RequestDetail?RequestId=20221213011

some flexibility mechanisms to lessen the burden on owners. Of particular importance, if an owner exceeds the permissible amount of GHG emissions per square foot, he can purchase renewable energy credits to offset the emissions attributed to his energy use.²²³ This loophole could reduce the incentive for building owners to invest in building upgrades, and, as of early 2023, environmental advocates are seeking additional constraints on the use of these credits to comply with the law.²²⁴

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D. Beyond Local Law 97

As was the case with the GGBP of the Bloomberg era, Local Law 97 may be just the beginning of a wave of building performance standards in progressive American cities. In fact, at the time of this writing, at least five other cities had either passed or introduced legislation that sets some sort of mandatory energy or emissions limits for buildings, including Washington, D.C., which legislated its building performance standard before New York City passed its law.²²⁵ In an example of how local climate initiatives can spur action at higher levels of government, one of the internal architects of Local Law 97, Mark Chambers, became Senior Director for Building Emissions and Community Resilience in the Biden administration's Council

^{223.} N.Y.C., N.Y., Admin. Code § 28-320.3.6.1.

^{224.} Mariana Simões, Office Buildings Could Evade Energy Upgrades via 'Giant Loophole' in NYC's Climate Law, Environmentalists Warn, CITYLIMITS (Feb. 21, 2023), https://citylimits.org/2023/02/21/office-buildings-could-evade-energy-upgrades-via-giant-loophole-in-nycs-climate-law-environmentalists-warn/ [https://perma.cc/C5RA-35JK].

Notably, WE ACT's testimony to the City Council Environmental Protection Committee in December 2018 warned "against the inclusion of renewable energy credits as a method of alternative compliance." Testimony of Aditi Varshneya, Community Organizer for WE ACT for Environmental Justice, Written Testimony before the Committee on Environmental Protection, New York City Council (Dec. 4, 2018). WE ACT stated, "RECs do not improve local environmental health, support a thriving local economy, or even sufficiently move the needle on carbon reduction."

^{225.} See, e.g., Building Energy Reporting and Disclosure (BERDO), Bos., MASS., CITY OF Bos. CODE, ch. VII, §§ 7-2.1, 7-2.2, (Sept. 22, 2021); DENVER, COLO., Council Bill 21-1310 (2021); Building Energy Performance Standards (BEPS), St. Louis, Mo., Ordinance 71132 (Apr. 20, 2020); CleanEnergy D.C. Omnibus Amendment Act of 2018, D.C. LAW 22-257, 66 D.C. REG. 1344 (2019); Chula Vista, Cal., Ordinance 3498 (Mar. 10, 2021). Bloomberg Philanthropies helped to fund the development of the building performance standard in St. Louis. See American Cities Climate Challenge, BLOOMBERG PHILANTHROPIES, https://www.bloomberg.org/environment/supporting-sustainable-cities/american-citiesclimate-challenge/ [https://perma.cc/T8ME-9YT9] (last visited July 31, 2023).

Several states have adopted building performance standards as well, including Colorado, Maryland, and Washington. *See* INSTITUTE FOR MARKET TRANSFORMATIONS, COMPARISON OF U.S. BUILDING PERFORMANCE STANDARDS (2023), https://www.imt.org/wp-content/uploads/2022/06/06.22-BPS-Matrix.pdf [https://perma.cc/8E7C-E7BC].

on Environmental Quality.²²⁶ In this role, Chambers helped to form a National Building Performance Standards Coalition to spur the adoption of similar laws in cities and states throughout the country.²²⁷ In December 2022, the Biden administration also adopted "the first-ever" performance standards for federal buildings to increase energy efficiency and electrification of these buildings.²²⁸

There are some important differences between the forms that existing building performance laws have taken. Arguably the most important distinction is that some of the laws limit the amount of energy buildings can use each year, while others limit the amount of GHG emissions they can release.²²⁹ This distinction is critical because the laws that limit GHG emissions do not necessarily encourage energy efficiency.²³⁰ This is a major drawback given that building out the electricity grid more than is necessary imposes significant economic and environmental costs,²³¹ even if all the electricity in the grid comes from renewable sources.

But there are also some important commonalities between many of the mandates. The same forces that have brought greater attention to the need to incorporate equity considerations into climate change policy in New York City are influencing local leaders in other major American cities. For instance, both Boston and Washington, D.C. elevated community groups in the process of developing their building performance standards and the resulting laws prioritize investment in environmental justice communities.²³² The Boston mandate, for example, calls for fines and compliance payments

229. See Danielle Spiegel-Feld & Katrina M. Wyman, Building Better Building Performance Standards, 52 ENVT'L L. REP. 10268, 10271–72 (2022).

230. See Simões, supra note 224.

^{226.} Mark Chambers, LINKEDIN, https://www.linkedin.com/in/mark-chambers-ra-71793854/ [https://perma.cc/6KC6-PLSQ] (last visited July 31, 2023).

^{227.} See id.

^{228.} Fact Sheet: Biden-Harris Administration Announces First-Ever Federal Building Performance Standard, Catalyzes American Innovation to Lower Energy Costs, Save Taxpayer Dollars, and Cut Emissions, THE WHITE HOUSE (Dec. 7, 2022), https://www.whitehouse.gov/briefing-room/statements-releases/2022/12/07/fact-sheet-biden-harris-administration-announces-first-ever-federal-building-performance-standard-catalyzes-american-innovation-to-lower-energy-costs-save-taxpayer-dollars-and-cut-emissions/#:~:text=Today% 20the% 20Biden% 2DHarris% 20Administration,the% 20Federal % 20government% 20by% 202030 [https://perma.cc/DB7C-VAFQ].

^{231.} See, e.g., Joseph G. Allen et al., Want to Phase Out Fossil Fuels? We Must Fundamentally Change Our Buildings, WASH. POST (Sept. 26, 2022), https://www.washingtonpost.com/opinions/2022/09/26/climate-carbon-fossil-fuel-energy-efficiency/ [https://perma.cc/8F8S-FS72].

^{232.} See Building Energy Reporting and Disclosure (BERDO) CITY OF BOS. CODE, ch. VII, § 7-2.2(g) (Sept. 22, 2021). Washington, D.C. also has a provision in its Clean Energy Omnibus Act that requires that at least 30% of the funds go in part toward benefitting low-income residents. CleanEnergy D.C. Omnibus Amendment Act of 2018, D.C. LAW § 8-1774.10(c)(12)(A)(i).

that are collected under the program to be invested in environmental justice projects.²³³ And the particular projects that receive the investment will be recommended by a Review Board, whose members come mostly from community groups.²³⁴

Coincident with the spread of local and state laws to require existing and new buildings to decarbonize or improve their energy efficiency is the emergence of local laws prohibiting newly constructed buildings from including connections to natural gas infrastructure. The intent behind such "natural gas bans" is to avoid perpetuating demand for natural gas in newly built buildings that can often be electrified more cheaply than existing buildings.²³⁵ The first ban on new natural gas connections was passed by Berkeley City Council in 2019, and a number of other local governments, including New York City, quickly followed suit.²³⁶ In 2021, at the end of the de Blasio administration, the New York City Council legislated a ban on natural gas connections in newly constructed buildings.²³⁷ Using similar tactics as it had employed to secure passage of LL97, New York Communities for Change played a key role in the ten month campaign that led to the ban, this time in coalition with New York Public Interest Research Group and WE ACT for Environmental Justice.²³⁸ These local laws to ban natural gas in new buildings are part of a broader emerging trend towards more aggressive local action to regulate emissions from buildings.²³⁹

performance-standard [https://perma.cc/GBM7-Q577].

238. See Sikora, supra note 196.

^{233.} See Building Energy Reporting and Disclosure (BERDO) CITY OF BOS. CODE, ch. VII, § 7-2.2 (Sept. 22, 2021).

^{234.} See BOS., MASS., CITY OF BOSTON CODE § 7-2.2(g); see also Emily Barkdoll, Boston Passes Equitable Building Performance Standard, NRDC (Sept. 22, 2021), https://www.nrdc.org/experts/emily-barkdoll/boston-passes-equitable-building-

^{235.} See, e.g., Berkeley, Cal., Ordinance 7672-NS § 1 ("It is the intent of the council to eliminate obsolete natural gas infrastructure and associated greenhouse gas emissions in new buildings where all-electric infrastructure can be most practicably integrated, thereby reducing the environmental and health hazards produced by the consumption and transportation of natural gas.").

^{236.} See id.

^{237.} See N.Y.C., N.Y., LOCAL LAW No. 154 s.1 (creating § 28-506.1) (2021); see also Emilie Raguso, Berkeley First City in California to Ban Natural Gas in New Buildings, BERKELEYSIDE (July 17, 2019), https://www.berkeleyside.org/2019/07/17/natural-gas-pipes-now-banned-in-new-berkeley-buildings-with-some-

exceptions?gclid=EAIaIQobChMImtar3rai_gIVRmxvBB1S5wjREAAYAiAAEgKIMfD_B wE [https://perma.cc/CAN8-BU8A].

^{239.} See Benjamin Storrow, Cities Look to Natural Gas Bans to Curb Carbon Emissions, E&E NEWS (Nov. 25, 2019), https://www.scientificamerican.com/article/cities-look-to-natural-gas-bans-to-curb-carbon-emissions/ [https://perma.cc/9A6Q-NS4S] (noting a shift in local climate action "toward the carbon footprint associated with heating and cooling buildings," and noting the "newest trend in the local fight against climate change: bans on natural gas hookups in new buildings").

However, the local laws have encountered opposition, including instances of state preemption of local government bans on natural gas.²⁴⁰ In April 2023, in litigation brought by the California Restaurant Association, a panel of the Ninth Circuit Court of Appeals held that Berkeley's ban is preempted by the federal Energy Policy and Conservation Act.²⁴¹ Nonetheless, in another example of a local initiative acting as precursor to state legislation, in May 2023, New York Communities for Change, Food & Water Watch, WE ACT for Environmental Justice and others persuaded New York State to follow New York City and adopt a state ban on natural gas connections in new buildings.²⁴²

IV. WILL IT HOLD?

Both PlaNYC and Local Law 97 emerged during times of economic bounty. Bloomberg even made reference to the city's good fortune in his speech in 2007 announcing the launch of PlaNYC: "Our economy is humming, our fiscal house is in order and our near-term horizon looks bright," the mayor said. "If we don't act now, when?"²⁴³ As for Local Law

^{240.} SEE NATHANIEL R. MATTISON, GUARINI CTR. ON ENV'T, ENERGY & LAND USE LAW, BEYOND GAS BANS: ALTERNATIVE PATHWAYS TO REDUCE BUILDING EMISSIONS IN LIGHT OF STATE PREEMPTION LAWS 5 (Oct. 2022); see also Brad Plumer & Hiroko Tabuchi, How Politics Are Determining What Stove You Use, N.Y. Times (Dec. 16, 2021), https://www.nytimes.com/2021/12/16/climate/gas-stoves-climate-change.html [https://perma.cc/6GWT-CUKF].

^{241.} See Cal. Rest. Ass'n v. City of Berkeley, 65 F.4th 1045, 1048 (9th Cir. 2023); see also The Times Editorial Board, Polluters Keep Trying to Block Gas Bans. California Cities Shouldn't Re Deterred, L.A. TIMES, (Apr. 30, 2023), https://www.latimes.com/opinion/story/2023-04-30/natural-gas-ban-decision-fossil-fuelsbuildings [https://perma.cc/VU5U-TDHZ]; see also Ari Plachta, SoCalGas Backed Case against Berkeley Gas Ban and Asked Customers to Pay, Advocates Say, SACRAMENTO BEE 27, 2023), (Apr. https://www.sacbee.com/news/politics-government/capitolalert/article274559671.html.

^{242.} See, e.g., Liam Stack, New York to Ban Natural Gas, Including Stoves, in New Buildings, N.Y. TIMES (Apr. 28, 2023), https://www.nytimes.com/2023/04/28/nyregion/gasstove-ban-ny.html [https://perma.cc/6NBB-5GHZ]; David Iaconangelo, N.Y. Weighs East Coast's First Statewide Building Gas Ban, E&E NEWS (April 28, 2023), https://www.eenews.net/articles/n-y-weighs-east-coasts-first-statewide-building-gas-ban/ [https://perma.cc/J4DJ-8KB7]; New York State To Ban Fossil Fuels in New Buildings: State Law Banning New Oil, Gas Hookups Is First in Nation, FOOD & WATER WATCH (May 2, 2023), https://www.foodandwaterwatch.org/2023/05/02/new-york-state-to-ban-fossil-fuelsin-new-buildings/ [https://perma.cc/W8FD-5ZYJ]; Anna Phillips, N.Y. Ditches Gas Stoves, Fossil Fuels in New Buildings in First Statewide Ban in U.S., WASH. POST (May 3, 2023), https://www.washingtonpost.com/climate-environment/2023/05/03/newyork-gas-banclimate-change/ [https://perma.cc/2A73-G2Y8].

^{243.} See Lueck, supra note 107.

97, the City Council passed the law towards the end of a period of more than ten straight years of economic growth.²⁴⁴

Within a year of Local Law 97's passage in 2019, the COVID-19 crisis threw the local economy into a tailspin, with unemployment rates soaring and property values plummeting.²⁴⁵ More than two years later, the economy still has not recovered and officials forecast substantial budgetary shortfalls for the fiscal year that begins in 2023.²⁴⁶ Business tax revenue and personal income tax revenues are expected to decline, and the city may need to provide an influx of cash to meet pension commitments.²⁴⁷ The predictions are so dire that in September 2022, a veteran reporter for the New York Times declared that the city was "teetering on the brink of a severe budget crisis."²⁴⁸

With such strong economic headwinds facing the city, one cannot help but wonder whether the city will implement its climate commitments, especially Local Law 97. Property owners are exerting considerable pressure to weaken the law.²⁴⁹ Amid a housing affordability crisis, residential property owners are concerned that they will not be able to finance retrofits to their buildings to comply with the law and will face large fines.²⁵⁰ Some of the owners of residential and commercial properties

^{244.} See GDP of the New York Metro Area from 2001 to 2021, STATISTA (Jan. 2, 2023), https://www.statista.com/statistics/183815/gdp-of-the-new-york-metro-area/

[[]https://perma.cc/3AV2-B2YZ]; see also Press Release, N.Y.S. Comptroller, New York City Economy Continues to Set Records: City Added 820,000 Jobs from 2009 to 2018 (Apr. 17, https://www.osc.state.ny.us/press/releases/2019/04/new-york-city-economy-2019). continues-set-records [https://perma.cc/UEW3-AA8A].

^{245.} See generally Jeffrey P. Cohen et al., The Impact of the Coronavirus Pandemic on New York City Real Estate: First Evidence, 62 J. REG. SCI. 858 (2022).

^{246.} See Comments on New York City's Fiscal Year 2023 Adopted Budget, BRAD LANDER, N.Y.C. COMPTROLLER, (Aug. 24, 2022), https://comptroller.nyc.gov/reports/comments-onnew-york-citys-fiscal-year-2023-adopted-budget/ [https://perma.cc/A7K8-CVBP].

^{247.} See Dana Rubinstein, New York City Faces Potential Fiscal Crisis as \$10 Billion TIMES Deficit Looms, N.Y. (Sept. 19. 2022), https://www.nytimes.com/2022/09/19/nyregion/budget-crisis-economy-nyc.html [https://perma.cc/ZRF2-M9PE].

^{248.} Id.

^{249.} Climate Tech Industry Pushes to Keep Local Law 97 Intact, HABITAT (Aug. 14, 2023), https://www.habitatmag.com/Publication-Content/Green-Ideas/2023/2023-August/Climate-Tech-Industry-Pushes-to-Keep-Local-Law-97-Intact [https://perma.cc/PA4E-CJGC]. There are countervailing economic interests at play as well: by the end of 2021, the energy efficiency sector in New York State, which focuses on building energy retrofits, had still not fully recovered the jobs that were lost during the COVID-19 pandemic. See N.Y. STATE ENERGY RSCH. & DEV. ASS'N, NEW YORK CLEAN ENERGY INDUS. REP. (Dec. 2022), https://www.nyserda.ny.gov/About/Publications/New-York-Clean-Energy-Industry-Report [https://perma.cc/BX8A-NXTA]. Weakening Local Law 97 would presumably deal a blow to this sector by reducing demand for retrofits.

^{250.} See Stefanos Chen & Winston Choi-Schagrin, What's Holding Up New York's Climate Progress? Apartment Buildings., N.Y. TIMES (Mar. 10, 2023), https://www.nytimes.com/2023/03/10/nyregion/greenhouse-gas-law-nyc.html

subject to the emissions caps in the law have launched a Hail Mary legal challenge to Local Law 97 on preemption and other grounds.²⁵¹ While there are no indications that the city council plans to repeal LL97 entirely, the administration of Mayor Eric Adams has sent conflicting signals about whether it will strictly enforce the law.²⁵² After a council member introduced legislation in 2022 to exempt a recycling facility from having to meet the law's targets, Mayor Adams appeared to support the move: "We're going to make sure that we're not doing things that hurt businesses," Adams said. "[S]o we're excited to see the council person's bill to see how we can

251. See Complaint, Glen Oaks Village Owners v. City of New York, No. 154327/2022, at *3 (N.Y. Sup. Ct. May 18, 2022).

252. See Raymond N. Pomeroy II, Tensions Evident as Adams' Administration Prepares to Implement the Climate Mobilization Act, N.Y. L. J. (June 17, 2022), https://www.law.com/newyorklawjournal/2022/06/17/tensions-evident-as-adamsadministration-prepares-to-implement-the-climate-mobilization-

[[]https://perma.cc/S49N-76DC] ("[M]onths before compliance begins, a mix of real estate interest groups are lobbying to delay the process or carve out exemptions, claiming that the requirements are too burdensome for residential boards with limited funding."); *see also* Steve Cuozzo, *Loony 'Environmental' Mandates Will Kill NYC's Middle-Class Housing*, N.Y. POST (Mar. 12, 2023), https://nypost.com/2023/03/12/nycs-local-law-97-is-a-threat-to-affordable-housing/ [https://perma.cc/95EA-B7A3] ("The loony law spells financial ruin for many of the city's 3,700 co-op and condo buildings, which are home to 800,000 apartments."); Campanile, *supra* note 9 ("Homeowners for a Stronger New York is battling the terms of the city's Climate Mobilization Emissions Law of 2019 — Local Law 97 — by next year while backing state legislation introduced by state Assemblyman Ed Braunstein (D-Queens) and Sen. Kevin Parker (D-Brooklyn) to require the city to provide property tax breaks to help alleviate the costs.").

A 2021 study that Spiegel-Feld and Wyman helped to author anticipated that residential buildings would have greater difficulty complying with the emissions caps in Local Law 97 than commercial buildings. Since commercial buildings are more electrified than residential buildings, the emissions of commercial buildings will decline more without them doing anything if New York State achieves its goals of decarbonizing grid-supplied electricity. DANIELLE SPIEGEL-FELD ET AL., CARBON TRADING FOR N.Y.C.'S BLDG. SECTOR: REP. OF THE LOCAL LAW 97 CARBON TRADING STUDY GROUP TO THE N.Y.C. MAYOR'S OFF. OF CLIMATE & SUSTAINABILITY 10 (2021).

act/?slreturn=20220914143405 [https://perma.cc/WT2W-X3XU] (stating that "Aggarwala noted that LL97's significant penalties give the law teeth, but stressed that penalties needed to be levied 'with thoughtfulness,' and a recognition that the city is still recovering from the COVID-19 pandemic's impact[,]" and that "Aggarwala's statements on penalties drew quick rebuke from several councilmembers, whose questions almost universally took aim at the administration's seeming efforts to soften LL97's penalty scheme."). *See also* Caroline Spivak, *City Council Demands Strict Enforcement of Local Law 97*, CRAIN'S N.Y. (Nov. 3, 2022), https://www.crainsnewyork.com/climate-change/city-council-demands-strict-enforcement-local-law-97 [https://perma.cc/9X7X-3CYL]. In April 2023, the administration of Mayor Eric Adams released a new PlaNYC which indicated that it planned to implement Local Law 97. *See* CITY OF N.Y.C., PLANYC: GETTING SUSTAINABILITY DONE 53 (2023) ("To achieve full implementation of Local Law 97, the City will finalize its rulemaking and enforcement mechanisms, and ensure alignment with existing City and State laws and regulations.").

accomplish the goal."²⁵³ The move gives rise to the concern that the law could die a death by one thousand cuts.

Adding to the more complicated economic environment today, the protest politics that fueled political momentum behind the bill may also be more muted now than they were when LL97 was passed. In 2019, President Trump was in the White House rapidly rolling back (or attempting to roll back) the EPA's climate regulations, and Republicans controlled the Senate.²⁵⁴ There was no chance that the federal government would play a productive role in climate policy development. Today, with President Biden in office and the Congress having passed legislation in 2022 that provides substantial funding for climate change-related investment, the need for local action may feel less acute and the forces that previously propelled protest politics may be diminished. At the same time, the federal Inflation Reduction Act may reduce the cost of implementing Local Law 97 because it subsidizes some of the technology needed to decarbonize buildings.²⁵⁵ And New York State has pledged to decarbonize electricity, which would cause building emissions from grid-supplied electricity to fall without building owners having to incur costs.²⁵⁶ Whether these improvements will materially impact the city's calculus regarding Local Law 97, or other climate policies, remains to be seen.

In the end, whether Local Law 97 will be faithfully implemented in New York City, and whether it will be replicated widely, may depend on policymakers finding a way to redistribute some of the costs of decarbonizing buildings away from building owners. Local Law 97 unapologetically allocated most of the cost of compliance to building owners; in 2019, city policymakers did not contemplate state, let alone federal, action that might reduce the cost of decarbonizing buildings. Amidst the bullish local climate politics of the Trump era, this cost allocation made good political sense. In the present era, it is less clear that this is the case.

^{253.} See N.Y.C., N.Y., Intro. No. 230 (2022); see also Paul Liotta, We Want to Make Sure We Don't Hurt Businesses: Mayor Adams Tours Staten Island Paper Mill Threatened by NYC Law, SILIVE (Oct. 4, 2022), https://www.silive.com/news/2022/10/we-want-to-make-sure-we-dont-hurt-businesses-mayor-adams-tours-staten-island-paper-mill-threatened-by-nyc-law.html [https://perma.cc/B3QN-WCS6].

^{254.} See Nadja Popovich, Livia Albeck-Rpika & Kendra Pierre-Louis, *The Trump Administration Rolled Back More Than 100 Environmental Rules. Here's the Full List*, N.Y. TIMES (June 20, 2021), https://www.nytimes.com/interactive/2020/climate/trumpenvironment-rollbacks-list.html [https://perma.cc/B75A-S56Y]; *see also* Tom Murse, *The Political Makeup of Congress*, THOUGHTCO (Oct. 18, 2019), https://www.thoughtco.com/thepolitical-makeup-of-congress-3368266 [https://perma.cc/G232-DE7T].

^{255.} See David Smedick, Rachel Golden & Alisa Petersen, *The Inflation Reduction Act Could Transform the US Buildings Sector*, RMI (Aug. 31, 2022), https://rmi.org/the-inflation-reduction-act-could-transform-the-us-buildings-sector/ [https://perma.cc/584L-XCEW].

^{256.} SPIEGEL-FELD ET AL., *supra* note 250, at 11.

Moving forward, the more that the transition costs of laws like LL97 can be socialized, the more politically viable cities' decarbonization laws may be. In other words, both economics and politics matter at the local level.

CONCLUSION

Given the global nature of climate change, one could be forgiven for looking to the federal government to take the lead in addressing the problem. But in the face of the federal government's inaction, some local governments, including New York City, sought to step in to fill the gaps in the early 21st century. Some of the actions that New York and other cities have taken may be at odds with their near-term local economic interests and may therefore be fragile in periods of economic downturn. But other steps appear clearly consistent with growth objectives and are likely quite durable. There is also no doubt that a few cities have already played a productive, complementary role to state and federal climate actions, especially in the context of regulating building emissions. These cities have amassed tremendous amounts of information about how energy is used in their buildings — including opportunities to reduce such energy use — and have spurred some higher levels of government to mimic their regulatory approaches.