BUILDINGENERGY NYC

IRA Incentives for Multifamily Decarbonization: What Works, What Doesn't, and What's Coming?

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Introductions

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Inflation Reduction Act Overview

Inflation Reduction Act: Overview

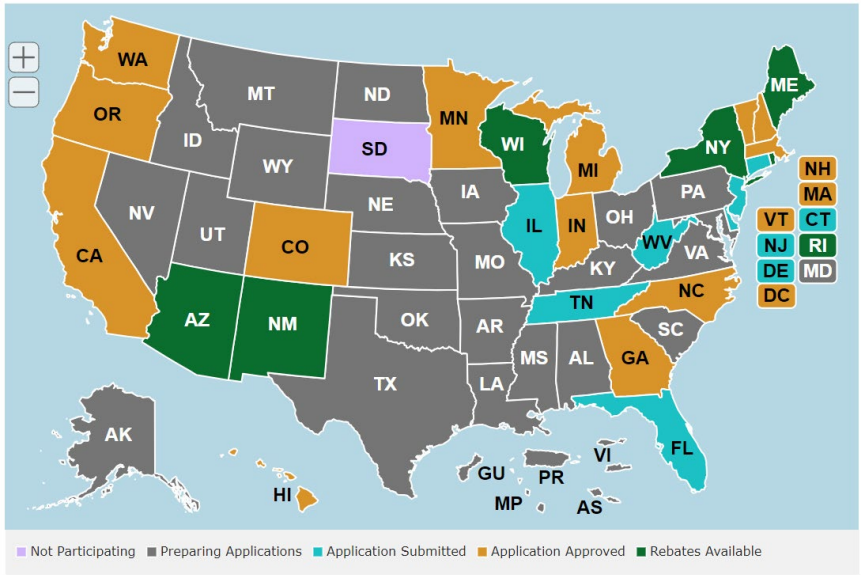
- The single largest climate investment in our nation's history at $369 billion
- Will drive national emissions 40% below 2005 levels by 2030
- Emphasis on "carrots" rather than "sticks" for the buildings sector

Energy Tax Credits & Deductions

- Investment Tax Credit (48) & Clean Electricity Investment Tax Credit (48E)
  - Energy Communities & Domestic Content Bonuses
  - Low- Income Communities Bonus Credits (48e & 48E(h))
  - Direct Pay & Transferability
- New Energy Efficient Home Tax Credit (45L)
- Commercial Buildings Energy Efficiency Tax Deduction (179D)
- Energy Efficient Home Improvement Tax Credit (25C)

DOE Home Energy Rebate Programs

- $318 million to NYS for the 2 programs & administered by NYSERDA
- Home Efficiency Rebates (HER)
  - From $2,000- $8,000 per dwelling unit for efficiency measures
  - Funding based on modelled energy savings and income tiers
- Home Electrification and Appliance Rebates (HEAR)
  - $/widget rates for appliances, weatherization, & electric infrastructure
  - Up to $14,000 per dwelling unit
- Multifamily buildings need at least 50% of residents to meet eligible income level to qualify
- Minimum 40% of funds must go to LMI
- Minimum 10% of funds must go to Multifamily
- NYSERDA launching Multifamily programs in Q1 2025



HUD Green Resilient Retrofit Program (GRRP)

- GRRP closed with final application deadline in July
- Grant & Loan program with 3 Cohorts of funding for varying levels of retrofit projects
  - Elements
  - Leading Edge
  - Comprehensive
- GRRP was was only open to eligible HUD- Multifamily Assisted Properties

EPA Greenhouse Gas Reduction Fund (GGRF)

Green financing and technical assistance for clean technology deployment and building decarbonization efforts

- Focus on low-income and disadvantaged communities
- Deployed through non-profit community lenders (aka CDFIs)

Buckets of funding

1. National Clean Investment Fund (NCIF) $14 billion
    - 3 awardees developing low-cost, green lending programs nationwide
1. Clean Communities Investment Accelerator (CCIA) $6 billion
    - 5 awardees providing helping CDFIs establish local green community lending programs
1. Solar for All - $7 billion
    - 60 municipal government & nonprofit awardees expanding and launching solar PV deployment programs across the country
    - NYSERDA & HPD/HCR in NYC & NYS

Timeline

- Lender applications submitted October 2023 w/ awards announced March 2024
- Some initial funding available Q4 2024 w/ full program rollouts Q1-2 2025

CPC Climate Capital Term Sheets:

- **$8,000 per annual ton of projected carbon reduced**
- Certain loan products require Davis Bacon and Build American Buy American (BABA)
- Low interest loans for 4 different performance tiers:
  - **Save a Ton:** 20% reduction in energy consumption OR 1 ton carbon reduction per unit annually
  - **Clean Air:** Modeled 35% reduction in energy consumption OR a modeled Energy Star Score >= 75 + elimination of all on-site carbon emissions
  - **Clean Air Boost:** Must meet the DOE's definition of a Zero Emissions Building
  - **Clean Air Boost for New Construction:** Meet the DOE's definition of a Zero Emissions Building + be powered solely from renewable/clean energy

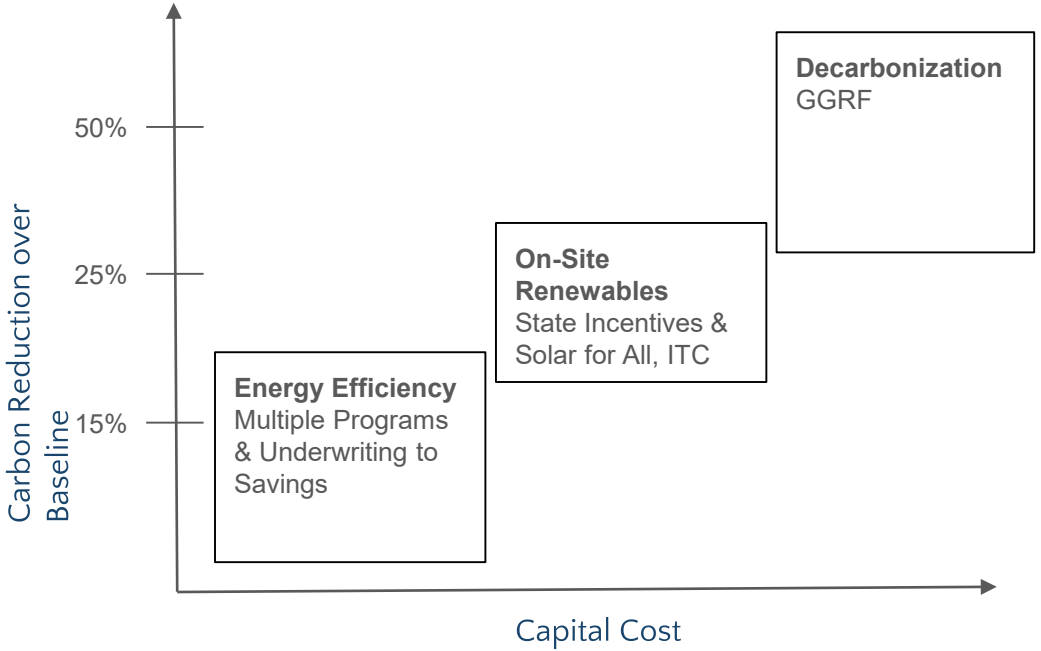
CPC Climate Capital Term Sheets

Case Studies using IRA incentives

Indicating how GGRF could be applied

Stacking Sources to Decarbonize Existing Buildings

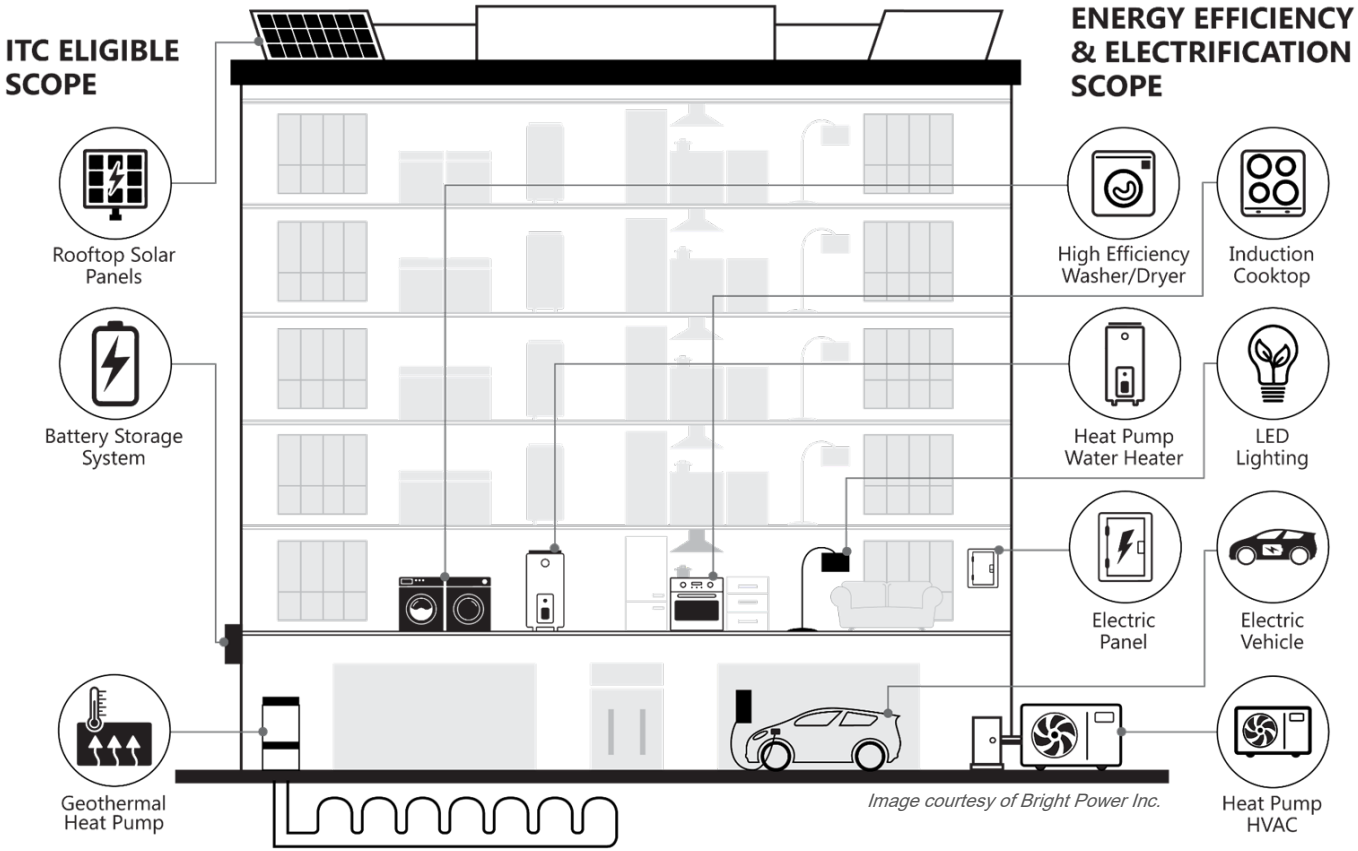
New products will align with/subordinate to existing sources and enable projects that do not fit into traditional energy efficiency trajectories



Key Considerations

- Decarbonization is related to but distinct from energy efficiency and renewables
- Stacking GGRF with other incentives, loans, and sources provides a pathway to decarbonization for existing buildings
- *Note: GRRP can support all project types and resiliency*

Unique Funding Approaches for Different Scopes



Funding for EE, Electrification, & Resiliency

Incentives (Tax, Rebate, Grant or Financing)	Scope of Work		
	Energy Efficiency	Electrification	Resiliency
ITC & Low-Income Bonuses	X	X	X
45L/179D	✓	X	X
HER/HEAR	✓	✓	X
GRRP	✓	✓	✓
GGRF	✓	✓	?
Utilities	✓	✓	X
NYSERDA	✓	✓	X
	Case Study Measures		
	• General efficiency (i.e. lighting) • Over-cladding	• Heating & cooling • DHW	• Elevation of Electric System

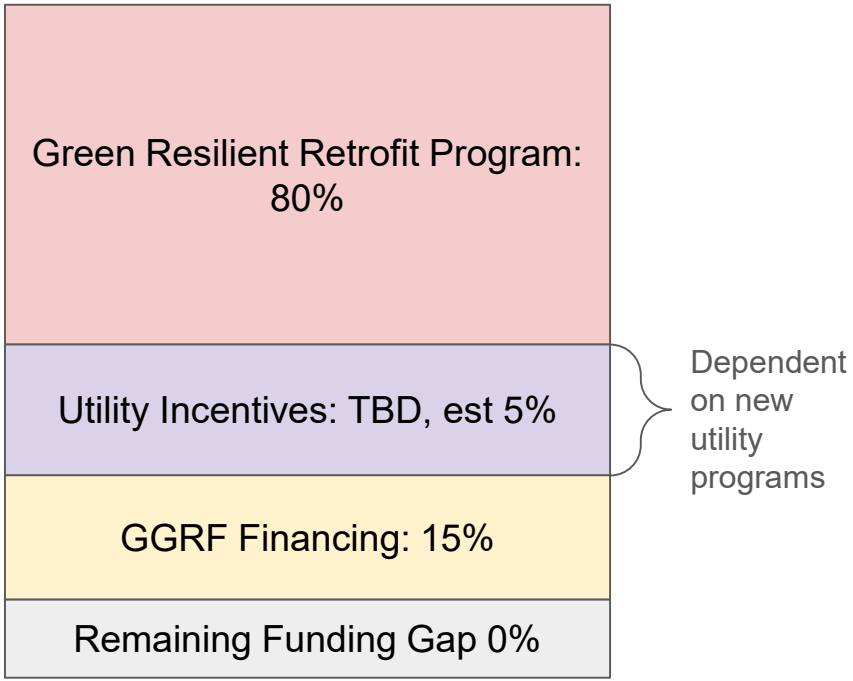
Case Study 1: Resiliency & Efficiency Retrofit

Anticipated Project Scope of Work

- Over-cladding
- Elevation of electrical system above flood elevation

GRRP is a rare opportunity to improve resilience of our properties. Target property is most vulnerable to flooding and extreme heat.

Potential Project Capital Stack



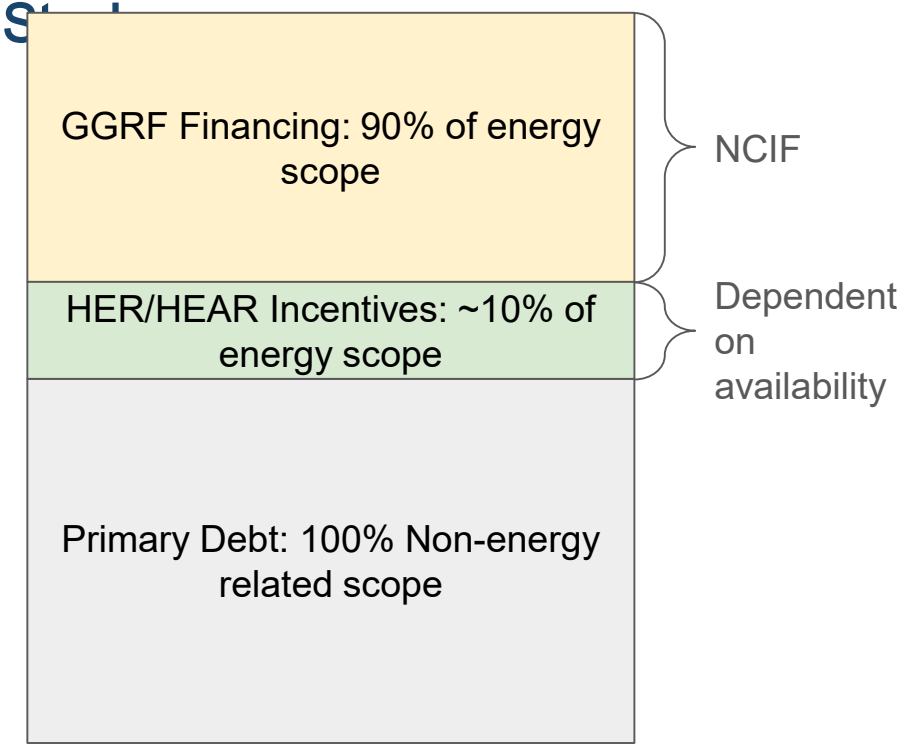
Case Study 2: Efficiency + Electrification Retrofit

Project Scope of Work

- Over-cladding
- Electrification of thermal and domestic hot water loads
- Energy efficiency
- Non-energy related retrofits (i.e. accessibility)

GGRF is being explored to reduce burden on primary lender. Without GGRF decarbonization scope likely limited to DHW electrification and energy efficiency.

Potential Project Capital S



Funding for Renewables

Incentives (Tax, Rebate, Grant or Financing)	Scope of Work		
	On-Site Solar	On-Site Storage	Geothermal
ITC	✓	✓	✓
ITC Low-Income Bonuses	✓	X	✓
GRRP	✓	✓	✓
GGRF	✓	✓	✓
Utilities *Varies by utility territory	?	?	✓
NYSERDA	✓	✓	✓

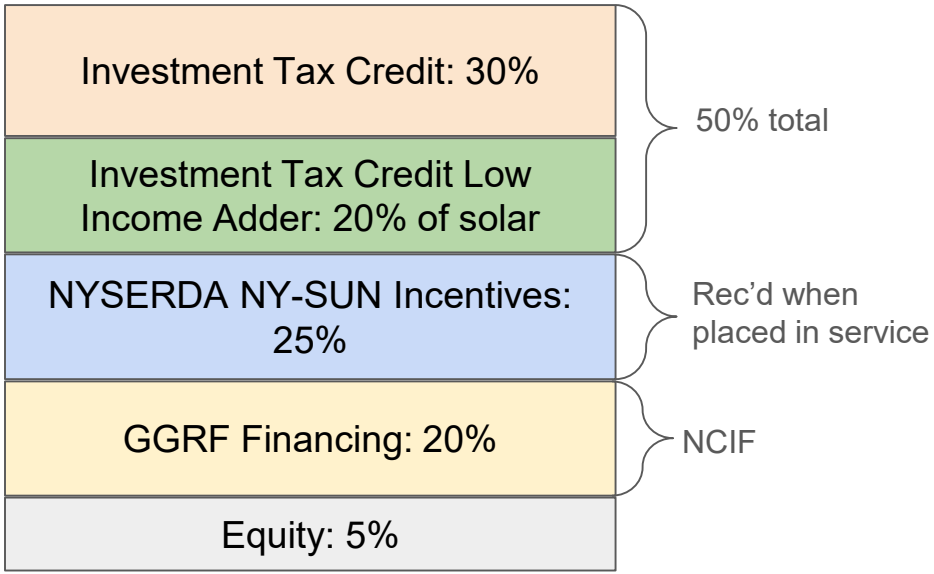
Case Study 3: Solar on Existing Buildings

Project Scope of Work

- Rooftop solar (1 MW) across scattered sites

Low income bonuses allow projects to pencil in high-cost markets (like affordable NYC multifamily housing) but can be difficult to monetize

Potential Project Capital Stack



Case Study 4: Large Solar + Storage Development

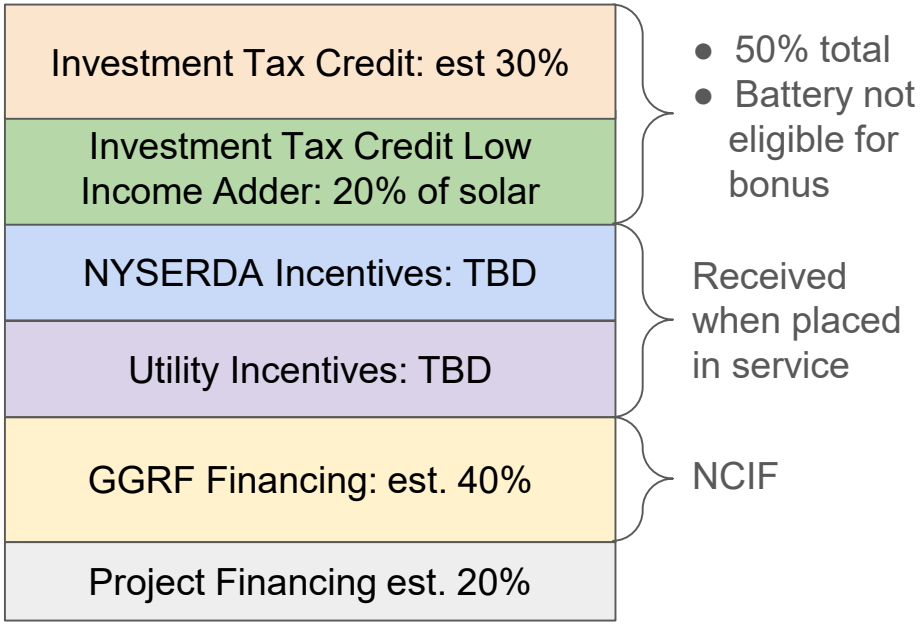
Project Scope of Work

- Parking lot solar canopy (3 MW)
- Battery (est. 8 MWh)

Carving renewables into a distinct entity from the rest of the development to more efficiently leverage funding

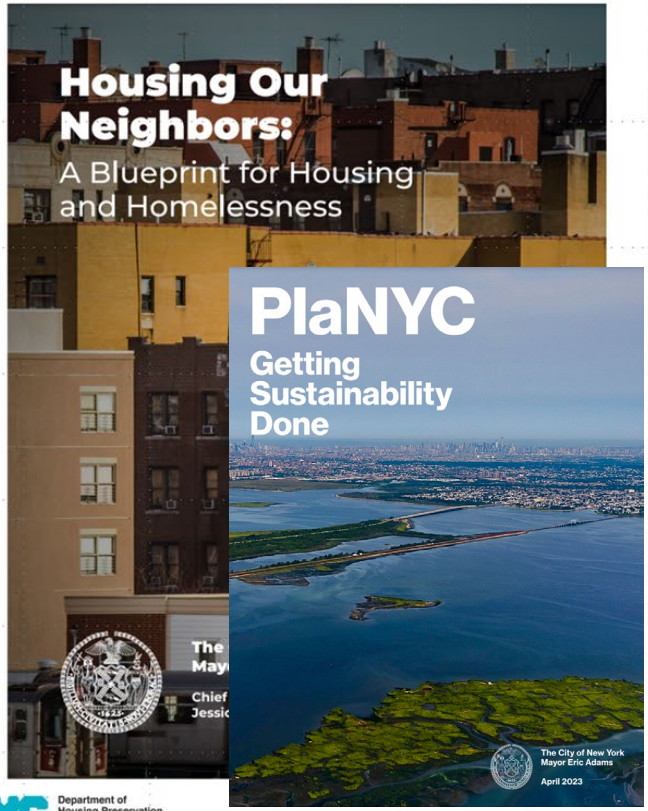
Tax credits and incentives will be received once placed in service, construction loan will bridge.

Potential Project Capital Stack



HPD Programs & IRA Incentives

NYC & HPD's Commitment to Decarbonization



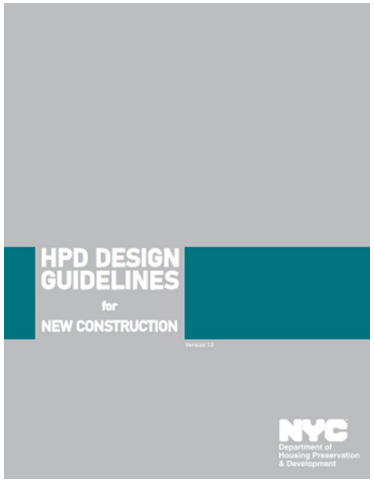
Fast-track equitable decarbonization and beneficial electrification to serve low-income households

We must ensure that the transition from a fossil-fueled economy is fair and equitable. Reaching New York City's ambitious climate targets while meeting our environmental justice goals will require significant investments in our housing stock, including scaling up beneficial electrification. Beneficial electrification reduces building emissions without creating additional costs for residents, and without stretching the energy grid in ways that may increase pollution and other environmental burdens in communities already disproportionately impacted by climate change.

SPOTLIGHT: Release Sustainable Design Guidelines that create a clear and equitable pathway to decarbonization

SPOTLIGHT: Incubate new ideas to scale beneficial electrification & resiliency

HPD's New Construction Design Guidelines



1.1 PERFORMANCE STANDARDS

REQUIREMENTS

a. All projects must certify with the current version of the NYC Overlay of Enterprise Green Communities (EGC) or LEED v4 Gold or above.

b. Design building to meet Local Law 97's 2050 GHG emissions limits in 2050, assuming a 100% clean electric grid. Note that fossil-fuel usage from emergency backup power generation should be excluded from calculation*

REACH

a. Certify project to one of the following high performance building standards:

- Enterprise Green Communities Plus, or
- PHIUS or PHI. Note that all PHIUS/PHI projects must also certify with Enterprise Green Communities or LEED Gold or above. Note that PHIUS certification requires compliance with Energy Star and DOE Zero Energy Ready Home (ZERH).

The Inflation Reduction Act (IRA) provides up to $1,000/ DU for projects that certify with ENERGY STAR and up to $2,500 per dwelling unit for projects that certify w/ DOE's Zero Energy Ready Homes program (ZERH). All projects are strongly encouraged to seek these incentives. ENERGY STAR is required by EGC, and ZERH is one path to achieve Enterprise Green Communities Plus certification.

4.1 SOLAR

REQUIREMENTS

a. All projects are subject to HPD's Solar Where Feasible Mandate.

b. All solar projects are required to comply with HPD's Solar Technical Requirements.

c. Further information, including access to free design and technical assistance, can be found on HPD's Solar Where Feasible webpage.

Note that starting in November 2024, all projects, regardless of affordability status, will be subject to Local Laws 92 & 94.

HPD's Preservation Design Guidelines

1.3 ENERGY USE REDUCTIONS FOR MOD REHABS

REQUIREMENTS Certain HPD programs, including the Green Housing Preservation Program (GHPP) require buildings to reduce energy use by 20%.

REACH Achieve a minimum of 20% energy use reduction in ALL buildings.

Some Mod Rehabs align w/ IRA HER Rebates or lower tiers of GGRF funding

1.4 ELECTRIFICATION Points may be available through EGC 5.5 for compliance with this requirement

REQUIREMENTS (Sub Rehabs)* The following systems, equipment, and appliances are required to convert to high-performance electric equipment meeting the performance standards outlined in Appendix A:

- Heating systems that use oil or electric resistance as a primary heating fuel
- Steam heating systems that are being replaced or extensively modified
- Domestic Hot Water systems in buildings < 7 stories
- Heating and Domestic Hot Water systems located in basements and cellars in flood-prone buildings (as defined in Section 2) as a means to protect equipment from future flooding

REACH Design and construct the project to Enterprise Green Communities Plus, LEED Platinum, LEED v4.1 BD&C Zero, PHI or PHIUS standards. Note that Passive House projects must also comply with EGC or LEED.

Sub Rehabs align w/ IRA HER/ HEAR Rebates and higher tiers of GGRF funding

HPD's REDi Program

Resilient & Equitable Decarbonization Initiative (REDi)

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Overview: To reach New York City and New York State's ambitious climate targets and to reduce the barriers to decarbonizing affordable housing, HPD's REDi program provides funding to build capacity and scale up equitable decarbonization, beneficial electrification, and resiliency within the HPD development pipeline and as outlined in HPD's Design Guidelines. The REDi program is a long-term joint HPD-NYSERDA initiative that builds on HPD's highly successful Retrofit Electrification Pilot and other joint programs and is an innovative model for streamlining access to financial and technical assistance from New York State. REDi funding is secured directly through HPD, without requiring an application to NYSERDA.

During Climate Week, the GreenHOUSE Fund was announced, which is a LL97 Offset Program that will flow through REDi.

Additional IRA sources may be compatible with the REDi program

HPD: Solar Where Feasible

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NYSERDA to Receive Nearly $250 Million from EPA to Provide Solar Power, Lower Energy Costs and Advance Environmental Justice Across New York

EPA announces selectees for Greenhouse Gas Reduction Fund grant competition to deliver solar to low-income and disadvantaged households through the President's Investing in America agenda

The program is designed to serve the hardest-to-reach buildings that can't leverage other incentives and that may have underlying needs to enable solar

Panel Discussion

Q&A

Thank you!

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Appendix

Home Efficiency Rebates (HER)

Energy Savings		Income >80% AMI (Market rate)		Income <80% AMI (Affordable)	
Modeled	20-34%	$2,000 per unit Up to $200,000 per building	Up to 50% of total project cost	$4,000 per unit	Up to 80% of total project cost
	35%+	$4,000 per unit Up to $400,000 per building		$8,000 per unit	
Measured	15%+	Per kWh rate equal to $2,000 for a 20% reduction of energy use for the average multifamily dwelling unit in the state	Up to 50% of total project cost	Per kWh rate equal to $4,000 for a 20% reduction of energy use for the average multifamily dwelling unit in the state	Up to 80% of total project cost

- Multifamily buildings need at least 50% of residents to meet eligible income level to qualify

Home Electrification & Appliance Rebates (HEAR)

Measure Type	Rebate Amount	80%-150% AMI	<80% AMI
Heat pump for space heating	$8,000	Up to 50% of total project cost	Up to 100% of total project cost
Heat pump water heater	$1,750		
Electric cooking appliance	$840		
Heat pump clothes dryer	$840		
Electric load service upgrade	$4,000		
Electric wiring	$2,500		
Insulation, air sealing, ventilation	$1,600		
Maximum per DU	**$14,000**		

- Multifamily buildings need at least 50% of residents to meet eligible income level to qualify