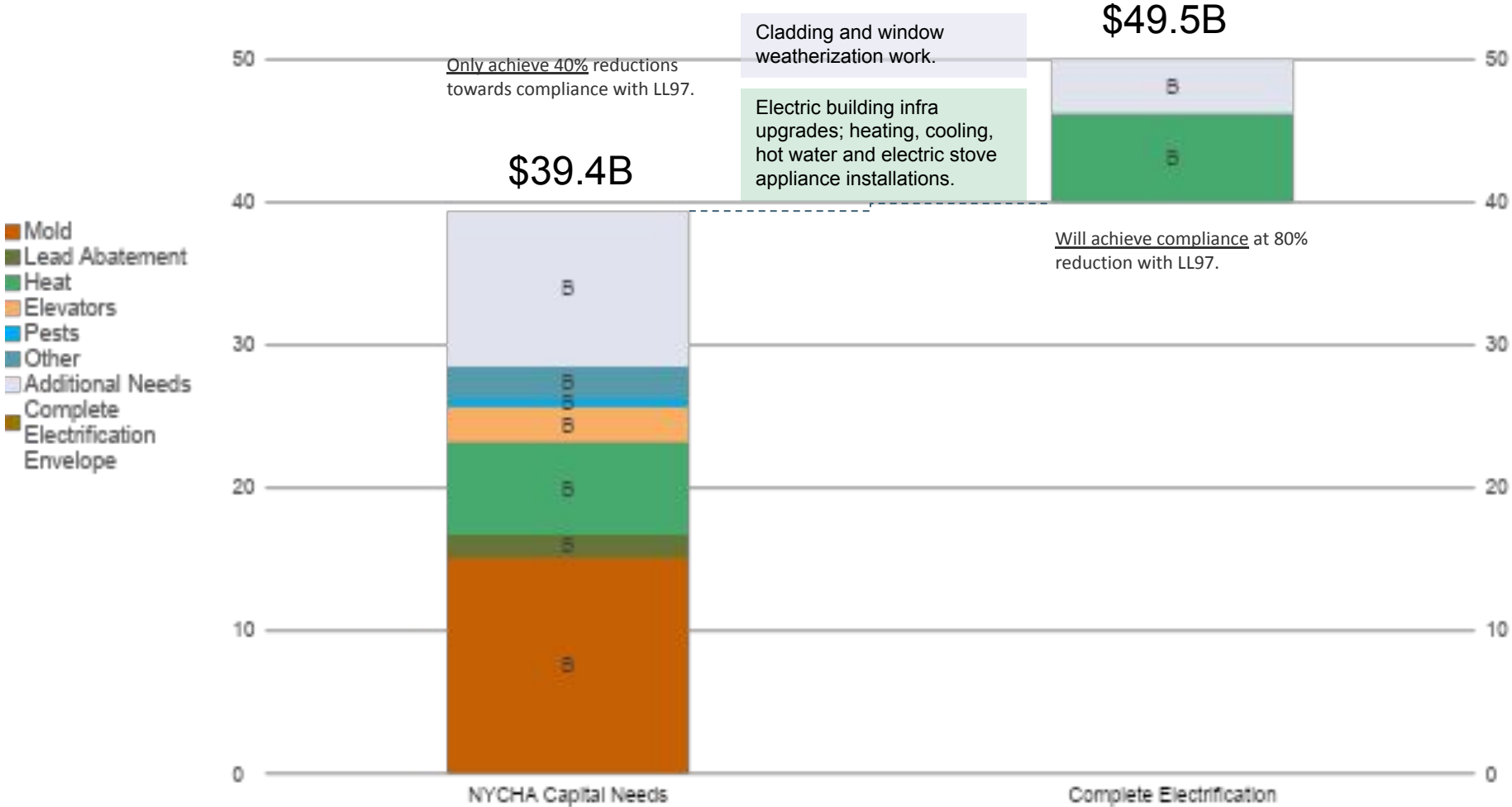




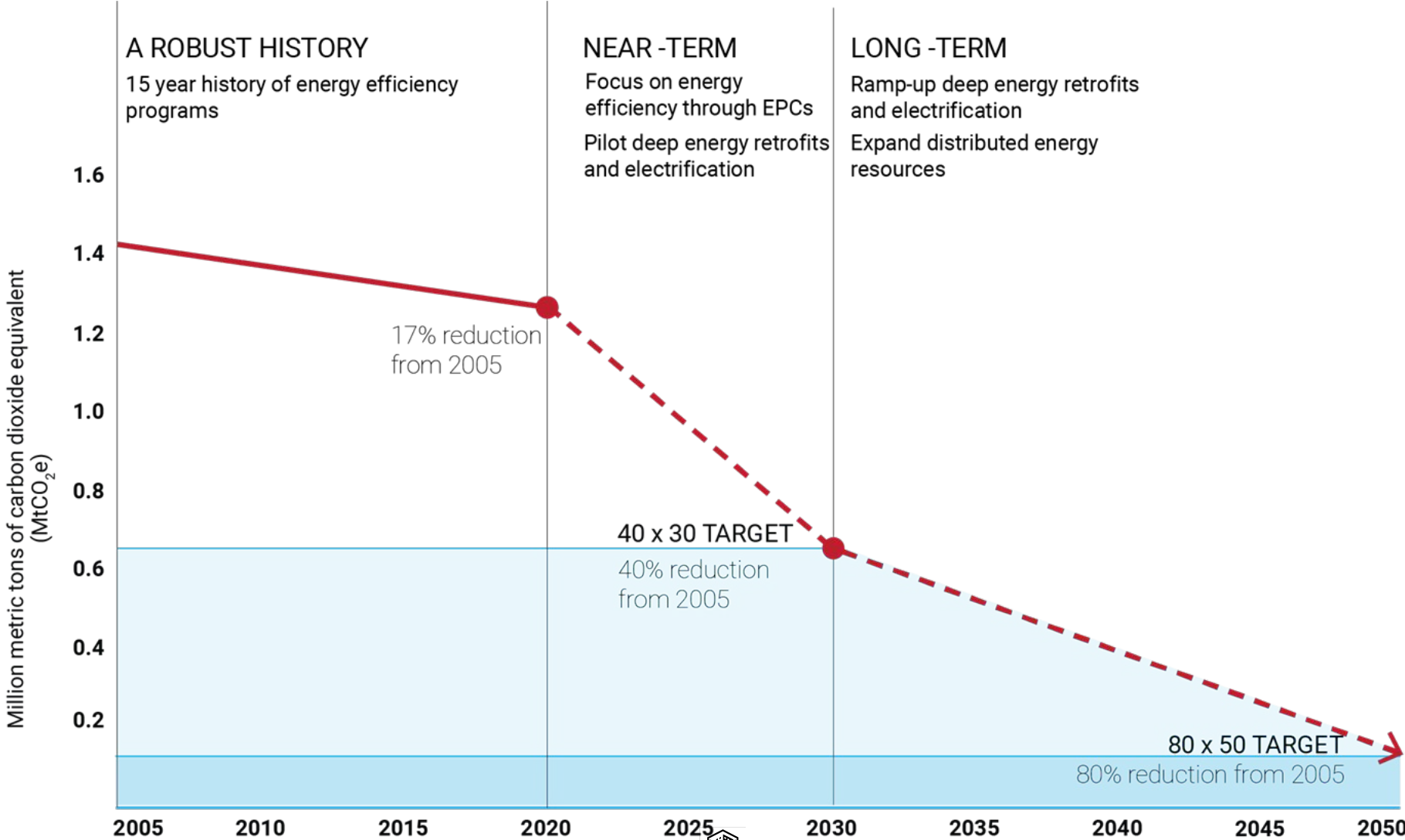
NYCHA Electrification Task Force

November 17, 2022

NYCHA Capital Needs



Path to Decarbonization



Recapitalization and Decarbonization Pathways

177,000 units

Public Housing Authority

90,000 units

- EPCs/WAP
- Community Shared Solar
- Pilot space heating and domestic hot water systems (VRF, GSHP, ASHP)
- Clean Heat for All Challenge
- Clean Energy Academy
- Pilot RetrofitNY
- Pilot battery + solar for critical loads
- Pilot micromobility charging infrastructure

Permanent Affordability Commitment Together (PACT)

62,000 units

- Required to meet Enterprise Green Communities Standard
- Required deep energy retrofits & electrification analyses
- Façade reclad + insulation where feasible
- Window replacements
- Space heating + hot water electrification where feasible
- Rooftop PV where feasible

Preservation Trust

25,000 units

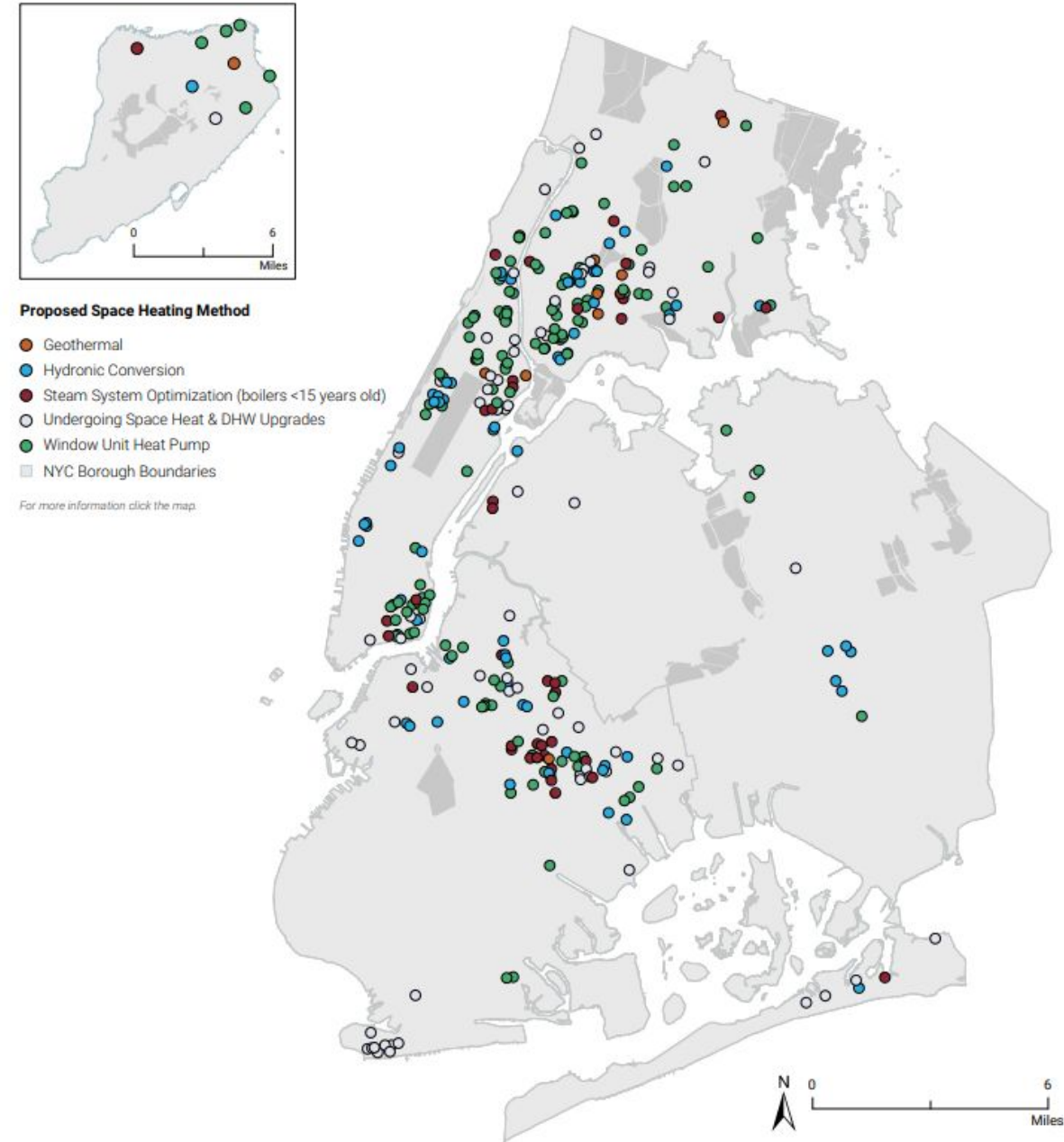


Path to Decarbonization

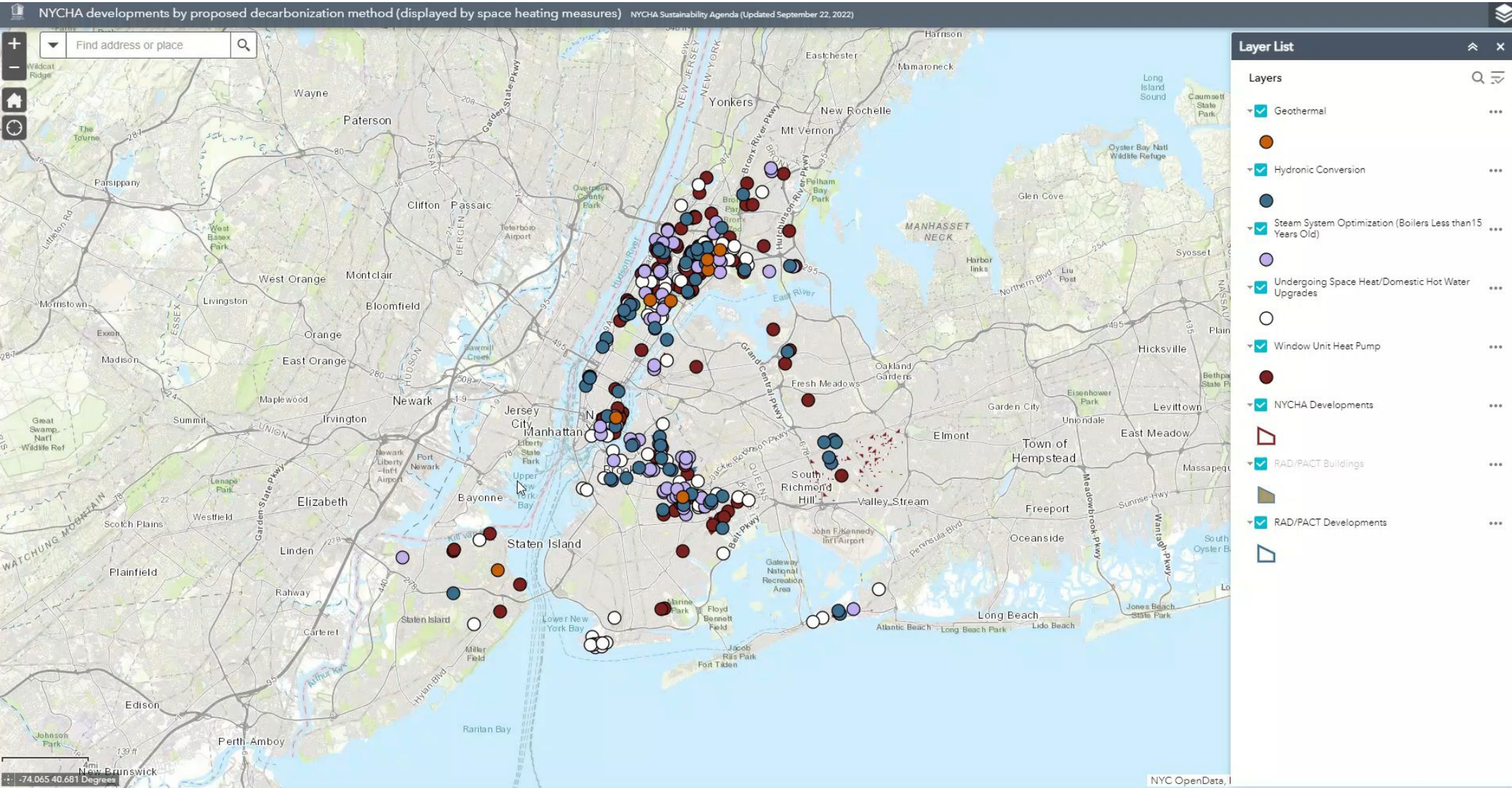
Recommendations

- **Geothermal** – 8 developments, 65 buildings
- **Hydronic Conversions** – 64 developments, 307 buildings
- **Window Unit Heat Pumps** – 122 developments, 801 buildings

NYCHA developments by proposed decarbonization method
Displayed by space heating measures



NYCHA's Decarbonization Map Present



Last Updated: September 2022

Link: <https://nycha.maps.arcgis.com/apps/webappviewer/index.html?id=a7d966dd9119434aac9f766b294781b4>

NYCHA's Decarbonization Map Present

 New York City Housing Authority Decarbonization Efforts



New York City Housing Authority Decarbonization Efforts

A plan to improve quality of life for residents

April 22, 2022

Last Updated: April 2022

Link: <https://storymaps.arcgis.com/stories/51214f12ac96485ab2013efd82845470>

Updated Map

Proposed Data Fields

Aspirational building decarbonization paths

this should be the data that shows up first, all other data groupings turned off

- Space heating
- DHW (indicate if infrastructure needs to be above grade due to flooding vulnerabilities)
- Windows
- Façade
- Distribution system upgrades
- Energy efficiency
- Thermal Network Potential (include future partnerships like Ravenswood, etc.)
- DER

Aspirational EV and micro-mobility infrastructure

- EV chargers
- Micro-mobility storage and charging infrastructure

Existing buildings related information

- Existing heating system type (central gas fired boiler, hydronic, electric, note if electric stoves are present)
- Existing windows type
- Building construction year
- ConEd and building upgrades analysis complete – upgrade needs based on aspirational scopes
- EUI
- GHGs
- Number of gas-fired generators installed

Recently upgraded heating infrastructure

(last 15 years)

- Boiler for boiler replacements
- Distribution system updates
- Energy efficiency retrofits
- Window replacements

Affordable housing category

- PHA
- PACT
- Future PACT (where known)
- Leased Housing

Incentive and funding opportunities

- IRA
- FEMA
- Utilities
- HUD Green and Resilient Communities

Updated Map

Requirements

- Ability for current and/or future NYCHA staff to easily update
 - No proprietary mapping systems
 - No complex coding
- Better visualizations – needs to be aesthetically pleasing and intuitive to use

Questions

- Understanding the audience
- Level of information to share – can we have multiple access layers?

Clean Heat for All – Electrify First NYCHA Buildings with Window Heat Pumps

Target ~30,000 PWHPs						
Development	Borough	# Blds	# Boilers	Window Count	Dwelling Units	Projected PWHPs
Pomonok	Queens	35	7	19571	2069	5735
Woodside	Queens	20	6	13242	1356	4292
Pelham Parkway	Bronx	23	6	7236	1266	3546
Soundview	Bronx	13	5	6594	1259	3977
Breukelen	Brooklyn	30	7	15188	1595	5078
Totals		121	31	61,831	7,545	22,628



Development	Estimate	Funding (thru '26)	Difference
Pomonok	\$88,759,199	\$14,514,017	(\$74,245,182)
Woodside	\$95,788,456	\$91,271,689	(\$4,516,767)
Pelham Parkway	\$78,871,976	\$9,757,778	(\$69,114,198)
Soundview	\$62,919,791	\$55,833,990	(\$7,085,801)
Breukelen	\$120,805,861	\$9,917,240	(\$110,888,621)
Totals	\$447,145,283	\$181,294,714	(\$265,850,569)
NYSERDA Grant		\$13,000,000	(\$252,850,569)

Scope:

- Install new energy efficient windows.
- Install new cold climate heat pumps in each bedroom and living room.
- Install heat pump hot water makers at each building.

Program Highlights:

- Partnership between NYCHA-NYPA-NYSERDA
- Utilize bulk purchase agreement to drive innovation
- Source NYCHA's in-house Operations staff for most installation.

Challenges:

- Funding gaps
- City Cap eligibility
- Resident buy-in/approval



Thank you!

