

Brighter Futures:

Electrifying NYC's Vital Spaces to Build Resilient Communities

EPA Climate Pollution Reduction Grants Program – Implementation Grants

1. OVERALL PROJECT SUMMARY AND APPROACH

The New York City (NYC) Department of Citywide Administrative Services (DCAS) is leading a coalition to request \$497,812,630 from the Environmental Protection Agency's (EPA) Climate Pollution Reduction Grant Implementation (CPRG-I) program to advance ***Brighter Futures: Electrifying NYC's Vital Spaces to Build Resilient Communities ("Brighter Futures")***. This project will electrify 599 civic, educational, and residential buildings in direct alignment with the *New York City – Newark – Jersey City Metropolitan Statistical Area (NY-NJ MSA) Priority Climate Action Plan (PCAP)*, funded by the EPA's Climate Pollution Reduction Grant Planning program, which lists "Electrification & Energy Efficiency in Residential, Commercial & Government Buildings" as a priority goal (p. 47). The Brighter Futures project supports the EPA's CPRG-I program goals and objectives by implementing ambitious measures that will substantially reduce near- and long-term GHG emissions, achieve substantial benefits – including job creation and public health improvements - in low-income and disadvantaged communities (LIDACs), complement other funding to maximize impact, and pilot scalable strategies that have the potential to transform the building sector in New York City's (NYC) and beyond.

DCAS has played a key leadership role in NYC's building decarbonization initiatives and is thus strongly positioned to be the Lead Applicant for the Brighter Futures proposal. DCAS leads a coalition with three other City agencies who provide critical expertise and resources: NYC Public Schools (NYCPS, formerly Department of Education), the NYC Housing Authority (NYCHA), and the NYC Department of Housing and Preservation (HPD). This coalition proposes to execute six innovative building electrification measures: **New York Public Library (NYPL) Building Electrification** – Co-led by DCAS & NYPL, **NYC Police Department (NYPD) Precinct Electrification** – Co-led by DCAS & NYPD, **The Health Building Electrification** – Led by DCAS, **NYCPS Hot Water Electrification** – Co-Led by DCAS & NYCPS, **NYCHA Hot Water Electrification** – Led by NYCHA, and **HPD Affordable Housing Heat Pump Pilot** – Led by HPD.

The City selected these measures to propose for CPRG-I funding to prioritize key community anchors - City-owned civic buildings and affordable housing – and to focus investment in NYC's LIDACs. Together these efforts will reduce greenhouse gas (GHG) emissions by **87,854 metric tons CO2 equivalent (MT CO2e)** by 2030 and **1,214,786 MT CO2e** by 2050, targeting nearly 100% of the cumulative CPRG-I investment and related air quality improvements to benefit LIDACs. The climate actions under Brighter Futures are replicable, scalable, and will maximize both near-term (2030) and long-term (2050) GHG reductions. They will invite community engagement and awareness on energy efficiency while stimulating economic innovation, improving public health, creating 1,612 quality jobs, and promoting resilience. With EPA CPRG-I funding, Brighter Futures will transform NYC's vital civic, educational, and affordable housing spaces, drive healthy and equitable communities, and advance NYC's climate goals.

Much of NYC's building stock operates on fossil fuels, and as a result buildings are responsible for approximately 70% of GHG emissions citywide.¹ Of that 70%, in 2022 roughly 41% came from commercial and institutional buildings and nearly 46% came from residential buildings.² Moreover, buildings contribute to 66% of health-threatening fine particle emissions and 42% of fossil fuel use citywide, contributing directly to global warming and increasing both climate-related risks and negative health outcomes.³ Moreover, 52% of NYC's census tracts are classified as Disadvantaged Communities

according to the Climate and Economic Justice Screening Tool (CEJST); these areas are home to historically marginalized populations exposed to disproportionate air pollution and health risks, including from building emissions.^{4 5, 6, 7, 8} The City's climate goals include maximizing GHG reductions from the buildings sector while prioritizing decarbonization efforts in Disadvantaged Communities to promote environmental justice; Brighter Futures would play a critical role in achieving these goals.

NYC has pledged to support the Paris Agreement by committing to an 80% reduction in GHG emissions and carbon neutrality by 2050, and aligns with the goals of the NY State's *Climate Leadership and Community Protection Act* (CLCPA) which aims to ensure at least 35% of all clean energy benefits go⁹ to communities. To help meet these commitments NYC enacted a suite of programs and policies to advance building emissions reductions, including the *Climate Mobilization Act* (2019), which contains landmark Local Law 97 (LL97). LL97 requires the city's largest buildings to reduce emissions by 40% by 2030 and 80% by 2050, and mandates a 50% emissions reduction across City government buildings by 2030.¹⁰ NYC's sustainability plan *PlaNYC: Getting Sustainability Done* (2023) outlines commitments to electrify building systems and decarbonize affordable housing,¹¹ and *PowerUp NYC* (2023) is NYC's Long-Term Energy Plan outlining 29 clean energy initiatives to meet NYC's climate goals, including phasing out fossil fuels in existing buildings.¹² In less than 20 years, these and other policies and programs have reduced citywide emissions by 17% and City government emissions by 25%.¹³ DCAS has helped drive these achievements by working with other agencies to implement over 13,700 energy efficiency and decarbonization measures in over 2,000 buildings since 2006. However, in 2021 NYC buildings still emitted 36.03M MTCO₂e, nearly three times the emissions level the City must hit by 2050 to meet its carbon neutrality goal (12M MTCO₂e).¹⁴ As NYC's largest property owner, the City's goal is to transform its extensive portfolio of 4,000 buildings into a model for sustainability.¹⁵

While the City's investments thus far have helped push NYC toward its climate goals, fiscal realities and constraints are a constant roadblock. With CPRG-I funding, the Brighter Futures project could surmount these challenges to implement rapid, scalable measures across commercial/institutional and residential buildings - the two largest GHG-emitting pillars of the NYC building sector - comprehensively and equitably reducing building emissions and accelerating the City's climate progress. The Brighter Futures coalition will collaboratively design and implement the proposed measures and contribute expertise, resources, and oversight to ensure the project's success. DCAS will submit a Memorandum of Agreement (MOA) signed by all coalition members by July 1, 2024 (see attached Letters of Intent).

a. Description of GHG Reduction Measures

Brighter Futures includes six building electrification measures targeting a diverse array of City-owned and affordable housing buildings. Descriptions of each coalition member's roles and responsibilities, and of each measure's major features, tasks, milestones, and potential risks, follow below. See attached Letters of Commitment from NYPL and NYPD pledging project support as critical partners.

Roles & Responsibilities

NYC Department of Citywide Administrative Services (DCAS) (Lead Applicant). DCAS, specifically its Division of Energy Management (DEM) team, will be the Lead Applicant and recipient of the CPRG-I award. DCAS has helped City agencies invest over \$1B in NYC building energy efficiency projects, driving an 8% annual energy reduction in the citywide building portfolio. DCAS led citywide efforts to release the LL97 Implementation Action Plan (IAP) and to procure 100% clean electricity for City government operations. Thus, DCAS is powerfully positioned to oversee the following:

- **Subawards & Financial Management:** Allocate CPRG-I award funding to subrecipient coalition members. Oversee coalition members' allocation of CPRG-I funds to ensure proper financial

management and to guarantee the full scope of work detailed in this application is carried out in accordance with relevant regulations and the EPA's CPRG-I terms and conditions.

- **Project Delivery & Community Engagement for NYPL, NYPD, & Health Building Electrification:** Manage project delivery contract, procurement, construction, monitoring, and budget for the three measures and lead community engagement for the Health Building while supporting community engagement strategies led by NYPL and NYPD.
- **Procurement for NYCPS Electrification:** Oversee the procurement process for NYCPS.
- **Reporting:** Report progress toward achieving the expected outputs and outcomes for each GHG reduction measure via EPA's required semi-annual reports and detailed final report.

NYC Public Schools (NYCPS) is the largest public school system in the country and comprises the largest share of City-owned buildings. NYCPS is committed to bringing climate action into its classrooms, buildings, and operations. As the owner's representative and team responsible for energy commitments and sustainability programs for all NYC public schools, NYCPS will take the role of a coalition member and subrecipient who will lead domestic hot water (DHW) electrification – including all responsibilities outside of procurement – at 500 NYCPS buildings.

NYC Housing Authority (NYCHA) is the largest public housing authority in the country, providing affordable housing to 528,105 residents through public housing and Permanent Affordability Commitment Together (PACT) programs and Section 8 housing. NYCHA's 2021 *Sustainability Agenda* commits to advancing electrification and deep energy retrofits to meet LL97 mandates, and NYCHA has over \$360M in energy-efficiency construction projects ongoing. The agency's role will be as a coalition member and subrecipient leading all aspects of DHW electrification across three developments.

NYC Department of Housing Preservation and Development (HPD) is the largest municipal housing preservation and development agency in the nation, with a mission to promote quality, safety, affordability, and resilience in the city's housing, in part through affordable energy efficiency programs that promote health and reduce energy costs. HPD's role will be that of a coalition member and subrecipient leading the delivery of a heat pump pilot at privately-owned affordable housing buildings.

As coalition members, responsibilities for NYCPS, NYCHA, and HPD will include **Project Management**, including procurement, design, implementation, budget oversight, and grant management; **Community Engagement** for their respective measures, and **Monitoring & Reporting** on project progress to DCAS to ensure accurate progress reports to the EPA. In addition to the key features, tasks, and milestones specific to each measure below, every measure will share these same tasks and milestones:

- **Project & Grant Management (Oct 2024 - Oct 2029):** Project and grant management, co-led between DCAS and partners or coalition members as applicable, will ensure electrification measures are delivered within the proposed schedule and budget and in alignment with EPA requirements.
- **Community Engagement (Oct 2024 - Oct 2029):** Each coalition member and partner will deploy early and continuous community engagement and target outreach to DACs. This will be critical to ensuring building visitors, residents, employees, students, and other New Yorkers impacted by Brighter Futures have frequent opportunities to participate in decision-making processes and to share feedback that improves benefits and avoids disbenefits (see Section 4).

Measure 1: New York Public Library (NYPL) Electrification

Measure Overview. The NYPL system consists of 92 branches throughout Manhattan, Staten Island, and the Bronx serving as civic and community centers that provide important social services like career

services, and after-school and adult learning programs, and that act as Cooling Centers during heat waves. With CPRG-I funding, DCAS and NYPL propose to implement electrification upgrades at three libraries: the Parkchester Branch in the Bronx; the St. George Library Center in Staten Island; and the Schomburg Center for Research in Black Culture in Manhattan. NYPL selected them based on “shovel-readiness,” locations in or near EPA-designated LIDACs; scalability of electrification measures; confidence in GHG reductions by 2030; and assurance of completion within the performance period. This measure is included in the PCAP *Address financing gap to decarbonize government-owned buildings* action (p. 47). The City selected this measure as a PCAP priority since NYPL buildings are community pillars for thousands of visitors that could serve as visible sustainability models yet face critical funding and operating constraints. This measure meets CPRG-I goals since it will notably reduce GHG emissions by 2030 – by **727 MT CO₂e** – and beyond while piloting scalable strategies, offering public educational opportunities, and improving the health and comfort of nearby LIDAC residents and visitors.

Major Features. NYPL and DCAS will coordinate to install new heat pumps and electric water heaters to promote energy-efficient heating, ventilation, and air conditioning (HVAC) and hot water systems and perform lighting upgrades and install rooftop solar photovoltaic (PV) to enhance energy efficiency. The table below summarizes the scope of work at each site.

Library	Address	Brief Description	Electrification Scope of Work
Parkchester Library	1985 Westchester Ave, Bronx, NY	A 2-story, 7,500 sf brick building built in 1985 that serves a growing immigrant community.	Transition fossil fuel-based building systems to electric with a new Variable Refrigerant Flow (VRF) heat pump system, a new water heater, and 21.4kW of rooftop solar PV.
St. George Library Center	5 Central Ave, Staten Island, NY	This 1907-era 2.5-story, 23,258 sf building has a Teen Room, research room, and adult learning center.	Replace building systems with electric alternatives, including a geothermal heat pump with air distribution or VRF heat pump system and new electric water heater.
Schomburg Center for Research in Black Culture	515 Malcolm X Blvd, New York, NY	This circa-1925 building houses research & exhibits of African American & African Diaspora material requiring protective building systems.	The Center accounts for 9.6% of NYPL’s average emissions. This measure will replace existing chillers and cooling towers with six modular Air to Water Heat Pumps (AWHPs) and installing lighting upgrades.

Major Tasks & Milestones. Both the NYPL and NYPD measures (below) have a parallel project timeline with the same key tasks and milestones. See more details on major tasks and milestones in Section 3.c.

- **RFQ, RFP, & Contractor Procurement (Nov 2024 - Dec 2026):** DCAS will release and evaluate a Request for Qualifications (RFQ) and Request for Proposals (RFP) for each measure and select design-build contractor(s) to complete electrification measures at selected NYPL and NYPD sites.
- **Design & Construction (Jan 2027 - Sept 2029):** Removal of existing systems and installation and commissioning of new electrification systems, performed by the procured contractor(s), will form the core of project delivery for both measures. Each measure will also include interim implementation milestones with phased electrification at every building.

Measure 2: NYC Police Department (NYPD) Precinct Electrification

Overview. Through a design-build contract managed by DEM’s Capital Project Implementation team, this initiative would implement electrification upgrades at nine NYPD precincts across four NYC boroughs. As most of NYPD’s buildings are between 51-75 years old, DCAS and NYPD chose Brighter Futures precincts within that age range, with representative building typology, location in or near a LIDAC, and the highest emissions to ensure larger energy savings, shorter payback periods, and scalability (see Section 1.c). The PCAP *Address financing gap to decarbonize government-owned*

buildings action (p. 47) encompasses this measure. The City selected this measure as a PCAP priority since like libraries, NYPD precincts have potential as visible City sustainability models – they provide critical security services and community safety programs for New Yorkers, form a significant portion of the City’s building portfolio, and contribute 3% of City-owned building emissions.¹⁶ In alignment with CPRG-I goals, this measure will reduce GHG emissions by **977 MT CO₂e** by 2030 while targeting air quality improvements in LIDACs and using technologies that could scale to NYPD’s 77 precincts.

Major Features. The table below details the nine selected precincts.

NYPD Precinct	Address	Square Footage
32nd Precinct	250 West 135 th Street, Manhattan	26,255
43rd Precinct	900 Fteley Avenue, Bronx	35,300
47th Precinct	4111 Laconia Avenue, Bronx	34,700
75th Precinct	1000 Sutter Avenue, Brooklyn	30,160
25th Precinct	120 East 119 th Street, Manhattan	62,500
48th Precinct	450 Cross Bronx Expressway, Bronx	59,328
72nd Precinct	830 4 th Avenue, Brooklyn	53,600
73rd Precinct	1470 East New York Avenue, Brooklyn	50,020
84th Precinct	301 Gold Street, Brooklyn	28,100
Total		379,963

Across all nine precincts (unless noted otherwise), DCAS and NYPD will:

- **Install Variable Refrigerant Flow (VRF) heat pumps** to support DHW electrification. VRF heat pumps will provide primary water heating with existing boilers remaining to provide emergency/backup heat. This will reduce energy consumption and utility costs by switching to a high efficiency DHW system. (Only the 84th Precinct will not receive a VRF heat pump.)
- **Electrify HVAC** systems by installing heat pumps with energy recovery that use electricity to transfer heat, thus improving energy efficiency.
- **Install advanced BMS** with demand response and remote access to facilitate more efficient building energy use by replacing existing pneumatic controls for air handling units, heating and ventilation units, rooftop units, boilers and hot water pumps, and chillers and hot water pumps. This will restore cooling and heating controls and reduce heating and cooling demand.

Major Tasks & Milestones. This measure’s key tasks and milestones are the same as those for the NYPL measure above. See more details on major tasks and milestones in Section 3.c.

Measure 3: The Health Building Electrification

Overview. NYC hosts over 50,000 office buildings (241M sq. ft.). Mitigating the 30% of citywide GHGs emitted by the commercial/institutional building sector will require rapidly decarbonizing these office spaces, and DCAS’s energy audits in City office buildings have shown which energy retrofits will be most cost-effective, time-efficient, replicable, and high-impact. Based on these audits under Brighter Futures DCAS would perform energy upgrades at the Health Building, which hosts staff from three key City departments: the Department of Mental Health and Hygiene (DOHMH), Health + Hospitals, and Department of Sanitation (DSNY). DCAS selected the Health Building to pilot various strategies as these agencies form the City’s backbone for public health and sanitation services that benefit millions of New Yorkers; over 50% of the building’s systems will need replacement in the next ten years; and the building has a similar typology to many other public and commercial office buildings, enabling scalability (see Section 1.c). Like the NYPL and NYPD measures, the PCAP includes this measure in its action to *Address financing gap to decarbonize government-owned buildings* (p. 47). This measure will meet CPRG-I goals

by reducing GHG emissions by maximizing long-term GHG impacts - reducing **156 MT CO₂e** by 2030 and **5,150 MT CO₂e** by 2050 – leveraging CPRG-I funds alongside City capital and utilizing ambitious strategies that provide a scalable model for offices citywide.

Major Features. DCAS would use CPRG-I funding to partially convert the Health Building away from gas-fired steam through the following actions, which will better regulate heating and cooling, minimize energy loss, maximize cost-effectiveness, and improve air quality and comfort for 1,100 daily occupants:

- **Convert dual duct, constant volume, or multi zone systems to a variable air volume (VAV) system,** which will provide proper outside air ventilation coupled with modern, zoned controls and appropriately sized cooling to keep occupants comfortable and healthy.
- **Replace the district steam heating and cooling system with Air to Water and Water to Water Heat Pumps (AWHPs/WWHPs)** that are on-site, central, all-electric, and have new hydronic distribution and variable-air-volume terminal units. Commercial air-to-water heat pumps allow for electrification of heating and cooling while keeping the refrigerant to the mechanical room, reducing the risks of refrigerant leaks and related GHG emissions and health risks. This measure will avoid an estimated 85.5 lbs. of PM_{2.5} and 1,437 lbs. NO_x from steam production.¹⁷

Major Tasks & Milestones. See more details in Section 3.c.

- **Procure Contractors for Design (Oct 2024 – March 2025) and Project Delivery (Mar – Oct 2027):** Completion of separate contractor bidding processes for design and construction to enable expert project delivery.
- **Complete Design (Apr 2025 – Feb 2027):** Phasing and completion of project design and engineering plans by the design contractor to support precise site planning and cost estimates and package development for Landmark Preservation Commission and Public Design Commission review.
- **Complete Electrification Measures (Nov 2027 – Aug 2029):** Removal of existing systems and the completion of electrification and energy retrofit measures by the construction contractor will complete project delivery.

Measure 4: NYC Public Schools (NYCPS) Hot Water Electrification

Overview. NYCPS operates 1,600 buildings that consume over one third of all municipal energy in NYC. Most of the schools are near roadways and heavy truck routes where emissions filter into classrooms where children spend 7 to 12 hours per day, increasing risks of childhood asthma, respiratory infections, and reduced lung function.^{18, 19, 20} CPRG-I funding would support targeted electrification of domestic hot water (DHW) systems across 500 school buildings in all 5 boroughs enrolling 304,458 students. This intervention will reliably reduce 4-25 MT CO₂e per building depending on the building's size. To select schools for DHW electrification, NYCPS identified school buildings in CEJST and/or EJScreen communities with high energy usage intensity (EUI), high potential GHG reductions, and equipment reaching the end of its useful life. The PCAP includes this measure in the action to *Address financing gap to decarbonize schools* (p. 47). The City selected this measure as a PCAP priority and meets CPRG-I goals because it will drive an outstanding decrease in GHG emissions from City-owned educational buildings by 2030 — by **71,211 MT CO₂e** — target 100% of air quality and health benefits to LIDACs, pilot technologies that can be scaled across the full NYCPS portfolio, and offer unique opportunities to educate, train, and engage students on the benefits of energy efficiency.

Major Features. This measure will install DHW heat pumps at 500 school buildings across nearly 800 schools citywide. Smaller schools (at or below ~100,000 sq. ft.) average between two 120-gallon heat pumps per site and larger schools (at or above 200,000 sq. ft.) average four 120-gallon heat pumps per

site to electrify DHW systems, though the number may vary depending on the hot water load. DHW heat pumps will capture thermal energy from ambient air instead of natural gas to heat the water supply, enabling hot water systems to operate on electricity. Domestic hot water (DHW) electrification presents a targeted opportunity for emissions reductions while improving indoor and outdoor air quality, fostering healthier learning environments, and reducing utility costs. Given the substantial number of buildings impacted, please see attachment Areas_DCAS for the full list.

Major Tasks & Milestones. See more details in Section 3.c.

- **New Contractor Procurement (Oct 2024 – Feb 2029).** NYCPS, with DCAS, will complete new contractor procurement for heat pump installations to ensure expert project delivery. To complete the number of sites on time, multiple contractors may be engaged.
- **Project Execution (Jan 2025 – Aug 2029).** Site scoping, RFP processing, permitting, removal of existing systems, and installation of new systems will take 6 months per building; NYCPS will also train facilities staff on the new systems to ensure sustained building efficiency.

Measure 5: NYC Housing Authority (NYCHA) Hot Water Electrification

Overview. NYCHA is the largest public housing authority in North America, contributing 2.5% of citywide building emissions and housing 1 in 17 New Yorkers. NYCHA’s *Climate Mitigation Roadmap* (2020) and *Sustainability Agenda* (2021) emphasize building electrification as critical to achieving LL97 and *PlaNYC* requirements.^{21, 22} Toward that end, in 2022 NYCHA launched the Clean Heat for All (CH4A) Challenge with the New York Power Authority (NYPA) and New York State Energy Research and Development Authority (NYSERDA) for manufacturers to deliver cold climate heat pumps that fit into existing windows. NYCHA committed to deploying 30,000 window heat pumps – starting with a pilot of 60 – while electrifying DHW across its portfolio. NYCHA’s Sustainability team identified seven developments slated for boiler replacement as priority CH4A sites, three of which were selected for Brighter Futures as they have funds for window heat pumps but not for DHW electrification. CPRG-I funds would bridge this gap, enabling full electrification of these three developments including 61 buildings and 7,000 residents. The PCAP includes this measure as *Address financing gap to decarbonize public housing* (p. 47). It was selected as a PCAP priority for the same reasons it meets CPRG-I goals: it deploys scalable measures to drive a substantial reduction of **12,673 MT CO₂e** by 2030, benefits 100% LIDAC residents, leverages outside funding to maximize impact, and has transformative potential as an energy efficiency and environmental justice model for public housing locally and nationally.

Major Features. NYCHA plans to decouple DHW service and connect it to newly installed DHW heat pumps, improving the energy efficiency of domestic water heating by two to three times. The table below summarizes the three sites NYCHA selected for this measure.

NYCHA Development	Location	Buildings	Residents	Development Description
Pomonok Houses	Queens, NY	35	3,978	Built in 1952 with 2,071 apartments, a community center, and senior center.
Pelham Parkway Houses	Bronx, NY	23	2,320	Built in 1950, with 1,264 units, a community garden, senior center, day care, and community centers.
Morrisania Air Rights (MAR)	Bronx, NY	3	1,616	Built in 1980, with 843 apartments and a senior center.
Total		61	7,914	

Major Tasks & Milestones See more details in Section 3.c.

- **Contractor Procurement (Oct 2024 — Mar 2026):** NYCHA will submit and review an RFP, do pre-bid walkthroughs, and approve a contractor to enable project delivery of DHW electrification.
- **Design Completion (Dec 2024 — Sept 2026):** The procured contractor will complete site planning and evaluations, design and engineering plans, and cost estimates to ensure the measure is completed on time, within budget, and with maximum benefits.
- **Complete Electrification Measures (Apr 2026 — Oct 2028):** The contractor will remove existing systems, procure materials, and install new DHW systems to complete DHW electrification.

Measure 6: HPD Affordable Housing Heat Pump Pilot

Overview. As discussed above, NYCHA's CH4A challenge aimed to address the high cost of building electrification by developing highly efficient, easy-to-install window heat pumps that cut electrification costs in half. Scaling their deployment across NYC's *non*-public affordable housing could be transformative in mitigating that sector's GHG emissions, but the pumps were designed for NYCHA buildings where NYCHA pays for utilities. Scaling this strategy will require design changes to account for diverse building types and policy changes to avoid transferring costs to vulnerable tenants. To help scale window heat pumps, HPD seeks to use CPRG-I funds for a heat pump pilot that will install and monitor window heat pumps in affordable Housing Development Fund Corporation cooperative housing (HDFC coops) where tenant-paid heat is not an issue. Buildings in LIDACs heating with oil will be eligible, with a focus on buildings of 25,000 sf or more struggling to comply with LL97, which will maximize emissions reductions while reducing energy costs. The NY-NJ PCAP includes this measure under *Address financing gap to decarbonize privately owned buildings, especially for low-to-moderate income families* (p. 47). The City selected this as a PCAP priority due to the transformative potential of unlocking the market for light-touch window heat pump installation across the entire affordable housing sector. This measure will meet CPRG-I goals by pursuing an innovative, widely scalable pilot that will achieve a notable **2,111 MT CO2e** reduction by 2030 and achieve 100% of related air quality and health benefits for LIDACs.

Major Features, Tasks, & Milestones. HPD will conduct on-site assessments at 100 buildings to confirm viability, electrical capacity, and interest, and then install and monitor heat pumps at 25 buildings (~500 dwelling units). HPD will share data with manufacturers to encourage them to design a wider range of products, and with utilities and policymakers to encourage the development of programs to enable scalability across privately-owned affordable housing. Installations will be standalone through existing windows, and so do not require complicated installation, costly structural/electrical upgrades, or tenant relocation; they will be completed at no cost to buildings in exchange for access and pilot data sharing. Each building's existing heating systems will remain to provide water heating and a backup heat source. The heat pumps will provide reliable heating and cooling and have self-contained refrigerants, minimizing the risk of dangerous refrigerant leaks.

- **Partner & Contractor Procurement (Oct 2024 – Mar 2025).** HPD will procure one or more partners to conduct tenant surveys, site assessments, and electrical screenings, and to conduct heat pump purchasing and installations since HPD does not have the technical capacity or expertise.
- **Site Assessments & Building Selection (Apr – Sept 2025).** HPD and its contractor partner(s) will evaluate buildings from the initial HDFC coop pool with representative typologies to determine which have the window form, electrical feasibility, and tenant buy-in for pump installation and data collection, and which would require heat pump design changes.
- **Heat Pump Installation (Nov 2025 – Oct 2028).** Contractor(s) will purchase and install window heat pumps at selected pilot buildings as standalone, mid-cycle electrification projects.

- **Monitoring & Verification (Nov 2028 – Sept 2029):** HPD and its partners will gather performance data at pilot sites and conduct tenant surveys to help manufacturers, utilities, and policymakers take action to enable the technology at scale.

Underlying Risks and Mitigation Strategies

Staffing Needs & Delays (DCAS, NYPL, NYCPS, NYCHA, and HPD). NYPL will need to allocate existing staff to oversee Brighter Futures community engagement activities. This could delay community engagement due to capacity constraints, but NYPL and DCAS have planned to conduct community outreach for the full 5-year performance period and will continue public engagement after project closeout to address this risk. DCAS, NYCPS, NYCHA, and HPD will utilize part of their CPRG-I funding to hire personnel to support project implementation, which could delay project delivery if hiring timelines are slow; however, all have added contingencies to their project/grant management and delivery schedules to ensure timely project delivery.

Space or Schedule Disruptions (NYPL, NYPD, NYCPS, and NYCHA). Electrification upgrades will require contractors to access certain indoor and outdoor spaces, partly or fully blocking access to those spaces during operating hours. This could disrupt workspaces and public programs (NYPL/NYPD) and school activities (NYCPS), or inconvenience residents by impeding access to certain areas (NYCHA). As they have during prior upgrades, agencies will adjust contractor schedules and coordinate with occupants, residents, and visitors to minimize disruption and ensure all spaces and services can be used.

Vulnerability to Power Outages (NYPL and the Health Building).

Full building electrification at St. George and the Health Building will mean the buildings rely on the electrical grid and are thus vulnerable to power outages. DCAS will put gas-powered backup generators in place at each building and is also exploring battery storage with NYPL. At the Health Building, DCAS would design in emergency partial heating to prevent pipe freezes during extended blackouts and leave existing heating systems in place to provide backup heating during power outages.

Supply Chain & Procurement Delays (All measures). All measures may experience supply chain delays in procuring the necessary materials and equipment. Similarly, each agency has experienced procurement process delays for similar measures. Both supply chain and procurement delays could disrupt implementation and GHG savings for each measure. DCAS scheduled an additional 6 months in delivery timelines for NYPL, NYPD, and Health Building measures and 9 months for design-builder selection and procurement as contingency. Similarly, to mitigate possible delays NYCPS extended procurement to 9 months; NYCHA tripled its delivery timeframe; and HPD buffered one year pre-installation.

Cost Escalations (All measures). Costs may increase due to inflation, unanticipated project costs, design changes, or unexpected challenges. This could mean additional funding is required to implement certain measures, leading to delays that impede GHG savings. To address this risk, all coalition members prepared conservative budget estimates that are modeled after similar electrification measures and incorporate inflated cost escalations.

Challenges in Complying with Build America Buy America (BABA) Requirements (All measures).

Compliance with BABA may increase costs or lead to equipment acquisition delays for any measure, disrupting implementation and impeding GHG reductions. DCAS-led measures have added 30% BABA cost escalation estimates to their budgets to mitigate this risk, while NYCPS confirmed their materials already comply with BABA. HPD heat pumps and NYCHA water heaters are currently made abroad, but manufacturers are working to bring sourcing and assembly to America. If BABA compliance is infeasible, HPD and NYCHA will seek waivers for the pumps and heaters but guarantee all ancillary equipment comes from American sources; they're prepared to backfill City capital if needed to ensure compliance.

b. Demonstration of Funding Need

As detailed below, CPRG-I funding is critical for the Brighter Futures project due to severe budget constraints, limited availability, and competitiveness of funding for relevant GHG reduction measures, and impending LL97 emissions reduction mandates. Tax incentives have mostly not been pursued for Brighter Futures measures since they're insufficient to fill funding gaps and not timely enough to meet LL97 mandates, and DCAS projects are ineligible for utility incentives. While agencies have pursued other funding sources, as outlined below they are insufficient to complete Brighter Futures measures.

DCAS Energy Management (DEM) has received significant cuts to its capital plan, with a \$295M cut from its five-year plan and a \$540M total cut across ten-years, leaving a significant funding gap for project management. Similarly, **NYPL** faces a \$25.5M funding cut in FY25, jeopardizing services, and building repairs. St. George received \$180,000 from NYSERDA for BMS installation and Schomburg received \$8M from the Dormitory Authority of the State of New York for façade retrofits, but these aren't sufficient to meet this project's more comprehensive needs or to meet LL97 mandates. Existing and upcoming grants lack sufficient funds for library electrification projects, and while NYPL solar and geothermal measures qualify for Elective Pay, post-delivery reimbursements won't address the immediate funding need. **NYPD** also faces a high risk that the proposed precinct measures will go unfunded since utility incentives are limited, recent grant programs lack sufficient or eligible funds, and the proposed retrofits do not qualify for Elective Pay. Moreover, **Health Building** Asset Inventory and Facility Condition Assessment Reports reveal \$29.1M in repairs is needed for the building to meet a state of good repair. While DCAS considered Hazard Mitigation Assistance grants for these energy retrofits, the projects were ineligible, and no other current grants are suitable. DCAS will leverage approved City capital for infrastructure and soft costs not covered by CPRG-I, but CPRG-I funds would greatly speed up the project.

NYCPS public schools need over \$5B in repairs, and electrifying all buildings would cost significantly more. A 2019 City capital allocation of \$4.58M addressed a fraction of the need since the average cost per site is \$202,000, leaving a budget shortfall of \$177M. Two applications to the U.S. Department of Energy's Renew America's School Grant Program were not successful. While the City's *Leading the Charge* initiative committed \$4B in City capital for efficiency upgrades and electrification at select schools, full electrification planning across NYCPS's portfolio faces delays and new budget constraints, jeopardizing the vast benefits achievable from these upgrades and compliance with LL97 mandates. Brighter Futures would complement *Leading the Charge* by providing diversified funding for electrification and critical equipment upgrades, supported by CPRG-I funding that bridges the funding gap to ensure all public schools can maximize energy savings and health benefits for students.

Regarding Brighter Futures housing electrification measures, **NYCHA** faces a massive \$78.4B funding gap for critical repairs. While NYPA awarded \$70M to deliver new heat pumps to seven priority developments under CH4A, a significant funding gap remains to achieve full electrification, particularly for hot water systems. MAR and Pomonok received funding for electrical surveys that does not fill the funding gap. CPRG-I funding would complement these existing funds to achieve full electrification at CH4A pilot sites. NYCHA's \$25M RAISE award and pending Choice Neighborhoods application, while valuable, do not address public housing electrification. The City, including NYCHA and HPD, also applied for EPA's Greenhouse Gas Reduction Solar for All program; however, the Brighter Futures project was ineligible to be included in that application scope. Finally, no current grants offer eligible or sufficient funding for privately-owned mid-cycle affordable housing electrification at **HPD** buildings. While federal tax credits like the 179D Commercial Buildings Energy Efficiency tax deduction are available to privately-owned residential buildings, they are extremely difficult to obtain for the buildings targeted by Brighter

Futures and would only cover a fraction of the cost. The resident owners do not have the capital to front the costs and would require costly bridge loans that would offset the benefits.

While the PCAP lists several possible sources of funding for “Electrification & Energy Efficiency in Residential, Commercial & Government Buildings” (p. 121), they are insufficient or infeasible as follows:

Program	Eligible Entities	Relevant Measure	Reason(s) Not Pursued
Energy Efficiency and Conservation Block Grant Program (EECBG)	Local govts	DCAS-led, NYCPS	HPD received a \$2M allocation that will support its Brighter Futures building energy audits but needs additional implementation funding. The City is not eligible for competitive EECBG grants.
Energy Efficiency Revolving Loan Fund Capitalization Grant Program	States	DCAS-led, NYCPS	Offered as State loans that would not meet the funding urgency or gap for this project.
Home Energy Performance-Based Whole-House Rebates	Local govts	NYCHA, HPD	Not available yet.
High-Efficiency Electric Home Rebate Program (HEEHRA)	States	NYCHA, HPD	Not available yet.
Low-income Home Energy Assistance Program (LIHEAP)	Local service providers	NYCHA, HPD	NYCHA and HPD measures would not be covered – these are only available as utility assistance to individual households.
Weatherization Assistance Program (WAP)	States	NYCHA, HPD	NYCHA uses WAP at smaller developments, but large NYCHA campuses are ineligible; this doesn’t typically cover electrification.

Application of CPRG-I Funds to Exclude other New York Proposals

Recognizing that other municipalities in New York State may submit CPRG-I applications related to building decarbonization, DCAS has established a distinct scope for the Brighter Futures project, focusing on selected City-owned civic buildings and affordable housing and specific electrification measures within those buildings. CPRG-I funding obtained through this application will exclusively fund the buildings and measures specified within the Brighter Futures project. Coalition members will not use awarded CPRG-I funds to fund other buildings or energy efficiency measures beyond this application's scope, nor will they seek CPRG-I funding allocated to other applications to implement these measures. While the final NYCPS and HPD buildings and NYCHA developments selected for Brighter Futures may vary slightly due to unforeseen construction challenges/conflicts or site assessment results, new buildings will be strictly chosen following each agency’s Brighter Futures site selection methodology (Section 1.a) and utilize the same CPRG-I budget amounts allocated in attachment Budgetcalcs_DCAS.

c. Transformative Impact

Each measure within Brighter Futures has been carefully selected to pioneer ambitious actions that drive transformative impacts, including reducing GHG emissions substantially across multiple building sectors by and beyond 2030, escalating positive health outcomes for LIDACs, and unlocking scalability that can drive market adoption across sectors and cities to accelerate climate goal achievements.

Maximize Near- and Long-Term GHG Emission Reductions in Hard-to-abate Sectors.

Prohibitive costs and inaccessible technology combined with aging building infrastructure form significant barriers to GHG abatement in NYC’s residential and institutional building sectors. Building owners and tenants either cannot afford energy efficiency technologies like heat pumps, solar, or

electric water heaters, and/or cannot structurally access the technology because older building infrastructure does not easily enable it, making retrofits prohibitively costly or infeasible. With the additional high costs of labor and equipment in NYC and other major cities, achieving both innovative and cost-effective decarbonization solutions can be challenging. Brighter Futures proposes a comprehensive group of energy efficiency initiatives that will overcome these barriers by applying a range of electrification approaches that lower energy demand and partially or fully transition systems from fossil fuels to electric across while significantly reducing GHGs - 87,863 MT CO₂e and 1,214,773 MT CO₂e by 2030 and 2050, respectively. These measures provide cost-effective yet powerful strategies for both immediate energy savings and deep long-term emissions reductions across diverse residential and institutional buildings. Thus, Brighter Futures offers NYC and other cities a sustainable path to abating emissions from challenging building sectors while building a healthier, more resilient future.

Catalyze Benefits for Low-Income and Disadvantaged Communities (LIDACs).

LIDACs are overburdened by building air pollution exposure and resulting health risks. Brighter Futures aligns with CPRG-I's Justice40 goals by implementing nearly 100% of measures in CEJST and/or EJScreen areas. The coalition views this project as an opportunity to help facilitate a clean energy transition while investing in long-term quality of life improvements for LIDAC residents. As detailed in Section 4.a, Brighter Futures will fulfill this objective by improving air quality, physical health, and climate resilience and spurring sustainability education, job creation, and economic development in these communities. Moreover, as detailed in Section 4.b, Brighter Futures will offer LIDAC residents' multiple opportunities to participate in decision-making processes and to share in the success of the proposed measures through community engagement and information-sharing before, during, and after project implementation. Education and community engagement will ensure the benefits of Brighter Futures are sustained and increased over time as New Yorkers learn from, take ownership over, and seek to replicate Brighter Futures measures across their communities.

Pioneer Scalable Models for Other Sectors and Cities to Replicate.

Brighter Futures provides a roadmap to achieving building decarbonization for other building sectors and cities. The project aims to test innovative strategies in a wide variety of buildings – libraries, police precincts, office buildings, public schools, public housing, and affordable coops – whose sizes, architecture, and ages are representative of various sectors, to ensure agencies can ultimately scale those measures and to support even wider adoption in similar public and private buildings across NYC and beyond. DCAS plans to test technologies at NYPL and NYPD under Brighter Futures so the agencies can expand electrification to all 92 NYPL library branches (and potentially other branches) and to all 77 police precincts. HVAC electrification at the Health Building will help DCAS make the case for public and private office building owners that it's possible to electrify their buildings citywide. NYCPS aims to leverage the outcomes of this Brighter Futures pilot to scale DHW electrification across its 1,600 school buildings and to enhance climate action connections to teaching and learning. Completing the CH₄A pilot through Brighter Futures will pave the way for NYCHA to achieve full portfolio electrification, while HPD's pilot will inform market development and policies to support cost-effective electrification across thousands of affordable and market-rate residential buildings. Brighter Futures will inspire scaled solutions that could create notable further GHG emissions reductions in NYC, while potentially driving wider-spread GHG savings in the NY-NJ region and other cities by offering an adaptable blueprint for rapidly and cost-effectively implementing high-impact electrification strategies across existing buildings.

Accelerate Deployment and Market Adoption of Emerging GHG Reduction Technologies.

Through CPRG-I, the EPA is working to scale access to innovative climate pollution reduction technologies that benefit all Americans. Funding the geothermal heat pump pilot at St. George Library will help DCAS gather data to scale that technology, which is not yet widespread, across public buildings

with similar typologies citywide. Moreover, currently NYC’s affordable housing tenants and building owners seeking to reduce energy use must choose between electrification or weatherization due to the high cost of window heat pump purchasing and installation, both of which can be cost-prohibitive. By enabling HPD to offer free heat pumps, CPRG-I funding would lower the barriers to heat pump technologies for low-income households and decrease electrification costs, enabling tenants and owners to focus remaining resources on weatherization to maximize energy efficiency, comfort, and cost savings. The HPD pilot will also provide the data and basis of design to enable manufacturers to innovate on window heat pumps to serve a wider variety of building typologies, and to enable HPD to create Maintenance & Operations standards and Utility Allowances that support this technology at scale. HPD will publish a study on the market barriers and recommended innovations to scale simplified heat pump technology to the wider housing market and to integrate compatible products like Smart Electric Panels and compatible windows; it will also inform utilities about incentive program design. Ultimately by funding the pilot CPRG-I would help lay the groundwork for a long-term strategy of equitable decarbonization through cost compression, data collection, and market transformation.

2. IMPACT OF GHG REDUCTION MEASURES

Brighter Futures will lead to substantial GHG emissions reductions by 2030 and 2050 in alignment with CPRG-I goals. Find detailed GHG reduction calculations in the attachment GHGcalcs_DCAS, and technology and calculation methodology details in attachment Techappx_DCAS. To demonstrate the relative magnitude of GHG reductions achieved by this proposal, total baseline emissions for agencies, as well as citywide residential and emissions reported in the 2022 NYC Greenhouse Gas Inventories²³, have been used as benchmarks. Please note carbon dioxide, methane, and nitrous oxide are all included in CO2e calculations.

Measure	2025-2030 Cumulative Emissions Reduction (metric tons CO2e)	2025-2050 Cumulative Emissions Reduction (metric tons CO2e)	Total Project Cost (\$)	Cost Effectiveness for 2025-2030 (\$/metric tons CO2e)
NYPL Electrification	727	9,834	\$54,356,486.00	\$74,796.37
NYPD Electrification	977	15,665	\$59,757,714.00	\$61,159.30
Health Bldg. Electrification	156	5,510	\$13,127,437.00	\$84,069.89
NYCPS Electrification	71,211	839,047	\$166,149,758.00	\$2,333.21
NYCHA Electrification	12,673	321,426	\$194,544,354.00	\$15,351.41
HPD Heat Pump Pilot	2,111	23,304	\$9,889,243.00	\$4,684.60
Total	87,854	1,214,786	\$497,824,992.00	\$5,666.48

a. Magnitude of GHG Reductions from 2025 through 2030

The total GHG reduction from all six measures is **87,854 metric tons (MT) CO2e** from 2025 through 2030. This is the equivalent of removing 20,909 gasoline-powered passenger vehicles off the road for one year or the CO2 sequestered by 102,572 acres (about twice the area of New Jersey) of U.S. forests over a year. The magnitude of these reductions is notable when considered in the broader context of citywide 2030 GHG reduction targets, particularly in alignment with LL97. Brighter Futures measures would contribute 0.5%, 2%, 5%, and 14% of the annual emissions reductions necessary to meet the 2030 GHG targets set by DCAS, NYPD, NYPL, and NYCPS, respectively.²⁴ For more information regarding the contribution of measures to 2030 GHG targets, please see the attachments Techappx_DCAS and GHGcalcs_DCAS (tab *Reference Case*). As detailed in Section 3.b, each coalition member will work with expert consultants to verify equipment performance according to ASHRAE standards and to diligently

monitor, verify, and report on emissions reductions from their proposed measures to follow through on and ensure the permanence of emissions savings. This includes monitoring emissions reductions using Measurement and Verification (M&V) strategies under the International Performance Measure and Verification Protocol (IPMVP), most likely Option C: Whole Facility, or Option D: Calibrated Simulation to ensure whole building analysis. See below (2.b) for more details on how coalition members will ensure reduction durability.

b. Magnitude of GHG Reductions from 2025 through 2050

The total GHG reduction from all six measures is over **1.2M MT CO₂e** from 2025 through 2050, equivalent to removing 289,121 gasoline-powered passenger vehicles off the road for one year or the CO₂ sequestered by over 1.4M acres (about the area of Delaware) of U.S. forests over a year. Heat pumps, which will make up a substantial portion of this project, have an expected service life of 15-20 years with periodic maintenance, and the City intends to replace or repair the equipment at the end of its useful life; this will ensure durability of emissions reductions through 2030 and 2050.²⁵ If a system needs replacement before 2050, upcoming mandates like LL97 and future technologies are expected to maintain the estimated long-term emissions savings outlined in this application, ensuring the measures will provide consistent emissions reductions through 2050 and beyond. Moreover, as outlined in Section 3.b, to directly quantify and ensure the durability of GHG emissions reductions, the team will implement M&V approaches allowing for precise, real-time tracking of emissions reductions at each site. For the Health Building, DCAS will seek the Monitoring-based Commissioning LEED EA credit and set up the building management system to provide enhanced monitoring of system performance. The monitoring system will be coupled with a Real-Time Energy Meter and routine energy bill monitoring for a comprehensive M&V approach that ensures near- and long-term GHG reductions are achieved. These strategies will be continued beyond the performance period to support continuous performance assessment and verify sustained emissions savings. Designated staff for all DCAS-led measures will conduct routine testing, track the emissions profiles of local electricity providers, and oversee consistent reporting to understand each measure's GHG reductions over time. M&V processes will likely also reveal GHG savings beyond the quantities estimated. As NYC's grid becomes cleaner—through investments in offshore wind, new substations, and transmission lines—the electricity consumed by the new, more efficient heating and cooling systems will correspondingly result in greater GHG emission reductions.

c. Cost Effectiveness of GHG Reductions

The Brighter Futures project achieves significant GHG reductions with remarkable cost-effectiveness. With a total cost of **\$5,666 per MT CO₂e** reduced between 2025 and 2030, the project optimizes resources despite higher operational and labor costs in NYC. The project's cost-effectiveness is especially striking considering installation costs in NYC are 74% higher than 30 other major cities²⁶ and that NYC remains the highest cost of construction market in the country due to factors like density and higher material and labor costs.²⁷ Despite these barriers, the project's viability and cost effectiveness is driven by the coalition members' experience implementing similar measures, data-driven planning studies, and market research to develop and prioritize solutions that will maximize the impact of every dollar spent while benefiting underserved communities and achieving equitable and sustainable outcomes. Brighter Futures also maximizes cost-effectiveness by prioritizing inefficient facilities already in critical need of equipment upgrades as part of the site selection process. By funding efficiency upgrades at buildings in need of system replacement, Brighter Futures contributes to substantial operational savings by avoiding the millions of dollars in future City or other federal grant capital that would need to be allocated to repair or offset emissions from increasingly inefficient systems. This includes avoiding the hefty fines - \$268 per ton of CO₂ per year - agencies would have to pay for not complying with LL97 by 2030. In addition, investing in these measures represents an investment in long-term financial and GHG savings because they serve as pilots that can ultimately be scaled across other buildings citywide (see Section

1.c and Techappx_DCAS for more details). Thus, Brighter Futures represents both near- and long-term cost effectiveness for its potential to unlock the market for widespread building decarbonization and accelerate achievement of climate goals.

d. Documentation of GHG Reduction Assumptions

Please see attachment Techappx_DCAS for details on GHG reduction methodologies and assumptions.

3. ENVIRONMENTAL RESULTS – OUTPUTS, OUTCOMES, AND PERFORMANCE MEASURES

a. Expected Outputs and Outcomes

By accelerating building electrification across civic and affordable housing buildings citywide, Brighter Futures will leverage CPRG-I funding to advance transformative outputs and outcomes as follows. EPA progress report and final report outputs will also be completed if awarded.

Outputs

- **Buildings with Electrification Upgrades:** 599 buildings – 3 NYPL libraries, 9 NYPD police precincts, 1 Health Building, 61 NYCHA buildings, 500 NYCPS buildings, 25 HPD coops
- **VRF, AWHP, and/or WWHP Heat Pumps Installed:** 17 – 7 at NYPL, 8 at NYPD, 4 at Health Building
- **Buildings with New Electric DHW Systems Installed:** 563 – 2 at NYPL, 500 at NYCPS, 61 at NYCHA
- **Window Heat Pumps Installed:** 500 at HPD coop units.
- **Buildings with Enhanced Efficiency, Comfort, & Climate Resilience:** 599 buildings
- **Dwelling Units with Efficiency Upgrades:** 4,680 units – 4,180 NYCHA units and 500 HPD coop units
- **Public School Buildings with Efficiency Upgrades:** 500 NYCPS buildings
- **Staff Hired to Implement GHG Reduction Measures:** 29 staff across all coalition members/partners.
- **NYCHA Residents Contracted:** 25%+ of labor hours employed on NYCHA contracts must be fulfilled by low- and very low-income NYCHA residents.
- **Minority and Women Owned Business Enterprises (MWBES) Engaged:** MWBES hired for 30%+ of contract hours across all Brighter Futures measures.

Outcomes

- **MTCO₂ Reduced from 2025-2030:** 87,854 MT CO₂e (See Section 2.a)
- **MTCO₂ Reduced from 2025-2050:** 1,214,786 MT CO₂e (See Section 2.b)
- **Hazardous Air Pollutants (HAPs)/Criteria Air Pollutants (CAPs) Avoided Annually in LIDACs (2030-2050):** (See more details in attachment GHGCalcs_DCAS)
 - **Total direct PM_{2.5} reduced:** 8,094.1 lbs.
 - **Total direct NOX avoided:** 95,744.8 lbs.
 - **Total direct CO avoided:** 37,971.2 lbs.
- **Total Annual Energy Savings:** \$10,027,768
- **LIDAC Residents with Reduced Exposure to Hazardous Air Pollution & Improved Health:** 1,862,047 – 1,680,300 in areas directly impacted and 181,747 in in “downwind” areas (see Section 4.a)
- **Increased Staff Capacity to Implement GHG Reduction Measures:** 29 staff.
- **People Impacted by Community Engagement or Education:** Over 315,000 – 304,458 students educated; 8,914 NYCHA/HPD residents and 1,1000 daily Health Building occupants reached; not accounting for thousands of daily NYPL/NYPD occupants and visitors and the 163,413 residents benefiting from the project who may participate in community engagement.
- **High-Quality Jobs Created:** 1,612 jobs (484+ to MWBES, 15+ to NYCHA residents) – 8 at DCAS, 277 jobs from NYPL, 236 from NYPD, 75 from the Health Building, 903 from NYCPS, 61 from NYCHA (likely more depending on procurement), and 53 from HPD electrification (see Section 5)
- **Cooling Centers with More Reliable Cooling:** 12 buildings – 3 NYPL libraries, 9 NYPD precincts

- **Housing Residents Experiencing Improved Air Quality & Comfort:** 8,914 residents – 7,914 NYCHA residents, ~1,000 HPD coop residents.
- **Students Experiencing Improved Air Quality & Comfort:** 304,458 students from NYCPS.

b. Performance Measures and Plan

To track, measure, and report progress toward the outputs and outcomes above, Brighter Futures coalition members will deploy several strategies outlined below.

Commissioning

Agencies will verify performance of installed equipment through a commissioning process according to the *ASHRAE Standard 202 Commissioning Process for Buildings and Systems* and/or *ASHRAE Guideline 0 The Commissioning Process* utilizing a certified Commissioning Agent. Each Commissioning Agent or team will develop functional tests, test installed equipment, identify necessary corrective measures, and verify corrective measures have been completed to ensure optimal performance and GHG reductions.

Lead Agency	Commissioning Process
DCAS (NYPL, NYPD, Health Building)	DCAS intends to procure a certified Commissioning Agent as part of the procurement process for the NYPL, NYPD, and Health Building measures using CPRG-I funds.
NYCPS	NYCPS's in-house Commissioning Agent will verify proper installation and equipment operation. Heat pumps will include an HVAC monitoring device that reports water temperature, setpoint, and unit status to a central monitoring system. Units will connect to existing monitoring systems or function as a standalone unit to provide continuous commissioning after installation.
NYCHA	Commissioning will be carried out by the design team as part of their contract and performed by the engineer of record on the project.

Measurement and Verification (M&V)

Each agency will verify emissions reduction performance for their measure(s) using M&V strategies under the International Performance Measure and Verification Protocol (IPMVP), working with a certified engineering consultant who will develop M&V plans, conduct measurements and analysis, and develop reports that evaluate and quantify emissions reductions and CAP/HAP reductions, determining whether Option A: Retrofit Isolation, Option B: Retrofit Isolation, Option C: Whole Facility, or Option D: Calibrated Simulation is best to verify savings.

Lead Agency	M&V Process
DCAS (NYPL, NYPD, Health Building)	DCAS intends to utilize its existing contracts to facilitate M&V strategies at these facilities including the development of M&V plans, utility data analysis, incorporation of M&V requirements into contract specifications, and execution.
NYCPS	NYCPS will use the DCAS-procured consultant and apply an industry standard of 10% sampling to verify performance. HVAC monitoring devices installed with heat pumps will assist with monitoring.
NYCHA	M&V will include monitoring over the course of a year post-installation, including metered energy and water data from a sample of installed heat pumps as well as reviews of utility bills to assess level of energy, GHG, and CAP/HAP savings.
HPD	HPD will collect specific building and scope data to ensure projected outcomes. For performance data each building will share access to its mandated Local Law 84 Benchmarking data (buildings <25,000 sf) and/or sign a ConEd Authorization Form to release aggregated energy consumption data and provide signed Data Release Authorization Forms (DRAFTs) from the building owner and 75%+ residents. HPD will analyze pre- and post-retrofit data to determine energy, GHG, & operational savings.

Grid Electricity Monitoring

Direct combustion emissions mitigated through Brighter Futures electrification measures will be assumed to be permanently eliminated. As a result, indirect emissions from electricity will be important

to monitor. Agencies will track the fuel source of electricity providers and consequential emissions per kWh. The Mayor's Office already calculates and reports on the annual electricity emissions factor specific to NYC based on the fuel mix of powerplants serving NYC,²⁸ so agencies will utilize their analysis for the electricity emissions factor to verify performance. Several electricity providers, including Con Edison, have committed to building a 'clean energy' grid capable of producing "100% clean energy by 2040." Tracking the providers' progress towards these goals not only prevents unintentional indirect emissions if the provider adds dirty energy sources in the future but could also result in even further GHG reductions from Brighter Futures down the line as the electricity grid is decarbonized.

Education, Training, & Workforce Development Reporting

All agencies will regularly review labor standards and job quality to ensure continuous adherence to job creation commitments and track MWBE utilization through procurement reports. Agencies will also:

- **DCAS: Capture attendance** at community engagement activities and energy efficiency-related public events and programming and record the number of DCAS staff trained on the new equipment.
- **NYCPS: Record and report the number of people engaged through events** including the number of classrooms reached by climate and energy efficiency webinars/events, the number of educators attending professional learning sessions, and the number of custodial/building staff trained on electrification and new DHW equipment.
- **NYCHA: Track residents hired** for Brighter Futures projects through existing procedures administered by NYCHA's Resident Economic Empowerment and Sustainability (REES) department, including residents trained through the Clean Energy Academy and other programs.
- **HPD: Collect periodic resident surveys** to get feedback on equipment performance and resident health and comfort.

C. Authorities, Implementation Timeline, and Milestones

DCAS manages numerous public buildings, purchases goods and services for City agencies, and leads City decarbonization efforts, and thus has the authority to oversee subawards, project and grant management, and delivery for the Brighter Futures project. Sections 1 and 6 provide more details on coalition member roles. Implementation timelines and managing authorities for each measure are outlined below. See attachment Project Schedules_DCAS for Gantt project timelines. The following tasks are managed by DCAS and all coalition members NYCPS, NYCHA, and HPD across each measure:

- **Task 0: Grant Award / Kickoff (Oct 2024 – Nov 2024):** Receive and process grant award from EPA (DCAS) or subaward from DCAS (coalition members).
- **Task 1: Project Management (Full 5 Years):** Oversee activities required to ensure timely completion of measure(s) within budget and in alignment with CPRG-I goals and EPA requirements. This includes project kickoff, project management plan development and maintenance, and monthly internal meetings. Coalition members will conduct regular progress reporting to DCAS via weekly, monthly, and quarterly check-ins as needed. DCAS will meet with coalition members and partners (NYPL and NYPD) monthly to track performance and project delivery. HPD will procure one or more partners to enhance staff capacity for project and grant management (below).
- **Task 2: Grant Management (Full 5 Years):** Fulfill EPA's grant administration requirements. For coalition members this includes tracking and reporting on project milestones and grant expenditures to DCAS through progress reports and meetings detailed in Task 1. For DCAS this includes continuous gathering and aggregation of project data from coalition members and partners on technical progress and milestones achieved to develop and submit semi-annual EPA progress reports. The October 2025 report will specifically quantify project LIDAC benefits as required. DCAS will also complete and submit a detailed final report to the EPA before January 29, 2030, summarizing all project measures, outputs, outcomes, and costs.

- **Task 3: Community Engagement (Full 5 Years):** All coalition members will kick off community engagement upon award and continue strategies detailed in Section 4.b through the performance period. DCAS, coalition members, and partners will collaborate (as needed) to regularly update community stakeholders on project progress and feedback opportunities. As public program managers in their respective buildings, NYPL and NYPD will lead these efforts for NYPL/NYPD measures. See more details on authorities and responsibilities in Section 4.b.
- **Final Task: Closeout (Aug 2029 – Oct 2029):** DCAS and coalition members will conduct M&V for performance tracking; members will submit final reports to DCAS to inform the final EPA report. Note for the Health Building this task will take 5 months, led by DCAS.

Each measure will also have distinct implementation timelines as outlined below.

I. NYPL & NYPD Electrification (October 1, 2024, to October 1, 2029)

NYPL and NYPD measures will follow the same timeline noted below. DCAS has previously funded and managed NYPL and NYPD energy efficiency measures, so has the authority and expertise to oversee all key milestones below including design-build procurement and delivery, financial management, and M&V. Since NYPL and NYPD operate out of these buildings, DCAS will coordinate with them to ensure smooth project implementation.

- **Task 4: Project Initiation (Oct 2024 – Nov 2024):** Project orientation with DCAS project team.
- **Tasks 5 & 6: RFQ & RFP Completion (Nov 2024 – Mar 2026):** Develop and release RFQs and RFPs.
- **Task 7: Design-Builder Selection (Apr – July 2026):** Evaluate RFP and select design-build contractor.
- **Task 8: Contractor Procurement (Aug – Dec 2026):** Procure design-build contractors to complete electrification measures.
- **Task 9: Permitting (Dec 2026 – Jan 2027):** Apply for and obtain the necessary City permits for building upgrades, assuming permits for different buildings may be acquired at different times.
- **Task 10: Design & Construction (Jan 2027 – Sept 2029):** Remove existing systems and install new electrification systems and BMS upgrades, performed by the contractors. Milestones include: Demolition of existing DHW heating systems and controls; Replacement of pneumatic controls; Installation of new control panel; Installation of heat pump hot water heater; Re-piping and commissioning of DHW system; Integration of heating and cooling controls with new BMS; M&V. NYPL will complete upgrades at Parkchester, St. George, and Schomburg within 6.5-8 months of each other. For NYPD, two sites will be completed every 5 months, with all completed by Sept 2029.

II. Health Building Electrification (October 1, 2024, to October 1, 2029)

This measure will be led by DCAS, who manages the building and thus has implementation authority.

- **Task 4: Design Procurement (Oct 2024 – Mar 2025):** Complete contractor bidding process for design and construction procurement.
- **Tasks 5-7: 30% Design; 60% Design; & 90% Design Phases (Completed Sept 2025; Jan 2026; June 2026):** Development of project design and engineering plans to 90% completion by the contractor, including site planning and evaluation, cost estimates, and Landmark Preservation Commission (LPC) and Public Design Commission (PDC) package development.
- **Task 8: Permitting (June 2026 – Nov 2026):** Apply for and obtain the necessary City permits.
- **Task 9: Final Design Phase (Nov 2026 - Feb 2027):** Finalize design and engineering plans and cost estimates, completed by the design contractor.
- **Task 10: Contractor Procurement (Mar – Oct 2027):** Procure contractor to complete electrification.
- **Task 11: Complete Electrification Measures (Nov 2027 – Apr 2028):** Remove existing systems and infrastructure that will be replaced and complete electrification and retrofit measures, commissioning, and M&V, completed by the contractor procured in Task 10.

III. NYCPS Electrification (October 1, 2024, to October 1, 2029)

DCAS and NYCPS will co-lead this measure. DCAS has funded NYCPS energy efficiency measures in the past and has authority to subaward to NYCPS. NYCPS manages all school buildings, and their programming so has authority to lead all aspects of program management and project delivery.

- **Task 4: New Contractor Procurement (Oct 2024 – Aug 2029):** Work with DCAS to procure new contractor services for installations and project management. Procurement will be concentrated in the first 12 months and involve RFQ /RFP processes. Additional procurement may be required.
- **Task 5: Project Execution (Jan 2025 – Sept 2029; ~6 months/building):** Prioritize buildings for electrification, phasing according to equipment condition (i.e. begin with equipment near the end of its useful life). Existing and/or new contractors procured in Task 4 will submit a proposal for each building. Completing electrification measures will include the following: notifying contractors of upcoming work; site scoping to determine load; permitting (as needed); equipment acquisition; removal of existing systems; installation of new systems; and ongoing monitoring via controls. Milestones include removing existing DHW systems, installing new control panels, installing new electric heat pumps based on required load, re-piping to existing circulation loops, post-upgrade inspections, commissioning, and punch list corrections. Buildings will be completed in phases: 30 sites by Oct 2025; 100 additional sites by Oct 2026; 150 additional sites by Oct 2027; 70 additional sites by Oct 2028 to reach 500 total buildings. Project Execution will include rolling training opportunities for building operators with two sessions in late Year 1 and six per year in Years 2-5.

IV. NYCHA Electrification (October 1, 2024, to October 1, 2029)

As the owner of the NYCHA portfolio and manager of NYCHA services, NYCHA will oversee all aspects of NYCHA DHW electrification, collaborating with DCAS on progress reporting.

- **Task 4: Contractor Procurement (Oct 2024 – Mar 2026):** Procure contractors to complete electrification measures through RFP submission and review, pre-bid walkthroughs, and bid recommendation, review, and approval.
- **Task 5: DHW Metering (Dec 2024 – Jan 2025):** Evaluate water usage and needs for DHW systems.
- **Task 6: ConEdison Coordination (Dec 2024 – Jan 2026):** Establish project plan in collaboration with ConEd to enable project delivery.
- **Task 7: 30% Design Phase (Dec 2024 – Aug 2025):** Complete the 30% design phase, including the completion of site planning and evaluation, development of initial cost estimates, and assembling of 30% design and engineering plans, done by the contractor.
- **Task 8: Environmental Survey (May 2025 – Aug 2025):** Conduct environmental impact survey.
- **Task 9: Permitting (Sept – Dec 2025):** Apply for and obtain the necessary City permits.
- **Tasks 10-11: 90% Design & Final Design (Completed June; Sept 2026):** Phasing from the 90% plans to finalization of plans and cost estimates by the contractor.
- **Task 12: Complete Electrification Measures (Apr 2026 – Oct 2028):** Contractor completes DHW electrification; installation milestones are the same as for the NYCPS measure, plus necessary electrical work to enable installations. Buildings will be completed as follows: MAR (3 buildings) completed by Oct 2027; Pelham and Pomonok both halves completed by Oct 2028 (17/35 and 11/23 buildings, respectively); all completed by Oct 2029. M&V enacted for one year after installations.

V. HPD Affordable Housing Electrification (October 1, 2024, to October 1, 2029)

HPD manages the impacted buildings and will oversee project and grant management and co-lead resident engagement. HPD will procure one or more partners to co-lead resident engagement and to lead site assessments and heat pump installations under HPD supervision.

- **Task 4: Partner & Contractor Procurement (Oct 2024 – Mar 2025):** Procure partner(s) to help manage and oversee the pilot since HPD does not have the technical capacity or expertise. This

includes an implementation and/or technical partner to create screening protocols, conduct screening and construction contractor procurement as needed, lead installation and resident training, implement M&V, and write a final technical report.

- **Task 5: Site Assessments & Building Selection (Apr – Sept 2025):** HPD and its contractor partner(s) evaluate buildings from the initial HDfC coop pool to determine window and electrical feasibility and tenant buy-in for installation and data collection, and to identify which buildings would require heat pump design changes. This includes obtaining approvals and access from building owners and tenants, which. HPD has successfully obtained in prior projects.
- **Task 6: Heat Pump Installation (Oct 2025 – Oct 2028):** Contractor(s) will purchase and install heat pumps through existing windows at pilot buildings as standalone, mid-cycle projects involving weatherstripping and installation of a building boiler controller. Air-sealing and an electrical outlet (as needed) will be included. Existing heating systems will be left in place as a backup heating source only during the coldest days, grid outages, and demand response events where applicable.
- **Task 7: Monitoring & Verification (Nov 2028 – Sept 2029):** Gather performance data, conduct tenant trainings, and send out tenant surveys for feedback to help manufacturers adjust pump designs to fit more buildings and help utilities design scaled incentive programs. Pilot findings will be aggregated into a report for manufacturers and utilities, and into EPA reports.

4. LOW-INCOME AND DISADVANTAGED COMMUNITIES

Decades of disinvestment have left LIDACs, often home to people of color and immigrants, to face disproportionate environmental and health burdens and heightened vulnerability to climate impacts like extreme rainfall, heat, and flooding. Brighter Futures offers solutions to improve health and quality of life for millions of New Yorkers who work, live, learn, and play in these communities.

a. Community Benefits

I. Benefits to Low-Income and Disadvantaged Communities (LIDACs)

Brighter Futures will maximize both direct and indirect benefits for LIDACs and mitigate disbenefits in these areas by targeting nearly 100% of impacted buildings in CEJST and/or EJScreen areas. The proposed measures will substantially benefit a total of 586 CEJST and/or EJScreen communities (i.e., census tracts) directly, reaching 1,680,300 LIDAC residents. The project will also benefit 181,747 "downwind" CEJST and/or EJScreen residents in census tracts starting within 1,000 feet of upgraded buildings. (See attached Areas_DCAS for the list and attachment AreaMaps_DCAS for maps.)

Increased Climate Mitigation & Resilience

NYC has faced increasingly severe climate events that constantly reveal the disproportionate climate risks faced by LIDACs. Events like Hurricanes Sandy in 2012 and Ida in 2021 underscored how LIDACs confront heightened climate disaster risk with limited recovery resources. Additionally, NYC's LIDACs are at the highest risk of heat-related illness and death due to social and environmental inequities, a risk that will quadruple by the 2030s due to climate change.²⁹ In line with *PlaNYC*, NYC aims to bolster climate resilience for LIDACs by addressing their critical climate risk needs. Brighter Futures will contribute to this goal in two crucial ways. First, by reducing GHG emissions from buildings in LIDACs, which will mitigate climate risks like heat waves, extreme weather events, and sea-level rise. Second, by ensuring safer, more comfortable environments for students, visitors, staff, and families during extreme climate events. The latter includes providing reliable access to cooling through HVAC upgrades and heat pumps at NYPL and NYPD buildings, which serve as public Cooling Centers, and through window heat pumps at HPD coops, many of which house senior or low-mobility residents more vulnerable to heat.

Indoor & Outdoor Air Quality Improvements

Brighter Futures will reduce fossil fuel use in 599 buildings situated in 586 (nearly 100%) CEJST and/or EJScreen communities and will thus significantly improve air quality for those residents. All Brighter

Futures measures except at HPD buildings will target natural gas-fired systems, including the Health Building since it sources district steam from gas-burning ConEd plants. NYPL, NYPD, and HPD measures will target systems that use fuel oil No. 2. Both fossil fuels emit GHGs including carbon dioxide and methane and CAPs like ozone, sulfur dioxide, particulate matter (including PM_{2.5}), nitrogen oxides such as NO₂, carbon monoxide, and volatile organic compounds.^{30, 31, 32} By electrifying building systems, Brighter Futures will reduce onsite fuel combustion and emission of these pollutants, greatly improving outdoor air quality. Brighter Futures conservatively estimates benefiting census tracts that start within 1,000 ft of each upgraded building, but the project's benefits are likely much more widespread (~3,000 ft) since CAPs from rooftop emissions stacks reach much farther. Moreover, the average person spends 90% of their time indoors, where pollution can be 2-5 times higher than outdoors.³³ Pollution risks are even higher in buildings needing repair, like NYCHA and NYCPS properties (see Section 1.b). By reducing onsite fossil fuel use and upgrading ventilation systems, Brighter Futures will reduce both indoor respiratory triggers and exposure to outdoor PM_{2.5} that filters indoors.^{34, 35}

Public Health Benefits

GHGs, CAPs, and the other hazardous pollutants in buildings are toxic and linked to higher rates of cardiovascular and respiratory diseases, lung cancer, and mortality, with heightened risks for more vulnerable populations like children and older adults.^{36, 37, 38, 39} The NYC Community Air Survey illustrates that LIDACs bear the brunt of air pollution-related health problems; for example, while PM_{2.5} is responsible for over 2,400 annual pediatric ER visits in NYC, these rates are 3 times higher within LIDACs.^{40, 41, 42} Additionally, ozone pollution causes 400 deaths and over 4,000 ER visits per year among adults and children.⁴³ Pollutants emitted by fossil fuel-powered equipment in buildings can combine with ozone, causing serious respiratory problems especially in LIDACs where pollutant concentrations are higher. By substantially improving outdoor and indoor air quality, Brighter Futures will directly improve health outcomes for LIDACs, reducing rates of asthma, cardiovascular and respiratory disease, hospitalization, and premature mortality in communities with the greatest public health burdens and helping to narrow health disparities.⁴⁴ Coalition members will track and quantify specific health outcomes through community engagement events and resident surveys.

Green Job Creation and Workforce Training

The buildings sector represents 50% of NYC's green economy jobs today, and green jobs in the building sector are expected to be the most significant driver of future green economy growth in NYC.⁴⁵ NYC's 2024 *Green Economy Action Plan* aims to create 40,000 "green collar" jobs and 12,000 green economy apprenticeships by 2040, citing LL97 compliance and the decarbonization of NYCHA buildings and public schools as crucial pathways.⁴⁶ Brighter Futures will advance that goal by creating 1,612 quality, well-paying jobs. The project will prioritize green workforce and training opportunities for LIDAC residents, who face higher rates of poverty and unemployment, reducing employment barriers while building onramps into the future "green collar" workforce. Section 5 includes more information about the employment and training opportunities for LIDAC residents Brighter Futures will offer.

Energy Cost Savings and Increased Energy Security

Building electrification also offers substantial energy cost savings from more resilient energy sources. DHW electrification in NYCHA and NYCPS buildings can have potential reductions of up to 50% compared to electric resistance heating, and the transition from fossil fuel-powered boilers to electric DHW appliances can save up to 60% of water heating costs, while heat pumps can save residents \$300 to \$1,000 per year.^{47, 48} On a citywide level, energy savings in the City's Heat, Light, and Power budget (managed by DCAS and encompassing most City agencies) will enable the City to focus more resources on providing other critical services for LIDACs. In HPD coops, delivery of heat pumps for free will maximize energy savings – estimated at 50% compared to other technologies – for low-income tenants.

Heightened Sustainability Awareness & Education

Coalition members and partners will develop and implement community engagement strategies, public and educational programs, and communication channels that promote transparency about Brighter Futures initiatives and share the benefits of building decarbonization, enabling sustainability education, training, and youth leadership opportunities for LIDAC residents. Education, engagement, and training efforts will reach 304,458 children and 8,914 residents in CEJST/EJScreen areas through NYCPS, NYCHA, and HPD measures. Throughout the project, the team will track the number of stakeholders reached through events, curricula, online interactions, signage, and other touch points, which DCAS will detail in progress reports. See Section 4.b for community engagement plans, which will be vital for success.

Quality of Life Improvements

By enhancing access to heating and cooling, improving air quality and health, and increasing energy savings, Brighter Futures will transform the comfort and safety of public indoor spaces and residences, fostering healthier and more productive environments for LIDAC visitors, residents, and students.

II. Potential Disbenefits and Mitigation Strategies

The major disbenefit Brighter Futures coalition members anticipate for LIDAC residents from this project is temporary reduced access to community and residential spaces and utilities. NYPL, the Health Building, NYCPS, and NYCHA may need to temporarily close certain office, community, or educational spaces, shift heating sources, and/or shut off hot water access in certain areas as energy retrofits, HVAC upgrades, and DHW installations are completed. This may temporarily limit access to or utility of areas that serve as functional, gathering, or educational spaces. At NYCHA buildings, DHW electrification may use some open space as heat pumps may be placed in outdoor "pods." At the Health Building, some tenants and public services may need to be moved while interior HVAC work is done. To mitigate these disbenefits, coalition members will increase communications with building residents and visitors through signage, online alerts, and community engagement (see Section 4.b), schedule shutdowns in unoccupied hours when feasible to minimize disruptions, design NYCHA pods to be as compact as possible, and develop alternative spaces for occupants during construction to ensure continual access.

III. Monitoring & Assessment Plan

The coalition members are committed to maintaining full transparency, ensuring benefits, and avoiding disbenefits for LIDACs throughout and beyond the CPRG-I performance period. Each member will collaborate with certified construction and engineering consultants to monitor and verify the performance of each measure, utilizing locally and/or internationally recognized protocols. As detailed in Section 3.b, this includes quantifying energy, emissions, and CAP/HAP reductions using M&V strategies under the IPMVP. Section 3.b also outlines how coalition members and partners will track and measure training, education, and workforce development benefits. The project team will leverage the community engagement strategies in Section 4.b to assess qualitative and quantitative community benefits by gathering LIDAC stakeholder feedback on project outcomes/outputs and experienced (dis-)benefits, and to frequently report on project progress, changes, and impacts. This includes sharing how feedback from LIDACs is used to adjust project implementation approaches. DCAS will report on the results of technical M&V and community feedback in semi-annual and final progress reports to the EPA.

b. Community Engagement

Brighter Futures prioritizes early, frequent, and meaningful community engagement to ensure LIDACs and other stakeholders can participate in project decisions. Agencies adhere to NYC's Language Access Law requiring them to distribute key communications in at least 10 designated languages. In-person and online channels will be established to reach community members of diverse backgrounds and internet access levels and joint agency events will be facilitated in neighborhoods where electrification measures intersect to maximize stakeholder reach. Brighter Futures will take the following approaches:

Maintain an Open and Transparent Planning Process

Coalition members and partners will communicate early and often with impacted communities about project plans to support their participation in project planning and to build trust. For DCAS-led measures, DCAS will seek early input from local Community Boards (CB) through presentations and publications to obtain CB feedback and approval to meet Public Design Commission requirements and to provide opportunities for early risk mitigation. Key City Council Members will also be briefed on the project so they can gather feedback from constituents to ensure measures meet community priorities. NYCHA's Department of Community Engagement and Partnerships will collaborate with staff and resident associations, such as Resident Green Committees, to ensure diverse groups can participate in planning and decision-making. Finally, HPD will host shareholder events and surveys to assess residents' interest and collect feedback on their comfort, utility, and other needs before site selection.

Foster Civic Engagement and Involvement During Project Implementation

Brighter Futures also aims to maintain transparency throughout project implementation. DCAS will reach out to the surrounding community through existing forums, such as the Mayor's Office of Climate and Environmental Justice's "LL97 in Your District" series, to raise awareness and gather feedback during and after implementation of DCAS-led measures. DCAS will reach out to communities during design and construction to motivate residents and building owners to see how decarbonization can be achieved across building typologies to motivate more widespread building electrification in pursuit of environmental justice and citywide climate goals. NYCHA will share ongoing DHW electrification updates with residents through NYCHA websites and community forums, fostering continuous communication about the progress and outcomes of measures during and after project completion. Finally, HPD tenant and owner surveys will gather continuous feedback on equipment performance, health and other outcomes, and utility costs during- and post-installation.

Maximize Educational Opportunities

Finally, the coalition is committed to raising awareness about the transformative potential of building decarbonization among residents, students, building owners, and the broader public. NYPL will host events, workshops, and educational programs, such as Earth Day and Junior Scholars programs, focused on environmental/STEM topics to inform visitors about Brighter Futures. DCAS will install permanent educational signage at the Health Building to educate the 1,100+ daily occupants and visitors on the project's benefits. Another exciting opportunity is to bring Brighter Futures into the classroom for public school students. NYCPS will reach over 200 classrooms in LIDACs and over 1,000 educators and staff annually through various programs including climate-centered curricula, online resources, Climate Action Days, climate workshops, experiential learning programs, skill-building Technical Education programs, DHW trainings for building staff, and climate education-focused teacher trainings. Youth Leadership Councils and teachers will share updates with peers citywide. NYCHA will also implement an outreach campaign to educate residents about DHW electrification, utilizing NYCHA's Stakeholder Engagement procedure to ensure multiple touchpoints. These strategies will maximize engagement with Brighter Futures communities and educate the next generation of climate workers and advocates.

5. JOB QUALITY

The Brighter Futures coalition is committed to creating high-quality, good-paying jobs that offer competitive wages, comprehensive benefits packages, freedom to join a union, and opportunities for career advancement in alignment with the Good Job Principles developed by the U.S. Departments of Labor and Commerce. **Brighter Futures will create 1,612 green workforce jobs.** DCAS will hire 8 new staff to support project and grant management. DCAS-led measures will create 588 new jobs – 277 from NYPL (4 staff; 273 contract hires), 236 from NYPD (6 staff; 230 contract hires), and 75 contract hires from Health Building electrification – while the NYCPS measure will create 903 new jobs (8 staff; 895 contract

hires), NYCHA will create 61 (1 staff, 60+ contract hires depending on procurement), and HPD's pilot will create 53 new jobs (2 staff; 51 contract hires). Agencies are dedicated to ensuring equal opportunity, job quality, and career advancement. NYCHA will include U.S. Dept. of Housing and Urban Development Section 3 mandates in all RFPs stipulating 25%+ of labor hours must be fulfilled by low- and very low-income NYCHA residents and requiring contractors to interview graduates of NYCHA's Clean Energy Academy, which trains residents to install and maintain heat pumps. DCAS will develop a thorough electrification training module for trades and technical staff based on Brighter Futures technologies that can be shared with other agencies; DCAS staff will be trained on the equipment and receive materials to train other operating engineers. NYCPS will partner with labor union Local 891 custodial engineers and Local 94 firepersons for DHW trainings post-installation. Brighter Futures will also be subject to the City's Project Labor Agreement with the Building Construction Trades Council of Greater New York and Vicinity, committing to recruit residents of communities with a 15% or higher poverty rate which share similar definitions to LIDACs. The PLA sets high standards for wages, benefits, hours, shifts, and safety and specifies apprenticeship and prevailing wage requirements in alignment with federal standards. Coalition members will include these requirements, and requirements that 30%+ of contractor hours are hired to MWBEs, in construction RFPs and continuously track/report on alignment with labor standards.

6. PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE

a. Past Performance

DCAS will leverage their expertise in delivering large, multi-stakeholder projects and the substantial experience of coalition members and the City in managing federal funds to oversee the CPRG-I grant. DCAS has the technical capacity to comply with Federal grant requirements and procedures to implement complex projects. The following grants demonstrate DCAS's experience with managing diverse assistance agreements within the last three years.

Development of I-Innovation Team at First Deputy Mayor's Office (2024) (no Assistance Agreement Number): Bloomberg Philanthropies awarded the Mayor's Fund to Advance New York City a grant for \$5,408,073 to develop the I-Innovation Team, which will help develop and implement effective solutions to high priority challenges. DCAS will support the budget for staff employed under the grant, review and approve the program budget, and oversee procurement and payment of services. The contact is Marcella Tillett, Executive Director, Mayor's Fund to Advance New York City, 212-788-7794.

Congestion Mitigation and Air Quality Improvement Program (CMAQ) - Purchase of Vehicles (2023) (no Assistance Agreement Number): The NYC Department of Transportation (NYCDOT) received funding from CMAQ and reimbursed \$3,000,384 to DCAS to procure electrical vehicles in alignment with grant requirements. The contact is Susan McSherry, Director of Alt. Fuels Program, smcsherry@dot.nyc.gov.

Creation of Manhattan Justice Opportunities Resource Center (2023) (no Assistance Agreement Number): The Manhattan District Attorney's Office (DANY) provided a \$628,025 municipal grant to DCAS for the construction of a short-term sentencing alternative space for misdemeanor and select felony cases. DCAS will oversee the construction of the Center and manage the budget and project in alignment with grant requirements. The contact is James Sowell, DANY CFO, sowellj@dany.nyc.gov.

Renovation of Richmond County DA's Office (2023) (no Assistance Agreement Number): The Dormitory Authority of the State of NY (DASNY) State and Municipal Facilities Program provided a \$250,000 state grant to DCAS to repurpose a space at the Richmond County DA's Office. DCAS will oversee the project and manage the budget in alignment with the grant requirements. The contact is Karen Hunter, Director of Grants Administration, grants@dasny.org, 518-257-3177.

Intelligent Speed Assistance (ISA) (2023) (Advance Assistance #20.939): The U.S. Department of Transportation (USDOT) funded NYCDOT \$29.75M under the Safe Streets and Roads for All Assistance

Program of which DCAS received a \$2.4M subaward. DCAS will oversee a portion of the project in alignment with federal regulations, including reporting and budget management. The contact is Paul D. Teicher, Grantor, Safe Streets and Roads for All, Paul.Teicher@dot.gov.

b. Reporting Requirements

Only the 2024 Bloomberg Philanthropies and 2023 CDOT grant above require reporting. DCAS has established internal processes to ensure timely and accurate reporting aligned with grant requirements. The Bloomberg grant requires periodic expenditure reports and the CDOT grant will require regular project status updates and financial reports. DCAS is prepared to submit these reports demonstrating timely progress toward achieving expected outputs and outcomes. DCAS's experience in developing, implementing, and monitoring citywide policies and procedures and in preparing complex reports to City and State Comptroller officials demonstrate the agency's capacity to meet and exceed all EPA reporting requirements. DCAS's CPRG-I reporting will follow procedures and controls such as:

- **Thorough planning and budgeting, with clear objectives, milestones, and resource allocations:** This includes a detailed expenditure plan with cost estimates for upgrades and administrative expenses.
- **Clearly defined oversight mechanisms to track fund utilization:** The DCAS team complies with all budgetary directives issued by the NYC City Comptroller's Office and submits all budgetary requests and documentation to the Comptroller or Mayor's Office of Budget and Management. DCAS will maintain these standards in adhering to EPA requirements through financial and status reports and budget reviews to ensure compliance with federal regulations and grant requirements and periodic assessments with coalition members and partners to efficiently identify any discrepancies.
- **Robust controls and procedures for procurements, contract management, and vendor selection.** DCAS manages a portfolio of 1,000 multi-year requirement contracts and adheres to all citywide procurement policies. DCAS's current procurement process, and that of coalition members, aligns with all CPRG-I requirements, so the process will emphasize equitable and competitive practices.
- **Prioritization of effective, routine communication between project stakeholders.** DCAS has worked frequently with all City agencies and quasi-governmental organizations to facilitate contracts and reporting. Soliciting regular feedback from partners and New Yorkers is essential for success.

c. Staff Expertise

As shown in the attachment All Staff_bios_DCAS, the staff overseeing this project have the extensive experience, knowledge, qualifications, and resources related to building energy efficiency projects – including project and financial management, engineering, contracting, agency coordination, operations, and performance tracking and reporting – necessary to achieve the goals of Brighter Futures successfully and cost-effectively. The following staff will compose DCAS's project leadership team:

- Sana Barakat, Deputy Commissioner of DEM & NYC Chief Carbonization Officer
- Bryan Simpson, Agency Chief Decarbonization Officer & Mechanical Engineer in DCAS's Division of Construction and Technical Services
- Steven Caputo, Assistant Commissioner of Operations
- Harold Barrios, Executive Director of Capital Project Implementation
- Kathryn Charpin, Senior Program Manager of Contracting Innovation

Resumes are also attached for DCAS support staff and core coalition member staff.

Please see all endnote references in attachment References_DCAS.
