

Dazzling Minnesota with Energy Efficiency Savings

Every December, Minnesotans gather to witness the dazzling spectacle of lights and color known as the Holidazzle Parade. While spectators enjoy the visual feast, they are keenly aware of the cold temperatures and are happy to return to a warm home at the conclusion of the parade. But for some Minnesotans, a warm home is not always certain. Low-income families shoulder a disproportionate energy burden, which becomes even more unmanageable when energy prices soar or temperatures drop. To alleviate this situation, Minnesota partners with the U.S. Department of Energy (DOE) to deliver 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 households typically spend 14% of their total annual income on energy, compared with 3.5% for other households. Low-income families often cut back on other necessities to pay their energy bills. Weatherization reduces home energy consumption, which provides a permanent boost to the household's budget.

Minnesota's program is administered through the Department of Economic Security and a network of 32 local agencies delivers energy efficiency services to eligible residents throughout the state. Weatherization prioritizes services to the elderly, people with disabilities, high energy consumers, 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. Weatherization measures provide long-term relief for low-income families and protect them from future fluctuations in supply and price.

LEADING THE WAY

When the Weatherization Program began, temporary measures, like covering windows with plastic, were emphasized. Today, Weatherization is a sophisticated program that integrates advanced technology to increase energy efficiency in low-income 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

MINNESOTA

Homes weatherized in 1999 (with DOE \$)	2,504
DOE funding in 1999	\$5.7 million
Clients served in 1999	5,762
Elderly	17%
People with disabilities	12%
Families with children	44%

Professionally trained crews and contractors use computerized energy audits to determine the most cost-effective measures for each home.

Advanced diagnostic equipment, such as the blower door, infrared camera, and manometer, is used to detect air infiltration, duct leaks, and pressure imbalances in the home. Minnesota was among the first states to integrate these diagnostic tools into their program. Crews also test heating units and appliances for gas leaks and carbon monoxide, an odorless, colorless gas that can be deadly in large quantities.

Typical weatherization services include blowing insulation in the walls and ceiling; sealing ducts; tuning and repairing furnaces; and mitigating heat loss through windows, doors, and other infiltration points. Minnesota crews were early users of the dense pack method of sidewall insulation.

Currently, Minnesota is using computer software to implement an on-site evaluation program that provides additional feedback on the home.

Minnesota prides itself on the professionalism and courtesy of its workforce. Weatherization crews provide comprehensive energy efficiency solutions for low-income families. These highly-skilled technicians receive technical training at national conferences, regional training centers, and in the field. Weatherization crews also serve as an energy efficiency resource to the community. Local agencies can bridge the delivery gap between federal, state, and community programs and agencies.

The effectiveness of the Weatherization Program is enhanced by the flexibility of core DOE funding, which enables local agencies to secure additional funding. In 1999, Minnesota leveraged funding to weatherize 1,963 additional homes. Leveraged dollars often result from creative partnerships. Weatherization, in collaboration with utilities and fuel suppliers, administers Minnesota's Conservation Improvement Programs (CIPs). CIPs reduce electric base load usage in the home by installing energy saving devices and materials.

A PARADE OF BENEFITS

Minnesota relies heavily on imported petroleum and natural gas. Weatherization reduces the dependence on foreign oil imports by making homes more energy-efficient. This also reduces the "export" of local energy dollars; up to 80% of the money spent on energy in low-income communities immediately leaves the community. Keeping money in the community spurs local economic growth and creates additional jobs. Every \$1 retained in the community produces an estimated \$3 in multiplier benefits.

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. 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 or one-third the emissions of an average automobile.

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 greenhouse gas emissions and curb demand for imported oil. Weatherization works for Minnesota and America!



The gauge on the blower door indicates air infiltration.

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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