The Equity Opportunity in the Inflation Reduction Act Home Energy Rebate Programs

The Home Energy Rebate Programs created by the HOMES and HEEHRA provisions in the Inflation Reduction Act (IRA) provide nearly $9 billion of federal funds for states to create and fund rebate programs for home energy upgrades, appliance replacement, and ultimately to improve health outcomes and reduce residential energy burden. Together, these programs can provide great benefits for low-income historically disinvested communities and communities of color. As the U.S. Department of Energy (DOE) prepares program guidance (expected by summer 2023) and State Energy Offices begin planning for roll-out of the rebate programs (expected by the end of 2023), Green & Healthy Homes Initiative (GHHI) has been collaborating with partners to ensure equitable and effective use of these program funds, and submitted formal recommendations in March in response to the DOE Request for Information (RFI).

The Inflation Reduction Act Investment in Homes

In 2022, Congress passed, and President Biden signed into law the Inflation Reduction Act (IRA) which included significant funding to address energy and climate issues across the US. By bringing down energy costs and investing in a clean energy future, the IRA will save Americans money and improve quality of life. With the Biden administration's goal that at least 40% of program benefits go to disadvantaged communities through the Justice 40 Initiative, the IRA can also be a strong force for creating a more equitable country. Green & Healthy Homes Initiative (GHHI) was proud to help craft key provisions in this historic law and is looking forward to the future it will create.

One key area investment in the IRA is in housing, where climate, health, and affordability intersect for families. The climate impact has received deserved attention; when Americans heat and cool our spaces, cook food, heat water, and dry clothes we rely on energy with significant greenhouse gas emissions. Nationally, an estimated 20% of greenhouse gas emissions can be attributed to the "commercial and residential" sector, which includes emissions coming directly from the sector (heating, products that release greenhouse gasses such as refrigerants, and treating waste) plus additional emissions from electricity use that generates greenhouse gas off-site. The result is the nation cannot address the climate crisis without changing how our buildings work.

At GHHI, we have long known that too often homes fail to meet people's basic needs for health and safety. Energy burden, temperature regulation, and ventilation are social determinants of health, impacting a family's ability to afford basic necessities and stay physically and mentally healthy.

GHHI is encouraged by the inclusion of many programs within the IRA that can comprehensively address this trifecta of climate, health, and affordability. The IRA will not just reduce emissions, but also save households money and improve living conditions. We commend our leaders in government for taking this significant step.

Key Pairing for Healthy and Affordable Homes: Efficiency and Electrification

The goals of the Inflation Reduction Act include both saving Americans money on their regular household costs and taking steps to fight climate change to preserve our ecological and financial future. In homes, the paired strategies of energy efficiency and electrification can bring down household utility costs, reduce greenhouse gas emissions, and improve resident health.

Efficiency and weatherization

Increased energy efficiency can be achieved through weatherizing the home and increasing appliance efficiency. Weatherization decreases energy consumption by reducing the need to generate heating or cooling to maintain comfortable temperatures. Common measures include air sealing, increased insulation, and weather stripping. These upgrades have proven effective across the country at reducing energy consumption and saving residents money.

Beyond the energy use reductions, these measures include tremendous "non-energy benefits." Weatherization reduces energy burden (the percent of income that a household spends on their energy utility bills), allowing them to meet other basic needs and avoid devasting consequences like utility shut-offs and evictions. Weatherization also reduces moisture and pest presence in the home which can both cause expensive structural damage as well as being some of the main triggers for asthma and other respiratory disease. Nationally, the cost of asthma alone is estimated to be $80 billion and an estimated 40% of childhood diagnoses can be attributed to indoor triggers such as mold, smoke, and dust mites. The upgrades to the building shell, ventilation, and efficiency of the home offer compounding benefits for residents.

Electrification

Electrification places homes on a path to net-zero carbon emissions as the electricity generation shifts to renewable resources. Additionally, especially when paired with weatherization, electrification also directly benefits homeowners both through growing opportunities for cost savings and immediate health and safety improvements.

In terms of the cost benefits, electricity is a more efficient form of energy than combustion of fossil fuels and ensures households are aligned with the system-wide energy transition. Modern electric home appliances consume fewer units of energy than their fossil fuel counterparts for the same outputs, and technological advances such as cold-climate heat pumps have made the appliances effective in almost all US climates; the added efficiency helps save money by using less energy.

An even more significant measure is that electrifying the home appliances can end reliance on gas utilities. Gas utility costs have two key risks in the coming decades. First, the commodity costs (based on the volume of gas use) are highly volatile and may rise if production is restricted or carbon taxes are included into the pricing. Second, the gas infrastructure costs are expected to be increasingly expensive as fewer customers share the cost for pipeline maintenance and cost recovery. By comparison, increases in renewable energy are expected to keep the costs for electricity relatively lower and significant public and private investments are going to support the infrastructure. Given the long lifespans of key home appliances and the high upfront costs of switching from a gas to an electric system, it is essential to support households with low- or moderate-incomes to make changes early in this national transition.

As for health, a growing body of evidence is showing that fossil fuel combustion and leakage have adverse health effects both in and outside of the home. Gas appliances release particulate matter and nitrous oxides, and—especially in the case of stoves that are in the kitchen and rarely receive adequate ventilation—researchers have found consistent evidence that the pollutant levels in the home will rise above outdoor air quality standards (See WE ACT's Out of Gas Report, for example). Potentially 12.7% of childhood asthma is attributable to gas stove usage in homes. These pollution levels risk cardiovascular and respiratory health which are both major public health concerns, particularly for people of color and in low-income communities.

The outdoor air quality health concerns are also significant. In addition to the immediate effects of the pollution, nitrous oxide is a main ingredient for forming smog. The negative health impacts of venting fossil fuel appliances to the outdoors was the basis for the Bay Area Air Quality District passing a rule phasing in a requirement that all sales of HVAC systems and water heaters meet a zero emissions standard—essentially requiring electrification of these systems in new construction and when replacing existing appliances at the end of life. Policymakers expect these changes to prevent 85 premature deaths and up to 110 new asthma cases each year.

Finally, many older homes lack modern electrical panels and wiring. At the most extreme is knob and tube wiring which severely limits electrical capacity in the homes and increases fire risks. Other homes will risk stability when using higher-power appliances, lack adequate outlet numbers, and have older wiring that can spark fires. Electrification projects (and funds from the Inflation Reduction Act) create an opportunity to bring these homes to modern standards. This improves safety and usability. It also prepares the homes for a future with electric appliances, renewable energy systems like solar panels, and electric vehicles.

Including electrification is a key health and affordability measure as a part of holistic retrofits. For the low-income homes served by many state and utility programs, it is especially important to design interventions to protect the overlapping health, social, and economic interests of the residents. This includes ensuring appropriate protections from cost utility costs increases, making sure that residents are comfortable with the appliances in their homes, and that delivery works for both homeowners and renters.

The Home Energy Rebate Programs

Both weatherization and electrification are cost-effective in the long term, especially when considering the non-energy benefits such as health and carbon emission reductions. The barriers are in the up-front costs, especially for low-income and low-wealth households. Together, the Home Efficiency Rebate program for home efficiency retrofits and the Home Electrification and Appliance Rebate program for high efficiency electric appliances are designed to address this concern by applying rebates to weatherization work and appliance replacement.

The Home Efficiency Rebate Program is funded at $4.3 billion dollars over ten years to provide rebates to help households undertake projects that reduce energy usage in their home. For low-income homes, these rebates will cover 80% of the costs of weatherization projects, up to a cap of a $8,000 rebate in projects with high energy savings. The cap decreases for projects with lower savings amounts. For multifamily buildings where at least 50% of the tenants are low-income, the same rebates apply per unit with additional building-wide caps. The law specifies that states can add additional rebates for low-income families to the programs, creating a pathway for the entire cost of the project to be covered. For non-low-income homes, the same structure also exists, but the rebates only cover up to 50% of project costs and the caps are halved. Additionally, the contractors completing projects will receive a $200 rebate for any

project they complete in an area defined as a Disadvantaged Community (DAC). State Energy Offices will submit plans for this program in the second half of 2023 and administer the programs.

The Home Electrification and Appliance Rebates program is funded at just under $4.3 billion and will provide point-of-sale rebates on electric appliances and electrical upgrades up to $14,000 per home, with specific caps for each appliance or measure. Eligible expenses include heat pump HVAC systems, heat pump water heaters, electric and induction stoves, electrical wiring and panel upgrades, and electric heat pump dryers. For low-income homes, the rebates can cover 100% of the costs to acquire and install the appliance. For moderate income homes, the rebates can cover 50% of the costs to acquire and install the appliances. The entity that completes the project can also receive up to a $500 additional rebate. Like the Home Efficiency Rebate Program, these rebates will be administered through State Energy Offices and are expected to be active in the second half of 2023.

GHHI Recommendations on Implementing the Programs

Together, the Home Rebate Programs can be a transformative housing investment with benefits that will last for generations. Too many people live in substandard homes, and making smart investments will improve health and affordability while taking significant steps toward putting our country on a path to climate sustainability. The most marginalized can and should be the ones that benefit the most from this process.

Much of the impact will depend on the implementation of these programs. This requires thoughtful leadership from the federal agencies tasked with providing guidance, strong program design from state energy offices that will implement the programs and coordinated efforts among advocacy and implementation organizations to reach households and deliver these interventions. A poorly implemented program risks not just missing the opportunity for good, but also can lead to negative consequences such as increased health inequality, displacement of low-income residents, and rising housing costs for rent, utilities, and home ownership. The following recommendations, which GHHI also submitted formally to the Department of Energy, will help ensure the programs achieve maximum social benefit.

Program accessibility

If the programs are designed with too many barriers, they will be inaccessible to low-income communities, low-wealth communities, and those without representative political capital such as Black, Indigenous, and other communities of color. Without enough structure however, it may be those who already have resources who monopolize the opportunity through this program. Administrators must find a balance. Too often, major national programs have not reached these communities and instead have resulted in widening inequality. To ensure program accessibility GHHI makes the following two specific recommendations:

1. Federal agencies, state energy offices, and local partners invest in outreach and education for clients and contractors. The opportunities of clean energy and electrification are newly accessible to many including both among the contractors that will implement programs and among the clients that may receive services, especially those with low- and moderate-incomes. Federal, state, and local program coordinators need to invest in outreach and education efforts to ensure program accessibility, trust, and feedback loops for effective design.

2. State energy offices align service delivery with existing home intervention infrastructure and provide simple and quick process to receiving rebates. Administering these programs through existing offices will build off of the familiarity between implementers and the agencies. Additional administrative funds from the programs can then be used to build capacity, including prioritizing quick turn-around on rebates for aggregators and implementers so that they can feel confident taking on projects with high-upfront costs knowing that they will then receive the rebates for projects within a period of a few weeks or sooner.

Program affordability

Programs need to be designed with awareness of the unequal access to capital for residents to co-pay on home upgrades, to spend money before receiving rebates, or to access loans. Thoughtful planning and centering equity considerations will ensure the funds go to those with the most financial need and with the largest deficiencies in their homes. It is critical that families can access these subsidies even if they lack capital.

In cases when residents do not own their homes, programs face split incentives between tenants who often pay utility bills and will occupy the housing in the present, and property owners that have a financial interest in upfront costs and long-term property value, but not utility costs. Program designers must also consider long term affordability risks. The US homeownership rate is 66%, and low-income Americans, Black Americans, and Hispanic Americans, American Indian and Alaskan Natives and Asian Americans are all less likely to own their homes. Advocates in the tenant rights community have raised the issues of decarbonization efforts potentially harming those who are already vulnerable. Improving housing conditions will benefit residents, but only if they are able to remain in the homes and afford the cost of living. Long-term equity also involves paths to homeownership that area accessible to all Americans. If the investments in housing create a market where housing is only accessible to businesses and wealthy Americans, the program will cause significant long-term harm.

For the program to ensure affordability for low-income homeowners, GHHI recommends the following:

3. States add additional funds to federal IRA programs to cover 100% of the costs of energy efficiency upgrades for low-income homes, ensuring that these upgrades are accessible. Under current design, the maximum rebate in the HOMES program would be 80% of project costs capped at an $8,000 rebate. To reach the highest-need homes—where total benefits will be maximized—funding must cover 100% of projects costs and more than $8,000 of expenses. State energy programs such as utility ratepayer funded programs or grants can meet the difference. States need to commit funds to do this. Low-income households do not have the resources for initial investments, nor should they be asked to take on debt.

Additionally, to ensure affordability for low-income renters GHHI recommends the following:

4. Federal and state agencies require contracts preventing landlords from raising rents or evicting tenants after receiving funds for housing upgrades, and landlords must commit to maintaining affordability for a period of at least 3 years after interventions. The Department of Energy (DOE) Weatherization Assistance Program and various state lead abatement laws can serve as models for ensuring that housing remains affordable, and tenants are not displaced by weatherization from the Home Energy Rebate program. Landlords will be receiving federal funds to improve their properties, and this should not cost tenants higher rents or place them at risk of eviction and displacement. The DOE Weatherization Assistance Program requires landlords and tenants to sign

an agreement provided by the grantee (state energy office) outlining the expectation that the landlord will not raise rents as a result of the upgrade, cannot evict the tenant without cause, and if the tenant leaves, that the landlord must find another low-income tenant within a short period. States have discretion on the exact terms of the agreement and for how long the stipulations last. Given the scale of the programs, GHHI recommends uniform guidance from the national level for a period of at least 3-years to ensure tenants are well protected.

Delivery

It is important for the programs to work within the reality of "starting line disparities" for low-income communities, communities of color, and disadvantaged communities. "Leading with Equity," and designing programs that focused on addressing existing issues, allows programs to achieve the most significant results. Often, implementers must address "pre-weatherization" needs before weatherizing and electrifying homes. Program funds must be flexible enough and aligned with related programs so implementers can complete the required work in these homes. A whole-home approach with aligned funding streams, braided programs, and coordinated delivery is an effective model to reach homes.

Finally, these investments are historic in their scale and design. The Inflation Reduction Act is likely to drive new levels of demand for retrofit work including weatherization, electrification, and the installation of these specific appliances. The technologies that make electrification such a promising choice for Americans across the are new to many consumers, contractors, and program designers. It will take time to build familiarity. A program driving sustained demand will support not just short-term work but careers that enable more people to enter the workforce, invest in learning new skills, and develop successful businesses. To this end, GHHI recommends the following:

5. State energy offices and agencies invest in workforce development, especially for under-represented workforce demographics, to ensure effective service delivery of new technologies and accessible business opportunities in the field. The weatherization workforce and the electrification workforce are both small relative to potential need, and scaling up will take resources. Federal and state agencies should be proactive about designing and implementing programs that can increase the workforce and empower disinvested communities. GHHI especially encourages recruiting from the populations where the programs will be most impactful (low-income communities, BIPOC communities, etc.) which will also build familiarity with the programs and with the resources available.
6. States align electrification, weatherization, and health and safety programs to meet needs of homes comprehensively and to ensure homes are not deferred from funding opportunities. The same "project" cannot be double counted for multiple IRA or federal programs. However, layering multiple "projects" in the same home will allow the programs to reach the highest need homes. Defining "project" and providing clear guidance on layers programs will allow for the most comprehensive and effective program deliveries at the household level.
   Because of housing policy, homes occupied by people with lower incomes often have significant needs including deferred maintenance, health and safety issues, poor efficiency, inadequate ventilation, and aging appliances. States should align their programs, braid their resources, and coordinate their delivery to maximize benefit to the residents and achieve efficiency in how they use funding. Having one-stop-shop services and coordinators to work through this process will help deliver the best results for clients.

Equity in funding distribution

Furthermore, the conditions of housing across the country are deeply unequal. The history of redlining, denying access to capital, displacing people through development, under-developing services, and more have left low-income and BIPOC communities with increased challenges and decreased resources. This manifests in homes with higher levels of lead poisoning, asthma, gas leaks, pest presence, heat, flooding, and energy burdens. GHHI recommends the following to address this inequity:

7. Prioritize 100% of the funds reaching low- and moderate-income families by dedicating funds to low-income households and homeowners. The funds will provide maximum benefit by supporting those that do not have the resources for high initial investments or to receive funding from private markets. The Justice 40 guidance should be followed in both letter and spirit. Low- and moderate-income homeowners, and landlords of affordable housing with limited capital to make significant upgrades should receive the majority of the rebates from these programs. The Climate and Economic Justice Screen tool designed to support the Justice40 initiative also highlights burdens beyond income metrics. Using this tool in-line with the Justice40 guidance to invest in overburdened communities will further drive investment in homes occupied by individuals bearing the brunt of injustices. We call for 100% of the funds for these programs to go to housing occupied by low- and moderate-income residents, understanding that this is not otherwise a requirement.

Conclusion: A Historic Window to Drive Investment

The potential for these programs—and the broader movement toward highly-efficient electric homes—to improve the quality of life for children, families, and seniors is enormous. We are hopeful that the legacy of the Inflation Reduction Act and decarbonization efforts benefit all of society, especially historically disinvested communities. In doing so, the Inflation Reduction Act should mark a key point in creating a more just and equitable future where homes are the foundation for healthy lives for all Americans.