
1. EXECUTIVE SUMMARY

This report summarizes state and utility low-income weatherization program activity for households weatherized to completion during calendar year 2001. The report includes state, utility, and agency summaries of calendar year 2001 spending and impacts by measure, end-use, and fuel.

Program Costs and Impacts

We estimated energy and coincident demand impacts for the program participants by applying the adjustment factors to the engineering estimates that were developed for the 1992 program¹. The estimates were adjusted using factors derived from a fuel consumption analysis of the 1992 program participants, and secondary, agency-specific, adjustment factors developed using data for completions during the period April, 1996 through March, 1997, September, 1998 through August, 1999, and January through December, 2000 and 2001. The base data consisted of statewide program tracking databases of spending and measure installations for households completed during the calendar year 2001.

The WAP program audited 2,003 households during calendar year 2001, and installed energy measures in 1,998. Program expenditures for labor, materials, and support totaled \$8.43 million in calendar year 2001, averaging \$4,225 per household. Although most measures installed by the program in 2001 are essentially unchanged from the 2000 program, clients received significant benefits from the addition of refrigerator and freezer exchanges or removals and greater installation frequencies of all major measures offered by the program.

First-year savings of natural gas totaled 507,034 therms -- a 6.8% increase from 474,554 therms in CY 2000 -- and 1,349,721 kWh -- a 54.4% increase from the 873,876 kWh of electricity saved by the CY 2000 program. Utility-funded measures were responsible for 44% of all energy and demand savings for electricity, and 41% of natural gas savings.

In addition to utility-provided fuels, the CY2001 program saved 62,190 gallons of propane, 7,434 gallons of fuel oil, and 27 Mbtu of other fuels.

First-year client energy cost savings totaled \$621,654 -- an increase of 29% over the \$483,923 saved by the CY 2000 program, and averaged \$310 per household, up from \$244 the previous year. The increases in client bill savings reflect higher installation frequencies of major measures, the addition of refrigeration measures, and higher fuel costs experienced during CY 2000.

On average, the program saved 679 kWh of electricity for 1,987 households with electricity impacts -- this constitutes a 52% increase in average electricity savings for households with electricity impacts. The program saved an average of 297 therms of natural gas for 1,706 households with gas impacts, 274 gallons of propane in 227 households with propane impacts, and 191 gallons of fuel oil in 39 households with fuel oil impacts.

Utilities contributed \$1.93 million in expenditures, or 23% percent of the total program expenditures. Utility-funded measures were installed in 1,500 households. Savings from utility-funded measures

¹ see the following Wisconsin Energy Conservation Corporation reports for a full description of the estimation routines and derivation of the adjustment factors:

- Estimated Low-Income Program Impacts in Iowa, June 14, 1993;
- An Evaluation of Iowa's Low-Income Weatherization Efforts, August 8, 1994; and
- An Evaluation of the 1995 Iowa Low-Income Collaborative Weatherization Program, November 5, 1996.

averaged 399 kWh in 1,472 utility-funded households with electricity impacts, and 175 therms in 1,204 utility-funded households with gas impacts. Utility-funded measures yielded first-year client cost savings averaging \$32 per household for electricity measures and \$153 for gas measures.

Fuel Consumption Analysis Results

The natural gas savings reported herein have been adjusted at the agency level. These adjustment factors were derived from a fuel consumption analysis of recent program participants. The factors were applied to the estimated natural gas, propane, and fuel oil heating measures, and to natural gas and propane water heater measures. Along with providing better assessments of agency-level impacts, this procedure also provides a check on the accuracy of the algorithms used to estimate savings. The fuel consumption analysis showed 24.9% savings \pm 1.3% at 90% confidence for natural gas measures installed in CY 2001.

Changes in Program and Report Contents

As noted earlier, refrigeration measures were phased in during CY 2001, including exchanges and replacements of refrigerators and freezers. In addition, the utilities expanded funding of high-efficiency furnace replacements during 2001.

We have added additional summary tables in this year's reports to assist the utilities with load planning. Past reports included tables showing impacts for utility-funded measures. These additional tables report estimated impacts for all measures in houses directly serviced by each utility, including DCAA-funded measure impacts.