



Environment and Natural Resources Trust Fund

2027 Request for Proposal

General Information

Proposal ID: 2027-461

Proposal Title: Community Resilience Collaborative Energy Pilot Projects

Project Manager Information

Name: Naomi Carlson

Organization: Headwaters Regional Development Commission

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Project Basic Information

Project Summary: Two community energy pilots expand renewable power, resilience, housing, and workforce training while the Regional Resilience Collaborative strengthens regional capacity for additional climate-resilience pilot projects.

ENRTF Funds Requested: \$3,823,000

Proposed Project Completion: November 30, 2030

LCCMR Funding Category: Energy (E)

Project Location

What is the best scale for describing where your work will take place?

Region(s): NE, NW,

What is the best scale to describe the area impacted by your work?

Region(s): NE, NW,

When will the work impact occur?

During the Project and In the Future

Narrative

Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.

Northern Minnesota communities are experiencing intensifying climate-driven disruptions—extreme storms, wildfire smoke, grid instability, rising energy costs, and ongoing housing shortages—that disproportionately impact rural and Tribal communities. Schools, shelters, and community facilities often lack renewable-energy systems or backup power, limiting their ability to maintain food service, communications, and emergency operations during outages. At the same time, the region faces a shortage of workers trained in renewable-energy installation, energy-efficient construction, and climate-resilient housing design, slowing progress toward statewide clean-energy and natural-resource goals.

In 2026, the Northwoods and Waters Community Resilience Collaborative received ENRTF funding to develop a Regional Resilience Plan. This application enhances and builds upon the Collaborative’s proposed demonstration pilots—intended to test renewable-energy, housing, and resilience solutions—that were removed from the award due to budget cuts. These pilots are essential for translating planning into practice, building local capacity, and validating approaches that protect Minnesota’s air, water, land, and wildlife.

This proposal fills that gap by advancing two high-impact pilots at Red Lake Nation and Leech Lake Tribal College. These projects address urgent regional needs: resilient renewable-energy systems for essential facilities and workforce-driven, energy-efficient housing solutions.

What is your proposed solution to the problem or opportunity discussed above? Introduce us to the work you are seeking funding to do. You will be asked to expand on this proposed solution in Activities & Milestones.

This project advances two community-energy demonstration pilots that activate and extend the Regional Resilience Collaborative’s planning work. These pilots support the prior ENRTF award by providing real-world energy demonstrations, workforce development, and community capacity building.

Pilot 1: Red Lake Schools Solar + Electric Bus Resilience System

This pilot will test how the district’s solar array charges electric school buses and how buses can operate as mobile battery storage during outages. The system reduces diesel use, lowers emissions, and increases emergency preparedness for critical school functions. Storytelling will document community benefits and support replication across Tribal and rural districts.

Pilot 2:LLTC Tiny-Home Renewable-Energy Workforce Pilot

LLTC will design and construct twelve to fourteen high-efficiency tiny homes over three years, incorporating active and passive solar technologies. Year 1 includes land preparation, engineering, and curriculum work; Years 2 and 3 complete home construction and sales. As part of this pilot, LLTC will mentor White Earth Tribal & Community College, providing hands-on learning, curriculum sharing, and Tribal-to-Tribal support to help WETCC launch its construction program. Story capture will highlight student learning, Tribal leadership, and housing outcomes.

A Pilot Projects Working Group will evaluate results, share lessons regionwide.

What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state’s natural resources?

This project will reduce fossil-fuel use, expand renewable-energy capacity, strengthen the regional workforce, and enhance community resilience. Outcomes include lower diesel and electricity use, increased renewable-energy systems at Red Lake and LLTC, twenty energy-efficient tiny homes, and hands-on training in renewable-energy and resilient construction. The Collaborative will capture and share community stories, coordinate regional resources, and integrate

findings into the Regional Resilience Plan to catalyze additional climate and natural-resource projects across northern Minnesota.

Activities and Milestones

Activity 1: Regional Coordination and Pilot Projects Working Group Leadership

Activity Budget: \$1,035,500

Activity Description:

This activity advances implementation of the Regional Resilience Plan by establishing a long-term, coordinated structure that supports planning and pilot development across northern Minnesota. A dedicated Regional Coordination and Pilot Projects Working Group Lead will ensure progress across all subawardees, guide implementation of the Red Lake and Leech Lake pilots, and maintain consistent communication among Tribal Nations, counties, colleges, and community partners. This role keeps work moving forward, provides technical and administrative support to pilot teams, and ensures that project outputs remain aligned with regional priorities and natural-resource goals.

Key tasks include convening working groups, compiling regional data, identifying adaptation gaps, coordinating culturally responsive outreach, and supporting pilot evaluation. ARDC and HRDC—supported by BSU, LLTC, WETCC, and other Tribal partners—will develop the Regional Resilience Toolkit, implementation pathways, and monitoring frameworks.

A major focus is capturing and sharing community stories, lessons learned, and visual documentation from the pilots. The Collaborative will partner with communications specialists, educators, and Tribal storytellers to produce accessible ENRTF-branded materials that strengthen public understanding and enable replication.

Outputs include an updated Regional Resilience Plan, coordinated support for pilots, story-based dissemination materials, and a pipeline of future resilience projects.

Activity Milestones:

Description	Approximate Completion Date
Hire/assign Pilot Projects Working Group Lead; launch regional coordination structure	September 30, 2027
Form Pilot Project working groups; complete structured work plan and identify priorities	June 30, 2028
Develop Regional Resilience Toolkit with policy, adaptation, and funding recommendations and pilot Projects integrated	June 30, 2028
Launch partnership to capture and share pilot project stories, visuals, and lessons learned for public	December 31, 2028
Conduct regional engagement including Tribal, municipal, youth, and community participation-Pilot Project sharing stories	June 30, 2029
Publish and distribute updated plan + pilot evaluation findings + story based dissemination products	June 30, 2030

Activity 2: Red Lake Schools Solar + Electric Bus Resilience Pilot

Activity Budget: \$887,500

Activity Description:

This activity demonstrates and evaluates a renewable-energy transportation and resilience system at Red Lake Schools while contributing actionable data and community stories to the Regional Resilience Collaborative. The objective is to reduce diesel emissions, lower energy costs, and improve emergency preparedness for a Tribal school district. The project integrates solar-powered electric bus charging with bi-directional battery capability, enabling buses to supply backup power during outages.

Tasks include engineering, procurement, permitting, solar and charging infrastructure installation, testing, and system commissioning. Performance monitoring will track solar-to-bus charging efficiency, diesel displacement, emissions reduction, and resilience performance. The Pilot Projects Working Group will use results to support replication across

rural and Tribal districts.

This activity also includes a dedicated storytelling and communications component to document community experiences, educational impacts, operational benefits, and cultural perspectives related to energy independence and resilience. Through interviews, video, photography, and ENRTF-branded dissemination products, the project will share stories that promote public understanding and increase adoption of clean-energy solutions.

Outputs include a fully functioning solar-charging system, performance datasets, a resilience protocol, and story-based communications products. Evaluation will include system performance analysis, environmental benefits, and narrative documentation of community outcomes.

Activity Milestones:

Description	Approximate Completion Date
Finalize engineering, permitting, and procurement plan	October 31, 2027
Install solar, charger, transformer, and monitoring systems	June 30, 2028
Complete inspections, system testing, and commissioning	August 31, 2028
Evaluate charging efficiency, emissions reduction, and resilience performance	June 30, 2029
Capture and publish community stories, photos, and videos of the pilot’s development and impact	December 31, 2029
Publish full evaluation + bus as battery resilience protocol and replication guide	June 30, 2030

Activity 3: Leech Lake Tribal College Tiny Home Renewable Energy Workforce Pilot

Activity Budget: \$1,900,000

Activity Description:

Develops renewable-energy workforce while constructing highly efficient tiny homes as a demonstration of climate-resilient, low-impact housing for Tribal communities. Led by the Leech Lake Tribal College (LLTC) Carpentry Program, the project engages students in hands-on renewable-energy installation, passive and active solar design, energy-efficient construction, and sustainable building practices.

A key component is Tribal-to-Tribal mentoring, with LLTC supporting White Earth Tribal & Community College (WETCC) as it launches its own construction program. LLTC will share curriculum, instructional methods, and opportunities for WETCC faculty and students to participate in hands-on learning, helping build long-term skilled-trades capacity across both Tribal Nations.

Year1 includes land acquisition, pre-development, engineering, permitting, and curriculum design. Year2 constructs and sells at least five tiny homes, providing a learn-by-doing environment for students and instructors. Year3 completes additional homes, expanding production based on lessons learned. The Pilot Projects Working Group will integrate outcomes into the Regional Resilience Toolkit and identify additional scalable housing pilots.

This activity also includes story capture documenting student experiences, homebuyer stories, training impacts, and the cultural significance of Tribal-led housing. Outputs include fourteen completed homes, trained workforce, replicable business model, performance data

Activity Milestones:

Description	Approximate Completion Date
Finalize land acquisition, design, curriculum, and permitting	June 30, 2027
Construct and sell five tiny homes (Phase I)	June 30, 2028

Construct and sell nine tiny homes (Phase II)	November 30, 2029
Capture student, instructor, homeowner, and community stories through interviews, photography, and video for ENRTF dissemination	December 31, 2029
Publish construction model + workforce, housing, and natural resource benefits evaluation	November 30, 2030

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Rochell Carpenter	Leech Lake Tribal College	Rochell Carpenter will provide instructional leadership, oversee design and construction quality, support student learning, and coordinate the buildout of all twenty energy-efficient tiny homes across the three-year pilot.	Yes
Tim Lutz	Red Lake School District	Tim Lutz, Superintendent of Red Lake Schools supports and oversees this project in integrating the solar-plus-electric bus system, coordinating planning, staff involvement, and resilience testing to demonstrate a scalable clean-energy model for Tribal and rural districts.	Yes

Dissemination

Describe your plans for dissemination, presentation, documentation, or sharing of data, results, samples, physical collections, and other products and how they will follow ENRTF Acknowledgement Requirements and Guidelines.

The Regional Resilience Collaborative will continue the dissemination framework established under the 2026–2029 ENRTF award, while expanding it to include performance data, community experiences, and lessons learned from the two demonstration pilots. As before, dissemination will emphasize broad participation, transparency, cultural relevance, and accessibility for communities, Tribal Nations, and local governments that may benefit from the results.

Project results—including energy production data, emissions reduction analysis, tiny home performance metrics, curriculum materials, workforce training outcomes, and resilience protocols—will be shared publicly through multiple platforms. The Pilot Projects Working Group will oversee documentation, interpretation, and communication of all findings, ensuring that the outcomes from the Red Lake and Leech Lake pilots inform ongoing regional planning efforts.

This project will also incorporate a storytelling and communications initiative to capture community voices, student experiences, cultural perspectives, and the real-world impacts of renewable energy and housing demonstrations. Through photos, interviews, videos, digital story maps, and ENRTF branded materials, these stories will make project outcomes accessible to a wider audience and support behavior change across the region.

As with the previous ENRTF award, the updated Regional Resilience Plan, pilot evaluation reports, dissemination products, and toolkits will be posted on the websites of the Regional Resilience Collaborative. Physical copies will be maintained at partner offices, Tribal government buildings, and educational institutions. Community convenings, youth engagement sessions, and Regional Resilience Forums will provide additional opportunities for dialogue and participation.

Digital materials will be archived with long term hosting commitments to ensure permanent accessibility, and all data will follow Minnesota public data retention policies. All products, signage, videos, and communications will acknowledge the Environment and Natural Resources Trust Fund in accordance with ENRTF Acknowledgment Guidelines.

These expanded dissemination efforts not only inform communities and decision makers, but also build public understanding of renewable energy solutions, uplift Indigenous and local perspectives, and support long term stewardship of Minnesota’s natural resources.

Long-Term Implementation and Funding

Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If

additional work is needed, how will this work be funded?

Results will be sustained through permanent renewable-energy systems, ongoing workforce-training programs, and operational protocols developed with partners. Red Lake Schools will maintain the resilience system using facility budgets and utility savings. Leech Lake Tribal College will embed tiny-home construction and renewable-energy training into long-term curriculum, supporting housing production and homeownership pathways. LLTC will also continue mentoring White Earth Tribal & Community College as WETCC expands construction programming to meet local housing needs. The Northwoods and Waters Community Resilience Collaborative will integrate findings into the Regional Resilience Plan and pursue federal, Tribal, philanthropic catalyze additional projects.

Project Manager and Organization Qualifications

Project Manager Name: Naomi Carlson

Job Title: Community Development Planner

Provide description of the project manager's qualifications to manage the proposed project.

As a Community Development Planner with a Master of Public Health in Environmental Health Sciences, I bring a strong interdisciplinary foundation to managing an LCCMR-funded project. My academic training in environmental health, combined with more than eight years of professional experience in community development, regional planning, and grant management, equips me to lead projects that protect and enhance Minnesota's natural resources with scientific rigor and community-centered insight.

My background includes hands-on environmental health work through my practicum with the Alaska Native Tribal Health Consortium, where I supported a CDC-approved Healthy Homes Study focused on improving indoor air quality and reducing respiratory illness among Alaska Native children. As noted in the document, I "conducted home-based assessments and assisted with air-quality measurements," experience that strengthened my understanding of environmental systems, data collection, and culturally grounded public health interventions. This foundation directly supports the technical and analytical demands of ENRTF projects.

In my current role with the Headwaters Regional Development Commission (HRDC), I lead regional planning initiatives across a five-county area and three Tribal Nations, managing projects related to land use, transportation, natural resources, and community well-being. My resume highlights that I "manage regional planning initiatives including land use, transportation, and human services plans," demonstrating my ability to coordinate diverse partners, facilitate engagement, and deliver complex, multi-year projects.

I also bring a strong record of securing and managing multimillion-dollar federal, state, foundation, and local funding. As the document states, I "secured federal, state, foundation, and local funding, expanding organizational capacity and sustainability," underscoring my ability to steward ENRTF resources responsibly.

Organization: Headwaters Regional Development Commission

Organization Description:

The Headwaters Regional Development Commission (HRDC) is a regional planning and development organization serving the counties of Beltrami, Clearwater, Hubbard, Lake of the Woods, and Mahnomen in north-central Minnesota. Its core mission is to help communities identify needs, develop effective solutions, and secure the resources necessary to achieve long-term success. HRDC focuses on strengthening the region as a whole, aligning its services with both its organizational strengths and the evolving needs of local governments, community leaders, and development partners.

Because its mission is broad, the HRDC has the flexibility to work across many issue areas. However, it intentionally prioritizes efforts that most directly support regional success rather than trying to be all things to all people. Unlike traditional government agencies, the HRDC does not have legal implementation authority and operates more like a

hybrid organization—combining the entrepreneurial mindset of a business with the public-service orientation of a civic institution. This structure has fostered a culture centered on strong customer relationships, leadership, and innovation.

While the HRDC receives limited funding from a property tax levy, most of its revenue comes from contracts with local governments, partners, and its subsidiary corporations. This model encourages adaptability, collaboration, and

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Regional Energy Pilot Project Coordinator Planner (HRDC) and Marketing Director		Lead Convene and facilitate Regional Coordination & Leadership Pilot Projects Working Group and Storytelling & Communications Partner (shared across Activities 1–3)			35%	3		\$465,000
Planner (HRDC)		Senior Project Manager and Applicant lead			35%	0.6		\$36,000
Finance		Provide finance and report oversight for grant including of subrecipient and pilot projects			35%	1.2		\$72,000
							Sub Total	\$573,000
Contracts and Services								
Red Lake School District	Subaward	Red Lake Schools Solar + Electric Bus Resilience Pilot Red Lake Schools will construct and evaluate a solar-powered electric bus charging and resilience system, providing performance data, emissions-reduction outcomes, and operational lessons to inform replication across Minnesota Tribal and rural school districts.				2		\$887,500
Leech Lake Tribal College	Subaward	Leech Lake Tribal College Tiny Home Renewable Energy Workforce Pilot: Leech Lake Tribal College will design, build, and evaluate fourteen high-efficiency tiny homes while providing hands-on renewable-energy and construction training for Tribal students. LLTC leads land preparation, engineering, solar integration, permits, materials procurement, and workforce development, producing				9		\$1,900,000
Bemidji State University Centers for Empowered Communities	Subaward	Grad student Research Assistants and storytelling Assist with analysis of pilot data. Support GIS mapping, research tasks, and Toolkit updates. Participate in story-capture and dissemination activities (interviews, documentation,				9		\$150,800

		drafting summaries). Provide hands on applied learning, lead youth engagement, and partner communication. Assist with evaluation frameworks and monitoring systems						
Arrowhead Regional Development Commission (ARDC)	Subaward	Staffing (1 Planner \$150,000), Meeting Facilitation and support on pilot Projects final year (2030)				1		\$150,000
White Earth Tribal Community College	Subaward	White Earth Tribal & Community College , mentored by LLTC, will work to lead construction training and mentor by sharing curriculum, instructional models, and hands-on learning opportunities. This Tribal-to-Tribal support helps WETCC launch its construction program while strengthening regional workforce capacity in sustainable, energy-efficient				3		\$120,000
							Sub Total	\$3,208,300
Equipment, Tools, and Supplies								
	Tools and Supplies	HRDC meeting and facilitation supplies and room rentals	Materials and resources needed for meetings, stakeholder engagement, and data collection. Expenses include office supplies and presentation materials to facilitate collaboration and room rentals for meetings					\$6,000
							Sub Total	\$6,000
Capital Equipment								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								

	Miles/ Meals/ Lodging	1500 miles a year X .725 (4531miles) = \$3285 / and 5 over nights per year @110 per night (15 nights) lodging nights, Peridium 15 X \$51 per day = \$765	HRDC staff will have to travel widely across a region that covers approximately 25% of the state in order to lead a regional collaborative. Due to distance and scheduling of meetings some trips will require overnight stays.					\$5,700
							Sub Total	\$5,700
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
	Printing	HRDC Printing of General Project materials	Printing materials (flyers, fact sheets, meeting handouts, and final reports) are essential for outreach and marketing of both pilot projects, supporting community engagement, accessible communication, and broad dissemination of project outcomes.					\$5,000
	Publication	These dissemination products will elevate regional climate-resilience work, increase public access to project results, and promote adoption of renewable-energy and housing solutions across northern Minnesota.	Funds will support the creation of ENRTF-compliant videos, written success stories, photography, infographics, printed materials, and online content documenting the progress and community impacts of the pilot projects.					\$25,000
							Sub Total	\$30,000
Other Expenses								
							Sub Total	-
							Grand Total	\$3,823,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
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Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
State				
			State Sub Total	-
Non-State				
			Non State Sub Total	-
			Funds Total	-

Total Project Cost: \$3,823,000

This amount accurately reflects total project cost?

Yes

Attachments

Required Attachments

Visual Component

File: [011c6f96-db8.pdf](#)

Alternate Text for Visual Component

The map shows the location of Leech Lake Tribal College, marked near 164th Street NW and Little Wolf Road NW. It highlights nearby road connections and provides simple distance markers for scale. The map shows where the Tiny Homes will be built on the campus of LLTC....

Financial Capacity

Title	File
HHDC Board resolution	bab0346-156.pdf
HRDC 2024 Audit	0056dc25-2c7.pdf
HRDC Budget	4827fee5-510.pdf

Board Resolution or Letter

Title	File
HRDC Board Resolution	c5adb04b-e8f.pdf

Supplemental Attachments

Capital Project Questionnaire, Budget Supplements, Support Letter, Photos, Media, Other

Title	File
Bemidji State University Centers for Empowered Communities Letter of Support	9991ac5a-ab4.pdf
HRDC Board Chair Support Letter	3dfd2c75-44b.pdf
Leech Lake Tribal College Tiny Home Renewable Energy Workforce Pilot: Capital Construction Project Questionnaire	98d56a70-26e.pdf
Fresh Energy Letter Of Support	20d8b01d-318.pdf
Leech Lake Tribal College Tiny Home Renewable Energy Workforce Pilot Budget Addendum	858843cd-2bc.pdf
Red Lake Supporting Materials for Pilot Project	bb3770c3-e06.pdf
White Earth Tribal Community College LOS	a23034f8-b81.pdf
Solar Bear Letter of Support	8bc2d997-dde.pdf
Highland	cfae9666-48a.pdf
Native Sun Support Letter	e9f99bfe-17d.pdf
Red Lake Solar Additional Narrative	ba2a4642-598.docx
Leech Lake Financial Services Support Letter	23377bb9-d85.pdf
Greater Minnesota Housing Fund (GMHF) Support Letter	ac89970c-46f.pdf
Arrowhead Regional Development Commission (ARDC)	58504b34-6bd.pdf
Leech Lake Tribal College	45e9ce51-2d7.pdf
Red Lake School District Support Letter	749fd8cd-b01.pdf

Administrative Use

Does your project include restoration or acquisition of land rights?

No

Do you understand that travel expenses are only approved if they follow the "Commissioner's Plan" promulgated by the Commissioner of Management of Budget or, for University of Minnesota projects, the University of Minnesota

plan?

Yes, I understand the Commissioner's Plan applies.

Does your project have potential for royalties, copyrights, patents, sale of products and assets, or revenue generation?

No

Do you understand and acknowledge IP and revenue-return and sharing requirements in 116P.10?

N/A

Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF?

N/A

Does your project include original, hypothesis-driven research?

Yes

Does the organization have a fiscal agent for this project?

No

Does your project include the pre-design, design, construction, or renovation of a building, trail, campground, or other fixed capital asset costing \$10,000 or more or large-scale stream or wetland restoration?

Yes

Do you propose using an appropriation from the Environment and Natural Resources Trust Fund to conduct a project that provides children's services (as defined in Minnesota Statutes section 299C.61 Subd.7 as "the provision of care, treatment, education, training, instruction, or recreation to children")?

No

Provide the name(s) and organization(s) of additional individuals assisting in the completion of this proposal:

Tim Lutz, Superintendent of Red Lake School District; Rochell "Rocky" Carpenter, Leech Lake Tribal College

Do you understand that a named service contract does not constitute a funder-designated subrecipient or approval of a sole-source contract? In other words, a service contract entity is only approved if it has been selected according to the contracting rules identified in state law and policy for organizations that receive ENRTF funds through direct appropriations, or in the DNR's reimbursement manual for non-state organizations. These rules may include competitive bidding and prevailing wage requirements

N/A