

The Residential Capital Stack

Maximizing Impacts of HOMES, HEEHR, 25C Tax Credit, WAP, and Utility Programs for Existing Single-Family Homes

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The Department of Energy (DOE)'s Home Energy Rebate Programs, enacted in the Inflation Reduction Act (IRA) of 2022, aim to save consumers money on home efficiency and electrification upgrades to cut energy use and carbon emissions in residential buildings. The historic \$8.8 billion in funding for these programs—the largest pot of money ever for home energy efficiency and electrification rebates—has tremendous potential to reduce residential greenhouse gas emissions, while also helping low- and moderate-income households better heat and cool their homes, save money on their utility bills, and increase resiliency to extreme weather.

To ensure these investments reach their full potential, state rebate programs should coordinate federal, state, and utility dollars while pointing participants to additional federal tax credits. Stacking rebates and tax credits will unlock maximum decarbonization outcomes while saving consumers the greatest amount of money.

Recent DOE Home Energy Rebate guidance² affirms the performance-based (HOMES) and electrification-focused (HEEHR) rebates are not taxable and can be paired with the 25C Energy Efficient Home Improvement tax credit.³ While the IRA does not allow HOMES and HEEHR to both be used for the same single upgrade, the law does allow for “stacking” of these rebates across federal funding sources, including the Weatherization Assistance Program (WAP),



provided that “each Federal grant only funds distinct, separable upgrades.” Per guidance, HOMES *Measured* Energy Savings rebates **cannot** be stacked with HEEHR, but HOMES *Modeled* Energy Savings rebates **can** be – again, provided they are for a different single upgrade.⁴

For non-federal funding, DOE guidance “**strongly encourages**” states to design rebate programs that combine funding—including state, local, utility

¹ This document reflects Department of Energy (DOE) guidance as of August 1, 2023. DOE may make additional clarifications and modifications to guidance in the coming weeks.

² DOE IRA Home Energy Rebates Program Requirements & Application Instructions [here](#).

³ The DOE Guidance is clear that the HEEHR rebate should reduce the amount of the expenditure on which the consumer calculates the amount of the credit ([p.44](#); [p.82](#)). Additional clarification is needed on HOMES. Per DOE, consumers receiving IRA rebates are not required to report the value of the rebate as income. For more on the 25C tax credit, see the AnnDyl Policy Group & Building Performance Association [Energy Efficient Home Improvement Tax Credit \(25C\) Factsheet](#).

⁴ Per DOE, “funds may be used to supplement, and no funds may be used to supplant, weatherization activities under the Weatherization Assistance Program for Low-Income Persons” ([p.93](#)). See [p.11](#) for details on HOMES Modeled/Measured stacking with HEEHR. DOE guidance defines an “upgrade” as “a single energy improvement to a dwelling unit or multifamily building that is a distinct and separable part of the overall scope of work of a home efficiency or electrification project” ([p.9](#)). Clarifications or modifications of DOE guidance could adjust stacking rules between Measured HOMES programs and HEEHR, but this analysis focuses on guidance as of August 1, 2023.

programs, or even philanthropic support.⁵ According to guidance, these non-federal funds can cover “any remaining costs for upgrades and individual components of qualified electrification projects beyond the value of the Federal rebate” under both HOMES and HEEHR – provided other funding programs also allow for the combining of resources.⁶ DOE urges careful accounting, however, noting that “home energy upgrade packages that use multiple Federal grants must braid the funding in a manner that ensures each Federal grant only funds distinct, separable upgrades”⁷ - and also does not cover more than 100% of the cost of the project.

When considering how to pair these incentives in the same project, **state programs may rely on household income** to best understand what options are available to each state resident. This brief guide provides examples of how to fully maximize the available capital stack for residential energy efficiency and electrification retrofits in existing⁸ single-family homes for three income categories:

- 1) **Low-Income Households** – Households at or below 80% of Area Median Income (AMI),⁹ including those qualifying for WAP at under 200% of the Federal Poverty Line (FPL).¹⁰
- 2) **Moderate-Income Households** – Households between 80% - 150% AMI.
- 3) **Market Rate Households** – Households with over 150% AMI and/or no income qualification.

Funding options listed will vary state by state based on existing state and utility programs, the status of other federal funding in both the IRA (including the Greenhouse Gas Reduction Fund)¹¹ and the Infrastructure Investment and Jobs Act (including the Energy Efficiency Revolving Loan Fund Capitalization Grants)¹² - as well as state-level decisions on HOMES and HEEHR program design and participation, and each state’s rebate program funding allocation.¹³

1) Low-Income Households

Below 200% Federal Poverty Line (FPL) for WAP eligibility
Below 80% of Area Median Income (AMI) for maximum HOMES/HEEHR rebate eligibility

Low-income families below the 200% FPL should first qualify for the Weatherization Assistance Program to receive up to \$8,250 to fully cover cost-effective energy conservation measures.¹⁴ This initial investment can be coupled in the same home with up to \$14,000 in HEEHR Rebates

⁵ DOE Home Energy Rebates Program Requirements & Application Instructions, [p. 43-44 & p.80-81](#).

⁶ Ibid.

⁷ Indeed, in guidance to states, DOE warns any “attempts to claim multiple Federal rebates for the same single upgrade is a violation of Federal law and must be reported to DOE” ([p.48](#)).

⁸ Existing homes are residences that have been built and occupied for a period of time. New homes must adhere to current state energy codes which drive their initial efficiency baseline.

⁹ See the U.S. Department of Housing and Urban Development (HUD) 2023 AMI levels [here](#).

¹⁰ See DOE’s 2023 WAP income eligibility [here](#). Note, some states utilize their LIHEAP funds to expand on the eligibility and measures supported by their state WAP.

¹¹ See EPA’s GGRF framework [here](#). EPA has also released detailed Notices of Funding Opportunity (NOFOs) for all three subprograms: the \$13.97B National Clean Investment Fund ([NCIF](#)); the \$6B Clean Communities Investment Accelerator ([CCIA](#)); and the \$7B Solar For All ([SFA](#)) competition.

¹² See DOE’s EERLF Capitalization Grant Program page [here](#).

¹³ See DOE HOMES and HEEHR State and Tribal Allocation Amounts [here](#).

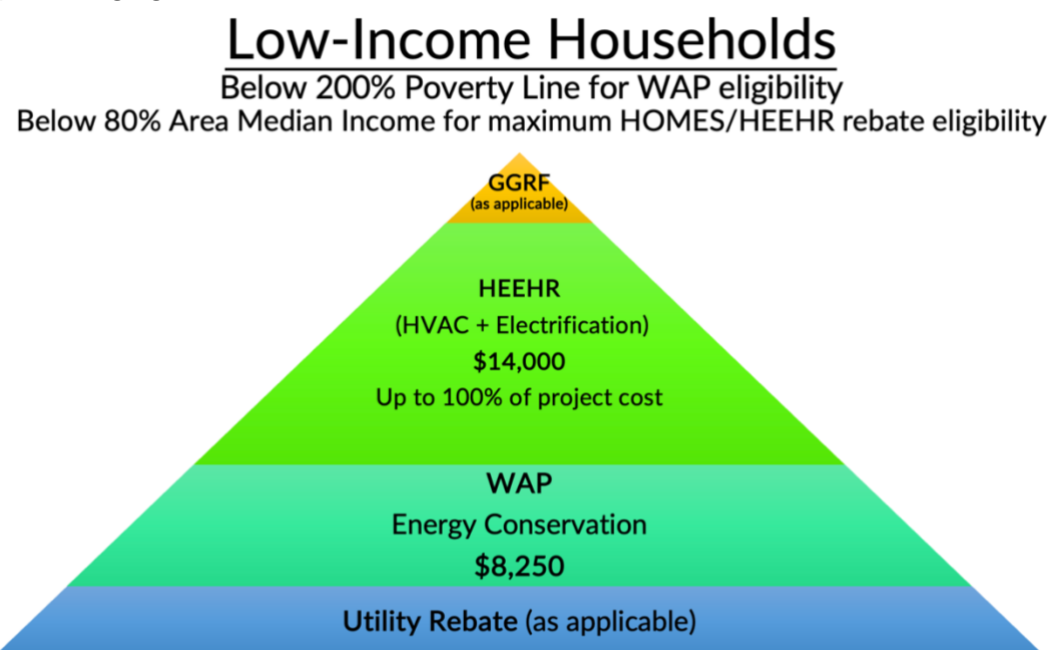
¹⁴ See DOE’s 2023 WAP Adjusted Average Cost Per Dwelling Unit calculation on p.8 [here](#).

for up to 100% of the HVAC and electrification upgrades, provided they are not for the same measure(s) – plus any additional support from utility rebates or potential funding provided by the GGRF.¹⁵ Importantly, HEEHR funds and services must be provided at the point-of-sale or project.

Additionally, a Modeled HOMES rebate of \$4,000 for 20% improvement or \$8,000 for a 35% improvement¹⁶ could be included (up to 80% of the project cost) - but because it would have to be achieved without the same measures included in WAP or HEEHR, it would likely be more cost effective for a low-income homeowner to take advantage of the other funding options available. Where the resident qualifies for HEEHR and not WAP, HOMES should be considered.

Tax incentives are a less effective option for many low-income homeowners, because many lack the tax liability needed to claim a credit.¹⁷

Even without HOMES or the tax incentive, **low-income households could potentially receive over \$22,000 in potential federal support** (also not including utility rebates or potential GGRF dollars). We do not include financing in this section, since the ability to qualify and provide debt repayment is particularly challenging for low-income residents.



¹⁵ All three GGRF categories list energy efficiency retrofits as an eligible expense: NCIF and CCIA projects may include “whole-home retrofits for 1- to 4-family homes and manufactured homes to improve energy efficiency” (NCIF [p. 11](#); CCIA [p. 12](#)); SFA projects may include enabling upgrades that include energy efficiency measures, up to 20% of the cost (SFA [p. 9](#)).

¹⁶ This assumes the HOMES rebate follows the *Modeled Approach* to energy savings and is based on predictions. A *Measured Approach* may provide similar or greater rebate based on an aggregator model and actual savings of at least 15% across a portfolio – but, as noted, cannot be combined with a HEEHR rebate, per DOE guidance.

¹⁷ According to the National Bureau of Economic Research (NBER), from 2005-2012, just 11 percent of the benefits from previous iterations of the 25C and 25D (Residential Energy Efficient Property Credit) tax credits went to taxpayers making under \$40,000 per year. Taxpayers making under \$20,000 per year received just one percent of the benefits. In contrast, 62 percent of the benefits went to taxpayers making over \$75,000 per year. National Bureau of Economic Research, “The Distributional Effects of U.S. Clean Energy Tax Credits.” <https://www.journals.uchicago.edu/doi/epdf/10.1086/685597>. 211.

2) Moderate-Income Households

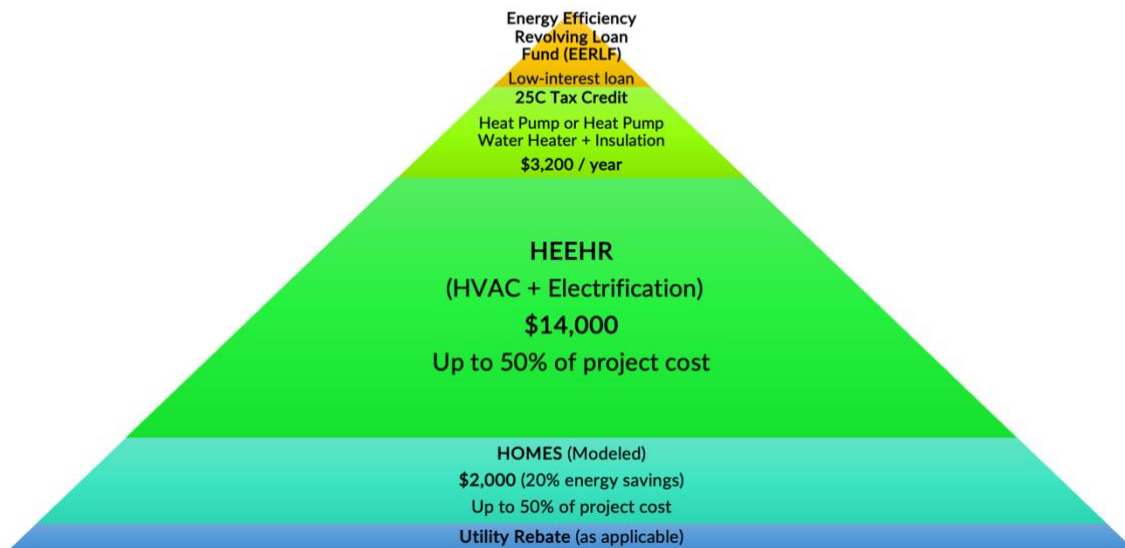
Between 80% - 150% AMI

Moderate-income households will be able to recover up to 50% of the costs of their HVAC and electrification projects with HEEHR Rebates and receive 30% of the remaining balance of the cost of the equipment with the 25C tax credit when they file their taxes (up to a \$3,200 maximum annual credit). To combine Modeled HOMES¹⁸ and HEEHR rebates in the same home, the contractor will need to use a model that has been calibrated with the home's utility data to affirm that measures from the HOMES rebate alone are predicted to save at least 20% of the energy usage.¹⁹ The 25C tax incentive can still be applied to the balance of the upgrade costs. The Modeled HOMES and HEEHR rebates cannot cover more than 50% of the project cost for this income bracket, nor can their measures overlap.

Assuming the project is focused on electrification and over \$32,000, *moderate-income households could potentially receive some \$19,000* in federal incentives when stacked. Per DOE, projects may also use low interest loan and utility rebates.²⁰

Moderate-Income Households

Between 80% - 150 % Area Median Income



¹⁸ An ENERGY STAR natural gas furnace/propane/oil furnace also could potentially qualify for both HOMES (*Modeled* and *Measured* approaches) and a 30% tax credit (up to \$600) via the 25C tax credit. If not using HEEHR, the HOMES *Measured* approach should also be considered and has more flexibility on the size of the rebate.

¹⁹ This scenario assumes that since HEEHR offers much more generous HVAC rebates, households would pursue HEEHR for HVAC upgrades and use the HOMES *Modeled* approach for other home energy savings. As a result, the scenario also anticipates that moderate-income households would likely pursue the 20% *Modeled* energy savings tier, since achieving the 35% *Modeled* energy savings tier on a HOMES project without any HVAC upgrades would be challenging.

²⁰ DOE guidelines affirm that any loans from DOE EERLF, GGRF, and HUD "are not considered Federal grants in that the recipient household receives these programs as financial products rather than as grants or rebates. Therefore, these programs may be used to finance any remaining costs for upgrades and individual components of qualified electrification and energy efficiency projects additional to and separate from the value of the rebate." (p.44, p.81).

3) Market-Rate Households

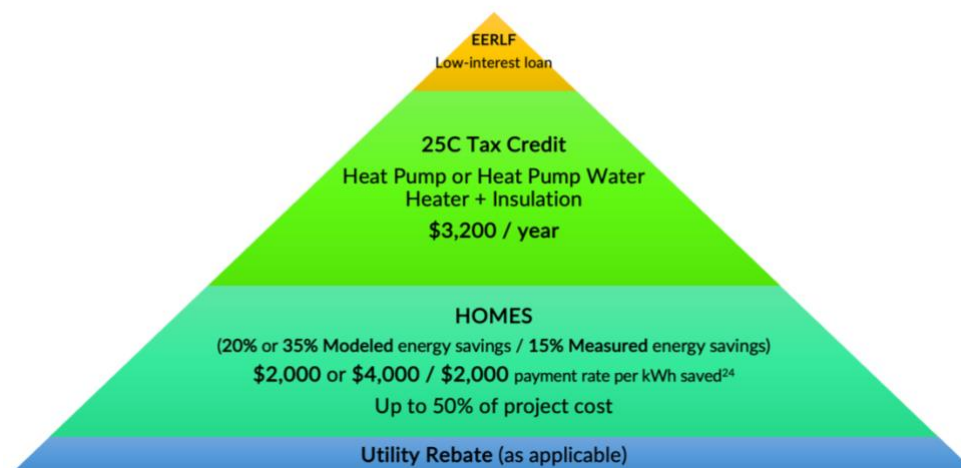
Over 150% AMI / no income qualification

Market-rate homeowners, while not income-qualifying for support from HEEHR, are still a critical part of the public policy solution to climate change, grid reliability and decarbonization. In addition to any utility rebates, programs should incentivize these households to invest heavily in high-efficiency HVAC, electrification, and insulation. By undertaking a home performance retrofit that saves at least 20% of household energy use under the *Modeled* approach, market-rate households can receive up to \$2,000 from a HOMES²¹ rebate, and up to \$4,000 for measures that achieve over 35% energy savings. Under the *Measured* approach, aggregators can provide rebates for actual energy savings and not be subject to the \$2,000 or \$4,000 caps - provided their portfolios achieve at least 15% of energy savings on average.²² In addition, a homeowner may receive up to \$3,200 annually off their tax bill for the qualifying products included in an annual retrofit.²³

Market-rate households could potentially receive over \$7,200 in incentives – while this may be a fraction of the cost of the upgrade, the total provides a key incentive for households to perform more efficient, electric, and climate-friendly upgrades. Furthermore, market-rate households may be able to access low interest loans and additional utility incentives because they are pursuing clean home energy upgrades that support a stable grid.

Market-Rate Households

No Income Qualification / above 150% Area Median Income



If you have any questions or comments, please email info@anndyl.com.

²¹ An ENERGY STAR natural gas furnace/propane/oil furnace also could potentially qualify for both HOMES (*Modeled* and *Measured* approaches) and a 30% tax credit (up to \$600) via the 25C tax credit.

²² Unlike the *Modeled* energy savings pathway, the *Measured* energy savings pathway does **not** have a statutory dollar cap, and features additional flexibility, since the rebate is offered by an aggregator that could potentially rebate more than the *Modeled* rebate dollar amounts. Importantly, both the *Measured* and *Modeled* pathways have a cost cap equal to 50 percent of the total project cost.

²³ Critically, the IRA makes 25C an annual credit, meaning eligible taxpayers can claim it every year for new improvements (but cannot carry the credit forward to future years).

²⁴ Depending on state plan design, households can also pursue Measured Energy Savings, which relies on granular energy savings and features a \$2,000 payment rate per kilowatt hour saved equal to a **20 percent** reduction for the average home in the state, up to **50 percent** of project cost. With no dollar cap, this has the potential to result in larger rebates.