

“MEET” ing Customers Where They Are

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ABSTRACT

Too often, low-income programs take a one-and-done approach. Contractors install energy efficiency measures and move on to the next home. But this approach leaves energy savings “on the table” and does not offer an effective strategy to provide follow-on weatherization services.

The Maryland Department of Housing and Community Development (DHCD) took a different approach. The DHCD wanted to test an innovative follow-up program that provides weatherization services to previous program participants through a two-year pilot by engaging in an ongoing conversation with previous low-income program participants about ways to lower their energy bills.

DHCD launched the Maryland Energy Efficiency Tune-Up (MEET) Pilot in 2019. This two-year pilot program (2019 and 2020) operated in the City of Baltimore. It expanded statewide in 2021. The focus is on offering past participants *new opportunities* for energy efficiency savings through a combination of no-cost energy efficiency upgrades, HVAC tune-ups, and behavioral tips that will lead to additional energy savings.

To add further value to the participant and expand the program's reach in the low-income and under-served communities, contractors provided information about other low-income resources available to City residents.

The paper will summarize the lessons learned from this innovative program design that seeks to develop a long-term relationship with low-income residents by re-engaging members of this population and continuing the conversation about reducing energy use and improving their homes.

Introduction

The Maryland Department of Housing and Community Development (DHCD) delivers the Low-Income Energy Efficiency Program (LIEEP) and the Multifamily Energy Efficiency and Housing Affordability Program (MEEHA). These two statewide programs are funded by ratepayers of the six participating EmPOWER Maryland utilities—Baltimore Gas & Electric, Delmarva Power, Potomac Edison, Potomac Electric Power Company, Southern Maryland Electric Cooperative, and Washington Gas Light.

LIEEP serves households using specific income-eligibility criteria within the utilities’ service territories.¹ Funding supports the installation of energy efficiency and conservation measures and health and safety repairs necessary for the respective energy measures.

In 2019 and 2020, DHCD administered a Maryland Energy Efficiency Tune-Up (MEET) pilot program in Baltimore City. The pilot aimed to provide follow-up services to customers who

¹ Income eligibility is set at or below 200% of the federal poverty level for LIEEP.

previously received weatherization measures through LIEEP within the past two years. However, as part of the statewide rollout, that period was extended to the past five years to build up a pipeline of participants (Tran & Rockwell 2022).

The unique aspect of this program is that it combines elements from two successful program designs: delivering savings through the direct installation of measures and participant engagement to achieve additional savings through behavioral changes (Cadmus & Johnson 2021).

The program offers previous LIEEP program participants *additional* ways to enhance the efficiency of their homes through minor upgrades, tune-ups to HVAC systems, and behavior change actions. The MEET pilot program activities include the following supplemental activities that were not completed as part of the initial weatherization program:

- Direct-install measures of additional qualifying measures such as lightbulbs, faucet aerators, showerheads
- Minor air sealing
- Adjustments to thermostat and water heater, and refrigerator/freezer temperatures
- Maintenance activities (e.g., replacing air filters, cleaning refrigerator coils)
- Clean-and-tunes for HVAC systems (DHCD Q3Q4 2021 Report, p. 9)

This measure list was expanded during the statewide rollout to include LED nightlights and an expanded range of HVAC repairs (Tran & Rockwell 2022).

Program Goals

The Maryland DHCD initially established a participation goal of 400 customers across the two-year pilot period, with the goal of enrolling 200 participants in the first year. The program was specifically designed to increase the number of HVAC equipment clean-and-tunes, given the sizable energy-savings residents can gain from this improvement. The clean-and-tunes improve the overall operation of the participants' HVAC system by ensuring it is working correctly. This check-up also provides gas significant savings compared to other measures installed through the program, Table 1 illustrates.

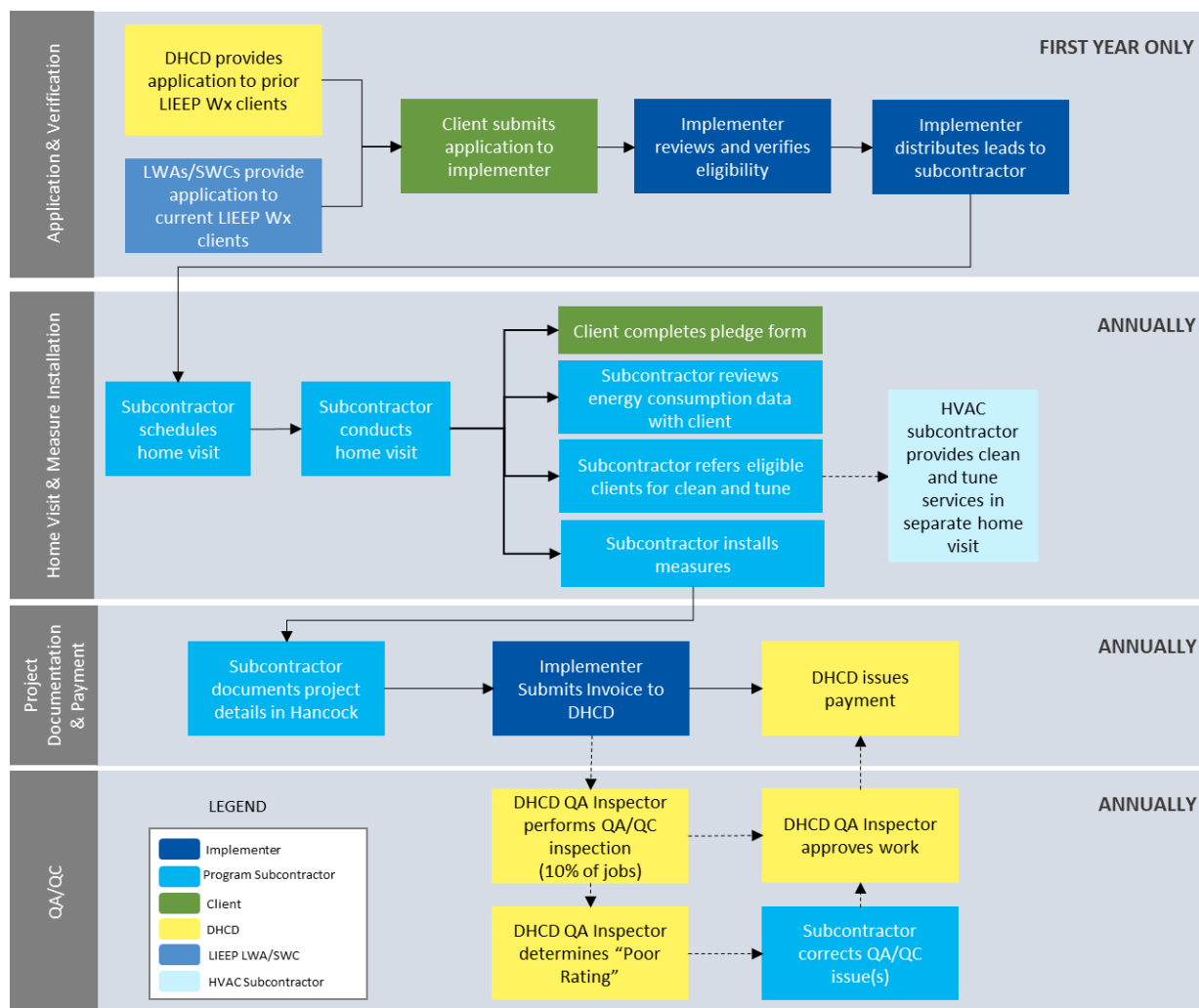
Table 1. Estimated Savings from MEET Pilot Program Actions

Measure	Electric - Per Participant Savings (per kWh)	Natural Gas - Per Participant Savings (per Therm)
Lighting	251	0
Water Heating Direct Install*	116	2.6
Tune Up	94	28.5
Smart Strips	156	0
Behavioral Action	Electric - Per Participant Savings (per kWh)	Natural Gas - Per Participant Savings (per Therm)
Program thermostat correctly winter	471	27
Program thermostat correctly summer	69	0
Lower water heater temperature	87	4
Turning off lights when not in use	18	0
Unplug entertainment electronics	103	0

Source: DHCD 2018-2019 Evaluation Report 2020

Participant Enrollment Process

Figure 1 describes the process for identifying and enrolling customers in the MEET pilot program. This program, both in its pilot and statewide format, requires close coordination with market actors including: 1) Maryland DHCD, who funds this program, 2) City of Baltimore Department of Housing and Community Development (Baltimore DHCD), who serves as the program implementer, and 3) Civic Works, a local weatherization agency that serves as Baltimore DHCD's subcontractor during the pilot program. For the statewide program, DHCD expanded the program delivery to include its current network partners: Local Weatherization Agencies (LWAs) and Statewide Weatherization Contractors (SWCs) which included both CAP agencies and private weatherization firms.



Source: Cadmus Process Evaluation 2020, p. 10.

Figure 1. DHCD MEET Process Flow Diagram

Implementer and Contractor Training

This program required specialized contractor education, as it differed significantly from traditional weatherization programs. Customer education and encouraging behavioral change, are critical elements of this program's design. Maryland DHCD and its program implementer offered additional training to participating contractors focusing on how best to engage customers during the home site visit. The training emphasized the importance of framing energy savings opportunities in terms of their potential to deliver financial savings to customers, since this type of language resonated best with customers.

In the pilot phase, the program implementer drew on its extensive experience in operating other energy efficiency consumer behavior change programs to make the client training “fun” and engaging for program participants.

This program also required that the contractor reviews energy consumption data with each client and works proactively to develop an approach that will lead to behavioral changes that will enhance overall energy savings. During the in-home visit,² the contractors engage with customers in the following ways:

- **Review the Energy-Saving Behavior Change Pledge Form:** Customers received a list of nearly 30 low/no-cost energy-saving behavior changes, organized from highest to lowest impact on energy consumption during the MEET Pilot Program application process. At the home visit, the contractor discusses any progress the customer has made with these behavior changes. The contractor will also identify energy consumption trends to illustrate the energy savings potential from these low/no-cost actions.
- **Complete the Home Visit Checklist:** The contractor documents customer information, energy consumption collected on-site, measure installations, and recommendations for additional energy-saving opportunities. Where appropriate the contractor will also install the MEET measures such as lightbulbs and showerheads, and adjust the thermostat, water heater, and refrigerator/freezer temperatures. The contractor also will determine if an HVAC system clean-and-tune is appropriate for the home and, if so, refers the customer to the program implementer to identify an HVAC contractor to complete the update.
- **Provide Additional Leave-Behinds:** Customers also receive materials that provide additional information on other income-eligible resources that are available to them such as referrals for other assistance programs available through the state. They also provide information to program participants about other low-income resources available within the city, to help reinforce the connection between this program and other low-income services (DHCD Energy Efficiency Program Operations Manual v.3-2021 162).

Figure 2 provides excerpts from the MEET participant materials that the customer receives in advance of the visit with the energy auditor. The energy auditor then uses these materials as a way talk to customers about current energy usage and their on-going commitment to reduce energy through behavioral changes going forward.

² Virtual visits were added as an option in 2021. One of the two required visits may be conducted virtually. Virtual services shall cover the same items as described in section 12.2.1 with the following exceptions: The visual inspection of the home is to be performed with the client's help; Direct install measures do not need to be performed, however can be shipped to the client. Photo documentation of installed measures is still required; DHCD *Energy Efficiency Program Operations Manual v.3-2021* pp. 162 -163.



DHCD
Department of
Housing and Community Development

Energy Savings Pledge



EmPOWER
MARYLAND

Client Name		Date:	
Address	City	Zip Code	
Energy Coordinator			

I pledge on behalf of my household to reduce our energy use and help the State achieve its goal of 50% reduction in green house gas emissions by 2030. I pledge to adapt the no and low cost practices indicated below to help save my family money and conserve energy. I pledge to share information that I have learned with neighbors and friends to encourage participations in the program.

 Print Client Name

 Client Signature

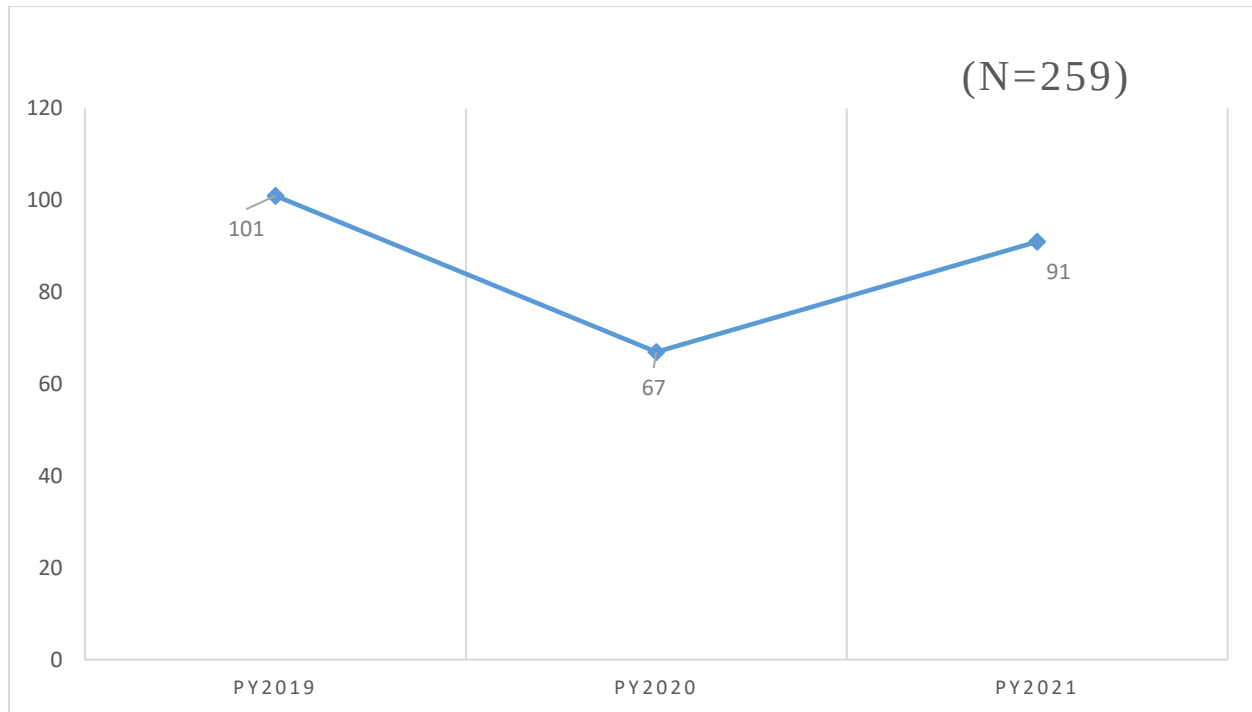
 Date Signed

Item	Household Energy Savings	Already Do	Will do
1	Wash Clothes in cold water.	☐	☐
2	Use your clothes washer and dryer only for full loads.	☐	☐
3	Don't over-dry clothes.	☐	☐
4	Clean the lint trap before every dryer load.	☐	☐
5	Set your thermostat at 68-70 in the winter and 78-80 in the summer unless medically advised otherwise	☐	☐
6	Take shorter showers (aim for 5 minutes).	☐	☐
7	Replace any light bulbs that burn out with ENERGY STAR qualified LED (light-emitting diode) light bulbs.	☐	☐
8	Turn off lights and unplug idle chargers for cell phones and other electronic devices when not in use.	☐	☐
9	Use a power strip as a central turn-off point when you are done using equipment.	☐	☐
10	Maintain distribution system; check ductwork return grille free from debris or furniture covering for house to be properly balance.	☐	☐
11	Install CO monitoring/fire alarms, and replace batteries	☐	☐
12	Install a smart thermostat to properly set and maintain your household's temperature while you're away.	☐	☐
13	Keep doors and windows closed when operating your heater or air conditioner	☐	☐
14	Set your ceiling fans to rotate counterclockwise (to blow air down) in the summer to create a cooling breeze and clockwise (to circulate warm air down) in the winter.	☐	☐
15	Ceiling fans cool people not rooms. Turn off the ceiling fan when no one is in the room.	☐	☐
16	Replace or clean the air filters for your heating or cooling system monthly	☐	☐

Figure 1. Examples of MEET Program Materials

Key Successes with the MEET Program

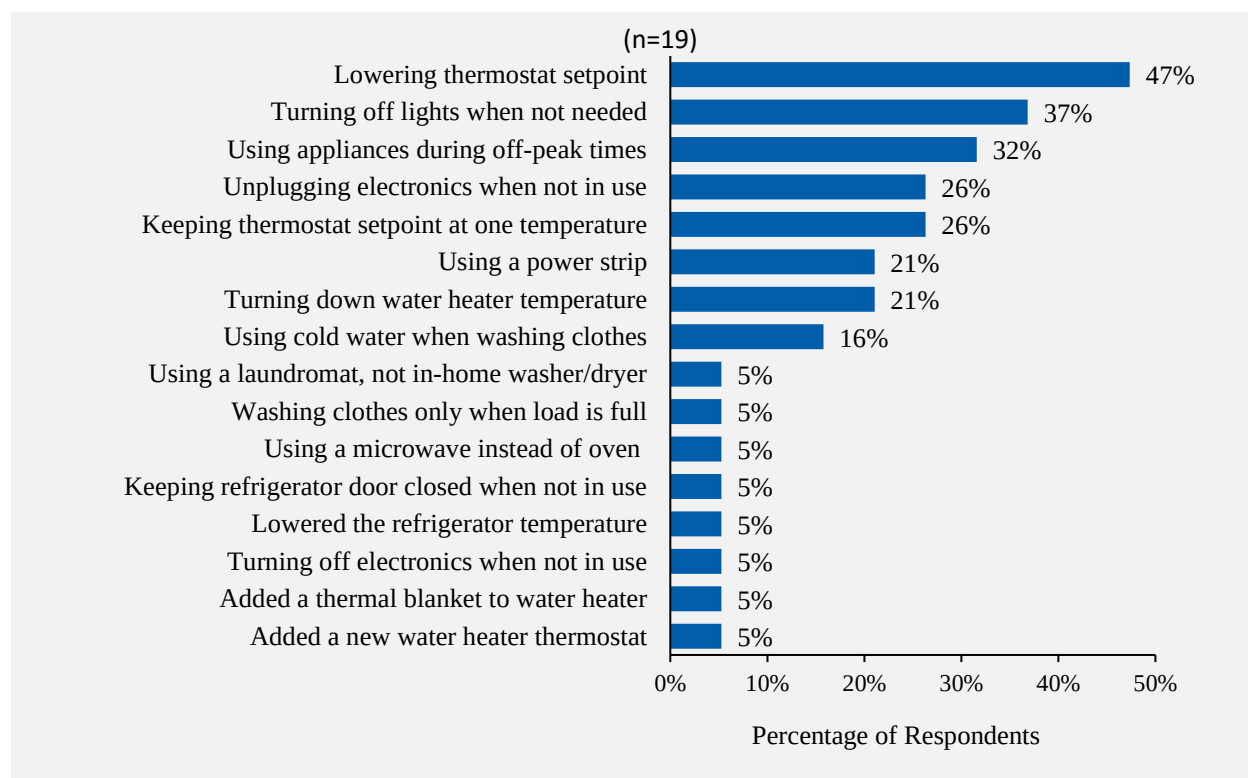
During the first year, the MEET pilot enrolled 101 participants. Unfortunately, the pilot's timing coincided with the COVID-pandemic and operations were shut down in the first half of the second year. These shutdowns continued to affect program operations as enrollment levels dropped throughout PY2020. However, the launch of the statewide program, the addition of new network partners increased participation during PY2021, albeit at a lower than projected level. Figure 3 illustrates the three-year enrollment patterns for both the pilot program (2019-2020) and the statewide program (2021).



Sources: DHCD EmPOWER Limited Income Programs Semi-Annual Reports Q-1-Q4, 2019-2022
Figure 3. MEET Participation Rates 2019-2021

As part of the process evaluation, 19 of the 101 program participants completed a follow-up survey that gathered feedback regarding the pilot program during its first year. Qualitatively, the program was viewed positively for both the usefulness of the information provided by the contractor (87% rating it as “Very Useful”).

Furthermore, the respondents indicated that the Energy-Savings Behavior Pledge led to changes in the way they used their appliances (61%), turned off lights and electronics (68%) and adjusted the thermostat (78%) (Cadmus 2020, pp. 18-19). Figure 2 summarizes the number of participants reporting that they **completed** each recommended behavior change. Due to the relatively small sample size, these findings should be viewed as directional rather than conclusive.



Source: Cadmus 2020, p. 20.

Figure 2. Summary of Behavior Modifications Reported by Participants

Challenges with the MEET Pilot Program

As is often the case for low-income programs, sometimes customers are hesitant to participate because the program “sounds too good to be true.” Customer skepticism, along with contractor reluctance, were the two most significant obstacles to the overall success during the pilot program’s first year. These challenges are summarized next.

- Participant Confusion:** Securing customer enrollments presented the first challenge to reaching the 2019 participation goals for the MEET Program. Although the DHCD administers both programs, many customers did not understand the differences between the two program offerings. Since the LIEEP program participants no longer needed weatherization services, they were less likely to respond to the program offering. In some cases, customers had not been contacted in several years since receiving their initial weatherization services, making them more hesitant to enroll in a new and unfamiliar program.
- Traditional Outreach Methods Failed:** The pilot program had difficulty recruiting participants through traditional outreach methods. For example, direct mail messaging did not generate much participant interest. Rather, the most successful tactics required the program implementers to conduct hands-on recruiting strategies, such as telephone outreach and door-to-door canvassing. These personal outreach methods, although more expensive compared to traditional outreach methods, were ultimately successful in recruiting customers during the first program year. Although the pilot did not achieve its

initial participation goal, the pilot program now focused a more personal marketing outreach to fully engage customers where they live, rather than rely on less personal appeals.

- **Perceived “Stranger Danger:”** The program implementation contractor noted that customers were reluctant to agree to having a stranger in their home to complete additional assessments and upgrades. The COVID-pandemic further exacerbated this issue. To overcome these concerns, DHCD modified the program to allow virtual visits to replace in-home visits to maintain program participation.
- **Challenges with income-verification:** Due to a combination of staff shortages and turnover, the program implementer did not have sufficient resources to complete the income-verification tasks. Customers must be qualified to participate in the program so any delays in this qualification process created a ripple effect of delays across the entire program.
- **Lack of Willing HVAC contractors:** Many trade allies were also hesitant to participate in this pilot program because it involved completing work that typically falls outside of traditional weatherization services. The biggest concerns were for not wanting to participate were two-fold: 1) the price Maryland DHCD provided for a “clean-and-tune” was too low, and 2) the liability was too high for potentially damaging equipment during home assessments, especially refrigerator coil cleaning.

Specifically, contractors were fearful of completing certain tasks because of the risk of accidentally damaging old equipment while moving or assessing it. Furthermore, contractors were also concerned about the risk of customers experiencing problems with the equipment shortly after the assessment and blaming it on the contractors.

Contractors also complained that the price they received for the clean-and-tunes was too low, and therefore they were not interested in completing this service (Reeves et al. 2020).

Mid-Year Course Corrections

Based on early feedback from the program administrator and implementer, the DHCD staff made some critical mid-course modifications to the pilot program which included:

- **Combining targeted direct mailings** to customers in income-qualified neighborhoods with follow-up telephone calls. The program implementer reported that this two-pronged approach has been more effective in reaching potential program participants, while remaining cost effective.
- **Increasing the price paid for clean-and-tunes.** The program administrator submitted a new higher proposed price for contractors beginning in 2020.
- **Developing a “liability” waiver** for the HVAC contractors that encourages contractors to complete the “clean and tune” while reducing their overall risk. As a result, Maryland DHCD requested that contractors carefully document existing conditions before beginning any work. The program implementer also created a liability release form to assure that contractors were not found responsible for faults with equipment that they did not cause.

- **Educating the program staff and its contractors** on the overall benefits of conducting HVAC “clean and tunes” which required developing a new mindset for this weatherization measure. Eventually, the implementer found a new HVAC contractor that agreed to work for the existing clean-and-tune price for the remainder of 2019 (Reeves et al., 2020).

Program Update

In July 2021, DHCD signed new agreements with Local Weatherization Agencies (LWAs) and onboarded five additional providers for MEET. In the fall of 2021, DHCD signed new agreements with SWCs and onboarded nine more additional providers for MEET. The new network partners have completed the training and have started to implement projects in two more utility territories. With the new contracts in place with the SWCs and the MEET program training complete, DHCD expects a continued increase in MEET participation in the first half of 2022 across the state.

The DHCD staff is also streamlining the data entry for the statewide launch. Specifically, staff simplified the data entry system and assigned leads to those contractors who completed the initial weatherization work. This strategy creates continuity for the contractor and the customer and should ease program recruitment and data entry (Tran & Rockwell 2022).

Recommendations and Lessons Learned

The MEET pilot provided some key insights regarding programs that target low-income customers which DHCD incorporated into its statewide rollout of the program in 2021. These findings can provide program administrators with insights into designing similar program offerings for low-income customers and participating contractors

“MEET” customers where they live. Since this was a new program design and involved recruiting previous program participants, the program struggled to gain traction initially. However, the participation rates increased significantly once the program switched to a combined approach of direct mail and personal outreach through telephone and door-to-door contacts. This finding illustrates that low-income customers are often skeptical of programs that sound “too good to be true.” So, the program implementer must take an active role in the local community to build trust.

Engage contractors early in new program designs. This program differed significantly from traditional weatherization measures by focusing on “clean and tunes” and refrigerator coil cleaning rather than complete change-outs of HVAC equipment. Initially, the pilot program’s fee paid to HVAC “clean and tunes” based on an estimate of the labor involved. However, the participating contractors perceived this payment was too low, especially as it increased the overall liability of the contractor.

The program delivery differences created contractor hesitancy. However, by increasing the fee for the “clean and tunes” and investing in additional contractor education, the pilot could increase contractor interest and participation.

Changes to traditional program designs must be communicated early and often to existing weatherization contractors. These trade allies also need to fully understand how these program changes will ultimately benefit their organizations and the program participants.

Customers will make energy-savings behavioral changes, but a “laundry list” of possible actions is a turn-off. The initial Pledge included nearly 30 suggested activities, but the participants

only completed a fraction of these recommended actions. Currently, DHCD staff are looking for a way to shorten the Pledge for rollout in the following program year (Tran & Rockwell 2022).

Pilot Programs provide valuable feedback that ultimately leads to more successful full-scale programs. The MEET process evaluation reinforces the value of testing new program ideas and a process evaluation in the first year. This real-time feedback provided insights into the best ways to improve this pilot and thus create a successful statewide program.

Combining behavioral change with follow-up weatherization services offers provides an excellent training ground for new auditors. The ongoing labor shortage of qualified contractors continues to limit the rollout of statewide MEET activities. To overcome this barrier, the DHCD staff encourage their network partners to use the MEET program to build up entry-level auditors' skill sets and experiences (Tran & Rockwell 2022).

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