

A Tribute to Weatherization Solutions in South Dakota

“Great Places. Great Faces.” South Dakota’s motto reflects the state’s pride in the many, impressive monuments that distinguish its landscape. The motto also reveals the state’s pride in its residents, from the famous personas to the anonymous faces. South Dakota prioritizes programs that help people; programs like 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 Office of Energy Assistance partners with the U.S. Department of Energy (DOE) to implement the program in South Dakota.

Weatherization services are delivered over a 75,989 square mile area through five community action agencies and one tribal program. Since the inception of the program, more than 30,000 homes in South Dakota have been weatherized.

Professionally trained crews use a computerized energy audit and advanced diagnostic equipment, such as the blower door, to determine the most cost-effective energy efficiency measures for each home. Weatherization crews also test gas furnaces and appliances for carbon monoxide and combustion safety. Typical weatherization services include installing insulation in attics, walls, and floors; sealing ducts; improving furnace efficiency; and mitigating heat loss through windows, doors, and other air infiltration points.

Client education is an important step in South Dakota’s weatherization process to ensure energy savings, maintain installed measures, and prevent future problems. One agency discovered a family was storing cleaning supplies on their furnace. Not only did this block the furnace air intake and reduce its efficiency, but the proximity of combustible materials posed a serious hazard. The crew explained the dangerous situation and helped to find a safe space for the materials.

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

SOUTH DAKOTA

Homes weatherized in 1999 (with DOE \$)	392
DOE funding in 1999	\$1.1 million
Clients served in 1999	1,008
Elderly	18%
People with disabilities	10%
Families with children	17%

MONUMENTAL LEVERAGING SUCCESS

South Dakota’s famous monuments make an enduring mark on the nation’s terrain. The state also creates a significant impact through successful leveraging strategies. South Dakota leverages core DOE program funding to weatherize more homes and deliver expanded services to low-income households. In 1999, South Dakota leveraged over \$2 million to weatherize 437 homes, in addition to the 392 homes weatherized with DOE funds.

This impressive leveraging success makes a big difference in the lives of low-income South Dakotans. Weatherization measures reduce average heating costs by 26%. These savings go a long way for a low-income family. Low-income households typically spend 14% of their total annual income on energy, compared with 3.5% for other households. Weatherization measures alleviate this high energy burden and help low-income families become more self-sufficient.

One local agency leveraged funds from the U.S. Department of Health and Human Services, the state utility, and a local organization to deliver comprehensive services to a disabled homeowner. The agency used DOE funds to install insulation and repair the windows and doors. Leveraged funds were used to replace the inoperable furnace, install a demand control device, and build a wheelchair ramp to make the home accessible for the disabled homeowner.

Weatherization does even more than save money and energy for low-income South Dakotans; often times, weatherization crews save lives. Darwin Veil* is a disabled homeowner, living on his own after the recent death of his parents. When his furnace broke over Thanksgiving weekend, he was left without any source of heat and the local utility was unable to help. Darwin called the Northeast South Dakota Community Action Program and was overwhelmed with relief when a new furnace was installed that afternoon. Few people can survive a South Dakota winter without heat.



South Dakota crew installs sidewall insulation in a single-family home.

INSPIRATIONAL WORK

Many times, homeowners are inspired to make further improvements to the home after the weatherization work is complete. While auditing a single-family home, a technician from the Interlakes Community Action Agency discovered that a mobile home furnace had been installed. The furnace was inadequate for the space and the ductwork was faulty. The agency used leveraged funds to replace the furnace and install the proper ductwork and then performed extensive weatherization measures. Following this work, the homeowner noticed a swift improvement in his health and he

was inspired to fix the missing sheetrock in his ceiling.

A weatherization crew in Pierre encountered a home with severe moisture problems. The attic was saturated with water and turning black with mold, and water was seeping down through the ceiling. Improper ventilation and serious air leakage were the culprits. The crew used the blower door to identify and seal the air leaks, and then corrected the ventilation problems. When the attic dried out, the client was encouraged to do more work and had the ceilings repaired.

WEATHERIZATION WORKS!

Weatherization produces an impressive range of benefits for individuals 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 South Dakota 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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