

Weatherization Works!

The U.S. Department of Energy's (DOE) Weatherization Assistance Program (Weatherization) reduces energy costs for low-income households by increasing the energy efficiency of their homes, while ensuring their health and safety. The program prioritizes services to the elderly, people with disabilities, and families with children. These low-income households are often on fixed incomes or rely on income assistance programs and are most vulnerable to volatile changes in energy markets. High energy users or households with a high energy burden may also receive priority. In 1999, more than 68,000 homes were weatherized with funding from the Department of Energy.

The extended oil crisis of the 1970s ignited a national drive for energy conservation. Weatherization was created in 1976 to assist low-income families who lacked the resources to respond to volatile energy markets by investing in energy efficiency. In this early phase, volunteers and job trainees installed low-cost conservation measures, such as plastic window insulation to reduce heating and cooling bills. Weatherization has evolved into a sophisticated program, which addresses whole-house energy efficiency and promotes a whole-community approach. Weatherization is the nation's largest residential energy efficiency program. More than 5 million homes have been weatherized since the inception of the program.

REDUCING THE BURDEN

Low-income households typically spend 14% of their total annual income on energy, compared with 3.5% for other households. This burden can increase to 20% or more when energy prices rise. Low-income families often cut back on other necessities to pay their energy bills.

Weatherization reduces a household's gas heating consumption by nearly 33% and creates average energy savings of \$300 per year. This alleviates the heavy energy burden on low-income households and helps them become self-sufficient.

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

PARTNERSHIPS DELIVER

DOE utilizes partnerships between state and local agencies to implement the program. DOE Regional Offices award grants to state-level agencies, which then contract with local agencies. Weatherization programs operate in all 50 states, the District of Columbia, and among Native American tribes, including the Navajo Nation, which weatherizes eligible homes on tribal land in Utah, Arizona, and New Mexico.

More than 970 local agencies deliver weatherization services to eligible residents in every county in the nation. State and local agencies leverage core DOE funding with other federal, state, utility, and private resources to weatherize more low-income homes and to deliver more services while in the homes.

ADVANCED TECHNOLOGIES BOOST RESULTS

Weatherization crews use computerized energy audits and advanced diagnostic equipment, such as a blower door, manometer, or infrared camera, to determine the most cost-effective measures appropriate for each home. Crews use DOE funds to install only those energy efficiency measures that meet a savings-to-investment ratio of 1:1 and above. DOE funds can be used to address energy-related health and safety problems. DOE funds can also be used to make the incidental repairs necessary to allow the measures to be installed and make the measures effective. This approach ensures the cost-effectiveness of the program and ensures the proper investment of taxpayer dollars. For every \$1 invested in the program, Weatherization returns \$2.10 in energy-related benefits.

States have the flexibility to customize the program to meet their local needs, so weatherization measures may vary by state and housing type. Some states choose to install only the most cost-effective measures in as many houses as possible; others deliver more comprehensive measures in fewer homes. Examples of typical weatherization services include: installing insulation; sealing ducts; tuning and repairing heating and cooling systems; and mitigating air infiltration through windows, doors, and other points.

Weatherization crews also perform health and safety tests that may include: testing heating units and appliances for combustion safety, carbon monoxide, and gas leaks; assessing moisture damage; checking electrical system safety; replacing unsafe heating and cooling systems; and installing smoke and carbon monoxide detectors. States often use leveraged funds to deliver additional services while in the home.



Weatherization workers use the blower door to identify and mitigate air infiltration and pressure imbalances in low-income homes.

WEALTH OF BENEFITS

Weatherization produces important energy, economic, and environmental benefits for low-income families and communities. The energy efficiency measures installed provide a long-term solution to high energy bills, which helps low-income families become self-sufficient.

By decreasing energy bills for low-income households, the program reduces the export of local energy dollars and keeps more money in the community. This spurs local economic growth. Every \$1 retained in the community produces an estimated \$3 in multiplier benefits.

Weatherization supports 52 direct jobs for every million dollars invested in the program. Additional jobs are created for contractors 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 reduce emissions of carbon dioxide, a leading greenhouse gas, by one metric ton per weatherized house every year.

Weatherization reduces the nation's dependence on foreign oil imports and plays an important role in the nation's energy security. Weatherization decreases national energy demand by the equivalent of 15 million barrels of oil each year. During winter 2000, the avoided costs to all the households weatherized totaled nearly \$1 billion.

Weatherization works for low-income families, communities, and the nation!



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

