Program Protocol

The Direct-to-Renter™ Program

Developed by:

the Energy Coalition

In partnership with:

day one

Latino & Latina Roundtable of the San Gabriel and Pomona Valley

POMONA CHOICE ENERGY
THE POWER TO CHOOSE

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Program Summary and Objectives

The Direct-to-Renter™ Program is a clean energy program offered directly to renters in low-income households at no cost. The program delivers clean energy and electrification technologies directly to renter households for their personal ownership. By offering plug-in energy storage, efficient heat pump technology, energy management systems, and 120V equipment that does not require landlord approval, this program safely reduces greenhouse gas emissions while improving resilience, indoor air quality, and high heat management for low-income renters. **The following protocol provides a roadmap to expand the Direct-to-Renter program into new communities.**

Background, Need, and Market Size

The Renter Gap

Across the country, renters tend to have lower income and wealth than homeowners[1]. Approximately 88% of people with net worths below the 25th percentile rent their homes. But despite substantial improvements in energy program equity over the last decade, the majority of energy programs for low-income and underserved households are designed for homeowners. This leaves renters far behind in the energy transition.

While energy upgrade incentives are available to the owners of rental units, these programs are complicated by a misalignment of incentives: costs accrue to the landlord but benefit the renter, preventing many landlords from taking action. These barriers have limited the popularity of current programs, and participation is usually out of the renters' control or influence. And when landlords do participate, they gain ownership of the valuable new appliances or retrofitted unit, whereas the tenant owns nothing.

Growing Challenges

As extreme weather increases, many low-income renters either don't have functioning air conditioning or heating, or they use it minimally to keep utility bills low. This is a growing public health issue with implications for grid demand. With escalating extreme heat, air conditioning will become a greater necessity. Many low-income renters will purchase cheap and inefficient units to meet critical needs (if landlords don't provide alternative solutions). These inefficient new units will add more demand on the grid and will more sharply increase electricity bills compared to high-efficiency units.

By providing energy-efficient portable heat pump air conditioning and heater units, batteries to support demand response, and other electrification and air quality technologies to renters

[1] Federal Reserve's 2019 Survey of Consumer Finances

at no cost, this program can improve public health outcomes related to extreme weather, indoor air quality, and resilience.

To be clear: we believe that building-scale improvements are still essential and we do not intend this program to be a replacement for investments in the energy system infrastructure of rental buildings. Nor will this program solve the many health and safety challenges faced by tenants related to issues such as mold, lead, asbestos, or pests. But in the face of immediate, profound needs and accelerating climate risks, we believe this program is an essential component of an equitable energy transition.

Market Size

There is a sizable market for direct-to-renter clean technology programs across the US. According to US census data, renters headed about 36% of the nation's 122.8 million households, which equates to 44.2 million renter households nationwide. While many households can afford to purchase these technologies themselves, this large population represents the total potential market for plug-in appliances to meet needs for cooling, heating, improved indoor air quality, and resilience.

Nationwide, approximately 106 million people live in communities identified as disadvantaged by federal guidelines.[2] While renter occupancy in disadvantaged census tracts tends to be higher than the national average, a conservative estimate[3] shows over 15M households (> 38 million people) need financial support to access energy-efficient electrification and air quality technologies.

Roles and Responsibilities

The Direct-to-Renter program includes the following roles and responsibilities:

- **Project management lead -** Provides project oversight, leadership, fiscal management, technical design, marketing and analysis tool development, procurement and performance evaluation.
- **Community engagement lead -** Advises on program design and ensures messaging is tailored to the community, leads in-person and online outreach and engagement, acts as participant liaison, leads survey data collection, and oversees appliance delivery logistics.

[2] Executive Order 14008, Tackling the Climate Crisis at Home and Abroad, established the Justice40 Initiative, which directs 40% of the overall benefits of certain Federal investments – including investments in clean energy and energy efficiency – to flow to disadvantaged communities (DACs). DOE recognizes as disadvantaged those census tracts identified by the White House Climate and Economic Justice Screening Tool (CEJST) that meet the threshold for: 1) environmental, climate, or other burdens, and 2) an associated socio-economic burden.
[3] Using 36% renter rate and 2.5 people/household

- **Local government agency or utility partner -** Supports program outreach and engagement by promoting the program through their communication channels. Provides agency/utility logo for marketing and outreach materials to build trust in the program.

In-kind donation

What We've Learned

The program team can include other community organizations to help with various aspects of the program. For example, community food banks could play a valuable role by storing and distributing appliances to the participants. Other organizations could support with community outreach efforts.

Participant Eligibility

Identifying and Prioritizing Eligible Participants

Communities seeking to replicate this program have a range of options available to identify and prioritize eligible participants, including income qualification, residents of high-pollution areas (including those adjacent to freeways), vulnerable communities, communities recovering from natural disasters, and areas with high rates of non-English speakers.

Federal tools including EJScreen and CEJST or state-led initiatives, such as CalEnviroscreen, can combine income criteria with a variety of environmental factors to identify priority communities.

Eligibility

Key Considerations

- Another option for designating and verifying eligibility is to focus on households already enrolled in a utility income-qualified program such as CARE/FERA.
- Complex eligibility verification, such as requiring participants to share tax documents, will likely reduce sign-ups.

Program requirements

Key Considerations

Additional requirements might include:

- Participants agree to share utility bill data through Green Button or another method to allow utility cost monitoring and avoid utility data access challenges.
- Participants agree to complete follow-up surveys and recorded testimonials regarding their experience with the program and how they are using the appliances.

Technology Offerings

Baseline Portfolio Technologies

The following technology items (appliances) were selected to meet needs under growing climate change impacts for the majority of renter households:

Portable heat pump unit with combined heating/cooling function

Air purifier with replacement filters

Induction cooktop with compatible cookware set

Electric kettle

Electric slow cooker

Portable battery (2400W)

Tower fan

Smart plugs with connected energy management app and optional smart hub

Portfolio Modifications and Selection Criteria

The program portfolio of energy-efficient technologies can be modified based on desired program outcomes, which may vary by region, community, local priorities, and climate considerations.

The baseline portfolio supports the following program outcomes/benefits:

- Resilience to power outages
- High heat management
- Indoor air quality improvements, which are especially important for:
    - Areas with ongoing high levels of ambient pollution
    - Areas impacted by periodic wildfire smoke
    - Households with poor kitchen ventilation or other indoor pollution sources
- Energy bill affordability
- Greenhouse gas reduction/electrification

Additional portfolio items may be appropriate for different climate regions. Program administrators can select new technologies depending on priorities, circumstances, needs, and opportunities (e.g., the importance of heating vs. cooling, renters' access to outdoor areas for solar panels).

Criteria that should be used to evaluate and select new portfolio items include:

- Functionality
- Safety
- Portability
- Ease of installation
    - 120V operation (no electrical service panel or wiring upsizing required)
    - No approval from landlords required
- Ease of use
- Ongoing affordability, including maintenance costs (e.g., air purifier replacement filters)

Program administrators would benefit from collaborating with community-based organizations (CBOs) when identifying program priorities and portfolio design.

Community input

Key Considerations

Technology offerings should be evaluated against local climate characteristics and should consider community-specific concerns. This is an area where community input can be highly valuable. Examples include:

- In humid climates, participants may benefit from dehumidifying technologies to lower the heat index.
- Colder climates may favor heating electrification options.
- Technologies may perform differently in different climates. For example, heat pumps tend to be more efficient in climates with milder winters; portable solar panels may not perform as well in rainy climates.
- Areas subject to a higher number of power outages, such as Public Safety Power Shutoff (PSPS) events due to wildfires, may have an increased interest in resilience technologies such as portable batteries.
- If a program offers portable batteries, battery sizing should be considered. Larger batteries will be more expensive but can provide greater resilience benefits, especially if paired with other technologies like portable HVAC air conditioning units or portable solar panels.

Portfolio Cost

The total cost of the baseline portfolio technologies is between $3,500-$4,000 (excluding volume discounts). Program administrators can choose to provide a standardized portfolio to all participants, or allow participants to rank their preferred appliances and provide their top choices up to a specific cost cap. Cost caps should be carefully calculated to include essential components. For example, the increased utility costs (and grid impacts) from large appliances like air conditioning can be mitigated through the use of battery storage, in which case the cost cap should be sufficient to cover at least a large appliance and a battery.

Cost saving

Key Considerations

Large scale programs can leverage volume discounts to bring down the cost of individual appliances and maximize program budget.

Marketing, Outreach, and Engagement

Program marketing and outreach priorities include communicating program benefits, recruiting eligible participants, and gathering community input. Building trust in the program requires leveraging the local reputation and experience of an established community-based organization (CBO) to develop messaging and strategy.

Marketing Materials

The program should coordinate with the CBO partner to develop the following outreach and engagement materials:

- Brand and style guidelines to create a cohesive look and feel that resonates in the specific local community
- Recruitment materials (fliers, social media content, webpage content)
- In-person and online sign-up materials
- Appliance educational materials (i.e., an appliance catalog with photos, descriptions, and specifications)
- Other promotional swag (e.g., shirts for the program team and participants).

All materials should be translated into relevant community languages and should include the logos of the partner city, CBOs, and the program lead to build trust in the program's legitimacy.

Outreach and Engagement Channels

Partner CBOs should lead community engagement and outreach to recruit participants via the following channels:

- Community events/tabling
- Social media posts
- A program website or webpage for education and participant sign-up
- A landing page on the city/utility partner website
- News articles posted on the city/utility partner news page

If interest exceeds the program's capacity to serve applicants, a randomized selection process could be deployed to ensure fairness. Sharing the randomized process with applicants provides maximum transparency. Program marketing and application materials should clarify that participation is subject to program funding availability

Marketing expansion

What We've Learned

Strategies to consider in scaling up marketing and engagement efforts for larger programs:

- For the post-program evaluation surveys, consider offering gift card incentives to engage participants
- Identify enthusiastic participants who can serve as program promoters in their community
- Provide wraparound services that address health, safety, social, and economic concerns
- Use an array of diverse strategies such as presentations, interactive workshops, demonstrations, pop-up tables, direct mailers, door-to-door outreach, and canvassing

Program Operations/Logistics

Technology Ordering and Delivery

The ordering and delivery process can be highly time consuming, but can also provide an opportunity to connect with participants, collect important baseline information, and develop trust between residents and the program team.

Key Considerations

- The best procurement approach will vary depending on your program size and community circumstances.
- The benefits and drawbacks of various procurement approaches are detailed in the table below.

Approach	Pros	Cons
1. Centralized ordering by Project Lead. CBOs partner with other local organizations to assist with delivery	• Maximize community engagement in smaller-scale programs • Leverage partners' existing logistics infrastructure and transportation, if available, to store and deliver items.	• Time-intensive • May not have sufficient resources available in all communities

Approach	Pros	Cons
2. Online utility marketplaces such as Enervee	• Allow participants to order appliances themselves • Convenient interface displays appliance options, applies rebates, and allows participants to arrange their own deliveries • May work best for larger-scale programs • Potential for volume discounts	• Will likely require participant utility account information, which could be a barrier • May not offer white glove delivery • Reduced connection between participants and CBOs, making demographic data collection more challenging
3. Online retailers, such as Home Depot, that offer white glove delivery	• Reduced risk of incorrect delivery/installation with white glove delivery • Potential for volume discounts	• White glove delivery may be less cost-effective

If using the first approach, participant enrollment should be followed quickly by outreach from the CBO via texts or phone calls in the participants' preferred language to confirm their appliance selection (if options are being provided), address, and delivery details.

With any of these approaches, it is important to consider how customer service will be addressed and who will be responsible if appliances are stolen, damaged, or otherwise delivered incorrectly.

Measuring Outcomes

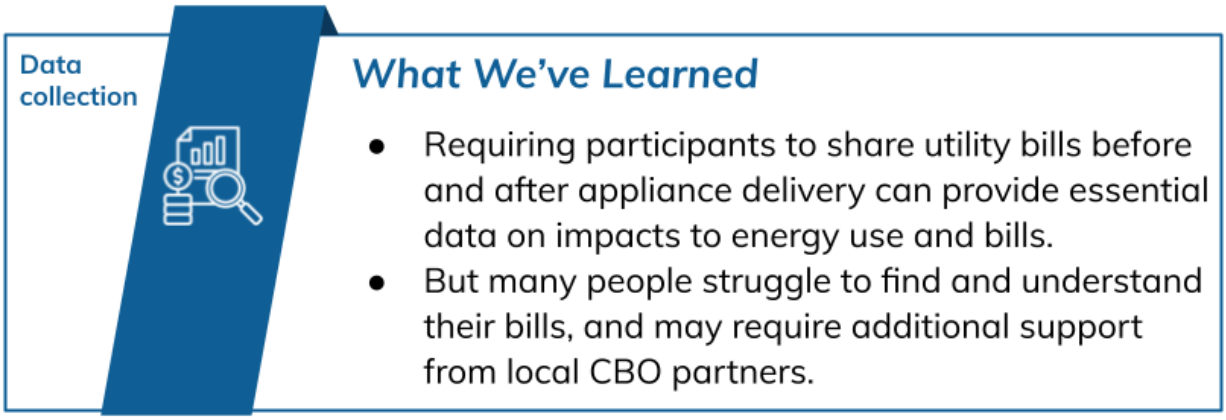
Participant Surveys

The program should conduct multiple surveys in relevant community languages to assess participant experience and program impact.

1. A baseline survey should be conducted with participants upon receipt of appliances. The survey should collect household demographic information, home characteristics, energy bill data, and feedback on participants' priorities prior to receiving the appliances.

2. A follow-up survey should be conducted three to six months post-delivery to collect feedback on the technologies, including frequency of use, level of satisfaction, impact on electricity bill (if applicable), and any problems integrating items into their rental home.

The combined data from these pre- and post-delivery surveys will help refine the technology portfolio, identify gaps and successes, and demonstrate program impact.



Performance Metrics

Program metrics should include the following:

- Number of renter households served
- Number of appliances delivered
- Participant overall satisfaction
- Participant thermal comfort (before and after receiving appliances)
- Number of in-person events held and attendance
- Number of applicants
- Social media engagements
- Website visits

Where possible, an evaluation of energy use changes pre- and post-participation should also be included.

Innovation

Maximizing Participant Benefits

Many utilities are transitioning residential customers to time-of-use (TOU) rates that vary by season or time of day and are based on the cost of generating electricity. Technologies offered by the Direct-to-Renter program and technologies being considered for future program expansion can help participants manage the peak energy costs that come with TOU rates.

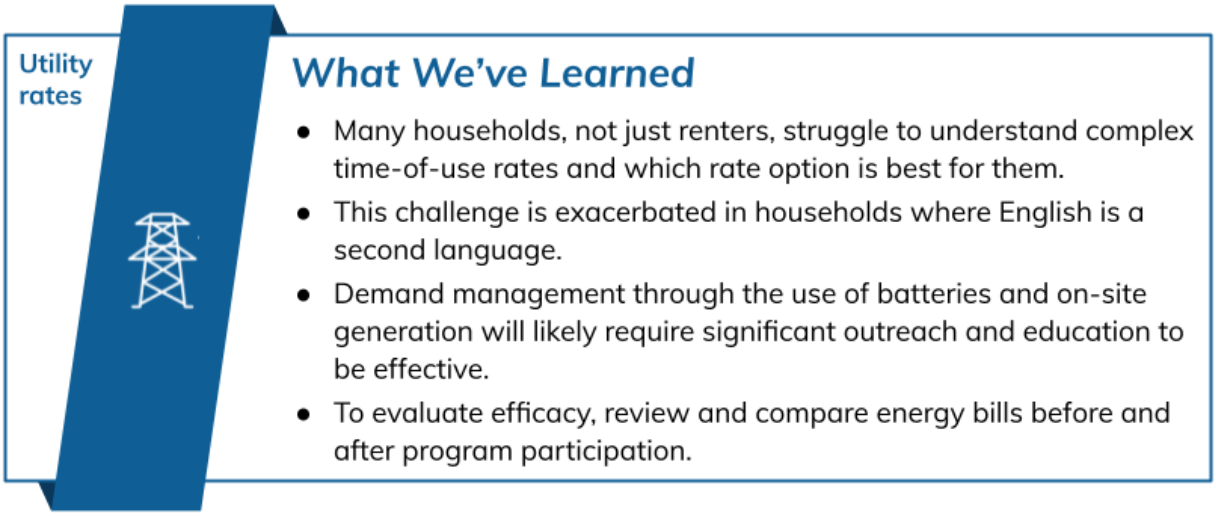
TOU rates tend to be highest in the summer. One way to address peak costs is to provide a

portable heat pump air conditioner/heater unit and a portable battery to help participants manage costs and respond to power outages. The battery can be charged when electricity costs are low and used to power the heat pump during peak pricing periods or during power outages.

Energy generation technologies (i.e., portable solar panels) could provide even greater cost savings to address peak pricing by providing a free source of battery charge[4]. This would also alleviate strain on the grid and alleviate plug load issues.

Maximizing Grid Benefits

The Direct-to-Renter program could also act as a demand flexibility program. A local utility partner could provide a portable heat pump air conditioner/heater and portable battery then enroll participants in a demand flexibility program. The demand flexibility program could incentivize participants to charge the battery during off-peak hours and use the battery to power the portable AC/heater during on-peak hours to avoid using electricity from the grid during peak times. This approach would benefit from software to manage a safe transition from grid to battery power through a user-controlled or utility-controlled management system. One example of software that provides this service is from Blip Energy.



[4] This approach will require careful evaluation of available sizes of portable solar panels and batteries, and the power requirements of the heat pump AC/heater units, to optimize the potential for these systems to work together.