

Weatherization: A Gateway to Energy Efficiency

St. Louis' Gateway Arch commemorates the westward expansion of pioneers searching for a better life. Although the push west has slowed, the drive to forge a better life remains strong. Many Americans are constrained in achieving this dream due to high energy bills. Low-income households in particular shoulder a disproportionate energy burden. They typically spend 14% of their total annual income on energy, compared with 3.5% for other households. To address this situation, Missouri partners with the U.S. Department of Energy (DOE) to implement the Weatherization Assistance Program (Weatherization). Weatherization reduces energy costs for low-income households by increasing the energy efficiency of their homes, while ensuring their health and safety. The Missouri Department of Natural Resources administers the program and 18 local agencies deliver weatherization services.

RAISING THE CURVE

Constructing the unique Gateway Arch required innovative thinking and advanced equipment. Similarly, Weatherization integrates sophisticated technology and innovative techniques to develop long-term solutions to energy problems. When the program began, temporary measures, like covering windows with plastic, were emphasized. Today, professionally trained crews use a computerized energy audit to determine the most cost-effective measures to install in each home. Diagnostic tools, like the blower door, are used to detect and mitigate air infiltration and pressure imbalances. Crews also test heating systems and gas appliances for carbon monoxide, an odorless, colorless gas that can be deadly in large quantities.

Typical weatherization measures include installing insulation; performing basic heating tune-ups and repairs; and mitigating air infiltration through doors and windows. After the home is weatherized, clients receive instructions on the proper use and maintenance of the installed measures.

NATIONAL WEATHERIZATION PROGRAM

Homes weatherized in 1999	68,000
DOE allocations in 1999	\$135 million
Average annual energy cost savings per household	\$300
Average space heating savings	25-30%
Energy benefits returned for every \$1 invested	\$2.10
Jobs supported	7,000

MISSOURI

Homes weatherized in 1999 (with DOE \$)	2,099
DOE funding in 1999	\$3.5 million
Clients served in 1999	5,473
Elderly	15%
People with disabilities	17%
Families with children	38%

Missouri prides itself on the professionalism and courtesy of its workforce. The state motto, "Let the welfare of the people be the supreme law," are words that weatherization crews put into action. Missouri crews receive technical training at national conferences, regional training centers, and in the field. Their approach to service complements their technical skills. One recipient of weatherization services commented, "The crews were polite and worked very hard. They even worked in sub-zero temperatures and did a very good job."

“SHOW ME” THE RESULTS

Nicknamed the “Show Me State,” Missourians value results; Weatherization is a program that delivers results for low-income families and communities. Weatherization helps low-income families become more self-sufficient by offering a hand-up, not a handout. Weatherization measures can reduce a household’s gas heating usage by nearly one-third.

Before weatherization, George and Kathy Pierce* closed off rooms to conserve fuel. However, within one month, their 200-gallon propane tank would be empty. Constantly filling the tank became too costly, so George contacted Economic Security Corporation of the Southwest Area for help. An energy audit was conducted and weatherization measures installed.

Following weatherization, George was amazed to find that after two months of heating his home, the tank still contained propane. In a letter of thanks, George and Kathy wrote, “Now that we can save money on propane, we can eat a little better. Thank you.”

Weatherization creates economic benefits for the community as well. Currently, Missouri employs more than 110 people to operate its program, and additional jobs are created through subcontractors and material suppliers.

Weatherization reduces the export of energy dollars from the community, which stimulates the local economy. In addition, reducing residential energy demand decreases electricity generation and avoids emissions of nitrogen oxides, sulphur dioxide, and other pollutants. This improves local air quality and reduces adverse health effects, particularly asthma.



Lt. Governor Maxwell learns how to insulate a wall cavity during a Weatherization site demonstration in St. Louis.

A PIONEER SPIRIT

The Gateway Arch was a partnership among state officials, engineers, and construction crews. The collaborative effort was key in raising the monument. Similarly, leveraging dollars and developing creative partnerships are crucial to the success of the Weatherization Program. In 2000, Missouri leveraged core DOE funding with over \$2 million from the state, utilities, and other organizations, which enabled the program to weatherize 2,132 additional homes.

Missouri is also developing a pioneer project to enhance service capabilities. The Energy Engineers, a for-profit project, allows local agencies to provide weatherization services for a fee (excluding low-income households). All profits are then funneled back into the agency’s

budget to weatherize more low-income homes. The Department of Natural Resources endorses this project because it provides the opportunity for all residents to improve the energy efficiency of their homes. Most importantly, it ensures that more low-income families can receive weatherization services.

WEATHERIZATION WORKS!

The Weatherization Program creates significant benefits for low-income households and communities. For low-income families, Weatherization provides long-term solutions to energy problems. For the community, Weatherization produces economic benefits by creating jobs, reducing the export of energy dollars, and boosting growth. Nationally, for every \$1 invested in the program, Weatherization returns \$2.10 in energy-related benefits. Weatherization measures reduce national energy consumption and curb demand for imported oil. Weatherization works for Missouri and America!

**Names have been changed to protect the privacy of the subjects.*

TO LEARN MORE ABOUT THE WEATHERIZATION ASSISTANCE PROGRAM, CONTACT:

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Visit the Weatherization Web site at: www.eren.doe.gov/buildings/weatherization_assistance
or call the Energy Efficiency and Renewable Energy Clearinghouse at: 1-800-DOE-3732



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