Build for the Future

Opportunities for Investment

Presentation for Hawaii TOD Group

Agenda

1. Background *The Importance of NOW*
2. Opportunities for HUD
3. Program Overviews + *Case Studies*
    a. Tax Credits
    b. Rebates
    c. Grants and Loans
4. Technical Assistance & Resources
    a. Funding Navigator
    b. Handouts and One-Pagers
    c. Starting the Conversation
5. Questions/Discussion

1. Background – The Importance of NOW

Importance of NOW

2023 25 confirmed weather/climate disaster events with losses exceeding $1 billion each

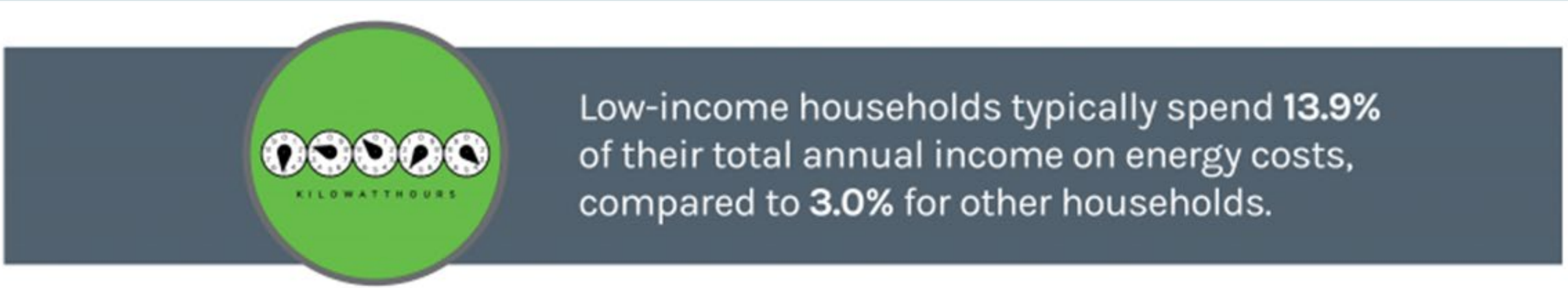
2022 > 3 million adults in the US were forced to evacuate their homes because of a natural disaster (16% or 480K) never returned to their home

Affordable housing is more than just the cost of rent – it's a home that withstands the next storm or storms and one that weathers our uncertain climate future

Why Focus on Buildings Now

- The buildings and systems we install today will be in place for decades.

- If we are to meet our goals and obligations, we need to focus on low/no emissions investments in all new construction and renovations



Why Target Building/Development Emissions

Contributions

Buildings account for 40% of greenhouse gas (GHG) emissions nationwide and in some cities, buildings account for 75% of emissions

Reductions

There are many ways to reduce emissions: Energy efficiency, electrification, clean energy, building reuse, densification, EV charging, waste diversion programs

Obligations

Reduce GHG 50% by 2030; and achieve net zero emissions economy by 2050

HUD's Role

- Mission to create strong, sustainable, inclusive communities and quality affordable homes for all
- 4.5 million public and assisted housing units
- ~ $5.6 billion annually on energy costs
- ~ 13.6 million metric tons of carbon emissions annually

Photo credit: biofriendlyplanet.com

NEW Funding Available

Inflation Reduction Act (IRA) **~$369 BILLION**

- Historic investment in energy efficiency and renewable energy through tax incentives, grant and rebate programs

Bipartisan Infrastructure Law (BIL) **~$1.2 TRILLION**

- Spent over five years, divided between improving the transportation network and society's core infrastructure

2. Opportunities for HUD Grantees

IRA Opportunities

Many investments targeted to disadvantaged communities

Clean/Renewable Energy

- New Direct Pay for Clean Energy Tax Credits
- Solar for All ($7B)
- National Clean Investment Fund ($14B)
- Clean Communities Accelerator ($6B)
- Environmental and Climate Justice Block Grants ($2.8B)

Energy Efficiency

- Energy Efficiency Tax credits
- Home Energy Rebates ($9B)
- HUD Green and Resilient Retrofit Program ($1B)
- National Clean Investment Fund ($14B)
- Clean Communities Accelerator ($6B)
- Environmental and Climate Justice Block Grants ($2.8B)

Justice 40

40% of overall benefits of certain Federal investments flow to disadvantaged communities that are marginalized, underserved, and overburdened by pollution

- Embedded in IRA and BIL programs
- Includes BONUS funds/points for investments in affordable housing and in projects that serve low-income populations
- Provides l**arge set asides** and longer application periods for Tribes and includes programs designed for **Communities at High Risk** due to Climate Change
- Some programs specify that 100% of benefits be directed to low-income

3. Program Overviews

Clean Energy Investment: Key Programs

✓The Inflation Reduction Act (IRA) represents the largest investment in US history into clean energy solutions, at **$369B**

Home Energy Rebates
$9B
U.S. DOE

Energy Code Assistance
$1B
U.S. DOE

Clean Energy Business Loans
$14B
U.S. DOE

Energy Grid & Industry
$9B
U.S. DOE

Affordable Housing
$1B
U.S. HUD

Clean Transportation
$7B
U.S. EPA

Energy Tax Credits
~$277B*
U.S. Treasury

Greenhouse Gas Reduction Fund
$27B
U.S. EPA

Enviro. Justice Block Grants
$3B
U.S. EPA

Rural Energy Assistance
$12B
USDA

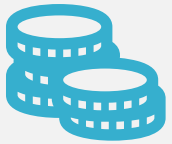
Coastal Climate Resilience
$2.6B
NOAA

+ Other Programs
~$7B
Various Agencies

This slide is courtesy of the Department of Energy Office of State and Community Energy Programs (SCEP)

Types

Tax Credits



Rebates

Grants and Loans

a. Tax Credits

Case Study

Location: 777 Main Street, Hartford, CT

Program: **285 apartments (including 59 affordable units)** 6 retail shops

Total Cost: $80 Million

Gross Area: 400,000 square feet

Funding: FHA-insured 221(d)(4)conventional mortgage, Connecticut Department of Housing, Capital Region Development Authority, Federal and State Historic Tax Credits, Low Emission Renewable Energy Credits, **Federal Clean Energy Investment Tax Credits**, CT Energy Efficiency Grants.

Features: Historic rehabilitation and adaptive reuse of Hartford's iconic 26-story office tower into sustainable, mixed-use, transit-oriented development.

Sustainability: **LEED Platinum certification and 45% more energy efficient than code requirements**. Renewable 400kw fuel cell and 115kw solar array provides electric heat, and hot water to building; electric car charging stations; smart metering with energy and water tracking for residents; recycled and local construction materials and finishes; high-performance envelope with industry-leading thermal insulation technology; energy recovery system; high-efficiency water-source heat pumps.

Tax Credits: Clean Energy

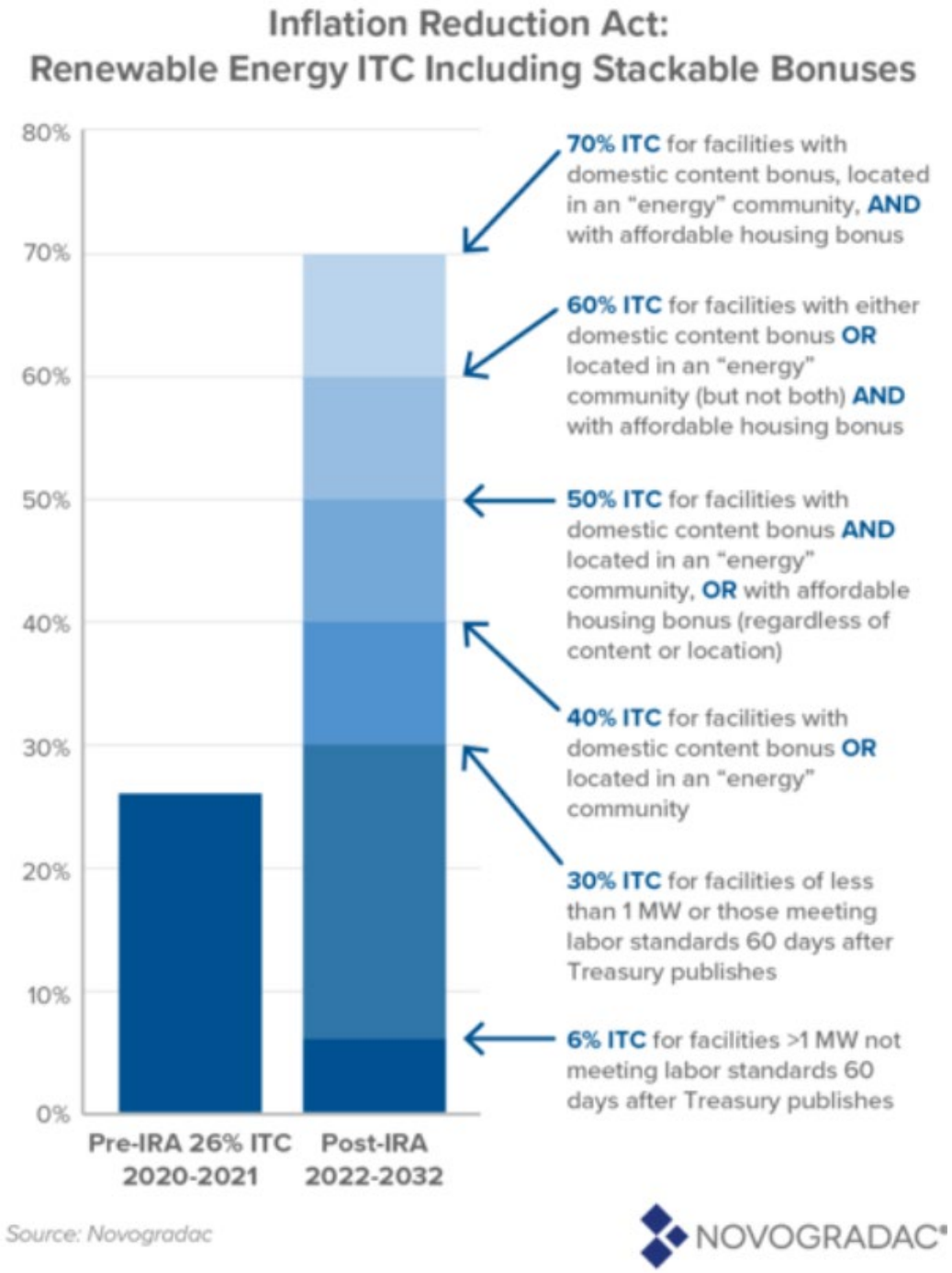
Direct (Elective) Pay (§ 6417) ***NEW:*** Expands 12 clean energy-related tax credits to tax-exempt entities including government entities, tribes, and housing authorities.

Transferability (§ 6418) ***NEW*****:** Allows entities that qualify for a tax credit to transfer all or a portion of the credit to a third-party buyer in exchange for cash.

Clean Energy Investment Tax Credit (§ 48E): A base credit of 30% of project cost with adders that can repay up to 70% of project cost for renewable energy project. (e.g., solar, small-scale wind, geothermal, etc.) (Summary of Inflation Reduction Act provisions related to renewable energy | US EPA)

Low-Income Bonus Communities Tax Credit (§ 48e): A 20% adder to 48E for projects done on certain federally subsidized housing programs or that housing that offers at least 50 percent of the financial benefits of the electricity produced to low-income households.

Tax Credits: Potential Project Savings from Investment Tax Credit



Tax Credits: Bonus Credits in Energy Communities

The Energy Community Tax Credit Bonus applies a bonus of up to 10% (for production tax credits) or 10 percentage points (for investment tax credits) for projects, facilities, and technologies located in energy communities. Increased credit amounts or rates are available to taxpayers that satisfy certain energy community requirements under Section 45, 48, 45Y, or 48E of the Internal Revenue Code.

IRA Energy Community Tax Credit Bonus (doe.gov)

HAWAII-O'AHU

Coal Closure Energy Communities

Tract Status

- Census tract directly adjoining a census tract with a coal closure
- Census tract with a coal closure

MSA/Non-MSAs that are Energy Communities

Status

- MSAs/non-MSAs that meet both the Fossil Fuel Employment (FEE) threshold and the unemployment rate requirement

Tax Credits & Building Standards

- ❑ **45L tax credit (up to $5,000 per unit)** awards funds if you meet Energy Star (lower) or Zero Energy Ready (higher) standard (new energy efficient home credit)
- ❑ **179D tax deduction** allows building owners to claim up to a $5.00 per square feet for energy-efficient buildings that meet key energy reduction requirements and ASHRAE standards.

What is a DOE Zero Energy Ready Home?

ZERO ENERGY READY HOME
U.S. DEPARTMENT OF ENERGY

A DOE Zero Energy Ready Home is a high-performance home that is so energy efficient that a renewable energy system could offset most or all the home's annual energy use. Each DOE Zero Energy Ready Home meets rigorous efficiency and performance criteria found in the DOE Zero Energy Ready Home National Program Requirements. Most types of new homes in the U.S. are eligible to participate in the DOE Zero Energy Ready Home program, and the homes are verified by a qualified third-party as part of the certification process.

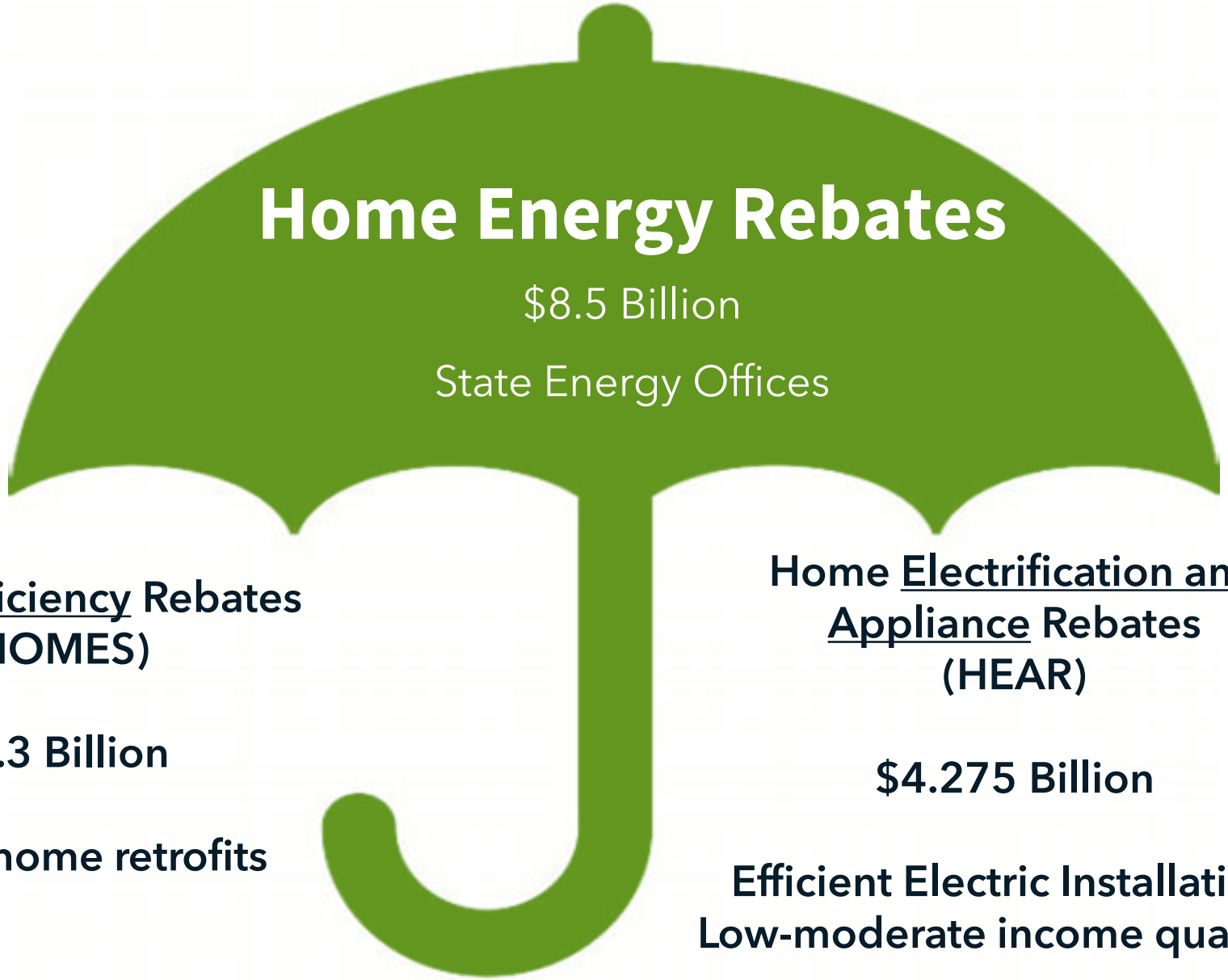
b. Rebates

Sample Braiding
(Energy Efficiency/ Electrification)

- ❑ EPA's Greenhouse Gas Reduction Fund funds two green financing programs (*National Clean Investment Fund* and *Clean Communities Accelerator)*
- ❑Rebates from State Energy Offices. State Energy Offices | NASEO

ENERGY EFFICIENCY AND ELECTRIFICATION 40 units ($640,000) (Efficiency=$80,000; Electrification = $560,000)		
Funding Source	**Dollar Amount**	**Comments**
HOME Efficiency Rebates (DOE program at State Energy office)	**$64,000**	Lesser of 80% of project cost or $8,000 per unit. Lesser is (.80 x 40)
Electrification Rebates (DOE program at State Energy office)	**$560,000**	Lesser of 100% of project cost or $14,000 per unit. Lesser is $14,000 x 40 units
Financing from **Clean Communities Investment Accelerator** Fund	**$-640,000**	Repaid $624,000 with rebates
Total project cost	**$640,000**	
Total Debt	**$16,000 (2.5% of project cost)**	

Rebates: Department of Energy



Home Efficiency Rebates (HOMES)

$4.3 Billion

Whole-home retrofits

Home Electrification and Appliance Rebates (HEAR)

$4.275 Billion

Efficient Electric Installations
Low-moderate income qualified

Rebates: Equipment & Housing Types

Rebates may apply to the installation of –

- ✓ Electric heat pump clothes dryer
- ✓ Electric heat pump for space heating and cooling
- ✓ Electric heat pump water heaters
- ✓ Electric panel & wiring upgrades
- ✓ Electric stove, cooktop, range, or oven
- ✓ Air sealing
- ✓ Duct sealing
- ✓ Insulation
- ✓ Materials to improve ventilation
- ✓ & Potentially other energy-saving technologies

Where applicable, technologies must be certified under EPA's ENERGY STAR program.

In the following types of buildings –

- ✓ Single-family homes
- ✓ Multi-family residential buildings
- ✓ Newly constructed homes
- ✓ Rental properties

More funds are available for households below 150% Area Median Income (AMI) and below 80% AMI.

Rebates: Funding Opportunities

Type of Home Energy Project	Households Below 80% Area Median Income (AMI) [1]	Households Between 80% and 150% AMI	Households Above 150% AMI
Home Efficiency Project with at least 20% predicted energy savings[2]	80% of project costs up to $4,000	50% of project costs up to $2,000 (maximum of $200k for a multifamily building)	
Home Efficiency Project with at least 35% predicted energy savings[2]	80% of project costs up to $8,000	50% of project costs up to $4,000 (maximum of $400k for a multifamily building)	
Home Electrification Project Qualified Technologies (only households with an income below 150% AMI are eligible)	100% of project costs up to $14,000	50% of project costs up to $14,000 (households with incomes above 150% AMI are not eligible)	To Access, contact your state energy office: State Energy Offices | NASEO
	ENERGY STAR electric heat pump water heater	up to $1,750	
	ENERGY STAR electric heat pump for space heating & cooling	up to $8,000	
	ENERGY STAR electric heat pump clothes dryer	up to $840	
	ENERGY STAR electric stove, cooktop, range, or oven	up to $840	
	Electric load service center	up to $4,000	
	Electric wiring	up to $2,500	
	Insulation, air sealing, and ventilation	up to $1,600	

REBATES:

Energy and Water Benchmarking: Documenting Efficiency Improvements

- ❑ Rebates and other programs require that you document energy savings to receive funding.
- ❑ To document energy savings, you must document energy usage before and after the efficiency measure was enacted.
- ❑ Using a benchmarking tool before and after the efficiency measure is enacted documents energy savings.
- ❑ EPA Portfolio Manager is an energy benchmarking tool federal programs request. EPA provides support to learn how to use EPA Portfolio Manager.

Benchmark Your Building Using ENERGY STAR® Portfolio Manager®

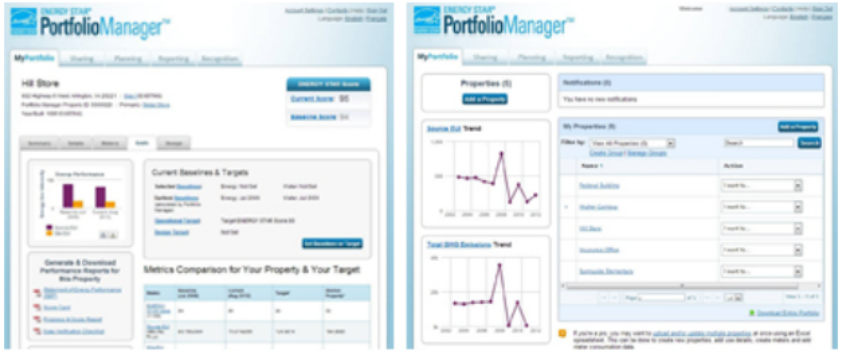
What is Benchmarking?

The first step to saving energy at your building is to benchmark — that is, to measure and compare your building's energy to similar buildings, past consumption, or a reference performance level.

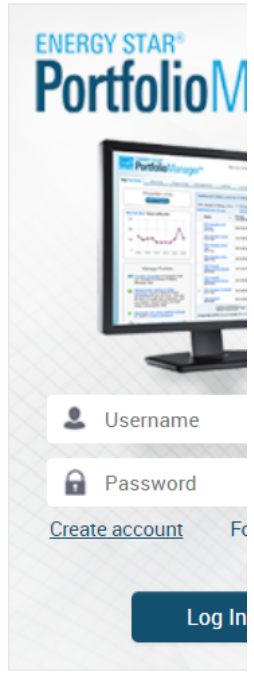
Benchmarking turns the information on your utility bill into knowledge you can act on.

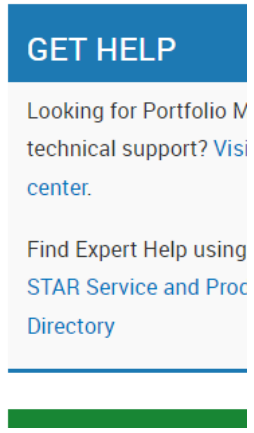
ENERGY STAR Portfolio Manager—the Industry Standard for Benchmarking Commercial Buildings

Portfolio Manager is an interactive resource management tool that enables you to benchmark the energy use of any type of building, all in a secure online environment. Nearly 25% of U.S. commercial building space is already actively benchmarking in Portfolio Manager, making it the industry-leading benchmarking tool. It also serves as the national benchmarking tool in Canada.



Use Portfolio Manager metrics to compare your building's energy use to a yearly baseline, national medians, or similar buildings in your portfolio.





[Benchmark Your Building Using ENERGY STAR® Portfolio Manager® | ENERGY STAR]

c. Grants and Loans

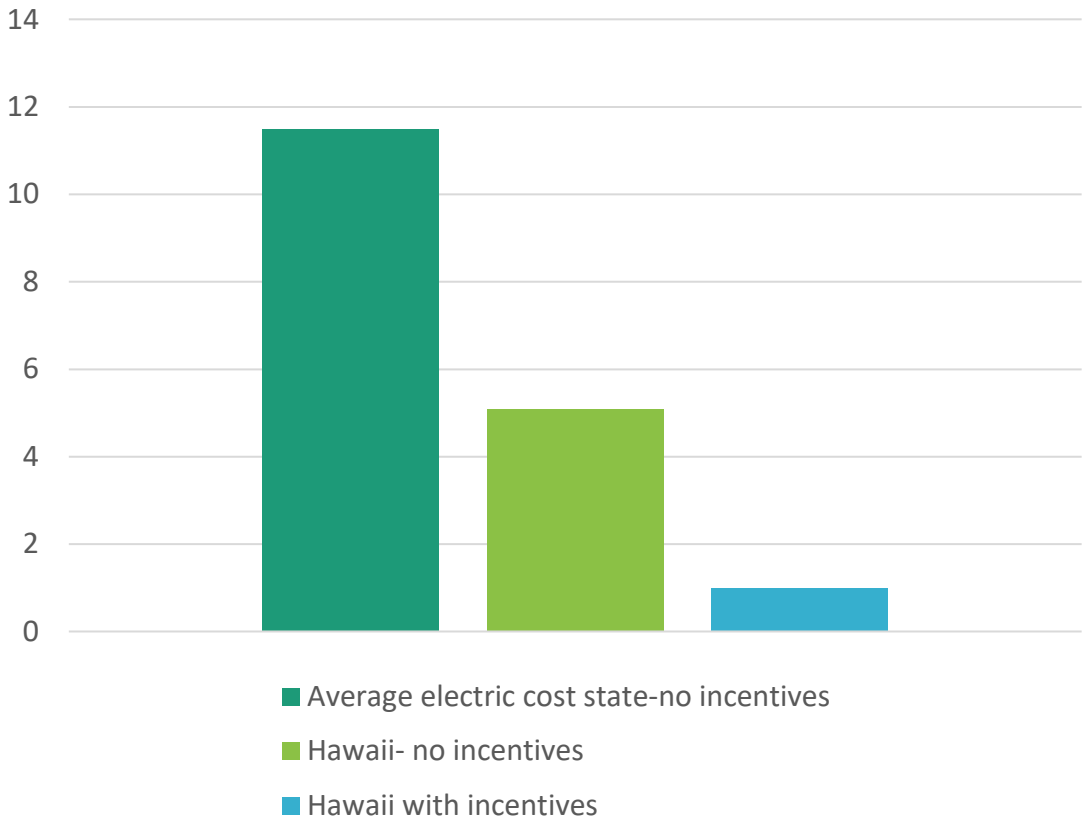
Sample Braiding
(Solar Project)

- By using several different funding sources together, project costs can decrease
- Use existing HUD programs and layer with IRA-BIL programs

SOLAR PROJECT ($400,000; 160 kW installed) to benefit 40 units		
Funding Source	**Dollar Amount**	**Comments**
Project cost	**$400,000**	**BASIS**
Solar For All Grant	$30,000	Restricted grants ($40K) + ITC ($240K) less than basis ($400K)
State Solar Incentive	$10,000	
HUD Grant (CDBG, Capital Fund, Choice, Green and Resilient Retrofit)	$40,000	Unrestricted (assumed)
Financing (*potentially*) from Clean Communities Accelerator Program	**-$320,000**	Bridge capital
Direct Pay - Investment Tax Credit (ITC) 30% Base credit + up to 70% project cost with adders	$120,000 (30% of $400K)	Repays private financing ($320K); based on $400K Project Basis
Low-income Bonus Tax Credit (20% adder to ITC) (application required)	$80,000 (20% of $400K)	
Domestic Content or Energy Community Bonus (10% adder to ITC)	$40,000 (10% of $400K)	
Total Debt (after Direct Pay)	**-$80,000**	20% of Project Cost

https://www.dsireusa.org/ for state incentives

Solar Project
(40 units)



https://www.dsireusa.org/ for state incentives

Solar Project

Electric Generation from $400,000 investment = 133 kW

$10,000 per unit before incentives; $3,300 per unit after incentives

133 kW system equals 192,850 kWh annual output (133 x 1450)

PAY BACK Period Average electric cost state (no incentives) = 11.5 years (133 x 1450 x .18 = $34,713 savings per year. Payback period with no incentives is 11.5 years to repay $400,000 with zero interest loan)

PAY BACK Period High electric cost state of HI (no incentives) = 5.1 years (133 x 1450 x .40 = $77,140 savings per year. Payback period with no incentives is 5.1 years to repay $400,000 with zero interest loan)

PAY Back Period with Incentives shown in example in HI is 1.1 year (133 x 1450 x .40 = $77,140 savings per year. Payback period with incentives is 1.1 year to repay $80,000 with zero interest loan)

$400,000 system-Assume 133 Kw System; $3.00 a Watt installed; 1450 kWh per KW US average;
.40 per kWh in HI

Mainland use $2.5 W installed

Hawaii use $3.00 W installed

Grants and Loans: EPA

Greenhouse Gas Reduction Fund

https://www.epa.gov/ggrf

National Clean Investment Fund	**$14 Billion** Fund 2-3 national nonprofits to partner with private capital providers to deliver financing at scale to businesses, communities, community lenders, and others - catalyzing tens of thousands of clean technology projects.
Clean Communities Investment Accelerator	**$6 Billion** Fund 2-7 hubs to rapidly build clean financing capacity of specific networks of public, quasi-public and non-profit community lenders—such as CDFIs, credit unions, green banks, HFAs, minority depository institutions, and others—to provide access to financing clean technology projects in low-income and disadvantaged communities.
Solar For All	**$7 Billion** 60 grants to States, Tribal governments, municipalities, and nonprofits for investments in residential and community solar in low-income and disadvantaged communities.

Grants and Loans: HUD Multifamily

Green and Resilient Retrofit Program (GRRP)

www.hud.gov/GRRP

- **$1 billion** in grant and loan authority provided through the Inflation Reduction Act (IRA)
- GRRP is designed to fund retrofits to make properties more energy efficient, climate resilient, and healthy for residents through
  - Carbon emission reduction
  - Improved Energy and/or water efficiency
  - Energy and water benchmarking
  - Improved indoor air quality
  - Low-emission building materials or processes
  - Climate resilience upgrades
  - Building electrification
  - Zero-emission electricity generation
  - Energy storage

4. Technical Assistance & Resources

Build for the Future: HUD Exchange

Build for the Future

Build for the Future empowers local communities to undertake initiatives focused on climate resiliency, energy efficiency, renewable energy, and environmental justice. It achieves this by providing critical access to funding opportunities, offering guidance materials, and fostering peer-to-peer knowledge sharing.

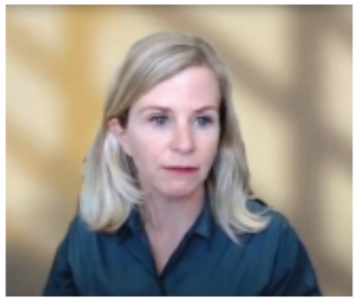
Home > Programs > Build for the Future

NEW

Funding Navigator

This tool is a user-friendly searchable database for IRA, BIL, and other resources. Check out funding opportunities across federal agencies to support climate resiliency, energy efficiency, renewable energy integration, healthy housing, workforce development and environmental justice in HUD supported communities, programs and properties.

Explore the Funding Navigator



Welcome to the Resources

Watch HUD's Climate Advisor explain how Build for the Future Resources and the Crosscutting Funding Navigator can help stakeholders use Inflation Reduction Act (IRA) and Bi-Partisan Infrastructure Law (BIL) funds to reduce energy use and strengthen resiliency in communities.

View Video

Highlighted Project

Foundation Communities built the LEED™ Gold certified Waterloo Terrace, a 132-unit permanent supportive housing property for seniors in Austin, Texas. The site includes a 180 kW solar array that avoids 220 metric tons of CO_2 emissions annually and reduces operating costs, allowing them to reinvest back into their residents. Learn more.

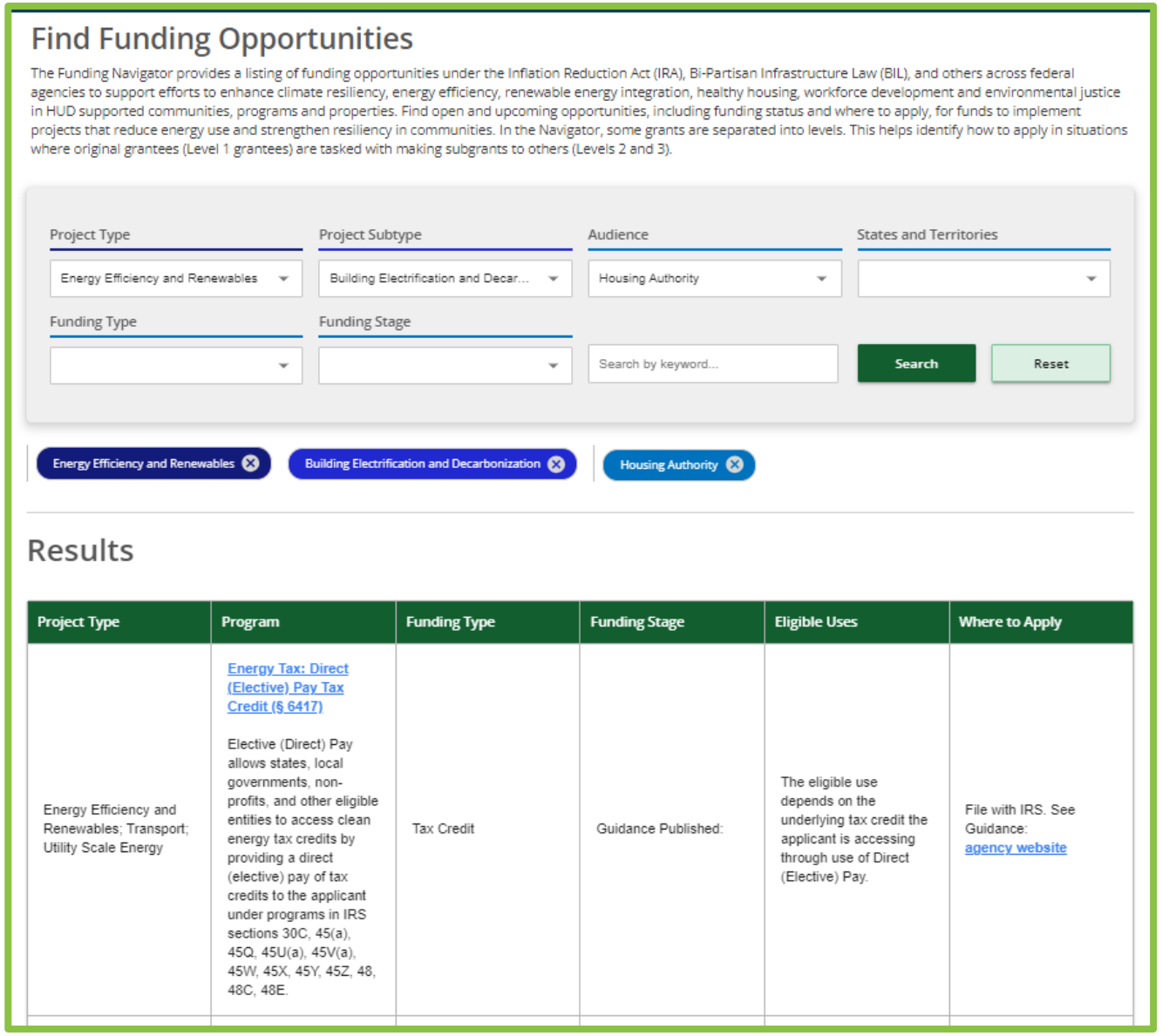
Guides and Tools

- HUD Community Resilience Toolkit
- Multifamily Utility Benchmarking Toolkit
- Guide to Energy Efficiency and Renewables
- Renewable Energy Toolkit
- Solar Readiness Assessment

https://www.hudexchange.info/programs/build-for-the-future/

a. Build for the Future Funding Navigator

Funding Navigator Demonstration



Find Funding Opportunities

The Funding Navigator provides a listing of funding opportunities under the Inflation Reduction Act (IRA), Bi-Partisan Infrastructure Law (BIL), and others across federal agencies to support efforts to enhance climate resiliency, energy efficiency, renewable energy integration, healthy housing, workforce development and environmental justice in HUD supported communities, programs and properties. Find open and upcoming opportunities, including funding status and where to apply, for funds to implement projects that reduce energy use and strengthen resiliency in communities. In the Navigator, some grants are separated into levels. This helps identify how to apply in situations where original grantees (Level 1 grantees) are tasked with making subgrants to others (Levels 2 and 3).

Project Type: Energy Efficiency and Renewables
Project Subtype: Building Electrification and Decar...
Audience: Housing Authority
States and Territories:
Funding Type:
Funding Stage:
Search by keyword...
Search
Reset

Energy Efficiency and Renewables
Building Electrification and Decarbonization
Housing Authority

Results

Project Type	Program	Funding Type	Funding Stage	Eligible Uses	Where to Apply
Energy Efficiency and Renewables; Transport; Utility Scale Energy	Energy Tax: Direct (Elective) Pay Tax Credit (§ 6417) Elective (Direct) Pay allows states, local governments, non-profits, and other eligible entities to access clean energy tax credits by providing a direct (elective) pay of tax credits to the applicant under programs in IRS sections 30C, 45(a), 45Q, 45U(a), 45V(a), 45W, 45X, 45Y, 45Z, 48, 48C, 48E.	Tax Credit	Guidance Published:	The eligible use depends on the underlying tax credit the applicant is accessing through use of Direct (Elective) Pay.	File with IRS. See Guidance: agency website

b. Handouts and One-Pagers

TA Resources: HUD Exchange *Build for the Future*:

Invest in Sustainable Solutions

Funding Is Available

The Inflation Reduction Act, Bipartisan Infrastructure Law, and other recent legislation provide billions of dollars for communities to advance sustainability through critical investments in climate resilience, clean energy generation, and carbon reduction. **Communities assisted by the U.S. Department of Housing and Urban Development (HUD) have priority for most of these programs and funding.**

Positive Impact
- Reduce car
- Improve res
- Trim operati
- Decrease c

Explore the Build for the Future Funding Navigator to see all the ways your community can access sustainability solutions.

Learn more about carbon reduction and how to build resilience in your community. Visit www.hud.gov/climate.

Build for the Future

Climate Resilience

Investing in climate resilience upgrades is critical to ensuring communities can adapt and provide protection against climate impacts and extreme weather events. Climate resilience upgrades reduce the operational risk to buildings, reduce long-term costs, and can minimize disruption of housing and services to residents. Upgrades are available to address a property's unique climate risks, but resilience is also a core benefit of energy-efficiency upgrades, electrification, and renewable energy investments.

The Inflation Reduction Act, Bipartisan Infrastructure Law, and other recent legislation provide billions of dollars for homeowners, property owners and managers, and communities to invest in climate resilience upgrades. Many funding opportunities are already available, and communities assisted by the U.S. Department of Housing and Urban Development (HUD) have priority for most of these programs.

Green and Resilient Retrofit Program (HuD)

Loans and grants to support HUD-assisted multifamily housing to improve energy efficiency, reduce carbon emissions, incorporate renewables, and increase climate resilience. Funding is available through spring 2024:

- Elements: Funding of up to $40,000 per unit or $750,000 per property to install upgrades like battery storage, fire-resistant roofs, elevated building systems, and flood protection
- Leading Edge: Up to $60,000 per unit or $10 million per property to achieve advanced green building certification, like LEED Gold or Phius ZERO, that incorporates climate resilience
- Comprehensive: Up to $80,000 per unit or $20 million per property for high-needs properties to make holistic climate adaptation investments

Community Development Block Grant (CDBG) (HuD)

Annual grants from HUD to eligible local and state governments. More than $3 billion allocated in 2023. Eligible activities can include improving housing, business, public facility, and infrastructure resilience.

CDBG Disaster Recovery (HuD)

HUD notifies states, cities, and counties if they're eligible. Grants can be used in the most affected and distressed areas for disaster relief, infrastructure restoration, housing, economic revitalization, and long-term recovery.

Section 108 Loan Guarantee Program (HuD)

Loan guarantees provide CDBG recipients access to low-cost, flexible financing for economic development, housing, public facilities installation, and infrastructure projects. Also used for long-term recovery or to prevent future damage from natural disasters.

= Single-family homes = Multifamily homes

Building Resilient Infrastructure and Communities (BRIC) Program (FEMA)

Competitive grants of up to $2 million per applicant. Awarded annually to states, local governments, Tribal governments, and territorial governments. Priorities include projects that:

- Mitigate risk to public infrastructure
- Mitigate risk to disadvantaged communities
- Incorporate nature-based solutions
- Incorporate solutions designed to reduce carbon emissions
- Enhance climate resilience and adaptation

Flood Mitigation Assistance Grants (FEMA)

Competitive grants awarded to states, local communities, Tribes, and territories to reduce the risk of repetitive flood damage to buildings insured under the National Flood Insurance Program. Funds are for community or individual flood mitigation projects, technical assistance, and management costs.

Environmental and Climate Justice Community Change Grants (EPA)

Partnerships of at least two community-based nonprofit organizations (CBOs), or partnerships between CBOs and a Federally Recognized Tribe, local government, or institution of higher education are eligible for funds to support environmental and climate justice activities to benefit disadvantaged communities. Funding is available for projects that mitigate the climate and health risks of urban heat islands, extreme heat, wood heater emissions, and wildfire events; promote climate resiliency and adaptation; and reduce indoor air toxics and indoor air pollution. Funding application available fall 2023.

Section 47—Rehabilitation Tax Credit (Treasury)

Tax credit for homeowners or renters of up to 20% of the total cost of the renovation, restoration, or reconstruction of a building. Eligible improvements include windows and doors, walls, partitions, floors, ceilings, central air conditioning and heating systems, fire escapes, waterproof coating, floodgates, seawalls, and the cost of lifting or elevating structures. Tax credits are available now.

Check the Build for the Future Funding Navigator for more funding opportunities and the Build for the Future webpage for resources to improve the physical and financial performance of your home or multifamily property.

HUD Resources: Topical Handouts

- Energy Efficiency
- Solar
- Building Standards
- Benchmarking
- Resilience
- Workforce Development

Energy Efficiency

Promoting Sustainability and Decarbonization

There are new resources for energy efficiency improvement in buildings. This guide provides background information on opportunities and resources to help HUD program participants invest in their properties by:

- Describing the importance of energy efficiency and connecting energy efficiency to other sustainability and decarbonization concepts;
- Providing resources and background on how to implement energy efficiency measures; and
- Identifying funding that can be used to support energy efficiency projects.

Why is energy efficiency important?

Energy efficiency projects can reduce a building's overall energy usage in a variety of ways. Two major benefits include decreased utility costs and reduced greenhouse gas emissions. New construction and existing buildings can gain long-term financial and environmental benefits from implementing these common energy efficiency measures:

- **Sealing the building envelope** to reduce a building's heating or cooling needs;
- **Upgrading electrical panels and wiring** to support renewable energy or building decarbonization;
- **Installing more energy efficient appliances** to reduce energy load; and
- **Investing in efficient heating and cooling systems** that use less electricity.

What energy efficiency measures are chosen is generally a part of an **energy management plan,** created from **benchmarking** data and developed from goals set by the **energy standard** selected.

Energy efficiency is often the first step to other sustainability and decarbonization work. Modernizing a building's electrical system may be required before **renewable energy** can be installed. Decreasing energy usage helps reduce the strain on the electrical grid, keeping it up and running during extreme weather events which contributes to **climate resilience**.

Energy Efficiency in Action: The Warwick, Newport News, Virginia

Community Housing Partners renovated a 4-story historic brick hotel into a housing development for people who were formerly homeless containing 88 single-occupancy rooms. Their projects focused on improving energy efficiency and indoor air quality; they reduced annual energy usage by 50% and costs by $40,000. The improvements included a variable refrigerant flow heating & cooling system; energy recovering ventilators; high efficiency water heaters; and ENERGY STAR windows, lights, and appliances. Additionally, the brick restoration prevents air leaks, which improves the building's envelope.

Energy efficiency resources available to HUD communities

Background on Energy Efficiency Improvements:

- Improving a building envelope through insulation and sealing gaps reduces energy usage by minimizing the loss of heat in the winter and the loss of cool air in the summer. This process is also called weatherization because it helps protect a building and its occupants from the impacts of weather. Examples of improvements to weatherize your home include installing **energy efficient windows, door sealing, duct sealing, and insulation**.
- **Upgrading electrical systems** increases the capacity for, and overall efficiency of, electricity usage in a building. This enables a building owner to implement more advanced electrical projects such as efficient electrical appliances or renewable energy systems.
- Heating and cooling systems can be upgraded to more energy efficient models, such as **heat pumps, biomass stoves, and water heaters**. These appliances reduce energy consumption and provide an even larger benefit when combined with weatherization.

Funding Opportunities:

- Home Energy Rebates Program under the Inflation Reduction Act (IRA) is funded by the Department of Energy (DOE), implemented through state and Tribes. The program has two components.
  - Home Electrification and Appliance Rebates provide funds for purchasing efficient electric home appliances, such as electrical stoves and electric heat pumps, and for electric service upgrades that facilitate building electrification.
  - Home Energy Efficiency Rebates provide funds for whole-house energy saving retrofits, such as building envelop sealing. Applicants will only receive the rebate if a certain level of energy savings is demonstrated, making this a program that requires benchmarking.
- Weatherization Assistance Program (WAP) funded by DOE provides grants to states and Tribes to work with local governments and residents to implement weatherization measures. WAP promotes energy efficiency by funding insulation and building envelop sealing projects.
- Energy Savings Performance Contracts allow a building owner to pay for the cost of energy efficiency projects through the resulting energy savings—**eliminating up-front costs.** A third party **Energy Services Company** is a project partner that helps plan, finance, install, and monitor projects.
- Energy Efficiency Home Improvement Tax Credits (25C) can help building owners offset the cost of energy efficiency measures. Improvements in the three categories above are all eligible.

For additional information the DOE Energy Savings Hub describes how to fund specific energy efficiency measures, and the DSIRE tool provides information about state policies and incentives.

For more funding opportunities, visit the *Build for the Future* Funding Navigator on the HUD Exchange and select the "Energy Efficiency and Renewables" project type in the first drop-down box and the "Energy Efficient Buildings" project subtype in the second drop-down box.

These Resources are just the start! Look for other information that match your needs here:

Build for the Future — A wealth of technical resources on energy efficiency and resilience

Build for the Future Funding Navigator — A user friendly searchable database for IRA and BIL grants

c. Starting the Conversation

Questions?

Jennifer Gottlieb Elazhari
Assistant to Senior Advisor for Climate (Detail)
Jennifer.R.Gottlieb@hud.gov

Resources: Toolkits & Technical Assistance Programs

Peer Learning and Public Recognition

Better Climate Challenge, DOE (emissions reduction based)

Better Climate Challenge | Better Buildings Initiative (energy.gov)

Better Building Challenge, DOE (energy efficiency based)

Better Buildings Challenge | Better Buildings Initiative (energy.gov)

Better Buildings Webinars, DOE

Events & Webinars | Better Buildings Initiative (energy.gov)

Benchmarking and Building Performance

Energy Management Resources | HUD.gov / U.S. Department of Housing and Urban Development (HUD)

Training | ENERGY STAR

Benchmarking and Building Performance Standards Policy Toolkit | US EPA

Greenhouse Gas Equivalencies Calculator | US EPA

Resilience

https://www.epa.gov/sites/default/files/2019-07/documents/regional_resilience_toolkit.pdf

Building Resilience in Coastal Communities | U.S. Climate Resilience Toolkit

HUD Community Resilience Toolkit (hudexchange.info)

Resources: Energy Efficiency and Renewables

Department of Energy Electrification Rebates
https://www.energy.gov/scep/home-electrification-and-appliance-rebates

Department of Energy Efficiency Rebates
https://www.energy.gov/scep/home-energy-rebate-program

Greenhouse Gas Reduction Fund
(Solar For All, Clean Investment Fund, Clean Community Accelerator)
https://www.epa.gov/greenhouse-gas-reduction-fund

Direct Pay for Investment Tax Credit (for Renewables) Tax Credit (§6417)
26 U.S. Code § 6417 - Elective payment of applicable credits | U.S. Code | US Law | LII / Legal Information Institute (cornell.edu)

New Energy Efficient Home Tax Credit (§45L)
https://www.irs.gov/newsroom/irs-builders-of-qualified-new-energy-efficient-homes-might-qualify-for-an-expanded-tax-credit-under-section-45l

Energy Efficiency and Conservation Block Grant Program (Local Government)
Energy Efficiency and Conservation Block Grant Program | Department of Energy

HUD Green and Resilient Retrofit Program
Green and Resilient Retrofit Program (GRRP) | HUD.gov / U.S. Department of Housing and Urban Development (HUD)

Resources: Resiliency

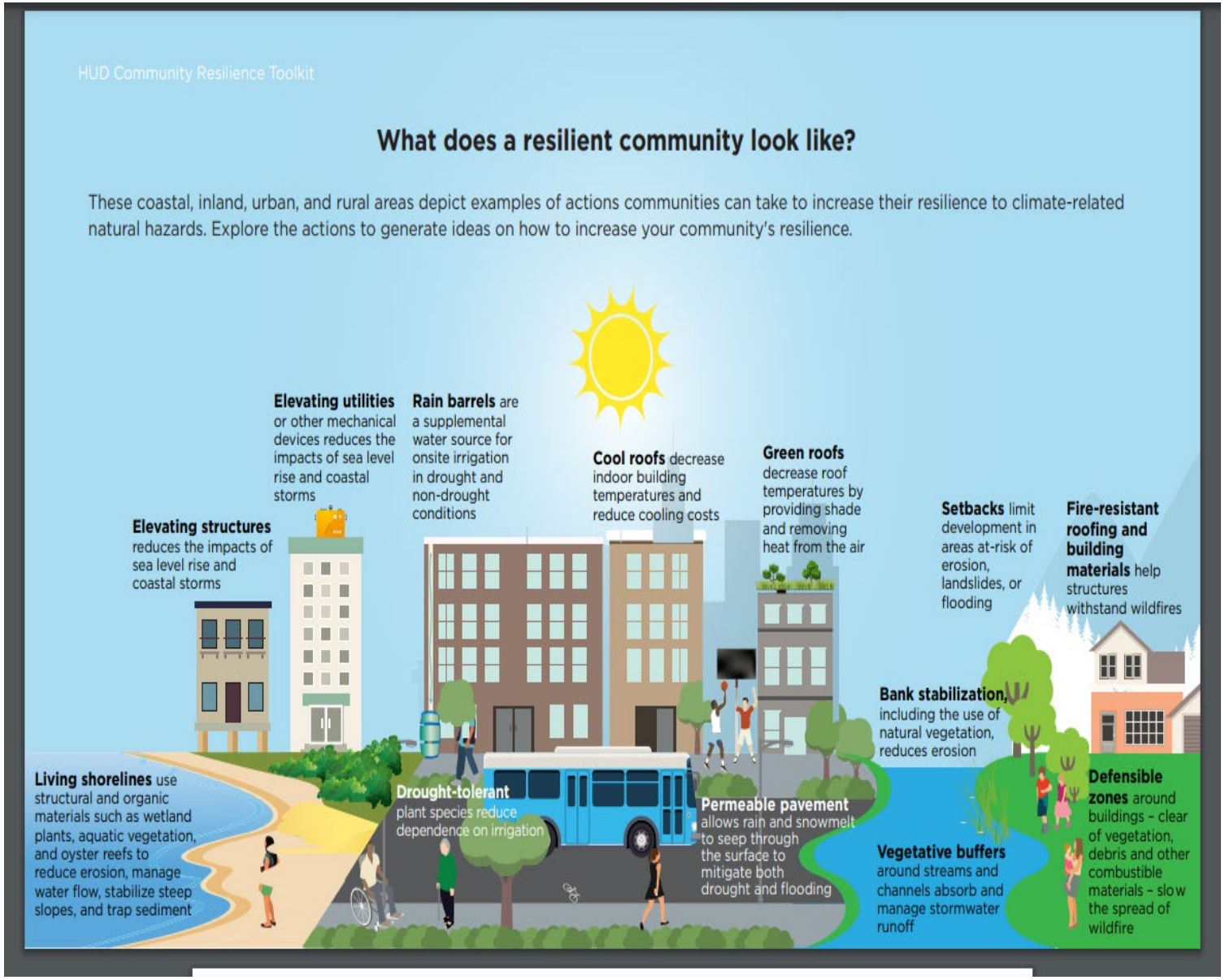
Safeguarding Tomorrow Hazard Mitigation Revolving Loan (STORM)
The program provides funds to states and Tribes for revolving loan funds for provide hazard mitigation assistance.
Safeguarding Tomorrow Revolving Loan Fund Program | FEMA.gov

Pilot Program for Transit Oriented Development
The program improves urban sustainability through access to public transit, land use, and improved pedestrian and bicycle integration.
Pilot Program for Transit-Oriented Development Planning – Section 20005(b) | FTA (dot.gov)

Urban and Community Forestry
Grants for tree planting and related activities (combats extreme heat).
2023 UCF National Grant Program (urbanandcommunityforests.org)

Investment Tax Credit (48E) Battery Storage
26 U.S. Code § 48E - Clean electricity investment credit | U.S. Code | US Law | LII / Legal Information Institute (cornell.edu)

Section 108 Loan Program Backed by a Grantee's HUD CDBG-HUD
The Section 108 Loan Guarantee Program provides Community Development Block Grant (CDBG) recipients with the ability to leverage their annual grant allocation to access low-cost, flexible financing for economic development, housing, public facility, and infrastructure projects.
https://www.hudexchange.info/programs/section-108/



Resources: Environmental Justice

Brownfields Programs
Provides resources to local governments and tribes to clean and reuse contaminated properties.
https://www.epa.gov/brownfields

Community Change Program
Provides 2 billion dollars to fund environmental and climate justice activities to benefit disadvantaged communities.
Inflation Reduction Act Community Change Grants Program | US EPA

Government to Government Program
Funds state, local, territorial, and tribal governments for activities that lead to measurable improvements in EJ communities.
The Environmental Justice Government-to-Government Program | US EPA

EPA EJ Thriving Communities Grantmaking Program
Environmental Justice grants given by grant-makers chosen by EPA to design programs.
The Environmental Justice Thriving Communities Grantmaking Program | US EPA

EPA EJ Thriving Communities Technical Assistance Program
Technical Assistance Centers provide training and build capacity for navigating federal grant application systems and grant management.
The Environmental Justice Thriving Communities Technical Assistance Centers Program | US EPA

Resources: Workforce Development: (Section 3)

The solar workforce must grow from the current 250,000 to 1,500,000 in 2035 to meet the goals for solar deployment.
https://www.energy.gov/eere/solar/solar-workforce-development

State-Based HOME Energy Efficiency Contractor Training Grants, DOE
The State-Based Home Energy Efficiency Contractor Training Grants (Contractor Training Program) funds state energy offices to train residential energy efficiency and electrification contractors.
States can partner with nonprofit organizations to develop and implement these programs.
State-Based Home Energy Efficiency Contractor Training Grants | Department of Energy

Building, Training, And Assessment Centers, DOE
To establish building training and assessment centers to educate and train building technicians and engineers on modern building technologies.
Building Training and Assessment Centers | Department of Energy

Career Skills Training, DOE The program funds career skills training for industry-related certification to install energy efficient building technologies.
Career Skills Training Program | Department of Energy

Energy Auditor Training Grant Program, DOE
Administered through State Energy Offices, the programs funds energy auditor training.
Energy Auditor Training Grant Program | Department of Energy

Consumer Recycling Education and Outreach Programs
The program funds community outreach about recycling and composting programs and activities that increase collection rates and decrease contamination rates. Practitioners can use the EPA Model Recycling Program Toolkit.
Consumer Recycling Education and Outreach Grant Program | US EPA