



HUD's Green and Resilient Retrofit Program (GRRP) & other IRA Energy Tax Credits

*We are the nation's leading full-service environmental, engineering, and energy due diligence firm.
We innovate solutions to our nation's largest challenges with affordable housing.*

Robert Hazelton
CEO and Founder, LEED-AP
P: (804) 513-6354
E: r.hazelton@d3g.com



201 Wylderose Drive, Midlothian, Va. 23113



804.358.2020



www.d3g.com



IRA targeted \$370B for Energy-Efficiency, Clean Energy and Climate Resilience

- IRA was signed into law on 8/16/22 and will invest \$370B in Clean Energy
- \$277B in the Energy Tax Credits
 - 179D Commercial and Multifamily Tax Deduction
 - 45L Energy-efficiency New Construction Tax Credit
 - Section 48 Clean Energy
 - Section 30C Installation of EV Chargers
- Also new programs for existing buildings
 - \$4.3B Home Efficiency Rebates (savings 20%+)
 - \$4.5B Home Electrification Rebates

Mobilizing Clean Energy Investment Through IRA



- **HUD's Green Resilient Retrofit Program**
 - \$837.5 Million provided
 - Up to \$4 Billion in loan authority



GRRP Program Overview

- GRRP funds retrofits to improve the efficiency, safety, and resident health in HUD's multifamily assisted portfolio through
 - Utility benchmarking
 - Improved utility efficiency
 - GHG / carbon emission reduction
 - Climate resilience upgrades
 - Improved indoor air-quality
 - Building electrification
 - Zero-emission electricity generation and energy storage
 - Low-emission building materials or processes
- Awards funding to properties in HUD's Multifamily assisted portfolio (e.g., S8 PBRA, Section 202, Section 811)



GRRP awards are loans and grants to support expanded green and resilient scopes

Element Awards

- Provide additional funding / gap-financing for owner-driven specific energy-efficiency and climate investments
- Recapitalization efforts should already be materially advanced and there will be limited HUD involvement
- Maximum awards of up to \$750,000 per property with a per unit cap of \$40,000
- Rolling application process starting in June with waves every three-months thru March-24

\$140M

**Expect
200 Awards**



Leading Edge Awards

- Provide additional funding / gap-financing for more ambitious owner-driven energy-efficiency and climate investments
- Requires an ambitious net-zero green building certification
- Maximum awards of up to \$10M per property with a per unit cap of \$60,000
- Rolling application process starting in July with waves every three months

\$400M

**Expect
100 Awards**



Comprehensive Awards

- Comprehensive property assessments with components of Elements and Leading Edge Investments.
- May fund a stand-alone initiative or be the foundation for a larger recapitalization
- Maximum awards of up to \$20M per property with a per unit cap of \$80,000
- Rolling application process starting in August with multiple waves

**\$1.47 B in
funding**

**Estimate about
300 Awards**





GRRP Eligibility: HUD-assisted Multifamily properties

Properties assisted under one of the following forms of assistance

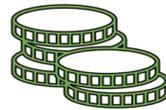
- HUD Properties assisted by the following types of Project-Based Rental Assistance (PBRA) Housing Assistance Payments (HAP) Contracts:
 - New Construction
 - State Housing Agencies Program
 - Substantial Rehabilitation
 - Section 202/8
 - Rural Housing Services Section 515/8 (including Section 8 Farmer Home Administration (FmHA))
 - Loan Management Set-Aside (LMSA)
 - Property Disposition Set-Aside (PDSA)
 - Rental Assistance Demonstration (RAD) PBRA Contracts executed on or before September 30, 2021
 - Pension Fund PBRA Contracts executed on or before September 30, 2021.
- Properties assisted under Section 202 of the Housing Act of 1959 (12 U.S.C. 1701q) and Section 202 of the Housing Act of 1959 (former 12 U.S.C. 1701q), as such section existed before the enactment of the Cranston-Gonzalez National Affordable Housing Act ("Section 202"), including:
 - Section 202/162 Project Assistance Contract (PAC)
 - Section 202 Capital Advance (commonly known as "Section 202 Project Rental Assistance Contract" (PRAC) properties)
 - Section 202 Direct Loans (commonly known as "Pre-1974 Section 202 Direct Loan" properties)
- Properties assisted under Section 811 of the Cranston-Gonzalez National Affordable Housing Act (42 U.S.C. 8013) ("Section 811"), including:
 - Section 811 Capital Advance (commonly known as "Section 811 Project Rental Assistance Contract" (PRAC) properties)
 - Section 811 Project Rental Assistance (PRA)
- Properties assisted under Section 236 of the National Housing Act (12 U.S.C. 1715z-1) which are receiving Section 236 Interest Reduction Payments (IRP)
- Faith-based organizations



Awards are either grants or surplus cash loans

GRRP Award Types

Will provide funding to Owners in the form of a grant or surplus cash loan



Grants:

- Affordability restriction – 25 years
- No repayment needed if terms are met



Loans:

- Affordability restriction – 15 years
- Payment – 50% of annual surplus cash paid to HUD (25% for *Elements* projects)
- Term – longer of first mortgage loan term or 15 years
- Interest – 1%

Subordination & 1st Mortgage Debt. The Surplus Cash Loan may be subordinated to a 1st Position senior mortgage lien, including HUD insured or HUD held mortgages, subject to HUD approval of such senior debt.



Application Are Due on a Rolling 3-month Timeline

Application Due Dates

Elements 2	Leading Edge 2	Comprehensive 2	Elements 3	Leading Edge 3	Comprehensive 3	Elements 4	Leading Edge 4	Comprehensive 4
9/28/23	10/31/23	11/30/23	1/4/24	1/31/24	2/28/24	3/28/24	4/30/24	5/30/24



Elements: Application

- GRRP Elements Application Form including the requested use of GRRP funds
- Narrative description of the project and proposed work
- Commitment letters for all financing sources
- Evidence that the recapitalization effort is materially advanced
- Evidences that the property qualifies for one of the ranking categories (e.g. Green Certification, BCC agreement)
- CNA or CNA eTool
- Replacement Reserve Analysis demonstrating compliance with Notice H 2023-05
- HEROS submission
- One cost estimate/bid covering each Elements investment

Application Process

Eligibility: HUD-assisted Multifamily properties (see Section 3 of the Elements NOFO for the complete list) with a materially advanced recapitalization effort underway

Selection: Eligible properties will be ranked based on priority categories in Section V of the Elements NOFO. Examples include achieving a green certification, committing to electrification, or participating in the Better Buildings/Climate Challenge.

Additional set-asides: *Each HUD region and non-metro areas*

Submission: Property applications should include the following:

- Elements application form, including property information, proposed sources and uses and operating proforma, and selected Elements investments
- Narrative description of the proposed work
- Documentation of the recapitalization transaction status, including commitment letters for other funding sources
- Verification of third-party reports and assessments
- Bids substantiating the requested Elements funding



Elements: Eligible Investments

What does GRRP pay for?

 Utility Efficiency	 Climate Resilience	 Carbon Reduction
Energy Star 7.0 windows Electrical upgrades WaterSense fixtures HVAC and water heater heat pumps Efficient ovens and clothes dryers Air-seal testing Insulation Heat or Energy Recovery Ventilators	Clean backup power Emergency shelter Emergency water access Storm shutters FORTIFIED certification Green or blue roof Floodproofing Permeable pavement Subsurface stormwater storage Wind- and impact-resistant windows Rainwater/greywater collection systems Fire resistant roof, windows, & fencing	Rooftop or carport solar Wind energy generation Geothermal energy generation Renewable energy storage Electric Vehicle charging stations Responsibly sourced raw building materials <p style="text-align: center; color: orange;">And more, including soft costs.</p>

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- Unless otherwise noted under Funding Limitations, all investments will be funded at the lesser of the actual costs or the award maximum. Actual costs may include cost of installation, but any General Contractor profit, overhead, or general conditions must be separately listed and meet all requirements of the Financial Thresholds included in Exhibit B of Housing Notice H 2023-05.

- Domains include
 - Energy Efficiency (Heat Pump Efficiency, Heat Pump Water Heaters, Improved Thermal Envelopes)
 - Renewable Energy
 - Electrification (EV chargers, gas to electric conversions)
 - Resiliency
 - Floodproofing
 - Heat/Cold Wave prep
 - Hurricane fortification
 - Wildfire resistance



Leading Edge Overview

Is the Leading Edge Cohort Right for You?

Leading Edge is right for you if...

- You have significant capacity to execute the rehabilitation of your property that will achieve an ambitious green building certification

To be selected...

- Your property must have demonstrated energy efficiency needs based on HUD's Multifamily Building Efficiency Screening Tool (MBEST)
- You must have preliminary or advanced recapitalization plans
- You must demonstrate the development capacity to build to the chosen green building standard
- The property must be made up of at least 50% assisted units



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Key Differences:

- Ability to secure a more substantial Green Building Certification
- Selection will be based on MBEST data collection to prioritize buildings with the greatest energy-savings opportunity



Comprehensive Overview

Comprehensive Cohort Overview

• Comprehensive Awards:

- Are applicable to **all eligible HUD-assisted multifamily property owners** regardless of construction experience or greening expertise
- Provide a **property-tailored, integrated design team approach** to scope of work development
- Fund **ambitious retrofits** touching utility efficiency, renewable energy generation, carbon emissions reductions, and climate resilience



Top 3 Comprehensive facts:

1. Provides funding for deep utility efficiency, renewable energy generation, carbon emissions reductions, and climate resilience retrofits
2. Accessible to owners of eligible projects regardless of construction experience or greening expertise
3. Scope of work will be developed in partnership with a HUD-provided contractor, who will support the owner in commissioning necessary assessments and creating a transaction plan

Four Application waves:

August 2023

November 2023

February 2024

May 2024

- *No prior green experience is required.*
- *Projects will leverage a HUD-provided contractor to assess the property and develop a transaction plan*
- *Designed for ambitious plans to address efficiency, renewables and climate resilience.*



45L “New Energy Efficient Home” Tax Credit

- Extended through 2032
- Mostly applies to New Construction
- All residential buildings (SF/MF) are eligible regardless of height
 - High-rise buildings (Four and above stories can also apply for the 179D tax deduction)
 - Mixed-use buildings: dwelling units and common areas must exceed 50% of the building square footage
- Bonus rates apply if prevailing wage is met
- Credit transfers are permitted to third parties
- Any 45L credit amounts do not reduce the “adjusted basis” of buildings supported by Low-Income Housing Tax Credits (LIHTCs)

Level	Tax Credit/Unit	Requirement
Base	\$500	ENERGY STAR Multifamily New Construction (ES-MFNC) Certification
Base + Zero Energy	\$1,000	ES-MFNC + DOE’s Zero Energy Ready Home (ZERH) Certification
Bonus	\$2,500	ES-MFNC + Prevailing Wage Requirements
Bonus + Zero Energy	\$5,000	ES-MFNC + ZERH +Prevailing Wage Requirements

Entry Point to Earn 45L is the ENERGY STAR Multifamily New Construction Certification



DOE Zero Energy Ready Home (ZERH)



Exhibit 1: DOE Zero Energy Ready Home Mandatory Requirements for All Labeled Homes

Area of Improvement	Mandatory Requirements
1. ENERGY STAR for Homes Baseline	<input type="checkbox"/> Certified under ENERGY STAR Qualified Homes Program Version 3, 3.1, or 3.2 (depending on state), or under ENERGY STAR Multifamily New Construction program Version 1.0, 1.1, or 1.2 (depending on state) ^{11, 12, 13}
2. Envelope	<input type="checkbox"/> Fenestration shall meet or exceed ENERGY STAR requirements. See End Note for specific U, SHGC values, and exceptions. ¹⁴ <input type="checkbox"/> Ceiling, wall, floor, and slab insulation shall meet or exceed 2015 IECC levels ^{15,16}
3. Duct System	<input type="checkbox"/> Duct distribution systems located within the home's thermal and air barrier boundary or an optimized location to achieve comparable performance. ¹⁷ <input type="checkbox"/> HVAC air handler is located within the home's thermal and air barrier boundary.
4. Water Efficiency	<input type="checkbox"/> Hot water delivery systems (distributed and central) shall meet efficient design requirements ¹⁸ or <input type="checkbox"/> Water heaters and fixtures shall meet efficiency criteria ¹⁹
5. Lighting & Appliances	<input type="checkbox"/> All installed refrigerators, dishwashers, and clothes washers are ENERGY STAR qualified. ²⁰ <input type="checkbox"/> 80% of lighting fixtures are LEDs or LED lamps (bulbs) in minimum 80% of sockets <input type="checkbox"/> All installed bathroom ventilation and ceiling fans are ENERGY STAR qualified
6. Indoor Air Quality	<input type="checkbox"/> Certified under EPA Indoor airPLUS Version 1 ¹³
7. Renewable Ready	<input type="checkbox"/> Provisions of the DOE Zero Energy Ready Home PV-Ready Checklist are completed ²¹



Top floor duct work can not be run in vented attics, with some exceptions

Requires water heater be located close to furthest plumbing fixture to minimize waste or requires high-efficiency water heaters (such as heat pump water heaters)





179D Tax Deduction for Energy Efficient Buildings

- 179D doesn't expire; it is a permanent part of tax code
- Eligible Building Types are any commercial and large (4 story or more) multifamily buildings covered by ASHRAE 90.1
- New construction must model with at least a 25% improvement over the ASHRAE 90.1 2007 baseline
- Baseline for Retrofits ("Alternative Deduction")
 - Building must be 5 years or older
 - "Qualified Retrofit plan" must be certified by PE / AIA
 - Post retrofit site EU reductions are measured against the pre-retrofit baseline to determine the sliding scale incentive
 - Retrofit deduction can only be claimed by taxpayer after the equipment is in service for one year and the project results are demonstrated in the site EUI reductions
- 5x Bonus rates apply if project meets "labor standards" that pay prevailing wages to laborers that install equipment and satisfy apprenticeship hiring requirements

Efficiency Gain Over Baseline	Deduction Amount (Base Rate)	Deduction Amount (Bonus Rate)
25%	\$0.50 / sqft	\$2.50 / sqft
30%	\$0.60 / sqft	\$3.00 / sqft
35%	\$0.70 / sqft	\$3.50 / sqft
40%	\$0.80 / sqft	\$4.00 / sqft
50%	\$1.00 / sqft	\$5.00 / sqft



Funding will be available for existing buildings as well

Home Energy Provisions

	Total Appropriations & Availability	Allocation of Funds	Program Description
 Home Efficiency Rebates SEC. 50121	\$4,300,000,000 Until September 30, 2031	State Energy Offices (SEOs)	Develop and implement rebate program for single-family and multi-family households to accomplish whole-home retrofits that save at least 20% of household energy.
 Home Electrification Rebates SEC. 50122	\$4,500,000,000 Until September 30, 2031	State Energy Offices (SEOs) & Indian Tribes	Develop and implement rebate program for low- and moderate-income single-family and multi-family households to purchase high-efficiency electric equipment.
 Contractor Training SEC. 50123	\$200,000,000 Until September 30, 2031	State Energy Offices (SEOs)	Develop and implement residential energy efficiency and electrification contractor training programs.

Need to wait until State Energy Offices develop program implementation guides



Section 48 Investment Tax Credit

- **Types Of Projects**
 - “Energy Property” covered by current law: solar to generate electricity for heating or cooling; fiber-optic solar to illuminate the inside of a structure; “small wind” and microturbines; geothermal used to produce electricity; geothermal heat pumps to heat or cool a structure; fuel cells; waste recovery; and combined heat and power.
 - IRA adds: energy storage (including thermal energy storage); dynamic glass; microgrid controllers; biogas property; and linear generators.
- **Credit Amount**
 - 6% of the cost of the Energy Property (“Base Rate”).
 - Can scale up to 30% of cost (“Bonus Rate”) if project pays prevailing wages and meets apprenticeship requirements for the duration of the project’s “construction.”
 - Credit amount can be increased by 2%/10% if project meets “domestic content requirements” (i.e., materials are made in the USA).
 - Credit amount can be increased by 2%/10% if project is located in an “energy community” (i.e., Brownfield site, census tract—or immediately adjacent tract—where a coal mine closed after Dec. 31, 1999, or coal-fired electric plant was retired after Dec. 31, 2009).
- **Generally** Section 48 project construction must commence in 2023 or 2024.



Section 30C Tax Credit for Electric Vehicle Charging Stations

- Extended through 2032.
- Same Base Rate (6%) and Bonus Rate (30%) structure as the Section 48 Credit
- Credit is capped at \$100K for each charging station or refueling pump installed at a property.
- Third party “transferability” applies.
- Geographic limitations—Charging station must be located in either:
 - A low-income or high-poverty Census tract under New Markets Tax Credit (NMTC) criteria;
or
 - Not an "urban area" as defined by the U.S. Census Bureau.