



# SCEP

STATE & COMMUNITY ENERGY PROGRAMS

## RECOMMENDATIONS FOR ENVELOPE-FIRST, HEAT PUMP READY HOME EFFICIENCY REBATE PROGRAMS

### Program Strategy Recommendations

The section discusses Home Efficiency Rebates (IRA Section 50121) program strategy recommendations, considerations, and resources for states pursuing an envelope-first or envelope-only program.

#### Envelope First

As a general principle, when a home is found to have a weatherization need during the home assessment, DOE strongly recommends states require that need be met before any mechanical or appliance upgrades are considered. For example, states should consider requiring all cost-effective envelope upgrades prior to the installation of efficient equipment. This is consistent with utility retrofit program best practices.

States should consider an envelope-only approach to deploying Home Efficiency Rebates (IRA Section 50121) in homes heated with natural gas, fuel oil, or propane, and then encourage these homes to use the more generous Home Electrification and Appliance Rebates (IRA Section 50122).

#### Consider a Direct Install, Envelope-Only Program

States should consider deploying a direct-install weatherization-only program with some or all its funds. This design will likely serve those who need the support the most.

This direct install strategy can leverage existing networks of community action agencies—a highly trained workforce due to decades of WAP funding—enabling a quick start and low administrative costs.

These community organizations are usually best suited to serving historically underserved segments and can help states achieve [Justice 40](#) objectives. Trusted community advisers will be critical actors in ensuring broad-based community participation. Low-income household participation should not be taken for granted, nor should it be left to chance. A weatherization strategy for Home Efficiency Rebates programs that relies on trusted and knowledgeable market actors will increase participation.

As a side benefit, this approach will give time for programs to train and ramp up the heat pump installer and electrician workforce, which are currently constrained in many areas.



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## Considerations in Choosing Heat Pumps for Water Heating, Space Conditioning, and Clothes Drying

DOE strongly recommends states avoid incentivizing projects that rely on like-for-like oil and propane furnace upgrades. In most situations, converting from oil and propane furnaces to efficient heat pumps will lower customer utility bills. For oil and propane heated homes, states should use Home Efficiency Rebates to enhance home envelopes and direct consumers to Home Electrification and Appliance Rebates for HVAC upgrades.

With respect to natural gas heated homes, while current natural gas prices may be lower than electric rates, States should use caution in allowing natural gas furnace upgrades because the long run fuel costs to consumers are highly uncertain. History shows fossil fuel prices tend to be more volatile than electric rates. Moreover, as the building sector electrifies, it is possible stranded natural gas infrastructure costs will be necessarily spread across fewer and fewer consumers, putting upward pressure on natural gas prices.

## Coordinating Between the Home Efficiency Rebates and the Home Electrification and Appliance Rebates

In consideration of the above recommendations, DOE encourages states to coordinate the design of their programs for both the Home Efficiency Rebates and Home Electrification and Appliance Rebates. Specifically, States should structure incentives, rules, and requirements to encourage fossil-fuel heated homes to access building envelope upgrades through Home Efficiency Rebates and access equipment upgrades through Home Electrification and Appliance Rebates. This will optimize bill impacts from electrification and maximize the decarbonation potential for the rebate programs.

## Incentive Design Opportunities

The Inflation Reduction Act allows considerable flexibility in how states encourage certain installations or behaviors within the Home Energy Rebates. With the goal of directing households to weatherization, DOE recommends that states consider:

- Offering higher incentives for low-income homes that achieve 20% savings through weatherization alone.
- Disallowing rebates for retrofit packages that do not include an envelope upgrade unless the home shows proof of high building envelope performance (e.g., 3 ACH 50 per International Energy Conservation Code (IECC), code-compliant insulation R-values)
- Requiring a 97% AFUE minimum efficiency level for any fossil fuel heating system upgrade.
- Providing contractor bonuses for achieving 20% savings for households with only envelope upgrades.
- Requiring any retrofit package that includes an air conditioner unit to be a heat pump.

## Maximizing Success Through Strategic Program Outreach

### Why Targeting is an Essential Element of Home Efficiency Rebates

While not all homes can achieve 20% whole-home saving through weatherization alone (at a reasonable cost), many can. The challenge is finding these homes efficiently. Audits are costly for the market (to programs, contractors, and consumers), adding time, money, and hassle for all involved. Without prescreening in some manner, programs risk needing to audit many homes before finding one that can save 20% at a cost the consumer will accept, even with the rebate defraying some or most of the costs.

An effective program will optimize the audit-to-weatherization-retrofit conversion rates. The levers in this optimization are straightforward:

- Audit the right homes (prescreen them)
- Increase sell-through (minimize cost to consumer).

### Tactics and Strategies

DOE offers the following suggestions for identifying the homes that can benefit most from envelope upgrades before onsite audit.

- Partner with local utilities to identify candidate homes and households.
  - While maintaining privacy, use billing data to identify the high users or those with high load factors. If possible, adjust for square footage and the number of occupants.
  - Consider looking for high users on low-income tariffs specifically.
- Partner with Community Action Agencies to understand the local building stock and the need for weatherization.
  - Older homes tend to be less energy efficient due to dated construction techniques, lack of insulation, and years of wear and tear.
  - While maintaining privacy, partner with weatherization implementers to reach and serve those that have been on the waiting list for such services.
- Implement an online pre-screening questionnaire for homeowners interested in the program. Questions could include information about their home's age, size, heating and cooling system types, perceived drafts, insulation status, and comfort issues. This information can help identify potential candidates for energy audits.
- Similarly, prepare screening questions for inbound calls to the program's call center.
- Consider quick remote audits.
- Review public housing records or databases for information on building characteristics such as age, size, and construction type to help identify homes that are likely to benefit from weatherization. Consider pairing this data with utility billing data.
- Get creative:
  - Consult city nuisance lists to identify homes with repair/maintenance issues. These may be the homes that need support.
  - Coordinate with state and local programs that address environmental hazards.

- Work across agencies to identify target populations that can benefit the most. For example, agencies that support:
  - Senior citizens
  - School referrals
  - Those with in-home health aides
  - ESL/refugee households

### Marketing, Outreach, and Education

DOE offers the following recommendations to tactics to encourage broad-based participation in a weatherization-first program funded by Home Efficiency Rebates.

- Conduct outreach and education at community-based events. Engage trusted sources in the community to conduct outreach.
- Ensure marketing collateral emphasizes both increased comfort and bill savings.
- After a home weatherizes through Home Efficiency Rebates, consider mailers, emails, and other outreach to encourage heat pump and heat pump water heater adoption.
- Ask the contractor to connect the homeowner to someone (perhaps with an organization implementing Home Electrification & Appliance Rebates) to help them navigate Home Electrification and Appliances Rebate eligible purchases and choices.

### Learn More

Visit the [Home Energy Rebates website](#) to learn more information about these programs and to sign up to [receive email updates](#).

Questions about these rebate programs can be [submitted online](#) or sent to [IRAHomeRebates@hq.doe.gov](mailto:IRAHomeRebates@hq.doe.gov)