



Knoxville, Tennessee

A White House Climate Action Champions Case Study

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Executive Summary

Like many communities, many Knoxville neighborhoods struggle with the lingering symptoms of mid-20th century urban divestment. Housing infrastructure is aging and inefficiently consumes energy, often leaving residents with utility bills too large for them to pay. In 2012, 9,670 households in the Knoxville area received assistance to pay their utility bills; other families were turned away due to lack of funding or may have gone without other basic needs in order to keep their lights on. With no systematic connection between utility assistance services and energy efficiency, many families struggle year after year with no ability to address the root cause of their high power bills, energy inefficiency.

In 2012, recognizing the potential for energy efficiency to help alleviate cycles of poverty, the City of Knoxville applied for and received a \$400,000 technical assistance grant from the IBM Smarter Cities Challenge. The grant allowed the City to develop strategies for connecting energy efficiency services with utility bill assistance and other programs serving lower income populations. IBM's expert analysis and recommendations catalyzed the Knoxville Smarter Cities Partnership, a coalition led by the City of Knoxville of over 20 community organizations seeking to improve the quality, comfort, and affordability of inner city homes through energy efficiency.

To complement this work, the City of Knoxville Office of Sustainability led the Smarter Cities Partnership in successfully applying for a Partners for Places grant to act on one of IBM's key recommendations: reform energy efficiency education through a coordinated, "high-touch" approach that empowers residents to take control of their utility bills. Through this "Savings in the House" education campaign, the City initiated a bold shift in how local partners approach efforts to help families reduce energy costs through behavior changes and no or low-cost efficiency upgrades. Since its launch in August, 2015, Savings in the House has provided direct educational outreach to an estimated 800 residents (as of November, 2015), with additional outreach activities occurring weekly.

By implementing the Savings in the House campaign alongside energy efficiency and weatherization programs, the City of Knoxville and its partners promote a long term solution that reduces the burden of utility costs while improving housing stock and avoiding the negative environmental impacts of excess energy consumption. By empowering residents to take control of their electricity bills, the City has helped develop a community that cares about energy use and efficiency, providing benefits well beyond the lifespan of the program.

Climate Action Champion

Since 2007, the City of Knoxville's Energy & Sustainability Initiative has helped make Knoxville a greener, more sustainable city – one where the economy, environment, and community can thrive today and in the future. Now in its ninth year, the Energy & Sustainability Initiative is championed by Mayor Madeline Rogero, staffed by two full-time employees in the City's Office of Sustainability, and supported by countless city staff and community partners who are committed to its success.

Knoxville's Energy & Sustainability Initiative seeks to reduce the greenhouse gas emissions associated with City operations and the Knoxville community each by 20% by 2020 relative to 2005 levels. Based on

the most recent inventory, emissions from City operations are down 12.99%, and community emissions have fallen 7.75% relative to 2005 levels.

In order to reach its community emissions reduction goal, the City must be successful at influencing the habits and actions of individual residents and businesses. To this end, Mayor Madeline Rogero and the City of Knoxville prioritize community engagement and building a culture of openness and transparency. Community Engagement is a core focus of the City's Energy & Sustainability Plan, and the Office of Sustainability works deliberately to engage citizens by providing educational resources, incorporating public input into plans, and seeking ways to encourage residents to incorporate sustainability into their daily lives.

Project Spotlight: Savings in the House

Overview & Background

The City of Knoxville's Savings in the House project is a coordinated education and engagement campaign designed to empower residents in Knoxville to reduce utility bills through energy efficient behavior and cost-effective upgrades. The project aligned and enhanced community resources in order to implement hands-on, engaging strategies that successfully motivate limited-income residents to build energy efficient habits and make low-cost adjustments to improve the comfort, quality, and affordability of their homes.

Savings in the House was created out of recognition that local energy education efforts were not effective at teaching or motivating lower and moderate income families to lower utility bills. The City and its partners recognized several key barriers to effectiveness:

- Lack of a Consistent Message: Many partners offered varying degrees of energy efficiency education; however, these materials were not coordinated and often presented inconsistent or conflicting efficiency tips, leading to reader confusion and ultimately inaction.
- Limited Visibility: Energy education was not a high profile activity. There was no recognizable "energy efficiency campaign" encouraging residents to learn about energy efficient habits.
- Heavy Use of Jargon or Overly Technical Information: Many brochures were difficult to understand, particularly for those with limited reading skills or knowledge of energy terminology.
- Overabundance of Tips: Research indicates that providing too many tips or steps for energy efficiency does not lead to action; readers become overwhelmed by the options and end up doing nothing. Some resources presented more than 20 tips.
- Focus on Expensive Upgrades: Some materials suggested actions that required significant financial investment, which many families can't afford.
- Consumer Distrust & Misinformation: Many customers distrusted or were skeptical of educational messages delivered by the local utility. However, many were also misinformed on utility rate structures and billing. This led to feelings of helplessness among many families struggling with utility costs.

Recognizing these barriers, the City developed the Savings in the House campaign to align partners around shared educational resources and programs specifically designed to reach a wider range of audiences.

Design & Implementation

Savings in the House leverages the capacity of local partners to deliver education and engagement activities that are specifically designed to be effective at reaching targeted lower income neighborhoods. In designing the strategy, the City conducted: 1) a comprehensive review of best practices for educating and engaging working class residents in energy efficiency; 2) an inventory of all existing local energy education materials; 3) a series of community focus groups to more deeply understand resident concerns and preferences.

This design process resulted in implementation of a multi-faceted education campaign centered on 5 key steps:

1. **Develop a Common Brand:** The new education campaign needed an intuitive, easy-to-remember name with eye-catching graphic treatment. Working with Shelton Group, the City led the Smarter Cities Partnership in establishing the Savings in the House name and logo, a new mark to brand all related education resources and activities.
2. **Develop Common Education Resources:** Central to the campaign was development new, graphic-oriented educational materials that would effectively communicate no- and low-cost energy saving tips to readers with very limited knowledge of energy concepts. To be effective at reaching (and motivating) target audiences, these resources avoid jargon and excessive text, focus on a limited set of activities, and reiterate emotional benefits of savings energy (i.e., avoiding waste, taking control of bills), which are proven to effectively motivate change. Key products include a 1-page handout (in English and Spanish) and a new website: www.SavingsintheHouse.com.
3. **Train Partners to Use Common Resources:** The long-term success of the campaign is contingent on local partners incorporating Savings in the House into existing and ongoing services and programs. The City's Office of Sustainability leads efforts to educate new and existing partners about Savings in the House and how campaign materials can be used in place of or alongside existing resources to educate residents about energy efficiency. Multiple partners, ranging from the local utility to the community action agency to small non-profits and service providers are already using Savings in the House in place of older, less effective materials.
4. **Host In-Person Energy Efficiency Workshops:** Community focus groups revealed strong resident interest in neighborhood-scale energy efficiency workshops hosted by trusted community organizations. Working with the Alliance to Save Energy, the City developed a Savings in the House workshop presentation that educates residents about no- and low-cost ways to save energy, introduces the concept of weatherization, and directs residents to



various resources to help with home energy upgrades. Like printed materials, the workshop is designed to avoid jargon and provide lower and moderate income residents with a strong idea of how to take control of utility bills without spending a lot of money. Although open to the public, these workshops are typically marketed to specific neighborhoods and residents who are participating in local weatherization programs. Alliance to Save Energy schedules and presents these workshops, typically working in close coordination with community organizations. Since August 2015, over 475 total residents have attended one of 40 Savings in the House workshops. Funding for the Alliance to Save Energy is provided by the Knoxville Extreme Energy Makeover program, a TVA-funded weatherization program.

5. Outreach through Peer-to-Peer Direct Engagement: Community partners hypothesized early on that engagement of working class individuals would be most effective if implemented through peer-to-peer outreach, rather than simply education materials. To test this hypothesis and the effectiveness of more intensive outreach, the City launched the pilot Savings in the House “porch light” campaign. Through this pilot, Socially Equal Energy Efficient Development (SEED), a minority-led local non-profit focused on young adult career readiness training, sends a team of trained young “ambassadors” door-to-door to engage residents in a specific neighborhood directly in conversations about energy efficiency. SEED ambassadors provide residents with a free LED light bulb and the Savings in the House brochure, and then encourage them to attend an upcoming energy efficiency workshop in their neighborhood. To date, SEED has completed three porch light campaigns. The campaign has directly engaged over 300 residents, as well as neighborhood associations, churches, and businesses. Initial results indicate that this outreach is highly effective at motivating workshop attendance; workshops preceded by a porch light campaign saw attendance between 3-6 times the overall average.

Timeline

Design of Savings in the House campaign strategy: 5 months (January – May 2015)

Design of Savings in the House brand and educational materials: 4 months (May – August 2015)

Campaign Implementation: On-going (began in August 2015)

Key Partners

The City worked hand-in-hand throughout this process with members of the Smarter Cities Partnership, particularly the Education Working Group – a subset of partners specifically interested in education efforts. These partners included representatives from the City, the Knoxville-Knox County Community Action Committee, Knoxville Utilities Board, multiple non-profits addressing housing, equity, and homelessness, a local community college, as well as multiple interested residents.

Shelton Group, a nationally recognized marketing communications firm, consulted with the City and Smarter Cities Partnership in the design of the campaign strategy and development of brand and educational materials.

As mentioned above, the Alliance to Save Energy and SEED each play critical roles in the implementation of Savings in the House workshops and door-to-door outreach.

Funding for design and implementation of Savings in the House was provided by a Partners for Places grant from the Funders' Network for Smart Growth and Livable Communities, United Way of Greater Knoxville, and the East Tennessee Foundation.

Measurement of Impact

The impact of the Savings in the House campaign is measured both qualitative and quantitatively. As implementation continues, the City and its partners will measure: 1) the number and scope of educational materials and engagement activities delivered under the campaign; 2) the number of residents directly exposed to campaign education; and 3) the number of residents participating in campaign engagement activities. Through surveys, partners will also qualitatively assess whether Savings in the House achieves the intended result of helping people feel more empowered to lower and take control of their bills. In addition, the City is specifically looking at the quantifiable impact of the porch light campaign on workshop attendance and improvements in attendees' energy efficiency habits.

Long term, the City hopes to quantify the impact of Savings in the House activities on energy consumption and costs. A notoriously trick task, the City has discussed methodologies for comparing weather-normalized bills to measure whether participation in workshops and other engagement activities is correlated with a discernable decrease in energy use.

Co-benefits

Savings in the House is a coordinated, cross-agency campaign that utilizes new and improved education and engagement resources to motivate energy efficient behavior among audiences not reached by more traditional efficiency education. Implementation continues, but early results are encouraging. In just over three months since its launch, the Savings in the House campaign has engaged an estimated 800 lower and moderate-income residents in direct, face-to-face interactions to encourage energy efficiency habits. Instead of distributing conflicting information, community agencies are offering residents a consistent message, and several agencies have begun distributing energy efficiency information for the first time as a result of access to the Savings in the House brochure.

Through this outreach, the Savings in the House campaign helps increase access among Knoxville residents to effective energy efficiency education and engagement opportunities. By creating a campaign specifically designed to engage lower income and rental markets, the project helps establish energy efficiency knowledge more equitably throughout the Knoxville community. Participating residents, armed with the knowledge and motivation to pursue energy efficiency, are better able to practice energy saving habits at home in order to improve home comfort and affordability.

Long term, Savings in the House will help families pursue and sustain energy efficient habits and improvements that increase the health, safety, and affordability of their home. As a result of this project, energy efficiency services in the community are better aligned and coordinated; education and engagement programs are more effective, and inconsistencies and duplications between agencies are eliminated.

The Savings in the House campaign plays a critical role in adding an educational/behavioral aspect to the Knoxville Extreme Energy Makeover (KEEM) program, a \$15 million initiative that will provide weatherization upgrades to nearly 1,300 low and moderate income households by September, 2017. By coupling Savings in the House education and engagement efforts with the physical upgrades offered by KEEM, the City and its partners help ensure that participating families understand how their own actions can have an impact on utility bills and are able to maximize energy efficiency savings.

Because energy efficiency reduces local energy consumption, the Knoxville and global communities will benefit from lower per capita carbon and air pollutant emissions, as 42% of power generated in the Tennessee Valley Authority's service territory is fossil-fueled.

Ongoing challenges and lessons learned

Ongoing Challenges

- **Measurement of Impact on Energy Consumption:** Implementation of the porch light campaign is on-going. Initial results indicate that this direct outreach is more effective than traditional marketing at encouraging resident engagement with energy efficiency education opportunities. Still to be measured, however, is whether this engagement actually leads to increased energy efficiency habits. The City has enlisted the University of Tennessee Sociology Department to assist in measuring the impact of the Savings in the House campaign on behavior change, but is still exploring methodologies to quantify any correlation between the campaign and reduced energy use.

Lessons Learned

- **Take the Time to Design:** Beginning with the intensive research phase, the design of the Savings in the House campaign took over 5 months. This was longer than expected, but a well-thought-out campaign with community buy-in was critical to success. By taking the time to really understand industry research, partner perspectives, and community preferences, the City and its partners were able to design Savings in the House to reflect best practice while also matching closely with community capacity and interests. Without this match, it would have been more difficult to establish consensus and recruit partners to assist in implementation.
- **Be Rigorous in Planning, but Flexible in Execution:** The Savings in the House planning phase was crucial, but equally important was taking on the mentality that unforeseen challenges are inevitable. The dynamics of the Smarter Cities Partnership allowed the City to be adaptable and respond to unanticipated roadblocks with creative solutions.
- **Partner Alignment is Critical:** The City engaged a wide variety of partners early and often in the design phase of Savings in the House. This "Education Work Group," in turn, presented the campaign to other Smarter Cities Partners in order to establish buy-in to the overall approach before beginning implementation. This early alignment helped ensure that partners were ready and willing to supplant older, less aligned educational materials with Savings in the House resources to ensure consistency of message. Partner buy-in also helps ensure that the Savings in

the House campaign continues through on-going efforts, even beyond the life of its initial grant funding.

Resources/Learning More

1. www.SavingsintheHouse.com
2. www.knoxvilletn.gov/sustainability

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Project Impact

Since launching in August 2015, the Savings in the House education campaign has:

- Hosted 40 educational workshops
- Trained 13 youth as “PorchLight Ambassadors”
- Engaged approximately 800 residents in energy efficiency education:
 - 475 Workshop Attendees
 - 300 Residents engaged through porch light outreach
 - 200 (minimum) recipients of Savings in the House materials through community fairs, partner organizations, and neighborhood associations.

Project Costs and Funding

The design and launch of the Savings in the House campaign was funded by a \$60,000 Partners for Places grant from the Funders’ Network for Smart Growth & Livable Communities, United Way of Greater Knoxville, and the East Tennessee Foundation. In addition, Savings in the House leveraged the Knoxville Extreme Energy Makeover Program (KEEM) to fund energy efficiency workshop presentations by the Alliance to Save Energy.

Project Facts

Project Duration

Savings in the House is an on-going campaign. The City initiated campaign research and design in January, 2015. The overarching strategy for the campaign was confirmed in May, 2015, and design of Savings in the House brand and outreach activities completed in August. Engagement activities began in August, 2015 and are on-going.

Project Cost

\$60,000, including consulting and design services, implementation assistance, and measurement of impact.

Project Staff Required

During design and the first two months of implementation, City of Knoxville staff committed an average of 5 hours per week to activities directly and indirectly related to the Savings in the House campaign. On-going implementation will require substantially less staff participation by the City of Knoxville.

Population Served

Savings in the House specifically targets lower income and working class families in Knoxville that have been traditionally underserved by energy efficiency education programming and resources. Direct engagement efforts have been targeted toward neighborhoods in the core of Knoxville that are racially diverse with average incomes lower than the area median.

Community Type

Municipality

Partners

Alliance to Save Energy
Community Action for Affordable Neighborhoods
East Tennessee Foundation
Funders’ Network for Smart Growth & Livable Communities
Knoxville-Knox County Community Action Committee
Knoxville Utilities Board
SEED (Socially Equal Energy Efficient Development)
Shelton Group
United Way of Greater Knoxville
University of Tennessee Department of Sociology

Tools & Resources

www.SavingsintheHouse.com

Partners for Places Grant:

<http://www.fundersnetwork.org/partnersforplaces/>