The City of New York Action Plan Amendment 24 (non-substantial)
Submitted to HUD: October 21, 2022
Acknowledged by HUD: November 10, 2022
For CDBG-DR Funds, Disaster Relief Appropriations Act of 2013 (P.L. 113-2)

Hurricane Sandy hit New York City on October 29, 2012. The City of New York's (City) Action Plan describes how the City will use its award of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds, received from the U.S. Department of Housing and Urban Development (HUD) to support recovery from Hurricane Sandy and to build more resiliently against the challenges of climate change. The programs in this Action Plan include programs to build and support housing, businesses, resiliency, and New York City infrastructure and other City services.

On May 7, 2013, HUD approved the City's initial Action Plan which has subsequently been amended several times through both substantial and non-substantial amendments. The entirety of the City's $4,213,876,000 CDBG-DR award for Sandy recovery and resiliency is described in the Action Plan, which is periodically amended to reflect program updates and revisions of unmet recovery needs.

Pursuant to the City's current citizen participation plan, any change greater than $15 million in funding committed to a certain program, the addition or deletion of a program, or change in the designated beneficiaries of a program, constitutes a substantial amendment. Substantial amendments will be available for public comment for at least 30 days, during which time at least one public hearing will be held, and must be submitted to and approved by HUD. The City may also make non-substantial amendments to its Action Plan. Non-substantial amendments do not require a public comment period but must be acknowledged by HUD and posted on the City's website.

Action Plan Amendment 24 is a non-substantial amendment to the City of New York's CDBG-DR Action Plan. The Amendment is posted to the City's CDBG-DR website at www.nyc.gov/cdbgdr and is effective upon HUD's acknowledgement within five days of publication.

The City will post all Action Plans, amendments, and its responses to public comments on the City's CDBG-DR website: www.nyc.gov/cdbgdr.

Summary of Action Plan Amendment 24 Changes

Action Plan Amendment 24 makes the following changes to the City's Action Plan, in summary:

- IV. Funding Justifications
  - Rebuild by Design (RBD): Hunts Point Resiliency description updated (pg 17)
- X. Resiliency
  - Update to the introduction, project description, project funding for Rebuild by Design: Hunts Point Resiliency (pg 119 – 132)
- Appendix I
  - Rebuild by Design (RBD): Hunts Point Resiliency description updated (pg 278)
- Attachment 2
  - Updated benefit cost analysis for the RBD: Hunts Point Resiliency project (attached).

Details of Action Plan Amendment 24 Changes

Changes to the following chapters will be made to reflect updated program allocations as a result of Action Plan Amendment 24. These types of changes include updates to charts and text to be consistent with the changes described in this amendment.

IV. Funding Justifications

Changes to the Chapter IV: Funding Justifications can be found on page 17 of the Action Plan.

Rebuild by Design (RBD)*: *Hunts Point Resiliency: $20 million for continued study, analysis, planning, and stakeholder engagement related to the flood risk reduction and energy resiliency goals of the RBD Hunts Point Lifelines proposal and the design and construction of a resulting energy resiliency project. The project started as a $20 million CDBG-DR investment as part of RBD. An additional $25 million of CDBG-DR funds that was previously allocated to this project has been reallocated to address needs elsewhere and will be replaced at the same level with City capital funds. Total project funding remains $81.6 million including another $26 million of City capital that was previously funded and an additional $10.6 million of City capital that was awarded in the 2022 Executive Plan

X. Resiliency

Changes to Chapter X: Resiliency can be found on pages 119 through page 132 of the Action Plan.

Rebuild by Design: Hunts Point Resiliency

INTRODUCTION

When Hurricane Sandy hit New York City on October 29, 2012, it brought the vulnerabilities of coastal communities to climate change into stark relief. Following the storm, the Mayor of the City of New York established the "NYC Special Initiative for Rebuilding and Resiliency," which released a report in June 2013 describing the damages and hardships experienced as well as strategies moving forward to build back stronger. With regard to Hunts Point, the report stated damage was minimal due to the timing of the storm's arrival coinciding with low tide in the Long Island Sound. However:

> "According to modeling undertaken by the storm surge research team at the Stevens Institute of Technology, if Sandy had arrived earlier – near high tide in western Long Island Sound, rather than in the New York Harbor and along the Atlantic Ocean – the peak water level in the western Sound, measured at the King's Point gauge, which hit more than 14 feet above Mean Lower Low Water, or MLLW (over 10 feet above datum NAVD88) during Sandy, instead could have reached almost 18 feet above MLLW (almost 14 feet above NAVD88).
>
> The result would have been devastating for infrastructure providing critical services to the rest of the City. Flooding could have overwhelmed parts of the Hunts Point Food Distribution Center (FDC) in the Bronx, thereby threatening facilities that are responsible for handling as much as 60 percent of the City's produce."

Hurricane Sandy highlighted the potential flooding vulnerability of the peninsula's critical facilities, other businesses, and the residential community to the effects of climate change including sea level rise, storm

surge, extreme precipitation events, extreme heat events, system-wide infrastructure outages, and building or sub-area level infrastructure outages.

Many areas in the City were significantly impacted by power outages caused by flooding. As a result of these outages, even the residents of buildings that were not flooded or had minimal damage were left without light, heat, refrigeration, or water for drinking, cooking, flushing toilets, or bathing. In high-rise buildings, elevators also ceased to function. Many older or infirm residents who lived on higher floors were trapped in their apartments, in some cases unable to communicate or gain access to information through television or the Internet.

The original Hunts Point Lifelines Rebuild by Design proposal addressed resiliency through four Lifelines: Integrated Flood Protection, Livelihood and Community Resilience, Cleanways, and Maritime Supply Chain. Through a year-long community engagement process, the City worked with stakeholders from community groups, elected offices, and local businesses to identify resilient energy as the priority for the pilot project. The revised project description in this Action Plan Amendment reflects the variation of the Hunts Point Lifelines "Cleanways" proposal to develop backup energy generation to ensure that the Hunts Point residential community and the FDC is resilient to power outages from flooding and other emergency events.

In June 2014, HUD announced CDBG-DR funding awards for the implementation of selected Rebuild by Design (RBD) proposals. HUD granted the City a $20 million award for the Hunts Point Lifelines RBD proposal to advance "continued robust planning and study related to the future of the food market and a small pilot/demonstration project (to be selected by the City)." In an April 2015 amendment to the City's CDBG-DR Action Plan, the City supplemented the original RBD award with the allocation of an additional $25 million of CDBG-DR funds, bringing the total investment towards the first stage of resiliency improvements in Hunts Point to $45 million. In May 2018, the City added $26 million in City capital funds, and in April 2022 the City added an additional $10.6 million in City capital funds, bringing the total project funding to $81.6 million. In June 2020, the City reallocated $25 million from the total CDBG-DR funding of $45 million, leaving the original $20 million RBD award. Those funds will be replaced with $23.5 million in City capital funds and $1.5 million in New York City Economic Development Corporation (NYCEDC) funds, maintaining the total project funding of $81.6 million.

In consultation with local elected officials, community and civic groups and business interests, the New York City Economic Development Corporation (NYCEDC), and Mayor's Office of Resiliency (MOR) formed the Advisory Working Group (AWG) to further develop resiliency priorities and recommendations that build upon the ideas presented in the RBD proposal and other ongoing resiliency and planning initiatives in Hunts Point. From June to September 2015, the AWG convened for seven meetings (including two meetings with the general public), worked through exercises to better understand Hunts Point's vulnerabilities to flooding, developed selection criteria for identifying priority resiliency categories, and recommended principles to be pursued in the implementation of any resiliency projects (see Appendix A for the *Advisory Working Group Implementation Principles*).

Understanding that only one pilot project would be advanced through implementation with the total available $81.6 million in funding, but that additional resiliency categories could be concurrently advanced through the feasibility study phase, the AWG reached consensus on two priority categories – both to be advanced with further planning and feasibility analysis, and one to be advanced through implementation of

a pilot project[3]. The two resiliency categories identified for further study by the AWG were "Power/Energy" and "Coastal Protection," referred to herein as "Energy Resiliency" and "Flood Risk Reduction." Based on these AWG recommendations, as well as *OneNYC: The Plan for a Strong and Just City* goals, HUD requirements, and City resiliency priorities, the City identified the "Energy Resiliency" category for implementation through a pilot project.

PROJECT DESCRIPTION

The Hunts Point Resiliency pilot project outlined in detail below will provide reliable and sustainable power in the event of an emergency, such as a power outage caused by flood, by allowing identified critical facilities to continue operations. The Hunts Point Resiliency pilot project will reduce the vulnerability of the Hunts Point peninsula to impacts of coastal flooding by providing at least three days of reliable, resilient, and dispatchable power to critical local and citywide facilities during emergency events like Hurricane Sandy, power outages, and other threats.

Project Context

The Hunts Point Peninsula is an area of regional and local significance in the southeast of the Bronx borough of New York City, New York (see Appendix H, Figures 1 and 2). The peninsula is surrounded by the Bronx River and the East River, an estuary of the Atlantic Ocean. The area is home to an active and engaged community of 12,300 residents as well as the FDC, one of the largest wholesale food distribution centers in the United States, numerous light manufacturing, and other businesses, and one of the City's largest wastewater treatment plants. The peninsula is divided by north-south oriented Halleck Street with the FDC to the east and a residential community and industrial zone to the west.

The recommendations from *A Stronger More Resilient New York*, *OneNYC, Hunts Point Vision Plan*, RBD, and other community-based and government efforts highlighted the vulnerability of the peninsula with respect to sea level rise, storm surge, extreme precipitation events, extreme heat events, system-wide infrastructure outages, and building or sub-area level infrastructure outages based on the experiences and lessons learned across the region since Hurricane Sandy.

The resiliency of the Hunts Point Peninsula is critical from both a local and citywide perspective. First, Hunts Point is an environmental justice community, which means that residents face disproportionate environmental burdens. Hunts Point is a low-income community of color, with a poverty rate of 40.5%—more than double the citywide poverty rate—and population that is 98% Hispanic and African American.[4] Like all of New York City, Hunts Point is classified as a moderate non-attainment area for 8-hour ozone.[5] Due to significant air quality emissions from trucking and other industrial sources, Hunts Point residents face asthma rates twice as high as New York City as a whole. Respiratory illness has led to 2.8 times more emergency room visits attributable to asthma from poor air quality in Hunts Point compared to the rest of the City. As outlined in the Section IV (Stakeholder Engagement Plan) and Appendix A (Advisory Working Group Implementation Principles), the City has prioritized meaningful involvement of the Hunts Point community with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The development of the pilot project for Hunts Point Resiliency aims for the Lowest

[3] https://www.nycedc.com/sites/default/files/filemanager/Hunts_Point_Resiliency_Working_Group_Recommendations_FINAL.pdf

[4] American Community Survey – 5 Year Estimates, 2014.

[5] https://www3.epa.gov/airquality/greenbook/ancl.html.

Achievable Emission Rate that goes above and beyond mandated mitigation controls to address local air quality and sustainability concerns of the low- and moderate-income populations affected by the project.

The resiliency of Hunts Point also directly affects the resiliency of the citywide food supply. Hunts Point is the largest geographic hub for food distribution by volume in New York City. The 329-acre FDC campus houses a significant cluster of food distribution and manufacturing facilities, including large Produce, Meat, and Fish Markets. Together, these facilities distribute 4.5 billion pounds of food annually to New York City and the broader metropolitan area and provide 8,500 direct jobs. The Hunts Point Resiliency pilot project will help protect and ensure access to food for millions of New Yorkers. The FDC land is owned by the NYC Department of Small Business Services (SBS) and managed by the NYCEDC.

Given the overall project objectives (described below under Project Objectives), evaluation criteria applied to select the Energy Resiliency pilot project to be funded by HUD (described in more detail below under Project Identification), and the *AWG's Implementation Principles* (in Appendix A), clean and renewable technologies were identified, assessed, and prioritized as part of the Hunts Point Resiliency Project for implementation as part of or in parallel to the preferred pilot project. As part of the operations plan for the technologies to be implemented, non-renewable technologies will only be operated under emergency conditions and with restricted durations.

Project Identification

In June 2016 the City completed a risk and vulnerability assessment of the Hunts Point Peninsula and feasibility studies for energy resiliency and flood risk reduction project options to reduce those vulnerabilities. The scope of work also included the conceptual design and environmental review for the Hunts Point Resiliency project and a robust stakeholder and community engagement process to inform the study and pilot project.

The methodology used for the risk and vulnerability assessment was adapted from procedures established by the Federal Emergency Management Agency (FEMA) for identifying the likelihood and potential consequences of threats. For Hunts Point Resiliency, existing conditions data was overlaid with the latest projections from the New York City Panel on Climate Change (NPCC), FEMA Preliminary Flood Insurance Rate Map (PFIRM) data including potential inundation depths with sea level rise (see Appendix H, Figure 3), historic data reflecting actual storms and outage events, and newly collected data from stakeholders (utility system providers, businesses, and residents) about critical facilities within the Hunts Point Peninsula. The study assessed facilities important to the continued provision of critical citywide and community services, such as emergency services, housing, mobility, power and water delivery, and social services, employment, and food distribution.

Each critical facility's vulnerability was assessed by identifying threats facing the facility, then multiplying the likelihood by the consequence of each relevant threat. Threats assessed included flooding because of sea level rise, coastal storm surge, and extreme precipitation events, as well as extreme heat events, system-wide infrastructure outages, and building-level infrastructure outages. A composite vulnerability score for each critical facility was then developed by adding the different threat-specific vulnerability scores together to compare and rank the vulnerability of each critical facility to another. See Appendix H, Figure 4 for the results of this vulnerability assessment.

Based on the risk and vulnerability assessment findings, building-level power outages were determined to be a significant and shared threat to residents and businesses in Hunts Point. In addition, the low-lying areas

of the peninsula face significant threats from coastal flooding while the upland residential area does not due to considerable elevation change throughout the peninsula. Based on the composite vulnerability scores, the most vulnerable critical facilities include FDC facilities—a key economic and food distribution center—that is vulnerable to building-level energy outages, system-wide outages, storm surge, and extreme heat events (see Figure 4). Food Center Drive, the main thoroughfare within the FDC, would be flooded in a 100-year storm tide that accounts for sea level rise in the 2050s. Community facilities, specifically two local schools, PS 48 and MS 424 are vulnerable to energy outages and extreme heat. The Hunts Point Resiliency project reduces the vulnerability of Hunts Point to power outages caused by emergency events, such as a major flood, through the lens of resilient energy provisions.

The risk and vulnerability assessment results identified the critical facilities in greatest need and potential opportunities for resiliency projects. For energy resiliency, dozens of power generation, distribution, and storage technologies were first screened to determine if technically feasible and those retained were further assessed based upon a set of criteria including:

- Resiliency: applicability to vulnerable, critical facilities, dispatchable, reliable for minimum of three days, independent utility
- Sustainability: emissions, efficiency, fuel sources
- Community benefits: workforce opportunity, scalability, potential to leverage other funds
- Constructability: suitable space, required infrastructure, permitting
- Feasibility: schedule, cost to construct, cost/MWh

It is important to note that no single project meets all the criteria above for all of the vulnerable facilities in the peninsula. These criteria identified technologies (i.e., solar photovoltaic [PV], battery energy storage system [BESS], and backup power generation) for detailed assessment that were then packaged into project options that would ensure resiliency, constructability, and implementation, while at the same time maximizing sustainability and community benefits.

The original energy resiliency pilot project as defined in Action Plan Amendment 18 was a tri-generation facility with a microgrid for power distribution, solar PV with BESSs, and mobile generators to provide a cumulative generating capacity of approximately 6.8 megawatts (MW). However, this pilot project encountered the following challenges during final design:

- Elimination of an end user for the tri-generation facility (i.e., the Meat Market opted out of receiving hot water);
- Potential Produce Market redevelopment that would replace all buildings and trailer refrigeration units (TRUs) with new construction;
- City and State policies and regulatory requirements to restrict local greenhouse gas emissions with penalties imposed; and
- Cost saving strategies identified during conceptual design did not reduce total project costs to within available funding limits.

To address the combination of these factors, the tri-generation facility components of the original pilot project were evaluated and modified. The amended energy resiliency pilot project is reduced in size and

scope yet still achieves the principal project objectives and supports subsequent project phases to achieve a larger vision of energy resiliency that is consistent with evolving City and State carbon neutrality goals. As such, the pilot project has been redefined to provide backup energy generation for the Produce Market with a natural gas-fired generation facility and one other FDC facility (600 Food Center Drive) will be backed up with a stationary diesel generator to be used during emergency periods. Some of the primary community facilities (MS 424 and PS 48) on Hunts Point Peninsula will be provided solar PV plus BESSs for resiliency and sustainability similar to the original pilot project. The cumulative energy capacity of the modified pilot project would generate up to approximately 6.3 MW for emergency conditions as needed.

Project Objectives

The principal objectives of Hunts Point Resiliency Project are to:

- Address critical vulnerabilities for both community and industry;
- Protect important citywide infrastructure during emergencies such as a major flood;
- Protect existing and future industrial businesses and jobs;
- Support the community's social, economic, and environmental assets; and
- Use sustainable, ecologically sensitive infrastructure.

Description of Preferred Pilot Project

The Hunts Point Resiliency project will provide reliable, dispatchable, and sustainable power to identified critical facilities on the Hunts Point Peninsula for three days in the event of an emergency, such as a power outage caused by flood. In total, the project provides approximately 6.3 MW of new resilient energy generation capacity for the peninsula. Each component of the pilot project has independent utility. These separate components do not rely on each other to provide resiliency to the intended facilities. At the same time, they are conceived as a suite of projects to provide resiliency to the most vulnerable and critical facilities within Hunts Point.

- Backup generation to support the Produce Market in the Food Distribution Center (FDC) – This component of the pilot project involves a backup generation system located at Site D that will supply electrical power to the Produce Market in the near term and anchor a larger future microgrid with distributed energy resources (DERs) to achieve long-term sustainability and resiliency throughout the Hunts Point Peninsula. The backup generation system will consist of two 2.6 MW reciprocating internal combustion natural gas engine generators as well as a BESS to enable the "black start" of the facility and support load management at the Produce Market during emergency conditions. The backup generation system is designed to operate in emergency conditions only.

  The backup generation system will utilize natural gas to provide reliable, resilient, and dispatchable power to the Produce Market. Emissions will be controlled to below standards with Selective Catalytic Reduction (SCR) systems for control of NOx emissions and oxidation catalysts for control of carbon monoxide (CO) and volatile organic compounds (VOC) exiting the generating units. Emission rates will be specified as a condition of generator unit operating permits to be enforced by both NYSDEC and NYCDEP. Permit requirements will be specified to equipment suppliers and/or contractors and guaranteed by the equipment suppliers as a condition of facility installation. Ongoing compliance with these emissions rates and permitted hours of operation will be a condition of facility management.

- Community Facility Solar/Storage Installations – To provide sustainable and resilient power supply to two primary community facilities, the project will involve the installation of rooftop solar PV generation and BESSs for both Middle School (MS) 424 and Primary School (PS) 48. The total supported installation is approximately 0.5 MW of solar capacity that will provide electricity to the schools during normal and emergency conditions. BESS will also be installed at the schools to provide electrical resiliency for critical loads during emergency conditions. This will enable the schools to provide shelter, refuge, or gathering spaces for the public in emergency situations. The solar and storage systems are also intended for use during blue sky days. The two rooftop solar sites are located at: MS 424, 730 Bryant Avenue, Bronx, NY 10474 on Block 2763, Lot 279; and at PS 48, 1290 Spofford Avenue, Bronx, NY 10474 on Block 2766, Lot 1.

- Emergency Backup Generation – To provide resilient power supply to other buildings in the FDC, the project includes the purchase of one 600-kW diesel generator and the installation of a connection to the electrical system at Citarella/Sultana facilities located at 600 Food Center Drive. The generator would no longer be a mobile generator and would be permanently installed to operate during emergency conditions only and for periodic testing and maintenance during the year. A Tier 4 certified engine will be used to control and treat emissions. Emission rates will be specified as a condition of generator unit operating permits to enforced by both NYSDEC and NYCDEP. Permit requirements will be specified to equipment suppliers and/or contractors and guaranteed by the equipment suppliers as a condition of facility installation. Ongoing compliance with these emissions rates and permitted hours of operation will be a condition of facility management. The proposed generator would be located at Citarella/Sultana's facilities at 600 Food Center Drive, Bronx, NY 10474 on Block 2781, Lot 500.

Meeting the Purpose and Need

The Hunts Point Resiliency project will reduce the vulnerability of the Hunts Point peninsula to impacts of coastal flooding by providing at least three days of reliable, resilient, and dispatchable power to critical local and citywide facilities during emergency events like Hurricane Sandy, power outages, and other threats.

The Hunts Point Resiliency project addresses the critical facilities most vulnerable to climate change and has independent utility to protect important local and citywide infrastructure under future conditions. The analysis accounts for baseline data of historic outage frequencies and durations, as well as anticipated outage frequencies and durations in the future due to an expected increase in flood-related events.

Due to the critical nature of facilities within the Hunts Point peninsula and based upon policy guidelines and precedents, the City of New York has defined resiliency as the ability to provide a reliable source of power for a given facility's critical load for a minimum of three days in the event of a major flood or other emergency. The overall project incorporates a combination of solar PV solutions with BESSs to operate during both blue sky and emergency conditions and backup power generation to operate during emergency conditions only. The configuration of these technology packages means that each protected facility will have dispatchable energy resiliency for at least three days in the event of an emergency.

The Hunts Point Resiliency project will be designed to incorporate flood protection measures and will be able to withstand impacts from flood events. The Hunts Point Resiliency project will protect food-related inventory and enable citywide food distribution for facilities within the FDC, as well as allow the schools in the Hunts Point residential neighborhood to serve as shelters, refuge, or gathering spaces during floods, outages, heat waves, or other emergency situations.

The pilot project will address air quality and environmental justice concerns in recognition of the importance of emissions and air quality in Hunts Point. Hunts Point (like all of New York City) is considered to be a moderate non-attainment area for 8-hour ozone. This classification mandates emission control technologies to meet the Lowest Achievable Emission Rate. Due to the air quality and environmental justice concerns in the neighborhood, the pilot project will include emission controls including SCR systems for control of NO_x emissions as well as the installation of oxidation catalysts for control of CO and VOC exiting the generating units at Site D. Emissions from the diesel stationary generator at 600 Food Center Drive would be controlled to below standards through utilization of a Tier 4 certified engine. In addition, the natural gas and diesel equipment implemented as part of this pilot project would be utilized only in the event of an emergency, such as a power outage, and would not exceed hours of operation specified in NYSDEC and NYCDEP air permits and registrations.

Resilience Performance Standards

The City of New York is committed to developing and implementing resilience performance standards for all infrastructure projects, including the Hunts Point Resiliency pilot project, and looks to the best available science and promising practices in resiliency to inform the development of these standards.

The City utilizes the following performance standards to measure resiliency within a project:

- Robustness: ability to absorb and withstand stressors and shocks.
- Redundancy: additional channels to enable maintenance of the core functionality in an event of disturbance or system failure.
- Resourcefulness: ability to adapt and respond in a flexible manner during stressors and shocks.
- Response: ability to mobilize quickly in the face of stressors and shocks.
- Recovery: ability to regain functionality after stressors and shocks.

As design progresses, the specific application of these standards to the Hunts Point Resiliency project will continue to be further developed and refined to accurately capture the effectiveness and efficiencies of the resilient technologies once installed.

To ensure that the energy infrastructure is itself resilient to flooding and to ensure compliance with the City's resilience performance standards, all of the energy systems will be flood-protected, elevated, or located outside identified flood hazard areas. The backup generation facility, which will be situated at Site D within the mapped 100-year floodplain, will be elevated above of the floodplain to 19 feet NAVD88.

Conduits that are at risk of flooding will be hardened. Each component of the Hunts Point Resiliency project provides an added level of energy redundancy to the facility it is designed to protect. As a result of the Hunts Point Resiliency project, critical facilities will have the redundancy to obtain energy supply even if there is a broader power outage in the larger grid network. The capital components of the project that provide resiliency and redundancy benefits will be paired with an operations plan for the City and FDC tenants. The project enables the schools and FDC facilities to be responsive to and recover from shocks and stresses because the project components will be equipped with black start capabilities, which refers to the ability to restoring power from a total or partial shut-down.

Rooted in these resiliency performance standards, the City will advance a plan to monitor and evaluate the energy resiliency infrastructure developed through this Rebuild by Design initiative. The purpose of this plan

is to convey how the City will monitor the planning, implementation, and achievement of key milestones in the delivery of the completed Covered Project. The plan will include inspection requirements for the resilient energy infrastructure based upon manufacturer specifications around inspection frequency and process. The specific inspection requirements will be finalized once equipment specifications are determined during final design.

During implementation of the monitoring plan, the City will ensure that all the appropriate mitigation measures are put into place and meet government standards. The plan will also include evaluation methodology, which the City will implement after the projects are complete. The purpose of the evaluation methodology is to determine the Covered Project's efficacy level in addressing the community needs over a period of time. Components of the evaluation methodology may include the use of data to establish a baseline, monitor progress over a designated period of time, and establish benchmarks to gauge the effectiveness of the project against anticipated outcomes.

The City will be vigilant in doing immediate assessments after future storms events. The City will provide monitoring or assessment of the structures and equipment to see if they can withstand storm and hurricane conditions. This will be reported to the appropriate City departments to address any failures in structures and equipment. Additionally, the City will explore standards for the replicability of this type of infrastructure.

Project Feasibility and Effectiveness

The feasibility assessment conducted as part of the Hunts Point Resiliency project was a key part of the process to identify the pilot project for energy resiliency. The packaging of different technologies into the Hunts Point Resiliency project optimizes the resiliency goals set forth in this project with the community's sustainability goals and environmental justice concerns. The Hunts Point Resiliency project includes latest emission control technologies and flood protection measures in capital costs and designs. To ensure that the energy infrastructure is itself resilient to flooding and to ensure compliance with the City's resilience performance standards, all of the energy systems will be flood-protected, elevated, or located outside identified flood hazard areas.

Feasibility assessments considered the appropriate code and industrial design and construction standards to implement packages of energy resiliency technologies. These codes and standards will be adhered to during final design of the pilot project, and a registered professional engineer will certify that the final design meets all applicable codes and standards prior to the obligation of HUD funds by the City for construction.

Con Edison is a key coordination partner for the design and construction of the Hunts Point Resiliency project. A series of meetings with Con Edison's regional engineering team were held to review the specifications of the energy generation facilities for the Hunts Point Resiliency project and the interconnections between the facility, Con Edison's existing infrastructure, and the Produce Market. The meetings also involved preliminary planning discussions of a future microgrid that may be built in subsequent phases of the project. The City and Con Edison are continuing to coordinate regularly to ensure successful implementation of the pilot project as well as the broader vision for resilient and renewable backup power serving multiple facilities and tenants on the Hunts Point Peninsula.

Once the Hunts Point Resiliency project is constructed, the City will operate and maintain the energy systems. The NYC Economic Development Corporation, which manages the FDC on behalf of the City, will oversee the operations and maintenance of the backup generation facilities. DOE will operate and maintain the solar PV and BESSs at the schools. This will include regular inspections in accordance with appropriate industry codes

and regulations. The City of New York hereby certifies that funding will be made available to cover the long-term operations and maintenance costs associated with the Hunts Point Resiliency pilot project.

Project Funding

A total investment of $81.6 million in Federal CDBG-DR and City funds ($20 million via the RBD program, $60.1 million in New York City capital funds, and $1.5 million in New York City Economic Development Corporation funds) is dedicated to the "continued robust planning and study related to the future of the food market and a small pilot/demonstration project." These funds will be used for planning, design, and project construction of the Hunts Point Resiliency project, and are eligible for reimbursement under HUD's RBD program. Planning work includes feasibility analyses, conceptual design, and environmental review; design includes contracting, permitting and full design; and project construction includes procurement, construction, and construction management activities. If the project generates program income, the City will coordinate with HUD that the program income would flow back to the City's CDBG Entitlement program.

Federal, State, and Local Coordination

Implementation of the Hunts Point Resiliency Project will involve federal, state, and local permits and authorizations. As described above (under Project Identification), the scope of work for the Hunts Point Resiliency Project included multiple assessments and evaluations to identify the energy resiliency pilot project. The pilot project has been identified, and the project has advanced to conceptual design and environmental review.

Action Plan Amendment 18 identified and described the permits and authorizations that will be obtained for the pilot project as design begins and the awarded contractors prepare for construction. If any changes to the pilot project result from coordination or approvals by permitting agencies, the City and NYCEDC will submit a Substantial Action Plan Amendment to HUD describing these changes and the modified pilot project.

The agencies involved in the environmental review, permitting and approvals for the pilot project, and the timing of these processes are described below in Table 4. The process mapped below is based on the identification of the energy resiliency pilot project and HUD funding schedule (described in the Project Funding section above). Additional design and construction schedule information for the pilot project is provided below in Section V. Project Timeline.

The City is currently working with the Sandy Regional Infrastructure Resilience Coordination (SRIRC) to coordinate design, permitting, construction and operation of this project to align and integrate with other recovery projects in the area. Additionally, the City will continue to work with the SRIRC's Technical Coordination Team (TCT) and the Federal Review and Permitting (FRP) Team as the project is further defined during the design and environmental review process.

Table 4: Permits/Approvals and Related Schedule Information

Agency/Authority	Permit/Approval	Timing
Federal		
U.S. Department of Housing and Urban Development (HUD)	Federal funding agency; Approval of this Substantial Action Plan Amendment; and	Substantial Action Plan Amendment Approval: Fall 2018

Agency/Authority	Permit/Approval	Timing
	final issuance of Authority to Use Grant Funds (AUGF) for the CDBG-DR funds.	NEPA Finding of No Significant Impacts (FONSI) issued September 2019 AUGF for CDBG-DR Funds issued November 2019
U.S. Fish and Wildlife Service	Section 7 of the Endangered Species Act (ESA) Consultation	Completed 2018
State		
Office of Parks, Recreation and Historic Preservation (OPRHP)	Section 106 consultation required per the National Historic Preservation Act (NHPA) with respect to eligible and listed properties on the State & National Registers of Historic Places.	Completed September 2019
New York State Public Service Commission (NYSPSC): Article VII	Certificate of Environmental Compatibility and Public Need (for projects generating 10 MW or <)	Spring 2023 to Spring 2024
NY Independent System Operator (NYISO)	Performance of Interconnection Process and Study.	Spring 2023 to Spring 2024
Department of Environmental Conservation (NYSDEC)	State Facility Air Permit (Subpart 201-5)/ Subpart 201-4: Registration of Minor Facility	State Facility Air Permit: Spring 2022 to Fall 2023 (by Contractor)
	Petroleum Bulk Storage Program Registrations Issuance of permits related to the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity	Petroleum Bulk Storage Program Registrations: Spring 2022 to Fall 2023 (by Contractor) SPDES GP: Fall 2023 to Fall 2024 (by Contractor)
	Natural Heritage Program Consultation on State-listed plant or animal species or significant natural communities	Completed 2018
Department of State (NYSDOS)	NYS Coastal Zone Consistency Determination	Completed 2019
Department of Transportation (NYSDOT)	Issuance of Highway Work Permit, Special Hauling Permit/Divisible Load	Summer 2023 to Fall 2023 (by Contractor)
	Revocable Consent	Summer 2023 to Fall 2023 (by Contractor)

Agency/Authority	Permit/Approval	Timing
City		
Department of City Planning (DCP)	NYC Waterfront Revitalization Program (WRP) Consistency Determination	WRP Consistency: Completed 2019
Department of Environmental Protection (DEP)	Air Pollution Registration (Engines, Generators, Turbines) Asbestos Abatement Compliance through the Asbestos Reporting and Tracking System (ARTS) Approval of City sewer and water connections for new connections or modifications of existing connections	Air Pollution Registration: Spring 2022 to Fall 2023 (by Contractor) ARTS Compliance: Summer 2023 to Spring 2024 (by Contractor) Water and Sewer Connections/ Modifications: Summer 2023 to Spring 2024 (by Contractor)
Department of Buildings (NYCDOB)	Review of design and issuance of construction work permits related to addition of distributed generated sources including compliance with the City's Building, Electrical, and Zoning Codes Office of Technical Certification & Research (OTCR) review and approval of battery storage plans	Construction Work Permit(s): Summer 2022 to Fall 2023(by Contractor) OTCR Approval: Fall 2022 to Fall 2023 (by Contractor)
Department of Transportation (NYCDOT)	Approval of Maintenance and Protection of Traffic Plan (MPT) NYSDOT Revocable Consent - Contingent upon public hearing	Summer 2023 to Fall 2023 (by Contractor) Spring 2023 to Fall 2023 (by Contractor)
Public Design Commission (PDC)	Review of project design	Initial coordination begins with concept design. Coordination began in Spring 2021; final approvals would be required for final design completion in Summer 2023
Landmarks Preservation Commission (LPC)	Advisory agency for activities on or near sites of historic or archaeological value.	Completed 2019
New York City Fire Department (FDNY)	Design approval of high-pressure gas permit; review according to fire code; review of battery storage plans by FDNY Technology Unit.	Spring 2022 to Fall 2023

Agency/Authority	Permit/Approval	Timing
Office of Management and Budget (OMB)	Responsible Entity (RE) for the disbursement of CDBG-DR funds for Hurricane Sandy from HUD to City agencies and NEPA Lead Agency.	NEPA Review: Summer 2018 to Spring 2019
Mayor's Office of Climate and Environmental Justice (MOCEJ)	Design review of activities and projects proposed to increase resiliency, including strengthening neighborhoods, upgrading buildings, adapting infrastructure and critical services, and strengthening coastal defenses.	Spring 2023 to Fall 2023
New York City Emergency Management (NYCEM)	Review of plans related to emergency preparedness, response, and operations under storm conditions.	Summer 2023 to Spring 2024
Small Business Services (SBS)	CEQR lead agency for NYCEDC; help City agencies fulfill their environmental review responsibilities. Issuance of Waterfront Permit for developments within the NYC waterfront, and review of resiliency related design coordinated with the DOB's permit(s).	Issued CEQR Negative Declaration in August 2019. Fall 2022 to Fall 2023 (by Contractor, as applicable)
Other		
Railroad Companies Approvals (CSX)	Issuance of permission to cross right of way.	Summer 2022 to Fall 2023 (by Contractor, as applicable)
Utility Companies Approvals (Con Edison)	Issuance of permission to cross existing utilities.	Spring 2022 to Fall 2023 (by Contractor, as applicable)

CDBG-DR ALLOCATION: $20,000,000

HUD ELIGIBILITY CATEGORY: Housing Rehabilitation and Preservation, per waiver in August 25, 2015 Federal Register Notice (80 FR 51589)

PROJECTED ACCOMPLISHMENTS: Reliable, resilient, and dispatchable power to critical load and citywide facilities during emergency events like Hurricane Sandy, power outages, and other threats.

NATIONAL OBJECTIVE: Low- and Moderate-Income Area Benefit

Appendix I

Changes to the Appendix I can be found on page 278 of the Action Plan.

Rebuild by Design: Hunts Point Resiliency: As of Action Plan Amendment 20, the City had allocated $45 million in CDBG-DR funding for continued study, analysis, planning, and stakeholder engagement related to

the flood risk reduction and energy resiliency goals of the Rebuild by Design Hunts Point Lifelines proposal. The project started as a $20 million CDBG-DR investment as part of Rebuild by Design. The additional $25 million of CDBG-DR funds that was previously allocated to this project is being reallocated to address needs elsewhere and will be replaced at the same level of City capital funds, including $26 million of City capital that was previously funded. In April 2022, the City awarded an additional $10.6 million of City Capital for the project, increasing total project funding to $81.6 million.