Iowa Fiscal Partnership

POLICY BRIEF

May 20, 2010
www.iowafiscal.org

Green Recovery: How Weatherization Works for Iowans

Sustainable Policy Assists Struggling Families, Enhances Iowa's Economy

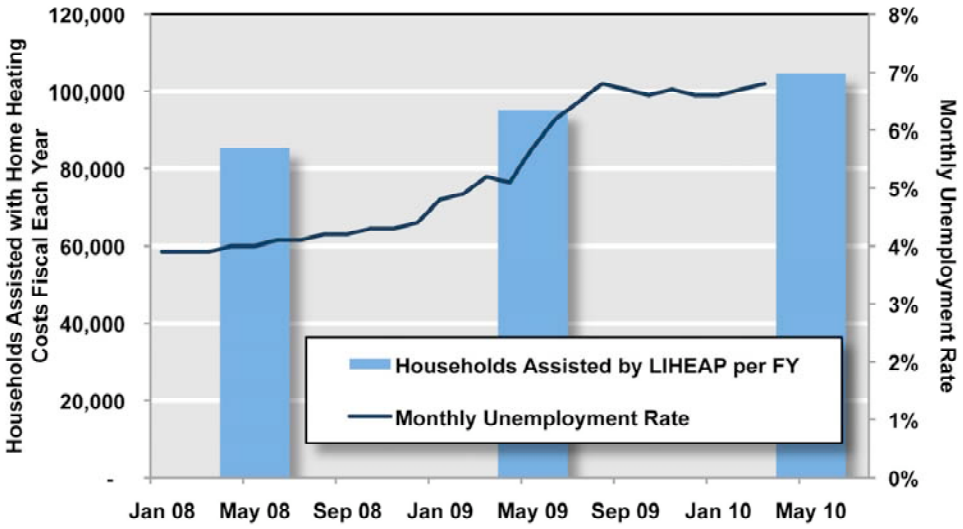
By Molly Fleming and David Swenson

The American Recovery and Reinvestment Act (ARRA), signed by President Obama on February 17, 2009, provides billions of dollars in funding to create jobs and to spur economic activity despite the recession. Included in this stimulus package is $5 billion for weatherization services to low-income families, of which nearly $81 million goes to the Iowa Weatherization Assistance Program (WAP). This report provides estimates of the impact of this funding on the Iowa economy and demonstrates that the increased WAP funding is creating jobs and boosting the incomes of Iowans.

Unaffordable Home Energy Burdens

As the nation grapples with converging crises of economic recession, uncertain long-term energy prices, and climate change, many Iowans are finding it increasingly difficult to pay their energy bills. In particular, low and moderate-income families struggle to balance high energy costs with other basic household needs. As unemployment rises and household incomes decline, more families in Iowa are turning to social support programs such as the Low Income Home Energy Assistance Program (LIHEAP) to make ends meet. As Figure 1[1] shows, the unemployment rate in Iowa increased by 74 percent between March 2008 and March 2010, while 23 percent more households received LIHEAP assistance for home energy bills during that same time period.

Figure 1. Unemployment Grows Faster than LIHEAP in Iowa



Source: LIHEAP data from the National Energy Assistance Directors' Association

LIHEAP offers financial assistance to qualifying low-income households to defray the burdensome costs of high heating or cooling bills. While LIHEAP assistance provides some relief for struggling families, who must earn less than 150 percent of the federal poverty

The Iowa Policy Project
20 E. Market Street
Iowa City, IA 52245
(319) 338-0773 • www.iowapolicyproject.org

CHILD & FAMILY POLICY CENTER
505 5th Avenue • Suite 404
Des Moines, IA 50309
(515) 280-9027 • www.cfpciowa.org

level to qualify, the average benefit covers only 19 percent of annual home heating bills. The average annual energy bill in Iowa during 2008 was $2,066[2] while the average 2008 LIHEAP payment was only $390.[3] Economically distressed households often find that they cannot bridge the gap between high energy bills and income, particularly during the recession.

The "home energy burden" for any household is the percent of the household income that is spent on energy expenditures.[4] Low-income Iowans experience a home energy burden three times the burden of their non low-income counterparts.[5] If a family experiences sudden unemployment or reduced wages, this energy burden can be crippling. A recent Iowa Policy Project report, "Making Residential Energy Efficiency Accessible to Low-Income Iowans" by Teresa Galluzzo and Beth Pearson, analyzes the multiple and overlapping factors that contribute to unaffordable home energy burdens for low-income households. All told, low-income Iowans are likely to have older homes and outdated appliances, and are less likely to be able to pay the high up-front costs of energy efficiency improvements.[6] This burden is particularly difficult to bear when the economy declines.

Weatherization Reduces Energy Costs

While income support programs such as LIHEAP provide vital assistance for economically distressed families, energy benefits alone are not enough to bridge the home energy affordability gap. Iowans struggling with high energy bills have strong incentive to reduce energy costs, but may lack the means to invest in energy efficiency measures that might create savings.

Iowa's Weatherization Assistance Program (WAP) seeks to ease the home energy affordability gap. WAP helps low-income households with energy efficiency home retrofits and appliance replacements. Participants receive a computerized energy audit that estimates the cost effectiveness of various efficiency measures. Contractors then install improvements, such as high-density insulation and infiltration reduction systems, which eliminate many energy inefficiencies. These efficiency investments reduce household utility bills for families most in need of relief from expensive utility bills. In particular, WAP targets households with children, seniors, or disabled individuals.

Key Energy Efficiency Measures: Costs and Savings

In addition to easing the household energy burden for struggling families in Iowa, weatherization can reduce the statewide greenhouse gas emissions that contribute to global climate change.

Residential energy usage accounted for 14 percent of Iowa's greenhouse gas emissions 2008, and this proportion is projected to steadily increase in the coming years.*

With targeted investments in household energy efficiency, however, Iowa can diminish the impact of residential energy usage on global climate change while ensuring more income for families who are finding it difficult to make ends meet.

* *Center for Climate Strategies.* Final Iowa GHG Inventory and Reference Case Projection. *October 2008. Table ES-1 and Table B3a.*

Home Weatherization Funding in the American Recovery and Reinvestment Act

In reducing household energy costs for struggling families and cutting nationwide greenhouse gas emissions, home weatherization also creates jobs that typically pay higher than the median wage, putting unemployed individuals to work in local economies. Because it puts funds to work quickly and in a targeted manner, weatherization —$5 billion of ARRA

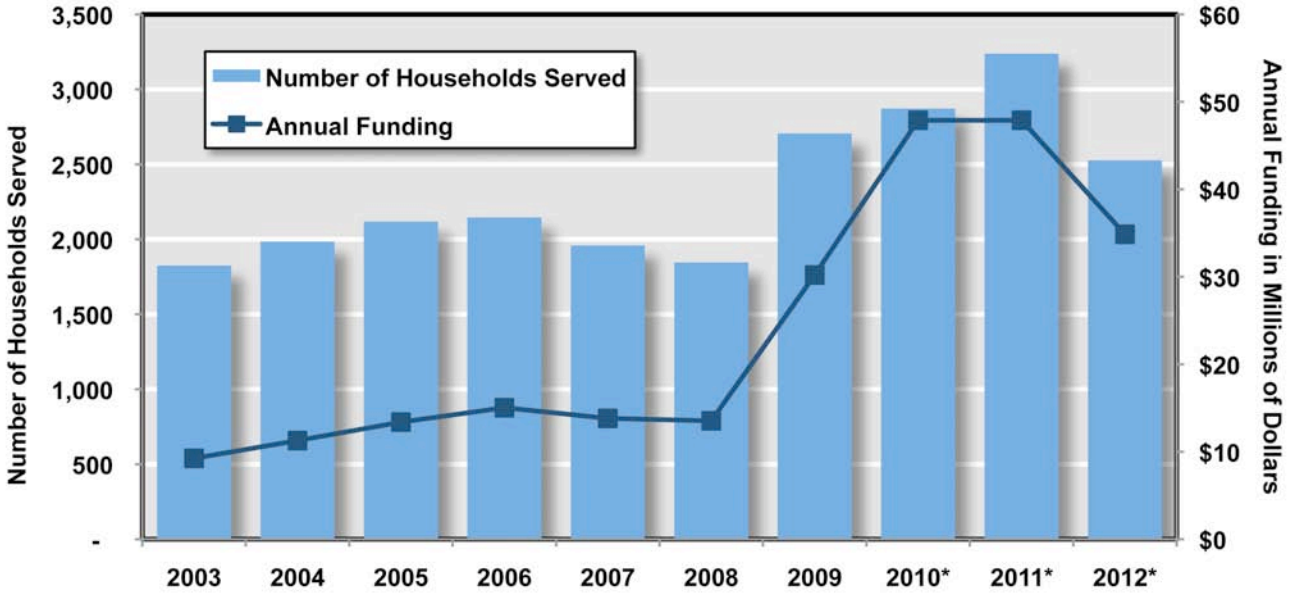
Table 1. ARRA Boosts Home Weatherization Funding in Iowa (Millions)

	Weatherization Services	Administration Expenses	Calendar Year Total
2009	$5.4	$1.2	$6.6
2010	$22.1	$10.9	$33.0
2011	$22.1	$10.9	$33.0
2012	$7.4	$0.86	$8.3
Total	**$57.0**	**$23.9**	**$80.9**

funding nationwide — is a powerful form of economic stimulus. As shown in Table 1, Iowa's WAP is set to receive $80.9 million in federal funding for weatherization services and administration to support the retrofitting of 7,205 homes for energy efficiency for calendar years 2009-12.[7]

These recovery dollars supplement WAP's existing funding from LIHEAP and utility companies statewide. WAP also receives weatherization funding from the Department of Energy, but in fiscal years 2009-12, DOE weatherization funding may be partially supplanted by ARRA dollars.[8] All told, ARRA more than triples Iowa's WAP spending in 2010 and 2011, and more than doubles spending in 2009 and 2012. Figure 2 shows how annual WAP spending compares to the number of households served in 2003 through 2012. Despite rising per household weatherization costs, ARRA this fiscal year will enable 76 percent more families to benefit from extensive energy retrofits in 2010 as received home weatherization in 2008. ARRA also expands access to WAP services by raising maximum income eligibility requirements from 150 percent to 200 percent of poverty. In other words, more struggling households are qualified for weatherization assistance just as WAP has greater capacity to serve more homes. For example, a single parent with two children earning $28,000 a year will now qualify for weatherization assistance. Because of these investments, more than 7,200 additional households will escape high home energy burdens while experiencing more sustainable living.

Figure 2. ARRA Boosts Households Served by Iowa's Weatherization Assistance Program, Fiscal Years 2003-12[9]



**Estimates provided by Bill Brand, administrator of the Iowa Division of Community Action Agencies*

Unfortunately, ARRA weatherization funds flowed more slowly than Iowa community action agencies had originally hoped. While the Iowa unemployment rate soared and more families staggered beneath unaffordable home energy burdens, weatherization stimulus money sat unused for months. Iowa's WAP plan was not approved by the federal government until July 2009, and six more weeks passed before the U.S. Department of Labor set prevailing wages for the state.[10] All told, Iowa's weatherizing agencies experienced a six-month delay between passage of ARRA and access to stimulus weatherization funds.

However, the delays caused by prevailing wage requirements do not mean that such wage rates should not be set for similar spending in the future. Though prevailing wage requirements did slightly slow the provision of weatherization services to Iowa households, these minimum wage standards ensure that federal funds support good-paying jobs for Iowa workers.

Impact of Weatherization Spending on Iowa's Economy

Besides the clear benefits of conserving energy, curbing greenhouse gas emissions, and reducing household energy bills, Iowa's WAP also stimulates the state economy. Funds from outside the state, such as ARRA dollars from the federal government, prompt multiple rounds of spending within local economies. These ripple effects of spending on goods and services would not occur but for ARRA.

For example, when low-income households in Iowa receive weatherization assistance funded by ARRA, they save on home energy bills. Because low-income individuals and families typically spend their available resources to meet basic needs, they usually would immediately spend their energy savings on goods and services in the local economy. Therefore, every dollar that a low-income family saves on home energy bills enables that family to spend an additional dollar on other purchases. As WAP recipient households make more purchases, Iowa retail stores and service providers see increased sales. Workers in these businesses are less likely to lose their jobs because of the recession, and may even earn more as work hours increase, enabling their own greater purchases from businesses in the state.

Meanwhile, the jobs created by ARRA's weatherization funding further enhance the state economy. Workers hired to weatherize homes, such as electricians, carpenters and heating mechanics, receive greater incomes, and can make more purchases in their local economies, supporting businesses and their employees statewide. Simultaneously, businesses manufacturing and selling weatherization products, such as insulation and high-efficiency appliances, see greater sales as their products are required for home efficiency improvements. In turn, these businesses are better able to keep their workers employed and have more income to make purchases from other businesses in the state. As these examples show, each round of spending incites a successive round, combining to represent the total economic impacts of weatherization stimulus.

The direct impacts of the extra WAP spending on Iowa's economy can be measured in three ways. First, the full amount of federal spending is reflected in an increase in *total output*, a standard measure of state economic activity showing the total dollar value of goods and services produced in Iowa. Second, *income* accrues to workers and business owners in Iowa. For example, local hardware stores may sell more weatherization products, producing increased income in the form of wages for workers and income for proprietors. Lastly, the weatherization stimulus spending *creates jobs* for unemployed and underemployed Iowans, or saves jobs that otherwise would have been eliminated in the economic downturn. A heating company experiencing increased demand for high efficiency furnace installation may opt to hire additional workers, for example.

However, these direct economic effects do not represent the full impact of weatherization stimulus spending on Iowa's economy. In addition to direct effects, there are indirect effects that increase the total impact of the stimulus. Businesses that produce and sell weatherization products rely on a variety of Iowa businesses for everything from heating coils to insurance services. Some of the federal ARRA weatherization funds are in turn channeled to these Iowa businesses, enabling them to experience greater sales and profits and employ more workers. Finally, all of the employees and small business owners who benefit from greater incomes as a result of weatherization stimulus spend a portion of those greater incomes in the Iowa economy — at the grocery store, the auto dealer, and all the other local businesses that make up the Main Street economy. These indirect effects are measured in the same three ways as direct effects: the increased value of output, increased incomes of workers and proprietors, and increased employment.

Table 2 summarizes the economic impacts of ARRA's weatherization funding in Iowa. For calendar year 2010, for example, Iowa's WAP is estimated to spend $33 million of its $80.9 million in federal weatherization stimulus funding. We estimate that the equivalent of 469 full-time Iowa jobs earning

more than $15 million in labor income are either created or retained in the private and public sectors as a *direct* result of the spending.[11]

Indirect effects, as described above, increase these direct economic impacts. Indirect purchases add more to the state economy, greater individual incomes, and more jobs. Further, as households obtain and keep jobs, they can spend more on goods and services, further expanding Iowa's economy.

Table 2. Indirect Effects Expand Economic Impacts of ARRA Weatherization Assistance Program Funding in Iowa

2009	Direct Effects	Indirect Effects	Total Effects
Total output	$6,600,000	$2,983,125	$9,583,125
Income	$2,596,471	$904,147	$3,500,618
Jobs	91	27	118
2010	**Direct Effects**	**Indirect Effects**	**Total Effects**
Total output	$33,000,000	$15,630,060	$48,630,060
Income	$15,299,375	$4,723,346	$20,022,699
Jobs	469	142	612
2011	**Direct Effects**	**Indirect Effects**	**Total Effects**
Total output	$33,000,000	$15,630,060	$48,630,060
Income	$15,299,375	$4,723,346	$20,022,699
Jobs	469	142	612
2012	**Direct Effects**	**Indirect Effects**	**Total Effects**
Total output	$8,260,000	$3,639,847	$11,899,847
Income	$2,946,032	$1,105,015	$4,051,040
Jobs	112	33	145

Source: Estimates by author David Swenson through the state input-output model

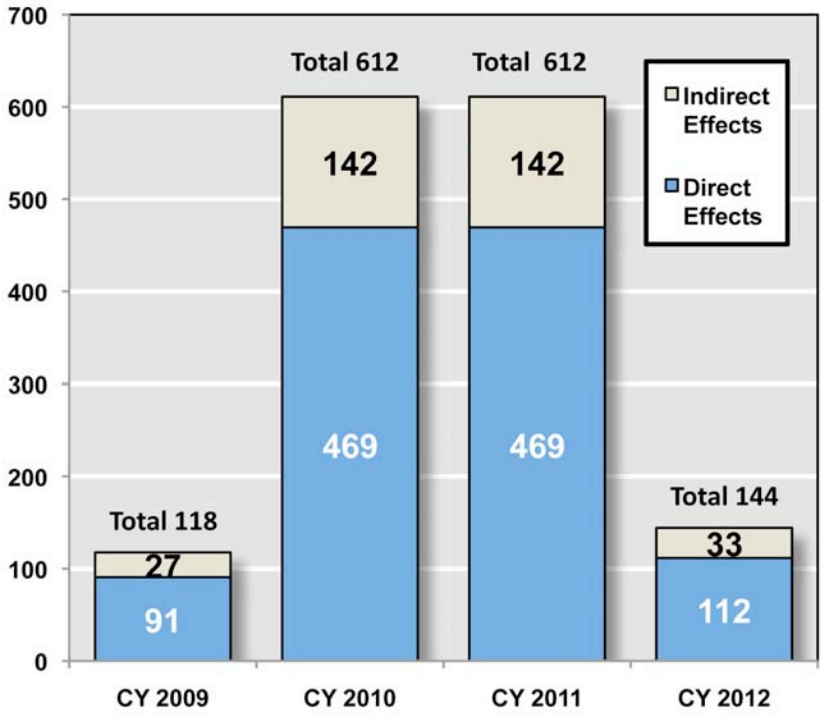
All told, we project that Iowa's economy will experience an increase in output of nearly $49 million in calendar year 2010 as a result of federal weatherization stimulus funding. This will create more than $20 million in income and the equivalent of 612 full-time jobs either created or saved by ARRA's weatherization component. These figures are identical in calendar year 2011. Due to a lower level of spending in the first and last years of ARRA weatherization funding, impacts in these years are somewhat smaller, as shown in Table 2.

As these figures show, weatherization stimulus spending has an economic benefit to the state of Iowa much greater than the federal government's initial investment. In 2008, it cost an average of about $7,336 to weatherize a single home in the state.[12] However, due to the indirect effects of economic activity associated with home energy retrofits, each federal dollar spent on home weatherization creates an additional 47 cents in economic output for Iowa's economy. In other words, one dollar of federal stimulus for home weatherization in Iowa generates $1.47 in total state output. Furthermore, each federal dollar spent on home weatherization generates 61 cents in income for Iowa workers and business owners. Because these dollars promote activity in many sectors of the economy, the federal stimulus supports the livelihoods of workers and small business owners statewide.

These impacts are particularly significant given the dire condition of local economies throughout the state. Iowa's seasonally adjusted unemployment rate continues to hover around 6.8 percent, its highest point in decades. More and more workers in Iowa are entering the ranks of long-term unemployment, meaning that they are unable to find work after over 26 weeks of searching. In fact, the nation's long-term unemployment rate is at its highest point since recording began in 1948, with a full 4 percent of the civilian labor force facing the economically debilitating and emotionally demoralizing impacts of more than half a year without employment.

Americans need jobs, and weatherization funding in the federal recovery bill has the capacity to create and maintain jobs that might otherwise be lost in the economic downturn. These jobs are crucial to Iowa's capacity to recover from the economic recession. As shown in Figure 3, ARRA's weatherization spending directly creates or saves about 91 jobs in calendar year 2009, 469 jobs in calendar year 2010, another 469 jobs in calendar year 2011, and 112 jobs in calendar year 2012 in the state of Iowa. Additionally, the indirect effects of ARRA increase these values by over 30 percent. All told, weatherization stimulus in Iowa creates or saves 118 jobs in 2009, 612 jobs in 2010, 612 jobs in 2011, and 144 jobs in 2012. In other words, every $1 million invested in Iowa's Weatherization Assistance Program creates or saves about 19 jobs for Iowa workers.

Figure 3. Total Job Effect of Federal ARRA Funding for Iowa's Weatherization Assistance Program



Weatherization in ARRA: A Threefold Impact

Energy efficiency investments, particularly large scale retrofits associated with home weatherization, save Iowans millions of dollars while simultaneously cutting residential energy use. As the Iowa Weatherization Assistance Program targets vulnerable low-income residents, it reduces energy costs and creates income savings for those households that grapple with the most unaffordable home energy burdens. At the same time, WAP reduces statewide greenhouse gas emissions and diminishes Iowa's contribution to global climate change. Weatherization federal stimulus spending also contributes to the statewide economy: increasing output, increasing incomes and ensuring jobs for Iowa workers despite the dramatic toll of the recession.

[1] LIHEAP assistance data from the National Energy Assistance Directors' Association Press Release revised February 22, 2010. Available from: http://www.neada.org/communications/press/2010-02-22Table%201-LIHEAP10ProjServed.pdf
[2] Fisher, Sheehan and Colton. *On the Brink: 2008—The Home Energy Affordability Gap*, Iowa factsheet. April 2009.
[3] LIHEAP Clearinghouse. "Iowa Low-Income Energy Programs." Available from: http://liheap.ncat.org/profiles/Iowa.htm.
[4] An "affordable burden" for home energy bills is commonly defined as 6 percent of gross household income or less. Fisher, Sheehan and Colton, 2009.
[5] *Ibid.*
[6] Teresa Galluzzo and Beth Pearson. "Making Residential Energy Efficiency Accessible to Low-Income Iowans." Iowa Policy Project. May 2010.
[7] The figures for total funding to Iowa's Weatherization Assistance Program available from the American Reinvestment and Recovery Act (ARRA) were reported by Bill Brand of the Iowa Department of Human Rights Division of Community Action Agencies on March 23, 2010. Annual figures are estimated based on current expenditure assumptions and the state's weatherization plan. The level of weatherization stimulus spending in each calendar year may change as expenditure assumptions are revised.
[8] At this time, the Division of Community Action Agencies is assuming that it must expend ARRA weatherization funding before "regular" (non-ARRA) Department of Energy funds can be drawn down for home weatherization in Iowa. Therefore, regular DOE weatherization funding was spent in 2009 before ARRA funds were available, and the Division of Community Action Agencies estimates that regular DOE weatherization funding will be spent after March 2012 when ARRA weatherization funds are exhausted. Given that Iowa is currently weatherizing homes at a faster rate than anticipated in its state plan, regular DOE weatherization funds may be spent earlier than March 2012.
[9] Iowa's Weatherization Assistance Program observes a fiscal year from April 1st through March 31st. Therefore, these data for WAP spending and the number of homes weatherized reflect an April through March schedule. Given that home weatherization is ahead of its schedule estimated in the state's plan, the actual number of homes weatherized and WAP spending may vary in fiscal years 2010-2012.
[10] ARRA requires that weatherization agencies and contractors pay at least the prevailing wage. Prevailing wage is the hourly wage, usual benefits, and overtime paid in the largest city in each county, to the majority of workers, laborers, and mechanics. This requirement was established under the federal Davis-Bacon Act. However, Iowa community action agencies have not been required to follow prevailing wage criteria in the past.
[11] These 496 jobs may take the form of part-time jobs or increased hours for existing part-time workers.
[12] Dalhoff Associates, LLC. *Report on the Impacts and Costs of the Iowa Low-Income Weatherization Program—Calendar Year 2008*. June 2009. Available from: http://www.dcaa.iowa.gov/bureau_weath/pdfs/CY08SLICE.pdf.

The authors

***Molly Fleming**, (M.A., urban and regional planning, University of Iowa), is a research assistant at the Iowa Policy Project, concentrating on economic impacts of the American Recovery and Reinvestment Act and state budget issues.*

***David Swenson**, (M.A., urban and regional planning, University of Iowa, and political science, University of South Dakota) is an associate scientist and lecturer in the Department of Economics and College of Agriculture at Iowa State University. His economic development research and economic impact studies are widely recognized among state government leaders in Iowa.*

Iowa Fiscal Partnership

The Iowa Fiscal Partnership is a joint initiative of the Iowa Policy Project and the Child & Family Policy Center, two nonprofit, nonpartisan Iowa-based organizations that cooperate in analysis of tax policy and budget issues facing Iowans. IFP reports are available at http://www.iowafiscal.org.

The Iowa Fiscal Partnership is part of the State Fiscal Analysis Initiative, a network of state-level organizations and the Center on Budget and Policy Priorities to promote sound fiscal policy analysis. IFP work is supported by the Stoneman Family Foundation and the Annie E. Casey Foundation.