The City of New York
Executive Budget
Fiscal Year 2026

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New York City Climate Budgeting

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EXECUTIVE SUMMARY

Investments made today will shape New Yorkers' lives for decades to come. The New York City Mayor's Office of Management and Budget (OMB) is charged with ensuring that the city's $115.1 billion expense budget (Fiscal Year 2026) and planned capital funding of $196.7 billion (Fiscal Years 2025-2035) are managed responsibly and effectively so the city has the resources to meet its needs now and in the future.

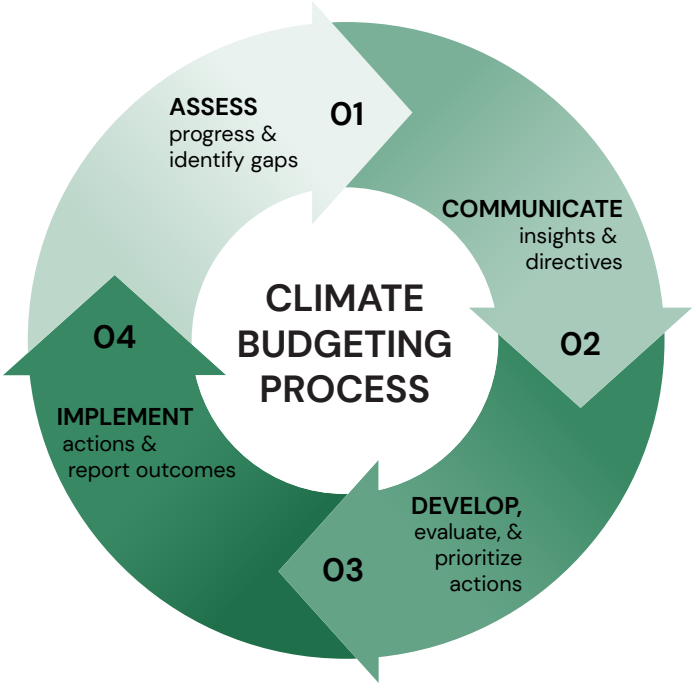
Achieving a safer, more resilient, and emissions-free New York City will require substantial investment amidst many competing funding needs—but the cost of inaction is greater. Climate change poses risks to the city's health, safety, housing, environment, and economy. When thoughtfully implemented, investments to reduce greenhouse gas emissions and bolster resiliency to climate hazards such as flooding and extreme heat can save the city money in the long term by maximizing resources to serve multiple purposes, achieving cost savings through energy efficiency, avoiding stranded assets and future losses, and protecting New Yorkers from harm.

To ensure New York City is well positioned to address climate change while advancing its many priorities, OMB has partnered with the Mayor's Office of Climate and Environmental Justice and other city agencies to implement Climate Budgeting.

Climate Budgeting is a process to systematically integrate climate considerations into the city's financial planning and align city resources with its ambitious climate goals. This approach ensures sustainability and climate resiliency are embedded across all levels of government.

New York City was the first big city in the U.S. to adopt Climate Budgeting, initiating the process in 2023 and issuing the first Climate Budgeting publication as a new feature of the city's Executive Budget in 2024.[1]

During the first year of Climate Budgeting, the city developed tools and put in place a process to help OMB and city partners assess progress toward climate goals, identify gaps in resiliency and emissions planning, and enable the collection of standardized data alongside relevant funding requests to inform targeted decision-making. The second year of Climate Budgeting builds on the successes of the first.



Climate Budgeting Outcomes

2024 TAKEAWAYS	2025 PROGRESS UPDATES
The city continues to lead by example.	**Investments in sustainability and resiliency:** Since the first Climate Budgeting publication, new and reallocated funds support a wide array of climate initiatives. Investments include rooftop solar on city facilities ($295 million), a school geothermal system ($11.6 million), electric hot water heaters in police precincts ($0.2 million), forestry management ($3 million), tree canopy planning ($0.4 million), expansion of flood sensors ($0.6 million), and continuation of a flood risk mitigation program for businesses ($1.2 million).
Effective planning is critical.	**Proactive planning:** The city funded an Advanced Capital Planning program ($3.5 million capital plus staff funding) that will help embed emissions reductions and climate resiliency into individual capital project development and enable holistic, long-term planning, including to phase out city capital spending on fossil fuel infrastructure. OMB used the Climate Budgeting process to encourage agencies to incorporate sustainable and resilient design during early stages of project planning. OMB analysis of climate progress is being used in conjunction with agency planning efforts to help understand long-term funding needs.
The most impactful city emissions-reduction action is the city's Building Performance Standard, Local Law 97 of 2019.	**New support for building owners:** The city has renewed tax benefits that help co-ops and condos meet emissions-reduction requirements and provided a new option for building owners to comply with the law by funding energy efficiency and electrification projects in affordable housing. New city funding supports staff ($1.2 million per year) and an online permitting and application portal to implement the law effectively.
Additional insights on the state of resiliency in New York City are needed.	**Quantifying the present and future state of resiliency in new ways:** OMB has developed innovative approaches to inventory adaptation measures to flood and heat risks and forecast their impacts. These provide insights into present conditions across neighborhoods and allow the city to quantify the extent to which select heat interventions could counter future warming and coastal resiliency projects could protect buildings from flooding.

Climate Budgeting Insights

The Climate Budgeting cycle begins by assessing the city's progress toward climate goals and how planned capital projects align with emissions-reduction and resiliency priorities. Insights from new and updated analysis will be used to focus Climate Budgeting efforts for the upcoming year.

New York City is making significant progress advancing sustainability and resiliency, but additional action is still needed.

Climate Alignment Assessment of Capital Projects

Planned capital funding will protect New Yorkers from flooding and extreme heat, including nearly $12 billion for projects that address flood risk and more than $2 billion for projects that address heat risk, inclusive of more than $1 billion for projects that address both. Additionally, projects totaling $46.5 billion include some scope elements that contribute to flood resiliency, heat resiliency, or both, or use the city's Climate Resiliency Design Guidelines to inform project design. Areas of opportunity to do even more, where cost-effective and feasible, include over $1 billion for projects in high-risk flood areas and on the waterfront that do not yet incorporate flood resiliency measures and over $200 million for projects in heat vulnerable areas that do not yet incorporate heat resiliency measures.

The city has allocated more than $8 billion in capital funding that will reduce emissions through building decarbonization, renewable energy development, electric vehicle and charging infrastructure deployment, and waste reduction. Over $14 billion of additional capital is allocated for projects that contribute to reducing emissions while advancing other city priorities, including transportation improvements and building upgrades. Opportunities to consider alternative approaches to advance the city's climate goals where cost-effective and feasible include $7 billion for projects that include fossil fuel equipment instead of clean, electric alternatives.

Greenhouse Gas Emissions Forecast

With current commitments, New York City can reduce its citywide emissions 78 percent by 2050. Additional planning and action are needed to meet both 2030 and 2050 science-based emissions-reduction targets, including the city's goal of net-zero emissions by 2050.

Planned energy efficiency and electrification projects in city-owned and -operated buildings will yield significant emissions reductions over the next 10 years. The city's purchase of 100 percent clean electricity beginning in 2027 will eliminate 1 million metric tons of carbon dioxide equivalent from government operations annually and yield greater reductions as buildings and vehicles electrify in the future. Additional comprehensive, long-term planning is needed to eliminate emissions from city government operations by 2050. Under existing plans, the city government is expected to continue to generate 1.1 million metric tons of carbon dioxide equivalent in 2050, with 74 percent coming from continued fossil fuel combustion in city-owned and -operated buildings.

Resiliency Inventory and Forecast

Projections of the city's 2050 tree canopy, which account for tree growth plus plans for new street trees, show that the city can meet its *PlaNYC: Getting Sustainability Done* goal of 30 percent tree canopy coverage. Overall, canopy expansion is projected to offset some temperature increase due to climate change, and neighborhoods with the highest vulnerability are projected to experience the greatest average cooling benefits from these efforts. However, no single strategy will fully mitigate extreme heat risks. OMB will continue to work with city partners to understand appropriate targets and assess interventions for outdoor and indoor cooling potential across different parts of the city.

Neighborhood-scale coastal flood resiliency projects that are underway or being considered could protect a majority of at-risk buildings in the 2050s 100-year floodplain but would not address all areas evenly. New analysis will help the city evaluate different scenarios for long-term planning, but protecting New Yorkers from sea-level rise and coastal storms will require substantial federal support, additional external funding streams, and evaluation of other means of addressing coastal flood risk, such as building-level protections.

Climate resiliency and emissions reductions bring substantial benefits to the city and New Yorkers—cleaner air, safer communities, and avoided damage to buildings and infrastructure. The city is committed to continuing to improve Climate Budgeting to help advance the most cost-effective and impactful investments to achieve a resilient and emissions-free New York City.

SOURCE: NYC DOT

1. Climate Budgeting in New York City

Last year, New York City became the first big city in the country to implement Climate Budgeting, a system that integrates climate targets and considerations into the budget process to support achieving the city's goals of net-zero greenhouse gas emissions and resiliency to climate threats. This document summarizes outcomes and analysis from the second year.

OVERVIEW

A New York City that is resilient to extreme weather, energy efficient, and powered by renewable energy will be a safer, healthier, and more enjoyable place to work, visit, and live. Achieving these objectives presents significant challenges, however. No city or state has yet solved the problem of eliminating emissions or of protecting its communities against the rising sea levels, stronger storms, and longer, more intense heat waves that climate change will bring. New York City is taking purposeful steps to better understand the challenges it faces and work towards a sustainable and resilient future.

Meeting the city's climate goals alongside its other priorities requires a systematic process to integrate climate considerations into the city's budget decisions, which is why New York City has implemented Climate Budgeting. Climate Budgeting is a governance system to regularly assess the city's progress toward its ambitious climate goals and drive cost-effective strategies for meeting them, while ensuring that investments are aligned with emissions-reduction and resiliency objectives and designed to achieve multiple ends. This strategic approach to investments is necessary to manage flooding and heat risks, realize cost savings and avoided losses, extend the life of city assets, safeguard infrastructure and communities, and protect New Yorkers' health, safety, and quality of life.

The New York City Mayor's Office of Management and Budget (OMB) initiated the Climate Budgeting process in April 2023, culminating in the release of the first Climate Budgeting publication in April 2024 as a new permanent feature of the city's Executive Budget. This year's publication includes details on how the process has evolved, new policy changes and funding allocations, and an updated assessment of the city's progress towards its climate goals.

NEW YORK CITY'S CLIMATE CONTEXT

Climate change is already disrupting the lives of New Yorkers through more frequent and extreme heatwaves, downpours, and coastal flooding. Climate Budgeting builds on the latest science and data from the Intergovernmental Panel on Climate Change (IPCC) and New York City Panel on Climate Change (NPCC). The IPCC, drawing on data and analysis from scientists across the globe, advocates for urgent global action to limit warming to 1.5°C, which would require ramping down emissions immediately and achieving net-zero emissions around the year 2050.[2] The NPCC applies global climate research to the New York City context, projecting local climate conditions over the coming decades.[3]

OMB'S ROLE

As the agency responsible for the city's budget and financial planning, OMB plays a vital role in the city's efforts to address climate change. In 2021, Budget Director Jacques Jiha created the Environmental Sustainability and Resiliency Task Force, OMB's first task force focused on cross-cutting climate mandates and impacts across the city's expense and capital budgets.

The task force leads the implementation of the Climate Budgeting process, and works with partners at OMB, the Mayor's Office of Climate and Environmental Justice (MOCEJ), and other city agencies to break down silos and ensure that emissions reductions and resiliency are key considerations in all relevant investment decisions.

The city has an expense budget of $115.1 billion in Fiscal Year (FY) 2026, and planned capital funding of $196.7 billion for FY 2025-2035. Both include substantial funding for emissions-reduction and resiliency programs and projects, spanning building and transportation decarbonization, protections from stormwater and coastal flooding, and extreme heat mitigation.

CLIMATE BUDGETING OBJECTIVES

In alignment with the best available science, New York City has set goals and commitments for emissions reductions and climate resiliency. Climate Budgeting facilitates these key objectives:

Protecting New Yorkers from climate threats: Recognizing that extreme heat and flood events threaten the health and safety of New Yorkers, the city is advancing initiatives to protect residents, including constructing neighborhood-scale coastal flood protection projects and expanding tree canopy cover.[4]

Building climate-resilient infrastructure: The city will build and renovate its public buildings, roads, sewers, and critical infrastructure to withstand growing hazards, as set out in the city's Climate Resiliency Design Guidelines and Local Law 41 of 2021.[5]

Reducing greenhouse gas emissions: New York City is committed to achieving net-zero emissions citywide by 2050.[6] Local Law 97 of 2019 (LL97) mandates that city government operations achieve a 40 percent reduction in emissions by 2025 and 50 percent reduction by 2030.[7]

PROCESS

The Climate Budgeting process is woven into the city's existing operations. OMB solicits relevant information from agencies about the emissions and resiliency impacts of their funded and proposed projects and makes recommendations internally and to agencies to support initiatives aligned with the city's climate goals. OMB and agencies implement the steps of Climate Budgeting in coordination with the annual budget cycle.

1 Assess Progress and Identify Gaps and Risks to Climate Goals. The annual Climate Budgeting cycle begins by assessing the city's progress toward its climate goals. OMB develops forecasts of the city's emissions and resiliency trajectories, working closely with agencies and external experts to collect data and understand the impact of city, state, and federal policies, and compares these forecasts to targets.

OMB also evaluates the degree to which the city's capital projects are aligned with emissions-reduction and resiliency goals in its annual review of planned capital projects, the Climate Alignment Assessment.

Informed by these ongoing assessments, OMB identifies gaps and risks to meeting the city's climate goals. These insights help to ensure that Climate Budgeting targets the highest-impact areas.

2 Communicate Insights and Directives. OMB issues guidance to agencies in an annual Climate Budgeting memo, which is distributed in the fall at the start of the city's Preliminary Budget development period, when agencies submit funding requests to OMB. The Climate Budgeting memo communicates progress updates and priorities for climate action, and it directs agencies to provide OMB with additional information about funding requests that may impact climate by submitting a Climate Budgeting Intake Form.

Relevant requests include projects that reduce emissions or improve resiliency, as well as those that could do so if approached differently.

3 Develop, Evaluate, and Prioritize Climate-Conscious Actions. Taking into account progress assessments, agency needs, and guidance from city leadership, agencies develop and propose projects and initiatives that advance the city's emissions-reduction and resiliency goals.

When reviewing agency funding requests, OMB evaluates and prioritizes the highest impact and most cost-effective proposals. Information collected via the Climate Budgeting Intake Form, which all agencies must submit to OMB with relevant climate-related requests, helps OMB evaluate how to most cost-effectively allocate resources and where alternative approaches to projects may be considered. Decisions on how to allocate funding are always based on many factors and considerations; Climate Budgeting ensures that climate is among those factors.

MOCEJ serves as a citywide lead on developing new climate policies and programs and works with agencies to embed climate priorities within programs. OMB collaborates with MOCEJ and city agencies throughout the year to refine and advance priority projects.

Supported by the city's Department of Citywide Administrative Services (DCAS), Agency Chief Decarbonization Officers at the seven agencies with the largest operational emissions work with agency leadership and staff to embed energy efficiency and decarbonization considerations into agency operations and capital planning.

Additionally, several agencies are incorporating sustainable and resilient design into their capital planning processes, with the support of tools like the city's Climate Resiliency Design Guidelines and OMB's Climate Alignment Assessment.

4 Implement Actions and Report on Outcomes. The city seeks funding for, and agencies implement, climate-friendly projects and initiatives, bringing the city closer to its long-term climate goals. New actions are incorporated into updated forecasts.

OMB releases its annual Climate Budgeting publication, a feature of the city's Executive Budget, reporting on outcomes of the year's Climate Budgeting process and providing updates on citywide progress toward climate goals. Following the release of the Executive Budget, OMB begins the Climate Budgeting process anew.

CLIMATE BUDGETING TOOLKIT

Climate Alignment Assessment

- Evaluates planned capital projects for alignment with climate goals
- Identifies missed opportunities and potential areas for climate-aligned investment

Climate Budgeting Intake Form

- Requires standardized data on requests for new funding that impact emissions or resiliency
- Signals OMB's strong interest in integrating climate solutions into funding proposals
- Provides OMB with data on the real-world cost and feasibility of a wide range of climate interventions
- Aids in prioritizing the most impactful and cost-efficient climate interventions

Emissions and Air Quality Forecasts

- Projects the city's emissions trajectory and resulting health outcomes
- Determines the gap to eliminating emissions and interventions needed to close that gap

New Resiliency Exposure Inventory and Forecasts

- Assesses current adaptation levels to extreme heat and flood exposure by neighborhood
- Projects the buildings protected by planned coastal flood resiliency projects
- Forecasts changes to future outdoor air temperature associated with heat management strategies

SOURCE: NYC DEP

2. Year-Two Outcomes

Since the release of the first Climate Budgeting publication, the city has advanced new policies and increased funding for programs and projects that lower emissions and improve climate resiliency.

New Climate Funding Allocations

Climate Budgeting debuted during a time when the city faced unprecedented financial challenges, the end of COVID stimulus funding, an asylum seeker crisis, and rising costs. Challenges continue, as New York City and cities around the country experience the rescinding of federal funding and the uncertainties caused by evolving federal policies, including tariffs, unstable financial markets, and the risk of recession.

Introducing and continuing Climate Budgeting during times when the city is unable to significantly expand its budget shows the importance of this work to the city. Limited resources make it more important than ever to prioritize the most impactful and cost-effective actions and find ways to optimize spending for climate outcomes wherever possible. Despite limitations, over the past year additional funding has been allocated to projects and programs that advance emissions reductions and resiliency and make the city healthier, safer, and more livable for New Yorkers. This includes funding allocated in the FY 2026 November Plan, Preliminary Budget, and Executive Budget.

Outcomes Supported by Climate Budgeting

Energy efficient buildings with electric heating and cooling provide healthy, clean, and safe homes and workplaces. The FY 2025 Climate Budgeting emissions forecasts showed that LL97, which encourages building improvements by limiting emissions allowed in large buildings, will reduce more emissions than any other action the city is taking and will cut local air pollution significantly.[8] Beginning this year, buildings are required to annually report their emissions and whether they meet the requirements of the law. The Department of Buildings (DOB) has been preparing for this first implementation period, and additional funding for staff and DOB's online permitting and application portal will help ensure they are able to enforce the law effectively.

The emissions forecasts also showed that the city needs long-term planning to achieve net-zero emissions from its own operations. Capital funding has been added to install an additional 30 megawatts of solar photovoltaic capacity on city facilities. In addition to providing emissions-free electricity with no local air pollution, the solar panels will reduce the amount of electricity the city needs to purchase for its operations. To further reduce electricity needs and emissions, the School Construction Authority will pilot a geothermal system at a new school construction project on the St. John Villa Campus on Staten Island. This pilot project will provide students with modern facilities and help the city assess the potential for clean geothermal energy. With a focus on infrastructure that can be more easily electrified, the city's Police Department (NYPD), identified several gas-fired hot water boilers that were due to be replaced. NYPD is now purchasing 20 new heat pump units to replace them, avoiding the purchase of new gas-fired systems. This work will inform future project and procurement design for faster electrification strategies.

Any time the city allocates funding to address a pressing need, there is an opportunity to consider whether climate needs can be addressed concurrently. This is often most cost-effective if done from the earliest stages of project planning. To enable this type of holistic, forward-looking planning, the city has funded an Advanced Capital Planning system at the Department of Design and Construction (DDC).[9] Building on initial phases, this centralized database will consolidate various datasets into one portal that provides comprehensive detail on capital assets, including new data that will be gathered on-site using a new building assessment tool. In addition to improving capital planning around facility conditions, the system will enable agencies to determine if facilities need protection against climate threats and if outdated fossil fuel systems can be replaced with clean electric systems. The system will also enable strategic long-term planning across the city's portfolio for emissions reductions and resiliency.

In the coming decades, New York City will face more frequent and longer heatwaves, and trees can play a critical protective role by providing shade and reducing air temperatures on hot days.[10]

Funding for expanded forest restoration, planting, and invasive species removal will help support expanding tree coverage. Funding allocated for the development of a citywide Urban Forest Plan will leverage data collection and analysis, city agency and external expertise, and community engagement to help the city to plan to meet its goal of 30 percent tree canopy cover citywide.[11]

The city is experiencing more severe storms that bring intense rainfall and result in dangerous flooding; in 2021, 13 people in New York City lost their lives as a result of Hurricane Ida.[12] New Yorkers need real-time information during rain events to understand when dangerous situations may arise. The city partners with researchers and professionals at New York University and the City University of New York to operate FloodNet, a system of sensors that provide real-time information about flooding and a public data dashboard.[13] Additional funding will expand this program, as well as continue the Business Preparedness and Resiliency Program's Risk Assessment and Grant Program which provides on-site risk assessments for eligible businesses in areas at risk of flooding.

Additional Funding Highlights

In 2024, the New York City Department of Environmental Protection (DEP) published a Stormwater Analysis highlighting that climate change is bringing more severe rainstorms to New York City, putting residents at growing risk from flood events.[14] The analysis describes the tools the city uses to manage stormwater, including grey infrastructure such as sewers and pumps to drain the streets, green infrastructure to absorb water into the ground, Bluebelt systems to retain and divert water, and cloudburst management systems to contend with heavy, short downpours. Funding has been allocated to various new stormwater management projects, including sewer upgrades, drainage improvements, a cloudburst hub in the Rochdale and Laurelton neighborhoods in Queens, and Bluebelts in Brooklyn, Queens, and Manhattan.

Making New York more sustainable and resilient also provides economic opportunities. The Executive Budget funds a new workforce development program which will provide training for youth in underserved communities to maintain rain gardens in Brooklyn and Queens.

Funding is allocated to revitalizing the Brooklyn Marine Terminal, which in addition to other improvements will add capacity for marine transportation of freight, benefiting local supply chains and reducing the need for polluting truck traffic through city neighborhoods. Funding is also allocated to develop a resilient waterfront at the New York Climate Exchange on Governors Island, which will provide shoreline protection and create new public space. The Exchange will be a hub for climate research, education, and green jobs, as outlined in the city's 2023 Green Economy Action Plan.[15]

The city has also allocated funding for the Future of Fifth project, which will transform Fifth Avenue between Bryant Park and Central Park.[16] In addition to expanded sidewalks which will improve pedestrian safety and encourage more foot traffic to local businesses, the project will add new trees, planters, and stormwater infrastructure to help protect against heat and flooding. These major projects show how climate strategies naturally align with other priorities including transportation and economic development.

Making Building Decarbonization Affordable and Accessible

Over the last year, OMB has worked with city partners, including MOCEJ, DOB, DCAS, the New York City Housing Authority (NYCHA), and the Department of Housing Preservation and Development (HPD), to help implement LL97, including by making building improvements more affordable and accessible. Highlights include:

Renewal of the Affordable Housing Rehabilitation Program (J-51 Reform) tax abatement

The J-51 tax benefit has supported the preservation of affordable housing across the city for decades.[17] Working with HPD, OMB found that an updated J-51 can also support building decarbonization by providing tax benefits for eligible energy efficiency and electrification retrofits benefitting condo and co-op buildings that are subject to LL97 requirements.

FIG. 2.1 | NEW CLIMATE INVESTMENTS AND REALLOCATIONS IN THE FY 2026 NOVEMBER, PRELIMINARY, AND EXECUTIVE PLANS

Program	Funding (in Millions)
CAPITAL	**FY 2025-2035**
Stormwater management projects	$1,508.8
Future of Fifth Avenue	$402.7
Expanded rooftop solar on city facilities	$295.0
Brooklyn Marine Terminal	$109.2
New York Climate Exchange resilient waterfront	$26.0
School geothermal system	$11.6
Advanced Capital Planning System (capital portion)	$3.5
EXPENSE	**FY 2026**
Forestry management	$3.0
Green infrastructure workforce development	$1.5
Advanced Capital Planning System (expense portion)	$1.4
Business Preparedness and Resiliency Program	$1.2
Additional staff for LL97 enforcement	$1.2
Expanded DOB NOW portal for LL97 compliance	$0.6
Flood sensor network expansion	$0.5
Electric hot water systems at NYPD facilities	$0.2
Urban Forest Plan	$0.1

Figure Source: NYC OMB

This analysis supported the city's adoption of the Affordable Housing Rehabilitation Program (J-51 Reform) in December of 2024, which covers projects completed through June of 2026. If further extended by the New York State legislature, the program could lower emissions across eligible condos and co-ops and could help hundreds of these buildings reach compliance with LL97 by 2030.

Implementation of the GreenHOUSE Fund

The GreenHOUSE Fund provides a new pathway for LL97 compliance.[18] Under this program, building owners may purchase carbon offsets for up to 10 percent of their LL97 emissions cap and the revenues from these offsets are invested directly into electrification projects for affordable housing developments through HPD's Resilient & Equitable Decarbonization Initiative.[19] The program channels funding toward projects that reduce emissions and improve air quality in affordable multifamily housing.[20] It advances climate, equity, and affordability goals by enabling improvements in buildings where resources for necessary upgrades may otherwise be lacking.

Advancing Large-Scale Renewable Energy

The FY 2025 Climate Budgeting emissions forecasts showed that a zero-carbon electric grid is crucial to New York City's ability to achieve net-zero emissions by 2050. Although renewable electricity development is largely driven by state policy, the city can help support this transition. Last year in the FY 2025 Executive Budget, the city committed additional funding to developing an offshore wind hub at the South Brooklyn Marine Terminal.[21] This support has proven critical; since April 2024, five major offshore wind projects in New York waters have been cancelled due to rising construction costs.[22] However, the major offshore wind project Empire Wind 1 was able to secure all necessary federal and state permits and begin construction in the summer of 2024, in part because of the city's funding.[23] Despite this progress, a halt-work order was issued in April 2025 by the federal government, introducing additional risk to this project.[24]

Leveraging the Climate Budgeting Process

During the first year of Climate Budgeting, the city's Climate Alignment Assessment of the capital plan revealed that with better advanced planning, the city has significant opportunities to redirect investments in new fossil-fuel-powered systems and to ensure that public buildings and infrastructure are designed to withstand and protect New Yorkers from climate hazards like extreme heat and flooding. Acting on these opportunities requires considering climate implications from the early stages of project planning. In the fall of 2024, the Budget Director distributed a Climate Budgeting memo instructing agencies to identify projects presenting opportunities for electrification, and to report whether projects in high heat- or flood-risk areas would mitigate those risks.

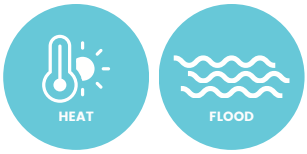
As OMB and city agencies fully integrate Climate Budgeting into existing processes, climate considerations will be incorporated earlier and more often in capital project scoping and decision-making, maximizing opportunities to reduce emissions and enhance resiliency while using city funding efficiently.

SOURCE: NYC DEP

3. Progress Toward Achieving the City's Climate Goals

The Climate Budgeting cycle begins by assessing the city's progress toward climate goals and how planned capital projects align with emissions-reduction and resiliency priorities. The findings outlined in this section reflect updated and new OMB analysis that will be used to focus Climate Budgeting efforts for the next year.

RESILIENCY TO HEAT AND FLOODING: KEY FINDINGS



Climate Resiliency Investments

1 New York City is investing nearly $12 billion in capital projects that address flood risk and more than $2 billion in projects that address extreme heat risk, inclusive of more than $1 billion for projects that address both.

2 An additional $46.5 billion is allocated to capital projects with elements that contribute to flood resiliency, heat resiliency, or both.

3 Capital projects totaling over $1 billion in high-flood-risk areas and on the waterfront represent potential opportunities for additional flood protection.

4 Capital projects totaling over $200 million in high-heat-vulnerability areas represent potential opportunities for additional heat protection.

The City's Resiliency Exposure Inventory:

5 Identifies areas where additional intervention may be needed.

6 Can be used to compare neighborhoods and identify potential scalable solutions to reduce climate risk.

7 Highlights where relatively lower adaptation levels and higher vulnerability overlap to put communities at greater risk from climate hazards.

The City's Outdoor Heat Forecast:

8 Allows the city to project future progress toward stated targets that can help combat increasing heat.

9 Estimates future benefits of city actions and helps identify remaining heat-related risks.

10 Allows the city to assess the impact of interventions in targeted locations.

The City's Coastal Flooding Forecast:

11 Spotlights which neighborhoods are expected to receive, and which may lack, currently planned initiatives.

12 Aids the city in evaluating future flood protection plans and investments for their local community impacts.

13 Enables the city to compare future scenarios and assess the potential benefits of various resiliency strategies and plans.

GREENHOUSE GAS EMISSIONS AND AIR QUALITY: KEY FINDINGS

Emissions-Reduction Investments

1 New York City is investing more than $8 billion in capital projects for decarbonization across sectors.

2 Over $14 billion of additional capital is allocated to projects that reduce emissions while advancing other city priorities, such as investments in mass transit, bus and bike networks, and facility upgrades.

3 Capital projects totaling $7 billion include the purchase or upgrade of fossil-fuel-powered systems—many of which reduce emissions in the near-term—representing opportunities to consider alternative approaches.

4 Technological obstacles remain to decarbonizing specialized vehicles and equipment.

Citywide Emissions Forecast

5 If fully executed, current policies would reduce emissions in New York City 78 percent by 2050.

6 Delays in critical large-scale renewable energy projects have slowed expected emissions reductions.

7 New York State's commitment to a zero-carbon electric grid by 2040 is the most significant driver of emissions reductions in New York City.

8 Building decarbonization is the most impactful emissions-reduction strategy within city control.

9 Additional action is needed to meet 2030 and 2050 science-based emissions targets, including New York City's mandate of net-zero emissions by 2050.

10 Actions needed to achieve the city's net-zero emissions goal will reduce local air pollution and improve public health.

City Government Emissions Forecast

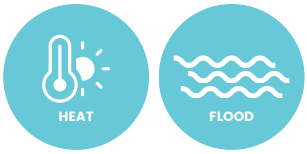
11 New York City government will achieve its 2025 emissions-reduction target in 2027, and exceed its 2030 target, but further action is needed to reach net-zero by 2050.

12 The city government's purchase of 100 percent renewable electricity beginning in 2027 will eliminate 1 million tCO_2e annually and yield even greater emissions reductions as buildings and vehicles electrify over time.

13 Planned energy efficiency and electrification projects in city-owned and-operated buildings will yield 500,000 tCO_2e of cumulative emissions reductions over the next 10 years.

14 Seventy-four percent of the city government's remaining emissions in 2050 are expected to come from fossil fuel combustion in city-owned and-operated buildings.

RESILIENCY TO HEAT AND FLOODING



Climate Resiliency Investments

The investments that New York City makes today will continue to define its built environment for decades to come, influencing how millions of current and future New Yorkers experience the impacts of climate change.

The expense budget primarily funds operations and services for New Yorkers, and the capital budget funds the long-term projects that shape the city's infrastructure, public spaces, and coastlines. Investments to build a more resilient city span the expense and capital budgets of all agencies. Climate Budgeting examines funding across all agencies to understand citywide investments in resiliency and identify types of projects that offer the opportunity to do even more. For the purposes of this document, the terms resiliency, resilience, and adaptation are used interchangeably to refer to the strategies available to reduce the risk from climate threats. In this document, capital funding amounts include the current fiscal year (FY 2025) plus the Ten-Year Capital Strategy (FY 2026–FY 2035).

1. New York City is investing nearly $12 billion in capital projects that address flood risk and more than $2 billion in projects that address extreme heat risk, inclusive of more than $1 billion for projects that address both.

New York City has a long history of dedicating resources to protect the city from climate threats, and it continues to invest in coastal resiliency protections, stormwater flood management, and extreme heat mitigation strategies to address long-term climate risk.

New York City is susceptible to coastal and stormwater flooding.[25] Coastal flooding refers to waters that flow onto land from rising sea levels or waves driven by storm events. Stormwater flooding refers to water that comes from rain or snow and can occur in any part of the city, not just along the coast. Stormwater flooding is sometimes called inland or rainfall flooding.

Investments in flood resiliency include those that address coastal flood risk, such as neighborhood-scale flood barrier projects, and stormwater flood risk, including grey infrastructure such as sewer buildouts and green infrastructure such as rain gardens, green roofs, and porous pavement.

The city's planned investments in large neighborhood-scale coastal flood protection projects and targeted interventions total $1.7 billion and include Brooklyn Bridge-Montgomery Coastal Resilience, East Side Coastal Resiliency, Seaport Coastal Resilience, the Battery Coastal Resilience, Hunts Point Energy Resiliency, Red Hook Coastal Resiliency, Tottenville Shoreline Protection Project, the Raised Shorelines initiative, and coastal protection projects managed by the U.S. Army Corps of Engineers. An additional $817 million is planned for other coastal resiliency projects including Harlem River Park and Greenway, East River Esplanade, Riverside Park, Bayswater Park, and the reconstruction of piers, seawalls, and other coastal infrastructure. Projects are designed to achieve different goals; some protect specific parks or facilities, while others are designed to prevent tidal or storm-related flooding in surrounding communities.

Stormwater flooding is primarily addressed through a network of grey and green infrastructure to improve drainage during extreme weather events. The city has planned investments totaling $2.4 billion for sewer buildout projects to directly address chronic stormwater flooding in Southeast Queens and at other priority locations.

The city has allocated $1.4 billion in rain gardens, porous pavement, and other green infrastructure, and an additional $574 million in tree canopy preservation and expansion, to retain stormwater from streets, sidewalks, and other hard surfaces before it can enter the sewer system or cause local flooding.[26] $512 million is planned for cloudburst management projects, which use a combination of methods that absorb, store, and transfer stormwater to minimize flooding from sudden, heavy downpours.[27]

$131 million is allocated to preserve and enhance the city's natural wetlands in addition to $865 million for the Bluebelts program to preserve and enhance natural drainage corridors to convey, store, and filter stormwater.[28]

In addition to the investments above that directly impact resiliency, planned capital funding includes $10.7 billion for state-of-good-repair work for citywide sewers and efforts to prevent combined sewer overflows, which occur when a mix of stormwater and untreated sewage discharge into the city's waterways during heavy rainstorms.[29] While maintaining sewers in a state of good repair and managing combined sewer overflow is not considered a direct investment in flood resiliency, this ongoing work is critical to the city's long-term ability to manage stormwater and keep waterways clean.

FIG. 3.1 | CAPITAL INVESTMENTS IN FLOOD RESILIENCY (FY 2025-2035)

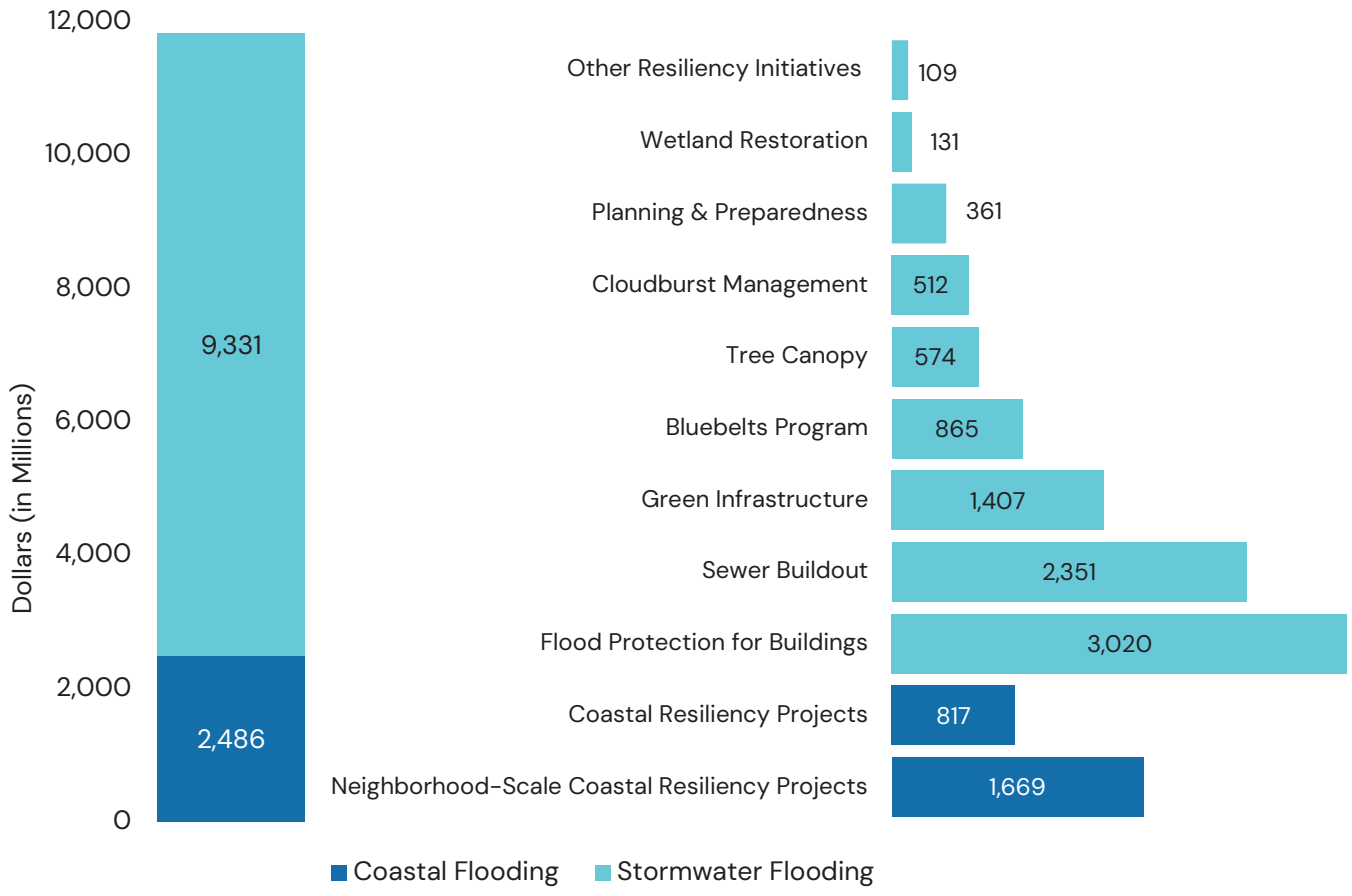


Figure Source: NYC OMB

The city has allocated $3 billion to upgrade city facilities, including schools, hospitals, and police precincts, for long-term protection from flood risk. These upgrades include elevating mechanical and electrical systems above future flood levels and installing floodwalls and flood gates to keep water out. Planned capital funding also includes $109 million for other projects that support efforts to address flooding, such as specialized vehicles for DEP use.

Investments in heat resiliency include expansion of tree canopy and green space, expanding access to public pools, and adding cooling features in buildings, parks, and recreation spaces. Planned capital funding includes $574 million for tree canopy preservation and expansion and $131 million for projects to preserve and enhance the city's wetlands.

PlaNYC identifies both of these investments as key strategies to bolster the city's resiliency to extreme heat for their ability to provide shade and reduce local temperatures.[30]

Other planned investments that help keep the city livable in the face of rising temperatures include $431 million for public pools and associated facilities to help New Yorkers stay cool during hot weather; $589 million for heating, ventilation, and air conditioning (HVAC) and other cooling upgrades to buildings; and $20 million for cooling features in city parks and playgrounds such as drinking fountains and spray showers.

FIG. 3.2 | CAPITAL INVESTMENTS IN HEAT RESILIENCY (FY 2025-2035)

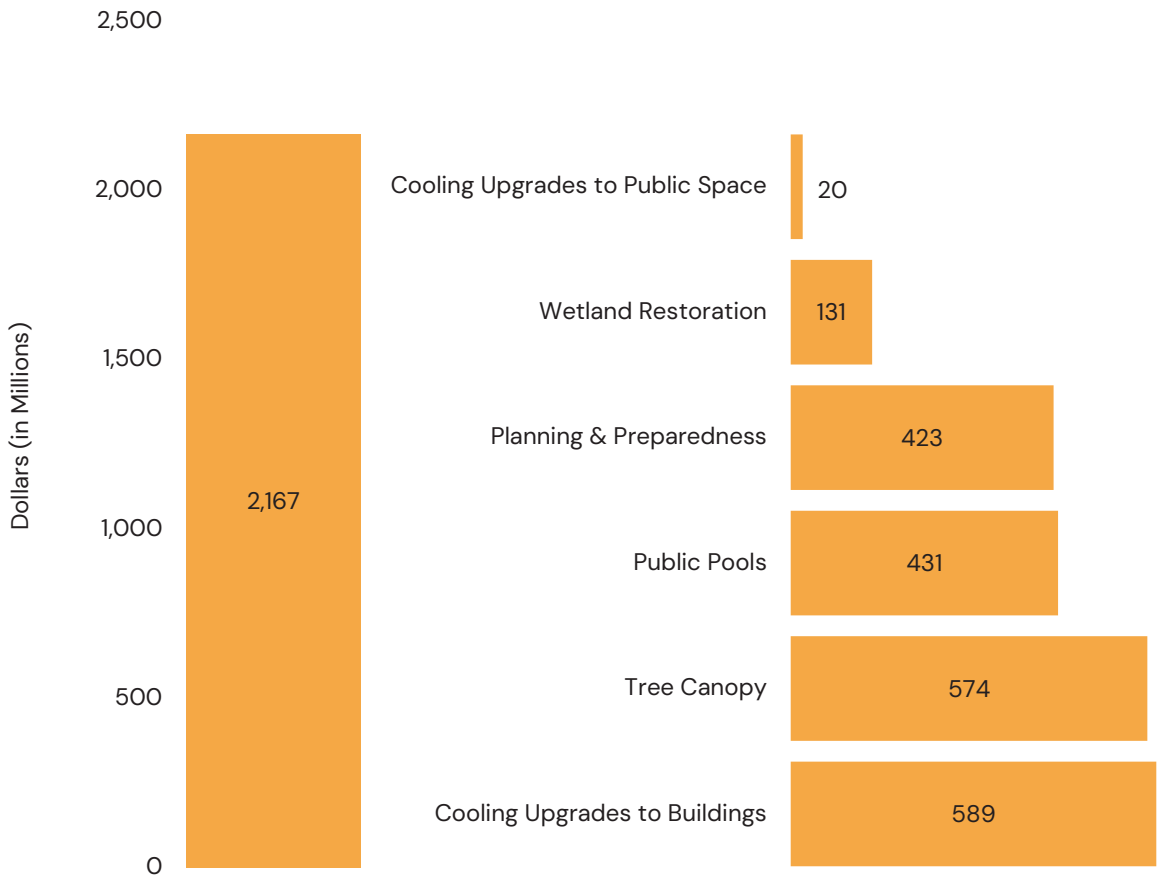


Figure Source: NYC OMB

CLIMATE ALIGNMENT ASSESSMENT: CLIMATE RESILIENCY

OMB uses its annual Climate Alignment Assessment of the city's capital projects to analyze how planned spending aligns with long-term climate needs, including strengthening resiliency to flood and heat risk.

Capital projects are evaluated to determine whether they use relevant design standards, such as the city's Climate Resiliency Design Guidelines (CRDG), or support resiliency initiatives, such as the PlaNYC goal to reach 30 percent tree canopy cover citywide.[38] Projects determined to have resiliency impacts are rated according to the criteria in Figure 3.3. While all projects are assessed, those where climate-specific details are not yet available remain pending rating, to be revisited with each annual evaluation.

In advance of the FY 2026 Climate Budgeting cycle, OMB revised its rating scheme to capture Missed Opportunities to incorporate resilient design elements for projects in areas at elevated heat or flood risk. To learn more about this update, see Missed Opportunities on page 20.

FIG. 3.3 | CLIMATE ALIGNMENT ASSESSMENT: RESILIENCY METHODOLOGY

Assessment Rating	Project Criteria	Flood Resiliency Examples	Heat Resiliency Examples
Aligned	The project's primary intent is to increase resiliency to flooding or extreme heat. The project furthers one of the resiliency goals in PlaNYC or other resiliency plans. If applicable, it is designed to withstand risk through the end of its useful life using the CRDG or other equivalent standards. Resiliency-related scope constitutes most or all of the project cost.	Green infrastructure Neighborhood-scale coastal protection project Floodproofing building, following CRDG	Tree planting and maintenance Public pool construction Upgrade to facility cooling capacity to handle increasing temperatures
Aligned Component	The project provides flood or extreme heat resiliency benefits, but its primary intent is not resiliency. The project furthers one of the resiliency goals in PlaNYC or other resiliency plans. If applicable, it is designed to withstand risk through the end of its useful life using the CRDG or equivalent standards. Improving resiliency could be a co-benefit of the project, or the project may be a mix of resiliency scope and unrelated scope.	Playground renovation including tree planting and stormwater retention Building renovation that includes elevating critical systems	Playground renovation including tree planting and spray showers Building renovation that includes upgrade to cooling capacity to handle increasing temperatures
Missed Opportunity	The project does not incorporate flood/extreme heat resiliency strategies and is located in an area of elevated risk.	Building renovation in a high-flood-risk area, without flood mitigation design features	Building renovation in a high-heat-vulnerability area, without cooling features

Figure Source: NYC OMB

Some types of projects can help the city address risks posed by multiple climate hazards at once. Planned capital funding includes $1.1 billion for projects that address both flood and extreme heat risk, contributing to the total allocations for each risk. For example, trees' canopies provide shade and outdoor cooling, while their permeable soils can increase water retention and can help to manage runoff.[31]

Similarly, wetlands absorb heat and reduce local air temperatures while providing additional natural protection against coastal and inland flooding by absorbing and slowly releasing excess water.[32] Projects that affect the continuity of essential services and operations during weather-related power outages, floods, storms, and other natural disasters also support resiliency to multiple climate hazards. For example, emergency backup power ensures that critical facilities can continue their operations during these events.

2. An additional $46.5 billion is allocated to capital projects with elements that contribute to flood resiliency, heat resiliency, or both.

Projects to keep infrastructure and facilities in good repair can contribute to climate resiliency by incorporating resilient design strategies that protect city assets and help mitigate heat and flood risk. Planned capital funding includes $46.5 billion for projects with elements that contribute to heat resiliency, flood resiliency, or both.

Although not yet mandated, many projects are designed using the city's Climate Resiliency Design Guidelines, which provide instructions on how to use forward-looking climate projections in the design of city facilities.[33] For example, DEP's Bureau of Engineering Design and Construction, which oversees nearly $15 billion worth of capital projects including water supply infrastructure and wastewater treatment plants, uses the guidelines to inform the design of every project it builds. Per local law, eligible capital projects will be required to follow the Climate Resiliency Design Guidelines starting in 2027.[34]

Allocated capital funding includes $9.7 billion for building and facility upgrade projects that incorporate flood resiliency components such as waterproofing, elevating critical systems, and installing drainage. Upgrades along the city's waterfront totaling $1.6 billion for infrastructure such as piers, boardwalks, and ferry landings contain flood resiliency elements.

Expanding permeable surface cover and drainage also contributes to the city's flood resiliency; $3.1 billion is allocated for projects in city parks, public spaces like playgrounds and plazas, and city streets that incorporate these elements into their scopes.

Heat-mitigation measures, such as new or improved cooling, heat-resistant materials, and expanded green space, are included in nearly $15 billion of buildings and facility projects across the capital portfolio.

MISSED OPPORTUNITIES

Projects may be identified as having missed an opportunity to incorporate resilient design elements if they are located in areas with elevated climate risk, such as areas with high heat vulnerability or flood risk. This differs from previous Climate Alignment Assessments, where projects were identified as Not Aligned, defined as "increasing vulnerability to flooding" or "increasing vulnerability to extreme heat." A "missed opportunity" does not necessarily reduce resiliency or increase vulnerability to climate risks, or mean that a project should not proceed as intended. Instead, this updated framework facilitates a broader analysis of location, asset type, and other features, and will help the city draw conclusions about potential gaps in its approach to protecting residents and assets to take into consideration when planning future projects.

Planned capital funding also includes $12.6 billion for projects that include tree planting or expanding green space, which help reduce the urban heat island effect.[35] This includes $4.2 billion for sewer projects that take advantage of street work to plant trees, $1.9 billion for projects along the waterfront, $1.3 billion for green infrastructure, and $5.1 billion for city parks, public spaces, and streets.

Projects that are designed using the Climate Resiliency Design Guidelines or otherwise incorporate elements that help address heat and flooding show that work across the city's vast capital portfolio provides opportunities to address climate risks where appropriate and cost-effective.

3. Capital projects totaling over $1 billion in high-flood-risk areas and on the waterfront represent potential opportunities for additional flood protection.

Analysis of planned capital projects identified $1.2 billion for projects planned through FY 2035 located in high-flood-risk areas or along the city's waterfront that do not include flood resiliency measures. These types of projects represent opportunities to consider incorporating resilient design features to protect both capital assets and New York City residents from long-term climate risk, where feasible and appropriate.

These investments are primarily waterfront infrastructure, such as piers, ferry, shipping, and cruise infrastructure, and marinas, as well as city buildings and facilities. Nearly 70 projects in city buildings located in high-flood-risk areas (or along the waterfront) were found not to be using flood resiliency guidance, such as the city's Climate Resiliency Design Guidelines, Federal Emergency Management Agency (FEMA) Guidelines, or other agency practices.[36]

These capital projects often involve large, comprehensive, and costly upgrades to buildings' HVAC, electrical, and mechanical systems. In these cases, opportunities to incorporate resilient design elements could include elevating critical systems above future flood levels, incorporating exterior and interior floodproofing measures, or adding permeable surfaces, which could help protect investments against long-term flood risk.

In the future, new resources including the Climate Resiliency Design Guidelines project evaluation metric, and additional coastal resiliency planning led by the DEP Bureau of Coastal Resilience, will provide further guidance to agencies when designing capital projects to best take advantage of these opportunities.

4. Capital projects totaling over $200 million in high-heat-vulnerability areas represent potential opportunities for additional heat protection.

Analysis of the planned capital projects identified $202 million for projects that are located in high-heat-vulnerability areas but do not include heat-mitigation measures. These types of projects represent opportunities to incorporate resilient design features to protect residents from the impacts of extreme temperatures.

Nearly 30 projects in city buildings were found to be in high-heat-vulnerability areas but not using indoor heat resiliency guidelines. Most of these projects relate to renovation of roofs, windows, and envelopes of public buildings such as police precincts, hospitals, and public libraries. Opportunities to improve occupant thermal safety while reducing energy consumption include window glazing and shading, vegetated or light-colored roofs, and passive ventilation design.

This analysis will inform future capital planning. Whether it is appropriate or feasible to incorporate heat or flood resiliency strategies must be determined on a case-by-case basis. In some cases, such strategies may be infeasible, cost-prohibitive, or unnecessary, but in other cases, they may present opportunities to take advantage of capital projects to augment resiliency. As new projects are proposed, the Climate Budgeting Intake Form now helps identify these opportunities. A forthcoming project evaluation metric that will be part of the Climate Resiliency Design Guidelines will ensure that all relevant projects are designed to withstand future heat and flood conditions.[37]

EXPENSE HIGHLIGHTS: CLIMATE RESILIENCY

Efforts to build a more resilient city span budgets and initiatives across agencies. For example, maintenance of green infrastructure, catch basins, and Bluebelts keeps infrastructure working during rain events.[39] Regular maintenance of street and park trees and programs such as CoolRoofs workforce development help reduce the urban heat island effect.[40] Real-time FloodNet flood monitoring sensors provide critical information to the public during rain events, public cooling centers provide refuge during hot weather, and the Be a Buddy program connects vulnerable residents to wellness-check volunteers and city services.[41] Efforts such as sewer system modeling, a Cool Corridors study to identify a toolkit of strategies that can be employed on streets to help address rising temperatures, and developing standardized shoreline protection practices help inform future resiliency planning.[42]

In many cases, there is not a distinct budget for resiliency within agency budgets; rather, these types of efforts are embedded into operations. Therefore, the amounts reported here should not be construed to represent every dollar the city is spending on climate resiliency, but as highlights of major projects and programs. Figure 3.4 shows funding for projects in the city's FY 2026 Executive Budget that are specifically associated with climate resiliency initiatives.

FIG. 3.4 | CLIMATE RESILIENCY EXPENSE BUDGET HIGHLIGHTS

Resiliency Category	Example Investments	FY 2026 Executive Budget (in Millions)
Coastal Flooding	Coastal resilience initiatives in PlaNYC, including developing standards for construction of coastal infrastructure.	$2.9
Stormwater Flooding	Funding added since Hurricane Ida to enhance resiliency to stormwater flooding, such as green infrastructure and Bluebelt maintenance and increasing catch basin cleaning.	$41.7
Heat	Tree planting and maintenance and roof coatings to reduce internal building temperatures.	$20.1
Planning & Preparedness	Climate-related planning efforts, a program to protect vulnerable New Yorkers during extreme weather events, and sensors providing real-time flood data.	$3.8

Figure Source: NYC OMB

Resiliency Status and Forecasts

While the city is making significant progress to bolster resiliency to climate threats, it needs to understand whether communities, infrastructure, and environments are sufficiently protected. Understanding where investments have the most impact, while projecting future adaptation levels based on known plans, helps the city pursue the strategies that are most beneficial.

Through the Climate Budgeting process, OMB has developed a suite of first-of-their-kind tools to enable the city to assess features of adaptation to heat and flooding in the present and future:

- A **Resiliency Exposure Inventory** tool**,** which evaluates neighborhoods' present levels of adaptation measures, and
- Several **Resiliency Exposure Forecast** tools, which assess the impacts of planned adaptation actions and future residual risks after those projects and plans are put in place.

The Value of These New Tools

Climate Budgeting aims to help New York City achieve its climate goals, including through the creation of new tools to assess progress and needs, which can then be used by city agencies in project development and long-term planning and by OMB when evaluating proposals for funding. The Resiliency Exposure Inventory and the Resiliency Exposure Forecasts give the city novel methods to understand the combined effects of its diverse and widespread climate adaptation work and quantify the impacts of different types of measures and actions under consideration. This first iteration of these tools lays the groundwork for more comprehensive analysis in the future, such as benefit-cost analysis informed by long-term forecasts.

While the city generates myriad data and plans on resiliency, it has historically been difficult to use these outputs to assess the city's level of preparedness to existing and future climate threats, because:

- It can be difficult to combine the data (e.g., different metrics, assumptions, scales, timelines, outputs)
- Detailed methodologies are not always publicly available
- Most data are backward-looking, while climate projections reflect future conditions
- Best-available information on climate threats and adaptation is not static
- Information may not be accompanied by guidance for decision-making

In the context of resiliency, risk comprises three elements—hazard, exposure, and vulnerability.[43] The city already has adopted clear projections of harmful climatic conditions ("hazard") from the NPCC and understands many of the social factors that may put people at elevated risk, such as income and racial disparities ("vulnerability"). The Resiliency Exposure Inventory and Forecast tools evaluate "exposure," or the people, property, and systems in an area affected by a hazard.

This work provides the city with an additional resource to more thoroughly evaluate the layered resiliency work occurring across neighborhoods, to see where investments and interventions are present and in what forms, and to discern which neighborhoods remain more exposed and may be in need of additional intervention. These tools can be used in tandem with other resources such as the city's Heat Vulnerability Index and Flood Vulnerability Index, which rate neighborhoods based on socio-economic factors as well as physical hazards that put residents at risk, or hazard-specific datasets, such as those provided by the NPCC on future climate change conditions.[44] The Resiliency Exposure Inventory and forecast tools will be updated annually, and OMB will work with MOCEJ and agency partners to expand upon the analysis so that Climate Budgeting can best support city efforts to increase resiliency.

Resiliency: Inventory of Present Conditions

The Resiliency Exposure Inventory merges existing data to provide an integrated, neighborhood-level view of physical adaptation measures to heat and flooding. The inventory will help OMB support city partners in refining strategies for protecting New Yorkers and deploying effective measures across neighborhoods, by providing an overarching view that spans sectors, agencies, mandates, and resiliency strategies, including highlighting gaps and opportunities.

The inventory generates scores based on present flood and heat adaptation measures by neighborhood across the city. Higher scores indicate greater adaptation levels to each hazard (lower residual exposure). Each neighborhood's score is relative to other neighborhoods; a neighborhood with the highest score is assessed to have the greatest relative level of adaptation measures, but overall adaptation can always be improved. While no single tool yet fully captures resiliency, the inventory adds unique perspective and can be used alongside the city's vulnerability and hazard tools to inform planning and investment decisions.

5. The inventory identifies areas where additional intervention may be needed.

For example, 57 percent of New York City neighborhoods overlap with the present-day 100-year floodplain. The city has had flood-resistant requirements in Building Codes for many years, but not all existing buildings must comply. On average, 22 percent of existing residential units within these at-risk areas are likely to have incorporated protections, through the building permitting process. Only 34 percent of residential buildings at risk have financial protections through the National Flood Insurance Program.[45] The city's coastal infrastructure program for neighborhood-scale projects is still in its early stages, and the impact of ongoing and planned projects will be factored into this inventory as they come online.

6. The inventory can be used to compare neighborhoods and identify potential scalable solutions to reduce climate risk.

For example, Midwood, Brooklyn and Williamsbridge-Olinville, Bronx have similar population densities and building heights and counts, but different inventory scores for outdoor heat exposure. This is driven by Williamsbridge-Olinville's relatively high level of cool roof cover, which improves resiliency to extreme heat.

7. The inventory highlights where relatively lower adaptation levels and higher vulnerability overlap to put communities at greater risk from climate hazards.

For example, residents and schoolchildren in East New York-New Lots, Brooklyn and Castle Hill-Unionport, Bronx have low relative levels of effective indoor cooling, and these neighborhoods also have high overlap with Environmental Justice Areas as defined by MOCEJ's EJNYC Report.[46]

COASTAL STORM FREQUENCIES AND INTENSITIES

Storms are typically classified by how often they occur (frequency) and how severe they are (intensity). Generally, the city experiences frequent milder storm events each year, but only a few major events. A "100-year storm" refers to an event so powerful that it has just a 1 percent or greater chance of occurring in any given year. In contrast, a 10-year storm (10 percent or greater chance of occurring in any given year) is more likely and less intense than a 100-year storm. The city could see two 100-year storms in the same year, because these labels represent statistical probabilities rather than absolute guarantees. Over time, more intense events are expected to occur more frequently—so today's 100-year storm intensity will be more common in the future.

Present Conditions: Context

The Resiliency Exposure Inventory aggregates datasets into one neighborhood-level resource, using more than 30 unique key performance indicators (KPIs), grouped into 15 categories, across four hazards—Outdoor Heat, Indoor Heat, Coastal Flooding, and Stormwater Flooding—to form a composite baseline score of adaptation. The same KPI can be included in multiple categories.

OMB conducted research and collaborated with city and external experts to determine the KPIs most relevant for understanding the presence of adaptation strategies across neighborhoods that are meaningful for reducing risk to New Yorkers' health and wellbeing, physical assets and infrastructure, and natural systems.

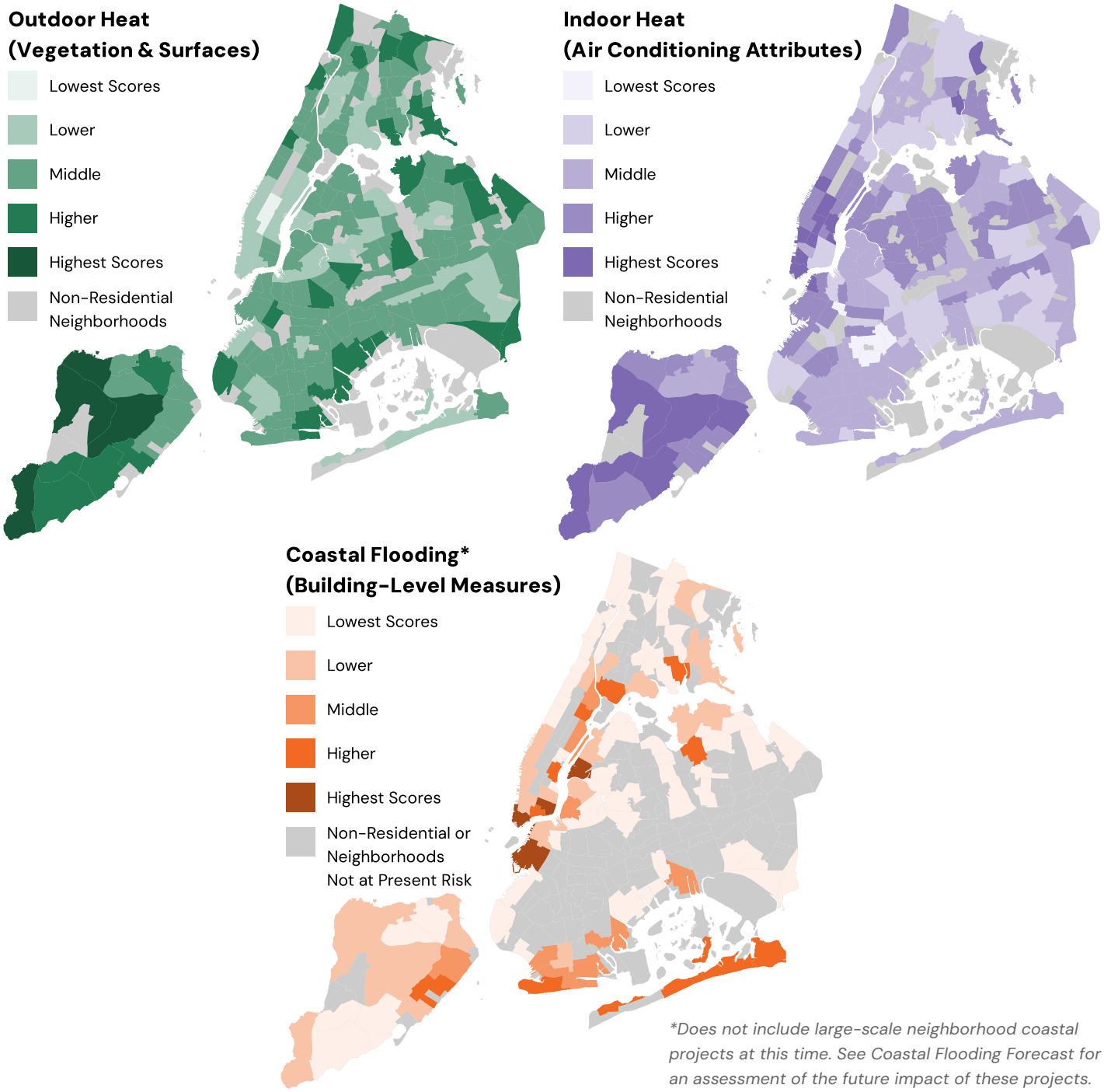
These KPIs were combined into relative scores by neighborhood. This baseline set of indicators includes the most recent data available at the time of analysis; future iterations will include additional indicators and updates as appropriate. Currently, the KPIs reflect existing physical adaptation measures (e.g., floodproofing, tree canopy), though social and community resiliency metrics are being evaluated to make the analysis more comprehensive.

FIG. 3.5 | BASELINE ADAPTATION INDICATORS, BY HAZARD

Hazards by Category	Key Performance Indicators		
Indoor Heat: Residential A/C, School A/C	Functional A/C prevalence – residences	Albedo	Green infrastructure installations
	A/C prevalence – NYCHA	Adjacency to green areas	Area served by sewers
Outdoor Heat: Trees, Permeable surfaces, Light-colored surfaces, Wetlands	A/C prevalence – school classrooms	Tree canopy cover	Separate sewer coverage
	A/C prevalence – school assembly	Contiguous canopy cover	Buildings at risk protected by contemporary building code requirements
Stormwater Flooding: Trees, Permeable surfaces, Green infrastructure, Wetlands, Sewer coverage	A/C capacity – school classrooms	Tree canopy over greenspace	Buildings at risk protected by previous building code requirements
	A/C capacity – school assembly	Fulfilled tree potential	Residential units at risk protected by contemporary building code requirements
Coastal Flooding: Area physically protected: buildings, critical buildings, residential units; Area financially protected	Central A/C – residential	Tree health	Residential units at risk protected by previous building code requirements
	Central A/C – school classrooms	Permeable surface cover	Critical buildings at risk protected by building code requirements
	Central A/C – school assembly	Greenspace cover	Insured buildings
	Cool roof cover	Permeability coefficient	Insured residential buildings
		Wetland area	Insured critical buildings
		Wetland health	
		Tree guards	

Figure Source: NYC OMB
KPIs listed here are included for all four hazards assessed, though stormwater flooding is still in preliminary stages to account for upcoming information on sewer capacity.

FIG. 3.6 | PRESENT ADAPTATION MEASURES: INVENTORY SCORES BY HAZARD



**Does not include large-scale neighborhood coastal projects at this time. See Coastal Flooding Forecast for an assessment of the future impact of these projects.*

Figure Source: NYC OMB

Neighborhoods are assessed based on a suite of adaptation measures for indoor heat, outdoor heat, and coastal flooding separately. Current adaptation levels for each neighborhood are relative to all others and are defined by quintiles at a baseline period from 0 to 100 percent (top quintile of scores denoted as "Highest Scores;" lowest quintile of scores denoted as "Lowest Scores"). Scores are generated based on data available to date; additional indicators will be incorporated in future iterations. Initial KPIs for stormwater flooding have been inventoried and more information will be added in the future to enable a similar, full assessment for this hazard. For more detail, see Figure 3.5 for indicators included in the score, and the Appendix.

STORMWATER FLOODING

In 2024, DEP published a Stormwater Analysis to highlight the growing challenge of extreme rainfall and outline a path to enhance resiliency.[47] To mitigate climate change's growing risks, DEP is assessing the city's stormwater infrastructure and exploring solutions including expanded sewer capacity, green infrastructure, and on-site water retention for private property. As part of the analysis, DEP conducted a prioritization study identifying the areas of the city most in need of stormwater flooding relief by dividing the city into 40-acre grids and evaluating the performance of the stormwater system in each grid under different storm conditions. This identified the areas of the city most in need of stormwater flooding relief, as shown in Figure 3.7.

These tools and future updates to DEP's analysis will offer insights into system-wide challenges and strategies to accelerate progress on stormwater resiliency. OMB's Resiliency Exposure Inventory for stormwater will present a different view by scoring neighborhoods based on the prevalence of various KPIs that influence stormwater management, such as permeable surfaces, green infrastructure, wetlands, and trees. While the KPIs underlying the inventory include sewer system coverage, area, and type, it does not yet incorporate sewer system capacity or volume, which is a crucial component of risk assessment. The inventory will integrate new information from DEP's ongoing stormwater analysis as it becomes available.

FIG. 3.7 | 2024 STORMWATER ANALYSIS REPORT FLOODING AREAS

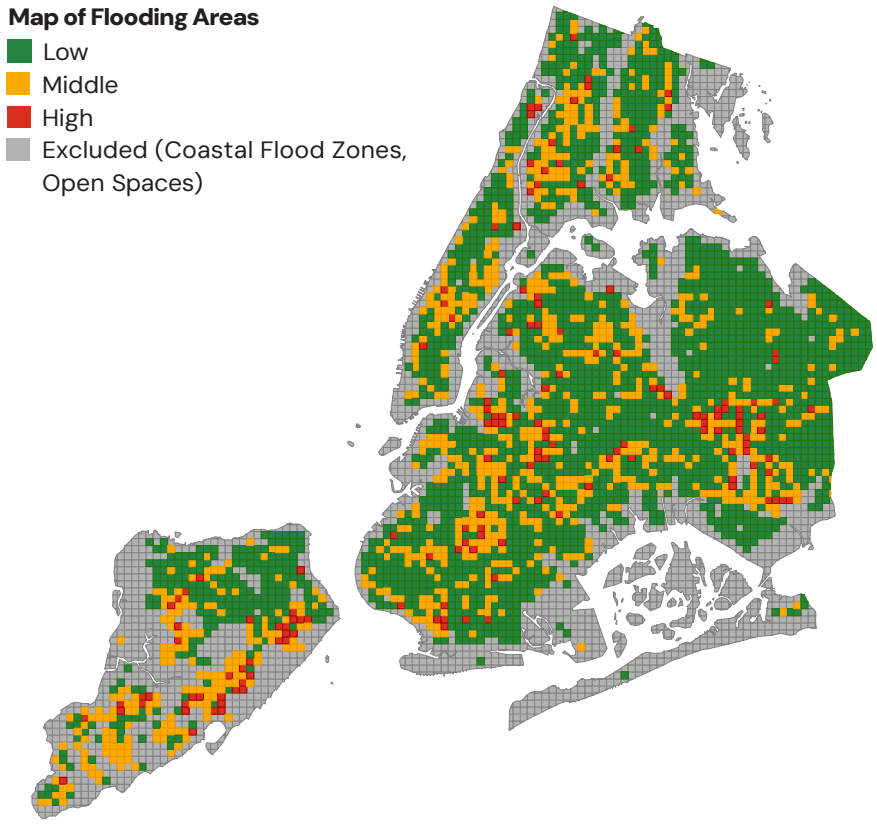


Figure Source: NYC DEP

Resiliency: Forecast of Future Scenarios

Because New York City must plan for both current and anticipated climate conditions, OMB built on its present-focused inventory and developed future-focused Resiliency Exposure Forecasts for heat and flooding. The forecasts allow the city to evaluate the impacts of planned adaptation actions against alternatives (including inaction) in a standardized and unified way, providing a new resource to inform long-term planning and investment decisions.

The NPCC applies global climate research to project future climate conditions at the New York City scale.[48] OMB used these projections to assess what future conditions could be like at the neighborhood level in the absence and presence of planned adaptation actions.

Outdoor Heat Forecast

The Outdoor Heat Forecast is designed to model neighborhood-level impacts of heat management interventions on temperatures through 2050. The first iteration of the forecast assesses expanded tree canopy, a strategy for mitigating outdoor heat. The forecast compares estimated future temperatures with and without meeting the city's tree canopy expansion targets, allowing the city to understand in a new way the potential impact of city work on the day-to-day lives of New Yorkers facing increased heat. Tree canopy is one of many approaches to contend with the city's intensifying heat, and this analysis will expand to incorporate and evaluate additional cooling interventions. This forecast, in conjunction with the city's Heat Vulnerability Index, will enable cost-benefit analysis and inform where targeted interventions could provide the greatest benefit to New Yorkers.[49]

8. The forecast allows the city to project future progress toward stated targets that can help combat increasing heat.

For example, OMB projects that if tree canopy growth is maintained across jurisdictions, which requires efforts by private and public landowners, and expanded through the NYC Parks Department's Neighborhood Tree Planting Program, the city could reach its goal of 30 percent tree canopy by 2050.[50]

9. The forecast estimates future benefits of city actions and helps identify remaining heat-related risks.

For example, expanding tree canopy through overall growth and meeting goals for street tree planting could reduce an average of approximately 2 percent of climate change's anticipated warming citywide by 2050, relative to no action. This initial assessment illuminates that while individual strategies have a quantifiable impact, additional analysis is needed to understand the full range of benefits, such as the cooling effects to individuals from trees' shade, not currently captured in the forecast. The assessment also suggests that no single solution will fully mitigate future heat exposure. OMB will expand this analysis to assess additional cooling interventions, sub-neighborhood scales, and additional benefits to enable cost-benefit analysis.

10. The forecast allows the city to assess the impact of interventions in targeted locations.

For example, areas identified as having high heat vulnerability will experience approximately 67 percent more heat reduction benefit from expanded tree canopy compared to lower-vulnerability neighborhoods, on average.[51]

FIG. 3.8 | PERCENT OF FUTURE OUTDOOR WARMING REDUCED BY PROJECTED TREE CANOPY EXPANSION, BY NEIGHBORHOOD IN 2050

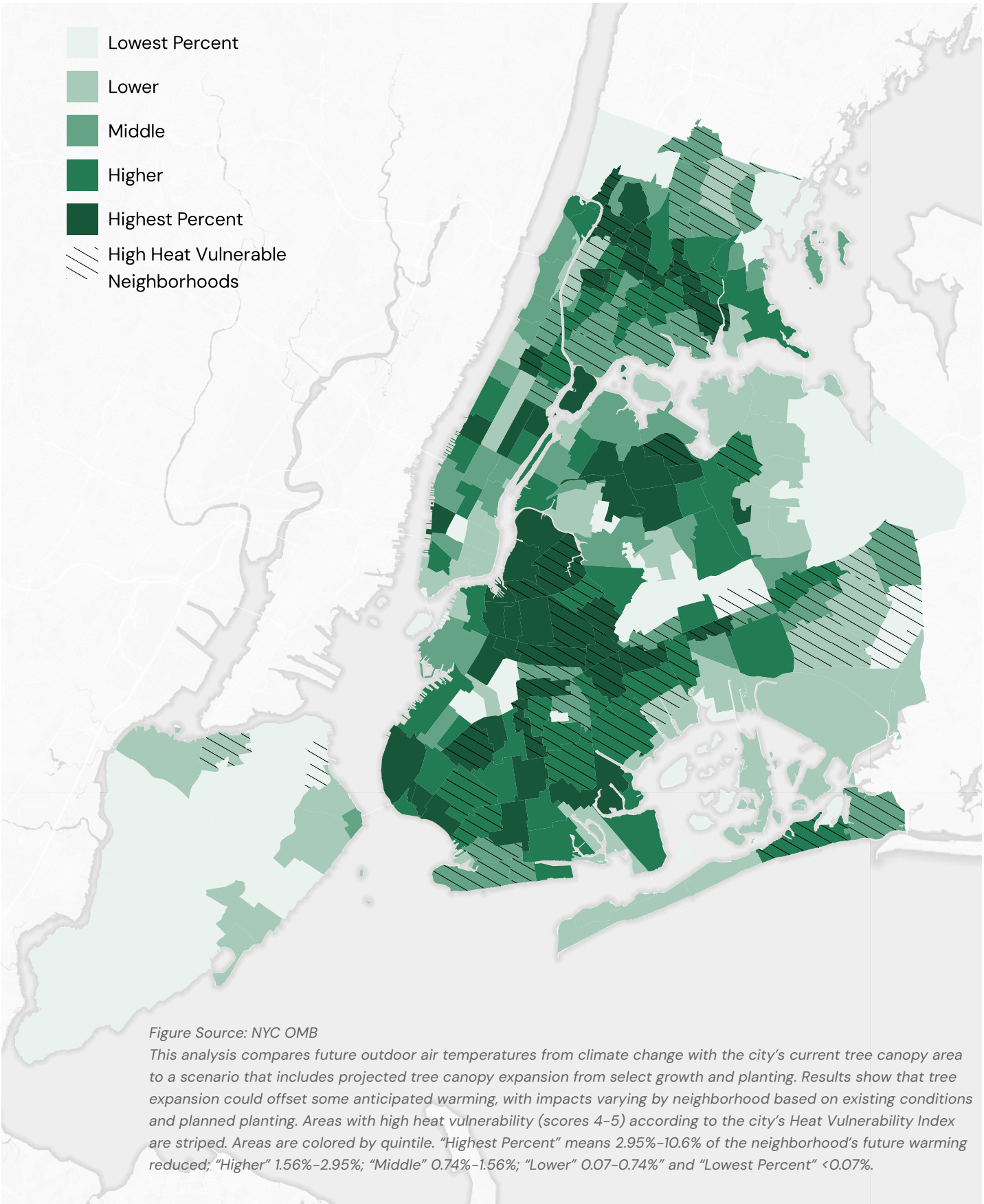


Figure Source: NYC OMB

This analysis compares future outdoor air temperatures from climate change with the city's current tree canopy area to a scenario that includes projected tree canopy expansion from select growth and planting. Results show that tree expansion could offset some anticipated warming, with impacts varying by neighborhood based on existing conditions and planned planting. Areas with high heat vulnerability (scores 4-5) according to the city's Heat Vulnerability Index are striped. Areas are colored by quintile. "Highest Percent" means 2.95%-10.6% of the neighborhood's future warming reduced; "Higher" 1.56%-2.95%; "Middle" 0.74%-1.56%; "Lower" 0.07-0.74%" and "Lowest Percent" <0.07%.

Outdoor Heat Forecast: Context

To assess the potential impacts of rising temperatures through 2050, the city ran two simulations for the 2030s, 2040s, and 2050s:

- Control: A scenario projecting temperature increases in the absence of interventions by neighborhood
- Planned Action: Modeling expanded tree canopy through citywide growth and the NYC Parks Department's Neighborhood Tree Planting Program plans for maintenance and new plantings

Aligned with the goal to achieve 30 percent canopy cover as per PlaNYC and Local Law 148 of 2023 to establish an urban forest plan, the NYC Parks Department's Neighborhood Tree Planting Program aims to lower surface and air temperatures by expanding tree canopy.[52] Future canopy changes were estimated using data from the Planting Program, historical land-cover surveys, and tree species growth projections. Cooling effects were modeled using a tool called SUEWS (Surface Urban Energy and Water Balance Scheme) in collaboration with researchers from Hunter College, University College London, and the NYC Parks Department, factoring in elements such as buildings, vegetation, population, humidity, and wind.[53]

Currently, the analysis projects air temperature without incorporating factors such as temperature-feel in shade versus direct sun. In the future, OMB will expand this forecast to include additional adaptation measures that affect city heat, such as surface color, and model metrics such as mean radiant temperature, which more fully reflect how people experience heat. OMB will also work with partners to understand the impact of these adaptation measures on health outcomes.

This work lays the foundation for better prioritizing city programs that effectively improve heat resiliency. It may not be possible to adapt completely to all future heat, but understanding the potential and the limits of interventions will help the city plan more effectively to manage outstanding risks.

FIG. 3.9 | AVERAGE FUTURE OUTDOOR WARMING REDUCED BY PROJECTED TREE CANOPY EXPANSION, BY VULNERABILITY IN 2050

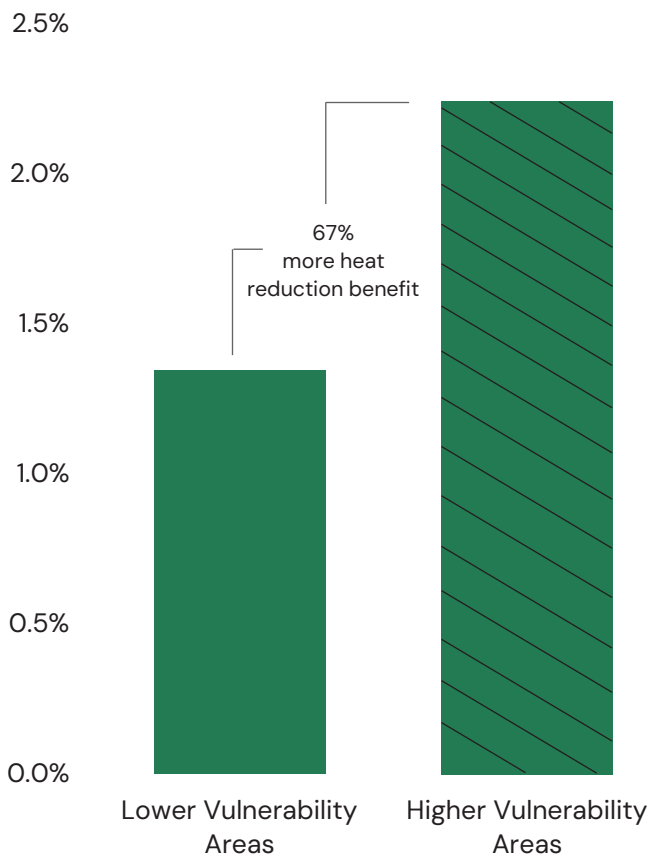


Figure Source: NYC OMB
Lower Vulnerability Areas represent neighborhoods with a Heat Vulnerability Index score of one through three and Higher Vulnerability Areas represent those with a Heat Vulnerability Index score of four or five. Heat managed reflects the difference in temperature between the 2050s Control and Planned Action scenarios.

CITYWIDE INDOOR HEAT

In addition to the city's goals to help New Yorkers withstand increasing outdoor temperatures, PlaNYC established an initiative to ensure residents remain safe indoors during extreme heat events. Goals include developing a maximum summer indoor temperature policy, cooling requirements for new construction, and program reform to support cooling affordability.[58]

High indoor temperatures can have wide-ranging impacts on health, wellbeing, and productivity. OMB worked with NYC Public Schools and the NYC School Construction Authority to forecast the uptake of indoor cooling in schools enabled by the city's Leading the Charge school electrification initiative to begin 100 school electrifications by 2030.[59] As schools electrify, they will provide reliable, dedicated or central air conditioning. This will be most meaningful for spaces that are less likely to already be air conditioned, particularly student assembly spaces such as gymnasiums and auditoriums, among others.

Initial OMB analysis shows that Leading the Charge school electrification projects could increase the proportion of school assembly spaces that are air conditioned by approximately 5 percent. This is an initial step in investigating the many efforts that ensure cooling for students.

Going forward, OMB will continue to work with partners to develop residential cooling forecasts by neighborhood.

Coastal Flooding Forecast

The Coastal Flooding Forecast models the present and future coastal flood risk for each city neighborhood that experiences flooding from coastal storm surge (100-year event) or high tide (frequent events), taking into account projected sea-level rise to 2050. Scenarios are used to compare how coastal flood protection infrastructure projects that are currently planned and in development may relieve future flood risk. Only large-scale (neighborhood-wide) projects such as floodwalls are included in this iteration of the analysis. These large-scale projects are just one form of protection, and this analysis is not a determination that these types of projects are the best form of protection for all areas or buildings; rather, it is a way of better understanding the impact of projects that are underway or being considered.

In addition to pursuing large-scale neighborhood protection projects, the city has increased adaptation to coastal flooding through investments in holistic urban resiliency, including adding flood-resistant construction requirements in the Building Code, adopting Zoning for Coastal Flood Resiliency to allow building owners to design more resilient buildings, creating the Climate Resiliency Design Guidelines to inform design of city capital projects, helping expand enrollment in the National Flood Insurance Program, expanding nature-based interventions, and exploring options to acquire difficult-to-protect flood-vulnerable properties.[54] Community capacity is also important to help withstand the shocks and stresses of climate change in addition to engineered solutions. Future planning by the DEP Bureau of Coastal Resilience will further identify appropriate measures to meet the city's needs, and OMB will continue to partner with DEP to incorporate new measures into the forecast.

11. The forecast spotlights which neighborhoods are expected to receive, and which may lack, currently planned initiatives.

Current federal, state, and local plans for neighborhood-scale coastal infrastructure could protect up to approximately 85 percent of at-risk buildings in the 2050 100-year floodplain. The forecast also highlights gaps, including the potential for diverse flood-protection solutions where flood protection infrastructure may not be built.

12. The forecast aids the city in evaluating future flood protection plans and investments for their local community impacts.

The U.S. Army Corps of Engineers' New York and New Jersey Harbor and Tributaries Focus Area Feasibility Study (NYNJHATS) is a large-scale federal-local project proposal to protect broad areas of the city from coastal flooding. The proposed plan is tentatively selected, and if these projects are built, 25 percent of at-risk buildings in Environmental Justice Areas, as defined by the EJNYC Report, across the city would remain at risk, compared to 7 percent in non-EJ areas. This highlights the potential need for supplemental protections to address this disparity.

FIG. 3.10 | SHARE OF AT-RISK BUILDINGS PROTECTED BY SELECT NEIGHBORHOOD-SCALE PROJECTS, BY NEIGHBORHOOD IN 2050

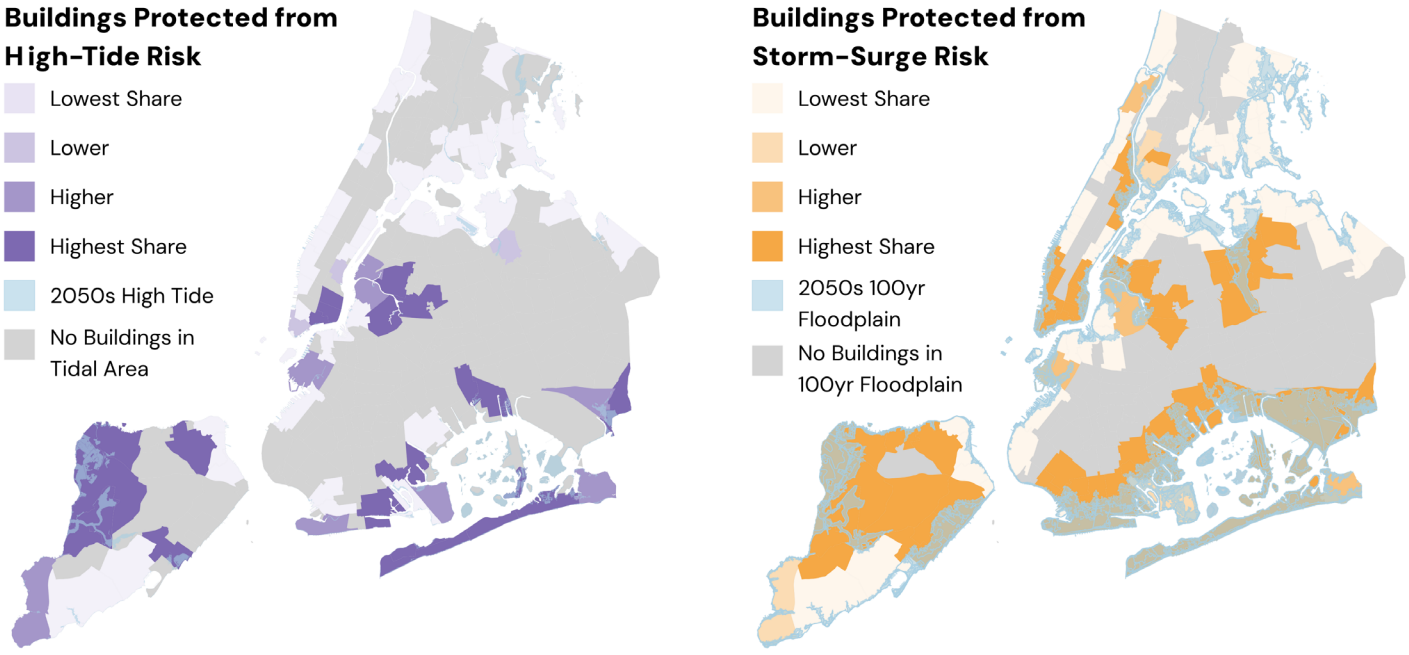


Figure Source: NYC OMB

Buildings located in coastal neighborhoods that overlap with the 2050s high-tide and 100-year storm flood areas were analyzed before and after proposed city, state, and federal protections. The areas were compared to determine the proportion of those at-risk buildings that would no longer be considered within the flood area if the select neighborhood-scale flood protection projects were implemented. Multiple scenarios were modeled—these maps reflect the forecasted results from the scenario of the most inclusive proposed protections.

13. The forecast enables the city to compare future scenarios and assess the potential benefits of various resiliency strategies and plans.

The forecast can be used to evaluate the benefits of individual projects or suites of projects and future flood exposure with and without those projects. For example, locations such as Lower Manhattan will receive fairly comprehensive protection from ongoing and planned projects. Other areas could remain largely exposed if federally supported projects do not proceed. This analysis can support long-term, comprehensive planning and cost-benefit analysis under different scenarios.

Coastal Flooding Forecast: Context

The coastal flooding forecast reflects PlaNYC's approach for a multilayered resiliency strategy, which includes neighborhood-scale coastal flood protection projects and NYNJHATS. OMB partnered with the DEP Bureau of Coastal Resilience, the NYC Economic Development Corporation, and MOCEJ to identify these large-scale projects—such as dunes, levees, and flood gates—and determine protected areas.

To assess the potential impacts of rising sea levels and more intense and frequent storms in the 2020s and 2050s, the city evaluated three scenarios:

- **Control**: Projected flooding with no new large-scale coastal protection projects
- **Planned Action (Part 1):** Control + planned projects by city, state, and federal entities (excluding NYNJHATS)
- **Planned Action (Part 2)**: Part 1 + NYNJHATS projects (mapped in Figure 3.10)

Not all large-scale coastal protection projects are included in this analysis. Some are excluded due to lack of available mapped project elements at the current stage of design and project scope uncertainty for projects undergoing changes. Projects that are built to less than the modeled design storm (less than the 100-year flood or tidal flooding, separately), are not reflected, though they do provide protection and are important parts of the suite of adaptation work.

In coming years, this work will be expanded to incorporate additional protections, such as floodproofing, and assess additional benefits to people and infrastructure.

FIG. 3.11 | SHARE OF AT-RISK BUILDINGS PROTECTED BY SELECT NEIGHBORHOOD-SCALE PROJECTS, BY EJ AREA IN 2050

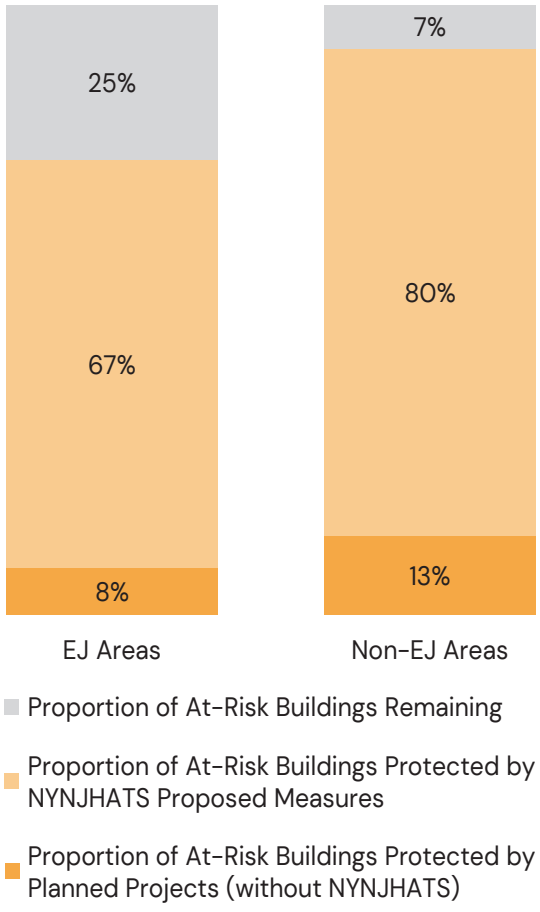


Figure Source: NYC OMB
EJ refers to Environmental Justice

Resiliency Risks and Challenges

As New York City saw in 2012 with Hurricane Sandy, coastal storms threaten lives and cause substantial disruption to the city's transportation network, power supply, and critical services.[55] Despite these risks, the scale of investment needed to protect the city from these storms is beyond the capacity of existing city resources.

To address this challenge, in 2024 the city convened a Resilience Finance Task Force to explore strategies for new revenue generation and financial structures to support coastal resiliency projects.[56] The Task Force recommended that the city establish shoreline protection districts to fund local operations and maintenance, pursue multiple long-term revenue sources to support project construction, create a Resilience Finance Authority and Board to finance capital costs, and collaborate with the insurance industry on climate risk and resiliency. These proposals will be explored in more detail to determine their viability and next steps, in collaboration with DEP's Bureau of Coastal Resilience.

While exploring new revenue generation is important, becoming a resilient city will inevitably require significant investments beyond the scope of New York City's budget alone. The recent announcement by the federal government that FEMA's Building Resilient Infrastructure and Communities Program (BRIC) would be canceled and all funding set for procurement would need to be returned to the Disaster Relief Fund or the U.S. Treasury eliminates an important resource for protecting New Yorkers.[57]

This program's cancelation could result in the loss of critical funding the city depended on to install large-scale flood mitigation projects. If the city bears the burden of the full costs of new flood mitigation projects, this could divert resources from other crucial projects, create gaps in adaptation for vulnerable communities, and compromise the completion of various projects that rely on federal funding for their implementation.

SOURCE: NYC DDC

GREENHOUSE GAS EMISSIONS AND AIR QUALITY

Emissions-Reduction Investments

Expense and capital investments across agency budgets shape the city's buildings, energy systems, and transportation infrastructure and present opportunities to reduce emissions and improve air quality and quality of life for New Yorkers. Embedding energy efficient and electric design early in capital planning, funding preventative maintenance, and installing smart building operations systems can reduce utility costs and result in savings over the life of the asset.

Through the Climate Budgeting process, OMB evaluates the city's budget on an annual basis to determine which investments help achieve net-zero emissions, and which investments install new fossil fuel infrastructure that will generate emissions for decades to come. Identifying projects seeking new funding for fossil fuel systems helps the city avoid investments that lock in emissions where cost-effective alternatives are available. In this document, capital funding amounts include the current fiscal year (FY 2025) plus the Ten-Year Capital Strategy (FY 2026–FY 2035).

1. New York City is investing more than $8 billion in capital projects for decarbonization across sectors.

Planned capital spending includes $8.4 billion for projects that reduce emissions and align with the city's goal of achieving net-zero emissions by 2050. These investments include building decarbonization, renewable energy projects, electric vehicles and charging infrastructure, and efforts to reduce emissions from waste streams.

Seven billion dollars is allocated for decarbonization work across city-managed buildings and facilities, including schools, hospitals, recreation centers, and police precincts. As the single largest source of emissions in New York City, nearly every building in the city's portfolio presents an opportunity to reduce emissions.[60] Planned decarbonization projects include comprehensive upgrades to HVAC and mechanical systems, electrification of heat and hot water, energy efficiency upgrades such as installing efficient LED lighting, and efficiency and electrification-readiness projects like façade and insulation improvements. These upgrades do not install new fossil fuel systems or maintain existing systems, which would risk locking in polluting equipment.

Planned capital funding includes $733 million for renewable energy projects including solar panels, hydroelectric generation, and offshore wind infrastructure.

In addition to $252 million allocated to purchasing all-electric vehicles for the city fleet, the city is investing $209 million in a network of electric vehicle charging stations. This includes charging stations for the city vehicle fleet as well as publicly accessible chargers for private vehicles.

The city is also investing $189 million in projects that reduce emissions from organic material, solid waste, and wastewater treatment.

FIG. 3.12 | CAPITAL INVESTMENTS IN NET-ZERO EMISSIONS (FY 2025-2035)

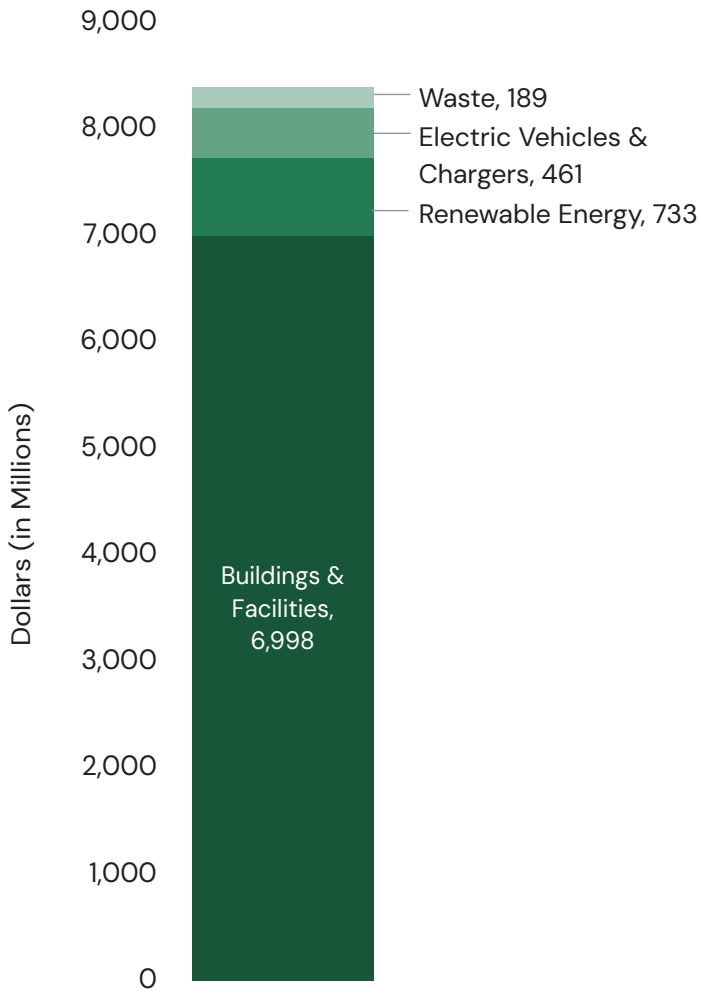


Figure Source: NYC OMB

2. Over $14 billion of additional capital is allocated to projects that reduce emissions while advancing other city priorities, such as investments in mass transit, bus and bike networks, and facility upgrades.

The city has allocated $14.3 billion for projects that support reaching net-zero emissions while advancing other priorities.

The city continues to support its vast public transportation network, including $298 million for bus lane infrastructure and enforcement cameras and $774 million in subsidies to the Metropolitan Transportation Authority (MTA). To provide safe access for cyclists and pedestrians, the city is investing $1.1 billion in the citywide greenways network, including projects along the Harlem River, East River, and in Sunset Park.[61] These investments are important for reshaping New York City's built environment in order to make net-zero-compatible transportation the preferred option for all New Yorkers.

While the city has allocated significant funding to energy efficiency and electrification projects, other types of work in buildings can also reduce emissions. The city has allocated $6.8 billion to projects that support emissions reductions in its buildings and facilities, including the construction of new buildings, many of which will be all-electric under current code.[62]

Comprehensive upgrades to existing facilities decrease emissions by replacing windows and roofs, sealing building envelopes, and upgrading energy systems. Projects needed to bring facilities into good repair are also opportunities to pursue emission reduction strategies where feasible.

CLIMATE ALIGNMENT ASSESSMENT: NET-ZERO EMISSIONS

As part of the Climate Budgeting process, OMB conducts an annual Climate Alignment Assessment of the city's capital budget. This evaluation tool is used to analyze how planned spending aligns with long-term climate needs, including reaching net-zero emissions citywide by 2050.

Capital projects are evaluated to determine whether they are compatible with a net-zero future—or whether they lock in fossil-fuel-powered equipment that will continue to emit greenhouse gases for decades. If a project is determined to have an impact on emissions, it is rated according to the criteria in Figure 3.13. While every project is assessed, projects where climate-specific details are not yet available remain pending rating, to be revisited with each annual evaluation.

FIG. 3.13 | CLIMATE ALIGNMENT ASSESSMENT: EMISSIONS METHODOLOGY

Assessment Rating	Project Criteria	Emissions Examples
Aligned	The project's primary intent is to reduce greenhouse emissions and it is compatible with the city's net-zero goal. Scope that reduces emissions constitutes most or all of the project cost.	Heat electrification in city facility Electric vehicle purchase Purchase of solar panels
Aligned Component	The project reduces greenhouse gas emissions and it is compatible with the city's net-zero goal, but its primary intent is not emissions reduction. Reducing emissions may be a co-benefit of the project, or the project may be a mix of emissions-reducing scope and unrelated scope.	Construction of protected bike lanes in support of Vision Zero Full facility renovation that including lighting efficiency upgrades
Not Aligned (Short-Term Benefit)	The project offers short-term greenhouse gas emissions reduction benefits but is incompatible with the city's net-zero goal.	Oil to gas boiler conversion Hybrid vehicle purchase
Not Aligned	The project is incompatible with the city's net-zero goal.	Fossil fuel vehicle purchase Fossil fuel boiler purchase

Figure Source: NYC OMB

3. Capital projects totaling $7 billion include the purchase or upgrade of fossil-fuel-powered systems—many of which reduce emissions in the near-term—representing opportunities to consider alternative approaches.

The city has allocated $7 billion for projects that include purchasing or upgrading fossil-fuel-powered systems, which are misaligned with the city's commitment to reach net-zero emissions by 2050. $3.2 billion, or nearly half of this funding, is allocated for projects in buildings and facilities. This illustrates the need for long-term planning to phase out fossil fuel systems in city buildings.

FIG. 3.14 | CAPITAL INVESTMENTS WITH FOSSIL FUELS (FY 2025-2035)

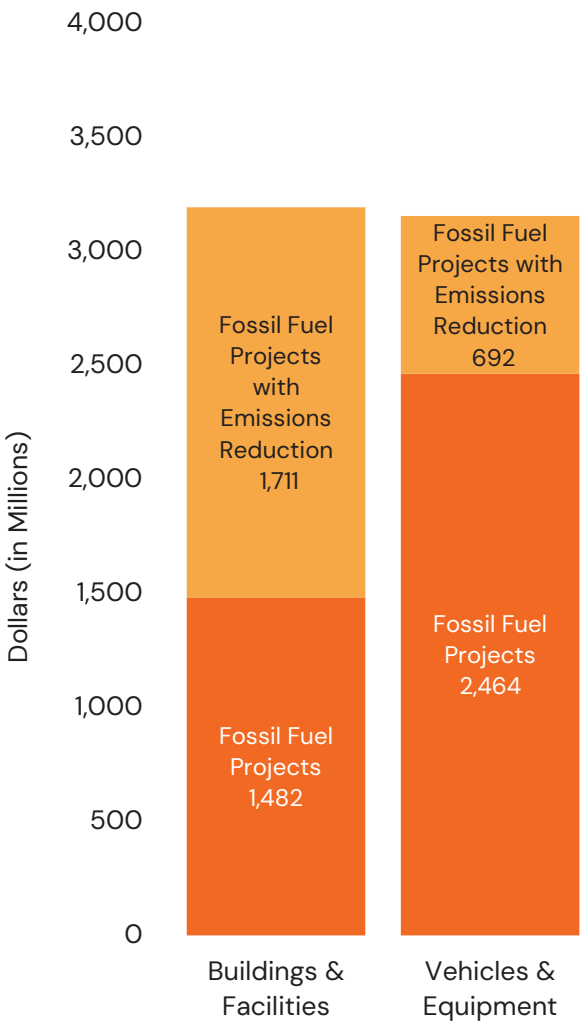


Figure Source: NYC OMB

There are many challenges to replacing these systems with efficient, electric ones, including engineering and operating expertise, and necessary upgrades to electrical, envelope, and duct work.

Buildings projects with spending on fossil fuel systems include new construction, comprehensive renovations, energy upgrades, and the installation of fossil-fuel-powered HVAC systems. While many newly constructed buildings are required to be all-electric under current code, many specialized facilities such as hospitals, waste processing facilities, and sites with emergency applications are exempt.[63] These projects highlight an opportunity for the city to invest in cost-effective, all-electric alternatives where feasible.

Over half of the funding identified for buildings-related projects with fossil fuel equipment is for types of work that will decrease emissions or improve efficiency, such as switching from oil to natural gas, and installing high-efficiency gas-powered HVAC systems. However, despite their short-term benefits, these greenhouse gas–emitting systems will operate for decades and are therefore not compatible with the city's long-term goal of reaching net-zero emissions.

4. Technological obstacles remain to decarbonizing specialized vehicles and equipment.

Planned capital funding includes $3.2 billion to purchase or upgrade fossil-fuel-powered vehicles and equipment, including gas, diesel, and hybrid models. These planned investments highlight several important technological obstacles to reaching net-zero emissions by 2050.

The city purchases medium- and heavy-duty vehicles, as well as specialized transportation such as ferries, barges, aircraft, and off-road vehicles, via its capital budget. Many of these vehicles, such as fire trucks and ambulances, are used for emergency applications. Few all-electric alternatives are currently available on the market or are approved by the city for widespread emergency use.[64] In the interim, the city has committed to transitioning the entire city fleet from fossil diesel to renewable diesel, which will produce fewer emissions from heavy-duty vehicles.[65]

EXPENSE HIGHLIGHTS: EMISSIONS

Efforts to reduce emissions span budgets and initiatives across agencies. For example, the city has committed to purchasing renewable energy certificates generated by wind, solar, and hydropower facilities to fulfill the commitment to power New York City government operations with 100 percent clean and renewable electricity, which is expected to begin in the later part of FY 2026.[66] The DCAS Division of Energy Management supports agencies in reducing emissions from city facilities, and the DOB Bureau of Sustainability is implementing LL97, which caps emissions from the city's largest buildings. The city also purchases light-duty electric vehicles for its fleet, installs electric vehicle charging stations, and advances programs to support alternative transportation methods. Curbside pickup of organic waste diverts this material from landfills towards beneficial reuse, helping reduce emissions.

In many cases, there is not a distinct budget for emissions reductions within agency budgets; rather, these efforts are embedded within agency operations. Therefore, the amounts reported here should not be construed to represent every dollar the city is spending on emissions reductions, but rather as highlights of major projects and programs.

Figure 3.15 shows funding for projects in the city's FY 2026 Executive Budget that are specifically associated with emissions reductions initiatives.

FIG. 3.15 | EMISSIONS-REDUCTION EXPENSE BUDGET HIGHLIGHTS

Emissions Source	Example Investments	FY 2026 Executive Budget (in Millions)
Buildings & Facilities	The DOB Bureau of Sustainability, DCAS Division of Energy Management, and programs to provide technical assistance to building owners.	$145.7
Energy	Funding to purchase 100 percent renewable energy for city operations.	$22.0
Transportation	Electric vehicles and renewable diesel for city fleet and electric vehicle charging infrastructure.	$38.0
Waste	Reducing emissions from waste through organic material collection.	$29.7

Figure Source: NYC OMB

The city has allocated $113 million for emergency backup power networks that rely on diesel, gasoline, or a biofuel blend. This infrastructure is essential to protecting the health and safety of New Yorkers, especially during extreme weather events. It also presents a decarbonization challenge, with few electric options currently available at scale. This is another opportunity for the city to determine where net-zero-compatible technology is appropriate and can be incorporated without jeopardizing safety.

Environmental and Social Benefits

Planned capital funding through FY 2035 includes $90.2 billion, or 46 percent of total planned funding, for projects that include at least one benefit to environmental health, quality, or access to resources. Tracking spending in these areas provides a more holistic view of the environmental benefits associated with the city's capital projects now and in the future.

FIG. 3.16 | CAPITAL INVESTMENTS WITH ENVIRONMENTAL AND SOCIAL BENEFITS (FY 2025-2035)

Benefit	FY 2025-2035 (in Millions)	Project Criteria *Projects that support…*	Examples
Access to Resources	$15,928.0	Access to public spaces and natural areas	Parks, plazas, playgrounds, wetlands
Access to Safe & Healthy Housing	$29,078.2	Access to affordable housing for New Yorkers	NYCHA developments
Air Quality	$17,600.9	Reducing indoor and outdoor air pollution	Electric vehicles, tree planting, electrification
Water Quality	$37,537.3	Sewers, wastewater management, improvement to waterways	Green infrastructure, combined sewer overflow management, wetland restoration
Reduced Exposure to Climate Change	$29,723.1	Resiliency to long-term impacts of flood or heat risk	Coastal protection, green infrastructure, public pools
Reduced Exposure to Hazardous Materials	$2,047.7	Reducing exposure to indoor and outdoor hazardous materials	Lead paint removal, Superfund site remediation
Circular Economy	$1,009.9	Waste reduction and beneficial reuse	Composting, gas-to-grid

Figure Source: NYC OMB

Citywide Emissions Forecast

In 2017, New York City committed to the Paris Agreement, which seeks to limit global temperature increases to 1.5°C.[67] In order to achieve this goal, the IPCC determined that global emissions must meet interim reduction targets and reach net-zero by 2050.[68] The city has reduced emissions substantially since measurements began in 2005.[69] To maintain its commitment to the Paris Agreement, however, the city must regularly assess its progress towards reaching net-zero emissions and address remaining gaps. Climate Budgeting has enhanced the city's ability to make these assessments by generating forecasts of the city's emissions based on market trends, enacted policies, and planned climate actions at the city, state, and federal levels.

Interim targets for New York City referenced in the Climate Budgeting process draw on IPCC global targets for 1.5°C and are adjusted to the city's 2005 emissions baseline of 64.4 million metric tons of carbon dioxide equivalent (tCO_2e).[70] New York City's 2030 interim target is a 52 percent emissions reduction relative to 2005 emissions.[71]

5. If fully executed, current policies would reduce emissions in New York City 78 percent by 2050.

The city's greenhouse gas emissions forecasts incorporate planned city climate actions that are either mandated by law, issued through executive orders, or already funded. Updated annually, the forecasts reflect changes to policies and projects and incorporate the latest data and methods from the city's Greenhouse Gas Inventories.[72] These forecasts help identify the policies and factors most critical to meeting the city's targets, and they reveal where additional work will be needed to eliminate emissions.

FIG. 3.17 | 2025 FORECAST OF CITYWIDE EMISSIONS

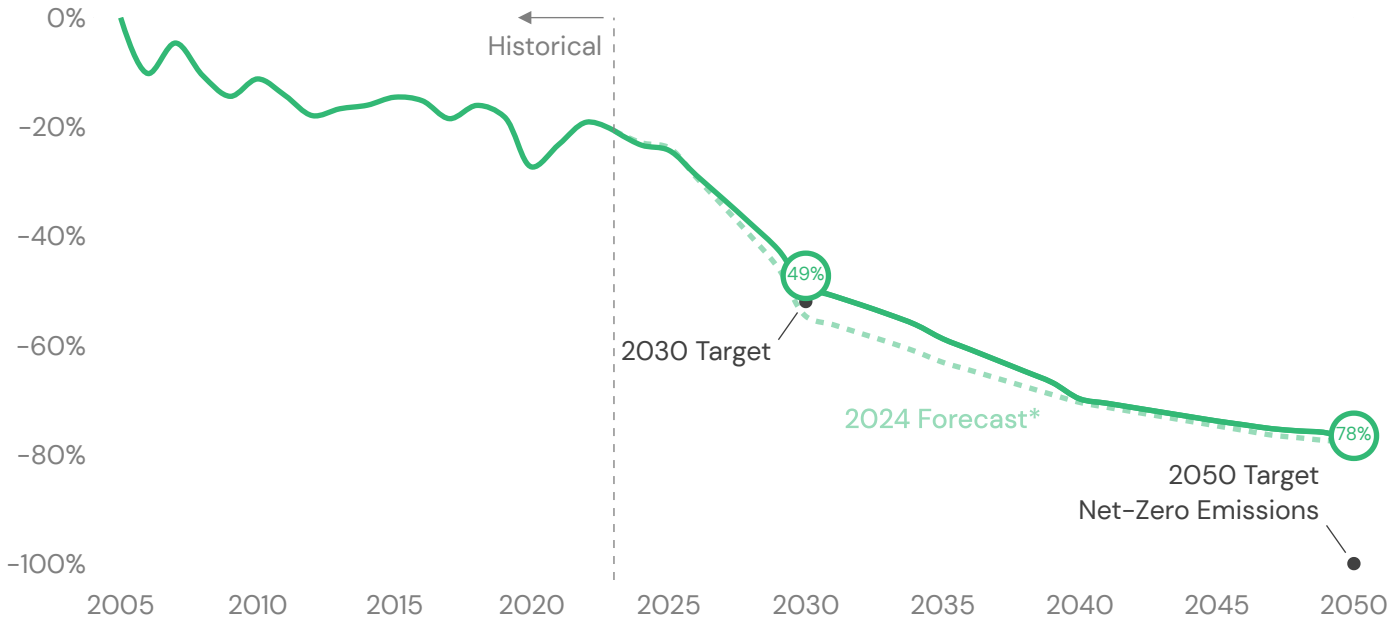


Figure Source: NYC OMB

** 2024 data are forecasted using updated 2025 methodology, which improves calibration to the city's Greenhouse Gas Inventories, integrates revised energy data and projections, and models electric options for medium- and heavy-duty vehicles.*

Over the past year, external developments have altered projections. Developers have cancelled or delayed multiple large-scale renewable energy projects, slowing the expected pace of electric grid decarbonization and making it more difficult to meet near-term emissions targets. If all planned actions are fully implemented, the city as a whole is projected to reduce emissions 49 percent from its baseline by 2030, and 78 percent by 2050, leaving a 22 percent gap to reaching its net-zero target.

6. Delays in critical large-scale renewable energy projects have slowed expected emissions reductions.

The city's success in meeting its emissions targets depends in part on market forces beyond its control, and also on renewable electricity development that is largely driven by state policy. Market trends alone are expected to reduce emissions 29 percent by 2050. Last year's forecast indicated that planned large-scale renewable energy projects would bring emissions reductions to 45 percent below the 2005 baseline. Because of multiple delays and cancellations over the past year, large-scale renewables are now expected to only bring down emissions by 40 percent by 2050.

Since April 2024, five major offshore wind projects in New York waters have been cancelled due to rising construction costs.[73] These projects were planned to enter service between 2028 and 2035 and would have brought approximately 6.5 gigawatts (GW) of new clean power to New York City. Together, these projects would have realized approximately 3 million tCO_2e in avoided emissions annually. The cancelled projects were:

- Empire Wind 2
- Beacon Wind 1
- Attentive Energy One
- Community Offshore Wind
- Excelsior Wind

On January 20, 2025, the federal government issued an executive action halting leasing and permitting for wind energy projects, causing offshore wind developers to cease the contracting, development, siting, and procurement of materials and equipment for new and existing projects.[74]

Until recently, two major offshore wind projects, Sunrise Wind and Empire Wind 1, were still underway and expected to generate 1.7 GW of power once online.[75] These projects have all necessary permitting and contracts in place, and the emissions forecast assumes they will come online as scheduled. Empire Wind 1's progress has been enabled in part by the city's financial support for the Offshore Wind Port at South Brooklyn Marine Terminal in Sunset Park, Brooklyn.[76] On April 16, 2025, however, the U.S. Bureau of Ocean Energy Management ordered Empire Wind's developer, Equinor, to halt all activities on the project pending further review.[77] The future of this 810 megawatt development is currently uncertain.[78]

In addition to offshore wind project cancellations and delays, the Clean Path transmission line, a major transmission line that was to bring clean power to the city from renewable sources in Upstate New York, was cancelled in late 2024 due to changing market conditions.[79]

FIG. 3.18 | IMPACT OF LARGE-SCALE RENEWABLES

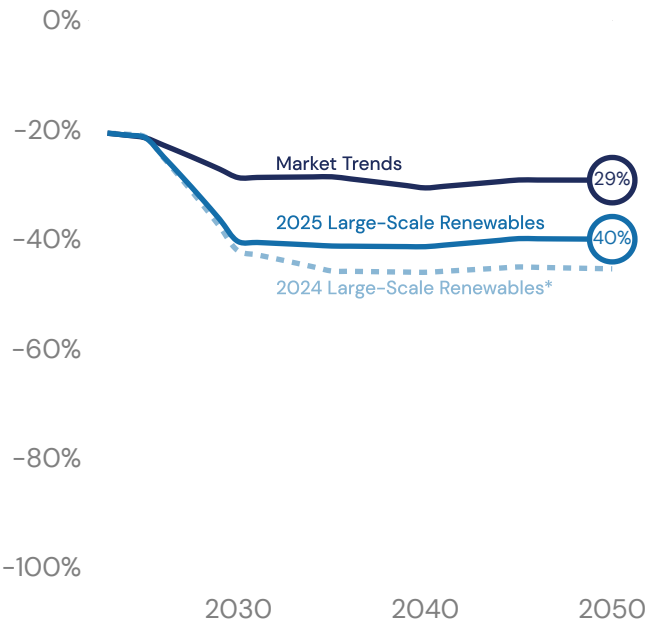


Figure Source: NYC OMB
**2024 data forecasted using updated 2025 methodology*

The New York Power Authority has petitioned the New York State Public Service Commission to designate Clean Path as a Priority Transmission Project.[80] Recently, the city submitted comments to the Commission expressing support for the development of the Clean Path transmission line. Should the Commission grant this petition, the project planning will resume. The emissions forecast now assumes that Clean Path will come online, but with a three-year delay relative to its original start date of 2027.

Through its contract with the New York State Energy Research and Development Authority (NYSERDA) to purchase Tier 4 Renewable Energy Credits, the city has supported the Champlain Hudson Power Express transmission project, which will bring clean electricity to New York City from hydroelectric dams in Québec.[81]

7. New York State's commitment to a zero-carbon electric grid by 2040 is the most significant driver of emissions reductions in New York City.

Beyond specific large-scale renewable energy projects, state climate policy largely defines the possibilities and constraints under which city climate actions operate. New York State's Clean Energy Standard (CES), which targets a 70 percent renewable grid by 2030 and 100 percent emissions-free grid by 2040, is one of several ambitious climate goals set out in the Climate Leadership and Community Protection Act (CLCPA).[82] State law also requires that all light-duty passenger vehicle sales in the state be electric by 2035.[83] Both the CES and the electric vehicles sales mandate support the city's decarbonization efforts. Emissions reductions from these commitments, when added to the reductions already expected from market trends and large-scale renewables, will bring citywide emissions down 72 percent from the baseline by 2050. The impacts of the CES, the electric light-duty passenger vehicle sales, the clean trucking rule, congestion pricing, and MTA bus electrification are represented together in the "state actions" scenario in Figure 3.19.[84]

With the delay in large-scale renewable energy projects, there is increased uncertainty about the state's ability to achieve the CES on time. Based on a recent assessment by NYSERDA, OMB is now modeling achievement of 70 percent renewable energy in 2033 instead of 2030.[85]

In 2050, the state actions represent 41 percent of the city's total emissions reductions from baseline, reducing annual emissions by about 20 million tCO_2e. The state's success in meeting its goals will directly influence the city's success in achieving net-zero by 2050. The CLCPA's success will make the grid cleaner, vastly reducing emissions from electricity, and aid in the transition from gas-powered to electric vehicles.

FIG. 3.19 | IMPACT OF STATE ACTIONS

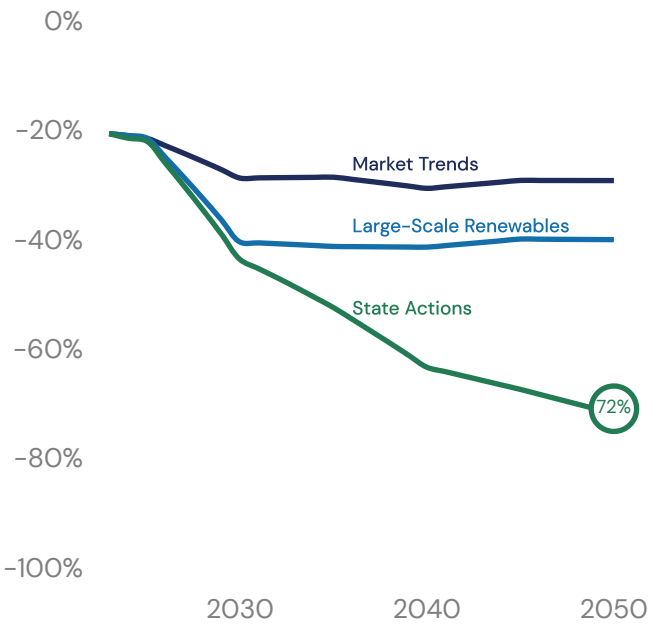


Figure Source: NYC OMB

8. Building decarbonization is the most impactful emissions-reduction strategy within city control.

The city has undertaken a suite of actions to help reduce citywide emissions, from rules and incentives to improve building energy efficiency, to encouraging the transition to electric vehicles, to phasing out the use of highly polluting fuel oil.[86] Taken together, these actions will reduce emissions an additional 6 percent beyond state actions by 2050.[87] The full list of city actions is shown in Figure 3.22. Building decarbonization remains the single biggest lever within the city's control to drive down emissions, primarily through interventions such as LL97, which sets per-square-foot emissions caps on New York City buildings over 25,000 square feet and gradually reduces those caps through 2050.

In 2050, LL97 accounts for 43 percent of the forecasted emissions reductions that are attributable to planned city actions. A multifaceted approach is required, at both the city and state levels, to support building owners in improving their buildings' energy efficiencies and converting building heating and hot water systems from fossil fuel to efficient electric systems.

FIG. 3.20 | IMPACT OF CITY ACTIONS

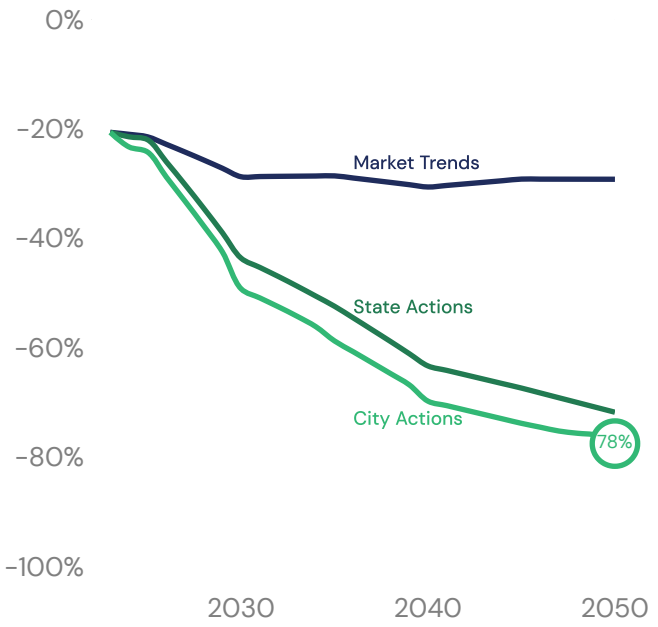


Figure Source: NYC OMB

FIG. 3.21 | RELATIVE EMISSIONS REDUCTIONS FROM CITY ACTIONS IN 2050

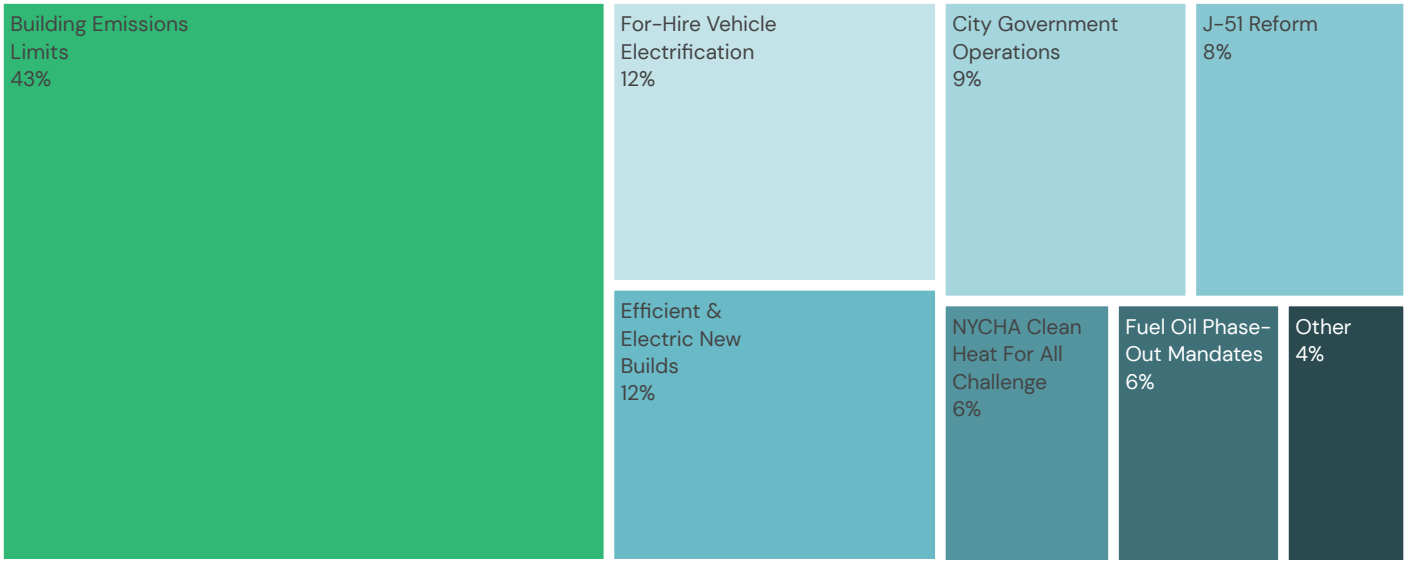


Figure Source: NYC OMB

FIG. 3.22 | EMISSIONS REDUCTIONS FROM CITY ACTIONS

City Action	2030 Annual Reduction (tCO_2e)	2050 Annual Reduction (tCO_2e)
Building Emissions Limits	-1,695,390	-1,561,880
For-Hire Vehicle Electrification	-842,510	-424,260
City Government Operations	-413,060	-338,270
Fuel Oil Phase-Out Mandates	-192,060	-205,290
NYCHA Clean Heat For All Challenge	-95,790	-209,190
J-51 Reform	-94,180	-294,070
Electric Vehicle Vision	-53,700	-30,730
Efficient & Electric New Builds	-52,900	-423,580
School Bus Electrification	-40,080	-90,790
Bike Lanes	-13,610	-480
HPD Sustainability Design Guidelines	-11,330	-17,780
Bus Lanes	-6,210	-220
Mandatory Citywide Curbside Organics Collection	-6,170	-11,210
NYCHA Solar Installations	-2,060	-100
Public Solar NYC	-1,150	-50
NYCHA PACT Program	-60	-60

Figure Source: NYC OMB, Various[88]

9. Additional action is needed to meet 2030 and 2050 science-based emissions targets, including New York City's goal of net-zero emissions by 2050.

Despite progress, New York City is no longer projected to be on track for 2030 science-based emissions-reduction targets, primarily due to slowed grid decarbonization. Longer-term, the city is not yet on track to achieve net-zero by 2050. Without additional action, it will still emit 14.1 million tCO_2e in 2050, primarily due to fossil fuel consumption in small buildings.

The forecast indicates that in 2050, 65 percent of the city's remaining emissions will result from natural gas consumption in buildings smaller than 25,000 square feet, which are not covered by LL97, and from buildings exempted from LL97 emissions limits. Future policy efforts must focus on decarbonizing the city's approximately one million small buildings.[89] The city needs better data on energy consumption in smaller buildings, in order to understand their energy systems consumption patterns, and distribution constraints. These data would help the city and state develop cost-effective strategies and programs to support efficiency and decarbonization in these buildings.

FIG. 3.23 | REMAINING CITYWIDE EMISSIONS BY SOURCE IN 2050

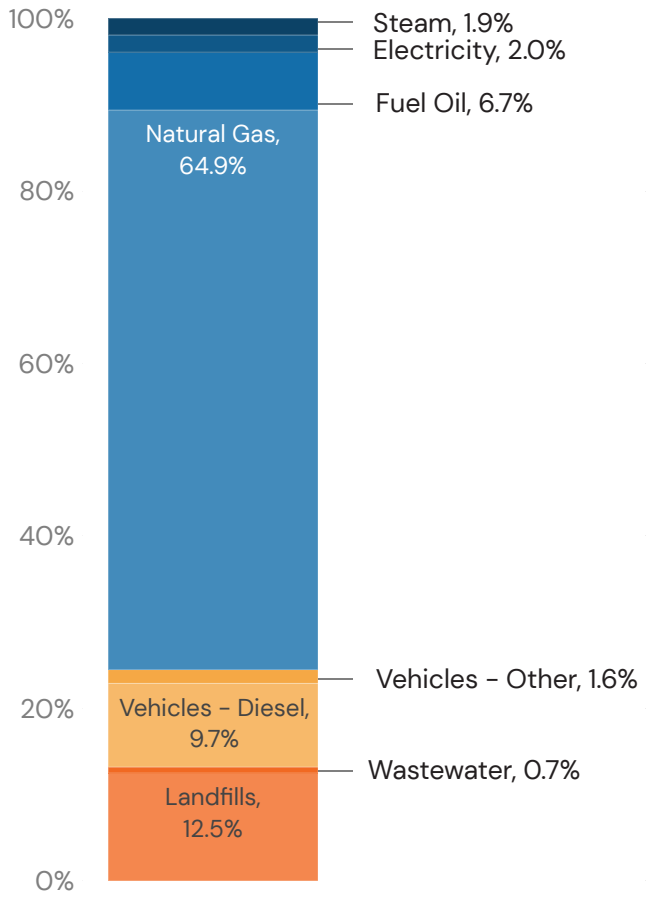


Figure Source: NYC OMB

10. Actions needed to achieve the city's net-zero emissions goal will reduce local air pollution and improve public health.

In addition to generating greenhouse gas emissions that contribute to climate change, fossil fuel combustion also harms New Yorkers' health by emitting local air pollutants such as particulate matter ($PM_{2.5}$).[90] The NYC Health Department estimates that in New York City, $PM_{2.5}$ contributes to about 1,800 deaths and thousands of hospital visits for respiratory and cardiovascular disease each year. Conservative estimates used in this forecasting indicate that planned climate actions aimed at reducing fuel oil, natural gas, and gasoline use in New York City—and consequently $PM_{2.5}$ emissions—could prevent 2 to 8 percent of these premature deaths.

Achieving the city's net-zero emissions goal by 2050 could increase prevented premature deaths to at least 9 to 25 percent according to the forecast, demonstrating the direct health benefits of New York City's climate commitments. Estimates are conservative given that modeling methods demonstrate the likely health impacts of reduced local $PM_{2.5}$ emissions, but not the impact of associated reductions in concentrations of regional $PM_{2.5}$, which could lead to greater health benefits.

FIG. 3.24 | FORECASTED HEALTH EVENTS (CAUSED BY $PM_{2.5}$) AVOIDED ANNUALLY

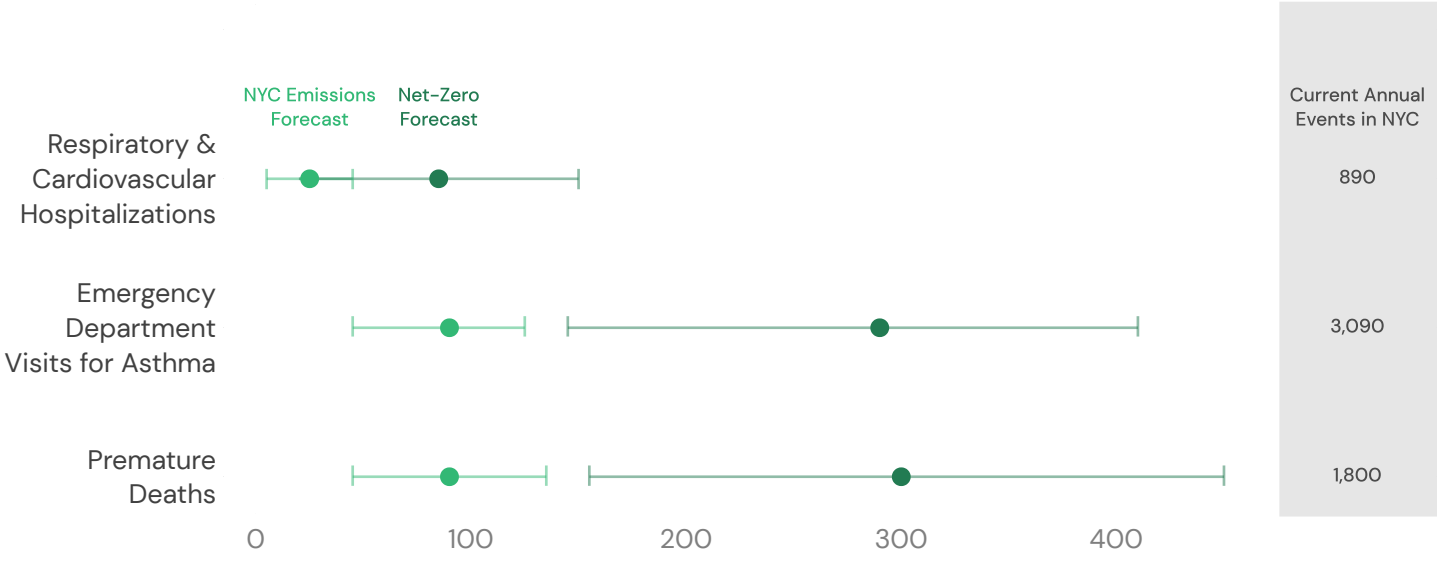


Figure Source: NYC OMB, NYC Health Department

Climate actions included in both the city's latest (2025) emissions forecast and net-zero emissions scenario are projected to reduce the local combustion of fossil fuels, including fuel oil, natural gas, and gasoline. Resulting reductions in local air pollutant PM2.5 are expected to prevent hospitalizations, emergency department visits, and premature deaths in New York City. Annual health events avoided are based on projections for the year 2050. Error bars demonstrate uncertainty in the forecasts, providing a low- and high-end estimate for each metric.

City Government Emissions Forecast

In addition to the citywide greenhouse gas emissions forecast, in partnership with DCAS Division of Energy Management (DEM), OMB forecasts emissions from city government operations, building on the City Government Greenhouse Gas Emissions Inventory.[91] The city government emits approximately 5 percent of citywide emissions. In 2023, citywide operational emissions were 51.2 million tCO_2e, while city government operational emissions were 2.7 million tCO_2e. OMB's forecast has changed little since the previous analysis released in the FY 2025 Executive Budget. In both forecasts, the city will surpass its 2025 and 2030 emissions targets in 2027 when the Champlain Hudson Power Express transmission line becomes operational, enabling the city to purchase 100 percent renewable electricity.

11. New York City government will achieve its 2025 emissions-reduction target in 2027, and exceed its 2030 target, but further action is needed to reach net-zero by 2050.

LL97 mandates that New York City government reduce its emissions 40 percent by 2025 and 50 percent by 2030, from its FY 2006 baseline.[92] The city will not reach the 40 percent benchmark until 2027, but will exceed its next target, reducing emissions 68 percent by 2030.

In 2024, MOCEJ and DCAS DEM revised the electricity emissions factors and methodology used to calculate the city government's historical and current emissions. Due to these changes, the city government's FY 2006 emissions baseline is slightly lower than previously reported, and the FY 2025 and FY 2030 targets have been adjusted downward accordingly. Because OMB forecasts the impacts of planned and funded projects, the city government emissions forecast is limited to the end of the Ten-Year Capital Strategy window in FY 2035.

FIG. 3.25 | FORECAST OF CITY GOVERNMENT EMISSIONS

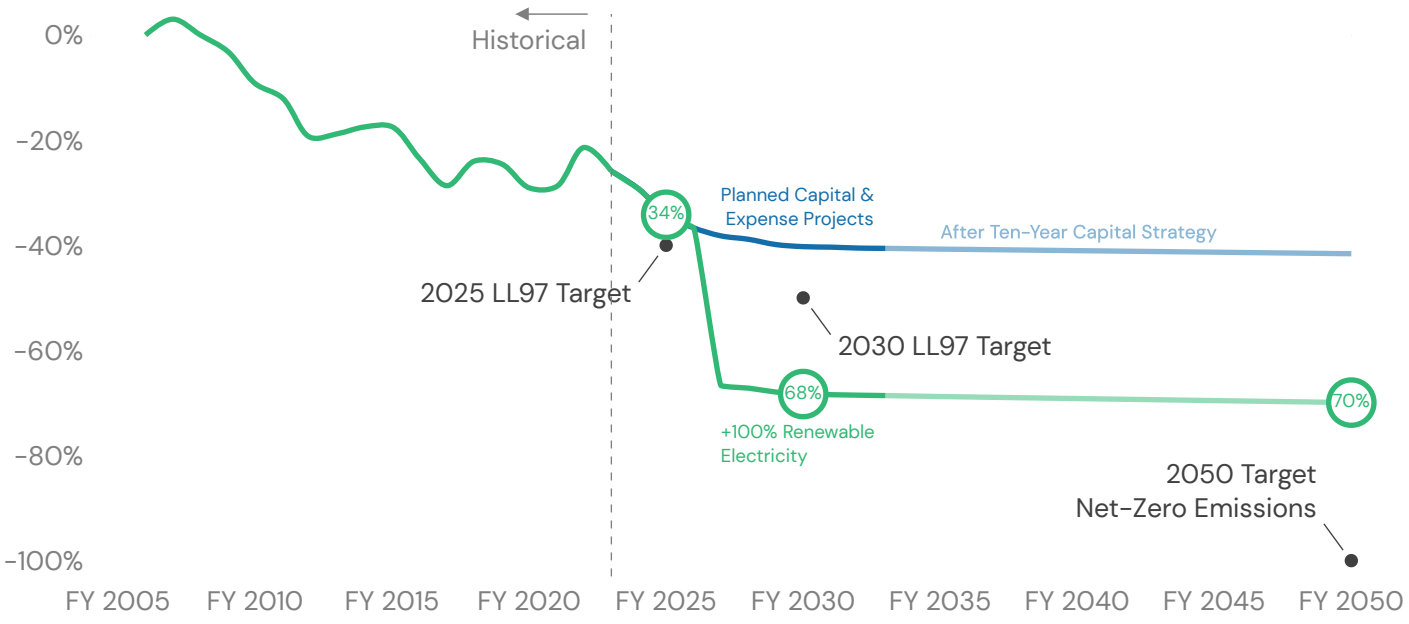


Figure Source: NYC OMB, NYC DCAS
Most planned projects only extend through the end of the Ten-Year Capital Strategy window in FY 2035.

12. The city government's purchase of 100 percent renewable electricity beginning in 2027 will eliminate 1 million tCO_2e annually and yield even greater emissions reductions as buildings and vehicles electrify over time.

New York State's decision to close the Indian Point nuclear plant in 2021 increased reliance on fossil fuels to generate electricity.[93] Beginning in FY 2027, the city will purchase 100 percent of its electricity from renewable sources including from hydroelectric renewable energy delivered to the city by the Champlain Hudson Power Express transmission line.[94] This will provide a substantial, immediate reduction in emissions, while the city continues to decarbonize buildings and the municipal fleet over time.

Construction on the Champlain Hudson Power Express transmission line is well underway and expected to be completed in the spring of 2026; however, any delay or change to this project risks the city's ability to achieve this major reduction.

13. Planned energy efficiency and electrification projects in city-owned and-operated buildings will yield 500,000 tCO_2e of cumulative emissions reductions over the next 10 years.

Projects undertaken by city agencies focus on improving energy efficiency in city government buildings as well as converting aging fossil-fuel-powered heating systems to efficient, electric heat pumps. Additionally, the city has committed to reducing emissions from its municipal vehicle fleet 50 percent from its FY 2006 baseline by 2025, through vehicle electrification, conversion to biofuels, and improved efficiency.[95] The city targets an 80 percent reduction in municipal vehicle emissions by 2035.

14. Seventy-four percent of the city government's remaining emissions in 2050 is expected to come from fossil fuel combustion in city-owned and-operated buildings.

Under current plans, the city government will still emit 1.1 million tCO_2e per year in 2050, or 30 percent of its baseline emissions. Seventy-four percent of these remaining emissions will result from continued fossil fuel combustion in city-owned and -operated buildings.

Despite progress, the city will need to develop a roadmap to fully decarbonize government buildings by 2050. This identified need has led to a suite of policy and planning changes, including work currently underway to develop a plan for transitioning city-owned and -operated buildings off of fossil fuels.

FIG. 3.26 | REMAINING CITY GOVERNMENT EMISSIONS BY SOURCE IN 2050

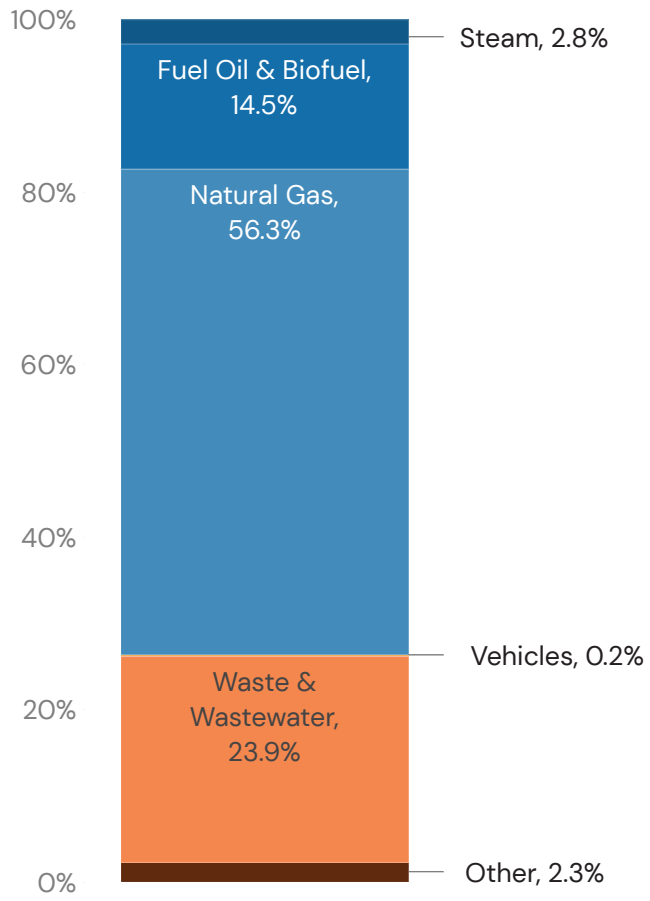


Figure Source: NYC OMB, NYC DCAS

Emissions Risks and Challenges

Achieving net-zero emissions by 2050 is highly dependent on the state successfully delivering on its commitment to a zero-carbon electric grid by 2040.[96] The city is no longer projected to be on track to meet science-based targets by 2030, mainly due to delays and cancelations of large-scale renewable energy projects. On January 20, 2025, the federal government issued an executive action pausing federal leasing and permitting for wind energy. On April 16, 2025, the Bureau of Ocean Energy Management issued a stop work order for the Empire Wind 1 project.[97] These orders have impacted offshore wind development, which could otherwise provide substantial clean energy to the state and city, and have increased uncertainty about the ability to achieve a zero-carbon grid by 2040.

Within the city's control, building decarbonization remains the highest-impact approach for reducing emissions, primarily through LL97. However, building retrofits are costly and complex. The city will need to monitor the efficacy of existing finance and incentive programs in supporting building owners to accomplish intended emissions reductions. Incentives created under the Inflation Reduction Act of 2022 to help offset costs to building owners are currently at risk, creating additional uncertainty.[98]

SOURCE: NYC DEP

4. Looking Forward

As Climate Budgeting continues to evolve, it will integrate new information and expertise from workstreams currently underway. Each of these efforts will help the city build climate considerations into decision-making across agencies.

CLIMATE BUDGETING EVOLUTION

Affordability

For New York City to reach its decarbonization and resiliency goals, improvements must be made to the city's energy supply, transportation networks, infrastructure, and buildings. This will require substantial investments in a city that faces some of the highest construction, housing, and utility costs in the country.[99] These pressures are already burdens for New Yorkers and are particularly acute for low- and moderate-income residents. For climate policies to be successful, they must protect New Yorkers from cost-of-living increases and not exacerbate existing barriers to affordability. OMB will increase its focus on strategies that advance climate policy while preserving and enhancing affordability for New Yorkers.

EJNYC Plan

In 2024, MOCEJ published the EJNYC Report, an assessment of historical and present environmental justice issues in the city, and the ENJYC Mapping Tool, a geospatial data repository with over 100 New York City-specific interactive mapping layers related to environmental justice.[100] MOCEJ is now developing an EJNYC Plan with the support of an interagency working group and an external Environmental Justice Advisory Board. The Plan will identify citywide initiatives and agency-specific actions that address environmental inequities described in the report and will provide recommendations on embedding environmental justice considerations into the city's decision-making processes. OMB will consider opportunities to adopt recommendations from the Plan, such as incorporating new screening questions into the Climate Budgeting Intake Form and using key performance indicators to track the near- and long-term impacts of city investments on advancing EJNYC goals.

Climate Resiliency Design Guidelines

MOCEJ is leading agencies to advance the five-year Climate Resiliency Design Guidelines Pilot Program.[101] Required by Local Law 41 of 2021, the pilot is enabling the design of more than 35 capital projects across 23 agencies to be consistent with the science-based standards, ensuring they are built to withstand extreme weather and provide benefits to communities for their full useful lives.[102] MOCEJ is also preparing to expand the use of the guidelines to eligible capital projects, as required by law by 2027, and is developing benefit-cost analysis tools and project evaluation metrics for measuring resiliency in design.

These guidelines will be important for aligning funding priorities with resiliency goals. OMB is participating in the development of these tools, and Climate Budgeting will evolve as new metrics and processes are established.

Climate Funding and Finance

To address the funding gap for coastal resilience projects, the city is considering new approaches for funding and finance, including the Resilience Finance Task Force's recommendation to create a comprehensive funding and governance framework.[103] The relaunch of the Affordable Housing Rehabilitation Program (J-51 Reform) tax abatement and the development of the GreenHOUSE program support affordable housing, building decarbonization, and compliance with LL97.[104] The city continues to explore mechanisms to support affordability and decarbonization efforts.

Electrification Planning

Two complementary strategies are being developed to tackle the challenge of phasing out fossil fuel consumption. MOCEJ is crafting a citywide plan to reduce fossil fuel use in private sector buildings, with a focus on promoting electrification through policy and legal reforms. Simultaneously, DCAS is creating a roadmap to phase out fossil fuel equipment in city government buildings, detailing investment pathways and their impacts on emissions, costs, and public health.[105] OMB facilitates the integration of projects from this roadmap into the city's Climate Budgeting process, ensuring a unified approach to achieving the city's emissions-reduction goals.

Advanced Capital Planning

Decarbonizing the city's physical assets will require more comprehensive, advanced, portfolio-wide planning, along with better tools for assessing and tracking capital project needs and priorities. Effective resiliency planning will also require a thorough understanding of the state of city-owned buildings and infrastructure and their exposure to current and future climate hazards.

DDC is leading the Advanced Capital Planning effort to create a rich, detailed, and up-to-date digital platform to bring together data on the city's public buildings, including energy use and emissions performance, flood and heat risk, state of repair, and other physical conditions and needs.[106] This centralized database will benefit both individual project planning and portfolio-wide strategic planning.

The city will use this resource to develop more robust plans for building decarbonization through energy efficiency and electrification, to head off the need for emergency investments in fossil-fuel-powered boilers, and to drive effective implementation of the Climate Resiliency Design Guidelines throughout the city's capital projects.

Embodied Carbon

Many of New York City's climate policies focus on reducing operational emissions, which come from fossil fuel combustion in vehicles, buildings, and power plants, and from waste. This approach, however, does not address emissions generated through the production and transportation of the goods New Yorkers consume, also known as "embodied carbon," which is another significant driver of climate change.

In 2022, the city adopted Executive Order 23 on Clean Construction, which requires city government agencies to implement specifications for low-embodied-carbon concrete.[107] In 2023, the city also joined the C40 Clean Construction Accelerator, in which it endeavors to reduce embodied emissions by at least 50 percent for all new buildings and major retrofits by 2030, reduce embodied emissions by at least 50 percent for all infrastructure projects by 2030, and require zero-emissions construction sites citywide by 2030, where technology is available.[108] In future years, the city will seek to incorporate embodied carbon into the Climate Budgeting process.

New York City's second cycle of Climate Budgeting has resulted in significant progress and identified further opportunities for advancement. Looking forward, OMB will continue to learn from its experience, streamline and improve internal and citywide processes, and expand upon existing tools to ensure that Climate Budgeting supports the prioritization of the most cost-effective and impactful investments to help New York City build a resilient, clean, and healthy future.

SOURCE: NYC OFFICE OF THE MAYOR

TECHNICAL APPENDICES

To explore the technical appendices, which include detailed methodologies of analyses presented in this document, follow this link or scan the QR code below.

Technical Appendix A: Climate Budgeting Tools and Investment Tracking
Technical Appendix B: Resiliency Exposure Inventory and Forecast
Technical Appendix C: Greenhouse Gas Emissions and Air Quality Forecasting

GLOSSARY

A/C	Air Conditioning
BRIC	FEMA's Building Resilient Infrastructure and Communities Program
CES	New York State's Clean Energy Standard
CLCPA	New York State Climate Leadership and Community Protection Act
CRDG	Climate Resiliency Design Guidelines
DCAS	NYC Department of Citywide Administrative Services
DDC	NYC Department of Design and Construction
DEP	NYC Department of Environmental Protection
DOB	NYC Department of Buildings
EJ	Environmental Justice
EJNYC	Environmental Justice New York City
FEMA	Federal Emergency Management Agency
FY	Fiscal Year
GW	Gigawatt
HPD	NYC Department of Housing Preservation and Development
HVAC	Heating, Ventilation, and Air Conditioning
IPCC	Intergovernmental Panel on Climate Change
KPI	Key Performance Indicator
LL97	NYC Local Law 97 of 2019
MOCEJ	NYC Mayor's Office of Climate and Environmental Justice
MTA	Metropolitan Transportation Authority
NPCC	New York City Panel on Climate Change
NYCHA	New York City Housing Authority
NYCHA PACT	NYCHA's Permanent Affordability Commitment Together Program
NYNJHATS	The U.S. Army Corps of Engineers' New York and New Jersey Harbor and Tributaries Focus Area Feasibility Study
NYSERDA	New York State Energy Research and Development Authority
OMB	NYC Mayor's Office of Management and Budget
PlaNYC	PlaNYC: Getting Sustainability Done report
$PM_{2.5}$	Particulate matter with diameter up to 2.5 micrometers
tCO_2e	Metric tons of carbon dioxide equivalent greenhouse gas emissions

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