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

Project Title: ENRTF ID: 144-CH
4-H and Renewable Energy: Growing Young Leaders
Category: H. Proposals seeking \$200,000 or less in funding
Sub-Category: C. Environmental Education
Total Project Budget: \$ _199,950
Proposed Project Time Period for the Funding Requested: June 30, 2021 (2 yrs)
Summary:
Windustry will work with rural and urban staff, leadership and youth participants of Minnesota 4-H to grow opportunities to learn about wind, solar and other renewable energy resources.
Name: Lisa Daniels
Sponsoring Organization: Windustry
Title: Executive Director
Department:
Address: 201 Ridgewood Ave
Minneapolis MN 55403
Telephone Number: (612) 270-7161
Email lisadaniels@windustry.org
Web Address www.windustry.org
Location
Region: Statewide
County Name: Statewide

City / Township:

Alternate Text for Visual:

Renewable energy is growing each year, we need to grow our efforts to educate the youth about renewable energy. This visual includes a MN wind map and solar map as well as info about all of our project partners.

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?				



PROJECT TITLE: Minnesota 4-H and Renewable Energy: Growing Young Leaders

I. PROJECT STATEMENT

Windustry will work with rural and urban staff, leadership and youth participants of Minnesota 4-H to grow opportunities to learn about wind, solar and other renewable energy generation. By providing STEM learning activities in renewable energy workshops, tours, industry connections, information and guidance on projects students elect to produce, our goal is to build a deeper understanding of renewable energy workforce, economic and environmental opportunities for today's youth and tomorrow's leaders.

First, rural areas with the big wide open-spaces are where wind projects are thriving and large-scale solar projects are blooming. Renewable energy is bringing new jobs and new revenue to rural communities all over the state and the region. But there is a seeming contradiction. Why aren't these technologies being embraced? It's a fight to get renewable energy permitted and sited. It represents change and many in the community don't have a good idea of what to expect when they are proposed. Many towns and communities with good wind and solar resources are not actively initiating or welcoming this type of development. Workforce training for wind and solar in the rural community and technical colleges are short on students to fill to their classrooms even when there is a 95% job placement immediately upon certification or graduation and often before graduation. This project will begin to address this disconnect by adding new opportunities for youth to discuss and learn about renewable energy and the potential for growing renewable industries right in the rural places where they live.

Second, in order to reach the level of growth of renewable energy to attain the goals that industry and units of government are setting for 2030, 2040 and 2050, all school-age children, today, need to start hearing about renewable energy as a workforce opportunity. The clean energy future we are targeting demands a significant workforce expansion and diversification. The current majority of people in the energy and renewable energy fields are comprised of white and male populations with many of them getting close to retirement age.

By bringing strong connections to high quality access and solid information into the fabric of rural communities as well as diverse urban after-school programs, we hope to foster a greater understanding and interest in Renewable Energy and STEM career options as well as broader adoption of renewable technologies. Bringing renewable energy programming into MN 4-H, one of the the largest youth development organizations in Minnesota, is a compelling match for both the rural and urban areas.

II. PROJECT ACTIVITIES AND OUTCOMES

Activity 1: Planning and Scheduli	ing with MN 4-H Regions and	Clubs ENRTF BUDGET: \$ \$25,000
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Outcome	Completion Date
1. Outreach and introduction of this new program. Schedule fall and winter workshops – Year 1	July – Sept 2019
2 Work collaboratively to design custom workshops with 4-H leadership of the 5 regions and 2 urban	Sept 2019
counties – Year 1	
3. Incorporate feedback from year one and schedule workshops for year 2	July – Sept 2020

Activity 2: Conduct Outreach and Engage with Clubs across MN ENRTF BUDGET: \$119,950

Outcome	Completion Date
1. Host one custom educational workshop in each of the 5 MN 4-H regions MN 4-H staff and Club	Jan2020 (Yr 1)
Leaders and Club Youth are all engaged in activities. Year 1.	
2 Host 2 Field days with tours of wind farms, solar projects and methane digesters. Have diverse	Jan 2020 (Yr 1)
industry representatives share info at the sites.	
3 Establish Mentor and industry relationships with Club Leaders, Parent Volunteers, Club Teams and	Jan – June 2020
Individuals who elect to do a research or 4-H Challenges where they produce a project	Yr 1



4. Incorporate feedback from year one and host Workshops and Field Days for year 2	Jan 2021 (Yr 2)
5. Establish mentoring relationships and other support as needed by Club Leaders, Parent volunteers	Jan –June 2021
and Youth	Yr 2

Activity 3: Evaluation and Feedback ENRTF BUDGET: \$ \$55,000

Outcome	Completion Date
1. Interview, survey and meet with 4-H Staff, Club Leaders and Youth to assess learning and whole	July 2020 (Yr 1)
experience of workshops, field days and mentorships	
2 Draft report to highlight the areas of success and where the program needs refining	July 2020 (Yr 1)
3. Conduct interviews, surveys and meet with 4-H Staff, Club Leaders and Youth to assess Year 2 and	Jun 2021 (Yr 2)
draft progress report report	

III. PROJECT PARTNERS:

A. Partners receiving ENRTF funding

Name	Title	Affiliation	Role
Michael Arquin	Principle, Founder	KidWind/Recharge Labs	Wind & Solar instructor;
Keith Dent	Principle, Founder	Just B Solar	Solar Instructor;

B. Partners NOT receiving ENRTF funding

Name	Title	Affiliation	Role
Colleen Sanders	Central Region Program Leader	University of MN Extension, Ctr for Youth Development	Connector to 4-H, Staff & Clubs, rural MN; Activity 1,2,3
Jessica Pierson Russo	Director, Urban Youth Development Office	University of MN Extension	Connector to 4-H, Staff & Clubs, urban MN; Activity 1,2,3

IV. LONG-TERM- IMPLEMENTATION AND FUNDING:

The workforce presents a growing demand for youth with STEM skills and interests. MN 4-H is doing a great job with reaching MN youth where they are in rural areas as well as in diverse underserved urban neighborhoods. Renewable Energy fits into the existing programmatic research contests and "Challenges" being conducted by MN 4-H today. But there were no formal or informal connection to expertise, or training to show the way and lead the Club Leaders and students towards these industries that are growing swiftly in our state. We hope to begin to fill that gap and ignite students to gain knowledge, skills and attitudes that can serve them in becoming leaders in whatever fields they choose. Based on the two-years of experience with this project, we will expand our funding outreach to private foundations that focus on common goals of this work such as: outreach and awareness of renewable energy workforce careers, career and college readiness, meaningful community partnerships and out-of-school program development.

V. TIME LINE REQUIREMENTS:

The 2-year time line fits well with this project. The July start is great for getting organized and ready for the coming school year and this project will have its work run the course of 2 full school year cycles. The summer inbetween the 2 school-year cycles is timed well for program assessment and refinement.

2019 Proposal Budget Spreadsheet

Project Title: MN 4-H and Renewable Energy: Growing Young Leaders

BUDGET ITEM (See "Guidance on Allowable Expenses")	A	MOUNT
Personnel: Windustry Staff		
Project Manager (90% salary, 10% benefits) 45% FTE, For Year 1 & 2, (1 staff)	\$	102,960
Program Associate (90% salary, 10% benefits) 25% FTE, For Year 1 & 2, (1 staff)	\$	28,600
(Benefits are limited to FICA/Medicare, retirement, and health insurance)		
Professional/Technical/Service Contracts:		
KidWind/RECharge Labs: Collaborate on team to design renewable energy workshops for 4-H Educators,	\$	18,000
Program Coordinators, Club Leaders, Club members and Parent Volunteers. One in-person workshop in		
each of the 5 outstate regions and one in the metro plus 1 recorded webinar. Provide ongoing wind and		
solar mentoring for Club Leaders, Club Youth teams and individuals. (For each of 2 years)		
Just B Solar: Collaborate on team to design renewable energy workshops renewable energy workshops	\$	14,000
renewable energy workshops for 4-H Educators, Program Coordinators, Club Leaders, Club members and		
Parent Volunteers. One in-person workshop in each of the 5 outstate regions, one in the metro plus one		
recorded webinar. Provide ongoing solar mentoring for Club Leaders, Club Youth teams and individuals.		
(For each of 2 years)		
Equipment/Tools/Supplies:		
Hands-on workshop supplies for wind and solar activities and small demonstration equipment for 6	\$	7,500
workshops (6 workshops for each of 2 years)		
Healthy snacks and beverages for all workshops and meetings with 4-H Youth present(6 workshops, 2	\$	4,500
planning/evaluation meetings, 2 field days)(10 events for each of 2 years)		
Travel:		
Windustry staff travel to 5 outstate regional meetings, 2 field days (\$500 x 7 x 2 years)	\$	7,000
KidWind/Recharge Labs travel to 5 outstate regional meetings (\$500 x 5 x 2 years)	\$	5,000
Just B Solar travel to 5 outstate regional meetings (\$500 x 5 x 2 years)	\$	5,000
Additional Budget Items:		
2 Field Days -3 12-Passenger Van rentals for each Field Day (\$330 x 3 vans x 2 days x 2 years)	\$	3,990
Venue Usage Fees for 6 workshops in each of 2 years	\$	3,000
Webinar Hosting Service (For at least 1 webinar in each of 2 years)	\$	400
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	= \$	199,950

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	<u>Status</u>
Other Non-State \$ To Be Applied To Project During Project Period:		
Wind and Solar Industry Sponsors	\$ 20,000	Pending
Other State \$ To Be Applied To Project During Project Period:	N/A	
In-kind Services To Be Applied To Project During Project Period:		
4-H Staff - Educators and Program Coordinators in their regular course of work (200-300 hours)	**	Pending
4-H Club Leaders' Volunteer hours (400-500 hours)	**	Pending
4-H Club Parents' Volunteer hours (400-500 hours)	**	Pending
Renewable Industry Experts' Mentor hours (100-200 hours)	**	Pending
Renewable Energy Industry Site Tours (20-40 hours)	**	Pending
Windustry Overhead	\$ 5,400	Secured
Past and Current ENRTF Appropriation:	N/A	
Other Funding History:		
Small Pilot of this this project, Carolyn Foundation (2018-2019)	\$ 25,000	Pending
FootNote: ** Volunteer and mentor hours are key to this project and are sure to be a robust number due to		
the extensive history of 4-H and Windustry's large industry network. We have conservatively estimated the		
number of hours however, at this time, we are unsure how to quantify their value amount.		

MN 4-H AND RENEWABLE ENERGY: GROWING YOUNG LEADERS





The photos above and to the right are a renewable energy teaching initiative called Just Be Solar.





The **KidWind Project** is a similar movement. They are an international leader in wind energy education who have been working with educators to integrate wind energy into classrooms for over 14 years. Their extensive network of instructors have trained 10,000s of teachers on how to bring wind power to life in the classroom using hands-on activities, award winning tools, and a passion for the subject matter.

To get a better idea of what they do check out this video: https://vimeo.com/157659329 Page 5 of 6 ENRTF ID: 144-CH



Project Manager Qualification: Lisa Daniels

Lisa M. Daniels, Executive Director and founder of Windustry, has been providing wind energy education and technical assistance to farmers, ranchers, elected officials, rural utilities and community groups for more than 20 years. Ms. Daniels has led Windustry in numerous contracts with the U.S. Department of Agriculture and has worked for more than a decade as a partner with the National Renewable Energy Laboratory on WINDExchange and Wind Powering America initiatives.

Nationally, Ms. Daniels is a recognized leading voice for distributed renewable energy development. She served as a founding member of the American Wind Energy Association Community Wind Steering Committee and her direction of Windustry was recognized in 2004, 2005, and 2012 by the U.S. DOE Wind Program for demonstrating leadership and creativity in wind outreach work. She was also recognized in 2009 by Women of Wind Energy for foundational support during its fledgling years and as an Aspen Environmental Advisory Forum Scholar. Ms. Daniels was recently re-appointed to the Minneapolis Citizens Environmental Advisory Commission (2012-present) and serves on the Board of Directors for EnerChange, a no-cost service funded by the Conservation Improvement Program that helps non-profit organizations save money by saving energy.

Ms. Daniels has led Windustry in creating, producing, and overseeing staffing of the Eco Experience exhibit's annual Wind Energy Center at the Minnesota State Fair. Launched in 2006, this event showcases cutting edge displays, products and activities designed to encourage Minnesotans to live more sustainable lives with trained volunteers serving as renewable energy ambassadors, allowing Windustry to present wind energy as an environmental solution to more than 350,000 visitors over the Fair's 12 days.

Organization Description: Windustry

Initially launched as a project of the Sustainable Resources Center with ENRTF funding (1995-11b and 1995-12d) and then fiscally hosted under the Institute on Agriculture and Trade Policy, Windustry became an independent 501(c)(3) non-profit organization in 2003. Windustry's mission is to promote sustainable energy solutions and empower communities to develop and own clean energy assets. As an independent voice acting in support of communities, Windustry has developed strong partnerships and works through education, outreach, and advocacy to advance broad community ownership of renewable energy. Windustry's primary motivation recognizes energy as the sector of the economy responsible for the most greenhouse gas emissions, and coal as the source that produces the largest share of our electricity and the bulk of greenhouse gases. Community-based renewables and energy efficiency are the most rapidly deployable forms of sustainable energy, requiring minimal upgrades to the transmission grid. Local energy resources also provide the highest local economic benefits, with more dollars saved and made kept in the local community.