

The City of Fort Collins, Colorado, a Better Buildings Residential Network member, increased the number of homes that are energy efficient through the use of community-based social marketing. Strategies to maximize impact included identifying neighborhoods based on data analysis, simplifying the process for completing upgrades, and using trusted messengers for delivery of tailored messages on energy efficiency services.

OVERVIEW

The City of Fort Collins, Colorado has used community-based social marketing (CBSM) to engage residents, reduce barriers that prevent homeowners from taking action to save energy, and help reach ambitious city-wide energy efficiency goals. CBSM is a data-driven approach to changing behavior that uses social influences to reduce barriers and increase motivations for action.¹ In a pilot from the fall of 2015 to the fall of 2016, Fort Collins used CBSM concepts to double enrollment rates, convert 44% of energy efficiency assessments to upgrades, and double its average project energy savings. The pilot involved targeting neighborhoods based on the likelihood of energy savings, streamlining the energy upgrade process for homeowners, and tailoring marketing messages.

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WHAT IS COMMUNITY-BASED SOCIAL MARKETING?

Community-Based Social Marketing Steps



¹ For more information, see Doug McKenzie-Mohr, *Fostering Sustainable Behavior: Community-Based Social Marketing*, McKenzie-Mohr & Associates, www.cbsm.com.

CBSM offers a powerful method, rooted in social science, for program managers to target resources effectively while also developing community buy-in for longer-term behavior change. Similar to social marketing, CBSM promotes behavior change by decreasing barriers to action and tapping into values that motivate action. However, CBSM is distinct from social marketing in that it is not solely a marketing effort, and CBSM concepts are meant to be applied from program design (or redesign) all the way through the evaluation and improvement phases of a program. CBSM is data-driven and more targeted than social marketing, with quantifiable outcomes.

Due to its ability to effect meaningful, long-lasting behavior change, City of Fort Collins managers have used CBSM in multiple programs. For more information on CBSM and how to apply it to your program, see the Better Buildings Residential Network [Community-Based Social Marketing Toolkit](#).

CBSM IN EFFICIENCY WORKS



Select Behaviors to Promote

In 2016, Fort Collins created the Efficiency Works Neighborhoods pilot program to increase the rates of participation, achieve higher energy savings, and make the upgrade process as simple as possible for homeowners. To reach its energy saving goals, Fort Collins selected whole home upgrades as the behavior to promote due to its high potential impact on energy use and the high number of residents that had not yet implemented an upgrade.



Identify Barriers and Benefits

Fort Collins used focus groups, segmentation studies, and customer surveys to identify barriers that prevented or discouraged homeowners from implementing upgrades in the past. These barriers included

- Complex, technical decisions about scope of work
- Lack of time to meet with and select contractors
- Lack of trust in contractor proposals
- Lack of an easy, affordable way to pay for improvements.

Fort Collins also identified the benefits of whole-home upgrades that would motivate community members to complete home upgrades. These motivations included

- Higher level of comfort
- Increased property value
- Reduced energy costs.



Develop Strategies

Next, Fort Collins developed a set of strategies to address each of the barriers that prevented participation and to promote the benefits of whole-home upgrades that were important to the community, such as comfort, health, and safety. Fort Collins developed a pilot program that combined home performance programming and traditional *à la carte* energy efficiency measure installation. It used the following strategies:

- Target neighborhoods based on data analysis (Strategy A below)
- Develop tailored, community-specific messaging and marketing (Strategy B below)
- Make the upgrade process more convenient and less complex (Strategy C below).

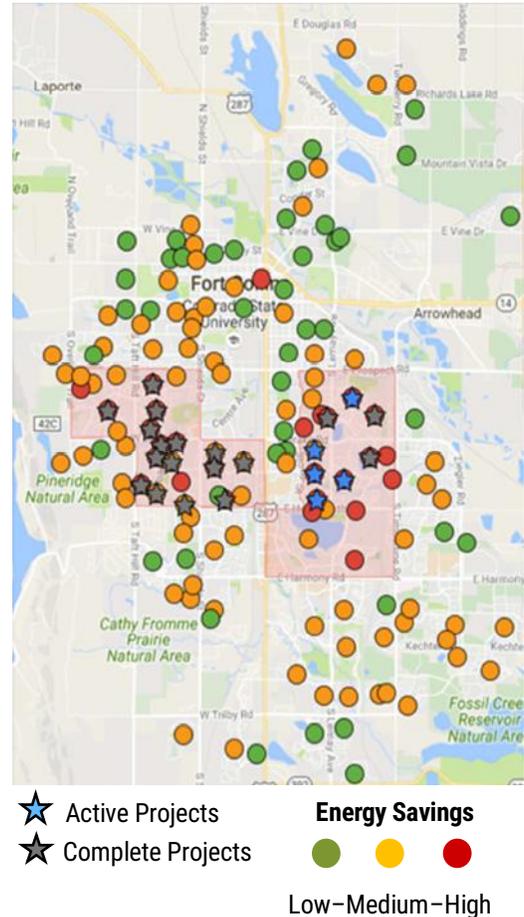
Strategy A: Target Neighborhoods Based on Data Analysis

Fort Collins used the CBSM strategy of targeting specific segments of the community to determine where to launch the pilot. To identify neighborhoods most likely to participate and save the most energy, Fort Collins analyzed data that ranked neighborhoods based on the following two types of information:

- **Potential Energy Savings:** Fort Collins ranked highest the neighborhoods that had high percentages of houses built in the 1970s and 1980s (which had large energy upgrade opportunities) and had high average monthly energy use, energy use intensity, and monthly base loads.
- **Propensity for Participation:** Next, Fort Collins identified the following characteristics of neighborhoods that made them more likely to participate in the future:
 - Household incomes at or above city average
 - Average education levels of bachelor’s degree or higher
 - A history of participation in other city programs.

This modeling was done on every neighborhood in the city, and each neighborhood was analyzed and ranked for its propensity to participate and opportunity to save. Fort Collins selected the highest-ranked neighborhoods in close proximity to one another to be targeted in the pilot using a combination of tailored messages and social marketing.

Fort Collins’ Mapping To Target Neighborhoods



Strategy B: Develop Tailored, Community-Specific Messaging and Marketing

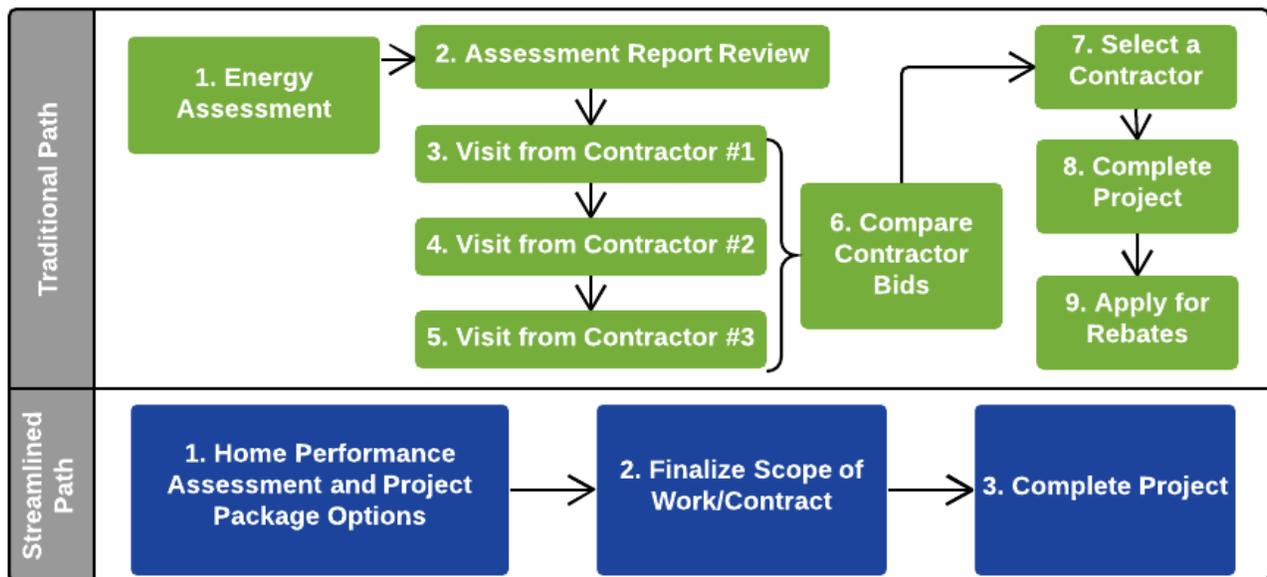
As part of the CBSM approach in the pilot, Fort Collins looked at ways to increase the marketing effectiveness for energy upgrades using behavioral science strategies. Marketing for the pilot included three touches, or contact points with potential customers. The first two methods of contact were via targeted mailing campaigns (see text box below). For the final touchpoint, Fort Collins tried and evaluated a number of communication methods with varying results, including a door-to-door porch light campaign, digital ads, the NextDoor app, and neighborhood homeowner association newsletters. Additionally, energy advisors encouraged homeowners to tell their friends and neighbors about the program and offered a gift card for referrals. The most effective methods were those that leveraged social norms and peer diffusion (key features of social marketing), including yard signs with brochure boxes and neighbor-to-neighbor presentations at open houses in the targeted neighborhoods.

Using demographic data and input from the marketing team, Fort Collins adjusted messaging and appealed to different concerns and motivations of different demographics. For example, messaging for higher-income households focused on comfort, health, safety, and savings, while messaging for lower-income households included those benefits but placed more emphasis on the affordability of upgrades and cost savings.

Strategy C: Make the Upgrades Process More Convenient and Less Complex

Fort Collins determined that in order to overcome the barriers related to time, complexity, and trust, it would need to develop a new, streamlined “path” for homeowners to complete energy upgrades. The figure below provides an overview of the streamlined and traditional paths to complete energy upgrades. Key elements of the streamlined path are described below.

Traditional and Streamlined Paths to an Efficiency Works Upgrade



Energy Advisors Serving as Single Points of Contact

In both the traditional and streamlined paths, energy advisors acted as a single point of contact for homeowners. In the traditional path, the energy advisors helped homeowners navigate through and interpret the energy efficiency assessment and upgrade proposals from contractors. In the streamlined path, these steps were not necessary, but energy advisors handled scheduling assessments; worked with customers to finalize the scope of work; routed contracts for each contractor to review; scheduled quality assurance, if needed (the program uses photo documentation); and processed the upfront rebates that were paid to contractors after project completion. *These improvements minimized the barriers of inadequate time and complex, technical decisions about the scope of work.*

Home Performance Experts and Upgrade Option Packages

In the streamlined path, home performance experts conducted three-hour energy efficiency assessments, prepared three custom packages (Good, Better, Best) for each home, and spent additional time in the home presenting the packages, costs, and answering questions. One strength of this approach was that the upgrades recommended by the expert were made by a third-party implementer, so there was no incentive for them to sell upgrades that were unnecessary or add to the price of the contract. It also helped establish trust with homeowners that the expert's company did not bid on or perform the work. Packaging options simplified the choices for homeowners. If they preferred, homeowners could instead opt for the traditional path to efficiency upgrades. *These improvements minimized barriers related to time, trust, and complexity of decision making.*

"It's interesting how impressed people are with the results when they complete comprehensive projects, saying, 'I noticed changes right away.' Then you don't have to worry as much about cost barriers and return on investment, because fixing the problems and increasing their comfort sells itself. That's when the neighbors start calling."

– Kim DeVoe, Program Manager, City of Fort Collins Utilities

Working with Contractors on Pricing

Contractors played a crucial role in standardizing pricing, which was one of the most difficult aspects of the streamlined path to develop. Fort Collins worked with trade allies to create "standardized" pricing for insulation and air sealing measures. Prior to this change, the cost of a project was unclear and highly variable.

In 2017, Fort Collins offered all Efficiency Works Tier 1 contractors (only those with the best quality assurance and customer service scores) an opportunity to participate in the streamlined path. Those interested reviewed the standardized pricing, and if acceptable, Fort Collins would add them to the rotation of contractors. They also were required to pass stringent field verification quality assurance and mentoring to be added to the rotation. *These improvements addressed the barrier related to the lack of trust in contractor proposals.*

Educating Homeowners About On-Bill Financing

Fort Collins created the Home Efficiency Loan Program (HELP) to provide an easy and affordable way for homeowners to pay for energy efficiency improvements through on-bill financing, which helped pay for upgrade project payments through energy savings on homeowners' monthly utility bills. Although HELP was not unique to the streamlined path, messaging to homeowners about the loans was an integral component of presenting the packages in the home. The report presented by the home performance expert showed an estimated net monthly cost of using the HELP loan to finance a comprehensive package of improvements, which helped ensure the homeowner's expectations of savings would be met. With HELP financing, customers could fund projects with no money down and receive financing for up to 100% of the project cost (up to \$25,000) at rates of 2.5%–4% for a term of up to 20 years. Customers simply repaid each month on their utility bill. *This improvement addressed the barrier of a lack of an easy, affordable way to pay for improvements.*

City funds for HELP loans were no longer available as of October 2016. Fort Collins then partnered with a local credit union that continued offering the HELP loan to customers in both the streamlined and traditional paths of the Efficiency Works program. Third-party interest rates at longer terms were not as attractive as the previous financing had been, and the loan qualifications were not as quick and easy. (HELP qualifications for on-bill financing were simply a minimum 640 FICO credit score and six months of good bill payment history, with no disconnect for non-payment.) The use of the HELP loan fell from 64% of projects in the pilot (through October 2016) to 13% of the

streamlined projects as of May 2017. Since the financing became less attractive, most customers have paid cash for energy upgrades, and the scopes of work have been less comprehensive.



Pilot Test Strategies

With the strategies above, Fort Collins was confident that it had combined strategies to create a faster, more streamlined process for homeowners, trade allies, and administrators, thereby reducing key barriers to the upgrade process and making upgrades more attractive to homeowners.

Fort Collins introduced the streamlined path and tailored messaging to the targeted community in a pilot project that occurred from October 2015 to October 2016. The Fort Collins Efficiency Works streamlined path pilot yielded significant results in year one. In fact, the pilot was so successful the program and contractors reached capacity just four months after the launch. To keep up with demand, six months after the launch, Fort Collins increased funding for rebates. The table above illustrates the impact that the combined strategies had on the upgrade process.

Process Improvements in Efficiency Works Pilot

Step	Traditional Path	Streamlined Path
Average Site Visits	6	2
Time from Assessment to Project Completion*	119 days	76 days
Time from Project Completion to Rebate*	88 days	43 days

* Mean time



Increased Program Reach Through Partnerships—Healthy Homes and Efficiency Works

Fort Collins looked across programs to identify internal platforms to promote Efficiency Works. The Healthy Homes program, which provides free assistance to residents to improve indoor air quality, made an ideal partner. During a home health assessment, educators used infrared (IR) cameras to show residents where their homes needed insulation or had moisture issues. Educators explained the indoor air quality and energy saving benefits from reducing air leakage from polluted sources like the attic, crawl space, and garage. Finally, educators provided a \$10 off coupon to take the next step and have an Efficiency Works energy efficiency assessment (which was offered at a subsidized rate of \$60). By presenting the energy efficiency assessment as one of the solutions to improve home environments, the Healthy Homes program was able to increase the reach of Efficiency Works at very little additional cost to either program.

For more information about the Fort Collins Environmental Services Department’s Healthy Homes program, visit the [Healthy Homes website](#).

BENEFITS, RESULTS, AND NEXT STEPS



Implement and Evaluate Strategies Broadly

The pilot was very successful in increasing program participation and energy savings in the targeted neighborhoods (see results in sidebar). Due to this success, Fort Collins began the final step of CBSM—implementing and evaluating strategies on a broad scale—in the fall of 2016. Fort Collins used the concepts of CBSM to increase the reach and efficacy of the Efficiency Works program. This involved selecting behaviors to promote, identifying the specific barriers inhibiting action and benefits associated with the desired behavior, designing a set of strategies to address those barriers and benefits, piloting those strategies, evaluating the efficacy of the pilot, and finally, implementing successful strategies on a broad scale. Although incorporating CBSM into these programs required more time up front, these efforts resulted in higher program participation rates, a greater understanding of the value of energy efficient homes, and stronger relationships with the community. In 2017, Fort Collins Utilities received the American Public Power Association Energy Innovator Award for the Efficiency Works Neighborhoods pilot of the streamlined path.

Although the pilot was cost-intensive to develop, Fort Collins determined that the increased level of participation, energy savings per project, and increased customer satisfaction far outweighed the development costs. While the new path resulted in a higher intensity of involvement for the energy advisors, the intensity was for a short duration of time. This was primarily because the advisors were using customizable packages with standardized pricing, compared to the months of advising required when comparing scope of work variations and different bid prices from multiple contractors in the traditional path. So, the total amount of advisor time and program cost per project was about the same. While more projects were completed and the overall program costs increased, the program cost per project did not.

Fort Collins has expanded the Efficiency Works streamlined path to many other neighborhoods, with homes ranging from very old homes to homes built as recently as 2005. Varying demographics have been added as well, including lower-income neighborhoods with a lower propensity to participate and those with a lower propensity for energy savings. Because of these differences, future neighborhoods may not have the same savings rates as in the pilot due to their different home characteristics and savings potential. In addition, the switch from on-bill financing from the city to a third-party financing mechanism has resulted in less attractive financing options for customers. Fort

Efficiency Works Pilot Results*

70%
GREATER THERM
SAVINGS PER
HOME



50%
GREATER kWh
SAVINGS
PER HOME



2X
AS MANY
CUSTOMERS
ENROLLED



64% OF
PROJECTS
USED ON-BILL
FINANCING



44%
CONVERSION
RATE TO A
PACKAGE



* Results are in comparison to the traditional path, which did not involve packaged upgrade options, home performance experts, and other features of the streamlined path. Enrollment is per capita. The results were also from neighborhoods targeted in the pilot due to their potential for energy savings.

Collins indicated its intent to use key CBSM strategies, such as neighborhood targeting, streamlined service delivery, and tailored communications in other Fort Collins conservation efforts, including water programs.

To learn more about incorporating CBSM into your program, see the Better Buildings Residential Network [Community-Based Social Marketing Toolkit](#). For more information about the Fort Collins Utilities' Efficiency Works program for homes, visit www.fcgov.com/utilities/residential/consERVE/home-efficiency-program/.



About the Better Buildings Residential Network

The Better Buildings Residential Network connects energy efficiency programs and partners to share best practices and learn from one another to increase the number of homes that are energy efficient.

The [Better Buildings Residential Program Solution Center](#) is a robust online collection of nearly 1,000 examples, strategies, and resources from a \$500 million energy efficiency grant program funded by the U.S. Department of Energy, [Home Performance with ENERGY STAR® Sponsors](#), and others.

To date, the Better Buildings Residential Network has completed five toolkits: Community-Based Social Marketing, Designing Incentives, Partnerships, Social Media, and Training. In addition to these resources, the network hosts weekly Peer Exchange calls that bring together state and local government agencies, utilities, program implementers, tradespeople, businesses, nonprofit organizations, financial institutions, and others to increase the adoption of energy efficiency practices, discuss similar needs and challenges, and identify effective strategies to reduce costs and increase benefits to homeowners.

For more information contact bbresidentialnetwork@ee.doe.gov or go to [our website](#).

This case study was developed with participation from the City of Fort Collins Utilities and City of Fort Collins Environmental Services Department.



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