

**Five Visions for
Building Climate Positive
Neighborhoods**

Overview



▲ Rewire Fellows at the final ideation workshop, Urban Design Forum.

In 2024, Urban Design Forum’s *Rewire* initiative examined ways to transform New York City’s buildings, public spaces, and infrastructure into engines for climate action. Our goal was not to address every challenge but to create a space for further imagination about the next chapter of our city’s climate response. To achieve this, we enlisted 48 Forum Fellows to advance new design and policy proposals across five key issue areas. We aimed to energize and mobilize leaders from both the private and public sectors, creating new venues for discussion – not just about what is being implemented now, but about what could be in the future.

Rewire’s interdisciplinary cohort of civic leaders lent their expertise – in architecture, urban design, landscape architecture, planning, engineering, community organizing, behavioral science, transportation and environmental policy, economic development, housing, and sustainability – to shape five transformational proposals for New York City.

This executive summary outlines the proposals in *Five Visions for Building Climate Positive Neighborhoods* – a compilation of research, case studies, policy recommendations, and pilot ideas.

Summary of Proposals

Vision 1

Accelerate Sustainability with Neighborhood Retrofit Programs

Authors: *Jane Bartman, Tommaso Bitossi, Lisa Bolle, Jonathan Molloy, Rebekah Morris-Gonzalez, Crystal Ng, Keith Ryan, Elaine Wang, Jess Wunsch, Sheena Zhang*



▲ Solar panels on a multifamily residential building. Bright Power, Inc. – U.S. Department of Energy.

Existing residential buildings under 25,000 square feet are particularly challenging to decarbonize at scale due to financial constraints, building ownership structures, knowledge gaps among residents and contractors, and the disruptive nature of in-home retrofits. Citywide, these smaller buildings represent 31% of the building stock and house an estimated 4.2 million residents (53% of the population).¹ To address barriers and accelerate retrofits of residential buildings under 25,000 square feet, we propose the creation of an NYC Housing Retrofit Agency.

Recommendations:

- Streamline processes, requirements and incentives for retrofits under 25,000 square feet through an agency modeled similarly to NYC School Construction Authority.
- Launch a network of neighborhood retrofit One-Stop Shops that conduct outreach and provide project management support to owners and residents.
- Support market building for energy retrofits by informing and upskilling minority-owned and worker-owned contracts to prepare for bids.
- Pilot an aggregated retrofit program in priority communities, unlocking financial sector and contractor appetite for small multifamily building retrofits.

Vision 2

Leverage Industrial Zones to Drive Circular Construction

Authors: *Gary Chung, Eleanor Gibson, Earl Lin, Candelaria Mas Pohmajevic, Jenny Osman, Saritha Ramakrishna, Zeineb Sellami, Matthew Seybert, Kristin Sposito*



▲ Circular Hubs working group at Glenwood Mason Supply, Urban Design Forum.

A significant portion of Industrial Business Zone (IBZ) activities are tied to New York City’s thriving construction industry that include material suppliers, masonry, electrical, mechanical, plumbing, roofing, and demolition contractors. Although these industries provide substantial employment opportunities, they also contribute to the city’s heavy carbon footprint; the building and construction sectors are responsible for roughly 40% of global carbon emissions. To support economic opportunity and reduce climate impacts, the City could **establish Green Industrial Cooperatives (GICs) that promote circular construction practices citywide** with the creation of a network of interconnected industrial businesses.

Recommendations:

- Leverage the cooperative model to help businesses achieve economies of scale, lower operational costs, and access to funding and financing.
- Build a market for material reuse in the building construction industry.
- Support education and training of industrial businesses and workers around material reuse and energy sustainability.
- Support long-term neighborhood planning for sustainable infrastructure investments in IBZs.
- Pilot a model in a specific IBZ that convenes industrial businesses and workers to identify opportunities for a circular economy.

Vision 3

Transform Peaker Plants into Biodiversity Hubs

Authors: *Charlotte Barrows, Hannah Berkin-Harper, Andrew Buck, Victoria Dearborn, Kirk Gordon, Kevin Kim, Harsh Shah, Lee Stark, John Surico, Somto Uyanna*



▲ Ravenswood Generating Station. King of Hearts.

Natural ecosystems play a crucial role in supporting human life and mitigating climate change. But nearly 70 percent of the city’s surface is impervious.² At one of the city’s dirtiest hardscapes, peaker plants – or fossil fuel energy facilities – emit harmful pollutants into the neighborhoods where they are located and contribute to habitat disruption. Nearly all the waterfront neighborhoods housing these peaker plants are classified by state and federal agencies as “disadvantaged communities,” bearing the disproportionate environmental and health burdens of climate change.³ To restore biodiversity and address historic harms in environmental justice communities, New York City could **transform decommissioned energy facilities into new models of waterfront infrastructure** through the Plant to Plants initiative.

Recommendations:

- Engage with power plant operators, starting with the New York Power Authority (NYPA) and Con Edison, to unlock sites for community access and biodiversity.
- Empower community-based local stewardship by collaborating with community organizations to create job training pathways for ecological maintenance and management.
- Create stronger baselining and data analysis to measure biodiversity change over time.
- Integrate biodiversity and equity principles into land repositioning and land redevelopment strategies on power plant sites.
- Establish a local seed and plant supply chain on waterfront peaker plant sites.
- Coordinate with existing environmental education programs and leverage sites for citizen science and living lab initiatives.

Vision 4

Promote Climate Literacy at Public Libraries

Authors: *Ankita Chachra, Caitlin Harris, Lloyd Helen, Christina Hernandez, Catherine Joseph, Anna Keleher, Andrew Leung, Kelley Tapia, Yi Zhang*



▲ Pop-up reading room, Street Lab.

While New York City has made strides in decarbonization through new local laws and initiatives, there has been limited focus on engaging New Yorkers through climate education efforts. A 2021 survey revealed that only about 52% of New York City public school educators teach climate change, with many lacking training in the subject.⁴ As vital community hubs, public libraries have the potential to expand their educational influence to include climate education. To improve access to climate education and green job resources, the City could **empower public libraries as “climate hubs” to enhance climate literacy.**

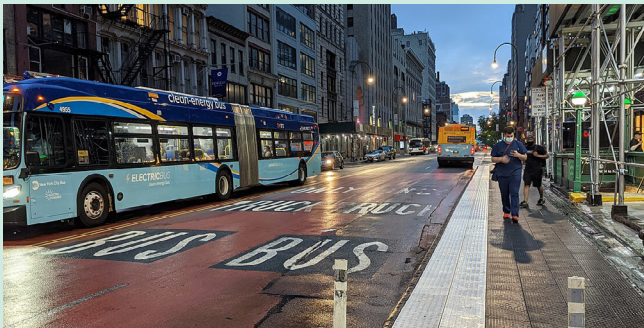
Recommendations:

- Build a coalition of stakeholders, from citywide organizations to grassroots groups, to shape and lead climate education initiatives in libraries.
- Utilize the physical sites of libraries to design a Climate Hub at every branch.
- Invest in programs that support workforce development, consumer education, and general awareness at every branch.
- Train, empower, and compensate branch employees as Climate Education Coordinators.
- Leverage public space programs, such as Open Streets, to pilot outdoor learning and community art activations on adjacent school and library streets in an environmental justice neighborhood.

Vision 5

Strengthen Transportation Resilience with Bus Rapid Transit

Authors: *Aditya Bhagath, Adriana Chávez, Liam Cutri-French, William Farrell, Thomas Heltzel, Nicole Payne, Danny Pearlstein, Nibarika Shekhawat, Ria Singh, Michael Woods*



▲ 14th street busway, Eden, Janine and Jim.

Looking to past transportation measures, the City’s response during Hurricane Sandy highlights the crucial role of surface transit – specifically buses – in providing resilient transit. The storm affected 11 million daily travelers, damaging over 500 miles of roads and shutting down the subway for days. In response, the City implemented single-occupant vehicle restrictions and successful “bus bridges” that allowed over 226,000 commuters to cross the East River – nearly triple the usual bus riders.⁵ To provide resilient, low-to-zero-carbon connections citywide, New York City could **develop a comprehensive bus rapid transit (BRT) system to support the “last-mile commute”** that would serve areas not well-covered by the subway.

Recommendations:

- Create a continuous loop around New York through large-scale BRT deployment.
- Establish a network that links a system of corridors and intermodal connections, as linear extensions of existing subway transit.
- Redesign key intersections to reduce traffic congestion and improve access with center running bus lanes.
- Shape effective communication and advocacy to garner political and grassroots support of bus priority projects.
- Explore a variety of funding pathways by leveraging diverse government stakeholders at the table.
- Pilot redesigns along a corridor that would strengthen intermodal connections and last-mile commute.

Call to Action

Rewire’s working groups aimed to address disconnects between historical top-down planning and ground-up neighborhood-level climate goals. In addition to deep and long-term commitments to fund sustainability and adaptation projects, New York City needs to strengthen the capacity of every neighborhood to tailor their approaches based on the local knowledge of their challenges. The goal of government should be to empower community organizations as conduits to neighborhood residents and businesses and help coordinate an accelerated grassroots transition that is guided by an overarching citywide plan.

This publication is a blueprint for organizing city government, community visionaries, and

the design and development community to take collective action in reshaping and adapting our built environment. This work can't be done in silos or by individuals alone. Only through deeper partnerships and collaborations can we adapt every sidewalk, street, and coastline, and rewire every building, block, and infrastructure to meet the challenge of our lifetimes.

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Endnotes

- 1 New York City Department of City Planning, "MapPLUTO," NYC Planning, accessed August 12, 2024, <https://www.nyc.gov/site/planning/data-maps/open-data/dwn-pluto-mappluto.page>.
- 2 "Resilient NYC Partners," New York City Department of Environmental Protection, accessed August 1, 2024, <https://www.nyc.gov/site/dep/whats-new/resilient-nyc-partners.page>.
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- 4 United Federation of Teachers (UFT) and National Wildlife Federation (NWF), CRETF ClimEd Survey 2021, deployed by the Climate and Resilience Education Task Force in NYC (CRETF), June 11, 2021, accessed August 1, 2024, https://drive.google.com/file/d/1__VwkOSGK1XZigV3KfA2eQ5RR1xHrNAC/view.
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