

## Pennsylvania Sparks an Energy Efficiency Revolution

Pennsylvania provided lumber, coal, and oil to fuel America's Industrial Revolution. Today, Pennsylvania fuels the national movement to increase energy efficiency in low-income homes. The state partners with the U.S. Department of Energy's (DOE) Weatherization Assistance Program (Weatherization) to reduce energy costs for low-income households by increasing the energy efficiency of their homes, while ensuring their health and safety. The Department of Community and Economic Development (DCED) administers the state's program and 42 local agencies deliver weatherization services to eligible residents in every county.

### BRIDGING THE GAP

Built in 1882, the Kinzua Bridge embodies Pennsylvania's industrious and innovative nature. The world's tallest railroad bridge at the time, Kinzua became a key link for transporting coal, lumber, and oil. Similarly, the Weatherization Program connects low-income households with vital energy efficiency services.

Low-income families typically spend 14% of their total annual income on energy, compared with 3.5% for other households. This burden becomes more unmanageable when energy prices soar. Low-income families often cut back on other necessities to pay their energy bills. Weatherization reduces energy costs for low-income households and provides long-term protection against rising energy prices.

Since the inception of the program in 1977, Pennsylvania has weatherized more than 370,000 low-income dwellings and has provided assistance to more than 962,000 residents. Pennsylvania has repaired or replaced 7,900 heating systems for low-income clients who otherwise would have no safe means of obtaining heat throughout the winter.

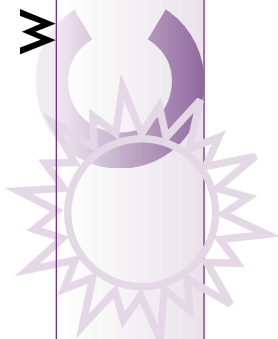
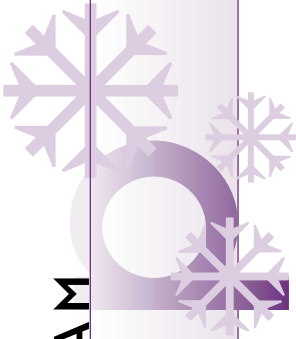
### NATIONAL WEATHERIZATION PROGRAM

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

### PENNSYLVANIA

Homes weatherized in 1999 (with DOE \$)	3,061
DOE funding in 1999	\$8.6 million
Clients served in 1999	7,638
Elderly	12%
People with disabilities	13%

Weatherization crews use computerized energy audits and advanced diagnostic equipment, such as the blower door and digital manometer, to determine the most cost-effective energy efficiency measures appropriate for each home. Pennsylvania crews also test heating units for combustion safety, carbon monoxide, and gas leaks. Typical weatherization services for single-family and mobile homes include installing insulation; sealing ducts; tuning and repairing furnaces; and mitigating heat loss through windows, doors, and other infiltration points.



**FORGING NEW PATHS**

Weatherization agencies develop partnerships to leverage resources and expand services. DCED has collaborated with the Department of Public Welfare since 1992 to provide emergency heating services as part of the Low Income Home Energy Assistance Program (LIHEAP) Crisis Program. In addition, weatherization agencies worked directly with the utilities to increase Pennsylvania's Universal Service and Energy Conservation Program Funds from \$41.9 million to \$97.3 million. These funds enable more low-income families to obtain weatherization services.

Pennsylvania's Leveraging Project secured utility funds to deliver advanced energy efficiency services, including the installation of solar hot water heaters in eligible low-income homes. The Pennsylvania College of Technology, Florida Solar Energy Center, and the Technology Transfer Center partnered to train local agencies to install solar energy technologies.

Thirty agencies received certification in site selection, system design and supervising installations. Twenty-one were certified in solar water heating installation; another 17 were certified in photovoltaic system installation. Pennsylvania's renewable energy expertise benefits low-income families and also provides an important technical resource for other organizations.

**LEADING A HEALTHY CHANGE**

Weatherization saves energy and money for low-income families. It also creates important health and safety benefits for individuals and communities.

Patty Thomas\* and her three children lived in a house warmed only by electric space heaters. Her children would gather around the electric heaters with blankets trying to capture any amount of warmth. These electric appliances caused four small fires when the children accidentally dropped small items nearby. Weatherization crews insulated

her home and installed a safe heating system. In a letter of thanks, Patty remarked, "My children remember waking up cold. Today they are comfortable, cozy, and warm... Thanks to the Weatherization Program you have made a difference in our lives... You probably saved our lives."

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.

**WEATHERIZATION WORKS!**

Weatherization produces an impressive range of benefits for low-income households and communities. 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 Pennsylvania and America!

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



**Weatherization crew installs a solar hot water system in a low-income Pennsylvania home.**

**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](http://www.eren.doe.gov/buildings/weatherization_assistance)  
or call the Energy Efficiency and Renewable Energy Clearinghouse at: 1-800-DOE-3732

