NYCHA houses 1 in 12 New Yorkers

- 77,000 SENIORS
  - 62 YEARS OLD OR OLDER

- 110,000 CHILDREN
  - UNDER 18 YEARS OLD

- 40% OF HEADS OF HOUSEHOLDS ARE 62 YEARS OLD OR OLDER

- 25% OF NYCHA EMPLOYEES ARE RESIDENTS OF PUBLIC HOUSING

- $23,000 AVERAGE HOUSEHOLD INCOME

- 61% ARE EMPLOYED
  - (OF NON-DISABLED, WORKING AGE ADULTS)

- 41% ON FIXED INCOME
  - (SOC. SEC., SSI, PENSION, OTHER)

- 12% RECEIVE PUBLIC ASSISTANCE
NYCHA’s housing stock is large and varied...

- **328 Developments**
- **Made up of 2,550 Buildings**
- **That consist of 178,000 Apartments**
- **Containing over 175 Million Square Feet of Space**

60% of NYCHA’s building are 50+ years old.

- The largest development: a 26-building apartment complex with 7,000 residents.
- The smallest development: a single-story senior building with 13 residents.
And it is aging.
$1 billion loss in operating funding since 2001

Data Source: NYCHA Finance
30% loss in capital funding since 2001

Data Source: NYCHA Finance
NextGeneration NYCHA
Safe Clean Connected Communities

The Authority’s **10-year strategic roadmap** to

1. Achieve short-term financial stability and diversify funding for the long term
2. Operate as an efficient and effective landlord
3. (Re)build, expand, and preserve public and affordable housing
4. Engage residents and connect them to best-in-class social services
Capital needs far outstrip available funds

Total Need: $16.6 Billion
Annual Bids: $535 Million

5-Year Projection
4-Year Average

- Grounds
- Building Systems
- Building Interior
- Building Exterior
- Apartment Interior
NextGeneration NYCHA
Vision for Safe, Clean & Connected Communities

**Fund Goal:**
Change the way NYCHA is funded
- Pay less to NYC
- Do a better job collecting rent and fees
- Make wiser use of ground floor space
- Reduce central office costs

**Operate Goal:**
Change the way NYCHA operates
- Go digital and use fees to upgrade service
- Localize decision-making to heighten customers’ satisfaction
- Pursue sustainability for a cleaner and greener NYCHA
- Improve safety and security

**(Re)Build Goal:**
Change how NYCHA looks
- Use data to drive capital decisions
- Provide land for NYC’s affordable housing goals
- Maximize federal programs to renovate and preserve buildings
- Choose and use good design

**Engage Goal:**
Change how NYCHA engages with residents
- Improve resident and community services with a new type of engagement
- Create a nonprofit organization to fund social services
- Connect residents to quality job opportunities
NYCHA’s **commitment** as a landlord to create healthy and comfortable homes that will withstand the challenge of climate change

An **invitation** to residents and surrounding communities to work with NYCHA to realize a shared long-term vision of equity, sustainability, and resiliency
NextGeneration NYCHA

OPERATE AS AN EFFECTIVE AND EFFICIENT LANDLORD

Create **healthy indoor environments**

Efficiently provide **comfortable and reliable heat and hot water**

Improve **water management**

Adopt a comprehensive **waste management plan**
NextGeneration NYCHA
Energy Commitments

Reduce energy intensity by 20% by 2025

- Large-scale retrofits via HUD EPC
- Scattered-site retrofits: non-HUD funding

Install 25 MW of renewable generation capacity

- Solar & DG PPAs
- Resiliency
**Priority Outcome**

**Healthy Indoor Environments**

43% of NYCHA developments are located in the areas of New York City that see the most asthma hospitalizations.¹

They house 151,000 residents, 38,000 children under 15.

New York City plans to have the **best air quality** among all large US cities by 2030.

NYCHA can’t control outdoor air pollution, but its sustainability strategies can improve indoor air quality.

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¹ Data Sources: NYC Department of Health and Mental Hygiene - Environment and Health Data Portal / United Hospital Fund Boundaries; NYCHA Department of Research and Management Analysis.

NYCHA development
Priority Outcome
Comfortable & Reliable Heat

92% of apartments are heated with steam, the most inefficient way to heat buildings.

1,379 boilers provide NYCHA's heat. Each has a life expectancy of 30 years. 45% are already 25+ years old.

Apartments are overheated because outdoor temperature sensors can't tell when it's hot inside—only that it's cold outside.

Winter-time indoor temperature

Recommended: 68°F
NYCHA Apartments: 80°F

That's like keeping the lights on inside because it's dark outside—even when you're sleeping or not home.
Priority Outcome
Get on the path to 80 X 50 GHG goals

Pathway for Reductions in Greenhouse Gas Emissions from NYCHA Portfolio

Source: Mayor’s Office of Sustainability and NYCHA Dept. of Energy and Sustainability
2025 Goals

Heating is critical.

GHG emissions reduction through 2025 by energy conservation measure

- Lighting Efficiency Measures: 8,000
- Domestic Hot Water Efficiency Measures: 38,700
- Heating Efficiency Measures: 229,900
- Scattered Sites Strategies: 21,500
- Renew300 Solar/ Distributed Generation: 32,100
- Total: 330,200

Source: NYCHA Dept. of Energy and Sustainability
2025 Goals
Various starting points

Energy Intensity Varies by Development Type

Master planned developments use more energy on average than single buildings or scattered site developments.
Master-planned sites use campus-scale steam systems; scattered site buildings tend to use hot water heat.
What was state of the art in 1939
By and large, still there.
2025 Goals: Heating is critical

NYCHA’s Heating Energy Use Intensity Can Be Improved Through Controls Upgrades

Heating Energy Use Intensity (kBTU/sf) before and after installation of indoor temperature feedback controls, compared to portfolio-wide median in 2014, and NYC multifamily median.

- NYCHA Median 2014
- NYC Multifamily Median (2-pipe Steam)
- NYCHA buildings before controls upgrade
- NYCHA buildings after controls upgrade
Priority Outcome

Climate Resiliency

90°F days per year in New York City¹

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<th>1970–2000</th>
<th>By the 2050s (As many as Birmingham, AL)</th>
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<td>18</td>
<td>39–57</td>
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6”–8” of rain is an extreme rain event

New York State has seen 71% more of these events over the last 50 years

54,000 NYCHA residents are located in areas subject to coastal flooding

1 in 6 NYCHA buildings lost power during Superstorm Sandy

44% of NYCHA residents are children and seniors

- <18 years old (27%)
- 65+ years old (17%)

vs. New York City’s population

- (21%) <18 years old
- (15%) 65+ years old

NYCHA also has almost 2x more residents <65 years old with disability than the New York City average
Capital Improvements
Master-Planned Sites

Invest $300 million via a series of large EPCs.

Scope of work: heating distribution controls, ventilation, and electric and water efficiency.

4 EPCs in development, serving 130 developments.

120,000 units in EPCs by 2018
Renewables
Three tracks toward Renew300

Solar RFPs contributing to 25 MW by 2025

Red Hook Microgrid and Cogeneration Plant via Public Private Partnership

Support City in community —scale clean and distributed energy systems

2.5 million SF of solar panels will provide 25 MW of solar energy in 10 years
CALL FOR INNOVATIONS

Provide innovative solutions to improve the lives of New Yorkers.
call for innovations:
Reducing the Electrical Load in NYCHA Buildings

The New York City Housing Authority (NYCHA) seeks solutions that will reduce electrical demand in developments that are master-metered for electricity.

http://j.mp/cfi-electric
Master-metered developments use 4 times the electricity of direct-metered developments

Comparison of electricity consumption at 62 developments in Brooklyn from August 2013 to July 2014

Source: Enterprise Community Partners with NYCHA data
call for innovations:
Reducing the Heat Load in NYCHA Buildings Connected to the Utility’s District Steam System

The New York City Housing Authority (NYCHA) seeks one or more technical solutions to implement pilot projects that will reduce energy loads from heat and hot water and produce utility cost savings in 16 housing developments that are connected to Consolidated Edison (ConEd) district steam heat

http://j.mp/cfi-steam
$1  vs  $3
Gas  vs  ConEd Steam
NextGeneration NYCHA
Sustainability Agenda

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Full agenda is available for download:
http://j.mp/green-nycha