

Hunts Point **RESILIENCY**

Public Meeting

September 12, 2018



Agenda

- **Welcome**
- **Energy Resiliency Pilot Project Update**
 - Project Recap: What did we present last time?
 - What did we hear from the community?
 - How are we responding
 - Project Update
- **Implementation Timeline**
- **Public Engagement Update**
- **Next Steps**

Hunts Point Resiliency Project Evolution



HUD launched the **Rebuild By Design (RBD)** Competition in response to Hurricane Sandy

Hunts Point Lifelines submitted to Rebuild By Design Competition

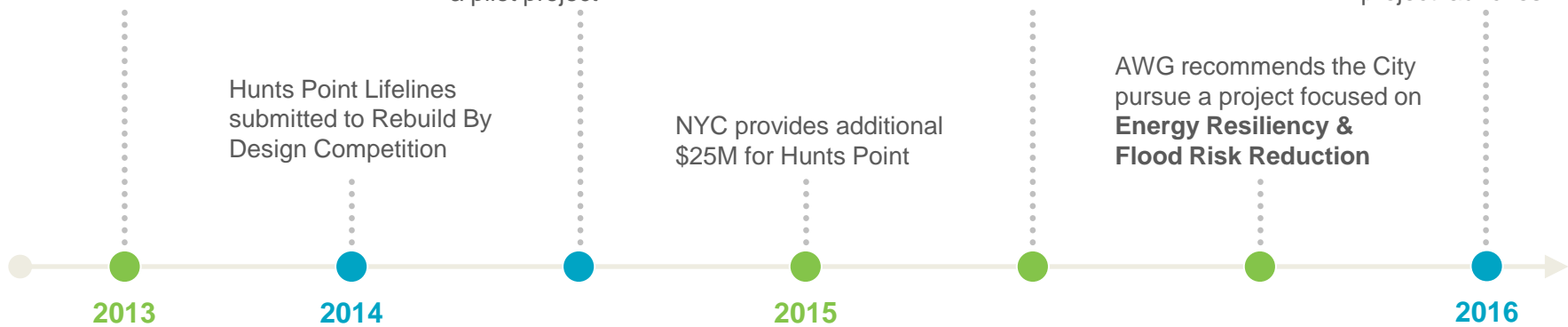
Hunts Point Lifelines awarded \$20M by HUD to further study and develop a pilot project

NYC provides additional \$25M for Hunts Point

EDC & ORR form Hunts Point **Advisory Working Group (AWG)**

AWG recommends the City pursue a project focused on **Energy Resiliency & Flood Risk Reduction**

Hunts Point Resiliency project launches



Mayor de Blasio releases **OneNYC**, outlining a multilayered approach to resiliency



Recap: Resiliency Energy Project Goals

The City is implementing a Resilient Energy Pilot Project, based upon community priorities identified by the Advisory Working Group.

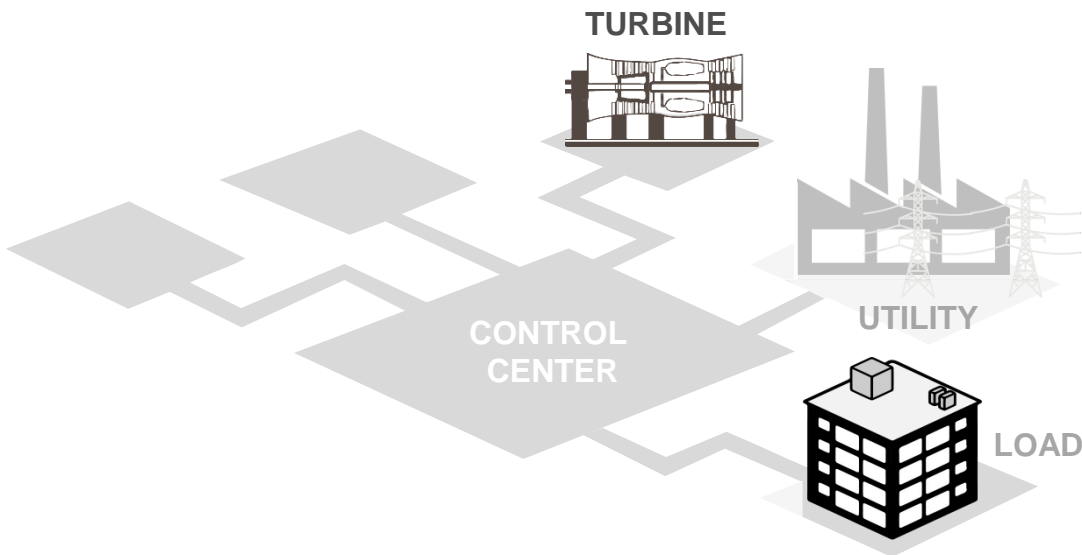
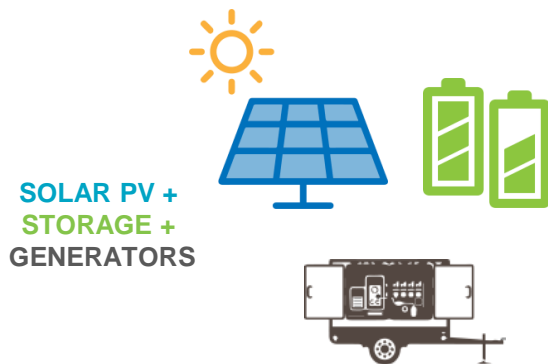
The Project seeks to advance solutions that meet the Advisory Working Group's goals:

- Address critical vulnerabilities for both community and industry
- Protect important citywide infrastructure
- Protect existing and future industrial businesses and jobs
- Support the community's social, economic, and environmental assets
- Use sustainable, ecologically sensitive infrastructure



Recap: What did we present last time?

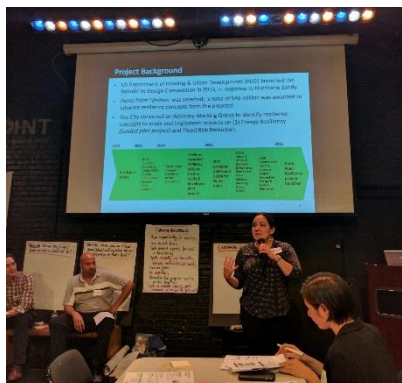
Emergency Power + Solar + Storage



Building	Energy Solution
PS 48, MS 424	Rooftop Solar PV w/ Energy Storage Emergency Power (Mobile Generators)
Fish Market	Energy Storage Emergency Power (Natural Gas Generator)
Produce Market	Emergency Power (7.5 MW Simple Cycle Combustion Turbine)
Flexible	Emergency Power (Mobile Generators)

What did we hear from the community?

- Support of the solar + storage solutions at the schools
- Support of the engagement process
- Concern over emergency power solution at markets, including simple-cycle turbine at Produce Market and generator at Fish Market due to potential negative impacts on air quality that would burden health and well-being of residents
- Short term exposure to air pollution can have serious health effects, even if operating hours are limited to emergency use



How are we responding?

- Last June, after receiving HUD project approval, the City paused the project due to community concerns to conduct further analysis.
- Revisited the Lifelines proposal and Advisory Working Group implementation principles
- **We considered:**
 - Are there different technologies that could **more positively impact air quality**?
 - What innovative solutions exist to better achieve both **resiliency and sustainability goals**?
- **We found solutions that:**
 - Use more sustainable technologies
 - Improve air quality and emissions
 - Electrify a portion of diesel-powered refrigerated trucks
 - Replace the need for existing boilers

Hunts Point Resiliency Projects Summary



Hunts Point Resiliency Projects Updates

In response to community feedback the City has updated the resiliency proposal to:

- Improve air quality through the resiliency projects
- Introduce more sustainable technologies

Changes from original proposal:

- Microgrid with Tri-generation at the Produce & Meat Market
 - **Key benefits:** Reduces air pollution and carbon emissions, electrifies a portion of idling diesel engines, takes old meat market boilers offline
- Resilient Nanogrid at the Fish Market
 - **Key benefits:** Leverages private capital to maximize opportunities for renewable energy and community solar

1. Tri-gen Microgrid

Tri-Gen (Combined Cooling, Heating, and Power) Microgrid System (5.2 MW) at the Produce & Meat Markets will provide:

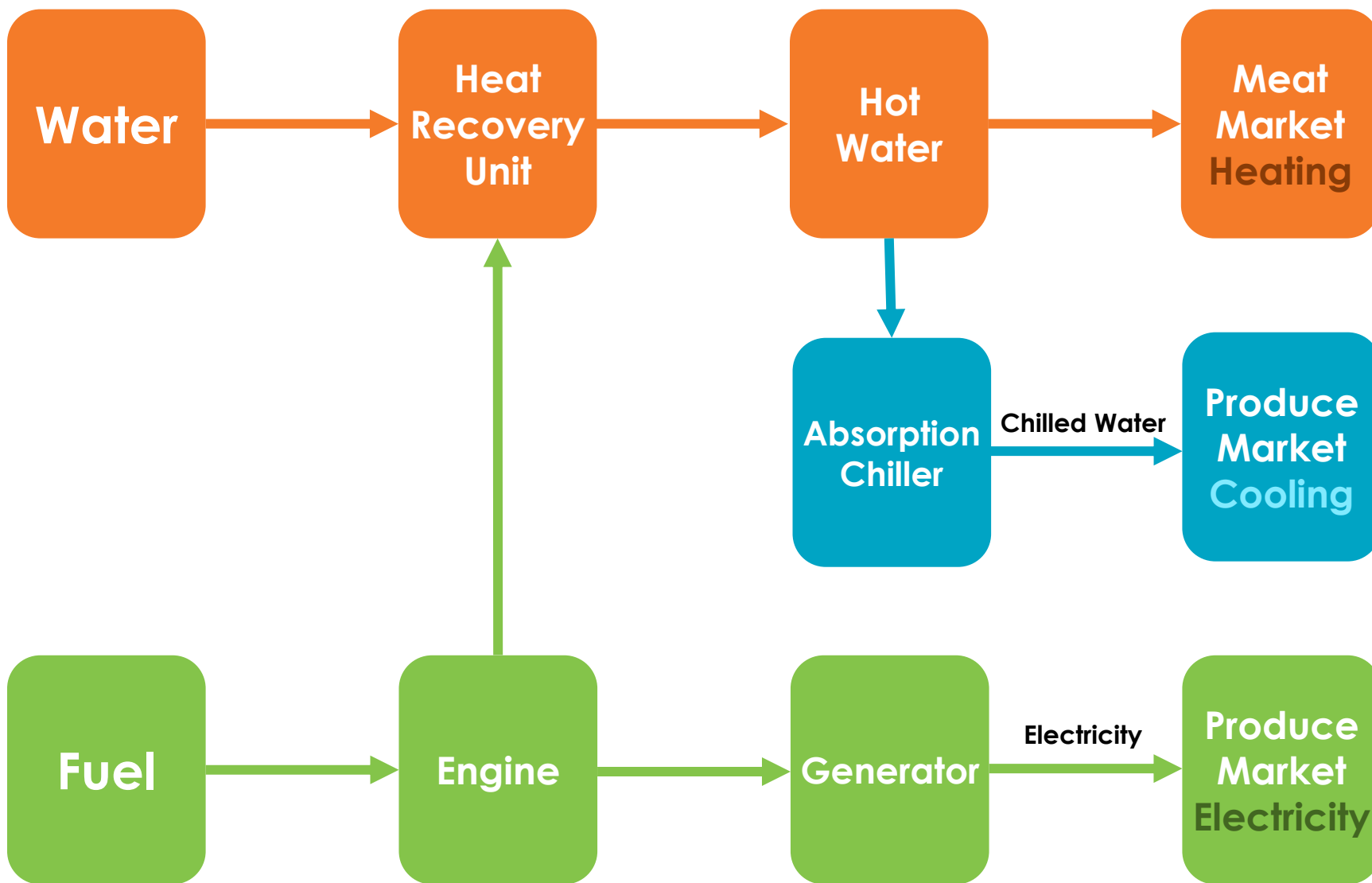
- Electricity & Central Cooling to Produce Market
- Hot water at Meat Market
- Backup power during emergency outages

Sustainability and Air Quality Co-Benefits to meet AWG Implementation Principles:

- Reduced overall size of generation needed
- Selected more efficient and sustainable technology
- Updated power system allows for electrifying a portion of refrigerated trucks to reduce idling diesel engines
- Take older boilers at Meat Market offline

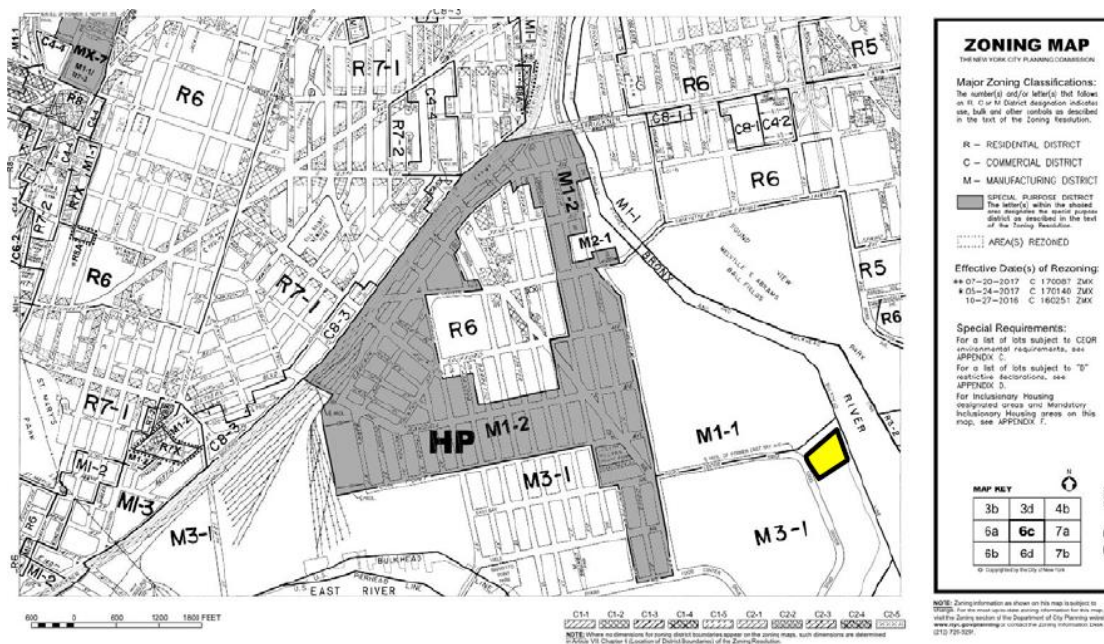


How Tri-Generation Works



Additional Tri-gen Microgrid Details

- Microgrid can isolate loads from larger ConEd grid in the event of a larger power outage
- All infrastructure will be elevated out of floodplain or otherwise flood-proofed if needed
- Located at Site D, which is undergoing remediation
- Tr-generation system will be fueled by natural gas, but will be significantly more efficient than the simple cycle turbine since it provides 3 forms of power with the same amount of fuel



2. Resilient Nanogrid at Fish Market

Develop concept for a resilient nanogrid at the Fish Market in order to:

- Maximize potential renewable resources
- Develop using private funding
- Request community solar proposals

Why a Nanogrid?

- Nanogrid is a building-level resiliency solution that connects storage and power generation
- Nanogrids can tie into a microgrid in the future
- Achieve a project that meets resiliency and sustainability targets

How will it work?

- EDC and ORR, in coordination with the AWG, will define project objectives for resiliency, sustainability, and community solar
- The City will scope a project that meet those objectives



3. Solar + Storage at Neighborhood Schools

Resilient Energy at the Schools

- Install solar panels + battery storage (600 kW) at PS 48 and MS 424
- Enable both schools to serve as community gathering places during emergency events

Why solar + storage?

- Provide year-round renewable energy at two neighborhoods schools
- Reduce the schools' overall energy use from the grid

How does solar + storage work?

- Solar + storage is a type of nanogrid
- Solar panels are connected to a battery system, which stores energy to provide resilient backup power
- Battery will have 8-hour discharge time



4. Mobile Generators

Resilient Backup Power for Businesses

- Four mobile diesel generators to provide resilient backup power to businesses
- 275 kW each
- Will only be used in emergency conditions

Why mobile generators?

- Low-cost and flexible solution to other important citywide food distributors and employers in the FDC

How do mobile generators work?

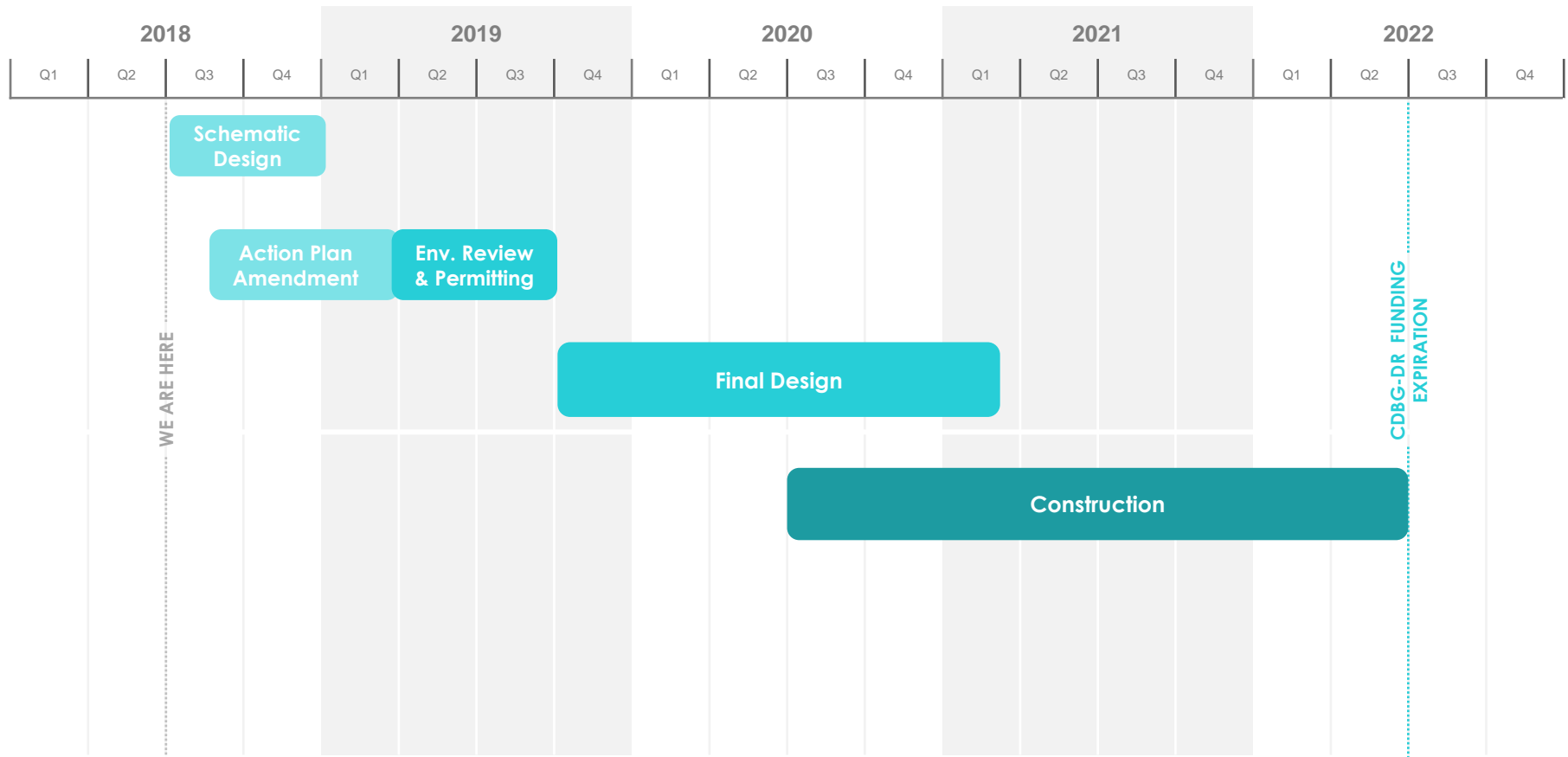
- Generators connect to electrical systems of facilities during emergency periods
- Stored offsite during blue sky days



Hunts Point Resiliency Project Summary

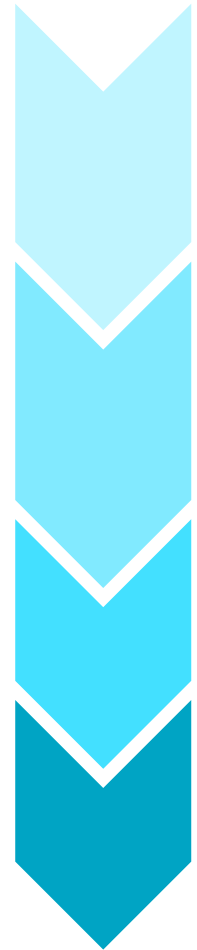
Project Location	Generation Type	Capacity (MW)
Site D (to serve Produce & Meat Markets)	Tri-generation system with natural gas engine generators	5.2
MS 424	Rooftop Solar PV	0.45
	Battery Storage	0.09
PS 48	Rooftop Solar PV	0.04
	Battery Storage	0.06
Businesses	Mobile Generators	1.1

Project Implementation Timeline



Current & Upcoming Key Milestones

- **Current: Concept Design Drawings and Report Development**
 - Design criteria to meet project goals, and guide final design
 - Applicable codes/standards such as building and electrical codes
 - Detailed project schedule and costs
 - Drawings for project arrangements at each site
- **Current: Environmental Impact Assessment (Federal, City Funding/ Actions)**
 - Purpose and need to be satisfied by project
 - Project alternatives
 - Operational, construction, and cumulative (combined) impacts in affected area
 - Design, construction or operational strategies to avoid or minimize impacts
- **Upcoming**
 - Air Permitting with NYSDEC
 - Public Design Commission Review for Site D



More on Environmental Review: Key Impact Assessments

- **Air Quality**

- Stationary emissions
- Modeling of project emissions:
 - At specific locations
 - Accounts for existing air quality conditions
- Demonstrate that it meets national (NAAQS) and local (CEQR) standards
- Demonstrate current emissions that would be offset by project:
 - Produce Market: Chilled water from tri-gen facility will convert 50 diesel refrigeration trucks to electric power
 - Meat Market: Hot water from tri-gen facility will reduce boiler gas usage
 - Schools: Solar panels/battery storage to reduce reliance on electrical grid
- Additional engineering and emissions controls to reduce impacts as much as possible

More on Environmental Review: Key Impact Assessments

- **Noise**

- Modeling of project stationary noise levels
- At specific locations
 - Accounts for existing noise levels using recorded noise data
- Project noise levels will meet City Noise Code and Zoning compliance
- Equipment will be enclosed and use other engineering controls to reduce noise, as needed

- **Hazardous Materials**

- Remediation of contamination at Site D
- Project design coordinated with engineering and institutional controls of remediation programs
- Site management, health, and safety plans for public and worker safety

- **Energy, Greenhouse Gas Emissions, and Environmental Justice**

- Beneficial effects of reliable and sustainable energy that can meet demand
- Account for air quality results

Next Steps

- Conduct HUD Action Plan Amendment (Fall 2018)
 - Action Plan Amendment Public Hearing (Oct. 4)
- Complete conceptual design
- Complete environmental review
- Release final design RFP
- Final Advisory Working Group Meeting and Public Meeting of this contract (2019)
 - Review potential coastal flood protection measures
 - Update on final design and environmental review of the Energy Pilot Project
 - Update on next phases of the project

Neighborhood Outreach Team Public Engagement Update



- Collaboration Lab
- Podcasts
- Video
- Neighborhood Outreach Team Appreciation Dinner
- Artist in Residence Event
- Art Installations
- Community Preparedness Surveys

Appendix

Environmental Review Basics

- **National Environmental Policy Act (NEPA)**
 - Required for Federal Funding/Actions – HUD Community Block Development Grant (CBDG)
 - OMB acting as Lead Federal Agency on behalf of HUD
 - E.O. 11988 – Environmental Justice Community
 - Federal & State Agency Coordination – USEPA, USFWS, NYSDOS, NYSDEC, NYSHPO
- **New York City Environmental Quality Review (CEQR)**
 - Required for City Funding/Actions
 - SBS (EDC) acting as Lead Agency under CEQR
 - City Agency Coordination – DEP, LPC, DCP
 - EA to be completed consistent with CEQR Technical Manual, 2014
- **EA (Environmental Assessment), Not EIS (Environmental Impact Statement)**
 - No “significant adverse impacts” anticipated based on evaluations during project development (for example, air quality)
 - No assessment of construction impacts required:
 - Modular, pre-fabricated equipment will limit truck traffic
 - Construction is anticipated to be short-term, temporary in duration (2 years or less)
 - EA to focus on operation of project