

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

LCCMR ID: 165-F3+4

Project Title: Sustainable Energy Practices: Residential Environmental Learning Centers (RELCs)Phase2

Category: F3+4. Renewable Energy

Total Project Budget: \$ 930,000

Proposed Project Time Period for the Funding Requested: 2 yrs, July 2011 - June 2013

Other Non-State Funds: \$ 0

Summary:

Six RELCs (Audubon, Deep Portage, Eagle Bluff, Laurentian, Long Lake, and Wolf Ridge) will demonstrate energy reduction technologies and disseminate energy education through renewable energy, energy efficiency and conservation demonstrations

Name: Jerome Deden

Sponsoring Organization: MN Coalition of Residential Learning Centers

Address: 28097 Goodview Dr
Lanesboro MN 55949

Telephone Number: 507-467-2437 x104

Email: director@eagle-bluff.org

Web Address: www.eagle-bluff.org

Location

Region: Statewide

Ecological Section: Western Superior Uplands (212K), Northern Superior Uplands (212L), No. Minnesota Drift and Lake Plains (212N), Paleozoic Plateau (222L)

County Name: Aitkin, Cass, Fillmore, Lake, Pine, St. Louis

City / Township: Statewide

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

2011-2012 MAIN PROPOSAL

PROJECT TITLE: SUSTAINABLE ENERGY PRACTICES, RESIDENTIAL ENVIRONMENTAL LEARNING CENTERS (RELCS)PHASE2

I. PROJECT STATEMENT

Collectively, six Residential Environmental Learning Centers; Audubon Center, Deep Portage, Eagle Bluff, Laurentian, Long Lake and Wolf Ridge, are focusing on becoming energy education sites disseminating energy information that addresses conservation, energy efficiency, and renewable energy opportunities.

Total immersion at a RELC is a high impact learning experience, especially at a young age when values are in the midst of development. We cannot expect change without the student's ability to grasp what change will look like and whether it is really achievable or not. How a student actually lives is the most likely way they will develop the behavior themselves. At a RELC, students live in a laboratory of learning where sustainable energy is overtly present and powers many of their daily living needs. While they see the biomass boilers, solar panels or wind turbines, the addition of focused instructional time with RELC staff assures that visiting students realize and understand the sustainable nature of the energy they use at the center. This immersion into a lifestyle anchors the learning experience in their mind and memory. The only way society will really change is through the behavioral change of one person at a time. With students who know and have lived, if even for just a week, with sustainable energy powering their needs, their future holds a different reality than their parents.

Working with Kirk Program Management, each RELC has a design team that has reviewed our original McKinstry proposals and made recommendations how best to proceed to improve each RELC's energy efficiency. Most are beginning with conservation and energy efficiency measures and then adding on-site renewable and other energy upgrades. Finally, monitoring systems will be put into place to monitor and document the improvements made. Collectively, we will reduce our carbon footprint by 80% with roughly half of that coming from on-site improvements and half from an off-site energy source—bio-energy, large wind, etc. McKinstry's predicted average energy impact for the 2010 LCCMR funds is 13% with a range from 5% to 21%. The energy impact of each funding source is listed in a table on the bottom of the budget page.

For example, one of our members, Deep Portage, has installed a wood burning system that has reduced their propane consumption by 75% this winter (09/10). In addition, it has created local jobs providing their biofuel verses shipping their fuel dollars out of the state or even out of the country. With their 2010 LCCMR and Federal Allocation funds, they intend to install solar thermal and photovoltaic systems for educational purposes, and complete envelope and mechanical improvements. The total carbon reduction for this work will be 38%.

As a group, we need the LCCMR's continued partnership to help meet state and federal energy targets and to achieve a complete project that truly demonstrates what can be accomplished in Minnesota's harsh climate. Along those lines, the RELCs have participated in the initial launch of Winona State University's "Energy Resource Advisor" (ERA) program and are looking forward to assisting the program to expand throughout the MNSCU system. The ERA program utilizes the RELCs for the experiential component with all participants completing a sixteen hour program at our centers.

The need for a second level of funding from the LCCMR is critical at this stage to maintain the momentum of the effort and to accomplish our educational goals. Funding received from the LCCMR in 2010 will be substantially complete by July,2011 except for the educational component for which no additional funds are being requested. 2011 LCCMR funds will enable the RELCs to complete this phase of our campaign.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Implementation of energy systems for education and demonstration purposes.

Budget: \$900,000

Outcome 1	Completion Date
1.1 <i>A design team, working with KPM, will make recommendations on the best improvements to be made based upon already completed projects at each RELC</i>	July 2013
1.2 <i>Work plans for each RELC will be submitted to the LCCMR</i>	
1.3 <i>Conservation, energy efficiency, and renewable energy recommendations will be completed per the attached budget by each RELC</i>	

Activity 2: Project Supervision **Budget:** \$30,000

Outcome 2	Completion Date
2.1. Kirk Program Management (KPM) who supervised the McKinstry Study will continue to assist the RELCs matching their energy needs with current technologies	July 2012
2.2 KMP will perform periodic on-site observations of work in progress and approve all center specific billings	July 2013

III. PROJECT STRATEGY

A. Project Team/Partners

The Audubon Center, Deep Portage, Eagle Bluff, Laurentian, Long Lake and Wolf Ridge serve most regions of Minnesota when you plot the locations of their participating 596 schools and 46 colleges. The centers' diverse locations provide a mix of challenging energy options. By educating about these different energy options and solutions, the centers are in a position to reach a wide variety of local and statewide audiences. Consulting Architect Ron Kirk worked with the six centers during the McKinstry Study and will provide professional oversight. We also consider our 596 schools, 46 colleges, and 84,817 people/year as partners as well as the communities in our six rural locations.

B. Timeline Requirements

We estimate that it will take up to six months to complete work with the design team and go out to bids. All construction work will be completed within the next sixteenth months—by the end of the project.

C. Long-Term Strategy

This request in combination with a pending Federal Allocation will complete the Phase One Capital Improvements goal of the campaign.

SUSTAINABLE ENERGY PRACTICES, RESIDENTIAL ENVIRONMENTAL LEARNING CENTERS (RELCS)PHASE2

IV. TOTAL TRUST FUND REQUEST BUDGET 1 YEAR

<u>BUDGET ITEM</u>	<u>Amount</u>	<u>%</u>
Contracts:		
Eagle Bluff, Lanesboro, MN, Energy Demonstration	\$400,000	42%
Eagle Bluff, Lanesboro, MN, Umbrella - Managing Architect, Kirk Program Mgt	\$30,000	3%
Audubon, Sandstone, MN, Energy Demonstration	\$100,000	11%
Deep Portage, Walker, MN, Energy Demonstration	\$100,000	11%
Laurentian, Britt, MN, Energy Demonstration	\$100,000	11%
Long Lake, Palisade, MN, Energy Demonstration	\$100,000	11%
Wolf Ridge, Finland, MN, Energy Demonstration	\$100,000	11%
TOTAL PROJECT REQUEST TO LCCMR	\$930,000	100%

V. OTHER FUNDS

SOURCE OF FUNDS

Other Non-State \$ Being Applied to Project During Period: 2011 Federal Allocation	\$1,800,000	Pending
Other State \$ Being Applied to Project During Period: EECBG, Long Lake/Aitkin Cty	\$100,000	Pending
In-kind Services During Project Period: RELC Staff Time	\$30,000	Secured
Remaining \$ from Current ENRTF Application:	\$1,500,000	Pending
Funding History: Bush and Butler Family Foundation Grants	\$236,000	Completed
Beim Foundation - Deep Energy Reduction Design Team, Eagle Bluff	\$15,000	Completed
Deep Portage Foundation - Biomass Heating System, Deep Portage	\$170,000	Completed
MN DEED - Biomass Heating System, Deep Portage	\$135,000	Completed
Fred & Catherine Anderson Foundation - Heating System Upgrade, Wolf Ridge	\$43,000	Completed
Wolf Ridge Internal - Heating System Upgrade	\$15,000	Completed
Funding History Total	\$614,000	

Original Goals by Center

Audubon	Deep Port	Eagle Bluff	Laurentian	Long Lake	Wolf Ridge
\$906,786	\$929,286	\$1,063,158	\$1,116,945	\$1,042,602	\$1,017,286

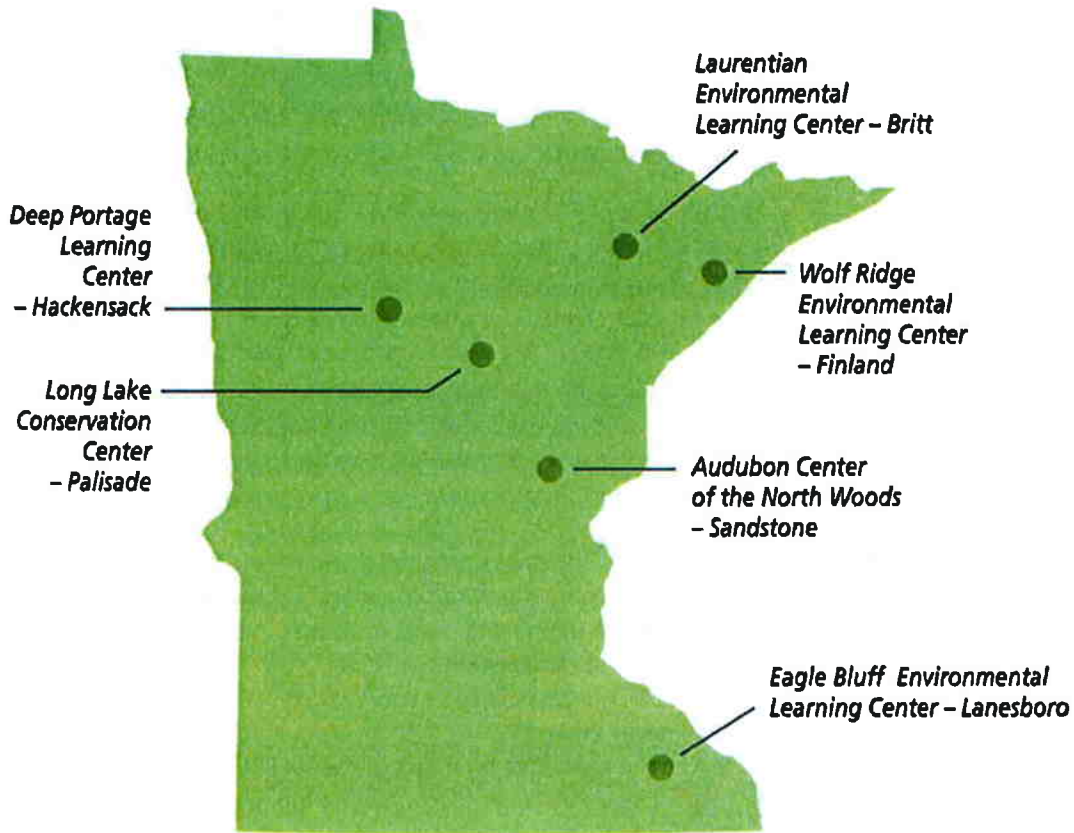
Estimated Reduction (Est Red) By Funding Source

Funding Source	All Centers	Est Red	Audubon	Est Red	Deep Port	Est Red	Eagle Bluff	Est Red	Laurentian	Est Red	Long Lake	Est Red	Wolf Ridge	Est Red	Est Red Range
Fed Allocation 2010	\$1,500,000	16%	\$300,000	18%	\$300,000	26%	\$0	0%	\$300,000	25%	\$300,000	12%	\$300,000	16%	0-26%
LCCMR 2010	\$1,395,000	13%	\$206,000	12%	\$212,000	18%	\$245,000	5%	\$258,000	21%	\$240,000	10%	\$234,000	12%	5-21%
Fed Allocation 2011	\$1,800,000	17%	\$300,000	18%	\$300,000	26%	\$300,000	6%	\$300,000	25%	\$300,000	12%	\$300,000	16%	6-26%
LCCMR 2011	\$900,000	7%	\$100,000	6%	\$100,000	9%	\$400,000	8%	\$100,000	8%	\$100,000	4%	\$100,000	5%	4-9%
	\$5,595,000	53%	\$906,000	54%	\$912,000	79%	\$945,000	19%	\$958,000	79%	\$940,000	38%	\$934,000	49%	

Note: Some centers have brought in limited outside \$ listed above, however McKinstry estimates are proving to be very low!

Large Wind 2nd Phase	\$4,000,000	47%	46%	21%	81%	21%	62%	51%
Total Energy Saving - On-Site and Phase 2			100%	100%	100%	100%	100%	100%

Residential Environmental Learning Center's (RELC's) Sustainable Energy Project



MN Coalition of Residential Environmental Learning Centers Data

	Audubon	Deep Portage	Eagle Bluff	Laurentian	Long Lake	Wolf Ridge	Totals
LCCMR Region	Northeast	Central	Southeast	Northeast	Northeast	Northeast	
City	Sandstone	Walker	Lanesboro	Britt	Palisade	Finland	
Schools served	80	99	130	39	58	190	596
Colleges served	24	1	4	7	1	9	46
K 12 students	3,858	6,767	13,200	2,619	5,348	12,145	43,983
College students	354				22	188	564
Adults	4,855	3,131	6,300	452	3,500	5,100	23,902
Outreach	5,274	8,002		1,061	1,430	1,200	40,305
*Total users	14,341	17,900	19,500	4,143	10,300	18,633	101,784

* May include general recreation users

Joe Deden has been selected the Project Manager by the Minnesota Coalition of Residential Environmental Learning Centers (MCRELCs). Mr. Deden is the Executive Director of Eagle Bluff Environmental Learning Center in Lanesboro, Minnesota. He has been with Eagle Bluff since it's beginning in 1978.

Mr. Deden has a master's degree in Human Resource Management from St Mary's College and a bachelor's degree in Forest Resources Development from the University of Minnesota. His resume is available upon request.

Eagle Bluff has been the fiscal agent for MCRELCs with grants from the Bush and Butler Foundations. Eagle Bluff has an annual operating budget of approximately \$1,750,000 and has a certified audit completed annually.

The coalition consists of the Audubon Center, Deep Portage, Eagle Bluff, Laurentian, Long Lake and Wolf Ridge. As educational and environmental non-profit organizations, the Centers have long been philosophical partners, proactively conserving resources and energy on each campus while teaching students to wisely use the land, water and woods of Minnesota.

Located across Minnesota, the Centers highlight the environmental diversity and beauty of Minnesota. Our individual perspectives, unique locales, teaching styles and management techniques combine to create a collective resource bank for the state of Minnesota: six unique examples of efficiency located throughout the state with applications specific to each region.

Project Leadership – RELC's Sustainable Energy Project

This sustainable energy campaign is led by the executive directors of the six RELCs. More information about each center is found on their respective websites or by contacting the person listed below.

Bryan Wood, Director

Audubon Center of the North Woods
54165 Audubon Dr, Sandstone, MN 55072
Phone: (320) 245-2648 Non-Profit Organization
Web: www.audubon-center.org
Federal Tax Id No: 23-7044164

Dale Yerger, Executive Director

Deep Portage Learning Center
2197 Nature Ctr Drive NW, Hackensack, MN 56452
Phone: (218) 682-2325 Public entity: Cass County
Non-Profit Organization
Web: www.deep-portage.org
Federal Tax Id No: 51-0164070

Joe Deden, Executive Director

Eagle Bluff Environmental Learning Center
28097 Goodview Drive, Lanesboro, MN 55949
Phone: (507) 467-2437 Non-Profit Organization
Web: www.eagle-bluff.org
Federal Tax ID No: 41-1431959

Nick Temali, Director

Laurentian Environmental Learning Center,
8950 Peppard Rd, Britt, MN 55710
Phone: (218) 749-1288 Public entity: Mounds
View Public Schools
Web: www.laurentiancenter.com
Federal Tax ID No: 41-6008084

Todd Roggenkamp, Executive Director

Long Lake Conservation Center
28952 438th Lane, Palisade, MN 55469
Phone: (218) 768-4653 Web: www.llcc.org
Public entity: Aitkin County
Non-Profit wing: Long Lake Conservation Foundation
Federal Tax Id No: 41-1409634

Kim Skyelander, Executive Director

Wolf Ridge Environmental Learning Center
6282 Cranberry Rd, Finland, MN 55603-9700
Phone: (218) 353-7414 Non-Profit Organization
Web: www.wolf-ridge.org
Federal Tax Id No: 41-1251705