

Weatherization Builds on Delaware's Innovative Past

Swedish settlers in Delaware introduced the first log cabins in America. Pioneers moving west adopted this highly efficient method of building homes and log cabins proliferated. Delaware continues to embrace this innovative spirit to improve efficiency in low-income homes. Delaware 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.

Low-income residents typically spend 14% of their annual income on energy, compared with 3.5% for other households. The annual energy costs for Delaware residents rank among the highest in the nation. For the elderly on fixed incomes, the energy burden can consume 17% or more of their annual income. Volatile changes in energy markets can drive this burden even higher. Low-income families often have to cut back on other necessities to pay their energy bills. Weatherization trims energy costs for low-income households and provides a permanent boost to their budgets. Weatherization measures also generate important health and safety benefits.

CONSTRUCTING THE FRAMEWORK FOR EFFICIENCY

Building a log cabin starts with picking a plot suitable for building a warm home in the shortest time possible. Once the settlers agreed on a site, four of the sturdiest logs were placed as the foundation for the home. Similarly, the Office of Community Services (OCS) provides the framework for the Weatherization Program in Delaware. The Office of Community Services, together with two agencies and a network of subcontractors, deliver weatherization services to eligible residents. In 1999, Delaware weatherized 82 low-income homes with DOE funds and used leveraged funds to weatherize an additional 320 homes.

NATIONAL WEATHERIZATION PROGRAM

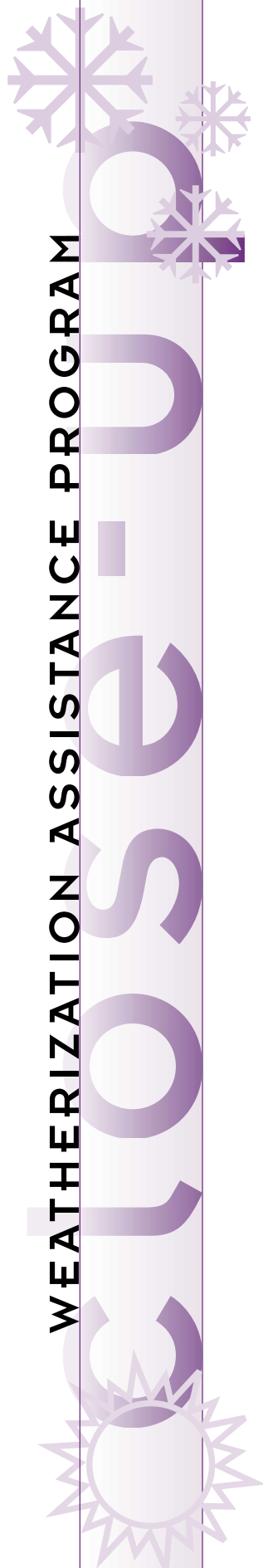
Homes weatherized in 1999	68,000
DOE allocations in 1999	\$135 million
Average annual energy cost savings per household	\$300
Average space heating savings	25-30%
Energy benefits returned for every \$1 invested	\$2.10
Jobs supported	7,000

DELAWARE

Homes weatherized in 1999 (with DOE \$)	82
DOE funding in 1999	\$336,754
Client composition	
Elderly	50%
People with disabilities	25%
Families with children	25%

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. Delaware crews also test heating units for combustion safety 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. Clients are also educated on the proper use and maintenance of the installed measures.



CHINKING THE ENERGY GAPS

"Chinking" was a common method to fill the gaps that let cold air infiltrate settler's homes in the winter. Settlers covered the gaps between the lumber with slits of wood held in place by clay, moss, or crude lime mortar. Similarly, the Delaware Weatherization Program has worked to chink the gaps in energy efficiency services to low-income families. One means of expanding services was to develop comprehensive guidelines on home energy efficiency. The Delaware Energy Office and OCS administer these guidelines, known as the Home Energy Rating System (HERS). The HERS curriculum is designed to educate and facilitate the inclusion of the most cost-effective energy upgrades during home purchase, construction, and rehabilitation. The HERS handbook, "Home Energy Ratings in Delaware:

An Education Program for Delaware's Housing Community," provides useful energy-related information for homeowners, lenders, and realtors.

BUILDING STRONGER COMMUNITIES

Petroleum is the primary fuel consumed in Delaware and the state relies heavily on outside sources for its energy supply. By reducing residential energy consumption, Weatherization curbs the export of energy dollars out of the community and keeps more money in the local economy. In addition, low-income families can use their energy savings to purchase other essential items in local stores.



Delaware crews use a digital manometer, like this one, to identify air pressure imbalances.

Every dollar retained in the community produces an estimated \$3 in multiplier benefits. Weatherization also creates jobs for energy professionals, subcontractors, and material suppliers.

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 measures also mitigate residential and power plant emissions of greenhouse gases. Weatherization reduces annual carbon dioxide emissions by an average of one metric ton per weatherized home. Avoiding greenhouse gas emissions and improving air quality is particularly important for a densely populated state like Delaware.

WEATHERIZATION WORKS!

Weatherization reduces the energy burden for low-income families and creates energy and economic benefits for communities. Nationally, for every \$1 invested in the program, Weatherization returns \$2.10 in energy-related benefits. The program benefits the nation as a whole by reducing the consumption of foreign oil and mitigating greenhouse gas emissions. Weatherization works for Delaware and America!

TO LEARN MORE ABOUT THE WEATHERIZATION ASSISTANCE PROGRAM, CONTACT:

Weatherization Assistance Program • U.S. Department of Energy, EE-42
1000 Independence Avenue, SW • Washington, DC 20585-0121 • (202) 586-4074

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

