CERTs 2018 Seed Grant Recipients



Central Region

Rural Renewable Energy Alliance (RREAL): Making Solar Accessible for Habitat for Humanity Households

Backus, MN - Nearly half of American adults experience housing insecurity at some point in their lives due to unpredictable rent prices, moving, and lack of access to affordable housing. Rural Renewable Energy Alliance is working with Central Minnesota Habitat for Humanity to make solar energy

more accessible and reduce electric bills for a new Habitat homeowner. Every effort made to help reduce energy costs for low-income families is key to the affordability of owning a home. (\$4,000)

Leech Lake Band of Ojibwe: Leech Lake Solar Master Plan

Cass Lake, MN - Leech Lake Band of Ojibwe will develop a Solar Energy Master Plan for all primary Tribal facilities. This Master Plan effort will, for all subject tribal government facilities: (1) collect annual energy use data, calculate EUI and performance evaluation against ENERGY STAR/B3 peers; (2) evaluate the viability of solar PV; (3) develop a detailed solar PV concept design, calculate annual energy generation possible, and develop preliminary project budgets; (4) develop a Solar PV Master Plan report summarizing all findings, identifying Tribal economic development potential of solar pv development, and propose a solar implementation plan for Tribally owned facilities. (\$4,600)

Discovery Woods School, ISD 4198: LED Lighting for Library

Brainerd, MN - Our school is a public charter located in an historic school building in our city. The school was built in 1940 and has been through multiple renovations but has not been upgraded in many years. Our library space has old fluorescent tube lighting that is irreplaceable and many tubes are burned out. We would like to replace the lighting with new energy efficient LED lights to provide a more welcoming and space as well as educate families about the benefits of LED lighting. (\$3,000)

Crosslake Lutheran Church: Solar Stewardship: Rooftop Solar PV Install

Crosslake, MN - Solar power, our first source of light and warmth, is the next essential step for Crosslake Lutheran Church (CLC) toward responsible environmental and fiduciary stewardship. Our intent is to conserve our natural environment and be financially responsible serving our church and community. Our solar panel system will have optimal southern roof exposure and will be visible from Route 66, the most highly trafficked thoroughfare in Crosslake. Eighty-seven (87) solar panels will produce 31.32kW to save an estimated \$4,223 yearly. Estimated payback is seventeen years. (\$8,400)

Metro Region

Midwest Renewable Energy Association (MREA): **Solarize Twin Cities**

Minneapolis, MN - For the first time, Midwest Renewable Energy Association (MREA) brings its award winning solar group purchasing program to the Twin Cities. MREA will offer 15-20 Solar Power Hours (free, one-hour informational sessions) to the public at various community locations around Minneapolis and Saint Paul, MN. These sessions will be coupled with a group buy incentive, allowing homeowners to purchase solar arrays from a vetted installer, receiving prices reflective of the economy of scale the group buy delivers. Through energy efficiency and renewable energy education, MREA will mobilize homeowners to take positive action toward solving climate change. (\$2,500)

Journey Home MN: Veterans Village at Station 1

North Oaks, MN - Journey Home MN builds and renovates homes for military veterans and families in need. This project will create four houses for veterans impacted by disabilities. This will be one of the first projects in MN that creates affordable housing that is also energy neutral. We do this intentionally because there is far too often a big gap between affordable housing and energy neutral / positive housing. One of our primary goals is to show how this type of project can be created by virtually any affordable housing organization. (\$5,000)

Connexus Energy: Municipal Fleet Vehicle Analysis for EV Adoption

Ramsey, MN - The intent of the Municipal Fleet Vehicle Analysis for Electric Vehicle (EV) Adoption is to assist municipalities in analyzing their fleet using a proven process. The process uses vehicle data collection, duty cycle analysis, and a final report showing total cost of ownership for electric vehicles to design a plan to effectively integrate EVs into their vehicle fleets to meet sustainability goals. Connexus Energy will be working with 3-4 municipalities to analyze their vehicle fleets for EV adoption. The three step process provides vehicle specific, hard data collection of daily vehicle duty cycle, dwell time, and EV drive-train modeling for selected electric vehicles to determine suitability of EVs in their fleets. (\$5,000)

City of Maplewood: Renewable Energy for Energize Maplewood!

Maplewood, MN - Re-Energize Maplewood! is the first step toward Maplewood's Comprehensive Plan renewable energy goals and builds on the City's Energize Maplewood! Energy action plan. The project will work with residents and businesses to follow up with past energy efficiency participants and provide solar information and resources to continue supporting the community's efforts toward clean energy. As part of that effort the top 40 solar sites for businesses will be identified. Those businesses will then be provided with site specific Low-income manufactured home outreach and work will be done in partnership with CEE. (\$7,500)





Northeast Region

City of Mountain Iron: Renewable Mountain Iron Solar Assessment

Mountain Iron, MN - Mountain Iron looks to deepen the community's solar energy commitment by identifying top opportunities and developing project concepts for their implementation. This effort will: (1) identify community-wide rooftop solar potential; (2) evaluate the viability of solar PV and develop a detailed solar PV concept, calculate annual energy genera

PV and develop a detailed solar PV concept, calculate annual energy generation, and develop project budgets at the top 20 solar sites; (3) conduct a site feasibility, selection, and concept design effort for a community solar project; and (4) develop a report summarizing all findings, identifying local economic development potential of solar PV development, and include a proposed solar implementation plan for City owned facilities. (\$4,750)

North Woods School: Solar Powered Trail Lighting

Cook, MN - Our goal is to build a trail system and light the Field-North Woods School Forest trails with solar lights. This will allow for night time skiing and trail hiking. Our project has been in the works for four years. The school forest started out with an agreement between Field Township and ISD 2142. Our project will be shared with others through the usage of the trail system, through education and a brochure that describes the FNWSF system. (\$2,400)

Ecolibrium3: Healthy Homes – Healthy Neighbors Initiative

Duluth, MN - The Healthy Homes - Healthy Neighbors Initiative is directed at building capacity in northeastern Minnesota to address housing stock conditions and resident behaviors that negatively impact the efficiency of buildings and health outcomes of residents. The holistic approach will convene cross-sector partners, jointly develop aligned energy, housing, and health assessments of properties and resident concerns, leverage funds from multiple sources to target appropriate interventions, and serve as a model for programs across Minnesota. (\$5,000)

Ecolibrium3: AmeriCorps Legacy Building Solar Project

Duluth, MN - The AmeriCorps Legacy Building seeks to rewrite the narrative of unaffordable housing for community service volunteers. The inaugural cohort of Resilience Corps VISTAs will redevelop a condemned property in Duluth's lowest income neighborhood into a sustainable single-family cooperative home to provide a permanent and affordable housing option for AmeriCorps members. To demonstrate adaptive reuse of structures, a deep energy retrofit will be completed with a 3 kW solar PV system. This project will be undertaken to create a model which can be replicated as a prospective solution for other communities facing similar housing and energy challenges. (\$2,500)





Bois Forte Band of Chippewa: Bois Forte Weatherization Project

Nett Lake, MN - The Bois Forte Housing Department will work with a contracted technician who will install weather stripping, caulking, and window coverings in up to 50 homes of the elderly and disabled on the Bois Forte reservation. The supplies for the weatherization will be provided by the Bois Forte Tribal Government. The project will be shared widely and the Bois Forte Housing Department will provide educational tools on weatherization throughout the duration of this grant. (\$4,350)

Salem Lutheran Church: LED Lighting Conversion

Mahtowa, MN - Salem Lutheran Church, along with the neighboring community center it operates, Salem's Mahtowa Hall, are lit by approximately 202 incandescent and fluorescent bulbs. The church is seeking to reduce its carbon footprint and reduce energy use and costs while inspiring other churches, organizations, and homeowners to do the same. (\$1,000)

Northwest Region

City of Warren: Benchmarking for Public Buildings

Warren, MN - Because the City of Warren owns and operates its own electric utility rather than using an outside utility provider, the city has unrestricted access to monitor its energy usage data to assist with its benchmarking efforts to track building energy usage. As a result, this makes the City of Warren's Public Municipalities a viable candidate for either interval data

benchmarking using one of two vendors or to have a custom program application be created to best track energy usage and meet benchmarking expectations. (\$3,500)

BI-County Community Action, Inc: Low-Income Weatherization Project

Bemidji, MN - This project focuses on weatherization-related items for low-income families' homes. Measures include: attic and wall insulation, air sealing, mechanical replacements, furnace clean and tunes, rim-joist insulation, crawlspace insulation, programmable t-stat, client education, pipe insulation and safety items like CO alarms, exhaust fans and dryer vents. (\$2,000)

City of Barnesville Municipal Utility: Barnesville Community Solar Garden

Barnesville, MN - Barnesville Municipal Utilities plans to install a 80 panel solar array near our Barnesville Community Garden during 2018. The Barnesville Community Solar Garden will provide a simple, convenient and cost effective way for our customers to participate in solar generation. Customers will be given the opportunity to purchase the output from one or more panels for a 20 year period. While the energy created will not directly power the customer's home, on an annual basis the customers will receive a credit on their electric bill based on the output of the system. (\$5,000)







Bemidji Community Food Shelf: Food Shelf Lighting Upgrade

Bemidji, MN - The Bemidji Community Food Shelf (BCFS) is a faith-based organization that distributes food to over 3,000 qualifying families in Beltrami County and the Bemidji School District. Its location in the Bemidji Industrial Park is comprised of an office area, a large shopping area, and a warehouse, which together make up 12,480 square feet. BCFS wants to replace its existing florescent lighting with LEDs and add motion sensors in the bathrooms and warehouse. Lighting in coolers and freezers will also be upgraded. (\$500)

Moorhead Public Service:

Downtown Community Geothermal System Pilot Project

Moorhead, MN - Moorhead Public Services (MPS) will take the next innovative step in renewable energy by piloting a Community (or District) Geothermal System (CGS). This project will pilot the downtown CGS and demonstrate the benefits that can be achieved when a public utility delivers geothermal energy to its customers. Geothermal utilizes the heat stored in the earth to provide efficient heating and cooling year-round. This project will help the Moorhead reach important environmental goals, as well as provide an efficient, cost effective, comfortable, and economically stable heating and cooling service to customers. (\$3,000)

Northwest Community Action: Office Building LED Lighting Project

Badger, MN - Replacing our T-12 lighting fixtures and incandescent bulbs at Northwest Community Action (NWCA) office building with LED bulbs and fixtures will cut our energy bills an estimated \$2,772 a year. We'll share the results of our project with local media outlets and talk about the project with people who come into our office for help. NWCA helped over 1,200 families with fuel assistance last year, and we have a lot of other services that clients come into our office for, too. We'll also develop a handout to show the savings of using LED lighting. (\$3,000)

Harmony Natural Food Cooperative: Food Coop Lighting Upgrade

Bemidji, MN - Harmony Natural Food Coop will upgrade existing lighting with energy efficient LEDs. Existing T-8 fluorescent and compact fluorescent lamps (CFL) nearing the end of their lifespan will be replaced (rewired/re-ballasted by an electrician) with 351 new LED lamps. This project is part of a comprehensive approach to Harmony's commitment to reducing our energy use and our greenhouse gas footprint through building envelope and energy efficiency improvements, renewable energy, and community/business education and outreach. This project will reduce annual electricity consumption by approximately 24,581 kWh (18.3 metric tons of CO2). (\$3,000)

Southeast Region

City of Faribault: Promoting Solar PV on City and School Facilities

Faribault, MN - Faribault recently adopted an Energy Action Plan that identifies cost-effective strategies to conserve energy and use clean energy. An objective of the Plan is to use prominent buildings as models for clean and efficient energy. This project involves development of an action-oriented

Solar PV Master Plan that will provide the impetus to implement solar PV at key City and school sites in Faribault. It will also serve as a model that will inspire similar actions in other public and private facilities throughout the community. (\$3,500)

City of Albert Lea: Solar Ready Albert Lea

Albert Lea, MN - The City of Albert Lea seeks to understand the feasibility of solar energy for all primary government buildings located within the City. This effort will, for all subject City and County facilities: (1) collect annual energy use data, calculate EUI and performance evaluation against ENERGY STAR/ B3 peers; (2) evaluate the viability of solar PV; (3) develop a detailed solar PV concept design, calculate annual energy generation possible, and develop preliminary project budgets; (4) develop a project report summarizing all findings, identifying local economic development potential of solar PV development, and include a proposed solar implementation plan for City owned facilities. (\$3,500)

Benike Construction: Creating an Energy Efficient Castle Community

Rochester, MN - A group of private investors is purchasing the former armory building from the City of Rochester and planning an adaptive reuse of this historic structure. The "Castle Community" (as the development is named) will incorporate a restaurant, bookstore, art gallery, art studios, and public commons space into the renovation project. The scope of the renovation will be limited to an estimated \$1,200,000, however the owners are interested in making sound energy-conscious design decisions. The Seed Grant will help defray the expense of hiring either a third party energy modeler or expanding the scope of services of the mechanical designer to assist with energy efficiency decisions and recommendations. (\$1,500)

Minnesota Interfaith Power & Light: Rochester Faith & Solar Coalition

Rochester, MN - MNIPL has expanded its presence in recent years by building regional networks in the northern (Duluth) and southeastern (St. Peter) parts of Minnesota. These networks have focused on accelerating adoption of solar power, especially within faith communities. We are seeking a grant to support a bid to build a similar coalition in Rochester. We began laying groundwork for the Rochester Faith & Solar Coalition in fall 2017 with a kickoff that attracted almost 30 participants from several groups. We will continue raising awareness and assisting faith organizations in navigating the decision-making process for rooftop solar or communitybased solar in 2018. (\$3,500)







City of Red Wing: Demonstration Electric Vehicle Charging Station

Red Wing, MN - The City of Red Wing will install a demonstration twin plug EV charging station within a public parking ramp. This will serve 4 parking spaces and will fill a gap in the EV charging infrastructure map along the southeast corridor. (\$2,000)

City of Whalan: New LED Street Lights

Whalan, MN - Our small city is very unique to southeast Minnesota. It's defined not only by the individuals who call it home but also by the visitors who enjoy a stroll through our city by use of the Minnesota DNR bike trail system, city events, or staying for the weekend at one of our local bed and breakfasts. We only have 29 street lights in the entire city, but they are outdated, consume a lot of energy, and are expensive to keep up every year. This project will allow us to replace them with energy-efficient LEDs. (\$1,000)

City of La Crescent: Public Facilities LED Lighting Upgrade

La Crescent, MN - The City of La Crescent Green Team/Green Step Program plans to upgrade 22 inefficient outdated exterior light fixtures to new LED lighting technology; the LED lighting improvements will be made to local parks, streets, and the water plant. The Green Team will also conduct educational activities that demonstrate how LED technology/lighting replacement can reduce energy consumption and maintenance costs. (\$1,500)

Minnesota State College Southeast: Winona Area Weatherization Installers Pool

Winona, MN - Minnesota State College Southeast will gain the skills necessary to incorporate Building Performance Institute (BPI) Air Leakage Control (ALC) Installer training into its curriculum; local contractors will also receive ALC training through the grant. Currently there are no BPI ALC certified contractors in the Winona area, which may stop residents from utilizing some utility rebates. (\$3,500)

Southwest Region

City of Windom: Solar-Powered Welcome Signs

Windom, MN - Windom has two solar powered welcome signs installed in 2012 that have experienced a number of reliability issues and are currently not in operation. A solar representative has identified the various reliability issues with costs to correct; the CERT Seed Grant will enable the City to correct the reliability issues, while at the same time provide a case study for others learn what to avoid in design and updating. (\$3,000)

United Community Action Partnership: In Home Education Course and Energy Saving Applications

Marshall, MN - Through this project we will provide one-on-one education with 20 or more homes to improve their understanding of how they can lower their energy bills though conservation. We'll survey the client's knowledge in energy savings and install energy saving devices, such as LED bulbs, pipe wrap, low flow shower heads, and weather stripping. We'll also assess their eligibility for conservation programs that UCAP administers and work with the utility providers to replace worn-out appliances with ENERGY STAR appliances. (\$5,000)

Federated Rural Electric: LED Lighting Upgrade

Jackson, MN - Federated's Jackson headquarters plans to upgrade to LED lighting inside and out as follows: 225 T8 tube lights in 26 rooms, halls and meeting rooms; 20 wall packs and lantern lights / high pressure sodium; 15 mercury vapor lights in warehouse to LED; and upgrade 23 mogul-base CFL's in the cold storage warehouse. (\$3,200)

Southwest Minnesota Housing Partnership (SWMHP): Residential Blower Door Testing

Slayton, MN - SWMHP recently began to offer blower door testing as a line of business when new building code regulations went into effect that required testing on all new single family homes. This data has provided useful information to identify potential issues with the energy efficiency of a home and to understand how our homes measure up when we are using green standards. Through this grant we will conduct pre and post blower door testing on a minimum of 15 single family homes or small rental developments. (\$5,000)

Worthington HRA: Atrium Hi-Rise Parking Lot Lighting

Worthington, MN - The existing parking lot lights will be replaced by LED lighting and additional new parking lot light will be added, also LED. The replacement lighting will decrease electrical usage and with the added LED lighting, the parking lot will be well lit for tenant and visitor safety and will consume less electricity than existing lighting. (\$3,800)





RESOURCE TER

West Central Region

City of Brownton: Brownton Center Light Replacements

Brownton, MN - The Brownton Community Center was built in 1993 and the lighting is original. Ballasts are now beginning to burn out, so it's time to upgrade. This grant will allow is to replace all the fixtures and lights in the Community Center, which will ultimately be more energy efficient. Many people use the building every year and it will be a great opportunity for them to learn about the benefits of LED lighting, too. (\$1,400)



City of North Mankato: North Mankato Police Station Energy Savings

North Mankato, MN - The North Mankato Police Station is upgrading its existing lighting, 75 total fixtures, to energy-efficient LEDs. This project includes the replacement of three exterior metal halides and 72 interior T8 fluorescents. This building experiences high volumes of traffic from community members and includes a community room where meetings and community events are held often. By making the switch to more energy efficient lighting we will see a reduction in annual costs by over \$2,000 and energy usage by over 18,000 kWh. (\$1,000)

Upper Sioux Community: Round House Energy Efficiency Project

Granite Falls, MN - The Upper Sioux Community has one remaining public building that does not have energy efficient lighting installed. This project will include a lighting upgrade that will save over \$500 in costs per year. This project will launch a community-wide education component on energy efficiency through creative outreach, engaging both youth and adults and tapping the cultural resources and values of the Dakota people. (\$3,100)

UMN West Central Research and Outreach Center: Financial Modeling of Solar PV and Battery Storage Systems for Dairy and Swine Farms

Morris, MN - The capital cost of solar PV has significantly declined in the last decade. Livestock farms are prime candidates for installing solar due to high energy consumption on-site, a load matched well with the generation curve, and the availability of roof space and land required. However, due to varying policies, the financial viability of solar PV in Minnesota is highly dependent on which utility serves the farm. This project seeks to address the specific financial viability of solar PV on West Central Minnesota swine and dairy farms by modeling the impact of rates, incentives, and the addition of storage. (\$5,000)

Morris Area Schools Robotics (a.k.a. Plaid Pillagers Robotics Team): Solar PV on Morris High School for the Robotics Team

Morris, MN - A 7 to 8 kW solar PV system will be installed on the roof of the Morris High School. Electricity savings at the school will be used to provide ongoing funding for the robotics team and performance data will be made available to science teachers for renewable energy labs. High school students will hold public solar informational meetings with help from the Morris Model team. (\$6,500)