

Utility Energy Efficiency and Weatherization Programs

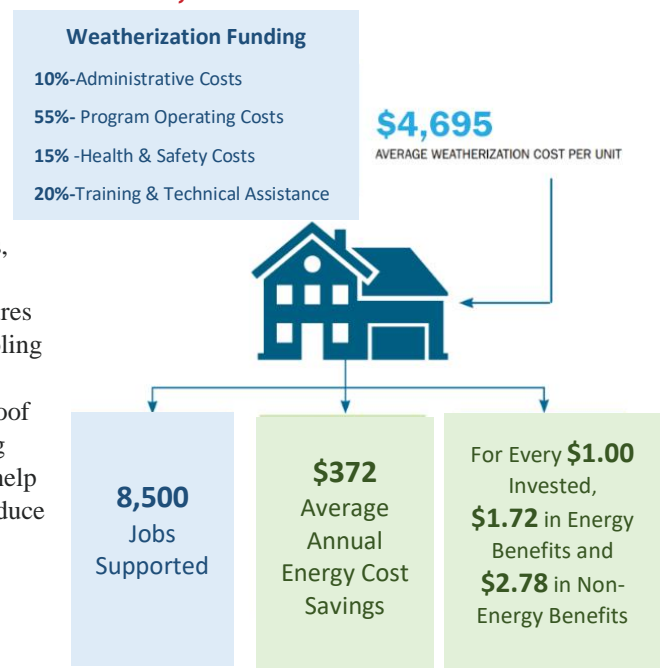
Energy Efficiency and weatherization programs work together to cut household energy expenditures, reduce greenhouse gas emissions, and increase the resiliency of our buildings.

Weatherization Programs

Weatherization Programs (WP) are partnerships between federal/state governments and utilities to provide low-income households with technical and financial assistance to lower household energy bills.¹ These programs help protect structures, such as a home or business, from outdoor elements, such as precipitation, sunlight, wind, etc. Typical weatherization measures include mechanical improvements (replacing aging heating/cooling systems, installing heating pipe insulations, etc.), building shell improvements (replacing leaky windows and doors, repairing roof and wall leaks, etc.) electric and water improvements (installing efficient light sources, low-flow shower heads, etc.). WPs can help decrease the energy expenditure of low-income families and reduce their carbon footprint.

U.S. Department of Energy Weatherization Assistance Program

One of the most prominent weatherization programs is the U.S. Department of Energy Weatherization Assistance Program (WAP). Since its inception in 1976, the WAP has helped 7 million low-income families reduce their energy costs and improve their environmental footprint. The program provides weatherization services to 35,000 homes each year, helping these households save \$372 or more annually on average. The program also currently supports 8,500 jobs.²



Source: [U.S. DOE, "Weatherization Works"](#)

 **Weatherization yields about \$2.78 in non-energy benefits for every \$1 of investment³**

Environmental Benefits of Weatherization

Weatherization is an impactful strategy to reduce greenhouse gas emissions and other pollutants. WPs can help reduce sector emissions by making homes and businesses more energy efficient. With less energy required for space heating and cooling, carbon emissions can be significantly reduced through targeted state/province and utility programs. For example, a weatherization program in a southwestern U.S. state saved 21.7 metric tons of CO₂ annually in each weatherized home, for total carbon savings of 218,148 metric tons.⁴

¹ [D.C. Department of Energy & Environment, Weatherization Assistance Program](#)

² [U.S. DOE, Weatherization Assistance Program](#)

³ [U.S. DOE, About the Weatherization Assistance Program](#)

⁴ [MFA Housing New Mexico, NM EnergySmart Weatherization Program](#)

Example Program: Illinois Home Weatherization Assistance

Illinois Home Weatherization Assistance Programs (IHWAP) was created in 2008 by the Illinois Department of Commerce to help low-income residents and households conserve fuel and reduce their energy costs. In 2018, the state's largest utility joined the program and has since provided \$13 million in retrofit incentives for income-eligible homeowners.⁵ More than 2,000 households have participated, saving more than \$800 on average. The emission savings from participating single-family homes is equivalent to reducing six million pounds of CO₂ emissions from the atmosphere, equivalent to removing 600 cars from the road.



Weatherization can reduce a family's medical expenses by an average of \$514⁶

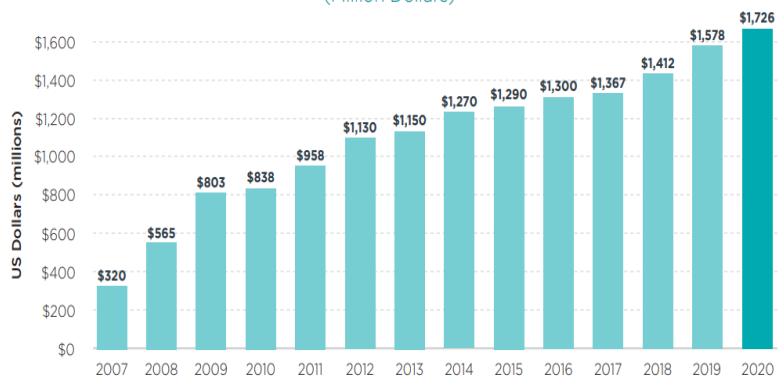
Gas Utilities & Energy Efficiency

Natural gas utilities have had long-standing efficiency programs that have yielded multiple benefits for their customers including improved energy affordability and resilience. There were 120 active natural gas utility ratepayer-funded efficiency programs in the United States in 2019.⁷ Those gas utilities can offer rebates for high-efficiency home equipment, such as natural gas furnaces, water heaters, and SMART. Between 2012 and 2017, natural gas energy efficiency programs saved energy at a cost of roughly \$0.40/therm, which was less than half the average retail price of natural gas during that period.⁸ Efficiency programs can have an even larger impact during periods of high natural gas prices.

Emission Reductions from Energy Efficiency Improvements

Fossil-fuel combustion associated with residential and commercial buildings account for 29% of total U.S. greenhouse gas emissions. Since 2005, energy efficiency improvements in the residential and commercial buildings sector have led to a reduction in greenhouse gas emissions of 17.3% in the residential sector and 11.4% in the commercial sector.⁹ In 2019, American utilities spent \$1.57 billion on energy efficiency measures, \$419 million of which funded weatherization programs in low-income households. In 2019, these energy efficiency measures saved roughly 1.7 million metric tons of CO₂.¹⁰

Yearly Natural Gas Efficiency Program Funds in the United States from 2007 - 2019³
(Million Dollars)⁴



Source: [American Gas Association, Natural Gas Efficiency Program Funding and Impacts](#)

⁵ Business Wire, [More than 2,000 Income Eligible Families Take Advantage of ComEd, Illinois Home Weatherization Service](#)

⁶ U.S. DOE, [Weatherization Assistance Program, 2022](#)

⁷ American Gas Association, [Natural Gas Efficiency Program Characteristics, 2022](#)

⁸ Utility Dive, [Efficiency Significantly Cheaper than Natural Gas, DOE Study Concludes, 2020](#)

⁹ C2ES, [Decarbonizing U.S. Buildings, 2018](#)

¹⁰ American Gas Association, [Natural Gas Efficiency Program Funding and Impacts, 2019](#)