Lighting the Way
How Iowa Can Lead with Energy Funding in Federal Stimulus

Beth Pearson
Teresa Galluzzo

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Authors
- Beth Pearson is a research associate at the Iowa Policy Project where she analyzes economic and fiscal trends in the state of Iowa. She received her master’s degree in Development Studies from the University of Oxford in 2007.

- Teresa Galluzzo has been a research associate at the Iowa Policy Project since 2004. Her work focuses on Iowa environmental issues, including water quality and energy.

The Iowa Policy Project
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By Beth Pearson and Teresa Galluzzo

Introduction

Programs in Iowa to make low-income homes more energy efficient, provide financing for a variety of energy improvement projects, and help fund city and county energy initiatives will receive large funding boosts from federal stimulus dollars. Over the next three years, federal funding under various energy-related provisions of the American Recovery and Reinvestment Act (ARRA), as the federal stimulus bill is known, will flow into Iowa, potentially yielding large increases in energy efficiency and renewable energy. This report identifies the different kinds of federal funding available to Iowa and highlights opportunities and challenges connected to scaling up energy efficiency and renewable energy programs in Iowa.

Iowa stands to receive approximately $170 million in federal stimulus funding that can help boost energy efficiency and renewable energy improvements (see Table 1 on page 2). The largest share of this funding, more than $80 million, will go to the Weatherization Assistance Program (WAP), which is administered by Iowa’s community action agencies. The Office of Energy Independence will coordinate the two next largest streams of funding, designated for the State Energy Program and for the Energy Efficiency and Conservation Block Grant (EECBG) Program. The State Energy Program helps direct initiatives that implement Iowa’s statewide energy conservation goals, and the Energy Efficiency and Conservation Block Grant Program will target funds to local governments to implement additional energy-efficiency initiatives.

Smaller amounts of energy-related funding may also be available through other programs in the stimulus bill. For instance, portions of the Clean Water State Revolving Fund and the Drinking Water State Revolving Fund must be spent on green infrastructure, water or energy efficiency improvements, or other environmental projects. The Iowa National Guard will also get facility improvement funding that could be used in part to install energy efficiency updates. Appliance rebate programs run by Iowa’s utilities are also likely to receive federal funding, although that amount is not yet known. Finally, some of the transportation funding authorized for Iowa in stimulus legislation will go to improving passenger rail and freight rail services in Iowa, which has implications for energy use. About $400,000 in stimulus money will be spent by Amtrak in Iowa to improve passenger rail stations, and another $5 million in state highway project funding could be spent on rail projects.1

1 Iowa Department of Transportation and www.recovery.iowa.gov.
Table 1. Millions for Iowa Energy Funding in Federal Stimulus Package

<table>
<thead>
<tr>
<th>Funding directed specifically at energy:</th>
<th>Funding (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weatherization Assistance Program</td>
<td>$80.8</td>
</tr>
<tr>
<td>Makes low-income homes more energy efficient</td>
<td></td>
</tr>
<tr>
<td>State Energy Program</td>
<td>$40.5</td>
</tr>
<tr>
<td>Helps states implement strategies to reduce per capita energy consumption</td>
<td></td>
</tr>
<tr>
<td>Energy Efficiency and Conservation Block Grant</td>
<td></td>
</tr>
<tr>
<td>Helps state and local government strategies for improving energy efficiency</td>
<td></td>
</tr>
<tr>
<td>EECBG State Funding</td>
<td>$9.6</td>
</tr>
<tr>
<td>EECBG City Funding</td>
<td>$9.2</td>
</tr>
<tr>
<td>EECBG County Funding</td>
<td>$2.4</td>
</tr>
<tr>
<td>Subtotal</td>
<td>$142.5</td>
</tr>
</tbody>
</table>

| Funding containing energy applications:                         |                        |
| Clean Water State Revolving Fund                                | $10.6                  |
| Projects related to green infrastructure, water or energy efficiency improvements, or other environmentally innovative activities |                       |
| CDBG Energy Efficiency and Conservation                        | $7.0                   |
| Funding for energy efficiency and conservation projects through the Housing and Urban Development administration |                       |
| Drinking Water State Revolving Fund                             | $4.9                   |
| Drinking water infrastructure projects related to green infrastructure, water or energy efficiency improvements, or other environmentally innovative activities |                       |
| National Guard Facilities Funding                               | $3.3                   |
| Funding through the Defense Department to construct building additions, energy reduction improvements, and roof replacements for Iowa National Guard facilities |                       |
| Diesel Emission Reduction Grants                                | $1.7                   |
| Funding through the Environmental Protection Agency to improve diesel vehicles through engine idling reduction and retrofit technologies, engine or vehicle replacement, and clean diesel emerging technologies |                       |
| Subtotal                                                        | $27.5                  |
| Total                                                           | $170.0                 |


Furthermore, numerous competitive funding opportunities related to energy have been identified by the various state working groups focusing on federal stimulus. Many of these opportunities involve grants for research on new energy technologies that could take place at Iowa’s state universities and community colleges. This analysis focuses on the programs receiving the bulk of Iowa energy funding through federal stimulus legislation: the Weatherization Assistance Program, the State Energy Program, and the Energy Efficiency and Conservation Block Grant Program. These programs account for over 80 percent of the energy-related funding listed in Table 1.

During a recession, demand for labor and goods shrinks as consumers and businesses reduce their spending and investment in the economy. Efforts to stimulate the economy aim to increase demand again by putting extra money in the pockets of consumers and funding projects that keep businesses hiring. Making investments in energy efficiency and renewable energy has great potential to both stimulate the economy and further long-term energy goals. For instance, weatherizing low-income homes will require training and employing energy auditors and contractors to make lasting changes to residential structures. Other projects that create new energy infrastructure — such as installing solar...
panels on municipal buildings, putting up energy-efficient stoplights, and developing clean public transit systems — will impact the economy and environment long after the current phase of the business cycle.

The massive potential for stimulus funding to expand Iowa’s energy efficiency and renewable energy leadership, as well as boost the state economy, will be best realized by putting this funding to work quickly and focusing on forms of spending that directly reduce emissions. Sudden, large increases in funding for the Weatherization Assistance Program and the State Energy Program, as well as the new funding available for cities and counties, will challenge programs, agencies, and governments to develop effective strategies for spending federal funds. This analysis describes some of these challenges and suggests ways that Iowa can take advantage of the significant opportunities offered by energy funding in federal stimulus legislation.

**Dramatic increase in weatherization funds can aid low-income Iowans**

The Weatherization Assistance Program (WAP) helps low-income families reduce their energy consumption and save money on their home utility bills by making energy-efficiency improvements to their homes. The larger Low-Income Heating Assistance Program (LIHEAP), also a federally funded program, provides low-income families with money to help them pay their utility bills. However, just subsidizing the costs of heating and cooling an inefficient home doesn’t help to increase energy conservation and address the risks of climate change. Households participating in the weatherization program receive energy audits of their homes and then contractors install energy improvements, which could range from a new, energy-efficient furnace to better insulation or compact fluorescent light bulbs.

WAP is an important way of helping low-income families, who often cannot afford the high, up-front cost of energy-efficiency improvements to their homes, deal with high energy costs. Figure 1 (page 4) uses data from a recent evaluation of Iowa’s WAP program and the federal LIHEAP program to show how weatherization can lower the share of low-income household incomes that is spent on home energy costs. Home energy costs are considered unaffordable if they take up more than 6 percent of household income; the effects of the weatherization program shown in this chart do not lower home energy costs below that level for low-income Iowans, but they do substantially reduce the share of family budgets being spent on energy bills.

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2 For instance, installing a high-efficiency heating system costs over $2,000, which is about 9 percent of the income of a three-person household living at 150 percent of the federal poverty level. Using data from a recent evaluation of Iowa’s WAP program, we estimate that installing the six energy efficiency improvements that produce the greatest energy savings would cost almost 30 percent of that household’s annual income. Dalhoff Associates, LLC. *Report on the Impacts and Costs of the Iowa Low-Income Weatherization Program—Calendar Year 2007*. October 2008. Available from: [http://www.dcaa.iowa.gov/bureau_weath/pdfs/CY07SLICE.pdf](http://www.dcaa.iowa.gov/bureau_weath/pdfs/CY07SLICE.pdf).

3 Dalhoff Associates, LLC.


5 The chart distinguishes between “low income,” “non-low income,” and “LIHEAP recipient” households. “Low income” households are those that meet LIHEAP income eligibility guidelines, which is income below 150 percent of the federal poverty level or 60 percent of state median income. Not all households in this category actually receive LIHEAP assistance, so “LIHEAP recipient households” is a subset of the low-income group. “Non-low income” households have incomes above LIHEAP eligibility thresholds.

The biggest change to Iowa’s Weatherization Assistance Program in the stimulus legislation is the tremendous increase in federal funds made available to the program. Historically, in addition to about $5 million in funding from the Department of Energy (DOE), Iowa’s WAP received approximately $5 million in funding from LIHEAP funds and another $5 million from Iowa utility companies, meaning that annual funding for the program was around $15 million. With this level of funding, the Weatherization Assistance Program saved 1,959 clients over $772,000 in energy costs and 2.4 million kilowatt hours (kWh) in energy usage during 2007. For 2009, Iowa had already received about twice as much in DOE funding as it normally receives, the result of a supplemental appropriation and regular appropriation for a program that has seen new attention under the Obama administration. However, this increase pales in comparison to the influx of funding that will come from the stimulus bill, which contains over $80 million for Iowa’s weatherization program. The funds are designed to support program activities over the course of three years, but even so they represent a massive increase in the program’s budget.

In addition to providing large amounts of funding, the federal stimulus bill makes several changes to the existing Weatherization Assistance Program. These changes expand eligibility to include more households and increase the ability of the local community action agencies that administer the program to undertake more comprehensive energy retrofits. Currently, a family is eligible for WAP services if its annual income is less than 150 percent of the federal poverty level, which translates to $27,465 for a family of three. The stimulus bill increases income eligibility limits to 200 percent of the federal

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8 Dalhoff Associates, LLC. The report also notes that clients saved over 408,000 therms, 66,000 gallons of propane, and 2,200 gallons of fuel oil.
10 Federal poverty guidelines are based on annual income and the number of people in a family, including both adults and children. For a complete list of the 2009 guidelines, see: [http://aspe.hhs.gov/POVERTY/09poverty.shtml](http://aspe.hhs.gov/POVERTY/09poverty.shtml).
poverty level. In Iowa, this means that the number of households eligible for weatherization assistance will expand well beyond the roughly 90,000 households now receiving LIHEAP assistance that, prior to stimulus, formed the eligible pool for the WAP program.

In addition, the stimulus bill increases the maximum assistance level per weatherization project from $2,500 to $6,500, which means that an agency can spend more on retrofits, as long as the statewide average for all their weatherization projects does not exceed this new maximum. In Iowa, agencies are already able to spend beyond $6,500 per project because the WAP program receives funding from utility companies and the LIHEAP program, in addition to the federal funds. By using a mix of funding sources for each project, the program can keep the statewide average for federal weatherization funds below the allowed maximum and still afford some of the costly energy improvements that produce the most savings for households.

The stimulus bill also includes a requirement that contractors hired to work on weatherization projects meet the conditions of the federal Davis-Bacon Act. The Davis-Bacon Act requires contractors working on public projects to pay a prevailing wage, which is based on local wages for similar types of construction work, and to meet other reporting and payroll conditions. Previous weatherization assistance projects using federal funds did not carry this requirement.

Finally, the stimulus bill increases the amount of WAP funds that can be spent on technical assistance and training for energy auditors and construction workers installing home improvements from 10 percent to 20 percent of total funds. This means that Iowa can now spend over $16 million on technical assistance expenses with the influx of federal funds. While this flexibility is helpful, the cost of training is less of an issue for the WAP program than is the primary challenge of implementing a scaled-up weatherization program in Iowa: recruiting new energy auditors and construction workers and getting them to work as quickly as possible.

The Weatherization Assistance Program has an existing training program for its energy auditors that will be expanded to accommodate new demand for auditors. Increased demand for energy auditors will occur across the state as a result of energy-related federal stimulus funding, not just in relation to the weatherization program. The WAP training program could well be used as a model for scaling up other energy auditor training programs statewide. In addition, the Division of Community Action Agencies has developed plans for a mobile training unit that will increase the capacity of local community action agencies to train the contractors and crews who will install energy efficiency improvements once an audit has been conducted.

Ultimately, increased funding will translate into expanded access to low-income weatherization services as local agencies work to quickly scale up existing programs. Although this scaling-up process can present a challenge, particularly with the need to quickly train and hire administrators, contractors, and auditors, successful management of this challenge will mean that more low-income families in Iowa can reduce their energy consumption and lower their home energy bills.

**State energy funds require policy commitments**

The second largest piece of energy-related stimulus funding coming to Iowa is through the State Energy Program (SEP), a federal program run through the Department of Energy that funds state energy offices to implement energy efficiency and renewable energy initiatives. In 2005, federal law mandated that state energy conservation programs receiving SEP funding should have a goal of reducing per capita
energy consumption to 25 percent below 1990 levels by the year 2012.\textsuperscript{11} During the same year, an analysis of the State Energy Program found that, on an annual basis, each federal dollar invested in the program had resulted in $7.22 saved and 1.03 million source BTUs in energy savings.\textsuperscript{12} Given that Iowa will receive $40.5 million in SEP funding, the state may save almost $293 million in energy costs and 41.7 million source BTUs (equal to 12,225,000 MWh) as a result of fully implementing stimulus funds.

The bulk of Iowa’s current efforts to promote energy efficiency are designed and administered by Iowa’s utilities. All Iowa gas and electric utilities are required to provide energy efficiency programs for their customers. In particular, the investor-owned utilities, which provide service to the majority of the state, must provide more comprehensive energy efficiency programs to all of their customers. In 2006 electric and gas utilities spent $86.8 million on their efficiency programs, saving over 573,000 MWh of electricity.\textsuperscript{13} With the addition of the federal dollars available to the SEP, efforts to encourage energy efficiency savings in Iowa should receive a big boost.

In Iowa, this money will be administered by the Office of Energy Independence. The main program used to support SEP activities, and the program that will benefit from new federal stimulus funds, is Iowa’s Building Energy Management Program. The Building Energy Management Program currently helps public agencies and nonprofit organizations access financing to conduct an energy analysis and develop a plan for making energy improvements to their facilities. The scope of the program’s activities (and budget) will be expanded with the influx of federal stimulus funding (see box at right).

In fact, as with the Weatherization Assistance Program, a major challenge related to the successful use of new federal funds is the sudden and substantial increase in the amount of funding available for the Building Energy Management Program. Prior to the passage of stimulus legislation, Iowa’s program had an annual budget of less than $1 million, so over the course of the next three years ARRA funds will increase by several thousand percent the size and potential impact of Building Energy Management activities. These funds will be used for a variety of grants, revolving loan funds, and cost-sharing

\begin{center}
\begin{tabular}{|c|}
\hline
\textbf{Federal Stimulus Funds for Iowa Energy Projects} \\
\hline
$17 million — Cost share for energy projects in public facilities, including schools, local government buildings, and state buildings \\
$7 million — Revolving loan fund for energy projects in agricultural, industrial, and commercial facilities \\
$5 million — Revolving loan fund for energy projects in non-profit facilities \\
$2 million — Grants for demonstrations of under-utilized technologies such as solar and small, off-grid wind \\
$2 million — Funding for innovative public, private, or non-profit projects \\
$1 million — Grants for short-term training initiatives that will enhance Iowa’s capacity to implement energy efficiency and renewable energy improvements \\
\hline
\end{tabular}
\end{center}


\textsuperscript{13} Iowa Utilities Board. 2007. The Status of Energy Efficiency Programs in Iowa. This spending figure does not include the $35.3 million that investor-owned utilities spent on load management programs. Although utilities include load management in their energy efficiency programs, load management programs are not designed to reduce energy usage, but rather to lower peak electricity demand needs. Because information was not available on the amount that municipal utilities and rural electric cooperatives spent on load management, this was not subtracted from their totals, but many municipal utilities and rural electric cooperatives do not have load management programs. The spending and savings figures also do not include the rural electric cooperative natural gas energy efficiency programs.
projects to help different groups and sectors in Iowa increase their use of renewable energy and energy efficiency technologies (see box above).

In order to receive federal funds through the stimulus bill for SEP, Iowa has to make several commitments related to energy policy. First, Iowa must implement updated building codes aimed at achieving greater energy conservation. Iowa’s current building code contains a section on energy conservation requirements that is drawn from the 2006 edition of the International Energy Conservation Code, which is the standard reference for building code requirements dealing with energy. In order to meet requirements for drawing down federal stimulus dollars related to energy, Iowa must adopt the 2009 version of the International Energy Conservation Code (IECC) or adopt codes that are achieve equal or greater energy savings. This can be done administratively through the Building Code Bureau in the Department of Public Safety and does not require new legislation. The Department expects to adopt the 2009 IECC on January 1, 2010. Beyond adopting a more stringent residential building energy code, Iowa must develop a plan to achieve 90 percent compliance with the new code within eight years. There is little information evaluating energy code compliance in Iowa, but one 2003 study found a less than 5 percent compliance for single-family homes, and less than 37 percent compliance for multi-family structures. Thus, meeting this part of the federal funding requirements will certainly require a well-designed and well-executed plan.

In addition, Iowa must, through the appropriate regulatory authority, implement policies that will align utility financial incentives with customer incentives to use energy more efficiently. This alignment is usually referred to as “decoupling” and involves separating a utility company’s financial gain — now tied to the amount of energy consumed by its customers — from energy conservation goals. This can be done in a variety of ways, mainly relating to how and when utilities are allowed to adjust the rates they charge their customers so that the utilities can still profit when their customers are using less energy.

In Iowa, utility-rate policy is overseen by the Iowa Utilities Board (IUB). Energy funding requirements in the federal stimulus bill can likely be fulfilled by expressing state support for decoupling proposals that may come before the IUB or be considered in legislative committees overseeing energy issues. Shortly after the ARRA was signed in February 2009, Governor Culver informed the chairs of these committees and the members of the IUB of the terms of stimulus funding and urged them to act in ways that support the alignment of utility financial incentives with customer energy efficiency incentives. Both the IUB and the Legislature can play a role in supporting such policies, which benefit utilities by helping them generate a return on investments in energy efficiency and help consumers by increasing opportunities for energy savings. For example, legislation introduced during the 2009 session would have established a decoupling pilot program and allowed participating regulated utilities to recover their fixed costs independent of retail power sales, as well as receive a rate of return based on investment in energy-efficiency programs. While this legislation did not pass in 2009, it is an example of the kinds of policies that the IUB and the Legislature could support in order to meet federal stimulus bill requirements related to energy funding.

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14 The section of the State Code dealing with energy conservation building code requirements can be found here: [http://www.legis.state.ia.us/aspx/ACODOCS/DOCS/661.303.pdf](http://www.legis.state.ia.us/aspx/ACODOCS/DOCS/661.303.pdf).
15 Personal communication with W. Stuart Crine, State Building Code Commissioner, Department of Public Safety, April 14, 2009.
17 Personal communication with Sean Bagniewski, Office of Energy Independence, April 10, 2009.
18 HF 349.
Local governments in Iowa must develop plans for energy efforts

Local governments in Iowa will also receive more than $21 million in Energy Efficiency and Conservation Block Grant (EECBG) funding from the Department of Energy to implement municipal-level energy efficiency initiatives. Originally created through the 2007 Energy Independence and Security Act but not funded at that time, the EECBG program helps cities and counties develop and carry out plans for reducing their fossil fuel emissions and overall energy use.

Cities with populations over 35,000 and counties with populations over 100,000 can apply directly to the DOE for their funding, while other cities and counties in Iowa can apply through the state Office of Energy Independence. Local governments will have wide scope to improve energy efficiency with federal funds, including developing an energy-efficiency strategy, making energy-efficiency improvements to public buildings and other local government infrastructure, regranting funds to nonprofits that want to retrofit their facilities, and making transportation systems more energy-efficient.  

Most local governments in Iowa do not have existing programs that deal exclusively with energy efficiency and renewable energy improvements or policy. Defining objectives for federal stimulus funds related to energy, and the activities that support those objectives, will be a key task in applying for funds from the Department of Energy or the Office of Energy Independence. In addition, an important part of this process will be building the capacity within local governments to craft these applications and administer newly funded programs, as well as within the Office of Energy Independence to help provide state support for local governments.

This capacity is important not only in the immediate term to further the objectives of federal stimulus legislation, which hinge on the swift injection of demand into the economy, but also in terms of making programs sustainable. If local officials and workers are not trained in the new tools and technologies that may be purchased or developed under the EECBG program, these systems may not be used to their full energy savings potential or could fall out of use in later years as new local government employees are hired who are unfamiliar with energy efficiency technologies. Effective capacity building means more than just hiring program administrators; structures must be put in place for knowledge transfer that will carry the impact of stimulus funding far beyond the current phase of the business cycle.

Stimulus dollars must be spent quickly and well — in the service of ambitious and carefully designed goals — in order to both jumpstart the economy and support long-term energy objectives. Recognizing that technical assistance is an important part of this process, guidance issued by the DOE for EECBG funding lists the hiring of consultants as an allowable expense for these funds. However, state policymakers should investigate ways to share technical expertise related to developing energy strategies to minimize the duplication of these efforts by each municipality so that cities and counties can use their funds primarily to get to work installing the energy improvements that will make their government buildings and local streets cleaner and more energy-efficient.

Conclusion and Recommendations

Energy-related funding in federal stimulus legislation offers unprecedented opportunity for Iowa to continue its national leadership in renewable energy and energy efficiency. It is encouraging that the bulk of energy-related funding in Iowa will go toward making energy technologies and improvements more accessible to a larger segment of the Iowa population, particularly low-income households.

The sudden and dramatic increase in program budgets that is a consequence of the sheer size of stimulus spending brings challenges as well as opportunities. The common thread in these challenges — for weatherization programs, local government energy planners, and state energy program officials — is the need to build sustainable capacity so that big steps forward don’t create gaps in knowledge and effectiveness that undermine these gains in future years. Swift action is needed to support the immediate goal of creating jobs and stimulating the economy, but stimulus funding has the potential to help create long-term change in Iowa only if it is well-supported by capacity-building efforts.

State and local officials, including legislators and other policymakers, should consider the following recommendations related to federal energy funding included in the stimulus bill:

- Recognize the importance of strong technical assistance support and capacity building at every level of the administration of energy funding, including state and local governments, contractors, building maintenance staff, and energy consumers. Many of the funding opportunities made available by stimulus funding require the development of new energy plans. In order for these plans to make the most effective and efficient use of funding, they should draw upon best practices and technical assistance so that funding can support long-term, sustainable changes in energy usage.

- Realize the opportunity afforded by large amounts of funding to install lasting physical improvements that will create an infrastructure that supports energy goals long into the next business cycle.

- Focus on sharing technical expertise among the various groups receiving energy funding through the stimulus bill in order to maximize the effectiveness of energy strategies developed over the next year and increase the speed with which funding can be put to work in local communities.