

# Solar energy is affordable, efficient

BY SARAH SMITH

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Green technology should be available even to the neediest segment of society, so a Pine River non-profit agency has been installing solar heating panels on the homes of disadvantaged families.

They are families who qualify to receive heating assistance. The Rural Renewable Energy Alliance is determined to bridge what it calls a "renewable divide" while cutting homeowners' heating bills.

The solar air heat panels are manufactured in Pine River.

In 2008, RREAL installed the panels on 25 homes throughout north central Minnesota, said Sarah Hayden, research and outreach coordinator for RREAL.

"These are purely supplemental systems," Hayden said, designed to defray winter heating bills by 25 to 30 percent overall.

Solar air heating is the cheapest form of solar technology, she said. Most people are familiar with solar electric systems, but those are prohibitively expensive to install. They require semi-conductors, expensive metals and storage systems.

Solar hot water systems would only provide enough power for domestic hot water needs, Hayden said, so they aren't a practical solution either.

The solar air heat panels are essentially metal pieces heated by the sun. They're coated to absorb as many solar rays as possible, then designed to transfer that heat to another metal piece behind the panel.

Hayden said air flows behind the piece of metal and gets warmed. A fan pulls air from the house into the panel. The air runs across the back of the panel, gets heated and re-enters the house warmer.

"In an area with such a



SUBMITTED PHOTOS

A Pine River non-profit agency is installing solar heating panels on homes of disadvantaged families. Sarah Hayden, research and outreach coordinator for Rural Renewable Energy Alliance will speak at the Green Park Rapids Energy Fair Feb. 28.

*'We work to keep it simple, effective and keep costs down.'*

**Sarah Hayden**  
RREAL research and outreach coordinator



Solar heat can make homes more energy efficient. Solar air heat panels are metal pieces heated by the sun. The solar panels are affordable and work well on sunny days.

high heat need as northern Minnesota it makes a lot of sense to address heat with clean energy first because it is people's largest energy expense," Hayden said. "Since it's a seasonally fluctuating expense it's really the biggest energy burden on low-income families."

Hayden will be one of the presenters at the Feb. 28 Energy Fair in Park Rapids.

The solar panels, mainly installed on existing homes, are affordable and on sunny days, will "provide all of the heat you will need during

the day," Hayden said. At night, the home's main system of heating then takes over.

The systems can be built with storage capacity for newer homes, but the cost would increase dramatically, Hayden said.

RREAL, formed in 2001, works through Community Assistance Programs to get

the names of eligible homeowners through social service agencies. Park Rapids residents on heating assistance plans can apply, Hayden said.

"We work to keep it simple, effective and keep costs down," Hayden said. "We want to keep it low-income appropriate."

## Low-cost and no-cost changes can help save energy and money

BY JEAN RUZICKA

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Saving energy in the home doesn't require a major investment of time or money.

Itasca-Mantrap's Jared Echternach will discuss how little things do make a difference when he addresses low-cost and no-cost energy and money saving ideas at 10 a.m. and 12:40 p.m. at the Green Park Rapids Energy Fair.

Energy conservation often deals with a change in behavior, he said.

For example, turning down the thermostat – from 70 to 65 degrees while home and 60 to 55 during the night and when the home is not occupied can cut your heating bill by about 25 percent.

Heating and cooling costs can be reduced with insulation, caulking and weather stripping to reduce infiltration. He will demonstrate the installation of spray foam as a conservation measure during the fair.

"And one of the simplest ways to save energy is switching from incandescent light bulbs to compact fluorescent," he advises.

Compact fluorescent lamps (CFL) will fit into normal light sockets and use about 75 percent less energy than the standard incandescent because most of the standard bulb's energy is lost in heat, he explained. And CFLs will last 10 times longer than standard incandescent light bulbs.

"We've come a long way with them," he pointed out. CFLs are now available for dimmable light switches and use outdoors. Shapes range from candelabra to standard.

Great River Energy brochures are available with charts showing how to select the appropriate CFL for a specific fixture.

*'One of the simplest ways to save energy is switching from incandescent light bulbs to compact fluorescent.'*

**Jared Echternach**  
Itasca-Mantrap Electric Cooperative

CFLs must be recycled to prevent the release of mercury, which is a free service offered at both Hubbard County transfer stations.

Tips on water heating – turning down the temperature and insulation of the tank and pipes – will be addressed.

And appliances – both new and existing – will be discussed.

The ideas will be geared to existing residences, Echternach said. "Anyone can go to the hardware store, get the materials and do the work themselves," he said of the energy-saving ideas. "It's not necessary to hire a contractor."

"We work with clients on a daily basis to help them use energy wisely," he said. "It's part of our job."

Itasca-Mantrap member service staff will be on hand to answer questions.

For more information on energy saving, go to [www.commerce.state.mn.us](http://www.commerce.state.mn.us), click on Energy Information Center in the upper left and scroll down to Energy Info Center Topics and Home Energy Guides.

A variety of publications is available, addressing attic bypasses, basement insulation, energy saving landscapes, wood heat, what to look for in appliances and many other topics.

The information is available in hard copy or CD. Call 800-657-3710 or e-mail [energy.info@state.mn.us](mailto:energy.info@state.mn.us).



## Housing Redevelopment Authority of Park Rapids

### River Heights Apartments

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The Housing and Redevelopment Authority was established September 12, 1966. Its primary mission is to promote safe and affordable housing within its jurisdiction. Its first and primary project is River Heights Apartments.

The beautiful (69 unit) brick building and groomed lawns of River Heights Apartments was formally the site of the Park Rapids Sales Barn. The transformation in 1970 was due to the dedication of volunteers and the City of Park Rapids. The first tenant was Sadie Kinkel, October 1, 1970.

River Heights Apartments was the first housing complex in Park Rapids and Hubbard County to provide income-based housing. Over a period of 38 years (1970-2008), the HRA of Park Rapids has provided housing assistance to more than 650 income-eligible adults.

Building improvements 1999-2008 included replacement of over 500 windows, new roof, soffit, fascia, doors, the renovation of resident lounge and recreation areas, installation of security surveillance equipment and the creation of four new handicap accessible apartments.

Rents are based on 30% of adjusted

gross income and basic utilities are included in the rent. Ceiling rents are based on unit size and do not exceed \$385 per month. Admission policies provide for older and disabled adult preference and a congregate or home-delivered noon meal is available on-site.

The Housing and Redevelopment Authority is currently working to coordinate and promote Green Park Rapids. The goal of Green Park Rapids is to develop community-wide strategies that will reduce our community's energy uses and carbon footprint and help the community prepare for increasing energy costs, by way of housing weatherization and rehabilitation.

The Green Park Rapids neighborhood boundaries are Hwy. 34 to the north, 6th Street to the south, Fair Avenue to the west and Hwy. 71 to the east. Residents in the Green Park Rapids neighborhood are eligible for comprehensive energy audits, which includes the use of infrared cameras, at a cost of \$15 versus \$350. This low-cost energy audit is possible because of our partnership with Minnesota Power and Minnesota Energy Resources. Residents are encouraged to call 732-4158 to schedule energy audits.

## Moving Minnesota communities toward greater energy security

BY BRITA SAILER

STATE REP. DIST. 4B

Minnesota, along with the rest of the nation, is experiencing economic challenges unlike any in recent history. These challenges are shaping decisions we all make in our daily lives, from cutting back on dinner out to carpooling, from taking on a second job to putting off retirement.

In the same way families are making decisions about changing the way they live and work, policymakers at every level are doing the same. Some of the decisions we're faced with are incredibly difficult, but at the same time, present us with unprecedented opportunities. In the case of energy, the opportunities are real – to bring new jobs and new industries to our communities that assuring our long-term energy needs are met.

Many of these new opportunities will



**Brita Sailer**

be featured at the upcoming Green Park Rapids Energy Fair. The first of what will be an annual event, the Energy Fair represents a turning point. Across Minnesota, communities like ours are recognizing the importance of adopting community-wide energy conservation and renewable energy programs.

In addition to helping us better manage energy costs, reduce harmful emissions in our air, and decrease contaminants in our drinking water, the smart decisions we make about energy use can create jobs and strengthen our local economy.

This event will present a chance to see new energy initiatives now underway in

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