

**Environment and Natural Resources Trust Fund
2014 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 090-C

CREED - Energy Education Project

Category: C. Environmental Education

Total Project Budget: \$ 148,500

Proposed Project Time Period for the Funding Requested: 2 Years, July 2014 - June 2016

Summary:

To update CREED's curriculum to serve more teachers in a shorter period of time thru development of an online, interactive, teacher lead, with online meetings based curriculum package.

Name: Rich Huelskamp

Sponsoring Organization: CREED (Center for Renewable Energy Education and Demonstration)

Address: 28609 Walnut Run Way
Red Wing MN 55066

Telephone Number: (651) 651-3271

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Web Address www.creedproject.org

Location

Region: Statewide

County Name: Statewide

City / Township:

_____ Funding Priorities	_____ Multiple Benefits	_____ Outcomes	_____ Knowledge Base
_____ Extent of Impact	_____ Innovation	_____ Scientific/Tech Basis	_____ Urgency
_____ Capacity Readiness	_____ Leverage	_____ Employment	_____ TOTAL _____%



PROJECT TITLE: CREED (Center for Renewable Energy Education and Demonstration) - Education Project

I. PROJECT STATEMENT

1. Since 2000, CREED has been conducting Energy Education workshops for secondary education STEM (Science, Technology, Engineering and Mathematics) subject based Minnesota teachers. **This LCCMR funding request is to update CREED's curriculum to serve more teachers in a shorter period of time** and expense without a reduction in quality.
2. It is time for CREED to modernize its curriculum. CREED has trained more than 200 Minnesota teachers and over 20 teachers have now completed the Energy Education Certificate requirements. **The goal of this project is develop an online, interactive, teacher(s) lead, with online meetings based curriculum package.** These curriculum packages should reduce the costs of educating a Minnesota teacher but not lose the effectiveness of face-to-face workshop interaction. We will continue the tours of fantastic energy efficiency and renewable energy technology applications throughout Minnesota. We will continue with assisting the teachers in their development of curriculum that is effective to their subject areas and their communities. Our CREED teachers will continue improving and implementing community based projects that are found in the Youth Energy Summit and Clean Energy Resource Teams programs throughout Minnesota.
3. The CREED Board, staff and Hamline University staff/director will develop a steering committee to advise, collaborate, the development of a new set of curriculum packages. The committee will develop and prioritize the list of curriculum packages to be implemented for our teacher training. Contracts with industry and education specialists are to be managed by the Executive Director. The steering committee will review the developing materials regularly.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Project Steering Committee and Grant Administration

Budget: \$17,500

From a list of energy utility and energy technology industry, educational, and website specialists, steering committee members will be recruited. The members will identify and prioritize the curriculum packages and a suggested format. The committee members will review and guide the development of the curriculum regularly.

Outcome	Completion Date
1. A minimum of 4 steering committee members to be recruited	August 2014
2. Two meetings a month to be scheduled for the first 4 months	December 2014
3. Build and prioritize a list of curriculum packages for teacher workshops	December 2014
4. Identify potential contractors and develop contract guidelines	December 2014
5. Once a month curriculum review meetings to be scheduled for the next 9 months	September 2015
6. Quarterly meetings to schedule for the 2 nd year to review project results	August 2016

Activity 2: Curriculum Package Development

Budget: \$70,000

Specialists from the energy and utility industry, teacher education field, and website developers in the state will be identified and contracted to co-develop the teacher curriculum packages and interactive website.



Environment and Natural Resources Trust Fund (ENRTF)

2014 Main Proposal

Project Title: CREED - Energy Education Project

Outcome	Completion Date
1. Contractors chosen	January 2015
2. Research existing curricula that meets the educational objectives of project	March 2015
3. Curriculum and website format finalized	April 2015
4. Development of at least 4 curriculum packages completed	April 2016
5. Development of at least 4 website curriculum packages completed	May 2016

Activity 3: Testing of curriculum packages and website

Budget: \$61,000

This activity is to implement the first use of the curricula and website and evaluate the results.

Outcome	Completion Date
1. Schedule, market, and complete at least to 2 online courses with tours with at least 20 attendees each. Classes to be scheduled for Spring Semester and the Summer Semester.	January 2016
2. Announce to teacher groups the new curricula packages are available from CREED and report the results	January 2016
3. Market the CREED website interactive activities and monitor the results	July 2016

III. PROJECT STRATEGY

A. Project Team/Partners

Rich Huelskamp Executive Director, Center for Renewable Energy and Demonstration, Red Wing, MN

CREED was established in 1997 to develop teacher-training programs. Rich will manage the grant and be the project manager. Rich has assisted in the development of similar programs at Winona State University, Riverland College, and the University of Minnesota.

Carl Sandness, Lead Instructor for CREED, Hibbing, Minnesota

Carl has been a professional educator since 1994 with experience in science education at the secondary school, community college and university level, including graduate-level instruction. Probable contractor for portions of the project.

Greg Pusch, H.S Science teacher and CREED Board, Orono, MN

Greg has taught physics and math in Minneapolis and Munich, Germany. Previously, Greg was an electrical engineer. Probable contractor for portions of the project.

B. Timeline Requirements

This project is expected to last 2 years. The first year will be for the development of the curriculum packages/trunks and interactive website materials. The second year will be for adjusting the teacher curriculum packages, conducting the interactive online training, arranging tours and observing the use of these materials.

C. Long-Term Strategy and Future Funding Needs.

Continue the Minnesota teacher training program so our workshop & online attendees and Energy Education Certificate graduates will involve their students in real world activities on renewable energy installations on the school district buildings, fundraising, energy assessment for the communities and science fair projects. **CREED will continue fundraising from energy utilities and energy industry partners to support this newer, cost effective program.**

2014 Detailed Project Budget

Project Title: Center for Renewable Energy and Demonstration – Energy Education Project

IV. TOTAL ENRTF REQUEST BUDGET [2] years

BUDGET ITEM (See "Guidance on Allowable Expenses", p. 13)	AMOUNT
Personnel: Rich Huelskamp, Executive Director \$15,000 (less than 5% of full time employment) and \$5,000 for expenses of the Steering Committee time, meeting expenses and steering committee travel expenses.	\$ 17,500
Contracts: This project is to budget (on average) \$20,000 for each contract that includes a specialist in energy, education, and website development as guided by the steering committee.	\$ 60,000
Equipment/Tools/Supplies: 4 renewable energy trunk based curriculum materials and equipment (\$2500 each)	\$ 10,000
Acquisition (Fee Title or Permanent Easements): <i>In this column, indicate proposed number of acres and name of organization or entity who will hold title.</i>	NA
Travel: Contractors will be responsible for their own travel expenses. CREED travel expenses will be in-kind contributions.	NA
Additional Budget Items: Expenses of two online training events (of at least 20 attendees of k-12 teachers) @ \$1,500 each, \$1000 for the marketing budget in the 2nd year, and to monitor and interact with online curriculum & trunk distribution users for the 2nd year.	\$61,000
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 148,500

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Other Non-State \$ Being Applied to Project During Project Period: CREED has been successful in obtaining teacher sponsoring funds from Minnesota electric utilities and energy related manufactures to support energy education to teachers. CREED will continue its annual request to sponsor our regular two 40 hour summer workshop program as well as encourage them to supply additional funds for this proposed online course	\$ 50,000	Pending
Other State \$ Being Applied to Project During Project Period:	NA	NA
In-kind Services During Project Period: Once this curriculum is developed and successfully implemented CREED will incorporate the post 2016 costs to continue in to it's 2017 regular budget planning. This would potentially be a .5 to 1.0 time staff employment opportunity for online	\$20,000	Pending
Remaining \$ from Current ENRTF Appropriation (if applicable):	NA	NA
Funding History:	\$ -	

CREED Organizational Description

Rich Huelskamp, Executive, has over 25 years of supporting, educating and assisting home, business, and energy industry professionals in energy efficiency and renewable energy technologies. He has his own off the grid home of which over 500 folks have toured to hear of the pluses and minus of the technologies used.

Creed Project

www.creedproject.org/index.html

CREED

Changing beliefs and behaviors through energy education.

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Center for
Renewable
Energy
Education and
Demonstration
PROJECT

CREED programs examine the relationship of energy, the environment and the economy in Minnesota, looking for ways to improve energy efficiency in a manner that harmonizes with the environment and produces a positive effect on the economy.

Education is the major focus of CREED with two main goals:

- I. To educate Minnesotans** about the impact that energy supply, conversion and use has on our environment and our economy. This is carried out by:
 - Offering Continued Education Graduate Credit Courses for teachers, leading to an Energy Education Certificate. This helps teachers strengthen their science, math and industrial arts curricula by integrating energy education into their lessons.
 - Writing and preparing curricula, courses and teacher training materials for use in:
 - Colleges
 - Schools
 - Businesses and
 - Communities.
- II. Establish education centers** to display and demonstrate:
 - Renewable working energy source
 - Energy efficiency
 - Energy conservation technology
 showing how these can have very positive environmental and economic outcomes in Minnesota.

Education in Action

Statewide Energy Education Strategy meeting.

CREED'S Major Sponsors

HAMLINE UNIVERSITY
 LAURENTIAN ENVIRONMENTAL CENTER
 ANDERSEN ENERGY
 ENERGISOURCE ENERGY COMPANY
 GREAT RIVER ENERGY
 MINNESOTA CORN GROWERS' ASSOCIATION
 MINNESOTA POWER

CREED

Changing beliefs and behaviors through energy education.

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CREED was conceived and established in 1997 to provide a service not available from any other source.

Since then, CREED has trained more Minnesota teachers than the national programs of NEED, NEF, and Energy Education combined!

Are you a teacher interested in attending one of our summer workshops on Energy Education? See our [workshops](#) page for the 2011 Summer Energy Education Workshop.

Want to know about our past year's workshop? During June and July of 2010, 24 Minnesota high school teachers attended our 2010 [workshops](#) and received graduate credits from Hamline University and Southwest Minnesota State University.

EERE (Energy Efficiency and Renewable Energy) SERIES

CREED has developed curricula and materials for teachers and is offering continuing education credits through an ongoing partnership with Hamline University's Center for Global Environmental Education in St. Paul.

The EERE Series is a 12-credit series of graduate-level courses that leads to an Energy Education Certificate.

Course work includes energy basics, solar energy, energy policy, energy entrepreneurship and new energy technologies.

The EERE Series is also offered in Northern Minnesota through

Discovering Science on the Range in the Field of Energy, a 12-credit, 2-year program.

For more information on class schedules and how to apply, please contact CREED.

DDRE 7: Evaluation Summary and Comments

A follow-up with teacher feedback from the 2011 Summer Course/Workshop held at the Laurentian Environmental Center.

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Minnesota Energy Education Centers

EARLY RIVER ENVIRONMENTAL LEARNING CENTER
 LAURENTIAN ENVIRONMENTAL CENTER
 HARTLEY NATURE CENTER
 WOLF RIDGE ENVIRONMENTAL LEARNING CENTER

Our Mission

CREED's goal is to help Minnesota School Districts and Environmental Learning Centers educate students on energy use and technologies that provide power and heat.

One of Creed's first projects was working with Three Rivers Regional Park to develop an energy education kiosk and utilize an E-85 park vehicle.

Schools and EE Centers own land and rooftops. The logos above represent a few of Minnesota's education facilities that have utilized these assets to completed energy efficiency and renewable energy projects that help educate students.

These projects are unique opportunities to help student leadership learn to live more "sustainable" as well as peak their interest in careers in energy.

Classroom Trunk Curriculum

partnership between MN State Energy Office, MN Power, Great River Energy and the Laurentian EE Center started the development of "curriculum in a trunk" to provide equipment and activities for schools.

To date two trunks have been completed: The Windy Classroom and The Sunny Classroom.

CREED plans to increase the number of "trunks" created and distributed. Additional topics include: energy conservation, biomass, ground source systems, transportation fuels and hydrogen.

Project Manager and Organization Description

Rich has over 25 years of supporting, educating and assisting home, business owners, and energy industry professionals in energy efficiency and renewable energy technologies. He has his own off the grid home of which over 500 folks have toured to hear of the pluses and minus of the technologies used. Rich also has developed courses for the University of Minnesota, Winona State University, and Riverland College similar to this proposed project.



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Changing beliefs and behaviors through energy education.

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Minnesota Energy Education Centers

Laurentian ENVIRONMENTAL CENTER
Learning in the Outdoors

WOLF RIDGE
Environmental Learning Center

HARTLEY NATURE CENTER

Our Mission

CREED's goal is to help Minnesota School Districts and Environmental Learning Centers educate students on energy use and technologies that provide power and heat.

One of Creed's first projects was working with Three Rivers Regional Park to develop an energy education book and utilize an E-65 park vehicle.

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