

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

---

**LCCMR ID: 188-G**

**Project Title:** Conservation Corps Statewide Low-Income Solar Home Heating

---

**Category:** G. Environmental Education

---

**Total Project Budget:** \$ \$565,000

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

**Other Non-State Funds:** \$ 0

---

**Summary:**

Conservation Corps Minnesota and the Rural Renewable Energy Alliance will collaboratively install 60 Solar Heating systems on the homes of low-income families and train young corps members in green jobs.

---

**Name:** Tim Johnson-Grass

**Sponsoring Organization:** Conservation Corps - Minnesota

**Address:** 2715 Upper Afton Rd, Ste 100  
Maplewood MN 55119

**Telephone Number:** 651-209-9900

**Email:** cindy.green@conservationcorps.org

**Web Address:** www.conservationcorps.org

---

**Location**

**Region:** Statewide

**Ecological Section:** 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 _____%

# 2011-2012 MAIN PROPOSAL

**PROJECT TITLE: Conservation Corps Statewide Low-Income Solar Home Heating**

## I. PROJECT STATEMENT

Over two years we will: 1) train two Conservation Corps field specialists to assemble and install solar heat systems and to supervise future installations, and 2) train and supervise 40 young adults, age 18-25, in solar technology and installations. A total of 60 solar heat systems will be installed in low-income homes that have been weatherized, permanently reducing their energy heat costs by 15-25%. The goals of this project, a partnership of Conservation Corps Minnesota and the Rural Renewable Energy Alliance in Pine River, MN, are to: 1) reduce the fuel-cost burden on families eligible for heating assistance, 2) reduce greenhouse gas and heavy metals emissions, 3) prepare young people for green jobs, and 4) increase the solar-technology knowledge base.

Since 2001, RREAL has installed nearly 100 solar heating systems in north central Minnesota homes that Community Action Programs have verified as low-income and meeting weatherization standards. By engaging Conservation Corps crews in other regions, an additional 60 households will be fitted with solar space-heating systems that will permanently reduce their energy costs by 15-25%. Each system saves about 10-15 million BTUs annually, reducing CO2 emissions by an average 1,400 lbs. (depending on the fossil fuel being replaced).

Conservation Corps field specialists will be highly trained by RREAL in solar technologies, including hands-on experience installing systems in 28 homes. The specialists will then engage 40 corps members in installing 32 additional systems in eight Minnesota regions, including the Twin Cities, over 16 weeks. All systems will be inspected. A training manual and template will be designed for ongoing training through the Corps. Field specialists will lead educational and outreach activities in communities served to expand the public's knowledge of renewable energy systems and their economic and environmental value to Minnesota.

Renewable energy is a long-term solution for reducing energy costs and freeing up energy assistance dollars for more families. The State of Minnesota allocates about \$80 million annually to a Heating Assistance program for families that cannot afford their heating bills. Currently about 600,000 Minnesotans are eligible for Heating Assistance but only about 250,000 of those apply and only half of those actually receive heating assistance each year.

## II. DESCRIPTION OF PROJECT ACTIVITIES

**Activity 1:** Field specialist training & installations\_\_\_\_\_ **Budget:** \$221,000

Initial training includes classroom instruction for two field specialists on the technical aspects of solar heating. They will then assist with 28 system assemblies and installations for hands-on training in solar technologies, site requirements, construction, and installation supervision.

<b>Outcome</b>	<b>Completion Date</b>
1. Training manual completed for Conservation Corps members	<i>August 2011</i>
2. Classroom training for two field specialists	<i>September 2011</i>
3. Hands-on field specialist training with 28 installations	<i>July 2012</i>

**Activity 2:** Site selection in Minnesota communities & outreach \_\_\_\_ **Budget:** \$64,000

RREAL staff will work with Conservation Corps field specialists to analyze homes, qualify solar system candidates and teach members about solar system design and requirements. Community Action Programs and housing agencies will be engaged in the process. Outreach activities will be planned to educate the public about solar installations in their communities.

<b>Outcome</b>	<b>Completion Date</b>
1. Acquisition of home referrals for solar systems	<i>April 2012</i>
2. Site analyses, selection & system design for home solar systems	<i>May 2012</i>
3. Outreach activities planned in communities with solar installations	<i>June 2012</i>

**Activity 3:** Corps member installation & training; \_\_\_\_ **Budget:** \$268,000

RREAL will work with field specialists who will lead corps members in solar heating installations. The Conservation Corps will select and acquire tools, and field specialists will be prepared to lead installations independently across Minnesota. Community outreach and educational activities will continue through the installations.

<b>Outcome</b>	<b>Completion Date</b>
1. 2 field specialists ready to lead installations and train corps members	<i>August 2012</i>
2. 32 additional solar systems installed in 8 regions for a total of 60	<i>June 2013</i>
3. In each of 8 regions, 5 local corps members are trained and assist with installations, for a total of 40 corps members engaged	<i>June 2013</i>
4. Heating production is verified with data-loggers on selected homes	<i>June 2013</i>

### **III. PROJECT STRATEGY**

#### **A. Project Team/Partners**

The project will be managed by Tim Johnson-Grass, Operations Manager of Conservation Corps Minnesota young adult programs. Tim Ollhoff, RREAL Program Development Director, will lead field specialist training, site selection, and collaboration with Community Action Programs, housing agencies and other participants. Conservation Corps Minnesota and RREAL are requesting funds to offset project expenses. Field specialists and corps members will be enrolled after the project starts.

#### **B. Timeline Requirements**

RREAL and the Conservation Corps are requesting the full two-year funding cycle. The first year, we will hire and train field specialists, identify sites and plan community outreach activities. The second year we will train and supervise corps members in solar installations.

#### **C. Long-Term Strategy and Future Funding Needs**

The intent of this project is to build the Conservation Corps' capacity to continue solar heating installations for low-income families across Minnesota after the project ends. While this project is nicely contained and will produce positive outcomes regardless of ongoing funding, it is designed for replication. RREAL has been funding Solar Assistance for low-income families through grants and donations for a decade. Also, RREAL installs solar systems for other families at market rate, which generates revenue that can be allocated to Solar Assistance.

## 2011-2012 Detailed Project Budget

### IV. TOTAL TRUST FUND REQUEST BUDGET 2 years

BUDGET ITEM	AMOUNT
<b>Personnel:</b>	
RREAL Program Development Director (.125 FTE - 2 years) - Classroom instruction & materials generation	\$15,000
2 RREAL Installation crew leaders (.25 each - total of 1 FTE over 2 years)	\$60,000
CCM - Program Manager at .25 FTE	\$34,625
CCM - 2 Field Specialists @ 1.0 FTE	\$135,990
Americorps Field Crews (40 corps members total - 5 per week for 8 weeks)	\$29,600
<b>Contracts:</b>	
Electrical Contractors for final fan / thermostat electrical hookup	\$25,000
<b>Equipment/Tools/Supplies:</b>	
Two mobile carpentry tool kits for solar installations	\$5,600
Balance of system including ducting, fasteners, grills, caulking, tape, etc.	\$16,365
Mounting equipment	\$19,200
Thermal Differential Controllers	\$19,140
Fans	\$12,480
Collectors	\$138,000
<b>Acquisition (Fee Title or Permanent Easements):</b> <i>In this column, indicate proposed # of acres and name of organization or entity who will hold title.</i>	
<b>Travel:</b>	
RREAL (Mileage, hotel, materials distribution, meals)	\$15,000
Conservation Corps (truck lease, maintenance, fuel, lodging, meals)	\$39,000
<b>Additional Budget Items:</b> <i>In this column, list any additional budget items that do not fit above categories. List by item(s) or item type(s) and explain how number</i>	
<b>TOTAL ENVIRONMENT &amp; NATURAL RESOURCES TRUST FUND \$ REQUEST</b>	<b>\$ 565,000</b>

### V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
<b>Other Non-State \$ Being Applied to Project During Project Period:</b> <i>Indicate any additional non-state cash \$ to be spent on the project during the funding period. For each individual sum, list out the source of the funds, the amount, and indicate whether the funds are secured or pending approval.</i>	\$25,000	<i>Initiative Funds - Pending</i>
<b>Other State \$ Being Applied to Project During Project Period:</b> <i>Indicate any additional state cash \$ (e.g. bonding, other grants) to be spent on the project during the funding period. For each individual sum, list out the source of the funds, the amount, and indicate whether the funds are secured or pending approval.</i>	\$ -	<i>Indicate: Secured or Pending</i>
<b>In-kind Services During Project Period:</b> <i>Indicate any in-kind services to be provided during the funding period. List type of service(s) and estimated value. In-kind services listed must be specific to the project.</i>	\$ -	
<b>Remaining \$ from Current ENRTF Appropriation (if applicable):</b> <i>Specify \$ and year of appropriation from any current ENRTF appropriation for any directly related project of the project manager or organization that remains unspent or not yet</i>	\$ -	<i>Indicate: Unspent? Not Legally</i>
<b>Funding History:</b> <i>Indicate funding secured prior to July 1, 2011 for activities directly relevant to this specific funding request. State specific source(s) of funds.</i>	\$ -	

## **Project Manager Qualifications**

### **Conservation Corps Statewide Low-Income Solar Home Heating project**

The lead project manager is Tim Johnson-Grass, Operations Manager for Conservation Corps Minnesota. Tim has overseen all AmeriCorps young adult programs and staff since 2005 and manages training and field operations and budgets totaling more than \$5 million, including \$2.8 million in state and federal government grants. He currently oversees 250 corps members and staff that manage field crews in all regions of Minnesota, Home Energy Squads in the Twin Cities, and seasonal trails crews in the Superior and Chippewa National Forests.

A former Conservation Corps Minnesota crew member, Tim has been involved in conservation corps operations and management for more than 10 years, including five years with EarthCorps in Seattle. He holds a bachelor's degree in conservation and outdoor recreation from Northern Michigan University.

Tim's management responsibilities for the project include:

- Recruiting and training Conservation Corps field specialists for the two year program.
- Collaborating with RREAL on identifying regions and communities for solar heat installations.
- Managing planning and logistics for Corps member training and solar heat installations in eight Minnesota locations.
- Supervising accomplishment tracking and performance evaluations of field specialists and corps members.
- Supervising field specialists' community outreach and education activities in collaboration with RREAL and local Corps members.
- Establishing and evaluating the project's goals and accomplishments.

Conservation Corps Minnesota provides meaningful work for young people in managing natural resources, conserving energy, responding to disasters and leading volunteers. In addition to providing training in resource management, safety, job-readiness and technical skills, the Corps helps young people develop personal responsibility, a strong work ethic and environmental stewardship.

The Conservation Corps Statewide Low-Income Solar Home Heating project is a partnership between Conservation Corps Minnesota and the Rural Renewable Energy Alliance (RREAL). The project team includes RREAL Program Development Director Tim Ollhoff, MSW, whose responsibilities include:

- Designing and implementing a training curriculum and manuals.
- Providing classroom training and supervising hands-on instruction during all installations.
- Facilitating site selection including working with Community Action Programs and housing organizations, analyzing technical requirements of sites, and acquiring homeowner agreements.
- Supervising the manufacture of solar collectors and acquisition of other system components.

RREAL's mission is to make solar energy accessible to people of all income levels. RREAL has experience and a solid reputation for working with Community Action Programs and housing organizations to identify eligible low-income families and managing solar installations.

