

Energy Efficiency and Conservation Block Grant (EECBG)

Better Buildings Neighborhood Program

Final Report

FAYETTE COUNTY BETTER BUILDINGS INITIATIVE

DE-EE0003814

Fayette County, Pennsylvania
Redevelopment Authority of the County of Fayette
Private Industry Council of Westmoreland/Fayette, Inc.

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Purpose and Instruction:

Award Number: DE-EE0003814

BBNP Name: Fayette County Better Buildings Initiative

Project Title: Fayette County Better Buildings Initiative

Name of Project Director: Art Cappella

Team Members: Andrew French, Al Jeffries, Erin Smith, Brad Geyer, Sean Sypolt

Executive Summary:

The Fayette County Better Buildings Initiative (FCBBI) represented a comprehensive and collaborative approach to promoting and implementing energy efficiency improvements. The initiative was designed to focus on implementing energy efficiency improvements in residential units, while simultaneously supporting general marketing of the benefits of implementing energy efficiency measures. The ultimate goal of Fayette County's Better Buildings Initiative was to implement a total of 1,067 residential energy efficiency retrofits with a minimum 15% estimated energy efficiency savings per unit.

Program Partners: United States Department of Energy, Allegheny Power, and Private Industry Council of Westmoreland-Fayette, Fayette County Redevelopment Authority, and various local partners.

The program was open to all Fayette County residents who owned their home and met prequalifying conditions. The level of assistance offered depended upon household income and commitment to undergo a BPI – Certified Audit and implement energy efficiency measures, which intended to result in at least a 15% reduction in energy usage. And based upon Weatherization guidelines found in the PA Weatherization Standards and Field Guide (<http://www.pct.edu/wtc/docs/WeatherBook.pdf>). Attached to this report is a copy of the parameters utilized by the FCBBI Team.

The initiative was designed to focus on implementing energy efficiency improvements in residential units, while simultaneously supporting general marketing of the benefits of implementing energy efficiency measures. Additionally, the program had components that involved recruitment and training for employment of persons in the energy sector (green jobs), as well as marketing and implementation of a commercial or community facilities component. Appended to this document is a Home Energy Magazine Blog highlighting the county's energy efficiency program.

The residential component of Fayette County's Better Buildings Initiative involved a comprehensive approach, providing assistance to low- moderate- and market-rate homeowners. Also, the initiative coordinated activities with local utility providers to further incentivize energy efficiency improvements among qualifying homeowners.

The commercial component of Fayette County's Better Building Initiative involved grants and loans to assist up to \$15,000 projects per commercial structure with a mixture of a grant and financing at 0% for up to three – (3) years. The maximum award could be a

\$5,000 grant and a \$10,000 loan. For projects less than \$15,000, the award will have a ratio of 1/3 grant and 2/3 loan.

FINAL TECHNICAL REPORT

Institutional Design and Business Model:

Essentially, the Fayette County Better Buildings Initiative developed its residential and commercial programs by mirroring its Weatherization Assistance Program as managed by the Redevelopment Authority of the County of Fayette. There was measured cooperation between West Penn Power and the Fayette County Better Buildings Initiative; however, the project enjoyed substantial cooperation with Columbia Gas of Pennsylvania. And there was limited collaboration with Dominion Gas due to their service area being primarily outside of the Fayette County borders.

Program Design and Customer Experience:

The level of FCBBI assistance depended upon the total household income of each applicant. In explanation, for very low income households (less than 200% of Poverty), assistance was provided through the Fayette County Redevelopment Authority's existing Weatherization Program. For low income households (200-250% of Poverty) and moderate and above – moderate income households (over 250% of Poverty), assistance was provided in the form of rebates of between \$1,500 and \$2,000.

In the FCBBI program an energy audit was required for all projects including both commercial and residential. A professional certified auditor through the Building Performance Institute (BPI) was used. After completing an application, the Redevelopment Authority would provide a listing of BPI-certified professionals that were eligible to perform services through FCBBI. BPI-certified professionals which were

contracted to perform audits for utility companies or were a member of the Diagnostic Energy Auditors of Western Pennsylvania were also eligible to perform services through the FCBBI.

Driving Demand

- Partnership with energy service providers such as Columbia Gas was very successful in generating application interest.
- Word of mouth from customers helped obtain additional applicants.
- Radio and Television commercials were utilized.
- One-page form was used by contractors on a daily basis while in the field.

Workforce Development

- Training was essential and facilitated by the Private Industry Council (PIC). BPI Building Analyst Training involved a total of 146 individuals being trained. BPI Building Envelope Training: 34 individuals trained, Multi-Family Unit Training: 12 individuals trained, Mobil Home Training: 18 individuals trained, Sales Training and Entrepreneur Training occurred as well. PIC was unaware of any BPI certified auditors located in Fayette County prior to implementation of the United States Department of Energy Efficiency Conservation Block Grant funded program. Additional trainings were requested by those students participating in the program who wanted to broaden their education in the energy efficiency field. As per funding requirements, a BPI audit of each structure that received FCBBI dollars for improvements, and, so, educating the work force was implemented as a first step.
- PIC created a revolving loan fund (RLF) to help the trained auditors acquire equipment needed to start their auditing business. The RLF was also available to companies who sent employees for training in the FCBBI program for job retention purposes. Each person who participated in the training could obtain up to \$5,000 for 36 months at 0% interest. Five individuals took advantage of this

program. Additionally, a grant program was established for individuals trained through the auditing program in order to acquire equipment and/or start their auditing businesses. Likewise, the grant fund was also available to companies sending employees to the program for training. Each person participating in the training program could obtain up to \$1,000. Sixteen people accepted a grant in this category. A follow-up survey of participants found the following (66 individuals responded): 94% remained working, and 29% identified themselves as self-employed. The average wage rate was \$16 per hour.

- Most BPI-Auditors were capable of completing the work necessary which was convenient as they were already familiar with the homes and the work needed from the audits they performed.
- The commercial component of Fayette County's Better Building Initiative involved grants and loans to assist up to \$15,000 projects per commercial structure with a combination of a grant and financing at 0% for up to three – (3) years. The maximum award can be a \$5,000 grant and a \$10,000 loan. For projects less than \$15,000, the award will have a ratio of 1/3 grant and 2/3 loan.

Financing Incentives

- Dual Payee was successful in encouraging applicants to participate who otherwise could not afford to participate in the originally designed rebate structure.

Data and Evaluation

- At the start, the Redevelopment Authority would request particular information from applicants such as electric and utility bill information. However, this proved to be difficult to obtain in many instances. Applicants were not well-disposed to provide such information. This impeded our efforts in calculating energy usage data.

ACCOMPLISHMENTS

CHALLENGES

The Fayette Better Buildings Initiative program faced challenges such as documentation and achieving commercial applicants. Specifically, FCBBI challenges included the following:

- Achieving applicants/participants to reach the targeted goals, especially in the first year.
- Making clear that the FCBBI upgrade project was a rebate program and that it was not going to cost the homeowner was a difficult task to overcome during the initial 12 months of the project. Candidates believed there were hidden fees.
- Structuring the rebate program was a challenge because most applicants could not afford to pay and wait to be reimbursed. Therefore, we were compelled to modify the program with a dual payee procedure to circumvent Davis Bacon.
- Obtaining appropriate documentation from applicants in a timely manner.
- Utility and electric bills were not obtained from numerous applicants.
- Locating contractors to perform the recommendations made by the BPI auditors.
- Scheduling post-work inspections proved challenging but was overcome.
- Training BPI Auditors in other areas like mobile homes and building envelope.

PROGRAM SUSTAINABILITY PLANS

The Fayette County Better Buildings Initiative Program will continue as Fayette County's Weatherization Program.

The Weatherization Program aims to weatherize homes in Fayette County by providing energy efficiency improvements to low-income households, often reducing both energy consumption and energy costs by as much as 23%, which is to some extent higher than the minimum requirement prescribed in the FCBBI program.

The target being served includes residences in Fayette County that are at least 200% of the Federal poverty level.

The Weatherization Program begins with a Weatherization Auditor conducting an energy audit and basic furnace safety check. This audit provides Installation Technicians with the information needed to determine which energy efficiency measures should be performed on each dwelling. Some conservation measures consist of insulating and ventilating the attic or other unheated areas, insulating water heaters, insulating waterlines in unheated areas, replacing broken glass, and weather-stripping doors. Technicians also use a blower door to find and reduce outside air infiltration and heat loss. If needed, a heating contractor will clean and tune up a furnace, perform a follow-up safety inspection, or make repairs to heating systems.

The Weatherization Program will continue to work in collaboration with funding from the Low Income Home Energy Assistance Program (LIHEAP), the U.S. Department of Energy (DOE) Weatherization Assistance Program, and various local utility companies.

The Weatherization Program is advertised on the Redevelopment Authority's website. It is also heavily promoted by word of mouth from previous customers and through recommendations from the energy service providers.

VERIFICATION OF DATA

The Redevelopment Authority maintains copies of all residential applications completed under the Fayette Better Buildings Initiative. Likewise, the Private Industry Council maintains records of all participants involved in the commercial or community energy efficiency retrofits. Copies of documents may be obtained by contacting either organization directly.

FAYETTE COUNTY, PENNSYLVANIA
BETTER BUILDINGS INITIATIVE
HOMEOWNER RESIDENTIAL ENERGY EFFICIENCY IMPROVEMENTS

How do people qualify for assistance? Every Fayette County homeowner is eligible for benefits through the Better Buildings Initiative (BBI). The program is not income restrictive, but the total household income will determine the level of assistance a homeowner will receive.

What is the level of assistance provided? Rebates between \$1,500 and \$2,000 are available to all homeowners. In addition, homeowners are eligible for loan financing up to \$3,000 at zero percent for 3 years for energy efficiency improvements. Additional benefits may be provided by Columbia Gas through the Income Qualified Energy Efficiency Program (IQEEP). See below for more information on IQEEP.

How are the rebates processed?

1. Homeowner completes and submits a BBI pre-qualification application.
2. Upon notification of their eligibility, a homeowner schedules a BPI-certified energy audit.
3. Using the completed energy audit as a guide, a homeowner chooses to implement energy efficiency improvements that will achieve 15% reduction in energy consumption.*
4. Homeowner submits receipts and invoices to the Redevelopment Authority.
5. Redevelopment Authority processes rebate and issues payment to homeowners and contractors for cost of the audit and work performed (up to \$2,000).

* 15% energy reduction expected by doing **2** of the following (*at least* one of the measures must come from Priority Level 1):

Priority Level 1

- Air and Duct sealing per audit recommendations
- Installation of insulation in attic—Add to achieve R-38
- Installation of insulation in any unheated areas—Add R-19

Priority Level 2

- Install high efficiency furnace (90+ for gas customers)
- Have furnace cleaned and tuned
- Install digital programmable thermostat
- Add R-11 Wrap to Water Heater and/or insulate hot water pipes
- Replace Refrigerator with Energy Star equipment
- Installation of low-e storm windows over single pane windows
- Replace windows with R5 labeled windows
- Replace Entrance Door with Solid Core or Insulated Door

Are there any items the rebate will NOT pay for? Any weatherization measure listed above, or found in the PA Weatherization Standards and Field Guide (<http://www.pct.edu/wtc/docs/WeatherBook.pdf>) is an eligible expense under the BBI. Please note that a roof IS NOT considered an energy efficiency measure and therefore IS NOT an eligible expense.

What is IQEEP? The Columbia Gas IQEEP is an income-qualified energy efficiency program that offers free home energy audits to homeowners, as well as significant additional financial incentives to homeowners who decide to implement measures recommended by the audit. Homeowners may be eligible for both programs.

To get started:
Call 724-437-1547 ext. 206,
or visit
www.racfpa.org

FAYETTE COUNTY BETTER BUILDINGS INITIATIVE
ENERGY EFFICIENCY MEASURES PRIORITIZATION

The following table outlines the energy efficiency measures eligible under the rebate assistance. Auditors should make every effort to prioritize their recommendations according to this table. For further guidance, consult the PA Weatherization Standards and Field Guide (<http://www.pct.edu/wtc/docs/WeatherBook.pdf>).

PRIORITY LEVEL 1	
Air and Duct Sealing	
Attic Insulation—add to achieve R-38	
Insulation in unheated area—add R-19	
PRIORITY LEVEL 2	
Install high efficiency furnace (90+ for gas customers)	
Have furnace cleaned and tuned	
Install digital programmable thermostat	
Add R-11 wrap to water heater and/or insulate hot water pipes	
Replace refrigerator with Energy Star equipment	
Install low-e storm window over existing single-pane window	
Replace deteriorated windows with R5 labeled windows	
Replace entrance door with solid core or insulated door	

*The Better Buildings Initiative **WILL NOT** issue a rebate for roof repairs or replacements, even if they are preventing weatherization measures. This includes Energy Star Rated Metal Reflective Roofing.

FAYETTE COUNTY BETTER BUILDINGS INITIATIVE
HOMEOWNER ENERGY EFFICIENCY REBATE SAMPLE WORKFLOW

Homeowner completes and submits a BBI pre-qualification application

Redevelopment Authority notifies homeowner they are eligible for \$1,500-\$2,000 in rebates

Upon notification of their eligibility, a homeowner schedules a BPI-certified energy audit

Auditor uses PA Weatherization Standards and Field Guide to prioritize energy efficiency improvements

Using the auditor's recommendations, a homeowner chooses which energy efficiency improvements to implement that will achieve a 15% reduction in energy consumption

Once all work is completed, homeowner submits invoices to the Redevelopment Authority

Representative of the Redevelopment Authority visits home to ensure all work has been complete

Redevelopment Authority issues two-party check to homeowner and contractor(s) for all eligible expenses up to \$2,000

Homeowner is responsible for remaining costs that exceed \$2,000

Pennsylvania County Puts Contractors Back to Work

By Danielle Sass Byrnett

The Better Buildings Neighborhood Program is part of a national Better Buildings Initiative led by the U.S. Department of Energy (DOE) that is improving comfort, decreasing costs, and supporting U.S. job growth by transforming the marketplace for energy efficiency upgrades in homes and businesses. At the local level, Better Buildings has provided seed funding to more than 40 state and local energy efficiency programs across the country that are helping consumers reduce energy use, save money, and support the development of local jobs.

Fayette County, Pennsylvania, may have a high unemployment rate, but it is using this challenge as an opportunity to improve homes and the local economy with energy efficiency upgrades. As a Better Buildings Neighborhood Program partner, the Fayette County Better Buildings Initiative has two primary goals—complete more than 1,000 residential energy efficiency upgrades and transition under- and unemployed citizens to energy efficiency jobs.



In order to train the workforce necessary to reach new customers with energy upgrades, the program relied on the expertise of the Private Industry Council (PIC) of Westmoreland/Fayette. PIC is a local nonprofit organization that fosters career training and workforce development throughout the county, providing the contractor training for the Fayette County Better Buildings Initiative.

In developing the workforce training components of the program, PIC leveraged the existing efforts of its Pathways Out of Poverty program, which offers introductory training in energy efficiency and renewable energy careers to low-income county residents. These courses helped introduce energy efficiency to Fayette County contractors, but they did not provide the depth of technical or entrepreneurial training needed to establish successful businesses that could help meet the county's upgrade goals.

To provide more targeted technical training and business skills, PIC partnered with Douglas Education Center (DEC), a private proprietary school it had worked with on other vocational training programs, to provide free training courses to participating contractor firms. The training program's primary goal was to increase the number of Building Performance Institute (BPI)-certified technicians in the workforce, but optional classes included business development training and sales training. Between May 2011 and June 2012, 70 of PIC's newly trained technicians were employed with existing companies, and 10 more were employed by or had started new companies.

In addition to providing training to those seeking a career change or additional work, program managers understood that technicians who were under- or unemployed were unlikely to have the financial capacity to purchase the equipment necessary to get new contracting companies off the ground. This realization prompted the program to offer additional grants and a revolving loan fund for contracting companies with technicians who have completed both building analyst and building envelope certification courses. Eligible companies qualified for a \$1,000 grant and equipment loans for up to \$5,000, which companies

Home Energy Magazine Blog Submission – Draft

have since invested in everything from insulation machines to modeling software to iPads for technicians in the field.

By fall 2012, the program and its partner contractors had completed approximately 500 upgrades, resulting in roughly 6,500 job hours worked in the third quarter alone. Program managers expect to keep accelerating the pace of upgrades and job opportunities for the region during 2013.

To learn more about how Fayette County is developing the skills and tools necessary for workforce success, read the [Better Buildings Neighborhood Program case study](#).

This story originally appeared as part of DOE's Better Buildings Neighborhood Program website; read more about Fayette County and related case studies [here](#).