

**Environment and Natural Resources Trust Fund
2011-2012 Request for Proposals (RFP)**

LCCMR ID: 177-G

Project Title: Minnesota Schools Cutting Carbon- Conserving Energy and Water

Category: G. Environmental Education

Total Project Budget: \$ \$1,370,000

Proposed Project Time Period for the Funding Requested: 3 yrs, July 2011 - June 2014

Other Non-State Funds: \$ 0

Summary:

We will empower 120 student-led high school teams to integrate long term energy and water conservation savings into daily school operations, create model school-utility partnerships, and develop student leadership.

Name: William Sierks

Sponsoring Organization: Minnesota Pollution Control Agency

Address: 520 Lafayette Rd N, Second Floor
Saint Paul MN 55155-4194

Telephone Number: 651-757-2722

Email: bill.sierks@state.mn.us

Web Address: www.schoolscuttingcarbon.org

Location

Region: Statewide

Ecological Section: Statewide

County Name: Statewide

City / Township:

<input type="checkbox"/> Funding Priorities	<input type="checkbox"/> Multiple Benefits	<input type="checkbox"/> Outcomes	<input type="checkbox"/> Knowledge Base
<input type="checkbox"/> Extent of Impact	<input type="checkbox"/> Innovation	<input type="checkbox"/> Scientific/Tech Basis	<input type="checkbox"/> Urgency
<input type="checkbox"/> Capacity Readiness	<input type="checkbox"/> Leverage	<input type="checkbox"/> Employment	<input type="checkbox"/> TOTAL <input type="checkbox"/> %

2011-2012 MAIN PROPOSAL

PROJECT TITLE: Minnesota Schools Cutting Carbon – Conserving Energy and Water

I. PROJECT STATEMENT

Minnesota Schools Cutting Carbon (MnSCC) will work with approximately 15% of the state’s public high schools to: 1) reduce energy and water use; 2) reduce expenses and create long-term cost-savings for schools; 3) engage school teams - students, teachers, administrators, and building managers - to work cohesively to develop and implement conservation projects; 4) connect school teams with their local utilities and communities; and 5) ingrain conservation practices into daily school operations.

In Phase I, MnSCC has worked with 100 participating schools (60 high schools and 40 colleges). Our successes to date with these schools include:

- Developed individual action plans for each school which identified low and no-cost energy-saving actions with the potential to reduce energy use by over 5,000,000 kWh.
- Awarded over \$200,000 in competitive grant funding to 23 school teams, resulting in an approximate cost-savings of \$250,000 and reaching a total student body population of 6,600 students.

Phase II of MnSCC will draw upon lessons learned during Phase I and, based on that experience, will adjust to focus solely on Minnesota public high schools. To achieve greater success with these schools, we will work with 120 schools, 60 renewing and 60 new recruits, to incorporate energy *and water* conservation practices into school operations. Our Phase II approach will focus on creating sustainable change in school operations via a three-part strategy:

1. Initial *and follow-up* school site visits along with webinars centered on the adoption and use of the state’s energy benchmarking database, creation and implementation of integrated conservation plans for energy *and water*; and coordination of five *regional education summits* to foster regional collaboration and sharing of best practices among schools.
2. Develop and document models and success stories of school-utility partnerships through a pilot project that pairs three schools with a local utility, a municipal, a cooperative, and an investor-owned utility, that can be replicated by other schools for the efficiency and water conservation grant round.
3. Improve school operations through grant funds for energy efficiency, water conservation renewable energy projects that leverage utility funding and connect project data and results into the classroom. Eligibility for renewable energy projects will be based on achieving minimum energy efficiency performance levels as an incentive to tackle efficiency first.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: *Individual Action Plans for Schools to Save Resources and Money (\$785,000).*

ERM, CERTs, CERT Regional Coordinators, MRES, and other partners will provide technical support to benchmark school energy and water consumption and develop school-specific action plans with ways to reduce energy and water usage and cut building operating costs.

Outcome	Completion Date
1. Provide webinar tutorials and individual assistance for schools to benchmark and track energy use in the state’s Buildings, Benchmarks, and Beyond (B3) database.	1 st round– 6/30/12 Ongoing
2. Meet with every school team to: (a) do a building walk-through and create individual energy and water saving action plans for each new recruit, and (b) update action plans to include actions implemented to date and further energy/water saving practices for renewing schools	6/30/2012
3. Develop information and sample agreements for schools statewide to design renewable energy installations appropriate for their situation	9/31/2013
4. Regional Education Summits for students and teachers (5 total)	12/31/2012

Activity 2: Develop School-Utility Energy Partnerships and Best Practices Guide (\$75,000)

Pilot project will pair three schools with a local utility: one Municipal (MMUA will partner), one Investor-Owned (Xcel will partner) and one Cooperative (to be determined). See support letters. These projects will develop best practices and financing models for school-utility collaboration on energy efficiency actions.

Outcome	Completion Date
1. Select three schools to partner with utilities (Xcel, MMUA, and Cooperative)	10/31/2011
2. Pilot projects begin (\$25,000 grant per project = \$75,000 total)	11/30/2011
3. Measurable energy and water usage reductions occur	Ongoing
4. Develop a Best Practices Guide for schools and utilities to use during the energy efficiency & water conservation grant round	12/31/2012

Activity 3: Creating Sustainable Action through Connected Schools (\$510,000).

Schools incorporate action plans and results into the classroom, creating an incentive to continue these actions and a means of teaching conservation concepts. Grant criteria will require distribution across the state, measurable results and integration in educational activities and school operations.

Outcome	Completion Date
1. Each school selects \$500 worth of proven energy, water, and waste reduction items (low-hanging fruit), choosing from VendingMisers, low-flow showerheads, compost/recycling supplies, and occupancy sensors, among others (\$60,000 total).	12/31/11; (items rec'd with ERM visit by 5/31/12)
2. Competitive Energy Efficiency & Water Conservation grants (\$200,000 available; 10-20 awards).	12/15/2012
3. Competitive Renewable Energy grants (\$250,000 available; 20-25 awards). *Schools must meet minimum building energy efficiency score to be eligible.	12/15/2013

III. PROJECT STRATEGY

A. Project Team. Project Manager: The MPCA will continue to provide the Project Manager (Bill Sierks) and administer grants and contracts with funded partners. **Partners Receiving LCCMR Funds:** (1) The Clean Energy Resource Team will continue to provide the Project Coordinator and Regional Coordinators; (2) Environmental Resources Management (a private consulting firm in Minnesota) will continue to develop action plans and give benchmarking support for schools; and (3) The Minnesota Renewable Energy Society will develop model renewable energy agreements and provide technical support. **Additional Organizational Support - Not Receiving LCCMR Funds:** Xcel Energy and MN Municipal Utilities Assn. (pilot projects and best practices guide); Office of Energy Security (evaluation of grant project feasibility, technical assistance); US Green Building Council-Mississippi Headwaters Chapter (outreach, webinars, and mentors); the Project Green Fleet (free diesel retrofits for schools fleets); Will Steger Foundation (student outreach and education materials); Youth Energy Summit (outreach to students based in southwestern MN); Youth Environmental Activists (outreach - Twin Cities based student group).

B. Timeline Requirements.

Year One: Recruit schools; school visits and individual school action plans; energy benchmark webinars; school-utility pilot projects begin; initial \$500 equivalent grants.

Year Two: Regional education summits; more webinars; energy efficiency and water conservation grants.

Year Three: MRES renewable technical assistance; renewable energy grants.

C. Long-Term Strategy and Future Funding Needs: MnSCC is developing a sustainable model for school energy and water conservation measures that can be documented and thus replicated for broad-based implementation. We will demonstrate the successes possible via: engaged school teams that combine students, teachers, administrators, and facility operators; utilizing existing benchmarking tools to establish a baseline and track performance progress; school-utility collaborations to identify low-hanging fruit and finance savings projects; curricular connections for all energy efficiency, water conservation and renewable energy projects to ensure that actions are tied to classrooms and help students understand and internalize the impact of conservation practices.

2011-2012 Detailed Project Budget - MNSCC

IV. TOTAL TRUST FUND REQUEST BUDGET - 3 YEARS

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
Personnel:	N/A
Contracts:	
1. Environmental Resources Management - individual school visits, action plans, benchmarking assistance, technical support	\$330,000
2. Clean Energy Resource Team - Project coordinator serving as primary contact for schools (\$60,000/yr for 3 years); assistance to schools provided by regional CERT teams (\$60,000/yr for 3 years); outreach, recruitment and website maintenance - \$5,000/yr for 3 yrs)	\$375,000
3. Minnesota Renewable Energy Society - Develop model renewable energy agreements	\$32,000
4. Retired Engineers Technical Assistance Program (ReTAP) - Assist schools in benchmarking and identifying conservation actions	\$20,000
Equipment/Tools/Supplies:	N/A
Acquisition (Fee Title or Permanent Easements):	N/A
Travel:	N/A
Additional Budget Items: \$500 grant per school for conservation items (1st year - \$60,000); 3 school-utility demonstration matching grants \$25,000 each (1st year) (\$75,000); energy and water conservation (2nd year - \$200,000); and renewable energy (3rd yr - \$250,000). Five educational summits \$5,600 each (2nd year \$28,000)	\$ 613,000
TOTAL ENVIRONMENT & NATURAL RESOURCES TRUST FUND \$ REQUEST	\$ 1,370,000

V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
Other Non-State \$ Being Applied to Project During Project Period:	N/A	
Other State \$ Being Applied to Project During Project Period:	N/A	
In-kind Services During Project Period:	N/A	
Remaining \$ from Current ENRTF Appropriation (if applicable):	N/A	
Funding History: Current LCCMR grant supports 3 year project ending 6/30/2011.	\$ 750,000	Current LCCMR Grant

Minnesota Schools Cutting Carbon — Conserving Energy and Water



Low-Hanging Fruit

YEAR 1



Energy Efficiency

YEAR 2



Renewable Energy

Page 5 of 6

YEAR 1

Recruit schools; ERM school visits & action plans; energy benchmark trainings & webinars; school-utility pilot projects \$500 equivalent grants.

YEAR 2

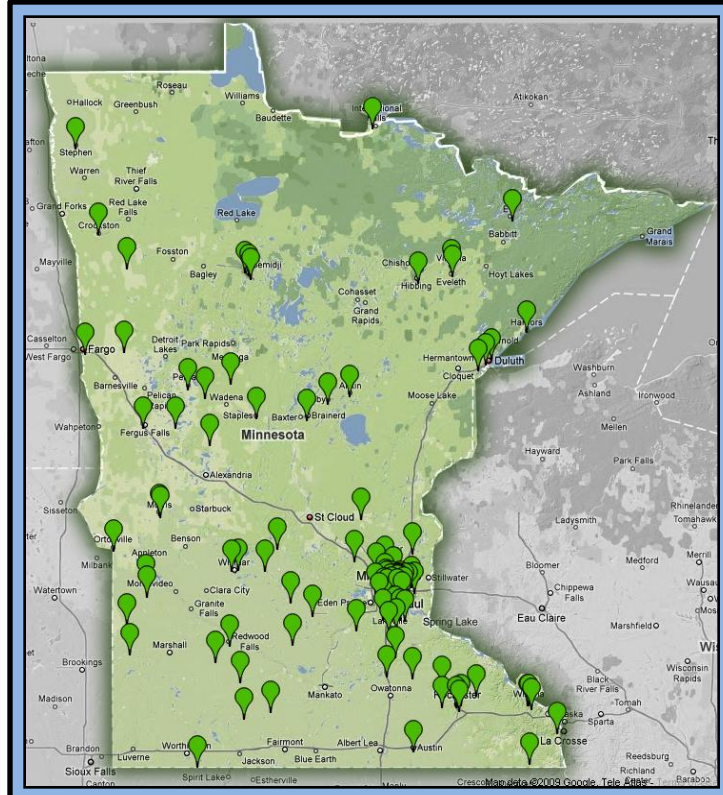
Regional education summits; Regional Coordinator follow-up visits; more webinars; energy efficiency & water conservation grants.

YEAR 3

MRES renewable technical assistance; renewable energy grants.



Lasting Sustainable Change in Minnesota public High Schools



This map shows the statewide distribution of all MnSCC Phase 1 (2009-2011) participating schools.

Minnesota Schools Cutting CARBON

PHASE 2 of Minnesota Schools Cutting Carbon will focus on reducing ENERGY and WATER consumption in 120—15%—of Minnesota's public high schools, by engaging school teams (students, teachers, administrators, and building managers) to work cohesively to develop and implement conservation projects and practices into daily school operations.

LCCMR ID: 177-G

Project Manager Qualifications and Organizational Description

Project Manager Qualifications. William Sierks is a manager in the Prevention and Assistance Division of the MPCA responsible for directing the division's clean energy and climate change activities. Mr. Sierks' qualifications to manage this project include:

- Project manager for the ongoing *Minnesota Schools Cutting Carbon* project, a three-year project funded by a \$750,000 LCCMR grant to work with 100 public high schools, colleges, and universities in the state to save energy and reduce greenhouse gas emissions. The program successfully recruited 100 schools and has been on-time and on-budget. Significant project results are highlighted in the main proposal.
- Responsible for coordination of energy and environmental issues between the MPCA and the Department of Commerce Office of Energy Security. Participates in federal, state and local partnerships, including the U.S. EPA Blue Skyways Initiative, the U.S. EPA-DOE Clean Energy Environmental State Partnership; and the Urban Land Institute's 36-city Regional Council of Mayors collaborative. Mr. Sierks also assists in preparation of joint OES-PCA legislative reports on energy and greenhouse gas emissions.
- Project/grant manager of a \$120,000 three-year grant from the U.S. EPA to MPCA and OES to help the state address energy and environmental issues through collaborative efforts by the state's energy and environmental agencies.

Organizational Description. The mission of the MPCA is to work with Minnesotans to protect, conserve and improve our environment and enhance our quality of life. The agency plays a key role in addressing greenhouse gas emissions in the state and protecting Minnesota's air, water and land resources through partnerships with other public and private entities at the regional, state and local levels. The MPCA is active in national, regional, and state efforts to address greenhouse gas emissions and in providing information to educate and engage citizens on these issues. The agency works closely with the Office of Energy Security on activities related to energy and greenhouse gas reductions.

The Clean Energy Resource Teams project is a public-private partnership involving the community, university, government, and non-profits. Launched in 2003, CERTs is connecting people with the technical resources needed to identify and implement community-scale energy efficiency and clean energy projects. The Clean Energy Resource Teams are diverse – individuals; small business owners; farmers; members of environmental groups; local utility representatives; academics; local, state and federal government staff and elected leaders – and all share common goals and values. They want strong communities, local jobs, and secure, clean, reliable energy. The CERTs approach is a pragmatic, cooperative model for how tangible economic, social, and environmental benefits can be achieved by reaching across traditional interest groups through a true community-based approach.

Environmental Resources Management (ERM) is a leading global provider of environmental, health and safety, risk, and social consulting services, with offices in Minnesota for over 20 years.

ERM provides sustainability, energy and water management and climate change services to a wide range of clients around the world. ERM employs over 3,300 personnel in 137 offices, with annual revenues over \$650 million.