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CASE STUDY: SOLAR – CENTRAL REGION

Bringing Solar Air Heat to Leech Lake

By Eric A. Olson, Research Assistant • July 2010

Dan Evans and Jason Edens can be considered sparks—as the well-known cliché goes, “you can’t start a fire without a spark.” Together they have ignited enthusiasm for increased solar energy throughout the community. Their ideas of utilizing solar energy have spread to the Tribal Council at Leech Lake Band of Ojibwe (LLBO), the faculty and students at the Leech Lake Tribal College (LLTC), and through the Cass Lake community. LLBO and LLTC collectively installed solar air heat collectors at the College so that the entire Leech Lake community can learn about the technology.

The idea to install solar air heat collectors at the College was developed by Dan Evans, who was serving as Special Projects Consultant for the Leech Lake Band of Ojibwe at the time. Evans envisioned a community project that would serve several purposes at the College. Primarily, it would serve as a functional model, lowering heating costs for the college while displaying renewable energy technology. The project would also demonstrate the possibilities of renewable solar technology to community residents and businesses.

Evans contacted Jason Edens, Director of Rural Renewable Energy Alliance (RREAL), about the possibility of installing a solar-powered furnace system at the College. RREAL is a nonprofit organization based in Pine River, MN that manufactures and installs solar hot air systems throughout the Midwest. RREAL strives to make solar technology widely available to all income levels, especially those heavily burdened by high energy costs. Jason Edens describes RREAL’s mission as “providing long term solutions to fuel poverty.” RREAL works with community organizations in the rural Upper Midwest, engaging citizens about the possibilities of solar power and manufacturing collectors for those ready to utilize this technology.

Evans contacted CERTs and wrote a grant application to receive funding for the project. He had been involved in establishing the Central CERT and was aware of grant opportunities from CERTs.



Solar thermal air heat panels being installed

“When CERTs offered their grant program, it seemed a good idea to initiate a small pilot project on the reservation to begin educating local residents about solar energy,” Evans said. They received a grant of \$5,000 that was used to cover labor costs to install the three collectors.

With the support of LLBO, RREAL, and CERTs, the project advanced to siting. A maintenance garage next to the construction and carpentry building was chosen due to the large south-facing wall and its proximity to classrooms that will be incorporating the solar thermal technology into their curriculum.

Project Snapshot

Purpose:

Use solar air to lower heating cost for the Leech Lake Tribal College and serve as an educational tool for students

Technology:

Solar-Powered Furnaces

Grant:

\$5,000 Central CERT

Total Cost:

\$20,000

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The collectors were on display for an Earth Day celebration held that April at the college. The College produced an informational brochure detailing the new solar air heat system and describing how solar heat can be available to people of all income levels. The brochures were distributed to several thousand residents and to organizations such as the Community Action Program.

Evans and Edens were working on a separate solar project when the LLTC idea materialized. “[The] main reason I was visiting with RREAL was to explore the possibility of opening a solar collector manufacturing facility on the reservation,” Evans said. As the LLBO explored opportunities to lessen their impact on the earth, Evans pictured a facility that would manufacture collectors for their reservation as well as for Native American communities throughout the region.

Cass County is one of the most impoverished counties in Minnesota. Of the 4,800 Native Americans living on the Leech Lake Reservation, which is mostly in Cass County, most qualify for energy assistance. Developing a manufacturing facility within the community would both establish economic opportunity and provide a beneficial product for community members. The new facility would also advance discussion about the possibilities of solar.

Talks have gone forward about developing a manufacturing facility on the reservation. “A manufacturing plant design for an existing building was developed and construction estimates secured. However, this project development was competing with a wind energy project at the LLBO Development Department. The wind project received more support from the LLBO Development Department and funding was targeted to it,” according to Evans. It is the hope that with increased exposure, the benefits of a manufacturing facility will become more apparent.

The development of renewable energy in Northern Minnesota is moving forward with Dan Evans and Jason Edens in the middle of the push. The manufacturing facility may well become a reality. A separate grant was secured through the LLBO Department of Tribal Management to install solar air systems on 12 tribal member homes. RREAL agreed to partner on the project, providing the collectors and labor for installation. RREAL also donated one of the collectors, free of charge. Evans is currently working on another solar education project with CERTs targeted at teenagers in the community to engage the next generation with the power of solar. And it all started with one carefully-planned project at the center of the Cass Lake community!

For more information, contact Jason Edens, Director of the Rural Renewable Energy Alliance (RREAL), at 218-587-4753 or jason@rreal.org or Dan Evans, Special Projects Consultant for the Leech Lake Band of Ojibway, at 218-766-3702 or devans2821@yahoo.com.

To learn more about projects happening in the Leech Lake community, read the August 4, 2009 Minnesota Public Radio article, “Federal grant helps bring solar heat to Ojibwe,” or visit the Leech Lake Tribal Council’s website at www.llojibwe.com.

Rural Renewable Energy Alliance



RREAL

Rural Renewable Energy Alliance

RREAL is a nonprofit grassroots organization pairing social activism with solar energy in a commitment to bring solar heat to low-income households. Through the Solar Assistance Program, RREAL provides solar heating systems to low-income families that qualify for Energy Assistance.

“Low-income households bear a greater burden when energy crises strike. As the price of fuel oil, natural gas and electricity rise, some families have to choose between food and heating their home. At RREAL, we believe that we have the power to make a difference!”

- Jason Edens, Director

More at www.rreal.org



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