

## Environment and Natural Resources Trust Fund 2009 Phase 2 Request for Proposals (RFP)

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**LCCMR ID: 101-D2**

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**Project Title:** Energy Efficient Cities – Leading the Way

**Total Project Budget:** \$ \$2,383,756

**Proposed Project Time Period for the Funding Requested:** 2 years, July 2009 to June 2011

**Other Non-State Funds:** \$ \$0.00

**Priority:** D2. Residential Energy Conservation

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**First Name:** Sheldon

**Last Name:** Strom

**Sponsoring Organization:** Center for Energy and Environment

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**Region:**

Metro, SE

**County Name:**

Dakota, Hennepin, Mower,  
Olmsted, Ramsey, Steele

**City / Township:**

Minneapolis, St. Paul, Apple Valley,  
Rochester, Ow

**Summary:** Demonstration of innovative energy efficiency delivery and financing strategies, serving 6,000 homes with broad community-wide partnership approach including utilities and cities to enhance current and integrate into future utility programs.

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**Main Proposal:** 0908-2-023-proposal-LCCMR\_CEE\_final.doc

**Project Budget:** 0908-2-023-budget-LCCMR\_2009\_CEEProject Budget.xls

**Qualifications:** 0908-2-023-qualifications-LCCMR\_CEEinfo\_strom.doc

**Map:** 0908-2-023-maps-LCCMR\_CEE\_map.pdf

**Letter of Resolution:** 0908-2-023-resolution-LCCMR\_CEE\_letter.pdf

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**PROJECT TITLE: Energy Efficient Cities – Leading the Way**

**I. PROJECT STATEMENT**

Achieving Minnesota’s 1.5% annual energy savings goals for utilities will require a transformation of consumer behavior and support from all sectors of the community. This pilot project will serve as an essential catalyst to help utilities achieve savings in the residential sector by developing strategies and implementing comprehensive programs to reduce energy use and carbon emissions in 6 cities: Minneapolis, Saint Paul, Apple Valley, Rochester, Owatonna and Austin. These cities represent varying demographics, a variety of housing stock and their utility services represent over 80% of Minnesota’s residents. To promote direct action resulting in a reduction of energy use in over 6,000 homes each city will be offered a full array of convenient energy efficiency services including innovative financing packages. Participant’s actions will be tracked and they will receive regular feedback on their energy use compared to an energy-efficient home of the same type.

In each city, a one-stop energy service will be developed and marketed to provide residents with a low cost energy analysis to identify insulation and other energy efficient improvements. Insulation and House Doctor services (based on the Princeton University “House Doctor” approach) will be provided by trained and certified contractors who guarantee the quality of their work. These services will offer new entry level jobs for people with limited formal education. A Home Energy Rating System (HERS) will be implemented to provide a consumer-oriented energy benchmark for homebuyers similar to the EnergyStar label for appliances, which could eventually be integrated statewide with the Multiple Listing Service. HERS will be packaged with financing and incentives to encourage significant efficiency upgrades at time of sale. An Energy Bank will be established to provide financing packages for each city.

**II. DESCRIPTION OF PROJECT RESULTS**

**Result 1:** Coordinate, track and provide feedback on energy improvements. **Budget:** \$370,000

Develop web-based tracking database that identifies energy actions and savings in each home, provide feedback to participants and offer a web resource in conjunction with the Builders Association of MN (BAM) that serves as a clearing house for information, diagnostic aids, advice, instruction and feedback tools.

| <b>Deliverable</b>                                 | <b>Completion Date</b> |
|--|------------------------|
| 1. Develop database and web-based tracking system  | 10/1/2009              |
| 2. Launch BAM web resource                         | 6/30/2010              |
| 3. Track 6,000 participants actions and energy use | 6/30/2011              |

**Result 2:** Design, develop 6 city specific programs. **Budget:** \$128,000

Develop and implement comprehensive energy efficiency programs to reduce energy use and carbon emissions.

| <b>Deliverable</b>   | <b>Completion Date</b> |
|--|------------------------|
| 1. Market analysis and segmentation in 6 cities beginning in July 2009 | 3/31/2010              |
| 2. Design programs, utility incentives for 6 cities                    | 5/31/2010              |

**Result 3:** Train and certify insulation and House Doctor contractors. **Budget:** \$60,000

Contractor training will be provided by a national trainer in coordination with local technical schools.

| <b>Deliverable</b>                                | <b>Completion Date</b> |
|---|------------------------|
| 1. Train and certify 10 contractors               | 12/1/2009              |
| 2. Train and certify an additional 15 contractors | 10/1/2010              |

**Result 4:** Implementation of energy efficiency programs. **Budget:** \$770,756

Manage the implementation of energy efficiency programs in Minneapolis, Saint Paul, Apple Valley, Rochester, Owatonna and Austin.

| <b>Deliverable</b>                                     | <b>Completion Date</b> |
|--|------------------------|
| 1. Generate 5,000 participants in workshops, fairs etc | 11/30/2010             |

**PROJECT TITLE: Energy Efficient Cities – Leading the Way**

|    |   |            |
|----|---|------------|
| 2. | Assist 5,000 participants in the direct installation of low cost measures   | 12/20/2010 |
| 3. | Conduct HERS rating assessments at time of sale or conduct home analyses and provide insulation and other major energy improvements in 2000 homes | 6/30/2011  |

**Result 5:** Implement Energy Bank financing programs.

**Budget:** \$1,000,000

Develop innovative energy financing in coordination with MHFA, State Office of Energy Security and local financial institutions.

**Deliverable**

|    |   | <b>Completion Date</b> |
|----|---|------------------------|
| 1. | Obtain funding commitments from cities/utilities; establish convenient repayment options on utility bills resulting in positive cash flow | 3/31/2010              |
| 2. | Design financing programs for each city/utility maximizing leverage from existing funding pools   | 6/30/2010              |
| 3. | Provide financing and incentives to 2,000 households including low to moderate income families  | 6/30/2011              |

**Result 6:** Incorporate findings into ongoing utility programs.

**Budget:** \$55,000

Conduct a comprehensive review of all residential CIP programs and recommend enhancements and improvements to ongoing utility programs.

**Deliverable**

|    |   | <b>Completion Date</b> |
|----|---|------------------------|
| 1. | Review all utility residential CIP programs   | 6/1/2010               |
| 2. | Evaluation of program including number of participants, measures installed, cost and savings  | 6/1/2011               |
| 3. | Design new programs in collaboration with utilities and include successful elements of LCCMR pilot with recommendations to Office of Energy Security and appropriate legislative committees | 6/1/2011               |

**PROJECT STRATEGY AND TIMELINE**

**Project Partners**

- Cities of Saint Paul, Minneapolis, Apple Valley, Rochester, Owatonna and Austin
- Xcel Energy, Great River Energy, Dakota Electric, CenterPoint Energy, Minnesota Energy Resources, Owatonna and Austin municipal utilities
- Builders Association of Minnesota (BAM)
- Clean Energy Resource Teams (CERTs)
- Great Plains Institute
- Minnesota Pollution Control Agency
- Minnesota Office of Energy Security

**B. Project Impact**

This project will serve 6,000 households with an estimated reduction in energy costs of \$1,000,000/year and an estimated annual CO2 reduction of 26,000,000 lbs.

**C. Time**

Project will begin in July 2009 with direct implementation in Apple Valley beginning in October 2009. Implementation of efficiency services in additional cities will begin in February 2010 and will continue through June 2011. After that time successful elements of the program would be incorporated into ongoing utility conservation programs.

**D. Long-Term Strategy**

This pilot project will demonstrate strategies that can be incorporated into residential CIP programs for the next decade.

## Project Budget

### IV. TOTAL PROJECT REQUEST BUDGET

| <b>BUDGET ITEM</b> (See list of Eligible & Non-Eligible Costs, p. 17)  | <b>AMOUNT</b>       | <b>% FTE</b> |
|--|---------------------|--------------|
| <b>Personnel:</b>  |                     |              |
| <u>Project Manager</u> - overall management of program design and implementation, supervision of staff, reporting & evaluation, supervise Proj Coord [2 yrs] | \$ 183,600          | 100%         |
| <u>Project Coordinator</u> - coordination of energy tracking; workshops, communication with partners, supervise Proj Asst [2 yr]                             | \$ 108,000          | 100%         |
| <u>Project Assistant</u> - assist with workshop production, data entry, communication with participants [2 yr]   | \$ 89,856           | 100%         |
| <u>Engineer</u> - technical advisor for program strategies; calculation of cost effectiveness; program evaluation [2 yrs]                                    | \$ 24,300           | 10%          |
| <b>Contracts:</b>  |                     |              |
| Home Energy Rating System (HERS) Audits - \$150 subsidy to HERS raters to reduce cost for 500 homeowners   | \$ 75,000           |              |
| Insulation Diagnostics - \$100 subsidy to energy auditors to reduce cost for 1500 homeowners   | \$ 150,000          |              |
| Clean Energy Resource Teams (CERT's) - program delivery, workshops and marketing for program implementation  | \$ 100,000          |              |
| Great Plains Institute - assist with implementation in Apple Valley  | \$ 25,000           |              |
| User Strategies Group - Market analysis & segmentation for program design  | \$ 48,000           |              |
| Conservation Services Group - insulation contractor & House Doctor training and certification  | \$ 60,000           |              |
| Builders Association of MN (BAM) - web development & management  | \$ 250,000          |              |
| <b>Equipment/Tools:</b>  |                     |              |
| Low cost energy materials - \$50 for 5000 workshop participants  | \$ 250,000          |              |
| Printing & workshop supplies   | \$ 20,000           |              |
| <b>Financing Incentives &amp; Interest Writedown</b> - \$500 incentives/interest writedowns for 2000 homeowners to reduce cost of energy improvements        | \$ 1,000,000        |              |
|  | \$ -                |              |
| <b>TOTAL PROJECT BUDGET REQUEST TO LCCMR</b>   | <b>\$ 2,383,756</b> |              |

### V. OTHER FUNDS

| <b>SOURCE OF FUNDS</b>   | <b>AMOUNT</b> | <b>Status</b> |
|--|---------------|---------------|
| <b>In-kind Services During Project Period:</b> Salary for Project Director, Sheldon Strom, financing design, admin support, graphics, accounting; cost of mileage & additional cost of workshop supplies | \$ 331,918    |               |

## **Center for Energy and Environment**

The Center for Energy and Environment is a non-profit 501 (c) (3) corporation that works to promote the responsible and efficient use of natural and economic resources. CEE accomplishes this mission through research, program development, delivery and evaluation, financing and public policy initiatives. CEE has provided energy, environmental and housing rehabilitation services to utilities, private corporations, neighborhood organizations, municipalities and public agencies for over twenty-five years. CEE has a staff of over 45, including research engineers, architects, programmers, analysts, design coordinators, construction managers, IAQ technicians, loan officers and policy analysts.

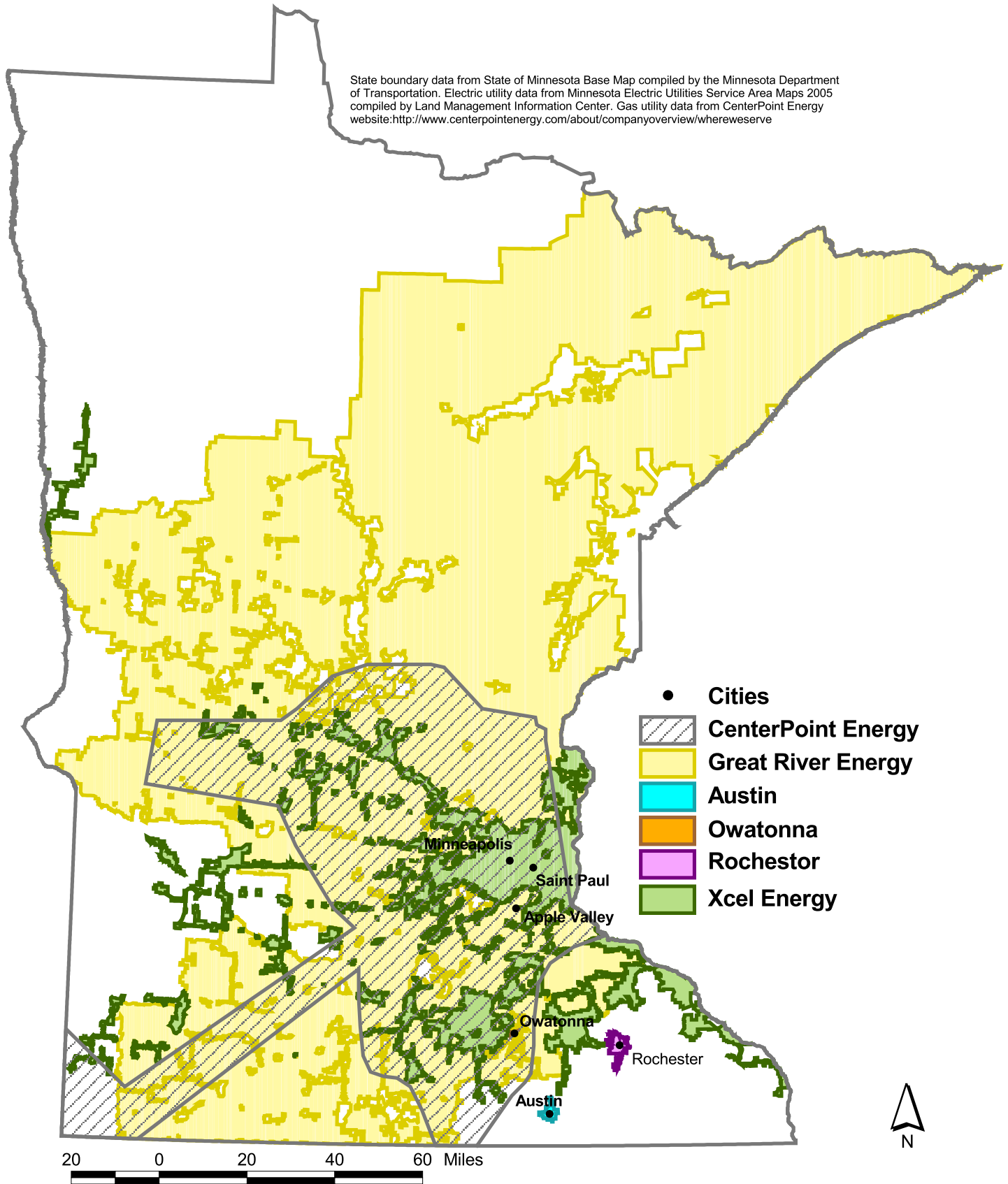
CEE has a long history of delivering residential energy efficiency programs in Minnesota. Through programs such as Operation Insulation, and Neighborhood Energy Workshops, CEE has delivered efficiency services to tens of thousands of Minnesota households. Properly implemented, low-cost community based programs can yield significant and measurable savings. For example, CEE's low-cost, no-cost Neighborhood Energy Workshop (NEW) program achieved measured savings of 7.2% of annual gas use in 28,000 households. CEE believes that community based efficiency services offer an opportunity to cost effectively deliver significant energy savings in the residential sector.

CEE works with the 32 suburban communities and 35 Minneapolis neighborhoods to assist staff, neighborhood volunteers and community organizations to develop and implement innovative and cost effective financing to improve residential properties. In delivering these programs, CEE provides program development and marketing, loan and grant origination, post installation inspections and remodeling advice on a fee for service basis. Annually, CEE lends in excess of \$12 million dollars resulting in over 1,300 home improvement loans financed throughout Minnesota. To date, CEE has provided more than 18,000 loans of various types totaling more than \$115 million.

### **Sheldon Strom, President**

Mr. Strom is the President of the Center for Energy and Environment. Under Mr. Strom's leadership, the Center's programs have served more than 60,000 homes and businesses with energy efficiency programs and completed over 100 research projects. Mr. Strom has also been actively involved in the development of energy legislation and utility policies and has a keen grasp of state regulatory procedures. His utility regulatory work includes participation in Integrated Resource Planning, development of utility Demand Side Management (DSM) incentive programs, development of procedures for review of utility DSM programs, and review and modification of procedures for determining program cost effectiveness. Mr. Strom played a major role in the comprehensive energy and global warming legislation that was passed in Minnesota in 2007. Mr. Strom has a Masters of Architecture degree from the University of Wisconsin/ Milwaukee and a Bachelor of Mechanical Engineering from the University of Minnesota.

State boundary data from State of Minnesota Base Map compiled by the Minnesota Department of Transportation. Electric utility data from Minnesota Electric Utilities Service Area Maps 2005 compiled by Land Management Information Center. Gas utility data from CenterPoint Energy website: <http://www.centerpointenergy.com/about/companyoverview/whereweserve>



These utilities cover approximately 80% of the State of Minnesota