Gaps and Barriers to Stacking Federal, State, and Local Incentives

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Contact Information:
Lauren Reeg, lreeg@rmi.org
David Smedick, dsmedick@rmi.org

Introduction and Scope

Up to $350 billion could be injected into the US economy to support the clean energy transition and lower climate pollution from the Inflation Reduction Act. Much of this funding is available for the buildings sector, which is responsible for 35% of US energy-related carbon dioxide emissions. But with over 120 million households spread across the country, 38% of which have high or severe energy burden, retrofitting homes to address energy, health, and structural needs can seem daunting. Thankfully, there are numerous incentive programs offered by federal and state agencies that provide these services to make retrofits more affordable.

To deliver effective, more affordable retrofits, residents need to combine (i.e., stack) as many incentives as they qualify for and access them in an efficient, user-friendly manner. However, there are major barriers to supporting incentive stacking for retrofits. First, it is difficult for residents to know what incentives are available. Second, accessing incentives is complex and often requires multiple applications with varying requirements, which can confuse and discourage consumer participation. Third, there are gaps in existing incentives that leave homes without support to fully upgrade their home. Many households can only decarbonize their homes affordably and safely with incentives that address the following:

- **Health and safety** services including toxic chemical abatement, lead and asbestos removal, roof repair, electrical wiring repair, and indoor ventilation improvements. Without health and safety upgrades, residents are commonly deferred from weatherization and efficiency programs.
- **Weatherization and energy efficiency** services that include building envelope upgrades such as improved insulation, better windows, and tighter air sealing to reduce energy use.
- **Appliance electrification** to replace fossil fuel appliances, like gas stoves and furnaces, with efficient electric alternatives, like induction stoves and air source heat pumps. Efficient electrification can reduce indoor air pollution and on-site climate emissions and reduces overall energy use. Electrification may need to pair with electric panel upgrades if a home has a lower amperage breaker box.
- **Energy assistance** services to ensure households have access to affordable, renewable electricity. Energy assistance can include limits on energy burdens (the portion of household income that goes to energy expenses), utility bill assistance, rooftop solar programs, and access to community solar.

This report addresses three major barriers to residential incentive uptake for single-family households: incentive availability and requirements, incentive stacking rules, and gaps in available incentives. This report includes:

- A catalogue of the major federal incentives including a summary of existing stacking guidance.
- A *National Stacking Examples* spreadsheet that walks step by step through how a resident would access incentives for retrofit services in order to evaluate and identify the barriers to stacking incentives.
- A gap analysis identifying the gaps in participants served and the measures available for single-family households in addition to the complexities in accessing and stacking incentives.
- A selection of concrete steps that state energy offices and other program administrators can take to improve access to incentives and facilitate stacking incentives to address upfront costs.[i]

The gap analysis finds that states should ensure incoming, existing, or future incentives prioritize health and safety measures, cold climate heat pumps, and pre-electrification upgrades to deliver more cost-effective, climate-aligned retrofits to households. For the stacking analysis, residents are facing unclear stacking guidance, varying program requirements, and numerous applications making it difficult for people to adopt these retrofits and stack incentives to drive down costs. RMI has identified three critical action items to support program administrators in easing these issues:

[i] Program administrators include any agency offering retrofit incentives including utilities, weatherization programs, state energy offices, etc.

1. Prioritize funding electric appliances, pre-electrification upgrades, and health and safety repairs with IRA rebates and flexible funds.
2. Make it easy for households to stack incentives.
3. Prioritize underserved communities such as multi-family housing and low-income residents.

Stacking Guidance for Federal IRA Incentives

The *Incentives* spreadsheet details the applicant and measure eligibility, application process, and funding amount for federal incentives. This section summarizes the latest guidance on stacking the federal tax credits and energy rebates. The below chart provides a brief description of the major programs available at each level.

Exhibit 1: Selection of federal buildings-related residential incentives[ii]

Incentive	Eligible Uses	Funding	Minimum Income Qualifications
Rebates			
Home Efficiency Rebate	Appliances, Weatherization	Up to $8,000/unit	N/A
Home Electrification and Appliance Rebate	Appliances, Weatherization	Up to $14,000/unit	150% AMI or less
Tax Credits			
Energy Efficient Home Improvement Tax Credit (25C)	Appliances, Weatherization	$2,000 for Heat Pump $1,200 for Efficiency	Requires Tax Liability
Residential Clean Energy Tax Credit (25D)	Solar PV, Battery Storage, Geothermal Heat Pump	Up to 30% of Expenditures	Requires Tax Liability
New Energy Efficiency Home Tax Credit (45L)	Efficient New Construction, Major Renovations	Up to $5,000 Per Unit	Requires Tax Liability
Grants and Loans			
Low-Income Home Energy Assistance Program	Utility Bill Support, Weatherization, Appliances	Dependent on Project and State	60% SMI or less
Weatherization Assistance Program	Appliances, Weatherization, Health and Safety	Dependent on Project and State	200% of Poverty Guidelines or less
Solar for All	Appliances, Weatherization, Solar PV, +	TBD	TBD
National Clean Investment Fund	Appliances, Weatherization, Solar PV, +	TBD	TBD
Clean Communities Investment Accelerator	Appliances, Weatherization. Solar PV	TBD	TBD
USDA Rural Development Repair Program	Appliances, Weatherization, Health and Safety	Maximum Loan is $40,000 Maximum Grant is $10,000	Doesn't Exceed Very Low County Income Limit
Revolving Loan Funds	Appliances, Weatherization	Dependent on Project and State	100% of Poverty Guidelines for Grant or less

[ii] As of November 2023, the rebates are not active. They are expected to go live in states who choose to apply in 2024.

When financial incentives are stacked, different program requirements, standards, and even cost-effectiveness tests can be forced to interact, sometimes with complicated results. For example, when Weatherization Assistance Program (WAP) funds are used, installed measures are required to meet a specific cost-benefit test — the savings to investment ratio (SIR). Stacking an external financial incentive for a specific measure with WAP funds may be difficult if that non-WAP incentive is not reliant on the state's WAP SIR calculation because it may be subjected to the WAP SIR test. While not every federal energy program is as nuanced as WAP, it serves as an important example to demonstrate the need for coordination, collaboration, and implementation across state and local agencies and key stakeholders like utilities.

Federal Tax Credits

Generally, the IRA household tax credits for energy efficiency and clean energy upgrades can be stacked together with other financial incentives, including state and local programs. However, specific steps and requirements exist when stacking the federal tax credits with other programs.

Energy Efficient Home Improvement Credit (25C) and Residential Clean Energy Property Credit (25D)

Stacking Guidance from IRS (Page 7, Q4): Utility incentives and rebates must be applied before the 25C and 25D tax credits whereas non-rebate incentives do not impact the 25C and 25D tax forms.

- **Public Utility Incentives —** Generally, if a public utility provides a subsidy to a customer for the purchase or installation of any energy conservation measure, the taxpayer must claim the cost of the qualifying purchase minus the utility subsidy on the tax form. Net-metering compensation is not considered a subsidy.
- **Rebates —** Regardless of the program administrator, rebates generally follow similar rules to utility incentives. If a rebate is provided to an energy conservation measure, the taxpayer must claim the cost of the qualifying purchase minus the rebate on the tax form. This applies for rebates provided to the household, manufacturer, distributor, or seller/installer.
- **State Energy-Efficiency Incentives** — A taxpayer does not need to reduce the cost of their qualifying purchase on a tax form if the state incentive is not a rebate. While many states label their energy-efficiency incentives as "rebates," these incentives may not qualify as rebates or purchase-price adjustments under federal income tax law and could be included in the taxpayer's gross income for federal income tax purposes. In general, rebates are nontaxable purchase price reductions if they are based on or related to the cost of the property, received from someone having a reasonable connection to the sale of the property (for example, the manufacturer, distributor, or seller/installer), and do not represent payment or compensation for services provided by the taxpayer.

Energy Efficient Home Credit (45L) — Stacking Ability with Low-Income Housing Tax Credit (LIHTC)

- The IRA updated statute to ensure that 45L and LIHTC can stack better together. The 45L tax credit provides eligible contractors with a tax credit for eligible new or substantially reconstructed homes that meet applicable ENERGY STAR home program or DOE Zero Energy Ready Home (ZERH) program requirements. The LIHTC program gives State and local LIHTC-allocating agencies the equivalent of approximately $9 billion in annual budget authority to issue tax credits for the acquisition, rehabilitation, or new construction of rental housing targeted to lower-income households. Additional guidance from the Treasury Department is anticipated; however, the IRA text ensures that the LIHTC basis is not decreased if the 45L tax credit is utilized on a project.

Additional resources on IRA tax incentives, including information regarding clean energy, electric vehicles, and commercial business energy retrofit tax incentives can be found here:

- https://www.irs.gov/credits-and-deductions-under-the-inflation-reduction-act-of-2022
- https://www.whitehouse.gov/cleanenergy/clean-energy-tax-provisions/

Federal Home Energy Rebates

The Department of Energy published initial stacking guidance (pp. 80-82) on the Home Efficiency Rebate (HER) and Home Electrification and Appliance Rebate (HEAR). A summary is provided below. Check DOE publications for the latest and most complete official agency guidance.

- IRA Rebates
    - The two rebates can be stacked for the same household retrofit project but can never be stacked for the same efficiency or electrification measure. There are additional restrictions for retrofit projects pursuing the measured-savings pathway for HER. Only HEAR rebates for electric panel and wiring upgrades can be accessed by the same address that is in the process of receiving a HER-measured savings approach. HEAR rebates associated with energy-savings products such as heat pumps or induction stoves cannot be accessed by the same address that is in the process of receiving a HER rebate through the measured-savings approach (or vice versa).
- Other Federal Grants and Rebates
    - Federal grants or rebates cannot be combined to cover costs for the same single efficiency or electrification upgrade but can be used on the same project if multiple upgrade measures are installed and the grants or rebates are used on different upgrade measures. For example, a household could use a federal grant, such as WAP, to cover insulation upgrades and HEAR for a new air source heat pump. However, WAP and HEAR can't share the cost of an air source heat pump. Rules and guidelines governing the other federal grants and rebates should be reviewed and consulted to ensure proper stacking and leveraging.
- Federal Loans
    - Federal loans — like the Energy Efficiency Revolving Loan Fund, financial products from the Greenhouse Gas Reduction Fund, and Housing and Urban Development loans — can stack with the rebates to cover any remaining costs after the rebate is applied.
- Non-Federal Funds
    - Non-federal funds (i.e., state or local funding, utility programs, or philanthropic funds) can stack with the rebates when those state, local, utility, and philanthropic program requirements do not have additional stacking restrictions. Rules and guidelines governing the non-federal funds under consideration should be reviewed and consulted to ensure proper stacking and leveraging.
- Federal Tax Credits
    - Federal Tax Credit 25C can stack with rebates. The credit is based on the cost of the applicable product after applying rebate funds.

Other Federal Grants

The Inflation Reduction Act and Infrastructure Investment and Jobs Act created or expanded numerous other programs. These programs include more funding for the Weatherization Assistance Program, financing funds for the Greenhouse Gas Reduction Fund and Revolving Loan Fund, and flexible grants like the Climate Pollution Reduction Grant or Energy Efficiency and Conservation Block Grant. Note that IRA Home Energy Rebate funds

can supplement but cannot be used to supplant Weatherization Assistance Program (WAP) funds. The latest guidance on using WAP with multiple funds is detailed on the Weatherization Assistance Program webpage. The tax credits can stack with flexible grants if households have qualifying tax liability, but the home energy rebates cannot stack with other federal grants for an individual measure. Federal financing funds can stack with grants, tax credits, and rebates since they are generally not considered grant funding.

DOE has stated that it intends to publish additional program stacking guidance. It is important to note that these federal programs occasionally receive updates from their authorizing agency and further guidelines from DOE, Treasury, and other agencies that may impact program stackability. Program designers and administrators, contractors, and consumers should always ensure they are working with the latest rules and guidelines from federal agencies regarding program and funding stacking.

Stacking Incentives

To understand the complexities of how federal incentives stack, RMI developed a stacking exercise. In this exercise, the steps needed to access all incentives for cold climate air source heat pumps (ccASHP), furnaces, gas and heat pump water heaters (GWH, HPWH), induction and gas stoves, health and safety measures, envelope upgrades, and renewable energy were outlined. The stacking examples exercise was completed for low-, middle-, and high-income individuals.[iii] Exhibit 2 represents an example of a middle-income household purchasing solar PV and a cold climate heat pump, assuming the ccASHP costs $12,750 for equipment and installation and solar PV costs $25,000.

Exhibit 2: Example of stacking federal incentives as a middle-income resident for a cold climate heat pump and solar PV system.[iv]

Order	Funding Source	Incentive Amount	Cost of Upgrade Post Incentive	Process for Application
1	Home Electrification Rebate Program	$6,375	$31,375	Point of Sale
Installation Occurs				
2	25C- Federal Residential Energy Efficiency Tax Credit	$2,000	$29,375	File IRS 25C Tax Form (5695)
3	Residential Clean Energy Tax Credit (25D)	$7,500	$21,875	
Total		**$15,875**	**$21,875**	**When available, financing from the revolving loan or greenhouse gas reduction funds may support project funding.**

**Assumptions listed in stacking report. *As of November 2023, the rebates are not active. They are expected to go live in states who choose to apply throughout 2024.*

[iii] Low-income is defined as 80% AMI or less. Middle-income is 80%–150% AMI. High-income is 150%+ AMI.
[iv] To illustrate the endcap cases for stacking incentives, this analysis assumes households making less than 80% AMI do not have enough tax liability to access the tax credits. In reality, they may be eligible for either the full or partial tax credit.

All the stacking examples are linked in the *National Stacking Examples* spreadsheet. The analysis details the order of applying to incentives, the process for application, assumptions, and the estimated cost of the upgrade post-incentives.[v]

Gap Analysis

Key Gaps in Funding

Using the stacking examples exercise, the gaps in incentives for individuals were identified. The gaps analyzed include upgrade measures, qualifying individuals, and barriers to stacking incentives. **The gap analysis finds that states should prioritize additional funding for health and safety measures, electric space and water heating — especially cold climate heat pumps, and pre-electrification upgrades to deliver more cost-effective, climate-aligned retrofits to households.** Exhibit 3 presents the cost differential between clean energy and fossil fuel appliances for space and water heating and stoves. The cells with parenthesis demonstrate a situation in which the upfront cost of the efficient electric product was less expensive than the fossil fuel product after incentives.

Exhibit 3: Cost comparison of clean energy and fossil fuel technologies after federal incentives are applied.

Clean Energy Technology	Fossil Fuel Technology	Low Income, <80% AMI, No Tax Appetite	Middle-Income: 80%-150% AMI, Tax Appetite	High-Income: >150% AMI, Tax Appetite
ccASHP	Furnace	$ 1,088	$ 1,401	$ 7,688
ASHP	Furnace	$ (3,662)	$ (678)	$ 1,749
ASHP	Furnace + A/C	$ (6,012)	$ (3,028)	$ (601)
ccASHP	Furnace + A/C	$ (1,262)	$ (950)	$ 5,338
HPWH	Gas Water Heater	$ 311	$ 218	$ 1,443
Induction	Gas Stove	$ 10	$ 10	$ 850

The following bullets rank the incentive gaps for appliances in order of funding need. These gaps are derived from the gap analysis and consider federal incentives.

- Space Conditioning: Since air source heat pumps can provide both cooling and heating, they are most accurately compared to the upfront costs of installing an air conditioner and furnace. In this case, heat

[v] The costs for each measure are from estimates by ACEE, GHHI, and Sealed. Note that the post-incentive costs are dependent on the cost of the upgrade, which can be highly variable.

pumps generally have a lower upfront cost. Since household typically do not replace their furnace and A/C at the same time, prioritizing ASHP incentives will support households installing heat pumps to both heat and cool.

- Water Heaters: Heat pump water heaters can be more affordable than gas water heaters once incentives are applied for middle-income residents who can access both tax credits and rebates. Low-income residents (who cannot benefit from the tax credits) should look to access local and utility incentives to further bring down HPWH costs.
- Stoves: With access to incentives, induction stoves are cost-competitive with gas stoves for low- and middle-income residents. High-income residents, who can't access federal induction stove incentives, may pay more for induction stoves without non-federal incentives.

The stacking analysis also reviewed the cost of common home upgrades including health and safety services, envelope upgrades, and solar PV. Since these upgrades do not have directly comparable services, Exhibit 4 simply outlines the cost for each upgrade post-incentive.

Exhibit 4: Post-incentive cost of envelope, health and safety, and solar PV upgrades.

	Low Income, <80% AMI, No Tax Appetite	**Middle-Income: 80%-150% AMI, Tax Appetite**	**High-Income: >150% AMI, Tax Appetite**
Health and Safety	$ -	$ 2,171	$ 2,171
Envelope Upgrade	$ 4,500	$ 5,300	$ 5,300
Onsite Solar	$ 25,000	$ 17,500	$ 17,500

- Renewable Energy: Middle- and high-income residents can reduce solar PV costs by 30% via tax credits. Low-income residents, with low or no tax appetite, pay the most for solar.
- Health and Safety Upgrades: Health and safety programs are generally not administered in conjunction with energy retrofit programs meaning households can't easily access much-needed whole-home retrofits. Generally, only low-income residents who enroll in efficiency and weatherization programs, like the Weatherization Assistance Program, can access incentives for holistic health and safety upgrades alongside other services like envelope upgrades, and even those programs do not guarantee funding or may not be available in every state. Besides ensuring a house is safe to live in, these upgrades can also unlock additional incentives that require a baseline safe home.
- Envelope Upgrades: For basic air sealing and insulation projects, residents will pay about $4,000–$5,000 across regions and income classes after accounting for federal incentives. Low-income residents do have access to programs, although oversubscribed, which can fully cover envelope upgrades. Envelope incentives generally do not effectively scale with the size of the project, therefore incentivizing smaller projects.

Finally, the stacking analysis compared the cost of a clean energy retrofit to a fossil fuel retrofit.[vi] For low- and middle-income residents, the analysis finds the clean energy retrofits are more affordable once incentives are

[vi] The clean energy retrofit includes an air source heat pump, heat pump water heater, induction stove, health and safety measures, and envelope upgrades. The fossil fuel retrofit includes furnace, gas water heater, gas stove, health and safety measures, and envelope upgrades.

applied than fossil fuel retrofits. Costs can be even lower for all income classes when state, utility, and local incentives are applied. For residents who also want to address operational costs, installing solar can help reduce utility bills in many cases.

Exhibit 5: Cost comparison of whole-home retrofits

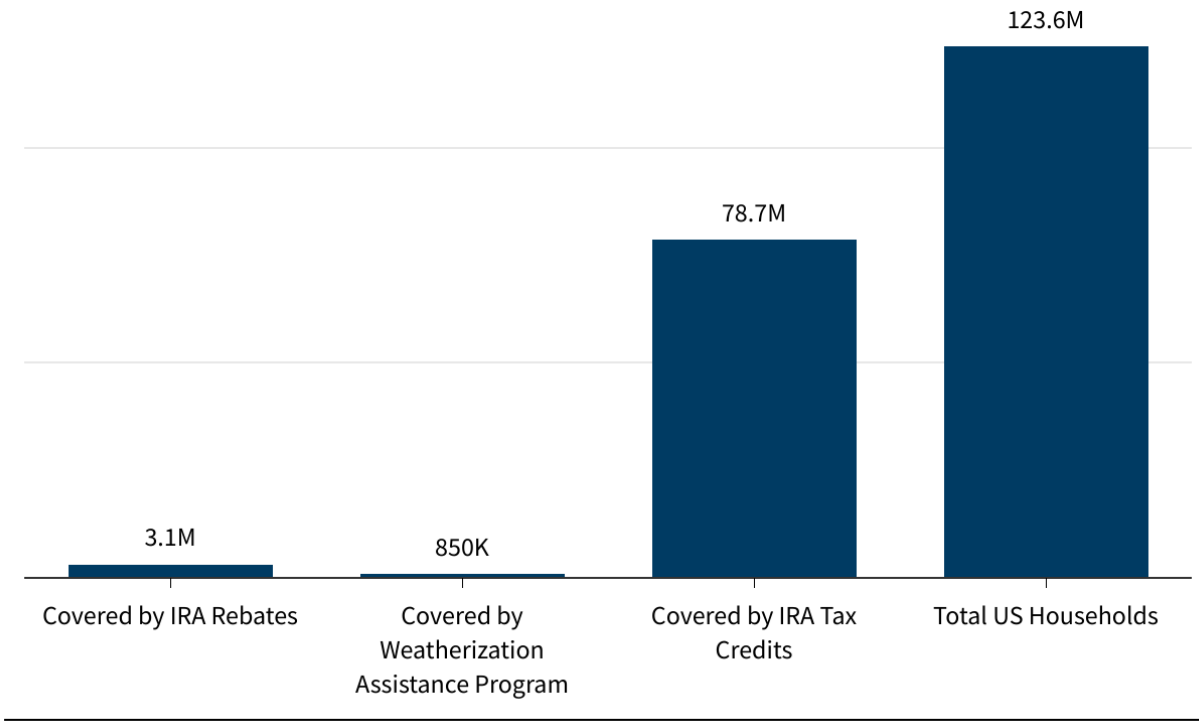
	Low Income, <80% AMI, No Tax Appetite	Middle-Income: 80%-150% AMI, Tax Appetite	High-Income: >150% AMI, Tax Appetite
Clean Energy Retrofit	$ 7,160	$ 11,990	$ 16,482
Fossil Fuel Retrofit	$ 12,851	$ 14,790	$ 14,790

How Many Houses Can Current Federal Funding Retrofit?

Existing programs do not have the funding or program design to reach every resident. Twenty-six million low-income households burn fossil-fuels and will need home upgrades. The reach of major programs is quantified as follows:

- Many residents are eligible for some level funding through their utility; however, program budgets will need to prioritize household upgrade measures that align with state and program goals.
- Over the next 10 years, approximately 4 million or more low-income comprehensive retrofits (~4% of US households) are possible between the weatherization assistance program and the IRA rebates, assuming rebates are only targeted at low-income communities.
- The federal tax credits present a unique opportunity because, while there are annual limits for individuals, a household may access the 25C tax credit each year if applicable upgrades are completed until the program expires in the early 2030s. About 60% of US households (~72 million households) are eligible to fully access them.
- Approximately 6 million households receive utility bill and weatherization assistance from the Low-Income Home Energy Assistance Program (LIHEAP) each year, approximately 5% of US households.
- There are also several new financing resources under development, federal loan programs include the Energy Efficiency Revolving Loan program, Greenhouse Gas Reduction Fund, and Single Family Housing Repair loan program, but they are not all available to households today. These programs will help deliver critical retrofits to many households across the country, but as some of those programs are more flexible and can be used for decarbonization efforts in other sectors, their potential was not summarized.

Exhibit 6: Estimated number of households that energy retrofit incentives could reach in 10 years



Key Barriers to Stacking Incentives

This section identifies key barriers residents and contractors may face when attempting to stack funds.

Navigating Numerous Applications Without Support: Depending on the measure and income-class, residents may need to submit up to six applications to maximize the amount of incentive funding they're eligible for. Presently, there are few comprehensive resources that help residents understand the breadth and depth of available incentives or how to apply. In addition to multiple applications, unless a resident enrolls in a low-income program, it is difficult to access technical assistance support that could help the household identify upgrade needs and navigate incentive applications.

Application Variability: The requirements for each incentive program differ, making it difficult for people to understand and meet all the requirements needed to qualify for and stack incentives. Application variability varies widely and includes:

- Performance standards: Programs across the state require different equipment performance standards for measures. For example, utility standards for a heat pump often differ from the federal rebate (ENERGY STAR standard) or tax credit standards (CEE standard).
- Various contractor lists: Numerous qualified contractor lists exist depending on the program. It is difficult for residents to understand if a given contractor allows them to be eligible for all incentives they intend to apply for.
- Income eligibility: The requirements for income-qualified programs often vary making it confusing and time consuming to apply. In some cases, qualification for one program qualifies people for others, such as TANF and WAP, which makes it easier for residents to access multiple programs.
- Unclear stacking guidance: There is little public guidance for residents or contractors to understand how and in what order funds stack, but each project may have slightly different incentive timelines depending

on scope and state, local, and utility program structure. The *National Stacking Examples* spreadsheet provides examples on the order of stacking. Providing public guidance on how to stack funds and the order to do so will make it easier for people to navigate the process.

State, Utility, and Local Incentives

In addition to federal incentives, programs are administered at the state, utility, and local level. State incentives generally include grants, rebates, tax credits, and financing or loans. Utilities often run rebate programs targeted at specific retrofit measures such as insulation or heat pumps. Finally, local entities can run rebate or grant programs, but they are relatively uncommon. To maximize the total incentives a household receives, it is critical that residents stack federal funding with the non-federal incentives. To support residents' understanding of state, utility, and local incentives, states can develop a database of available incentives. It's critical that residents understand the applicant eligibility, measure eligibility, process for applying, and stacking rules for each incentive. States must also remove any statutory barriers that block federal and state funding from being stacked.

Potential Action Items

To capitalize on the opportunity presented by IRA and IIJA, states should bring together leadership, program design, and implementation staff from critical agencies to work together and identify how existing programs interact well or poorly and the updates that can be made to better facilitate program stacking and consumer utilization ease. Critical agencies and stakeholders to bring together to coordinate, share program information, and align on implementation may include the state energy office, Department of Human Services, Department of Revenue, public utilities commissions, energy utilities, affordable housing developers, local government leaders, community action programs, advocates, energy efficiency program implementors, federal agency program officers, and more. To support a state in easing access and filling gaps in the incentive market, a few key opportunities were identified.

1. **Prioritize Funding Electric Appliances, Pre-Electrification Upgrades, and Health and Safety Repairs with IRA Rebates and Flexible Funds.**

To support households accessing whole home retrofits, state program administrators can focus existing and flexible funds on key incentive gaps in the state. In the stacking analysis completed by RMI, cold climate electric appliances, pre-electrification upgrades, and health and safety repairs are identified as critical gaps. To support these measures, program administrators should consider the following:

A. Fund electrification: Building sector energy programs that are not explicitly and clearly prioritized for efficient appliance electrification retrofits should focus on energy efficiency upgrades that drive substantial demand reductions through envelope upgrades, and then reserve mechanical equipment upgrade funds for efficient electric appliances. For example, the Home Efficiency Rebates can be used to prioritize demand reduction retrofits and any HVAC, water heating, clothes dryer, or cooking equipment upgrades that do occur via that program are reserved for efficient electric systems.
B. Leverage flexible federal funds to fill the gap: Potential funding sources include the Climate Pollution Reduction Grant and Energy Efficiency and Conservation Block Grant. Approach the IRA rebates and additional existing funds as a multiplier — not a replacement — to existing state and utility funds.

C. Facilitate access to project financing: Most existing incentive programs do not effectively interact with financing institutions to provide clear guidance to access both funding resources. State program administrators can develop partnerships with financing institutions to help bridge the financial gap when incentives aren't enough for households.

2. Make It Easy for Households to Stack Incentives.

Given the influx of new federal funding, program administrators should ensure that it is easy to access state, utility, and federal incentives. If programs are not designed to stack easily, residents will be leaving money on the table for home upgrades. Program administrators can lead their state by ensuring residents have the education and technical assistance needed to navigate the various incentives easily. State energy offices can also shape existing and incoming programs so that they stack without complication. To support stacking, state energy offices could pursue the following:

A. Publish a consumer resource on available incentives: Publicly accessible information on the available incentives and how to access the funds is critical for incentive uptake. California's Switch is On and Denver's Home Energy rebate webpages provide examples that other states could model. Any information resource should include:
    a. Stacking information on what federal, state, and utility incentives can stack and the order of stacking is critical to maximizing the incentives a household will leverage.
    b. Guidance on equipment performance standards, which vary across programs making these standards difficult for people to navigate. Clear guidance on what performance standard will allow a project to be eligible for all relevant incentives is needed.
    c. Funding at all Levels: Besides state- and utility-administered incentive programs, there are still funding sources that residents are eligible for outside that purview. Program administrators should include additional incentives, like the federal tax credits, in any stacking guidance provided on their website or in technical assistance programs.
B. Provide technical assistance: Develop technical assistance resources for contractors, manufacturers, and consumers to support accessing and understanding incentives and the published guidance. For example, California's TECH program provides technical assistance to contractors.
C. Standardize performance standards. Generally, utility, state, and federal retrofit incentives do not have the same appliance performance standards creating market confusion. For example, the Home Energy Rebates have a base performance standard of ENERGY STAR, which in some cases is a slightly lower performance standard than the IRA tax credits, which utilize CEE tiers as a reference standard. Program administrators should make clear the performance standard differences between the incentives and work to standardize them where possible. Facilitating conversations with manufacturers, contractors, and other program administrators (like the Weatherization Assistance Program) as these decisions are made can help ensure program changes are implemented smoothly.
D. Develop a state-wide eligible contractor map. Eligible contractors vary across the state and by program. Developing a map that helps a household pick a contractor, who enables them to be eligible for all incentives, will make the incentive application process easier for households. Wisconsin's Focus on Energy Trade Ally page provides a good example.
E. Consolidate applications. Currently, residents must submit numerous applications to maximize their incentives for a given upgrade.[vii] Collaborating with programs such as the Weatherization Assistance

[vii] For example, a household could apply to the Weatherization Assistance Program, utility insulation rebate, the Home Efficiency Rebate, and the Federal Residential Energy Efficiency Tax Credit to maximize their incentives for insulation and weatherization services.

Program or utility programs to develop a single application for state-wide retrofit incentives will make the process easier for applicants. The Colorado Peak webpage provides an excellent non-energy example of consolidating programs into one application.

F. Develop a replacement commitment: Build demand by establishing a replacement commitment program that educates and prepares the public to change their heating equipment at the time of replacement, based on behavior science. For example, British Columbia's Switch It Up program sends people stickers to remind consumers and contractors of this commitment and how to electrify when the original appliance fails.

3. Prioritize Underserved Communities such as Multi-Family Housing and Low-Income Residents

Many state and utility incentive programs currently allocate additional funding for low-income households. This prioritization is critical to ensure state resources are distributed equitably. In the gap analysis performed for this evaluation, RMI identified that low-income residents still need support to afford holistic home retrofits. Program administrators should continue prioritizing low-income and multifamily housing with the incoming federal funds. To support these communities, program administrators can consider the following:

A. Increase Home Energy Rebate allocation to low-income and multi-family housing: The DOE has set a floor for the percentage of rebate funds that must go to low-income and multi-family households. States can further work with communities to dedicate increased set-asides to disadvantaged communities (as defined in the program requirements). Tools such as the Climate and Economic Justice Screening Tool can support.

B. Serve households without tax appetite: The federal home energy tax credits are neither transferable nor refundable meaning residents with low or no tax appetite are unable to access these meaningful incentives. Utility and state dollars should be focused on serving households without tax appetite to address this inequity.

C. Adopt stronger tenant protections than the minimum requirements established by US DOE. For instance, states could bar building owners receiving rebates from raising rents or evicting tenants to gain higher rents for at least five years (compared to the DOE minimum of 2 years).