2009 Project Abstract
For the Period Ending June 30, 2011

PROJECT TITLE:	Energy Efficient Cities
PROJECT MANAGER:	Carl Nelson
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FUNDING SOURCE:	Environment and Natural Resources Trust Fund
LEGAL CITATION:	ML 2009, Chap. 143, Sec. 2, Subd.7c

APPROPRIATION AMOUNT: $2,000,000

Overall Project Outcome and Results

The Energy Efficient Cities project was developed to demonstrate innovative residential energy efficiency program delivery to reduce energy use and environmental impact in at least 6,000 homes through a community-wide partnership approach. With strong and crucial support from local gas and electric utilities, city-specific programs were developed in a total of 8 cities: Apple Valley, Austin, Duluth, Minneapolis, Owatonna, Park Rapids, Rochester, and St. Paul. While each city developed a customized approach, each program was designed to provide a "one-stop shop" comprehensive whole-house approach that makes taking energy efficiency actions as easy as possible for the homeowner, while maximizing participation and energy savings opportunities. This comprehensive approach involved the following components shared by each program:

- Community-based marketing strategies to recruit participants to workshops and for training participants to take low-cost energy actions;
- Home energy visits that include installation of low-cost materials and identify other energy-saving opportunities;
- Energy usage feedback reports to encourage individual energy-saving actions;
- Follow-up assistance, including providing cost-share, for completion of major efficiency upgrades including insulation, air sealing and major mechanicals replacement; and
- Training and quality control for insulation and air sealing contractors.

The project exceeded its original goals for participation, with 8,243 people attending workshops, 6,922 of those households completing a home energy visit, and 1,474 homes completing major energy efficiency upgrades. Over 36 contractors were trained in high performance installation techniques for insulation and air sealing jobs. The upgrades completed under this program generated $4.8 million in work for Minnesota's insulation and heating contractors. The total energy savings from measures installed in these homes will result in an estimated $13.8 million dollars in energy savings for the homeowners over the life of the measures. The programs will be continued in at least 5 of the participating cities.

Project Results Use and Dissemination

Dissemination of information to homeowners was an integral part of the program. Our outreach activities for the program reached tens of thousands of Minnesotans, resulting in over 7,500 households attending a workshop that was produced by the project. The workshops educated people on basic energy conservation concepts and strategies, such as how a home loses energy, low-cost or no-cost methods for reducing energy, and what the process is for doing major energy efficiency upgrades in your home. The “Home Energy Resource Minnesota” website was also designed for education and outreach on energy efficiency issues. In addition, each city program had an on-line presence for dissemination of information about the program.

In addition to outreach targeted to homeowners as part of program activities, efforts were made to communicate to utilities, cities and other potential program sponsors of energy efficiency programs the Energy Efficient Cities program results, and increase uptake of similar residential programs. A presentation was given in August 2010 at the American Council for an Energy-Efficient Economy’s (ACEEE) Summer Study on Buildings in Pacific Grove, California. Based on interest at that conference, another webinar presentation on the program was given as part of a series sponsored by the U.S. Department of Energy and attended by over 500 participants. A second webinar presentation was conducted for a national network of local government officials organized by the Institute for Sustainable Communities. A presentation was also conducted for the Clean Energy Teams (CERTs) conference in February 2011. Both Minneapolis’s and St. Paul’s programs were featured in a national study of retrofit programs by Lawrence Berkeley National Lab entitled “Driving Demand for Home Energy Improvements.” As a result of the initial program success, programs in Minneapolis, Duluth, Owatonna, Rochester and Austin will continue beyond the grant period, funded by utilities and other sources.

Finally, a report was completed to document the project and communicate lessons learned to utilities and other potential program sponsors. The report will be disseminated to Minnesota utilities, and presentations will be scheduled with interested parties. A presentation has been scheduled for October in Owatonna for the Midwest chapter of the Association of Energy Service Professionals.

Environment and Natural Resources Trust Fund
2009 Work Program Final Report

Date of Report: August 31, 2011
Final Report
Date of Work Program Approval: June 24, 2009
Project Completion Date: June 30, 2011

I. PROJECT TITLE: Energy Efficient Cities

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Location: Minneapolis, St. Paul, Apple Valley, Owatonna, Austin, Rochester, Duluth, Park Rapids.

Total Trust Fund Project Budget:	**Trust Fund Appropriation**	**$ 2,000,000**
	Minus Amount Spent:	**$ 1,745,651**
	Equals Balance:	**$ 254,349**

Legal Citation: ML 2009, Chap. 143, Sec. 2, Subd.7c

Appropriation Language:
$2,000,000 is from the trust fund to the commissioner of commerce for an agreement with the Center for Energy and Environment for demonstration of innovative residential energy efficiency delivery and financing strategies, training, installation, evaluation, and recommendations for a utility residential energy conservation program.

II. and III. FINAL PROJECT SUMMARY:

The Energy Efficient Cities project was developed to demonstrate innovative residential energy efficiency program delivery to reduce energy use and environmental impact in at least 6,000 homes through a community-wide partnership approach. With strong and crucial support from local gas and electric utilities, city-specific programs were developed in a total of 8 cities: Apple Valley, Austin, Duluth, Minneapolis, Owatonna, Park Rapids, Rochester, and St. Paul. While each city developed a customized approach, each program was designed to provide a “one-

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IV. OUTLINE OF PROJECT RESULTS*:*

Result 1: Design and develop 8 or more city-specific residential energy-efficiency programs.

Description:

City-specific residential energy-efficiency programs will be designed in the following cities: Minneapolis, St. Paul, Apple Valley, Rochester, Owatonna, Rochester, Duluth and Park Rapids. Other cities may be added later as resources allow. The programs will be designed to be comprehensive, emphasize ease of use for participants, and be oriented towards achieving cost-effective energy savings. Program design will be informed by successful past programs (such as Operation Insulation) as well as emerging research and new technology opportunities.

These programs will be designed in consultation with local cities and utilities. It is expected that utilities will provide significant cost-share in implementing these programs, in order to help them achieve their state-required energy conservation goals. Although the program would be tailored to each city, we expect that the program design would have the following components:

1) Recruitment of participants through workshops or other events

Homeowners would be recruited for the program through community energy workshops, or other community-based recruitment techniques to encourage efficiency actions as “keeping up with the neighbors” and a healthy sense of competition for improving energy efficiency. These recruitment techniques would involve significant partnerships with local community organizations. A variety of studies have shown that through the use of this “foot-in-the-door” technique individuals who agree to small requests are much more likely to agree to larger requests later. Combined with a public commitment by residents and long-term feedback, this will set the foundation for lasting and effective behavior change, as well as increasing the likelihood of households making larger investments in efficiency retrofits that are a later part of the program. At the workshop, some low-cost energy-efficiency measures would be distributed, while others would be distributed at an in-home visit.

2) In-home visit

Based on an analysis of energy usage, participants would be pre-screened using a “triage” approach and sorted into large energy users and small energy users; more time would be concentrated on households with high energy usage. With this information, an in-home visit would be scheduled with an energy specialist, where the low-cost measures would be installed and/or verified and additional homeowner education provided. This education would include no-cost recommendations such as lowering the hot water heater setback temperature if appropriate. If the home is a medium or high energy user, building diagnostics would be performed.

Low-cost gas saving measures could include: setback thermostats (if needed), pipe insulation, gasket seals, recessed light inserts, attic door weather-stripping, door sweeps and other weather-stripping items, faucet aerators, low-flow showerheads and window insulation film. Low-cost electric-saving measures could include: CFLs (assortment of types), LED holiday lights (if participants traded in for old incandescent type) and outlet strips.

If the home energy visit determined that either air sealing or insulation was required, the energy technician would write out the specifications for the necessary work, and provide the homeowner with an estimate of the work to be done by a third-party contractor. The program would work with qualified contractors to develop a standardized bidding system to ensure the bids would be as low-cost as possible to the homeowner, while ensuring they provided sufficient revenue to the contractors to keep them in the program. It is anticipated that participating contractors would be able to offer competitive pricing, as they would not need to invest in marketing their companies for work received through this program. Homes with medium or high energy usage may be provided with a blower door test that would be used as diagnostics for air sealing and insulation work.

3) Contractor work

Contractor work recommended by the in-home visit is expected to include air sealing, insulation and major mechanical (furnace, air conditioner, hot water heater) upgrades. Quality-control protocols would also be established for the program. After work was completed by the contractor, an energy technician would verify the work was completed according to specifications through infrared camera or other means. Contractors would be required to do call-backs for work not meeting quality standards. After a certain number of jobs are completed for a given contractor, not every job would be inspected, but random audits would still be performed.

4) On-going home energy feedback and action messages to encourage energy savings through behavior change

Research has demonstrated homeowners can reduce their energy bills if they are provided context for their energy use (how does it compare with their peers), given sustained feedback on how to reduce their energy use, and provided a clear benchmark for their progress in achieving energy savings. Further, this type of feedback can help create and reinforce social norms that energy efficiency is "the right thing to do." Simple behavioral changes resulting from this type of feedback program can result in up to a 10 percent reduction in energy use, at zero cost to the homeowner, depending on the intensity of the feedback program. This project will develop such a feedback program by collecting energy data for those in the program, tracking their improvements over time, and developing a platform for processing and delivering feedback to users over time.

5) Cost-share incentives and other resources for implementing

In order to encourage participants to implement contractor work, information on financing and incentives would be provided to homeowners.

The extent to which all of these components as described above are integrated into an individual city's program will depend on interest and the extent to which it can be merged with utility objectives. It is anticipated that local utilities will want to tailor the in-home visit to their needs and specific programs. For example, Dakota Electric (in Apple Valley) has an air conditioner tune-up program for residents that could be promoted through the LCCMR program. In addition to CEE staff time, Neighborhood Energy Connection (NEC) would also dedicate staff time to assist with developing these programs, particularly with St. Paul.

Summary Budget Information for Result 1: **Trust Fund Budget: $ 64,100**
Amount Spent: $ 63,869
Balance: $ 231

Deliverable	**Completion Date**	**Budget**
1. Design residential energy-efficiency programs for 8 cities	3/30/2010	$64,100

Result Completion Date: 3/30/10

Final Report Summary:

City-specific programs were designed for Minneapolis, St. Paul, Apple Valley, Austin, Owatonna, Park Rapids, Rochester and Duluth. Each city had a unique program design as well as city-specific names and branding. Below is a city-by-city description of the program design.

Minneapolis

Recruitment
Minneapolis has strong neighborhood organizations that the City has financially supported over many years, many of which have the capacity and desire to help with local marketing efforts. Thus partnering with neighborhood groups was a prominent feature of the Minneapolis program design. Neighborhoods were selected for initial participation the program through a Request for Proposals (RFP) process. Selection of the neighborhoods was based on the leveraging opportunities that the neighborhoods offer to provide for helping market and recruit program participants within their neighborhood. Primarily, this leveraging was expected to be the people-power they can offer. Training was provided by CEE for neighborhood volunteers, who then go door-to-door to recruit participants for a workshop. Other marketing efforts, including promoting in neighborhood newsletters, support the door-to-door approach. The program was planned to be offered only in the selected neighborhoods, with opportunity for new neighborhoods to join the program during the project period. This was designed to allow the program to get a high saturation rate through concentrated marketing in a given neighborhood. Low-cost materials were given out at the workshop for those that sign up for the in-home visit. The name for the Energy Efficiency Cities program in Minneapolis is “Community Energy Services”.

In-home visit
Labor costs for the in-home visit were funded with leveraged non-Trust Fund dollars by the local gas utility (CenterPoint Energy) and electric utility (Xcel Energy). For Xcel’s contribution, Xcel funded the in-home visit as part of their new “Home Energy Squad” direct install program, also to be run by CEE in Minneapolis. The in-home visit includes direct install of materials, identification and encouragement of no-cost actions, as well as an assessment of major upgrade opportunities. A $20 or $30 co-pay by participants helps pay for additional low-cost materials.

Contractor work
Minneapolis ensured high quality contractor work by requiring all air sealing and insulation contractors that are referred work through the in-home visit to sign a participation agreement with CEE. Contractors that sign this participation agreement were put on a participating contractor list given to homeowners in the program who need air sealing and/or insulation work (although the homeowner is ultimately free to select whomever they want – they are not bound by the list). The participation

agreement requires contractors to: 1) have basic training in air sealing & insulation; 2) meet industry standards as set by CEE and outlined in a standards document; 3) agree to warranty their work for at least one year; 4) carry basic insurance; 5) report results of work to CEE; 6) agree to have their work checked periodically by CEE to ensure they are meeting standards. Contractors who do not abide by these rules will be taken off the participating contractor list.

On-going home energy feedback and action messages
CEE has worked with CenterPoint and Xcel on a system to periodically get the energy usage data of participating homeowners. With this data, CEE has developed two reports that will be used to provide feedback and facilitate action messages to participating homeowners. The "Home Energy Snapshot" was given to homeowners during the home visit, and compares their weather-normalized energy usage to other Minnesotans. It also calculates a target energy usage that the homeowner can strive to achieve. The "Home Energy Progress Report" was sent out as often as utility data was available, but not more often than every two months, to program participants after completion of the home visit. This will provide the homeowner with updates on how they are doing in achieving their targeted energy usage.

Providing of cost-share incentives and other financing resources
CEE offered loan financing to all program participants through the Minnesota Housing Finance Agency and other energy loan programs. In addition, CEE processed Energy Saver rebates for program participants. Energy Saver rebates was a stimulus-funded program through Minnesota Housing that offered a 35% rebate on qualified energy upgrades for participants that took out a Minnesota Housing loan. In addition, CenterPoint Energy started a new rebate program for insulation and air sealing in March 2010. The CenterPoint rebates provide homeowners with a 50% rebate of the total air sealing and insulation cost, up to $400 (later reduced to $350).

<u>St. Paul</u>

Recruitment
Recruitment in St. Paul was be done by the Green Institute, and later Eureka Recycling, as the Metro CERTs coordinator, in coordination with Xcel Energy, Neighborhood Energy Connection (NEC) and other partners. Efforts initially focused on neighborhoods located adjacent to the planned Central Corridor Light Rail Transit project. This was done in conjunction with the "Energy Innovation Corridor", a partnership effort of utilities, non-profits, local governments and businesses along the Central Corridor working to develop innovative energy projects in parallel with the light rail development. The Green Institute worked to organize and recruit homeowners for workshops in conjunction with St. Paul's District Council neighborhood organizations. The Green Institute had homeowners sign a utility data release so that they could receive feedback reports. Low-cost materials were given out at the workshop for those that signed up for the in-home visit. The St. Paul program was called "Neighborhood Energy Services" or the workshop component, and the "Home Energy Squad" for the home visit portion.

In-home visit
Xcel Energy, as the gas and electric utility in St. Paul, is funding NEC to conduct the home visits as part of their "Home Energy Squad" program. The Home Energy Squad program does not include a blower door test or other detailed diagnostic work. Thus Trust Fund dollars were provided to NEC to enhance the Home Energy Squad visits to do this diagnostic work, which is a necessary precursor to getting homeowners to do major efficiency upgrades. A $30 co-pay by homeowners helped pay for additional low-cost materials installation.

Contractor work
NEC provided participating homeowners with a list of qualified contractors.

On-going home energy feedback and action messages
CEE provided the Home Energy Snapshot and Progress Updates as in Minneapolis (see above).

Providing of cost-share incentives and other financing resources
NEC offered loan financing and Energy Saver rebates to all program participants needing upgrades through the Minnesota Housing and other energy loan programs. Xcel Energy has existing rebates for air sealing and insulation, as well as for furnace and hot water heater replacement. These rebates were promoted through the program.

<u>Apple Valley</u>

Recruitment
Recruitment of participants to workshops was led by CEE with the City and other partners. The City of Apple Valley, with support from the Great Plains Institute, designed a city-wide energy-efficiency campaign called "be Apple Valley" ("be" stands for "better energy"). The program was marketed to Apple Valley residents under the "be Apple Valley" Campaign. As in the other cities, low-cost materials were given out at the workshops.

In-home visit
CenterPoint Energy (gas utility) and Dakota Electric (electric utility) jointly funded the home-visit, which was delivered by CEE. The home visit was identical to the one in Minneapolis.

Contractor work
Contractor work will be coordinated as in Minneapolis (see above).

On-going home energy feedback and action messages
Feedback will be provided as in Minneapolis (see above).

Providing of cost-share incentives and other financing resources
Financing resources were provided to Apple Valley residents as in Minneapolis (see above). In addition, Apple Valley has dedicated $50,000 in EECBG stimulus funding for a residential loan program that CEE administered as part of the program.

Owatonna and Austin
(These cities are combined, since Owatonna and Austin have coordinated closely on all aspects of the program development and implementation.)

Recruitment
CEE coordinated recruitment on a city-wide basis, in conjunction with the Cities and local partners. The program was branded under the utilities' existing "Conserve and Save" residential program. Low-cost materials were given out at the workshops to those that sign up for the in-home visit.

In-home visit
Greg Ernst and Associates provided the in-home visit, called the "Conserve and Save House Call" and funded by Owatonna Public Utilities and Austin Utilities, with a $25 co-pay provided by the homeowner (it was $50 for those that don't attend the workshop). Greg Ernst was previously the audit provider for both utilities, and since the utilities funded the in-home visit portion of the program, Greg Ernst continued to be used for this program. The visit included direct install of low-cost materials, recommendations on no-cost actions, and recommendations for major upgrades. A blower door test was conducted as part of the visit.

Contractor work
At the Conserve and Save House Call, the auditor provided the homeowner with a list of participating contractors. Contractors signed a participation agreement with CEE, similar to the one in Minneapolis (see above). Quality-control visits were conducted after the visit.

On-going home energy feedback and action messages
Austin and Owatonna contracted with O-POWER to provide city-wide home energy feedback reports with action messages. These reports went out to every city resident. Thus CEE did not provide additional reports. CEE and the cities coordinated with O-POWER to market the program through the homeowner reports.

Providing of cost-share incentives and other financing resources
CEE worked with local financing providers to provide homeowners with financing opportunities for both loan and Energy Saver rebates. Austin and Owatonna started a new air sealing and insulation rebate program in 2010, in conjunction with their Conserve and Save House Call.

Rochester

Recruitment
CEE led recruitment efforts in Rochester, in partnership with the city and utilities. The program partnered with "R-Neighbors," a city-funded neighborhood resource group, to promote the program to Rochester neighborhoods. Because utilities were working on setting up new audit and insulation rebate programs in conjunction with the workshops, the program did not start until the spring of 2010. The program was named the "Neighborhood Energy Challenge."

In-home visit
Greg Ernst and Associates conducted the in-home visit, with funding from the gas utility, Minnesota Energy Resources Corporation (MERC) and the electric utility, Rochester Public Utilities. The in-home visit included direct install of low-cost measures, identification and encouragement of no-cost actions, and recommendations for major upgrades.

Contractor work
Greg Ernst provided a list of participating contractors to the homeowner during the in-home visit. Contractor work will be coordinated by CEE (see Minneapolis and Austin/Owatonna description above).

On-going home energy feedback and action messages
MERC is also funding O-Power to conduct a large feedback program in Rochester, nearly identical to the Austin and Owatonna program. Thus CEE did not produce additional reports.

Providing of cost-share incentives and other financing resources
CEE provided homeowners with financing options and support. MERC started a new air sealing and insulation rebate program in 2010, which was promoted by CEE and Greg Ernst.

Duluth

Recruitment
Duluth has a coalition of utilities, non-profits, and local government agencies called Duluth Energy Efficiency Initiative (DEEP) that worked to develop a comprehensive residential program. Common Ground, a Duluth non-profit, led recruitment efforts in Duluth. They were selected in the summer of 2009 to operate the financing program for which the City of Duluth received $1.5 million in stimulus funding. This contract was not completed until late in 2010. Further, DEEP worked on an agreement with the electric (MN Power) and natural gas (Comfort Systems) utilities that was not completed until late 2010. Thus Duluth got a late start to their program. Although workshops were held and people signed up for home visits, the home visits were not available until late 2010. Common Ground coordinated a "Green Canvass" (staffed by Americorp workers) to do recruitment for the workshops. The Green Canvass went door-to-door to sign people up for the workshops.

In-home visit
The in-home visit was co-funded by Minnesota Power (the electric utility) and Comfort Systems (the municipally-owned gas utility), and run by contractors selected by the two utilities. It included direct install of low-cost materials as well as recommendations for major upgrades. The Duluth process includes screening for homes that have high energy usage, and targeting those homes for more in-depth home performance visits.

Contractor work
Common Ground planned insulation contractor trainings in order to ensure high quality contractor work.

On-going home energy feedback and action messages
The DEEP group, with leadership from Minnesota Power, developed a Home Energy Yardstick report that provides homeowners with a context for their energy bill. This is provided to homeowners at or before they have the in-home visit.

Providing of cost-share incentives and other financing resources
Financing coordination for homeowners is provided by Common Ground. Comfort Systems (the gas utility) does not currently have a rebate program for air sealing and insulation.

<u>Park Rapids</u>

Recruitment
The recruitment effort and program in Park Rapids was an extension of the "Green Park Rapids" Initiative, which is a broad partnership effort to improve the energy efficiency of Park Rapids housing and commercial buildings. Initially the HRA (Housing Redevelopment Authority) of Park Rapids was contracted to do recruitment with support from CEE. After several workshops, the HRA and other Green Park Rapids partners decided to focus their residential efforts on a grant they received through stimulus funding to provide large rebates for electrical appliances. Thus after spring of 2010, Park Rapids dropped out of the Energy Efficient Cities program.

In-home visit
The in-home visits were jointly funded by MERC (gas utility) and Minnesota Power (electric utility). Greg Ernst and Associates conducted the visits, which were only available to residents who have attended the workshops. They included direct install of low-cost materials, identification and encouragement of no-cost actions, and recommendations for major upgrades. A blower door test will be included. Homeowners paid a $40 co-pay.

Contractor work
Greg Ernst provided homeowners with a list of local contractors.

On-going home energy feedback and action messages
A Home Energy Yardstick report, identical to that used in Duluth, was planned to be used for Park Rapids, and given out to participants at the home visit. However, as Park Rapids dropped out of the program, this was not completed.

Providing of cost-share incentives and other financing resources
CEE offered participating homeowners financing support.

Result 2: Coordinate, track and provide feedback on household energy usage.

Description:

Program participants will be provided information and feedback on their home energy consumption in order to encourage them to take actions to reduce their energy usage.

Specifically, we would prepare home energy reports on a bi-monthly basis (or other interval depending on how often we receive the data from utility companies) containing the following information:

- Homeowner's energy usage in a standardized index, which we call the "flame index" for natural gas (Btus per square foot per heating degree day) and the "spark index" for electric (kilowatt-hours per square foot)
- Energy usage of similar homes in the neighborhood or state
- Benchmark energy use of an efficient home
- Customized energy actions giving recommendations for how the homeowner can reduce energy usage through individual actions
- Feedback on electricity and natural gas usage

For cities that are already planning on regular delivery of feedback messages through their local utility (Owatonna, Austin and perhaps others), we will not provide separate mailings, but coordinate our efforts with theirs.

A website will be created for this project using interactive media approaches to reach a wide audience, effectively communicate an energy efficiency message and turn this information into action and energy savings. Interactive media approaches will include such tools such as instructional videos and step by step do-it-yourself instructions to allow residents to assess their needs and determine and implement energy savings actions. Users will be able to input their energy use data to track the savings that they have achieved and get direct feedback on their usage with tips for improvement. Since the project will be delivered over the Internet, it will reach and serve a statewide audience. The site will be a comprehensive one-stop informational resource on home energy efficiency and resources (such as stimulus dollars) to achieve energy efficiency. Resource links to utility residential audit and rebate programs as well as financing options and a supported online community to promote Minnesota home energy efficiency will be included. The website will allow users the ability to interact with others and experts in order to get feedback and advice and provide reviews and ratings on products, tips and actions. The website

will be produced by the Builders Association of Minnesota (BAM), anticipated to be as an enhancement to their existing successful website, home-smart.org. The other major costs are mailing costs and CEE staff time.

As CEE will maintain a database of people enrolled in the program, and their actions, this will be provided as requested to LCCMR in summary form (with personal information removed) as we report on our results.

Summary Budget Information for Result 2: **Trust Fund Budget: $ 136,200,**
Amount Spent: $ 118,320
Balance: $ 17,880

Deliverable	Completion Date	Budget
1. Enter data, track, produce and send feedback assessments to 6,000 participants	6/30/2011	$86,200
2. Develop educational information, instructional videos and other web resources	12/31/2009	$60,259

Result Completion Date: 6/30/11

Final Report Summary:

Three cities (Austin, Owatonna and Rochester) provided feedback reports paid for by the electric and/or gas utility in their city. One city (Duluth) developed their own feedback report (the "Home Energy Yardstick") in conjunction with local utilities. CEE produced the reports and acquired the necessary data for Apple Valley, Minneapolis and St. Paul. Development of the feedback report was completed within the first quarter of the program. However, the more challenging aspect was acquiring the necessary data (i.e., energy usage data from utilities) in an appropriate format in order to produce the report. It was necessary to develop agreements with utilities, and obtain the necessary legal approval, in order to obtain access to utility data on behalf of program participants. At first, utilities were only able to provide data in a scanned format that could not be imported directly into a database, so CEE had to hand-enter all of the data. By the final two quarters of the project, CEE acquired the data in an electronic format that could be uploaded into the database that produced the reports. Ultimately, reports were produced for all the program participants, with the exception of Park Rapids, where we did not have access to the utility data.

Development of the website with the Builders Association of Minnesota was completed, and is available at: www.homeenergyresourcemn.org. One of the primary features is the "Home Energy Explorer" which is an interactive tool to look at energy saving opportunities room-by-room. There are also comprehensive resources on incentives and financing opportunities as well. This offers a resource to homeowners state-wide, whether they are in a participating city or not.

It should also be noted that nearly every city developed their own website for their city-specific program, for example, St. Paul's is: www.cleanenergyresourceteams.org/regions/metro/NES; Duluth's is: www.duluthenergy.org; Minneapolis's is www.mnces.org; and Rochester's is accessed from: www.rpu.org/your_home/.

The project also conducted marketing to promote both the main website resource (homeenergyresourcemn.org) and the city-specific program websites. The city-specific website URLs are included on most of the marketing material produced for the programs. The Builders Association of Minnesota sent out an email to 14,000 contractors in Minnesota promoting Minnesota's residential stimulus rebates, and providing links to those programs, which are listed on the website.

Result 3: Train insulation and air sealing contractors.

Description:

Currently there are only a handful of qualified insulation and air sealing contractors in Minnesota. In order to ramp up residential energy efficiency work, new contractors will need to be trained. Contractor training will be provided by highly experienced contractors (Conservations Services Group, Shelter Supply and others) in coordination with local technical schools. These consultants will develop curriculum that incorporates comprehensive best practices for insulation and air sealing, and can be used as the basis for further training. We will recruit contractors to attend the training, anticipated to be existing remodeling contractors looking for expanded business opportunities.

We will coordinate our efforts closely with the Office of Energy Security, and anticipate that there may be stimulus dollars that would also be available for this training. If this turns out to be the case, we would request an amendment to reallocate a portion of the budget for training to other activities.

Amendment Request (approved 2/3/2011):
In addition, CEE will work with the Builders Association of Minnesota (BAM) to develop a curriculum and conduct trainings for training existing contractors in the remodeling industry to become involved in helping their customers to do insulation work. BAM would consult with industry leaders in the remodeling industry prior to developing the curriculum. Effectively engaging the remodeling industry in building energy efficiency work could significantly leverage the groundwork laid by the Energy Efficient Cities project, while creating new job opportunities for Minnesota's remodeling industry. Expanding the original scope of work to include this deliverable is able to be done at no budget impact to the project. This is because the project was able to leverage efforts from the Project ReEnergize program that was funded after this workplan was written. Project ReEnergize, implemented by the Builders Association of Minnesota with federal stimulus dollars, developed a curriculum for insulation contractors that CEE was able to use for this project (CEE provided input

on this curriculum). The curriculum development represented a large portion of the original budget. In addition, Project ReEnergize conducted the training for many of the contractors in the Energy Efficient Cities project, so that CEE did not need to train as many contractors as otherwise would have been the case.

Summary Budget Information for Result 3: **Trust Fund Budget: $60,000**
Amount Spent: $ 47,056
Balance: $ 12,944

Deliverable	Completion Date	Budget
1. Train 10 contractors	12/1/2009	$5000
2. Train an additional 15 contractors	10/1/2010	$5000
3. Develop curriculum and conduct at least 7 trainings for existing remodeling contractors	6/30/2011	$50,000

Result Completion Date: 6/30/2011

Final Report Summary:
The Builders Association of Minnesota (BAM), under subcontract to CEE, conducted a training for the Owatonna and Austin programs in December 2009, which was attended by 19 local contractors. An identical training was held in Rochester in the fall of 2010 that was attended by 17 insulation contractors and 5 auditors. The training curriculum was identical to the BAM trainings for their Project Re-Energize program, and was conducted by Mike Wilson of Shelter Supply (recently acquired by Dakota Resource Group). The morning curriculum covered air sealing, including an extensive hands-on segment where contractors had to demonstrate their knowledge of air sealing techniques on props. The afternoon covered blower-door assisted air sealing, including a hands-on demonstration of how to conduct a blower door test. The training was required for air sealing and insulation contractors participating in Austin and Owatonna's program.

BAM also conducted a series of trainings for remodelers across the state focusing on training existing remodeling contractors becoming involved in helping their customers to do insulation work. A series of focus groups with existing remodelers were conducted to help define what the training needs were for curriculum development. A curriculum was then developed, focusing on the benefits of ice-dam prevention from air sealing. Over 250 contractors across the state attended 12 trainings organized by BAM.

Result 4: Implementation of energy efficiency programs.

Description:

Although program design will vary by city, we will work to achieve the following overall results in implementing the residential energy efficiency programs in each of the eight cities.

Generate at least 6,000 participants in workshops and other community events
We expect to organize between 50 and 100 workshops during the project period, depending on the turnout per workshop. That will be an average of one workshop every week to two weeks throughout the project period once we start organizing them. Community-based marketing efforts will be used to recruit people to workshops. Generally we will try to work with schools and other community centers for hosting the workshops. One important strategy is working with local neighborhood and community organizations and volunteers to organize the workshops. A volunteer training program will be developed for the volunteers working on the workshops.

Tactics used to increase awareness of the program and get people to attend the workshops will vary according to the community, but are expected include the following:

- Utilization of block leaders and other community leaders to recruit their neighbors
- Presentations at community events
- Door-to-door knocking
- Postcard mailings
- Door hangers
- Neighborhood and community newsletters

Volunteers will also be utilized in the production of the workshop as well, including providing food, signing people in, and setting up the room.

In Minneapolis, St. Paul and Apple Valley, CEE will work with Metro CERTs (coordinated by The Green Institute) for recruiting participants for workshops. CERTs and CEE will split primary responsibility for organizing these workshops; for example, CERTs might organize turn-out for all the workshops in St. Paul, and assist with turn-out in other cities. For some of the Greater Minnesota cities, one or more contractor will be hired to assist with the workshop production.

The Great Plains Institute (GPI) will work exclusively with program design and implementation in Apple Valley. Apple Valley is one of four communities in the upper Midwest participating in a pilot to develop strategies for community-wide energy efficiency initiatives. In order to leverage this opportunity to maximum advantage for this project, GPI will help develop and integrate these efforts (which focus on all sectors of energy use, including business and institutional) with this LCCMR project, which focuses just on the residential sector. Activities include

facilitating a community-wide planning process, stakeholder recruitment and facilitation, and development and implementation of a community energy efficiency plan. LCCMR-funded activities will focus on the residential component of this community-wide plan. It is anticipated that these efforts will help deepen community engagement on energy-efficiency issues in general, and result in a more concentrated turn-out of Apple Valley residents to workshop events.

Assist 6,000 participants in the direct installation of low-cost measures through in-home visits

At the workshop, participants receive free energy-efficiency materials to install in their home, such as CFLs, set-back thermostats, LED night lights, power strips and pipe wrap. CEE has learned from past experience that providing education and free materials does not automatically insure that the materials will be used and energy savings will be achieved. Providing a home visit to the participants in their home is a critical component to a successful workshop centered program. This follow-up home visit (funded with matching utility funding) allows the homeowner to ask specific questions about their home, identifies insulation and other needs, provides additional hands on education on how to use the materials and gives the energy technician the opportunity to reenergize the homeowner's interest in energy conservation. Low cost insulation and air sealing work would be referred to a specially trained contractor. Participants in need of high efficiency furnaces would be referred for financing. The in-home visits would be coordinated with, or incorporated into, existing and planned utility programs. For example, Xcel Energy and CenterPoint Energy both plan on implementing an in-home visit program called "Quick-Fix" starting in January, 2010.

In St. Paul, NEC would implement the in-home visits, utilizing their existing energy auditor staff. In Minneapolis and Apple Valley, CEE would implement the in-home visits. In other cities, local contractors, with utility cost-share funding, would implement the in-home visits.

Ensure 1,600 homes receive insulation, air sealing and other major energy improvements

If major weatherization work is needed, the homeowners will receive a blower door test, analysis and bid with a referral to a qualified insulation contractor. This diagnostic work would be provided by NEC in St. Paul, CEE in Minneapolis and Apple Valley, and existing auditor contractors in other cities. We estimate contractor work would be recommended in about half of the homes that receive in-home visits, and of these, 1,600 would act on the recommendations to conduct major insulation, air sealing, or furnace or hot water heater installations.

In addition to the initial cities, if budget and resources allow, CEE may also extend the program into other cities.

Summary Budget Information for Result 4: **Trust Fund Budget: $ 1,253,700**
Amount Spent: $ 1,058,247
Balance: $ 195,453

Deliverable	Completion Date	Budget
1. Recruit, educate and enroll at least 6,000 participants in workshops and other community events	6/30/2011	$ 563,850
2. Conduct 6,000 in-home visits including installation of low cost measures	6/30/2011	$ 689,850
3. Ensure that 1600 homes receive insulation, air sealing and other major energy improvements	6/30/2011	(included in #2 above)

Result Completion Date: 6/30/11

Final Report Summary:

The following table shows results from the program activities that were outlined above. These results are further discussed below.

Energy Efficient Cities Results Through June 2011				
City	Workshop Attendees	Home Visits Completed	Households Completing Upgrades	Number of Upgrades Completed
Apple Valley	796	780	147	151
Austin	224	184	64	83
Duluth	789	177	15	15
Minneapolis	4,139	3,886	948	1,063
Owatonna	204	180	43	47
Park Rapids	14	6	0	0
Rochester	302	216	78	110
St. Paul	1,775	1,493	179	221
Total	**8,243**	**6,922**	**1,474**	**1,690**

Goal: Generate at least 6,000 participants in workshops and other community events

The Energy-Efficient Cities exceeded the goal for total workshop participants by over 2,000 participants. In total 8,243 people attended the workshops (some households had more than one person in attendance, but typically only one member of the household would sign in at the workshop). The number and size of the workshops varied, with generally more workshops being done in the larger cities, and less, but

larger, workshops being done in the smaller cities. The larger cities, like St. Paul, Minneapolis and Rochester, generally marketed the workshops by neighborhood, while the smaller cities marketed them across the city. The workshops completed included:

- 91 workshops in Minneapolis
- 51 workshops in St. Paul
- 10 workshops in Apple Valley
- 4 workshops in Owatonna
- 4 workshops in Austin
- 9 workshops in Rochester
- 31 workshops in Duluth
- 3 workshops in Park Rapids

In addition, Duluth piloted an "on-line workshop," which several hundred additional participants utilized.

Goal: Assist 6,000 participants in the direct installation of low-cost measures through in-home visits

All of the programs resulted in installation of low-cost items as part of the home visit, as well as diagnostic work, such as a blower door test, to make recommendations for major efficiency upgrades. In total, 6,922 home visits were completed, exceeding the goal by nearly 1,000 home visits.

In most cases, there was a very high percentage of people attending the workshops that took the next step of completing the home visit (for some cities, over 95% of workshop attendees completed a home visit). The case of Duluth requires special explanation, as Duluth had many more people attend the workshop than followed through with completing the home visit. This was largely because the home visit portion of the program was not available in Duluth until late 2010, due to contractual negotiations with the utilities and DEEP on finalizing the administrative details of the home visits. Consequently, the home visits were not available at the time of the workshops, and all but 5 home visits were completed in the first months of 2011. As the Duluth program is now ongoing, it is expected that many of the workshop participants will in the future receive a home visit. Also, some workshop participants in other cities (including Minneapolis and St. Paul) were scheduled to have a home visit, but the home visit was not completed until after the end of the project period (6/30/2011).

Goal: Ensure 1,600 homes receive insulation, air sealing and other major energy improvements

As of the end of the project period, 1,474 homes participating in Energy Efficient Cities completed upgrades to their homes; about 15% of these homes completed more than one upgrade (e.g., insulation work and furnace replacement), resulting in a total of 1,690 upgrades in these homes. These upgrades were facilitated by follow-up work and assistance to participating homeowners who had upgrade recommendations, including phone calls, letters and email. These upgrades

generated $4.8 million in work for insulation and heating contractors. In total, measures installed by the programs (including low-cost measures) resulted in an estimated $13.8 million of energy bill savings over the lifetime of the installed measures.

Although the project fell 126 homes short of its goal of 1,600 homes, it is expected that in time additional upgrades will be completed beyond the end of the project period by homes that participated in Energy Efficient Cities. This is because there is a lag period between when the home visit is completed and when the homeowner completes the upgrade which is typically 2-6 months, but can be 12 months or more. Thus, it can be expected that a year after the end of the project period, more homes will have completed upgrades, coming closer to or exceeding the original goal of 1,600 homes.

In order to assure the quality of the work completed, CEE developed quality assurance protocols for contractors to follow. The basis of these protocols is air sealing and insulation installation standards. The starting point for these standards is based on CEE's experience in overseeing air sealing and insulation over 8,000 homes through the Metropolitan Airport Commission's Sound Insulation Program. The standards set expectations for what insulation contractors will be expected to accomplish in their scopes of work for individual houses. Based on building science principles, the standards provide a framework to ensure that the work is done right the first time, avoiding issues like ice dams, missed opportunities for energy savings, and moisture problems. CEE has also developed a protocol for testing the homes post-retrofit to ensure good indoor air quality (i.e., adequate ventilation and no combustion safety issues from tightening up the home). Participating contractors are required to conduct these tests. These standards were provided to all cities in the program, and were adopted by a majority of the Energy Efficient Cities programs (Minneapolis, Apple Valley, Rochester, Austin, Owatonna and Rochester).

In November 2010, Minneapolis was selected as one of ten communities, and the only city in the Upper Midwest, for piloting the U.S. Department of Energy's Home Energy Score tool. CEE ran the pilot for 154 homes participating in the Energy Efficient Cities program (called Community Energy Services in Minneapolis). The Home Energy Score rates a home based on its existing energy usage, and indicates how the rating could be improved through retrofitting the home. CEE entered this pilot in order to test other methods of persuading homeowners to complete upgrades. A separate report (funded through the Department of Energy) will be completed for this pilot in the fall of 2011.

The project was able to accomplish Result 4 with nearly $200,000 less expenditures than originally planned. In fact, a majority of the budgeted money that was not spend for the Energy Efficient Cities project was from Result 4. This was largely due to the fact that additional cost-share was provided through utility programs and other sources. Minneapolis, St. Paul and Duluth received stimulus funding from the state for outreach activities. CEE also received additional stimulus funding through a City of Minneapolis Energy Efficiency and Conservation Block Grant (EECBG) in July

2010. No LCCMR funding was spent on homes recruited through this funding. In addition, less funding was needed for insulation diagnostics, as most of this was provided through utility funding.

Result 5: Provide cost-share for installing energy-efficiency measures.

Description:

Trust Fund dollars would be used to provide cost-share for homeowners to act on the in-home visit recommendations requiring contractor work (result 4). This contractor work will include air sealing, insulation and major mechanical replacement.

In conjunction with loans provided by other sources such as the Minnesota Housing Finance Agency, these cost-share incentives would be tailored to each city to cover project costs. We would also work with local utilities to complement and enhance existing rebate programs. In general, we would strive to have LCCMR cost-share, combined with other incentives, pay for 30-50 percent of the costs to the homeowner for air sealing (total cost of around $800) and 20-25 percent of the cost of insulation (total cost of around $4,000). In total, this would require funding of about $900,000 in cost-share. We assume half would be provided by utilities and stimulus dollars, and half by this program.

Specifically, stimulus funding to the MHFA is expected to be able to supplement cost-share incentives to homeowners provided by this LCCMR project. The stimulus funding will include loans, and may include cost-share incentives as well, although this has not yet been determined. As more details about this program are made available, CEE will work with LCCMR staff to further refine our budget for cost-share.

Summary Budget Information for Result 5: **Trust Fund Budget: $475,000**
Amount Spent: $ 450,934
Balance: $ 24,066

Deliverable	Completion Date	Budget
1. Provide cost-share for installing energy-efficiency measures in 1,600 households	6/30/2011	$475,000

Result Completion Date: 6/30/11

Amendment request (approved 6/17/11):
An amendment is being requested to shift $25,000 from Result 2 to Result 5, in order to provide more participants the opportunity to receive cost-share. We have had a greater demand for these funds than we anticipated, and the request is to meet that demand. Note that the level of cost-share per participant will not be

increased, and that other non-LCCMR utility-funded rebates will still provide a portion of this cost-share, as described above.

Final Report Summary:

CEE developed the program guidelines, and started implementation, for providing cost-share for major upgrades completed as part of the Energy Efficiency Cities program in May 2010. It was decided that offering the same package to each city would be most fair, and the cleanest to administer. Cost-share was available to homeowners who had gone through the program (completed the home visit), and have received recommendations for major upgrades. These customers were eligible for Trust Fund dollars to pay a portion of their upgrade costs in the following amounts:

- $250 for installing a natural gas forced air furnace with 95% or greater efficiency
- $250 for installing a boiler with 85% or greater efficiency
- 50% of the total project cost, up to $400, for air sealing, or air sealing and insulation, or wall insulation.

The total amounts ($250 for furnace/boiler and $400 for insulation/air sealing) were set to roughly equal utility rebates (although the rebate levels are slightly different in each city), so that Trust Fund cost-share would be about equally matched with utility rebates. Although the cost-share was available anytime after May 2010, the vast majority of applications for cost-share were received in the final four months of the project. Participants were responsive to marketing that conveyed a sense of urgency of an impending deadline, after which the money would not be available. In the final weeks of the project, based on the volume of request being received, CEE requested a transfer of $25,000 from Result 2 (these funds were not needed for Result 2 as they were dedicated to postage for the feedback reports, when most were actually send via email). In the end, however, although the entire original budget was spent, less than $1,000 was spent of the $25,000 transferred from Result 2. In total, 1,162 homeowners received cost-share from Trust Fund dollars (some of these homes did both insulation and heating system upgrades).

Result 6: Conduct project evaluation and make recommendations for ongoing utility programs.

Description:

A major objective of this proposal is to transform the delivery of residential energy efficiency programs, so that they can be massively scaled up to reach significantly more (an order of magnitude more) homes than will be served by this project. Thus we would evaluate the success of the program in achieving cost-effective energy efficiency services, and recommend enhancements and improvements for ongoing utility programs.

Summary Budget Information for Result 6: **Trust Fund Budget: $11,000**
Amount Spent: $ 7,225
Balance: $ 3,775

Deliverable	Completion Date	Budget
1. Evaluation of program including number of participants, measures installed, cost and savings, and recommendations for future programs	6/30/2011	$11,000

Result Completion Date: 6/30/11

Final Report Summary:

A separate report was produced for this result.

Figure 1: Anticipated program delivery workflow and relationship to project results

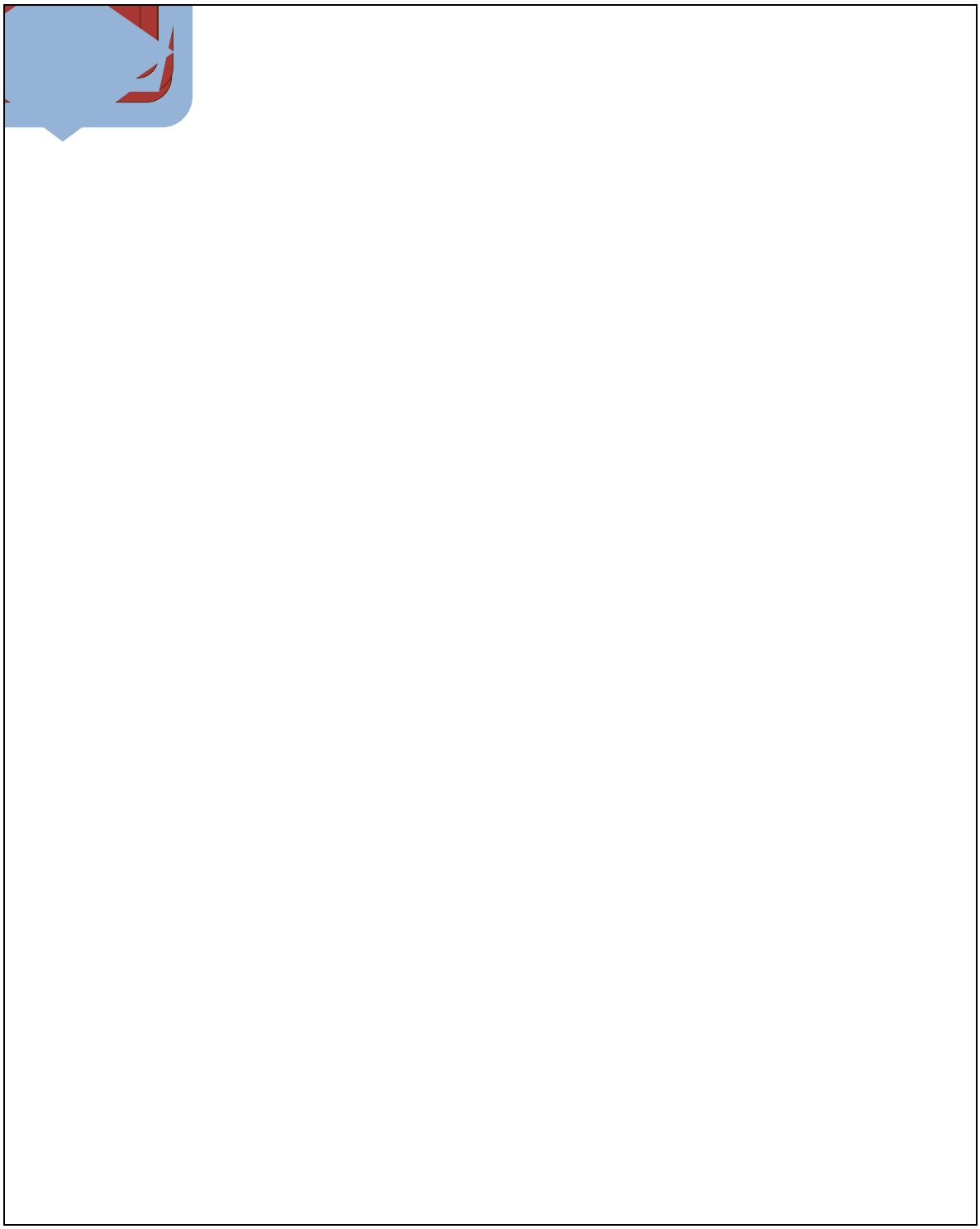

Figure 2: Anticipated project timeline

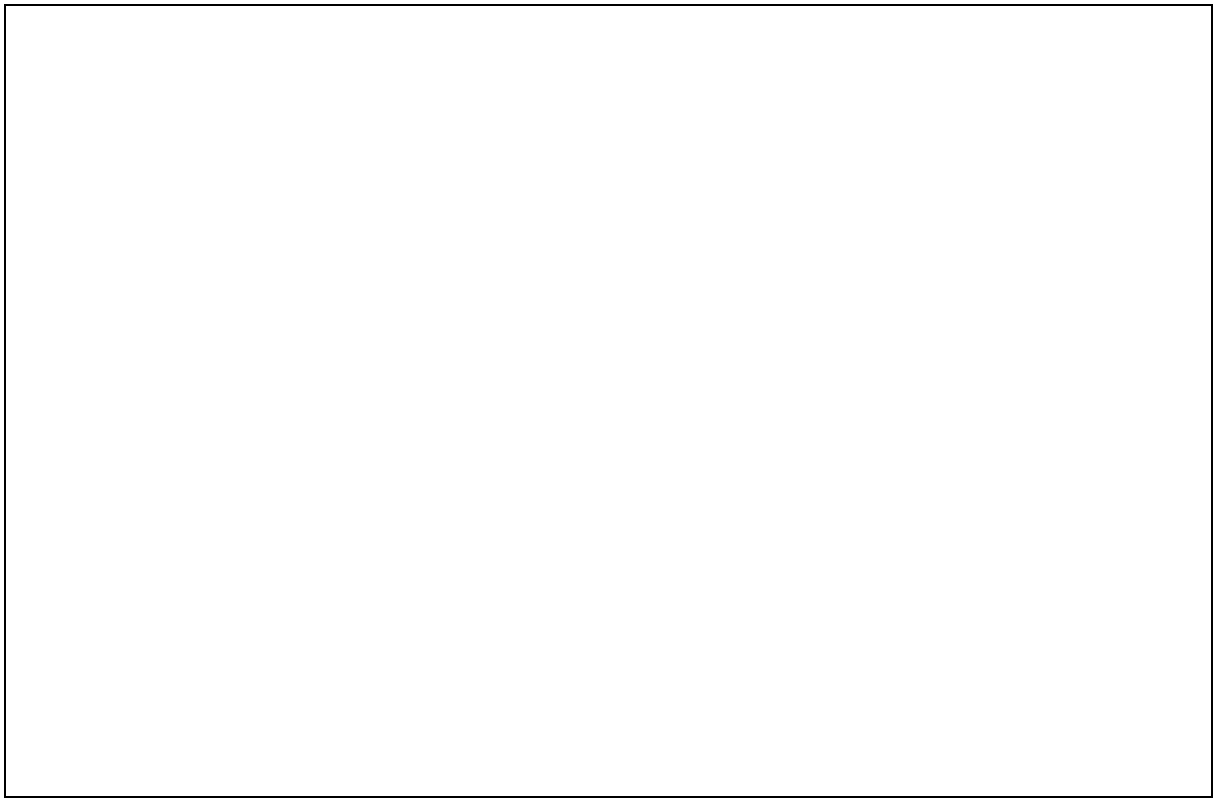

Figure 3: Summary of participation / funding commitments of partners

	Minneapolis	St. Paul	Apple Valley	Austin, Owatonna, Rochester	Duluth	Other Cities
Participation / Tracking	LCCMR	LCCMR	LCCMR	LCCMR	LCCMR	LCCMR
Data Analysis and Feedback	LCCMR	CenterPoint, LCCMR	LCCMR	Triad (utilities of Austin, Owatonna & Rochester), LCCMR	LCCMR	LCCMR
Home visit/ Materials	CenterPoint Energy, LCCMR	Xcel Energy, LCCMR	CenterPoint Energy, Dakota Electric, LCCMR	Triad, LCCMR	Minnesota Power, Comfort Systems, stimulus	local utilities, LCCMR
Cost-share for insulation / air sealing / mechanical upgrades	Xcel, stimulus, LCCMR	CenterPoint, stimulus, LCCMR	CenterPoint, stimulus, LCCMR	Triad, stimulus, LCCMR	MN Power, Comfort Systems, stimulus	Local utility, LCCMR, stimulus

V. TOTAL TRUST FUND PROJECT BUDGET:

Personnel: $ 681,000

CEE has about 60 staff, of which about 1/6th will be assigned for some portion of time to this project. In implementing the majority of project activities for the LCCMR project, these staff will utilize expertise in project management, program design, recruitment and organizing of workshops, data input and tracking, field experience with home visits and technical analysis.

Contracts: $ 500,000

$100,000 to CERTs for assistance recruiting and organizing workshops
$85,000 to other Greater Minnesota contractors for assistance recruiting and organizing workshops
$150,000 to NEC and others for insulation diagnostics, post-Installation inspection and home visits
$25,000 to Great Plains Institute for assistance with Apple Valley implementation
$30,000 to NEC for program design in implementation assistance
$50,000 to BAM for website development
$60,000 to Conservation Services Group, Shelter Supply, and other contractors for developing and producing air sealing and insulation contractor trainings

Other direct project costs: $ 80,000

$50,000 for workshop production costs including promotion and direct costs of producing the workshops (food, venue rental, etc.)
~~$30,000~~ $5,000 for production and delivery of the feedback forms

Travel (within Minnesota): $ 39,000

Estimated based on an average of about two visits/month to each participating city.

Low-cost energy-efficiency materials: $ 250,000

Low-cost energy-efficiency materials for 6,000 homeowners will include items such as compact florescent light bulbs, weather stripping, outlet gasket seals, recessed lighting inserts, low-flow showerheads, facet aerators, hot water pipe insulation, outlet strips, and programmable thermostats.

Cost-share for energy-efficiency: $475,000

Cost-share to be provided for homeowners who pay for contractor work for air sealing, insulation and major mechanical replacement.

TOTAL TRUST FUND PROJECT BUDGET: $ 2,000,000

Explanation of Capital Expenditures Greater Than $3,500: None.

VI. PROJECT STRATEGY:

A. Project Partners:

Cities: Saint Paul, Minneapolis, Apple Valley, Rochester, Owatonna, Austin, Duluth, Park Rapids

Utilities: Rochester Public Utilities, Owatonna Public Utilities, Austin Public Utilities, Minnesota Energy Resources (Rochester's gas utility), Comfort Systems (Duluth gas utility), Xcel Energy, Great River Energy, Dakota Electric, Minnesota Power

State agencies: Minnesota Office of Energy Security, Minnesota Pollution Control Agency

Contractors:

Builders Association of Minnesota (BAM)

BAM has extensive knowledge of building energy efficiency, and has developed the successful home-smart.org website.

Neighborhood Energy Connection (NEC)

The NEC is a St. Paul-based non-profit with extensive experience in residential energy efficiency. They will assist with developing the program design, and will implement in St. Paul.

Clean Energy Resource Teams (CERTs)

In the Metro CERTs, efforts for this project will be coordinated by Diana McKeown through The Green Institute.

Great Plains Institute (GPI)

The Great Plains Institute is a 501(c)(3) nonprofit organization that brings together key public and private leaders from across the northern plains to accelerate the transition to a renewable and low-carbon energy system by mid-century. GPI's core competency is facilitation and collaboration with a diverse group of creative, intelligent individuals to achieve consensus on policy and technology recommendations for businesses and government.

Conservation Services Group (CSG), Shelter Supply and other contractors

CSG and Shelter Supply have decades of experience in training energy efficiency contractors, in Minnesota as well as other states.

Common Ground Construction

Common Ground is the implementing organization of the Duluth Energy-Efficiency Program (DEEP), and conducted

B. Project Impact and Long-term Strategy:

Estimated direct impacts include the following:

- served 6,933 households
- reduce energy costs $1,000,000/year in those homes
- reduce CO2 26,000,000 lbs.
- create 30 new full-time jobs

In addition, it is our intent to transform how residential energy services are delivered, so that after we complete this project, these benefits would continue and increase by approximately an order of magnitude. After initial funding by LCCMR, we would anticipate that these programs will be funded by utilities in the long term. Duluth,

Minneapolis, Rochester, Austin and Owatonna have made commitments to keep funding their programs.

This pilot project will demonstrate strategies that can be incorporated into utility residential Conservation Improvement (CIP) programs for the next decade. In order to meet the legislatively mandated 1.5 percent per year savings goal within the residential sector, over the next decade hundreds of thousands of homes will need to enter in a program such as we will be implementing. Thus we would anticipate that this LCCMR project could catalyze the implementation of much larger utility programs that would enroll 50,000 or more homes per year over a 10 year span, creating hundreds of jobs and significantly reducing CO2 emissions in the residential sector.

C. Other Funds Proposed to be Spent during the Project Period:

The following lists estimated funding leveraged by this project:

CEE in-kind	$330,000
Other utilities:	$2,000,000
Stimulus funding (Duluth):	$1,500,000
Stimulus loan financing:	$1,600,000
TOTAL:	$5,430,000

D. Spending History:

CEE has spent over $100,000 of its own funding planning for this project prior to June 30, 2009. Activities conducted with this funding include:

- Conducting program pilot in fall of 2008 in select neighborhoods in Minneapolis and Oakdale;
- Providing in-home visits and free materials for the pilot;
- Discussions and planning with project partners;
- Developing a training curriculum and conducting a “train the trainer” session so training can be conducted during the project period.

VII. DISSEMINATION:

Our program will involve significant outreach efforts inherent in the program design, including a website developed for the project. Outreach efforts will include presentations at workshops and working through community partners to turn out people to the workshops. Program results will be captured through the final report which will be sent to key stakeholders. In August 2010 CEE presented the program at a conference of the American Council for an Energy Efficient Economy (ACEEE). In December 2010 CEE presented the program at a webinar sponsored by the U.S. Department of Energy.

VIII. REPORTING REQUIREMENTS:

Periodic work program progress reports will be submitted on the following dates: January 31, 2010; July 31, 2010; and January 31, 2011.

A final work program report and associated products will be submitted by August 31, 2011.

IX. RESEARCH PROJECTS:

None.

Attachment A: Final Budget Detail for 2009 Project

Project Title: ***Energy Efficient Cities***

Project Manager Name: Carl Nelson

Progress Report: July 15, 2011

Reporting budget results as of: *6/30/11*

Trust Fund Appropriation: $ *2,000,000*

2009 Trust Fund Budget	**Result 1 Budget:**	**Amount Spent: (6/30/11)**	**Balance: (6/30/11)**	**Revised Result 2 Budget:**	**Amount Spent: (6/30/11)**	**Balance: (6/30/11)**	**Result 3 Budget:**	**Amount Spent: (6/30/11)**	**Balance: (6/30/11)**	**Result 4 Budget:**	**Amount Spent: (6/30/11)**	**Balance: (6/30/11)**	**Revised Result 5 Budget:**	**Amount Spent: (6/30/11)**	**Balance: (6/30/11)**	**Result 6 Budget:**	**Amount Spent: (6/30/11)**	**Balance: (6/30/11)**	**TOTAL BUDGET**	**TOTAL BALANCE**
	RESULT 1: *Design and develop 8 city-specific programs*			*RESULT 2: Coordinate, track and provide feedback on energy use*			***RESULT 3:*** *Train insulation and air sealing contractors*			***RESULT 4:*** *Implement energy efficiency programs*						***RESULT 6:*** *Recommendations for ongoing utility programs.*				
PERSONNEL: wages and benefits																				
Project Manager (Carl Nelson - 60% FTE)	22,000	11,669			2,399					77,100	55,262					11,000	7,225			
Participation Coordinator (Erica Graber-Mitchell - 60% FTE)		1,556								87,500	27,785									
Community Organizers (100% FTE)		3,960								99,900	73,382									
Logistics Coordinator (Judy Thommes - 30% FTE)										54,300	56,638									
Project Assistant (John Kracum - 100% FTE)				62,600	31,431					15,700	7,618									
Project Assistant (Beth Bennett - 90% FTE)					254					75,300	29,082									
In-home Visit Coordinator & other field staff (Bob Mello - 20% FTE)		28,105								31,900	155,159									
Administrative support (10% FTE)					29,714					8,100	37,305									
Workshop Coordinator (Neely Crane-Smith - 70% FTE)					1,629					73,700	18,168									
Project Engineer & technical support (Lester Shen - 25% FTE)	37,100	13,623		18,600	3,872					6,200	69,134									
SUBTOTAL PERSONNEL:	***59,100***	***58,912***	***188***	***81,200***	***69,299***	***11,901***				***529,700***	***529,534***	***166***				***11,000***	***7,225***	***3,775***	**681,000**	***16,030***
CONTRACTS																				
Organizing Assistance - CERTs										100,000	81,133	*18,867*							100,000	*18,867*
Insulation diagnostics, post installation inspection, home visits (NEC & other contractors)										150,000	88,637	*61,363*							150,000	*61,363*
Organizing Assistance - Additional local contractors										85,000	74,250	*10,750*							85,000	*10,750*
Apple Valley assistance (Great Plains Institute)										25,000	20,504	*4,496*							25,000	*4,496*
Program design & implementation assistance (NEC)	5,000	4,957	*43*							25,000	25,000	*0*							30,000	*43*
Insulation and air sealing contractor training (Conservation Services Group, Shelter Supply, Builders Association of MN and others)							60,000	47,056	*12,944*										60,000	*12,944*
Website development (Builders Association of MN)				50,000	49,000	*1,000*													50,000	*1,000*
SUBTOTAL CONTRACTS:	***5,000***	***4,957***	***43***	***50,000***	***49,000***	***1,000***	***60,000***	***47,056***	***12,944***	***385,000***	***289,524***	***95,476***							**500,000**	***109,463***
TRAVEL IN MINNESOTA										**39,000**	**5,041**	***33,959***							**39,000**	***33,959***
OTHER DIRECT PROJECT COSTS																				
Workshop production costs (materials & promotion)										50,000	35,649	*14,351*							50,000	*14,351*
Production and delivery of feedback materials				5,000	21	*4,979*													5,000	*4,979*
SUBTOTAL OTHER DIRECT COSTS:				***5,000***	***21***	***4,979***				***50,000***	***35,649***	***14,351***							**55,000**	***19,330***
SUPPLIES (low-cost energy-efficiency materials for homeowners)										**250,000**	**198,499**	***51,501***							**250,000**	***51,501***
COST-SHARE FOR EFFICIENCY INVESTMENTS													**475,000**	**450,934**	***24,066***				**475,000**	***24,066***
COLUMN TOTAL	**$64,100**	**$63,869**	**$231**	**$136,200**	**$118,320**	**$17,880**	**$60,000**	**$47,056**	**$12,944**	**$1,253,700**	**$1,058,247**	**$195,453**	**$475,000**	**$450,934**	**$24,066**	**$11,000**	**$7,225**	**$3,775**	**$2,000,000**	**$254,349**