

NATIONAL EVALUATIONS: SUMMARY OF RESULTS

DOE is pleased to summarize the results of two major national evaluations of the Weatherization Assistance Program (WAP or Weatherization). These evaluations were multiyear, peer-reviewed, statistically robust efforts led by Oak Ridge National Laboratory (ORNL). They are the most comprehensive, detailed analysis of the WAP and its operations ever conducted. The Retrospective Evaluation covers Program Year (PY) 2008 and is reflective of a typical year in WAP operations. The Recovery Act Evaluation covers Program Year (PY) 2010 and provides insight into the unique program that was administered by DOE in the national effort to create jobs and promote economic recovery, as part of the American Recovery and Reinvestment Act of 2009.



KEY FACTS FROM THE WEATHERIZATION RETROSPECTIVE EVALUATION (2008)

Weatherization provides cost-effective energy savings to American families, provides additional health and safety benefits, supports jobs, and provide a stable platform for additional investment in energy efficiency.

Program Wide Energy Savings (Present Value)	\$340 million
Single-Family Home Average Annual Energy Cost Savings	\$283
Single-Family Home Savings-to-Investment Ratio (SIR)	1.5
Jobs Supported	8,500
Program Wide Savings-to-Investment Ratio (SIR)	1.4
Program Wide Benefit Cost Ratio Including Health and Safety Benefits	4.1
<i>The WAP Retrospective Evaluation is a large, comprehensive evaluation reflecting typical program operations.</i>	
Evaluation Sample Size - Total Dwelling Units	30,000
Evaluation Sample Size - Utility Bills Analyzed	8,000

TABLE 1. OVERVIEW OF BENEFITS FROM THE WEATHERIZATION PROGRAM

SUMMARY OF BENEFITS	RETROSPECTIVE (2008)	RECOVERY ACT (2010)
<i>Program Wide Benefits for All Housing Types</i>		
Total Homes Weatherized	97,965	340,158
Average Cost per Weatherized Home	Total Cost: \$4,695/DOE Investment: \$2,301	Total Cost: \$6,812/DOE Investment: \$5,926
Average Energy Measure Costs	\$2,899	\$3,545
Savings Per Household (Present Value)	\$4,243	\$3,190
Energy Savings (Present Value)	\$340 million	\$1.1 billion
Total Benefits including Health & Safety (Present Value)	\$13,550	\$13,167
Savings-to-Investment Ratio (SIR)	1.4 ⁱ Energy Benefits	0.9 ⁱ Energy Benefits
Jobs Supported	8,500	28,000
Carbon Reduction	2,246,000 metric tons	7,382,000 metric tons
<i>Benefits for Single-Family Homes</i>		
Percent of Single-Family Homes Weatherized	64% ⁱⁱ	65%
Average Annual Energy Bills	\$2,279	\$1,863
Average Energy Measures Costs	\$2,846	\$3,777
Average Savings Per Home (Present Value)	\$4,196	\$3,803
Average Annual Energy Cost Savings	\$283 (12%)	\$223 (12%)
Average Annual Energy Savings - Gas	18%	16%
Average Annual Energy Savings - Electric	7%	8%
Savings-to-Investment Ratio (SIR)	1.47 Energy Benefits	1.01 Energy Benefits

ⁱThese values represent conservative estimates that include funding from some non-DOE sources that are not uniformly subject to DOE's SIR requirement that is used to guide the measures that are installed. These funds are often used for higher cost energy measures that result in lower SIR for the combined funds.

ⁱⁱThis value includes 5% for small multifamily homes consistent with the definition for the 2010 study; the costs and benefits are provided for site built homes only; the SIR with small multifamily homes remains at 1.47.

TABLE 2. KEY PROGRAM CHARACTERISTICS FOR THE STUDY PERIODS

PROGRAM CHARACTERISTICS	RETROSPECTIVE (2008)	RECOVERY ACT (2010)
States/Territories (Grantees) Served	50 States, District of Columbia	50 States, District of Columbia, U.S. Territories
Average Spending Limits	\$2,500 ⁱⁱⁱ	\$6,500
Eligible Households	35 million	38.6 million
DOE Investment	\$236 million	\$2 billion
Non-DOE Investment	\$614 million	\$715 million
Health and Safety Expenses	10-15%	up to 20%
Other Factors	---	Prevailing wage requirements Program ramp up Greater assistance to cooling dominated climates

ⁱⁱⁱ Before Consumer Price Index (CPI) adjustment.

TABLE 3. KEY PROGRAM CHARACTERISTICS FOR THE STUDY PERIODS

EVALUATION SCOPE	RETROSPECTIVE (2008)	RECOVERY ACT (2010)
Single Family/Mobile Homes	20,000+	35,000+
Multifamily Units	10,000+	10,000+
Electricity & Natural Gas Billing Histories ⁱⁱⁱⁱ (for weatherized and comparison single family + mobile homes)	8,000+ from over 1,000 natural gas and electric utilities	16,000+ from over 400 natural gas and electric utilities

ⁱⁱⁱⁱ For weatherized and comparison single family + mobile homes.

Results for both the Retrospective and the Recovery Act Evaluations are summarized in Table 1 across all housing types that Weatherization services (e.g., single family, mobile homes, and multifamily homes) and for single-family homes in particular as they are the major building type assisted through the program. Table 2 summarizes the major characteristics of the WAP program for each of the two study periods, and Table 3 provides an overview of the scope of data collection for each of the evaluations.

WEATHERIZATION: GOING FORWARD

The National Retrospective and Recovery Act Evaluations provide a comprehensive picture of the Weatherization Assistance Program, including the characteristics of the clients, housing stock and service providers. They also provide valuable information on the costs and benefits of WAP services in different parts of the country and for different types of housing. As Weatherization moves forward, the results of the National Evaluations will provide valuable insight into the opportunities for policy and practice enhancement that will allow WAP to build on its successful history of improving families' lives while saving energy. The National Evaluation demonstrates that, thanks to the dedication of the entire WAP network, Weatherization Works!

For more information go to <http://weatherization.ornl.gov>.