

**Environment and Natural Resources Trust Fund  
2019 Request for Proposals (RFP)**

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**Project Title:**

**ENRTF ID: 186-E**

White Earth Nation Community Solar for Community Action

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**Category:** E. Air Quality, Climate Change, and Renewable Energy

**Sub-Category:**

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**Total Project Budget: \$** 572,702

**Proposed Project Time Period for the Funding Requested:** June 30, 2021 (2 yrs)

**Summary:**

Project goals include installation of a 200-kW White Earth community-owned solar garden reducing GHG emissions, increasing economic development through environmental education and solar workforce training, and improving energy resilience.

**Name:** Vicki ODay

**Sponsoring Organization:** Rural Renewable Energy Alliance

**Title:** \_\_\_\_\_

**Department:** \_\_\_\_\_

**Address:** 3963 8th St. SW

Backus MN 56435

**Telephone Number:** (952) 239-6198

**Email** vicki@rreal.org

**Web Address** www.rreal.org

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**Location**

**Region:** Northwest

**County Name:** Becker, Mahnomen

**City / Township:**

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**Alternate Text for Visual:**

The White Earth Nation Community Solar for Community Action solar array will be built in a Minnesota low-income community such as Pine Point or Naytahwaush.

_____ Funding Priorities	_____ Multiple Benefits	_____ Outcomes	_____ Knowledge Base
_____ Extent of Impact	_____ Innovation	_____ Scientific/Tech Basis	_____ Urgency
_____ Capacity	_____ Readiness	_____ Leverage	_____ TOTAL _____%
_____ If under \$200,000, waive presentation?			



**Environment and Natural Resources Trust Fund (ENRTF)**  
**2019 Main Proposal Template**

**PROJECT TITLE: White Earth Nation Community Solar for Community Action**

**PROJECT SUMMARY:** Project goals include installation of a 200-kW White Earth community-owned solar garden reducing GHG emissions, increasing economic development through environmental education and solar workforce training, and improving energy resilience.

**I. PROJECT STATEMENT**

This project will install a 200-kilowatt community solar garden in partnership with the White Earth Nation. The array will provide renewable energy to participating low-income White Earth Tribal members as a fiscally responsible approach to addressing energy assistance. This second 100% low-income community solar array in Minnesota builds on the success of the first LCCMR supported Leech Lake Band's project. The White Earth Nation community solar garden is projected to serve an additional 100 families and provide environmental education and technical workforce development for up to 60 students and 10 solar installation interns.

Solar energy promises to permanently address energy poverty with a renewable solution, and LCCMR support makes solar energy available to low-income families. RREAL has forged a nationally relevant, scalable model of energy assistance: Community Solar for Community Action (CS4CA). Rather than simply paying low-income families' energy bills annually, RREAL is proving that shared solar is a fiscally responsible and environmentally appropriate alternative to conventional, fossil-fuel based energy assistance. Utilizing Minnesota solar energy to meet this need is preserving valuable natural resources and adapting Minnesota's ecosystem for environmental and economic resilience and more responsible social service delivery models.

This project responds to the growing natural resource impacts of using imported fossil fuels to supply Minnesota's low-income energy needs. The solar energy system will increase the state's annual renewable energy production by an estimated 253,837 kilowatt hours, offsetting up to 206,685 pounds of coal equivalent, equal to sequestering the carbon of 223 acres of US forest in one year. The community solar asset will last at least 30 years and is projected to avoid GHG emissions of approximately 6,270.06 MTCO<sub>2</sub>e over its lifetime.

**II. PROJECT ACTIVITIES AND OUTCOMES**

**Activity 1: Solar Project Design, Management, and Reporting**

*Conduct a Solar Site Assessment, Engineering Analysis and Design, perform Project Management and Reporting*

**ENRTF BUDGET: \$66,670**

<b>Outcome</b>	<b>Completion Date</b>
<i>1. Create comprehensive assessment of preferred and potential White Earth solar site(s)</i>	<i>Summer 2019</i>
<i>2. Generate design for solar array</i>	<i>Winter 2019</i>
<i>3. Professional Structural &amp; Geo-technical Engineering</i>	<i>Winter 2020</i>
<i>4. Permitting &amp; Inspections</i>	<i>Summer 2021</i>
<i>5. Perform project management and project reporting</i>	<i>Summer 2021</i>

**Activity 2: Environmental Education and Solar Workforce Development**

*Engage White Earth Community College in Environmental Education, select and train solar installation interns.*

**ENRTF BUDGET: \$21,720**



**Environment and Natural Resources Trust Fund (ENRTF)**  
**2019 Main Proposal Template**

Outcome	Completion Date
1. Engage White Earth Community College Students with Environmental Education	Summer 2019
2. Select White Earth Community Members for Solar Technical Training	Spring 2020
3. Train White Earth Interns on Solar Installation	Spring 2021

**Activity 3: Construction and Commissioning of Community Solar Garden Array**

RREAL will construct and commission the community solar garden on White Earth lands.

**ENRTF BUDGET: \$484,312**

Outcome	Completion Date
1. Installation phases: Install footings, build array, electrical, inspection & commissioning	Summer 2021

**III. PROJECT PARTNERS:**

**A. Partners receiving ENRTF funding**

Name	Title	Affiliation	Role
RREAL Team	Project Managers, Electricians, Construction Manager and Crew, Operations Staff	Rural Renewable Energy Alliance (RREAL)	Project management, construction, commissioning, and operations facilitation.

**B. Partners NOT receiving ENRTF funding**

Name	Title	Affiliation	Role
Winona LaDuke	Director	Honor the Earth	Director
Pam Mahling	Special Projects Manager	Honor the Earth	Project Manager
Mike Triplett	Planner	White Earth Tribal Council	Economic Development Division
Darrell White	Executive Director	White Earth Nation	Training Employment Rights Ordinance
Lorna LaGue	Director of Development	White Earth Tribal Community College	Environmental Education

RREAL will work in partnership with the White Earth Nation and Utility Provider(s) to ensure the design of the community solar garden aligns with utility and energy assistance programming frameworks.

**IV. LONG-TERM- IMPLEMENTATION AND FUNDING:**

This project is being replicated in Vermont and Minnesota and is part of the nationwide Department of Energy Solar in Your Community Challenge to further scale low-income solar models across the U.S. As part of the challenge, RREAL will prove solar can be integrated into the energy assistance program as an environmentally friendly and fiscally responsible approach to making solar accessible to people of all income levels.

**V. TIME LINE REQUIREMENTS:**

The activities for this project proposal will begin in Summer 2019 and be completed by June 30, 2021. The timeline accounts for any delays attributed to unpredictable weather events and other factors.

## 2019 Proposal Budget Spreadsheet

Project Title: White Earth Nation Community Solar for Community Action

### IV. TOTAL ENRTF REQUEST BUDGET [2] years

BUDGET ITEM (See "Guidance on Allowable Expenses")	AMOUNT
<b>Personnel:</b> Licensed Electricians: \$11,700 (70% salary, 30% benefits); 18% FTE for Activity 3 Construction Manager: \$9,200 (70% salary, 30% benefits); 15% FTE for Activity 3 Project Managers: \$42,200 (70% salary, 30% benefits); 31% (operations) and 7% (technical) FTE for two years Activity 1 Installation Technicians: \$29,250 (70% salary, 30% benefits); 54% FTE for Activity 3 Site Assessment Technical Analyst \$5,470 (70% salary, 30% benefits); 6% FTE for Activity 1 Program support staff: \$5,000 (70% salary; 30% benefits); 7% FTE for two years Activity 1 White Earth Interns: \$7,880 Activity 3	\$ 112,700
<b>Professional/Technical/Service Contracts:</b> Professional Engineering Services: Structural and Geo-technical (\$10,000) Activity 1 Electrical Permits & Inspection (\$3,000) Activity 1 Environmental Education and Solar Technical Workforce Training (\$29,720) Activity 2	\$ 33,720
<b>Equipment/Tools/Supplies:</b> Equipment Rental (Heavy equipment handler, trailer for transport) (\$1,000) Activity 3	\$ 1,000
<b>Acquisition (Fee Title or Permanent Easements):</b>	\$ -
<b>Travel:</b> Travel to/from work site and related meetings with White Earth and utility partners, mileage and lodging (\$9,000) All Activities (respectively 1000, 1000, 7000)	\$ 9,000
<b>Additional Budget Items:</b> Activity 3 Capital Expenditures for Solar Equipment and Installation Footings installed (\$10,000) PV Modules (\$156,000) Racking (with shipping) (\$73,000) Inverters (with shipping) (\$55,000) Electrical Parts - Array, Underground, Monitoring, and Balance of System (with shipping) (\$33,000) Guarded Access (\$40,000) Indirect Costs (\$49,282)	\$ 416,282
<b>TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =</b>	<b>\$ 572,702</b>

### V. OTHER FUNDS (This entire section must be filled out. Do not delete rows. Indicate "N/A" if row is not applicable.)

SOURCE OF FUNDS	AMOUNT	Status
<b>Other Non-State \$ To Be Applied To Project During Project Period:</b>	\$ 50,000	Pending
<b>Other State \$ To Be Applied To Project During Project Period:</b>	\$ -	
<b>In-kind Services To Be Applied To Project During Project Period:</b>	\$ 5,000	Pending
<b>Past and Current ENRTF Appropriation:</b>	\$ 490,000	Completion date June 2018
<b>Other Funding History:</b>	\$ -	

# SITE MAP NAYTAHWAUSH



The White Earth Nation Community Solar for Community Action solar array will be built in a Minnesota low-income community such as Pine Point or Naytahwaush.

PROJECT FOR:  
PV INSTALLATION  
WHITE EARTH

REVISION HISTORY:

**RREAL**  
Rural Renewable Energy Alliance  
www.rreal.org 218-947-3779 info@rreal.org

DRAWING BY:  
BJA

DATE:  
14-MAR-18

SCALE:  
NTS

SHEET TITLE:  
SITE MAP

STATEMENT OF CONFIDENTIALITY:  
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PROJECT NUMBER:  
WHITEEAR06

SHEET NUMBER:



## Environment and Natural Resources Trust Fund (ENRTF)

### Project Managers Qualifications & Organization Description

**Project Title:** White Earth Nation Community Solar for Community Action

#### Project Manager Qualifications:



**BJ Allen** is Project Manager at the Rural Renewable Energy Alliance (RREAL) in Backus, Minnesota. She received her B.S. from the University of San Diego in Electrical Engineering before managing at RREAL, and has contributed to the team in product development, project management, manufacturing engineering, supply chain development, logistics, renewable energy systems design and installation, and implementation of business goals and priorities.

In addition to designing and managing PV projects around Minnesota and North Dakota as well as designing and managing Skip the Grid and other Special Projects at RREAL, BJ is currently a graduate student at the University of Minnesota Duluth, where she is studying Engineering Management. She enjoys traveling, woodworking and fishing when not occupied with homework. She has collaborated to publish key research papers, including one on a solar software analysis tool, TRNSYS, managed a \$4m+ budget, and raised millions of dollars for projects. BJ loves traveling around the world, including co-founding an international environmental awareness organization based in Japan. She currently resides in Northern Minnesota with her husband and ski-joring dog. She can be contacted at [bj@rreal.org](mailto:bj@rreal.org).

**Vicki O'Day** joined the Rural Renewable Energy Alliance as a volunteer and in 2018 became a full-time staff member working in Development. Vicki works with innovative leaders who think systematically for solving complex challenges. She has over twenty years of experience in financial services industry as an investor, registered representative, product developer, project manager, and organizational development. Vicki is an active community organizer for advancing the clean energy economy and transforming money consciousness to include social justice and environmental care. She has a BA in Business and a MA in Human Development. She loves playing with her granddaughter, hiking in Lebanon Hills, strolling along Maui beaches, and the SUN! Vicki can be reached at [vicki@rreal.org](mailto:vicki@rreal.org).

#### Organization Description:

The Rural Renewable Energy Alliance (RREAL) is a 501(c)3 nonprofit solar manufacturer and design-build firm with the mission of making solar energy accessible to communities of all income levels. Founded in 2000, RREAL has been pioneering the use of solar technologies to address low-income fuel poverty throughout the Midwest.

RREAL accomplishes its mission primarily through Solar Assistance, a program which provides residential solar energy systems to low-income households in partnership with community action agencies, the State of Minnesota, Housing and Redevelopment Authorities, Habitat for Humanity affiliates, affordable housing providers and tribal communities. In addition to Solar Assistance, RREAL is home to several other programming efforts including an Education & Community Outreach (ECO) program which provides hands-on educational and training opportunities for learners of all ages. RREAL also operates two social enterprises, Manufacturing & Distribution and REAL Solar Design-Build, in an effort to provide financial sustainability and self-sufficiency.