

STRENGTHENING ENERGY EFFICIENCY PROGRAMS FOR LOW-INCOME COMMUNITIES



Energy efficiency programs offer an effective way to reduce energy consumption and address energy burden. These programs are particularly beneficial to low-income households, which spend a higher percentage of their income on energy bills. There are many energy efficiency programs offered by states, cities, and utility companies, but often only a subset of these programs is specifically designed for and directly benefits low-income communities. This fact sheet provides an overview of how energy efficiency programs could benefit low-income communities, and how to design efficiency programs to better serve low-income communities.

LOW-INCOME HOUSEHOLDS STRUGGLE WITH ENERGY BURDEN

Access to energy is critical to succeeding in modern society, but energy costs can be particularly burdensome for households with low incomes. These households face a higher “energy burden” since they spend a higher percentage of their income on energy bills. Low-income households face a median energy burden that is more than twice that of the median household.¹ Spending more on energy means these households have less to spend on non-energy goods and services, which can directly impact their well-being as well as the vitality of a community.

In general, low-income residents live in buildings that are older and less efficient, and use older and less efficient appliances. Both of these lead to higher energy consumption and higher energy bills. While there are bill assistance programs that can help address the immediate burden of high energy bills, the long-term solution is to reduce energy use through efficiency measures. Energy efficiency improvements can help reduce the amount of energy used and energy cost while simultaneously improving the quality of life for residents. Moreover, energy efficiency is an effective way to decrease air pollution from power plants, improve public health, improve grid

resilience during periods of peak electricity demand, and create jobs in the building and energy sectors.

HOW TO ASSESS ENERGY EFFICIENCY PROGRAMS FOR LOW-INCOME HOUSEHOLDS

There are many energy efficiency programs offered by states, cities, and utility companies, but only a subset of these programs is specifically designed for and directly benefits low-income communities. Weatherization programs are likely the most common type of energy efficiency programs for low-income households. Typically directed at improving the building envelope and heating systems, weatherization programs, on average, help save participating households about \$283 a year in reduced heating and cooling costs.²

Most energy efficiency programs are not specifically designed for low-income communities but could still benefit these households. And many of these programs could be modified to better serve low-income communities. Given this variety, policymakers may not be aware of the full extent of energy efficiency programs that could benefit low-income households.

A landscape analysis can help determine if low-income households have accessible energy efficiency options and

whether the available programs succeed in their aims. C2ES undertook a landscape analysis for the Kansas City region.³ Like our effort, an assessment should:

- **Identify existing energy efficiency programs offered by the state, city, and utility companies.** In regions like Kansas City with many jurisdictions, there can be significant differences in the number and type of programs available to different populations separated by just a few miles, or even blocks. Jurisdictions can learn from and complement each other's efforts.
- **Categorize programs by type and relevance to low-income communities.** Categories can include energy standards, benchmark and reporting, technical assistance and education, weatherization assistance, rebates, tax incentives utility programs, public ordinances, and government building upgrade program. Programs can also target residential, commercial, industrial, municipal, university and college, school, hospital, and other buildings. Some programs will be specifically targeted at low-income households, while others may have relevance to the community. Some programs will not be accessible to low-income communities. Dividing the programs into these categories allows for a gap analysis.
- **Determine program participation, especially among low-income communities.** While a qualitative assessment of program availability can be useful, data collection on activities can yield significantly more information about the effectiveness of programs in reaching low-income households. Demographic data on the uptake of programs can demonstrate whether low-income householders are using programs targeted to them or other available programs. Geographic distribution of projects can illustrate whether public sector energy efficiency programs are reaching low-income communities. Data must be publicly available and easily accessible to determine participation.
- **Allow for comparison of program cost (and budget) with resulting energy savings.** A cost-benefit analysis is substantively important to determining the effectiveness of any program. Energy efficiency programs are designed to achieve societal cost savings by avoiding resource waste. Keep in mind, however, that reducing the energy burden on low-income households may achieve policy objectives

beyond cost savings.

Program managers should use this analysis to help evaluate program effectiveness and uncover broader trends in the local energy efficiency arena. This information can help efficiency providers and local leaders decide if existing programs can and should be made more accessible or attractive (e.g., through targeted outreach) to low-income residents, or if new programs could fill identified gaps or address persistent hurdles.

STRENGTHENING ENERGY EFFICIENCY PROGRAMS TO REDUCE ENERGY BURDEN

In response to the challenges low-income households face in accessing energy efficiency programs, managers around the country are incorporating multiple strategies to identify and address barriers to participation. These strategies can also be used to develop programs that better serve low-income communities, such as:

- **Centralized program tracking, reporting, and evaluation.** Adhering to the adage, "you can't manage what you don't measure," leading states have developed uniform metrics and reporting for their energy efficiency programs. Minnesota uses the Energy Savings Platform, which serves as a central repository to track and report energy savings of 2,200 energy efficiency programs run by 184 utilities.⁴ This platform could be used to evaluate the effectiveness of existing programs and to potentially identify areas of need within communities, such as low-income households.
- **Understanding building energy use.** Buildings in low-income communities tend to be older and less efficient, which may provide unrealized opportunities to reduce operating costs and improve the quality of life for tenants. One strategy to address this is through city-led energy benchmarking and reporting initiatives that include multi-family housing. Building benchmarking programs are intended to provide a metric for assessing whether a particular sector or building type need improvement. Making this information accessible to the public can provide transparency and help identify priority areas for action and investment. More than 25 cities, including Kansas City, Missouri, have implemented benchmarking and reporting programs.⁵ In February 2017, St. Louis enacted a benchmarking and reporting program based on

the Kansas City program.⁶

- **Well-designed education and outreach.** Education and outreach are important components to increasing participation in energy efficiency programs. In Michigan, Consumer Energy piloted a Building Blocks program that directly rewarded customers with incentives (e.g., gift cards, prizes) for participating in energy education workshops and energy coaching follow-ups. The pilot resulted in full participation among participants for many self-installed measures (e.g., energy efficient light bulbs, aerators, showerheads, pipe wrap, and window wrap).⁷ Moreover, coordinating with local organizations that are trusted messengers (e.g., churches, community centers, and local energy non-profits) to introduce and promote the energy efficiency program can play valuable role in generating buy-in among residents.
- **Providing energy-efficient appliances as add-on measures.** Low-income households often have older and less efficient appliances—which often cost more to operate—and are less likely to purchase new ENERGY STAR appliances. ENERGY STAR appliances could be part of add-on measures to a state’s weatherization assistance program. Efficiency Vermont supplements the state’s weatherization program by providing funding for energy efficiency measures (e.g., ENERGY STAR refrigerators and washers; lighting; ventilation fans; and smart power strips).⁸
- **Combining home repairs with weatherization.** Often building repairs are needed as a prerequisite to weatherization assistance. For instance, roof repairs not directly related to efficiency improvements are normally outside the scope of weatherization assistance programs but are essential prior to adding additional insulation. The cost of repairs can be a barrier to weatherization assistance. A number of programs seek to address this issue. For example, the Housing Resources of Western Colorado pairs weatherization assistance with low interest loans—loan rates range from zero to three percent—for home repair services.⁹
- **Offering low-cost financing programs for low-income communities.** The lack of upfront capital could serve as a financial barrier to installing many energy efficiency measures. A number of

programs seek to address this issue. The Pay As You Save (PAYS) program allows utility customers—including property owners and renters—to pay for energy efficiency improvements over time through a tariff on the utility bill. In the first four months Ouachita Electric Cooperative started offering the PAYS program, renters accounted for a third of participants.¹⁰

No single program can meet the needs of an entire community. Instead a portfolio approach deploys different energy efficiency programs in a coordinated manner to achieve maximum benefits and reduce costs. A portfolio approach could better serve low-income communities by addressing the varying needs of the community. Different programs and strategies are often necessary to reach renters versus owners, those living in single-family housing versus multi-family housing, and to address financial and cultural barriers that may impede installation of energy efficiency measures.

Many regions across the United States offer a portfolio of energy efficiency programs that includes several of the above types of programs for low-income communities. For instance, the Energy Assistance Programs for Income Eligible Residents in Massachusetts offers a range of programs for eligible low-income households, including: weatherization assistance, free energy efficiency measures (e.g., LED light bulbs, refrigerator, freezer, window air conditioners, and heating system repair and replacement).¹¹

CONCLUSION

Energy efficiency programs can help states, cities, and utility companies address energy burden, especially in low-income communities. Most efficiency programs are geared for the public, but could still benefit low-income households. The first step in improving access to energy efficiency programs is to conduct a detailed landscape analysis to determine the effectiveness of existing programs and gaps in coverage. An analysis will help policymakers consider how to modify existing or create new programs to achieve desired outcomes. No single program can meet the diverse needs of a community. A portfolio approach to energy efficiency could better serve the diverse needs of low-income communities, and communities across the country are finding new ways to reach underserved populations.

ENDNOTES

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- 11 “Housing Energy Programs,” The Official Website of the Executive Office of Housing and Economic Development, accessed May 23, 2017, <http://www.mass.gov/hed/community/energy>. See also “MA Income Eligible Home Energy Program,” The RCS Network, accessed May 23, 2017, <http://www.masssave.com/en/residential/home-energy-assessments/income-eligible-programs/income-eligible-programs>.



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