

# Digging into the Grassroots: Community Partnership Approaches to Reach Income Qualified Households

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## ABSTRACT

Community based organizations (CBOs) play a critical role in programs targeting underserved communities. These organizations have cultural understanding and relationships within their communities that allow them to reach community members much more effectively than program administrators coming from the outside can. Organizations may also be able to blend utility funding with other funding sources and services they offer in order to provide participants with a more comprehensive set of services.

Based on a review of industry literature, this paper describes how CBO engagement can provide significant benefits for energy efficiency programs, but successful engagement requires program administrators to present CBOs with a compelling value proposition for involvement. CBOs gain value from energy efficiency program engagement by providing input to ensure the program design meets the needs of their constituents; by receiving compensation to support the time and effort they put into program delivery; and by receiving guidance and technical support to enable measure delivery. The paper then presents lessons learned from a case study program working with CBOs to deliver heat pumps to income-qualified households.

## Introduction

Community engagement is an important element of income-qualified<sup>1</sup> programs. Presenting program messaging through a trusted, community voice can help to overcome a range of barriers to participation for income-qualified customers, ranging from skepticism around program offerings to difficulty understanding program materials and providing required information. When approached as a two-way relationship, community engagement can further advance goals of procedural equity, giving community members a voice in the development and leadership of the programs designed to serve them (Ayala et al. 2021).

Partnerships with community organizations provide a ready path for income-qualified programs to engage with the customers these programs seek to serve since these organizations have existing relationships in their communities. Community organizations also often blend program offerings with additional services thereby providing more comprehensive solutions to participating households.

This paper begins with a review of industry literature on lessons learned from program efforts working with community organizations. It then reviews a detailed case study of the Energy Trust of

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<sup>1</sup> Income-qualified programs generally refer to programs serving low-income households. These households are less able to engage in traditional energy-efficiency and renewable energy programs because of upfront costs, time commitments and other barriers. Income-qualified programs generally offer energy-efficiency upgrades and renewable energy installations at a higher incentive level or at no cost to the participant, and outreach or marketing more directly targeted to income-qualified households.

Oregon's No Cost Pilots, which work with CBOs to provide income-qualified households with heat pumps at no cost.

## **CBO Vs. CAA Partnerships**

This paper separates community organizations into two broad categories. The first category consists of Community Based Organizations (CBOs), which are mission-driven, nonprofit organization that work to provide one or more services or advocate on particular issues within a given community. The second category is Community Action Agencies or partnerships (CAAs or CAP agencies), which were created as part of the "War on Poverty" in the 1960's and offer a variety of services to income-qualified households, including job training, early childhood education, food assistance, and housing assistance. CAAs also implement the federal weatherization programs, including the Weatherization Assistance Program (WAP) and the Low Income Home Energy Assistance Program (LIHEAP).

The opportunity to braid the federal weatherization funding they administer with utility funding makes CAAs an attractive partner for income-qualified programs. Among the 107 Consortium for Energy Efficiency (CEE) members that provided information for the organization's 2023 Residential Low Income Program Summary, at least 43 partner with CAAs, listing them as an outreach channel (36 members), a delivery method (12 members), or both (5 members) (Consortium for Energy Efficiency 2024). A 2017 ACEEE review of ratepayer-funded programs targeting low-income households in the 51 largest cities in the United States found a similar level of coordination between utilities and CAAs, with half the reviewed programs partnering with WAP providers (Drehobl and Castro-Alvarez 2017).

This paper focuses more strongly on CBOs outside of the CAA network, a less traditional partner in the delivery of energy-efficiency and renewable energy programs. These CBOs can include Community Development Corporations; housing organizations; repair and restoration organizations, and organizations serving specific populations. While some of these organizations have dedicated federal or state fundings sources, others are grassroots organizations, led by members of their communities.

## **Industry Review**

Community-based organizations (CBOs) have become essential implementers for many energy efficiency programs due to their ability to address underserved populations, especially low-income households and disadvantaged communities. Research consistently shows that traditional utility-funded energy efficiency programs regularly fail to serve vulnerable populations, creating ongoing inequities in program access and benefits. This literature review brings together findings from recent research CBO delivery of energy efficiency programs, highlighting successes, challenges, and tools they need for effective programs and promoting energy equity.

## **Benefits of CBO Implementation**

Recent research has identified several key strengths that make CBOs uniquely positioned to serve underserved populations in energy efficiency programs. Table 1 outlines some of these benefits.

Table 1. Benefits of CBO Implementation

Benefits	Description
Established Community Trust	CBOs have a history of being present in communities as a helpful resource, with staff that are often members of the communities themselves providing services to households that traditional utility programs struggle to reach and engage. As a result, CBOs can often overcome mistrust of, or disbelief in, utility program offerings (Ayala et al. 2021; Wiseman et al. 2023).
Cultural Understanding	CBOs are often better positioned to provide culturally appropriate outreach and education than utilities, addressing language barriers and cultural preferences that go beyond simple translation of materials. This support can be particularly valuable in rural areas where messaging originating from urban areas may be viewed with skepticism (Amann et al. 2023).
Comprehensive Approach to Home Retrofits	By leveraging federal weatherization funds and other funding sources, CBOs often have the ability to take comprehensive approaches to home retrofits that address multiple housing challenges at once, rather than focusing narrowly on energy efficiency measures, although programs may nonetheless struggle to serve homes with extensive health and safety needs (Ayala et al. 2021).
Economic Benefit to Community	CBOs provide important economic benefits within their communities, particularly in rural areas where local hiring and purchasing can significantly impact regional economic development, with some CBOs primarily focused on economic community development and using community businesses to create workforce development opportunities (Chase et al. 2024).

### CBO Delivery Models

CBOs can play different roles in energy efficiency program delivery (such as community advocates and workforce trainers) but are often involved in programs by directly delivering measures. One successful model of CBO-led program implementation is PUSH Buffalo's PUSH Green program, which has served over 700 low-to-moderate income households by combining health and safety services like mold removal with energy efficiency improvements (Ayala et al. 2021). Similarly, EcoWorks Detroit's Eco-D program shows the potential scale of CBO impact, as the program has helped 57,000 residents reduce energy bills by 14% while saving \$49 million collectively.

Utility partnerships with CBOs work well when designed as true collaborations rather than one-sided transactions. A recent ACEEE report emphasized the importance of programs developing long-term relationships with their community partners that include two-way communications, gathering input from CBO partners and including them on advisory boards that have clearly defined roles, including decision-making power (Mah and Sussman 2023). Sacramento Municipal Utility District represents a model where the utility works with CBOs to share resources and refer customers (Amann et al. 2023). The Philadelphia Energy Authority's Built to Last program is an example of a "one-stop shop" approach in which CBOs coordinate between multiple agencies to provide comprehensive services including home repair, energy efficiency upgrades, and housing counseling (Mah and Sussman 2023). Sharing leadership responsibilities with community groups in this way helps program administrators ensure that community members receive tangible benefits from programs including: energy-efficiency technologies that meet their needs; outreach and engagement that resonate with the community, and economic and workforce development opportunities within the community itself (Amann et al. 2023).

## **Challenges with CBO-delivered Programs**

Despite their unique advantages, CBOs face challenges that limit their effectiveness in energy efficiency program delivery. Funding constraints are perhaps the biggest barrier, with CBOs operating under short-term funding cycles that require constant relationship rebuilding and fail to cover true program costs (Ayala et al. 2021). As PUSH Buffalo noted, while combining funds from multiple sources leads to strong outcomes, short-term funding cycles make strategies like finding compatible funding resource-intensive and time-consuming. A need to search for new funding sources or prioritize funding sources that may expire can limit CBOs' capacity to engage with energy efficiency programs.

Limited capacity poses another major challenge, as many CBOs operate with limited staffing while serving populations with high needs and conducting intensive projects. With regards to commercial buildings and multifamily opportunities, research by the National Renewable Energy Laboratory found that local organizations "lack the resources, expertise, capacity, and funding to tackle the complexity of decarbonizing commercial buildings" (Clarke et al. 2024). These organizations had insufficient labor and funding capacity to scale building upgrades. In rural contexts, these capacity constraints are particularly severe, as small CBOs "have to do it all" without backup support systems (Chase et al. 2024). Given the limited resources that CBOs face, programs have found it beneficial to compensate them for the time they spend attending meetings or events to support the program (Mah and Sussman 2023).

Technical expertise gaps create additional barriers to effective program delivery. While CAAs delivering WAP have extensive training requirements and financial support for training embedded in their funding, CBOs without experience delivering weatherization can lack the knowledge to serve homes holistically. A Penn State University white paper identified "unequal information" and "technical limitations" that put CBOs in weaker positions within collaborative networks, limiting their ability to participate as equal partners (Wiseman et al. 2023). These technical limitations are exacerbated by workforce development challenges, as CBOs face shortages of skilled workers and limited access to technical training opportunities. Coordination challenges represent another significant barrier, as CBOs must navigate federal, state, and regional programs and funds. While many CAAs excel in this area, having extensive experience blending funding and juggling eligibility criteria, other CBOs lack the specialized expertise needed to do so. A 2016 ACEEE report highlights coordination difficulties arising from different eligibility requirements between federal and utility programs, while administrative burdens from coordinating multiple funding streams can overwhelm limited CBO resources (Cluett et al. 2016). Administrative staff with expertise in blending funding sources can also be in short supply.

## **CBO Needs and Program Considerations**

Adequate and sustained funding emerges as the most basic need for CBOs, with existing literature consistently advocating for multi-year funding commitments that allow CBOs to maintain relationships and build capacity over time rather than constantly rebuilding support networks (Ayala et al. 2021). This funding must cover true program costs and compensate CBOs fairly for their community expertise rather than undervaluing their contributions in favor of larger organizations with lower costs but weaker community connections.

Capacity building support in areas like technical assistance, workforce development funding, and training programs can address CBO expertise gaps. A Penn State University Whitepaper recommends enhanced funding for workforce development and better coordination mechanisms, while noting successful models like PSE&G's training program that includes childcare and job placement services (Wiseman et al. 2023). CBOs need access to technical training opportunities and support for developing skilled worker pipelines within their communities.

Policy frameworks must be redesigned to recognize and support CBO expertise rather than creating barriers to their participation. This includes establishing centralized data management and data sharing platforms to help CBOs coordinate services and avoid duplication of effort (Wiseman et al. 2023), as well as creating accessible engagement processes with appropriate support. An ACEEE Summer Study paper describing the Energy Trust of Oregon's experience working with CBOs argues for fundamental shifts toward giving CBOs more control over energy program decision-making, allowing them to exercise greater control over program design and implementation (Chase et al. 2024).

Real partnerships with utilities and government agencies are crucial for CBO success, requiring relationships that treat CBOs as equal partners rather than subcontractors. A 2022 ACEEE report emphasized that effective engagement requires utilities to move beyond superficial outreach toward genuine community participation where "low-income community members identify their needs and [programs are] built to address those needs" (Morales and Nadel 2022). This authentic partnership approach requires utilities to share power and decision-making authority with community organizations.

Finally, successful CBO programs require recognition that community-based approaches are part of broader outreach strategies rather than standalone solutions. A study of community partnership programs in California and New York caution that "CBO outreach alone is unlikely to generate sufficient volume to sustain a program" and noted CBO partnerships work best as components of multi-channel marketing and outreach approaches (Bean and McRae 2016). However, this integration must be designed to leverage CBO strengths rather than simply adding them as participants to existing program structures.

### **Case Study: Energy Trust No Cost Pilots**

Energy Trust of Oregon co-designed a pilot with a small group of Oregon CBOs to provide ductless (mini-split) heat pumps (DHPs) at no cost to income-qualified households in 2022. Energy Trust later expanded the pilot to include ducted air-source heat pumps (ASHPs), recognizing that a significant number of eligible households would be better served by an ASHP than a DHP. Energy Trust also expanded its offerings to include heat pump water heaters in order to test a no-cost delivery model for the measure.

Energy Trust and its program management contractor recruited additional CBOs to deliver measures to their communities through the pilots. While the pilots primarily focused on single family and small multifamily buildings, some larger multifamily buildings operated by affordable housing providers (which became delivery CBOs) also received measures through the pilots.

Households eligible for pilot measures reported an income of 60% or less of the state median income or reported participation in income-qualified support programs with similar income requirements. Eligible households had electric resistance heat or an electric forced-air furnace as their primary heating source or as a backup source for a non-utility heating fuel, such as wood, propane, or heating oil.

The authors conducted in-depth interviews with seven Energy Trust and program management contractor staff members involved in pilot design and delivery. The authors also interviewed eight of the 28 CBOs that had completed projects through the pilot as of August 2024. Finally, the authors conducted a survey of 55 households that received measures through the program in October 2024.

While Energy Trust's pilots were open to both CAAs and CBOs, relatively few CAAs participated in the pilots.<sup>2</sup> Staff described a variety of reasons for this, noting, for example, that many CAAs also draw on other sources of public purpose funding and thus are limited in their ability to leverage Energy Trust funds. Pilot staff also indicated that some CAAs were not interested in single-measure offerings and were

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<sup>2</sup> Given the relatively small number of CAAs participating in the pilots and the limited number of projects they had completed, the interviews the authors conducted did not include any respondents from CAAs.

concerned that single-measure heat pump installations could limit their ability to later serve a household with more comprehensive weatherization measures.

CBOs conducted outreach and secured engagement of households, retained contractors to conduct installations, scheduled services, provided additional services to households, and followed up with participants post-installation.

**Most CBOs conducted little active marketing of no-cost measures, instead focusing on serving existing clients and relying on word-of-mouth referrals.**

Most interviewed CBO staff reported primarily delivering pilot measures to customers with whom they were already engaged. Three of the eight interviewed organizations reported more active recruitment efforts, using referrals from partner organizations and social media, newspapers, and flyers to recruit potential pilot participants. Two organizations newer to providing energy-efficiency services reported that, once they had completed a few installations through the pilots, word of mouth became the most effective form of recruitment. According to one of these CBO staff members, “It has been a little bit crazy...[the pilots have] been very minimally advertised...[but], we’re a small town, so if you do things well...that gets around really quickly.”

Participant survey responses differ from these CBO interview responses, suggesting that the minority of CBOs more actively recruiting participants may be responsible for a disproportionate share of pilot projects. Most surveyed participants (55%) reported learning about the opportunity to receive measures through the pilot from the CBO that delivered the measures, but two-thirds of participants (67%) reported they were not aware of the CBO prior to their participation. Only four of the 51 respondents reported previously receiving other efficiency measures from the CBO they worked with through the pilot.

CBOs delivering measures in large multifamily buildings were primarily housing-focused organizations that own and manage portfolios of buildings providing low-income housing. These organizations focused their pilot efforts on installing measures within their own properties – they did not recruit or work with outside buildings. Both of the interviewed CBOs of this type noted that they had more properties that could benefit from heat pump upgrades than the pilots’ budget could serve.

**Pilot participation helped CBOs expand their capacity, knowledge, and energy services offerings.**

The energy-services experience that the interviewed CBOs brought to the pilots varied, and Energy Trust sought to develop CBO capacity to offer energy efficiency measures. While one organization had 45 years of experience in the field, some participating CBOs began providing energy-efficiency services as recently as 2021. Given the pilots’ limited funding period, Energy Trust and implementation staff (subsequently referred to as pilot staff) hoped that CBOs would ultimately be able to leverage other funding sources along with Energy Trust incentives to continue providing heat pumps at no cost to their clients after the pilots’ end. According to one pilot staff member, “The theory was that, if you give them time to figure out how to run the programs, they will do that, then they will be better positioned to solve the other problem, which is how do we come up with more money?”

Another pilot staff member stated, “We want to quickly get as many CBOs capable of administering and managing projects as possible. We created this runway for folks to get the process down, so they can start delivering on measures that would be no cost...We manage that complexity internally and give CBOs the pathway to working with the community and delivering that impact.” Pilot staff further noted that building this capacity would position CBOs to be more effective partners with Energy Trust as future opportunities arise, for example through Inflation Reduction Act funding.

All of the interviewed CBOs viewed the opportunity to participate in the pilots as beneficial for their organizations. Staff from CBOs with longer histories of home repair or energy efficiency work expressed appreciation for the opportunity to increase the number of households they serve or to focus more closely on energy efficiency and energy burden reduction for their clients. CBO staff who participated in the co-design process felt they provided practical insights into the targeted community's needs and highlighted common challenges faced by other low-income housing programs. The staff expressed satisfaction with distinctive features of the pilot, notably the streamlined income verification and the exemptions process, which facilitate service to homes that might not otherwise qualify.

CBOs with less experience in energy-efficiency and home repair services described more dramatic benefits from their participation in the pilots. They built staff capacity, added institutional knowledge, and expanded their offerings. CBO staff at all levels of these organizations reported developing greater knowledge in building science, energy-efficient equipment, Energy Trust customer offerings, and the role energy-efficiency plays in mitigating climate change. CBO staff also reported that their pilot experience allowed them to get out in the community, see more homes, and more deeply understand people's needs.

Pilot staff noted that some organizations have leveraged their experience with the pilots to access other funding sources like the Portland Clean Energy Community Benefits Fund (PCEF) and funding from the Oregon Department of Energy's Community Heat Pump Deployment Program. CBO staff indicated these funding sources would allow their organizations to continue offering heat pumps to eligible households at no cost.

**Pilot support helped build CBOs staff capacity, and most planned to maintain staffing levels using additional funding sources to continue offering heat pumps beyond the pilot period.**

Pilot staff noted that the limited capacity of CBO staff to add to their workloads was a key barrier to participating in the no-cost heat pump offering for some CBOs. At the same time, pilot staff reported that hiring new staff members could be a significant commitment for a small CBO organization. According to one pilot staff member, "The ones that struggled, the biggest issue was personnel limitations. They are small nonprofits, trying to accomplish a lot, [and they] don't have a lot of extra time or people sitting around. When they try to take on something like this, it's a bunch of new work and needs to reach a certain threshold before it makes sense to hire a new person." As a result, pilot staff reported that it took approximately six months after the pilot launched before a sufficient number of CBOs could hire and train staff to bring about a notable increase in project volumes. Four interviewed CBOs reported expanding their staffing levels in response to the pilots, while two other non-housing organizations delivered pilot measures with existing staff.

CBO staff interviews suggest that staff turnover also posed challenges for some organizations implementing the pilots. Respondents at three of the seven organizations interviewed reported that turnover among staff delivering the pilots or other key staff in their organizations had caused disruptions to pilot delivery in the past year or two.

Most of the interviewed CBOs did not plan to hire additional staff in the near future, as they anticipate the end of pilot funding in 2025. However, they were also confident that they would have enough work for their current staff as they draw on funding from the Oregon Department of Energy's Community Heat Pump Deployment Program (CHPDP) or other funding sources. While the funding from CHPDP may not fully cover the cost of heat pump installations in all cases, most CBOs using the funding planned to blend it with other funding sources and to leverage their relationships with local contractors to provide households with no-cost heat pump installations. Interviewed CBOs also viewed CHPDP funding positively because it is fuel-blind, allowing them to offer services to homes heated by natural gas in addition to electricity and bulk fuels.

**The pilot facilitated participation for CBOs by providing an administrative structure for program delivery as well as training and technical support.**

The pilot provided participating CBOs with training and administrative support, including program documents and forms, training, education and technical support, and marketing assistance. An Energy Trust survey of four initial CBO partners found that Energy Trust’s project management tools (timelines, flowcharts for procedures), administrative materials (QA forms, customer questionnaire, and income charts), and marketing support had been helpful. CBOs new to energy efficiency offerings that the authors interviewed confirmed receiving training on program requirements and processes, as well as more technical topics like conducting home energy assessments and understanding heat pump technology.

One pilot staff member suggested that the pilot could further support CBOs with improved project management tools to help track project status and CBO allocations. This staff member expressed a desire for a tool that would track in real time when a project has been bid, when it is approved for installation, and the installation date, and then update the CBO’s allocation based on the project cost. According to this staff member, such a tool would “increase the transparency across all parties and help everyone track allocations and the funding.” Energy Trust entered into service contracts with some CBOs through its Community Partnerships program, which helped fund staff resources within the organizations to manage and deliver programs. Energy Trust and its PMCs have also supported organizations in applying for outside funding sources, including at least three CBOs who reported that PMC and Energy Trust staff had helped them make connections and offered letters of recommendation to support their successful applications to deliver the Oregon Department of Energy’s Community Heat Pump Deployment Program (CHPDP).

Beyond the training and resources they received, interviewed CBO staff reported working closely with Energy Trust’s implementation contractor staff in day-to-day pilot delivery. The CBOs reported that pilot staff provided good training, ease in communications, expedient follow-up, and a great deal of technical assistance on pilot requirements and limitations, heat pump technology, and irregular projects. As one CBO staff member described, “It feels like we are all part of the same team, just working towards this goal together.” Another CBO staff member stated that pilot staff “have been incredibly responsive...when we turn around and tell them about a challenge that we’re facing.” CBO staff reported that pilot staff had been willing to work quickly to resolve issues that arose during installation and to work directly with both CBO staff and installation contractors.

**CBOs leveraged other Energy Trust incentives or outside funding to cover gaps in installation costs and install additional measures, although this was more challenging for affordable housing providers.**

Pilot staff noted that CBOs serving single-family homes and small multifamily properties were successful in leveraging outside funding sources to cover any gaps in heat pump installation costs or deliver additional measures to customers. Two of the three affordable housing organizations partnered with the pilot to install heat pumps in their properties were not enrolled in the Energy Trust’s Community Partner Funding (CPF), which meant they did not have access to enhanced rebates for additional measure installations.<sup>3</sup> As one pilot staff member explained, “Maybe a few organizations had a little bit of funding they could put toward it...but mostly we were working with the cost caps of the pilot, and the affordable housing organization, which typically had no money to put in the pot.” As a result, pilot staff reported that projects in affordable housing properties required an increased level of management and negotiation with trade allies to ensure the installations could occur within the pilot’s cost caps.

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<sup>3</sup> Two of the interviewed organizations’ main work was providing housing, and one interviewed CBO provided housing units and also operated a home repair fund serving low-income customers.

Consistent with pilot staff reports, most of the interviewed CBOs, with the exception of the affordable housing providers, reported leveraging other funding sources to install attic insulation, and in some cases other efficiency measures, in homes receiving heat pumps through the pilots.<sup>4</sup> Most of these CBOs used Energy Trust's CPF to install these measures. One CBO described situations in which they were able to combine state and federal home repair funding to replace roofs and mitigate mold damage with Community Partner Funding for attic insulation and pilot funding for a heat pump installation.

CBOs with access to multiple funding streams, like CHPDP or PCEF funding also reported using those funding sources to provide heat pumps in homes that did not qualify for the pilots. Two CBOs also described strategic partnerships with CAAs. One respondent reported receiving referrals from their local WAP provider to serve some rural homes the WAP organization found difficult to reach and serve. Another reported providing information on equipment costs and rebates available through Energy Trust to customers ineligible for the pilots to provide the option for the households to fund upgrades themselves.

**Smaller and more rural CBOs had challenges working with installation contractors to deliver pilot measures, which they were largely able to address with pilot assistance.**

The interviewed CBOs varied in the number of installation contractors they worked with to deliver pilot measures. While some CBOs worked with only a small group of contractors, others worked with more than ten different installers. CBOs in more urban areas generally worked with more installers. Some rural CBOs reported challenges finding contractors to complete pilot installations, and in some cases sought assistance from pilot staff. For example, one rural CBO reported that their nearest installation contractors were 45 minutes away and were reluctant to take on pilot installations. This CBO reported that they began scheduling clients so the contractor could complete multiple installations in a single trip.

Some CBO staff reported initial challenges aligning the pilots' incentive payment processes with installation contractors' needs. While Energy Trust typically pays incentives, including the cost of no-cost heat pump installations, after the measures are installed, some contractors require an upfront deposit of 50% of the installation cost. Several CBOs reported being unable to provide this upfront funding, and had to work creatively with other funding sources, or with the general budget of their organization to provide deposits. Larger CBOs reported paying contractor costs upfront and waiting for reimbursement from the Energy Trust incentive. Both groups of CBOs reported that these upfront payments helped build trust among installation contractors and increased their willingness to work with the pilot.

A pilot staff member suggested there may be an opportunity for the pilot to use incentives to shift some of the work required to coordinate installations from CBOs to contractors. For example, this staff member suggested that contractor incentives might motivate contractors to take on the responsibility for arranging installation visits with customers, rather than relying on the CBO to make those arrangements.

**The Home Energy Assessment process became more efficient as CBOs gained experience.**

Staff well-practiced in the assessment process could typically complete the assessment and interview with the potential participant in an hour, while assessments generally took an hour and a half for those with less experience. CBOs would complete a Home Energy Assessment to determine whether, and what type of, heat pump would be a good fit for a prospective participant, identify any additional needed repairs, and verify participant eligibility. CBO staff reported that the time to complete the assessment varied depending on both staff experience and knowledge and the participants' level of trust

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<sup>4</sup> Only one of the non-housing CBOs reported that they did not install insulation or any other energy-efficiency measures along with the heat pump installations.

with the assessors. In most cases, CBOs used paper forms to collect assessment information and later entered the data into their systems to be forwarded to the PMC.

**Both CBO and pilot-led quality control processes identified installation issues, which CBOs addressed with assistance from pilot staff.**

CBO staff reported that installation contractors would generally manage communication with participants once installations were scheduled. CBO staff reported this communication was largely effective. The CBOs that were affordable housing organizations installing heat pumps in their own buildings worked directly with contractors to schedule services.

The affordable housing CBOs and two other organizations reported that their staff conduct a walk-through inspection of the home prior to submitting final photos and paperwork on the project to Energy Trust. Other CBOs reported requesting pictures and follow-up documentation from the installation contractors. One CBO performed inspections after complaints from participants and found that a contractor was installing a low-cost heat pump model with known reliability issues in order to meet the pilot's price cap. The CBO and pilot staff were able to resolve the issues customers had with these heat pumps. The manufacturer eventually improved the model quality and the CBO was able to continue installing the newer version. The frustration with the contractor installing the original model prompted the CBO to designate two main contractors to work on all their projects moving forward.

The pilots provide additional quality control on completed projects. A subcontractor inspects a sample of completed projects for the pilot. If these inspections identified any issues, pilot staff notify the CBOs and installation contractors. One CBO reported that these inspections revealed that a contractor they had hired had not been properly permitting the work. Energy Trust and implementation contractor staff worked closely with the CBO to identify jobs done by this contractor and rectify the permitting issue. CBO staff expressed gratitude for the pilot staff's assistance.

The CBOs or their contractors provided education to their clients on the new equipment and optimal operation. Contractors generally provided education onsite post-installation, while also helping residents to set their temperature preferences. CBOs operating affordable multifamily housing reported that their maintenance staff and other staff members provided training to residents on heat pump use. Administrative staff at some CBOs were also trained in proper operation of the technology. Additionally, CBO staff educated participants on other assistance programs for which they may qualify, as well as Energy Trust programs from which they may benefit.

**The program's own direct installation offering provides an opportunity for program involvement to CBOs that are not ready to deliver measures on their own.**

Implementation contractor staff identified locations in Energy Trust's electric service area with high concentrations of low-to-moderate income customers and no active community partners within a 30-minute drive. The implementation contractor then selected two areas where it would deliver no-cost heat pump measures directly through its In-Home Energy Services (IES) program. In addition to the pilot measures, the IES program offered insulation upgrades and critical home repairs when needed. Pilot staff reported that the IES program sought to work with local CBOs that were not prepared to take on the role of delivering the pilots as community partners. One pilot staff member reported that a local Community Action Agency had provided the IES program with referrals, saying, "They are buried, they continually get higher and higher volumes of inquiries that they are not able to serve."

Pilot staff reported that the IES program had encountered similar challenges to some rural CBOs, finding it difficult to find installation contractors willing to serve the rural areas the program targets. According to one pilot staff member, "There are not many contractors out there that will actually install

at those price points, especially where you are getting out in rural communities, where they have an hour drive time...every time they are on the job site.” Staff noted that the increased labor costs of serving rural areas were particularly notable for ductless heat pump and heat pump water heater installations.

## Conclusions

Meaningfully engaging with an energy efficiency program requires investment on the part of a CBO: they need to see how participation benefits their constituents and be confident that they will be able to provide program services over the medium-to-long term. Some CBOs initially had more limited engagement with Energy Trust’s pilots, with staff supporting the pilots in addition to their regular duties. Once these organizations gained experience with the pilot, they devoted more dedicated staff resources to their participation and, program staff reported, began to bring in more projects.

Programs can drive effective CBO engagement by incorporating three key CBO needs into their designs. First, the program design must **allow CBOs to see value in the program**. Programs must align with CBOs’ broader mission and speak to them in their language related to helping their community or constituents. While the specific points of alignment will vary by organization, reducing energy bills, increasing comfort, and improving home health and safety are all benefits that can align with a range of missions related to improving the lives of underserved communities. Giving CBOs a voice in program design can help to ensure that programs take organizations’ interests and concerns into account and provide this value. Programs should also compensate CBOs for the administrative and support work involved in program participation, beyond the incentives passed through to pay for program measures.

Second, programs designs should prioritize enabling CBOs **to provide services in an ongoing way**. Organizations will likely be reluctant to expand their capabilities and potentially bring on staff to deliver program services if there is a risk that the funding supporting those services will disappear. If it is not possible for programs to commit to providing longer-term funding directly, as was the case with Energy Trust’s limited duration pilots, program staff can help CBOs identify and access alternative funding sources that can be braided with program funding in the short term and allow the program to continue providing energy efficiency services without program support in the long term.

Third, programs should **support CBOs in developing the relationships and capabilities to provide program services**. CBOs may require significant guidance and support as they develop the expertise needed to manage installation of energy efficiency measures in constituents’ homes. Programs can support the development of these skills through training, providing project management support and resources, and quality assurance and control. Programs can also provide a range of engagement options for CBOs, from simply referring customers for services to fully managing and providing retrofits.

Finally, as programs engage with CBOs, it is important to consider how their offerings fit into the broader landscape of income-qualified energy efficiency offerings. For example, consistent with their missions and the structure of federal weatherization programs, many CAAs work to provide each participant with as comprehensive a set of efficiency measures as possible. More limited utility offerings can complement this approach by providing funding for certain measures, thereby freeing up resources for additional improvements. However, failure to coordinate utility-funded measure installations with federal weatherization program installations can ultimately limit the range of measures a household is eligible to receive.<sup>5</sup>

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<sup>5</sup> Federal weatherization program installations must pass Savings to Investment Ratio (SIR) cost effectiveness requirements. Installation of, for example, heating and cooling measures prior to a WAP or LIHEAP-funded project may lower household energy costs and thus reduce the SIR of weatherization measures, potentially making households ineligible for those measures.

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