

(A) First, (B) Second, (C) Third Kinds of Levers.

Leveraging Funds for Retrofits

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Iowa Energy Summit 2024 October 10, 2024

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Presenters

Gregory Ehrendreich
Manager, Research & Analysis

Miranda Andrade
Associate, Market Solutions and Education

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Who We Are

The Midwest Energy Efficiency Alliance (MEEA) is a collaborative network, promoting energy efficiency to optimize energy generation, reduce consumption, create jobs and decrease carbon emissions in all Midwest communities.

MEEA is a non-profit membership organization with 170+ members, including:

Energy Service Companies & Contractors

State & Local Governments

Academic & Research Institutions

Electric & Gas Utilities

Community-based Organizations

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Background – Deferrals and Leveraging

Greg Ehrendreich

(A) First, (B) Second, (C) Third Kinds of Levers.

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An existing home can have **lots** of retrofit needs

Energy, structural, hazards, etc.

Hundreds, X Thousands, = etc.

- Community
- Municipality
- Service Territory

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How do we find a home's needs?

Energy audit is often the first step

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Types of Problems

If these are found, EE projects can get **deferred**

- Water leaks/intrusion
- Injury hazards
- Pests
- Code violations
- Heating, plumbing, electrical deficiencies
- Asbestos, mold, lead paint



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Deferrals

Some problems make the utility walk away from the project

- **Scale of the problem**
 - 6 million households nationwide have moderate to severe home health hazards
 - 30 million households have some form of indoor environmental hazards [\(EPA Study\)](#)
- EE projects deferred in 20-60% of households in Midwest programs [\(MEEA Blog\)](#)
- Deferred customers are often also those with the highest energy burden - % of income going to energy bills



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Household Energy Burden in Midwest Cities

Upper quartile energy burdens – 25% of households have burden at or above this level



Metro Area	All households			Low-income households			Black households			Hispanic households		
	All	Owner	Renter	All	Owner	Renter	All	Owner	Rental	All	Owner	Renter
National	5.7%	5.4%	6.3%	15.2%	17.2%	13.2%	7.2%	6.7%	7.8%	6.2%	5.8%	6.8%
Chicago	4.1%	4.0%	4.7%	15.7%	14.9%	18.6%	9.1%	10.2%	6.9%	4.8%	3.8%	6.2%
Detroit	6.0%	5.4%	8.3%	15.2%	14.1%	16.4%	8.8%	7.6%	9.7%	6.0%	5.4%	6.9%
Minneapolis	3.7%	3.5%	4.9%	14.0%	15.9%	12.2%	4.4%	2.7%	6.0%	4.6%	3.3%	9.0%
Cincinnati*	4.4%	4.3%	4.8%	13.6%	14.8%	10.9%	5.0%	4.3%	6.5%	6.5%	4.9%	6.5%
Kansas City*	4.9%	4.2%	6.6%	12.7%	13.6%	12.0%	6.3%	4.8%	8.6%	5.5%	4.0%	5.8%
Milwaukee*	5.1%	4.5%	6.3%	12.3%	16.0%	10.9%	7.5%	6.3%	8.0%	6.0%	5.7%	6.2%

□ Below burden threshold ■ High energy burden ■ Severe energy burden □ Above national average

Source: ACEEE Policy Brief | 2024



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Why are Deferrals a problem?

Not good for the customer or the utility

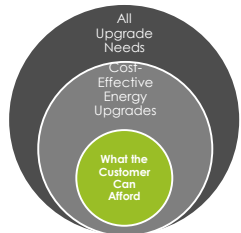
- **Homeowner** finally gets to the top of the waitlist and then audit shows that they can't be served
 - Feel they wasted time & effort applying
 - Lowered satisfaction and decreased expectation of participation in future programs
 - Energy burden not reduced
- Sunk costs to **implementer** budget from evaluating a home that cannot be weatherized (and for which they can't claim any savings from the money spent)



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Conceptual Model for Leveraging Discussion

Three decreasing 'buckets' of retrofits



Analogous to EE Potential Studies

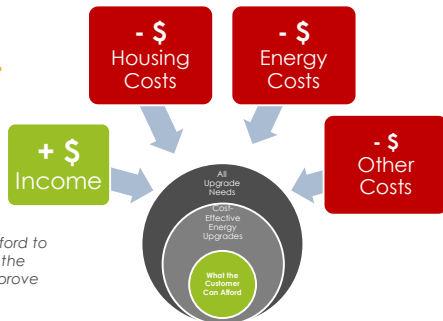
- **Technically** possible upgrades
- **Economically** possible upgrades
- **Achievable** upgrades



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The Problem

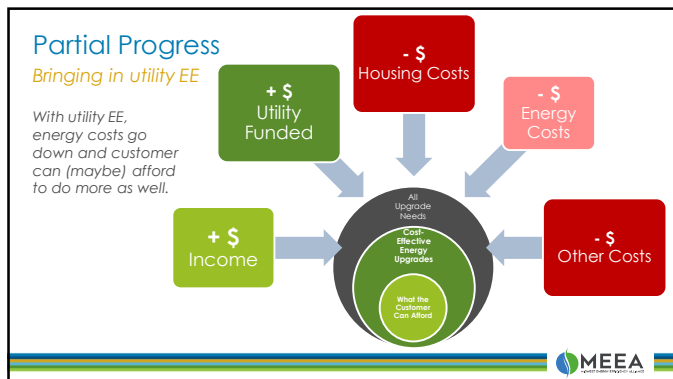
What if we just let the market do it?



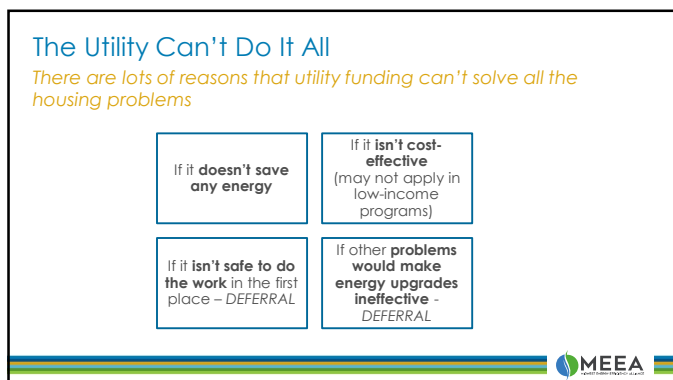
The customer can only afford to make **some (if any)** of the needed upgrades to improve their housing.



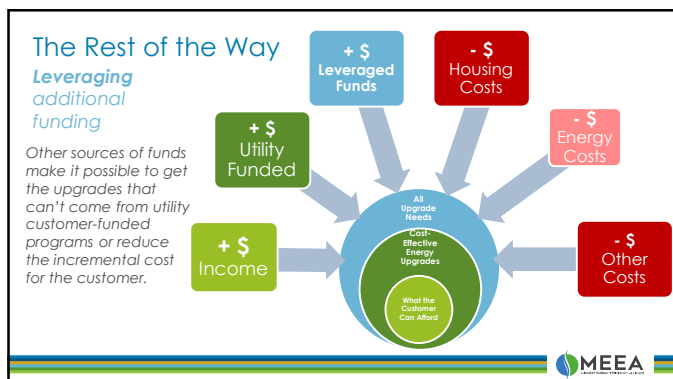
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What about IRA tax rebates?

"If there is federal funding, why do we even need utility EE?"

- Only pays part of the cost of projects (even for low-income households)
- Have to be able to pay first and wait for a tax rebate
- Not everything needed has an IRA incentive available

- **It doesn't really help disparity enough**
 - Politico (8/28/24) – **Highest-earning 25% of households get 66% of EE tax credits** (and they can already afford it!)



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Federal Funding Can't Do it All

There are lots of reasons that federal funding can't solve all the housing problems

- Spending limits per household
 - Average Cost Per Unit (ACPU)
 - Savings to Investment Ratio (SIR)
- Limits on amount of budget that can be spent on health & safety issues



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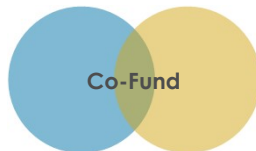
Types of Leveraging

Two basic flavors



Braid

Each funding source covers **distinct and separable** measures within the project for a single household.



Co-Fund

Second source covers additional cost above what first source covers for the **same single upgrade** for a single household.



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Examples

Braiding – distinct & separate measures covered by different funding streams

Utility incentive replaces furnace

Braid

State Energy Office incentive (using DOE WAP funding) provides insulation and air sealing

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State Experience with Braiding

Illinois

- “Braided with IHWAP” program
 - In operation since 2017
 - Implementation by Resource Innovations
 - Partnered with CAAs & installation network
 - Single family & multifamily components
 - Leveraged funds from utility EE to supplement WAP funding
 - 50% cost share from utilities, allocated to gas/electric
 - Based on total project cost or per-measure cost, depending on utility

Braided 50/50*

- Weatherization/shell
- HVAC & t-stats
- Water heating
- Lighting
- Appliances

** Braided measures depend on which utility/utilities territory the customer is in*

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State Experience with Braiding

Michigan

- Michigan DHHS has policies in place for pre-weatherization deferral reduction (DR).
- Deferral reduction funds are designated for addressing structural, health and safety issues of homes that are currently in the queue to be weatherized, but are at risk of deferral.
- Community Services Policy Manual defines policies for administration of funds through community action agencies & etc.
 - [CSPM 2100 Deferral Reduction Policy](#)

Types of Measures

- Mold remediation
- Moisture control
- Knob and tube wiring issues
- Electrical issues
- Grading, gutters and downspouts
- Roof repair and replacement
- Structural issues
- Measures to meet SHPO requirements
- Drainage system
- Sump pump installation
- Plumbing repair and replacement
- Pest control
- Asbestos encapsulation and remediation
- Duct repair and replacement

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State Experience with Braiding

Minnesota

- Leveraged funds from multiple sources
 - WAP
 - U.S. Department of Health and Human Services
 - Utilities
 - Designated state funds
- Work with 23 local service providers across the state to deliver programs
- [Recognition from DOE](#) for success of their approach



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Leveraged Funds for Weatherization Assistance Programs

State, utility, municipal funds supplement federal \$

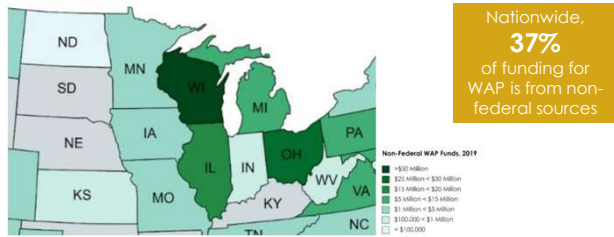


Image source: NCAAP via Graham, 2022



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Examples

Co-Funding – layered funds cover the cost of a single upgrade



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Leveraging Other Funds with Home Energy Rebates


DOE SCEP Guidance

Guidelines for Leveraging Other Funding Sources with Home Energy Rebates

Sources of Funding	Allowance	Requirements to Leverage Funding within Same Household	Examples
Other Federal Grants (e.g. funding from the Weatherization Assistance Program (WAP), Low Income Home Energy Assistance Program (LIHEAP))	Can Braid	Must "braided" and use other federal grants to fund distinct and separable measures from the "single upgrade" or "qualified identification project" (QIP) funded by a Home Energy Rebate.	Energy efficiency (EE) measures from WAP (insulation and air sealing), appliance measures from rebate (heat pump, heat pump water heater, and associated wiring).
Federal Loans or Loan Guarantees (e.g. loan from DOE Revolving Loan Fund (RLF))	Can Co-Fund	Can co-fund any remaining costs for the 2022 "single upgrade" or "QIP" above the value of the Home Energy Rebate.	Loan from a state's DOE RLF covers remaining upgrade costs after rebate has been applied.
Non-Federal Funding (e.g. EE utility \$, state/local \$)	Can Co-Fund	Can co-fund any remaining costs for the 2022 "single upgrade" or "QIP" above the value of the Home Energy Rebate.	Utility incentive provides additional funding toward remaining upgrade costs after rebate has been applied.
Tax Credits (e.g. federal/state/local tax credits, may vary based on state/local law)	See IRS or Tax Authority guidance		Refer to IRS guidance on the energy efficiency home improvement tax credit, available at https://www.irs.gov/credits-deductions/efc-energys-tax-credits

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DOE does not provide tax advice. Please refer to IRS guidance or relevant state guidance for relevant tax laws and requirements for tax credits.



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Issues with Co-Funding

Do utilities get credit for the savings? 4 possible frameworks.




Full Attribution
Program administrators receive credit for all savings from programs or projects that combine IRA Home Energy Rebates with existing programs. As part of this framework, program administrators may be required to meet performance requirements or financial contribution thresholds set prior to implementation.

Proportional Attribution
Program administrators receive savings proportional to their financial contribution for programs or projects that combine IRA Home Energy Rebates with existing programs. Financial contribution can include spending on technical assistance, marketing, and administrative support, as agreed to prior to implementation.

Negotiated Attribution
Program administrator receive a portion of the savings from programs that combine IRA Home Energy Rebates with existing programs, provided they meet conditions outlined prior to implementation.

No Attribution
Program administrators would not receive any savings attributed to IRA Home Energy Rebates. IRA programs are run separately from current program administrator efforts.

Image source: NEEP




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Policy Work on Deferrals in the Midwest

Reports, presentations and other resources

- Minnesota Dept. of Commerce informal Weatherization Working Group
 - [2021 recommendations](#)
- Michigan [EWR Low-Income Workgroup](#)
- Illinois Stakeholder Advisory Group (SAG)
 - [Jan 28, 2020 SAG meeting](#)



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Takeaways

- Utility audits can reveal problems the utility can't fix with EE funds.
- Leveraging other funds can allow for non-EE retrofits or deeper retrofits.
- Leveraging can be braided (separate measures) or co-funded (same measure).
- Lots of experience with braiding, co-funding is newer especially as related to IRA funds.



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Leveraging Federal Home Loan Bank Funds

Utility and FHLB Co-funded Programs

Miranda Andrade

(A) First, (B) Second, (C) Third Kinds of Levers.



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Utility Energy Efficiency Programs

The benefits of braided programs

Utilities can provide income qualified customers programs to support EE improvements, but can be limited when it comes to:

- o Energy efficiency measures with low Savings to Investment Ratio (SIR)
- o Health and safety concerns
- o Age in place improvements
- o Budget caps
- o Other repairs outside of program scope

With these limitations, these programs are a perfect candidate for a co-funded initiative...



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Pilot Model

Tennessee Valley Authority's Home Uplift Program

Program to reduce low-income homeowners' energy burden through retrofits at no cost to residents

Initially fully funded through TVA - wasn't sustainable long term

Started looking for other funding sources to keep up with demand

- o Charitable donations
- o Local partnerships
- o Grants, including **Federal Home Loan Bank's Affordable Housing Program**



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Federal Home Loan Bank (FHLB)

FHLBanks System

- 11 regional cooperative banks
 - o Midwest branches - Chicago, Cincinnati, **Des Moines**, Indianapolis, Topeka
- Established by the Federal Home Loan Bank Act of 1932
- Self-capitalizing
- Government Chartered



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The Affordable Housing Program (AHP)

FHLB and Community Investment

- Banks set aside at least 10% of annual net earnings to be used as gap financing for Affordable Housing Development or Rehabilitation
 - o **AHP Competitive**
 - o AHP Set-Aside,
- Most banks require a matching funder
- Application is submitted by a team
 - o Sponsor – developer or non-profit
 - o Member – FHLB Member Bank Institution
- Projects awarded based on a 100-point scoring system
 - o Highest scoring projects until funding runs out
 - o Competitiveness of a single application is based on the competitiveness of the pool
 - o Project deviations from application may decrease points and put funding at risk




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The Affordable Housing Program (AHP)
2023 Competitive Fund Awards Summary

	Rental Housing Projects	Owner-Occupied Housing Projects	Total Housing Projects
Total Number of Awarded Projects	343	100	443
Subsidy Awarded (\$ in Millions)	\$266.2	\$52.8	\$319
Number of Housing Units	17,598	2,703	20,301
Average Subsidy per Unit	\$15,126	\$19,536	\$15,714
Number of Very Low-income** Housing Units	12,206	1,414	13,620

* As of December 31, 2023
 ** Units at or below 50 percent AMI




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The Affordable Housing Program (AHP)
Owner Occupied Rehab Project Requirements

- Household
 - Owner Occupied
 - Single Family
 - Income Qualified
 - Household Member Targeting*
- Project
 - AHP Funds may not exceed portion of total project costs, often 75%*
 - Soft costs may not exceed portion of total project costs, often 25%
 - Developer Fee limitations*

*requirement varies based on bank and application commitments




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The Affordable Housing Program (AHP)
Owner Occupied Rehab Required Documentation Examples

- Household
 - Enrollment Paperwork
 - Income documents (paystubs, tax returns, VOE, awards letters, etc.)
 - Copy of Deed*
 - ID*
 - Disability paperwork*
- Project
 - Invoice Documentation
 - Inspection Forms
 - Sponsor/Member commitments*
 - Inspector Licenses*
 - Contractor Lien*

*requirement varies based on bank and application commitments




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The Affordable Housing Program (AHP)
Owner Occupied Rehab Funding Limitations

AHP Funding is very flexible!

- Roof repair/replacement
- Structural repairs
- Lead-based paint hazard reduction
- Accessibility modifications
- Mold remediation
- Repair/replacement of major housing systems, attached garages, or porches necessary for ingress and egress to fix code or safety violation(s)
- Repair/replacement of windows, gutters, or siding
- Permanent fireplaces
- Repair/replacement of basic carpeting or floors
- Electrical or plumbing work needed to maintain habitability
- Repair/replacement of basic light fixtures
- Drywall, painting, fixtures, and flooring, only if related to other necessary repairs
- Interior painting needed because of necessary or eligible rehabilitation
- Exterior lighting, only if safety- or hazard-related necessity
- Exterior painting, if related to fixing code or safety violation(s)
- Installation/repair of affixed solar panels




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The Affordable Housing Program (AHP)
Owner Occupied Rehab Funding Limitations


A few limitations...

- Decks not necessary for ingress and egress
- Finished attics or basements
- Fences and gates
- Detached garages, sidewalks, and driveways
- Awnings and shutters
- Landscaping and irrigation systems
- Swimming pools
- **Furniture and appliances, including portable fireplaces and A/C units**
- **Window treatments**
- Additions or extensions
- **Security alarms and smart home systems**
- Installation of skylights where none existed before
- Homeowner's personal labor
- **Upgrades to the building exterior solely to improve aesthetics/curb appeal** (e.g., restyling, building re-surfacing, façade improvements)
- Agriculture or horticulture structures (e.g., barn houses or greenhouses)




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WeCare Plus - Kentucky
Program Design



Extension of the WeCare Program

- Louisville Gas and Electric Company and Kentucky Utilities Company (LG&E - KU)'s Weatherization, Conservation Advice and Recycling Energy (WeCare) program
- Offered since 1994
- Designed to create savings through weatherization and energy education to help income-eligible customers in need
- Provides ~\$1,500 in energy efficiency upgrades to 4,000 homeowners annually



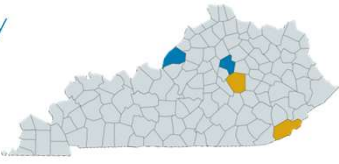

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WeCare Plus - Kentucky

FHLB Cincinnati Pilot

- Partners
 - MEEA (sponsor)
 - People's Bank (member)
 - WeCare Program Team
- 2 AHP grants of \$398,650 each
 - 93 homes in **Urban Counties** (Fayette & Jefferson)
 - 93 homes in **Appalachian Counties** (Bell, Harlan & Madison)

Average FHLB investment of \$4,286, totaling ~\$5,786 per home!





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WeCare Plus - Kentucky

Program Requirements

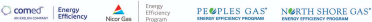
- Household:
 - Owner Occupied, Single family
 - Household member over 60 years old
 - Household \leq 50% AMI
- Project:
 - FHLB funds $<$ \$15,000 or 75% of project costs (whichever is less)
 - Hard costs \geq \$5,000
 - Soft costs \leq 25% of total project costs
 - Developer Fee $<$ 15%



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Helping Homes – Cook County, IL

Program Design



Extension of the Home Energy Savings Program:

- Commonwealth Edison (ComEd) partners with Nicor Gas and Peoples Gas to deliver weatherization and energy savings program to their shared income qualified customers, Home Energy Savings Program (HES)
- Average utility investment of \$8,400 in each home
- Deferrals common due to expensive health and safety concerns or major structural issues (roof repairs, electrical issues, mold and moisture, code violations, etc.)
 - In 2021, 19% of single-family homeowners were deferred from the program
 - Homeowners need to address the concerns before they can be added back into the queue for HES



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Helping Homes – Cook County, IL

FHLB Chicago Pilot

- Partners
 - MEEA (sponsor)
 - Providence Bank (member)
 - HES Program Team
- 2 AHP grants for \$357,600 each
 - 24 homes in **Urban Cook County** (Chicago)
 - 24 homes in **Suburban Cook County**



Average FHLB investment of \$14,900, totaling ~\$23,300 per home!



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Helping Homes – Cook County, IL

Program Requirements

- Household:
 - Owner Occupied, Single Family
 - Low-Moderate Income, Minority Census tract
 - 100% households < 80% AMI, 60% < 60% AMI
- Project:
 - FHLB funds ≤ \$15,000 or 75% of project costs (whichever is less)
 - Soft costs ≤ 25% of total project costs
 - Developer Fee < 12%



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The Story So Far...

Stats as of September 25th

- WeCare Plus
 - 51 homeowners identified as potential candidates
 - 7 homes where rehab is complete
 - 1 FHLB Disbursement Request submitted
 - 12 ineligible or uninterested
 - \$48,673.40 of repairs completed, including \$30,457.36 from AHP
- Helping Homes:
 - 16 homeowners identified as potential candidates
 - 4 homes where rehab is complete
 - 4 homes ineligible or uninterested
 - \$108,664.69 of repairs completed, including \$59,600.00 from AHP



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What We've Learned

- Key Considerations
 - Program introduction and marketing
 - Customer accessibility challenges
 - Detailed document review
 - FHLBank and HUD updates
 - Customer experience and consistency across partners
- Challenges
 - Data and documentation alignment
 - Nuances between different bank requirements and processes



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References

- FHLBanks - <https://fhlbanks.com/affordable-housing-2020-awards/>
- Home Uplift - <https://energyright.com/residential/home-uplift/>
- Home Uplift Lessons Learned - <https://thda.org/pdf/NEW-TVA-Home-Uplift-Presentation.pdf>
- WeCare - <https://lge-ku.com/wecare>
- Home Energy Savings Program - <https://www.comed.com/ways-to-save/for-your-home/home-energy-savings>



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Questions?



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