A recent study shows that the typical low-to-moderate income family in Allegheny County, the home of Pittsburgh, spent a stunning 48.7 percent of their entire 2010 household income on utility bills including water, electricity, and natural gas.

Looking closer shows that the poorest families – those that earned 50% or less than the Federal Poverty Level ($7,355 annually for a family of two) – had a home energy burden six times that of an equivalent household that earned 185% or less of the Federal Poverty Level ($27,214 annually.)

Every year, various agencies and programs aim to help those families trim that cost. Starting in 2009, the Coordinated Weatherization Campaign (CWC) program ratcheted up that annual work, delivering more home retrofits for the region, more integrated programs, and a model for how to engage a community in helping itself.

“We are trying to create a complete cycle for energy conservation – from helping those households who most need it through subsidized energy audits and retrofits, to driving growth in the retrofit market in our region. We’re concerned with everything from setting livable wages for weatherization workers and high standards for the quality of work that is done to measuring the energy reductions achieved,” said Lindsay Ruprecht, Sustainable Community Development Coordinator for ACTION-Housing, Inc., one of the key players in the CWC effort.
The Pittsburgh Foundation catalyzed the CWC collaboration into action, urging the various nonprofit organizations, utility companies, for-profit businesses, and government agencies to push beyond the typical annual campaigns that each organization ran separately to aid low-income homeowners. Jane Downing, Senior Program Officer at The Pittsburgh Foundation explained, “The project started from a single question: Could ARRA (2008 American Reinvestment and Recovery Act - AKA Federal stimulus) money be used to increase local hiring, particularly minority hiring through use of minority contractors, to do the work to install the insulation?” To find the answer, the CWC team needed to design and build from scratch a recruiting, training and job creation strategy.

Injected with a heavy dose of cash from federal stimulus funding and inspired by green retrofit programs in Denver, Portland and elsewhere, the team decided to focus on delivering help where it would have the greatest impact. “We all agreed to insist on a data-driven approach,” said Downing.

The gas and electric companies pooled data on their highest utility users, then used GIS mapping to overlay a representation of household income figures, participation in existing Low Income Home Energy Assistance Program (LIHEAP), and other poverty data. The highlighted regions were the East End neighborhoods of Pittsburgh (Garfield to Homewood), Wilkinsburg, the Hilltop (Mount Oliver/Beltzhoover/Allentown), the North Side of Pittsburgh and McKeesport. “The resulting maps clearly showed specific clusters of neighborhoods that paid a disproportionate share of their household income toward energy costs,” said Downing.

That’s partly because much of the housing stock occupied by the region’s low-income families was built in a bygone era when energy for coal-burning furnaces was cheap and abundant. Often, they lack proper insulation and have high heating bills — and owners bequeath them to family members, with plenty of deferred maintenance. “Many homes need repairs beyond what we can provide through the Weatherization program,” says Ruprecht.

From the outset, the project team had two goals: to reduce utility costs for the less advantaged and to grow the weatherization employment market in the Pittsburgh region. The Department of Energy’s
Weatherization Assistance Program and utility programs such as the Low Income Usage Reduction Program (LIURP) provide free energy audits and weatherization services to qualifying low-income homeowners. That drives the demand for skilled weatherization services. To meet growing markets, contractors hire new laborers, who must be trained and certified. The end result saves energy, saves money and jump-starts an economic sector.

But the team faced an initial challenge: how to effectively engage communities that historically had low participation rates in utility-driven programs? “We realized that we needed to identify strong community partnerships and make extensive outreach efforts about the services and the employment opportunities,” said Ruprecht, adding, “Breaking down barriers that existed for generations was the key factor in getting participation.”

ACTION-Housing chose key Community Partners in the targeted areas to get the word out. In Larimer, East Liberty, Garfield and Penn Hills, it partnered with the Kingsley Association and GTECH Strategies to collaboratively train residents to be community advocates for these programs through the Urban Leadership Institute (ULI). ACTION also worked closely with Operation Better Block in Homewood, The Hilltop Alliance in the Beltzhoover/Allentown/Mount Oliver area and Wilkinsburg Weed and Seed in Wilkinsburg for similar community-based outreach and conservation education.

These communities reflect the majority of the results of the mapping exercise -- communities with the highest percentage of participation in utility assistance programs to low-income families, such as Low Income Home Energy Assistance Program (LIHEAP), and high energy usage.

Each community group conducted an aggressive outreach campaign to raise awareness, identify qualified applicants, and assist in application procedures. The approach delivered results – in the 2009/2010 program year, Weatherization Assistance Program participation increased in targeted areas by 21% to 156% from the previous year, with the greatest increases occurring in the areas where the deepest Community Partner relationships existed.

“To make lasting changes, we knew that we’d have to really get community members involved,” said Fred Brown, Associate Director of Program Development, Kingsley Association, one of the three community partners. “Working through our Urban Leadership Institute, we trained community members in weatherization, green technology, financial literacy, resources allocation, and community organizing.” The campaigners’ grassroots approach combined new technology and old-fashioned personal touch -- text messaging, door-to-door canvassing, block-by-block organizing and public outreach events, that offered specific, achievable actions that residents could take to lower their bills and improve their utility efficiency. “We knew that changing behavior was every bit as important as installing weatherstripping,” said Ruprecht.

The ULI also utilized web-based technology to educate community residents in how to best apply their knowledge and understanding of the energy

*Students learned hands-on weatherization skills as part of a collaborative training effort between International Union of Operating Engineers, Local-95 and Community College of Allegheny County’s West Hills center. The program provided many students with critical job skills.*  
*Photo Credit: IUOE Local 95*
The overall goal is one of creating a change in human behavior as well as providing retrofits to address mechanical challenges. The Imagine Larimer software provides comprehensive hands-on experiences that helped to galvanize the community’s interests in weatherization.

The ULI concluded its community engagement process with a 51-family energy challenge aimed at embedding weatherization into the community at a grassroots level. The energy challenge looked at the options created by the SMART Board workshop in Imagine Larimer and brought specific plans to fruition through strategic planning and monthly review of energy use. ULI sees these activities as cutting edge for the community. According to Brown, “The ULI is a game-changer for providing qualitative and quantitative ways to measure impact at the micro and macro levels.”

“The Urban Leadership Institute definitely impacted minority participation rates in communities with high LIHEAP scores,” says Brown. Another benefit was the ULI-trained Block Captains grew personally from their entire experience, especially with their door-to-door fieldwork. “Half of the ULI members have taken on increasing roles in their communities, and there is an increased desire and interest in green technology. The Green Outreach Coordinator for the ULI project is one of the non-incumbent people who became weatherization-and BPI-certified during this period. He is now a weatherization auditor, providing inspiration to unemployed and underemployed urban residents.”

While the community engagement campaign advanced, other members of the CWC team worked to get enough workers properly trained and certified to perform the weatherization work. This was particularly pressing since, in Pennsylvania, the ARRA funding stipulated that each weatherization crew paid under its umbrella had to be certified through the state Weatherization Training Centers.

Months earlier, the Community College of Allegheny County (CCAC) and International Union of Operating Engineers Local 95 applied to the state to be an “expansion site” for funded weatherization training. This aligned with the Commonwealth’s strategy shift to geographically disperse its programs across the state, rather than continue with its old model, which required every training candidate to attend a week-long session on the campus of the Penn College of Technology in Williamsport, PA, more than a four hours’ drive from Pittsburgh. Fortunately, CCAC’s West Hills Center and IUOE Local 95’s Training facility became an authorized training center.

“It was clear that the program at Penn College wouldn’t meet demand,” says Reggie Overton,
Executive Director of the Center for Professional Development at CCAC. Plus, the additional expense associated with lodging and meals made Penn College a tough sell for many potential workers. “So we partnered with the International Union of Operating Engineers - Local 95 to establish a program that was more accessible for those that needed it.”

After studying the weatherization program at Penn College, IUOE-Local 95 and CCAC partnered to create a similar program that emulated the three separate “tracks” at Penn College: training for installers, crew chiefs and auditors.

Using experienced union instructors, the innovative hands-on training lab mimics what students can expect to see in the field. The intentionally flexible instructional components can easily be swapped-out. Overton said the program was tailored to meet regional needs and respond to contractors’ job site input, and it was customized to provide students with a crash-course in weatherization skills.

Upon receiving grant funding in November 2009, the partnership had just short of three months to design, build and implement a training program that could accommodate an expected large number of students. “We had it ready for students by February,” Overton said.

Merely having a local training program was not enough to make CWC meet its objective. The team set goals to ensure that existing weatherization workers (called “incumbents”) were certified while also attracting, qualifying and training low-income, minority and women laborers and contractors for the anticipated weatherization job market.

The CWC team focused its outreach, and even increased field staff, to boost participation by minority and women candidates and Minority, Women, Disadvantaged Business Enterprises (MWDBEs). Eight new MWDBE contractors were added to ACTION-Housing’s list, and a few minority and women individuals were connected to new opportunities with seasoned contractors.

Since its February 2010 opening, the weatherization program at CCAC-West Hills and the IUOE Local 95 facility in Greenfield has trained more than 536 students, many of whom were already working in the industry but needed some extra skills development. According to Carl Luisi, Education Director for IUOE-Local 95, “The majority of the students are incumbents, meaning men and women who were already in the industry but needed the certification,” said Luisi. The program defined “incumbents” to include anyone that had just worked 30 days. “This program gives valuable training to the guys that are out there doing it. It’s a real asset to this region.”

CWC team member CareerLink, a state-funded program for linking potential workers to training programs and jobs, provided free training vouchers for qualifying incumbents and new workers.
But, the team strove to get the right candidates into the program. “We went to great lengths to make sure that candidates knew what it was like to work in weatherization before they were trained, said Overton. Prospective trainees had to attend an orientation session and hear about working in 130-degree heat in an attic in summertime and scrambling through a crawl spaces with mice, spiders or even snakes. “We definitely did not glamorize the work,” he added.

Those still interested after the orientation session had to complete a pre-assessment skills test in math, reading and locating information before being awarded a voucher for the CCAC training. Those who scored low on the assessment could re-test, in addition to skills remediation programs.

Of the students that earned a CareerLink voucher and entered the program as new workers, most later acquired good paying positions. One student, who went on to work for a regional university, called back to personally thank his instructor.

The Coordinated Weatherization Campaign results speak to success. Between late 2009 and summer 2011, ACTION-Housing conducted more than 30 community outreach events, educating over 3,000 community residents. In total, workers weatherized more than 2,000 homes classified as low-income households, allowing those residents to put their limited financial resources to better use.

In the long run, the retrofitters’ partnerships with local agencies in the targeted neighborhoods may prove to be the most important new strategy. In Larimer, where community leaders are committed to sustainable revitalization practices, the software and the word-of-mouth campaign about additional individual energy savings strategies got participants enthused — and were a missing element in marketing weatherization assistance programs in the past.

“We did what we hoped to do by getting people to think and talk about regional weatherization,” says Downing. The secret to the CWC success? “It was really a full ‘360 degree’ approach to weatherization, which will help us in the future as we seek to increase demand for weatherization services in other low and moderate income communities.”