

Weatherization Assistance Program

Overview

The U.S. Department of Energy's (DOE's) **Weatherization Assistance Program (WAP)**, within the **Office of Energy Efficiency and Renewable Energy**, reduces energy costs for low-income households by increasing the energy efficiency of their homes, while ensuring health and safety. WAP is part of the Weatherization and Intergovernmental Programs Office and supports DOE's objectives to lower energy bills while expanding cost-effective energy choices for all American communities. The program supports 8,500 jobs and provides weatherization services to approximately 35,000 homes every year using DOE funds. Through weatherization improvements and upgrades, these households save an average of \$372 every year (*National Evaluation, expressed in 2022 dollars*).

Weatherization in Action

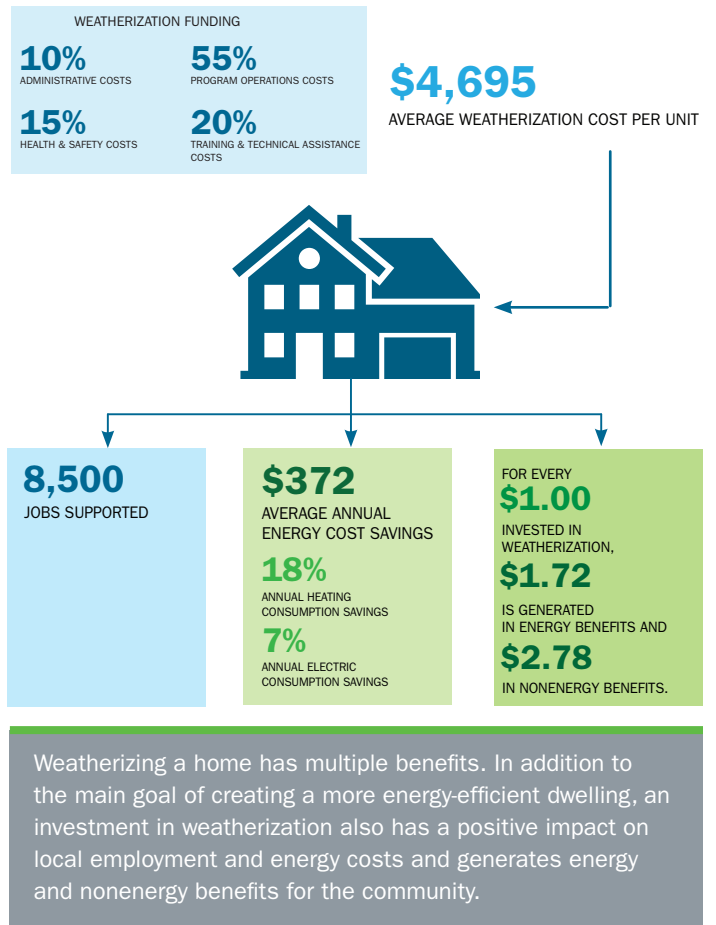
Locally-based and professionally-trained weatherization crews use computerized energy assessments and advanced diagnostic equipment, such as blower doors, manometers, and infrared cameras, to create a comprehensive analysis of the home. This analysis helps determine the most appropriate cost-effective measures and identifies any health and safety concerns. Crews also inspect households to ensure the occupants' safety, checking indoor air quality, combustion safety, carbon monoxide, and identifying mold infestations—which are all indications of energy waste.

The auditor creates a customized work order and trained crews install the identified energy efficiency and health and safety measures. A certified quality control inspector ensures all work is completed correctly and that the home is safe for the occupants.

Impact on Low-Income Americans

Low-income households carry a larger burden for energy costs, typically spending **13.9%** of total annual income versus **3.0%** for other households (*ORNL/TM-2020/1566*). Often, they must cut back on health care, medicine, groceries, and childcare to pay energy bills.

Weatherization helps alleviate this heavy energy burden through cost-effective building shell improvements such as insulation and air sealing; heating, ventilation, and air conditioning systems; lighting; and appliances.



The program improves health and safety by addressing any energy-related hazards. Once installed, energy-efficient weatherization measures continue to save money and energy year after year so funds can go toward other key living expenses.

Funding and Leveraging

DOE provides program funding to all 50 states, the District of Columbia, Native American tribes, and five U.S. territories—American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and the Virgin Islands—through formula grants.

With DOE grants, states contract with nearly 800 local agencies nationwide. Community action agencies, other nonprofits, and local governments use in-house employees and private contractors to deliver services to low-income families.

In 2019, utilities and states supplemented DOE funding by providing an additional **\$844 million** or **\$3.04** for every dollar invested by DOE (*NASCSP Funding Survey 2019*).

The Benefits of a Weatherized Home



ENERGY COSTS SAVINGS



WATER COST SAVINGS



LOWER OUT-OF-POCKET HEALTH COSTS



LOWER LOAN INTEREST PAYMENTS

Impact on Communities

Weatherization not only helps households, it also helps revitalize communities by spurring economic growth and reducing environmental impact.

Weatherization returns **\$2.78** in nonenergy benefits for every \$1.00 invested in the Program (*National Evaluation*).

Nonenergy benefits represent tremendous value for families whose homes receive weatherization services. After weatherization, families have homes that are more livable, resulting in fewer missed days of work (e.g., sick days, doctor visits), and decreased out-of-pocket medical expenses by an average of **\$514**. The total health and household-related benefits for each unit averages **\$14,148** (*National Evaluation*).

Typical Weatherization Measures

MECHANICAL MEASURES

- Clean, tune, repair, or replace heating and/or cooling systems
- Install duct and heating pipe insulation
- Repair leaks in heating/cooling ducts
- Install programmable thermostats
- Repair/replace water heaters
- Install water heater tank insulation
- Insulate water heating pipes
- Install solar hot water heating systems.

BUILDING SHELL MEASURES

- Install insulation where needed
- Perform air sealing
- Repair/replace windows and doors
- Install window film, awnings, and solar screens
- Repair minor roof and wall leaks prior to attic or wall insulation.

ELECTRIC and WATER MEASURES

- Install efficient light sources
- Install low-flow showerheads
- Replace inefficient refrigerators with energy-efficient models.

CLIENT EDUCATION ACTIVITIES

- Educate on potential household hazards such as carbon monoxide, mold and moisture, fire, indoor air pollutants, lead paint, and radon
- Demonstrate the key functions of any new mechanical equipment or appliances
- Discuss the benefits of using energy-efficient products.

Leading the Industry

Weatherization has an essential role in introducing and deploying technology and facilitating greater industry adoption. An entire industry—the home performance industry—is based on the skills perfected by weatherization. Over the past 5 years, the weatherization network and the private sector have established the **Guidelines for Home Energy Professionals**, including **Standard Work Specifications for Home Energy Upgrades (SWS)**, and **Home Energy Professional certifications**, along with accreditation of energy-efficiency training programs.

Weatherization agencies also create a market for American manufacturing, using products and equipment from local sources, benefiting the business community in the regions they serve.

The Weatherization Assistance Program has created an industry—producing new jobs and technologies—all while helping the most vulnerable families in America. ■



HEALTH and SAFETY MEASURES

- Perform heating system safety testing
- Perform combustion appliance safety testing
- Repair/replace vent systems to ensure combustion gas drafts safely outside
- Install mechanical ventilation to ensure adequate indoor air quality
- Install smoke and carbon monoxide alarms when needed
- Evaluate mold/moisture hazards
- Perform incidental safety repairs when needed.

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DOE/EE-2124 · June 2022