

# Energy Savings for Low-Income Households

Assisting hard-to-reach customers with home energy management

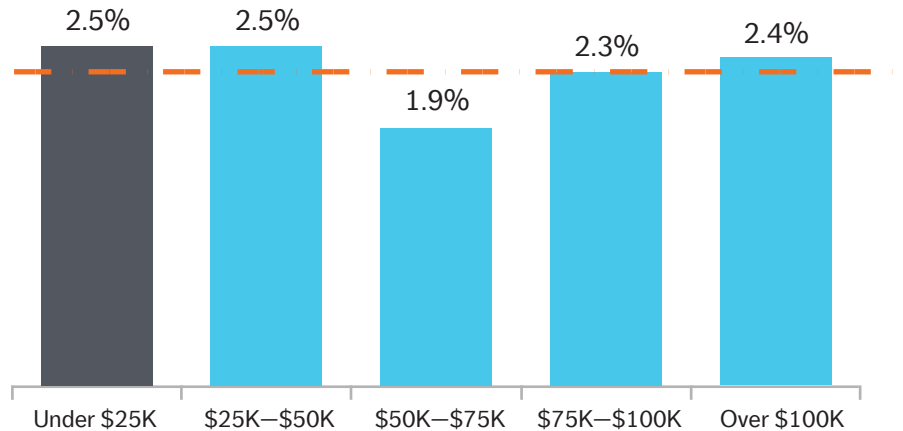
## KEY TAKEAWAYS

- » Approach lowers energy bills by US\$25 to US\$50 per household
- » Cost-effective with a TRC exceeding 1.0
- » Opower reports motivate more than 85% of households to take action
- » Reports improve participation in low-income efficiency programs by up to 60% through targeted promotion
- » Zero payback period with immediate savings from no-cost behavioral tips
- » Option to target program to the most inefficient low-income households

“The average low-income household spends 16% of its income on energy costs—more than four times the level of average households.”

— AARP, 2010

## Representative Energy Savings



Energy Savings for Different Annual Household Incomes (US)

## The Challenge of Low-Income Efficiency

Low-income households are the customer segment with the greatest economic need for efficiency savings, yet are one of the hardest to reach. Limited access to technology means efficiency websites and smart-phone applications are largely inaccessible to them. Lacking discretionary income for home improvements, these households miss hardware upgrades, and few today are taking full advantage of low-income efficiency programs.

To date, many low-income programs have focused on free retrofits and weatherization. While such programs produce substantial savings, they present high up-front costs for utilities, and only reach a small percentage of eligible households; limited reach means only a small percentage of low-income households are becoming better educated, more-active managers of their energy use.

## Opower’s Solution

Opower responds to the challenge of low-income customer engagement by reaching people the way they normally hear from their utility: through the mail. Targeted, customized Home Energy Reports deliver no-cost behavioral tips that help households manage their energy better—and save money while doing so. This solution delivers efficiency savings to more than 85% of homes, equitably spreading energy efficiency resources.

Opower reports can also be used to market other low-income programs using targeted program promotion modules. Combined with enrollment in other programs, information-based energy efficiency allows each low-income household in an Opower program to allocate more of their income to other essential needs beyond energy.

## UNIQUE CONSIDERATIONS FOR LOW-INCOME HOUSEHOLDS

- » Improved efficiency means greater comfort, fewer tough choices between heat and other basic needs
- » Few households have money to spend on efficiency investments
- » Lower annual usage increases payback period of hardware investments
- » More likely to rent, and therefore lack incentive for home efficiency improvements
- » Multi-family housing adds complexity to coordinating behavior change
- » Limited access to internet and technology adds to the communications challenge

## Reaching Low-Income Households

Though highly effective once implemented, traditional opt-in programs suffer from problems of scale: they require proactive engagement and substantial customer investments in time and/or money. As a result, even heavily marketed programs fail to reach a majority of homes—meaning they miss out on financial and energy savings.

In contrast, Opower works with utilities to identify low-income households, and deploys an opt-out program customized to motivate those homes to act. It is a highly effective approach: most households read the reports and savings are cost-effective, with total resource costs (TRCs) above 1.0.

## Improving Customer Education

Customized efficiency tips on Opower reports detail energy-saving actions homes can take with little or no investment. Specifically designed to be low-cost or no-cost, these tips are an educational tool that promotes behavior-based efficiency. Ongoing reporting and positive feedback to households sustains behavioral savings and prevents a rebound effect.

### Quick Fix

Something you can do right now

#### Set your thermostat for comfort and savings

Heating and cooling your home can account for more than 50% of your total energy use. By setting your thermostat appropriately, you can be comfortable and save energy.

When you are away from home or sleeping, change the thermostat to an energy-saving level—a 5 degree adjustment from your desired temperature is a good rule of thumb.

Consider a programmable thermostat for added convenience.

SAVE UP TO  
**\$165** PER YEAR

### Quick Fix

Something you can do right now

#### Be smart about clothes washing

Water heating accounts for about 90% of the energy used for washing clothes.

Unless your clothes have oily stains, washing with cold or warm water is effective and can be gentler on your clothes. Special cold-water detergents are available, though most detergents will work.

SAVE UP TO  
**\$50** PER YEAR

### Quick Fix

Something you can do right now

#### Turn off lights when not needed

It's a common misconception that turning a light off and on consumes energy so that you might as well leave it on. This is not the case.

While some lights do require an initial burst of energy to start, the amount is very small when compared to the energy needed to keep the light operating.

Turning off lights (and other devices too) when not needed will save you energy and money.

SAVE UP TO  
**\$35** PER YEAR

## Generating Measurable, Verifiable Savings

Opower employs large-scale experimental design to measure energy savings from report households accurately. Once a program is deployed, Opower measures the aggregate energy use of report recipients against a statistically identical control group. This control group resides in the same community and experiences the same weather, economy, and other external factors as recipient households; the differences in usage between the two groups are, therefore, energy savings due to the reports. Savings rates of 1.5% to 3.5% per home are consistent across all customer segments, including low-income households, renters, and the elderly.

## Increasing Participation in Existing Programs

Program promotion modules are prominently displayed on Opower reports to increase customer awareness of low-income efficiency opportunities. These modules can highlight local community programs, such as retrofits or appliance recycling, and explain to customers where they can obtain more information. Through these modules, Opower is able to increase participation in related programs like these by up to 60%.

For more information, please contact Opower at [solutions@opower.com](mailto:solutions@opower.com)