

NEWS

August 2008

Inside this issue...



Duel Fuel changes

3



The cheapest source of heating and cooling

4



North Dakota receives award for air quality

8

Official publication of



www.mcleodcoop.com

Thank you members!

The Cooperative would like to thank its members for conserving electricity on Extreme Peak Days. Those of you who voluntarily postponed energy use or followed our suggestions for conserving energy during peak hours, significantly helped reduce electric load during critical demand times. Your efforts helped keep energy costs low. Members participating in the cycled air conditioning, peak shave water heating, commercial and industrial genset and curtailable programs were a huge help to the reduction efforts on every extreme temperature day. Again, thank you to these members for any sacrifices in comfort or lifestyle made to conserve.

Due to electricity demand growth outpacing the building of any new baseload generation resources, our need to take action to conserve is occurring on days when the temperature does not exceed 90 degrees. In past years, we did not have to declare an Extreme Peak Day until temperatures reached 95 degrees. We anticipate that this trend of asking for extra conservation efforts from members will continue on hot days, not just extremely hot days.

The effort was well worth it. Again, thank you for doing what you can to conserve.

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Simple ways to reduce your electric bill



Unplug that extra refrigerator or freezer

Cleaning out and unplugging the extra refrigerator you have in your garage or basement will save you approximately \$10 a month on your electric bill. If it one of the early self-defrosting side-by-side models (usually harvest gold or olive green in color) it could likely save you over \$20 a month.

Unplugging a smaller, old manual-defrost refrigerator will save you about \$6 a month. If you just can't live without an extra fridge to hold sodas and beer, how about down-sizing to a small compact refrigerator? It will use a fraction of the energy.

If you use the refrigerator only a few times during the year, clean it out and unplug it when you are not using it. You can save over \$100 a year by not having it plugged in 10 months out of the year.

Eliminating one or more freezers can provide similar energy savings. Each chest freezer you clean out and unplug will reduce your bill \$4-\$8 a month. Each self-defrosting freezer should drop your bill more than \$10 a month once it is unplugged.

Turn your thermostat up a few degrees in the summer

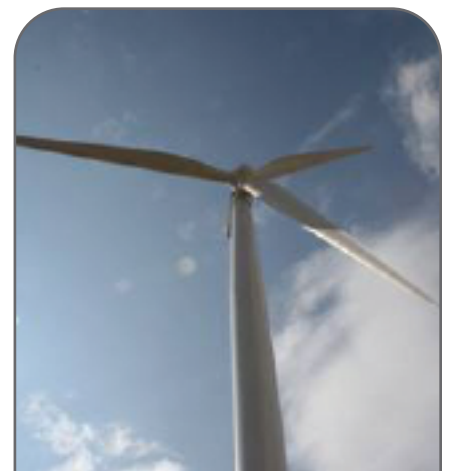
Every degree you increase your thermostat will save on air conditioning/cooling costs.

Utilize the clothesline instead of the dryer

Each load you dry on a clothesline outside of the house instead of running your electric dryer saves you 25 cents. If you do a lot of laundry, this savings can add up.

Turn your computer and printer off when you are not at home or using it

Also unplug any charging devices once the cell phone or i-pod or camera is fully charged. These small charging devices all increase your usage.



Just a few seats remain for Aug. 27 Wind Tour

On August 27 a busload of our members will be traveling to southeastern Minnesota to tour the Prairie Star Wind Farm and Pleasant Valley Peaking Plant.

If you want to join us, please call to make your reservation soon; just a few seats are still available. Cost is \$25 per person. A light breakfast and lunch, plus motorcoach transportation is included. The group plans to leave Glencoe about 7:00 a.m. and return approximately 5:00 p.m.

What is Cap & Trade?

You hear talk of “cap-and-trade” plans in Congress and even in the Minnesota Legislature. The initial idea behind the cap-and-trade talks was environmental - to use it as a way to force industry and utilities to reduce carbon emissions. Now, many government leaders see it as a way to bring huge sums of money into the government coffers to fund a variety of programs. Venture capitalists and traders see it as a huge opportunity to make money for personal gain by profiting from the trading of emissions allowances. What started as a noble-intentioned cause would end up being a tax on gasoline, fuel oil, electricity, coal products, natural gas and propane, concrete and every manufactured product that puts some carbon into the atmosphere through its manufacturing process. It would be a tax ultimately passed on to the American taxpayer. It would directly impact economic activities for consumers and businesses in the U.S., plus put us at a distinct economic disadvantage with other nations that do not have cap-and-trade allowances. We might just as well call it a “Cap-and-Tax” program because that is what the end result would be.

Call it Cap & Tax

Two U.S. Environmental Protection Agency (EPA) lawyers, speaking in a letter to Congress, warned that EPA’s inability to police carbon allowance trading markets means the cap-and-trade approach taken in leading climate change bills may thwart the program’s ultimate goals.

Here is how cap-and-trade legislation, like was written into the Lieberman-Warner bill, would work. Companies could emit greenhouse gases only if they had the appropriate amount of allowances or quotas from the government. This allowance would gradually decline which then becomes the “cap” for the emissions. Utilities that needed additional allowances could buy them from companies that wanted to sell them. This then becomes the “trade” for the emission allowances. The price paid by utilities would be passed on to consumers and this amount would escalate as allowances are reduced and the demand for additional allowances increases. This is how the “cap-and-trade” essentially would tax most Americans and would allow the government to sell or auction these purchased allowances and then

either spend the proceeds on pet projects or provide windfalls to recipients. The Warner-Lieberman bill that was proposed would do both, to the tune of \$1 trillion within the first ten years.

Promoters of cap-and-trade agree that energy prices would rise, but because consumers would be financially forced to use less energy, they believe the impact on household budgets would be modest. We believe this is unrealistic and will end up suppressing an already struggling U.S. economy.

Internationally, cap-and-trade would not work either. Developing countries, the largest source of new CO2 emissions, will not likely abandon fossil fuels unless there are competitively priced alternatives. Congressman Joe Barton of Texas, warned that a carbon cap-and-trade system could destroy the U.S. economy while providing little beneficial impact to the global environment. Pointing to the European experience with a cap and trade system, Barton said electric rates in Germany are up 40 percent, petrochemical production is being dismantled and the steel industry is projected to lose 50,000 workers, while CO2 emissions are going up, not down.

August 21 through Labor Day, Sept. 1, 2008 MINNESOTA STATE FAIR

Visit the Eco Experience building at the MN State fair

Great River Energy, our power supplier, will be participating in the Minnesota State Fair. They will have a booth in the Eco Experience building. The Eco Experience building is located one block north of the Snelling Avenue main entrance gate, near the camping area.

OCR testing done



About 130 oil circuit reclosers (OCRs) were tested in June and July by Solomon Corporation of Solomon, Kansas. They were at McLeod Cooperation Power for a few weeks with their portable test facility. OCRs are tested once a year as part of the Co-op’s maintenance program. OCRs are cleaned, tested and recalibrated by Solomon.

OCRs are tested and cleaned by Solomon Corp. in their portable testing truck.



Office closed Labor Day

McLeod Cooperative Power’s office will be closed Monday, September 1, in observance of Labor Day. Emergency and outage dispatchers are on duty 24 hours a day and can be reached by calling 1-800-927-5685.

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MCLEOD COOPERATIVE POWER ASSOCIATION NEWS

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“SQUISHY SCIENCE”

Twin Cities meteorologist Mike Fairbourne and 31,000 other scientists concerned about global warming hype

The StarTribune of Minneapolis recently featured a story about longtime WCCO-TV meteorologist Mike Fairbourne, who says environmental activists are practicing “squishy science” when they tie human activity to global warming. Fairbourne’s perspective was announced on the same day that the Oregon Institute of Science and Medicine appeared before the National Press Club in Washington D.C. The Institute said it had the signatures of more than 31,000 scientists — including Fairbourne’s — who concur that human impact on climate change is exaggerated.

A meteorologist for more than 40 years, Fairbourne notes that the Earth has experienced some increases in global temperature. However, he wonders how much of that warming is attributable to humans.

“Do we need to be wise stewards [of the Earth]? Absolutely,” Fairbourne said. “Do we have to pin everything that happens on global warming? No, we need to have cooler heads.”

Oregon group in agreement

Fairbourne signed the Oregon Institute’s petition about five years ago. The group said that hundreds of meteorologists are among the signees.

Global Warming Petition signed by over 31,000 American scientists.

The Petition states: “We urge the United States government to reject the global warming agreement that was written in Kyoto, Japan in December, 1997, and any other similar proposals. The proposed limits on greenhouse gases would harm the environment, hinder the advance of science and technology, and damage the health and welfare of mankind. There is no

convincing scientific evidence that human release of carbon dioxide, methane, or other greenhouse gases is causing or will, in the foreseeable future, cause catastrophic heating of the Earth’s atmosphere and disruption of the Earth’s climate. Moreover, there is substantial scientific evidence that increases in atmospheric carbon dioxide produce many beneficial effects upon the natural plant and animal environments of the Earth.”

The Oregon Institute and its petition have been widely challenged by several groups in the scientific community. The national Academy of Sciences, for example, rejected the petition’s contentions, noting “greenhouse warming poses a potential threat sufficient to merit prompt responses. Investment in mitigation measures acts as insurance protection against great uncertainties and the possibility of dramatic surprises.”

Fairbourne, a University of Utah graduate, said a number of meteorologists and colleagues have similar opinions as his, adding that he is concerned about the extremism that is attached to global warming.

He noted that not long ago, in the 1970’s, environmental activists were quite concerned about just the opposite — global cooling.

Fairbourne pointed out that the concern over climate change does have scientific merit, but the issue has become quite political. He urged policymakers to remain calm, study the scientific evidence on both sides of the debate, and evaluate it thoroughly.

“It makes me nervous,” he said, “when we pin a few warm years on squishy science.”

What is going on with Dual Fuel?

For nearly thirty years, the Cooperative has been offering to its members low-cost Dual Fuel energy because we had excess base load capacity at our power plant that we could sell to members at a discounted price. This was good for the Co-op and a great deal for members.

In the past two years, Dual Fuel sales have grown very fast, as consumers no longer wanted to pay the price of fuel oil or propane and they chose to switch to a Dual Fuel system. The time has come when our power supplier no longer has excess capacity to sell at a discounted rate. And no additional base load is on the drawing board at this time, since Minnesota’s political environment has made it nearly impossible to build new generation with coal or nuclear or any other cost-effective base load plants.

Don’t fear if you recently installed Dual Fuel. The program is not going away. The Dual Fuel program will continue to be offered for both new and existing participants. It will just have a few changes:

- The Dual Fuel rate, with the new power cost adjustment, went up on July 1 to 4.905 cents per kWh. We anticipate a possible PCA or rate increase in January of 2009.
- No more pole barns, shops or non-conditioned living spaces will be allowed on Dual Fuel. No new garage heaters will be allowed on Dual Fuel. A storage heating system under the floor will be available as a good alternative system. Or you can install a geothermal heat pump system on the regular rate and circulate hot water constantly through the floor.
- We estimate Dual Fuel control times will increase to 200-250 hours per winter, but will continue to be below our published 400-hour per season maximum hours. The control times will possibly shift to hours other than 5-9 p.m. We promise you more details as soon as they become available.

Does someone you love live alone?



Family members are often concerned about the personal safety of their loved ones, especially those who live alone. This uneasiness is compounded if the loved one is elderly, has medical concerns or lives a distance away from other family members. Yet we recognize that it is also important for our loved ones to maintain their sense of independence.

McLeod Cooperative Power offers a solution to this delicate situation. It is the First Alert Personal Emergency and Monitoring System.

Easy to Operate

System installation is easy. The equipment is simple to operate and the monthly monitoring fee is inexpensive. The system features a high-quality advanced telephone with a speakerphone and emergency response pendant or wristband. In case of an emergency, help is summoned through a simple touch of the pendant/wristband that is worn at all times. The speakerphone is immediately activated and contact is made with a 24-hour response center.

Professional Response

Professional dispatchers staff the response center. Since the

automated computer system has already been programmed with the necessary subscriber information such as address, family contacts and medical history, the dispatcher will be able to immediately contact the appropriate authorities.

Preserves Mobility

A particularly nice feature is that this sophisticated speakerphone and pendant/wristband alert allows mobility throughout the home and the nearby yard. The speaker-phone is so powerful that it even allows conversation from across the room.

A Quality Phone, plus more!

The speakerphone is a quality device that can be used for everyday conversation, just as a normal telephone. The number keys are especially large and are backlit, making dialing easy for arthritic hands or someone with reduced vision.

Peace of Mind is Affordable

Contact McLeod Cooperative Power to have a personal emergency response system installed anywhere within McLeod, Sibley, Carver or Renville counties. Subscribers do not need to receive electric service from the Cooperative in order to participate in this program. Installation of the rental phone monitoring system is \$49 and the monthly monitoring fee is \$30.00, plus tax.

Look to the earth for your cheapest source of heating and cooling

A Ground Source Heat Pump (GSHP) is probably the cheapest, most efficient way to heat and cool your home.

A GSHP system will operate on the coldest winter nights at efficiencies of 300% to 600%, according to the US Department of Energy. This means it gives off three to six times more BTUs of heat than it uses to produce or transfer the heat. It does not burn any fuel source to produce heat; it simply transfers the heat that is in the ground outside into your home.

While it can be scorching hot or freezing cold outside, several feet below the earth's surface the ground remains at a relatively constant temperature. Ground temperatures can range from 45 to 75 degrees. Like a cave, this ground temperature is warmer than the air in the winter and cooler than the air in the summer. The GSHP takes advantage of this by exchanging heat with the earth through a ground heat exchanger. GSHP systems can work with forced air heating systems or hydronic (in-floor) heating. It can also be a combo of forced air and in-floor heat.

Heating and cooling costs with a GSHP are unbelievably low. One local GSHP installer, Isakson's Plumbing and Heating of Gibbon, has been putting in GSHPs for over 25 years. They have a customer who has separately metered his GSHP for five years. That customer averages \$619 a year for all his heating and cooling of a 2,400 square foot house. Low operating costs like this are very common with GSHP systems.

The only drawback that keeps more people from choosing them is the initial cost to purchase and install the system. Cost is totally dependent upon whether you install a horizontal, vertical or slinky closed loop system or a pump 'n dump open loop system. A horizontal closed loop system is the most common type installed and is often less costly than other types. However, even a horizontal loop GSHP for an average size home can cost a minimum of \$20,000.

Installation basics

Polyethylene tubing rated for a geo system is buried in a trench 8 to 10 feet below ground. Each run of tubing is 400 feet long per one ton of heating/cooling. So an average house requiring five tons of heating and cooling would need 2,000 feet of pipe buried in the yard. A food-grade glycol solution is circulated through the loop to absorb and transfer the heat.

If your yard is not big enough to accommodate this much pipe, then you could consider the slinky version of a horizontal closed loop system. A slinky uses smaller tubing that comes in a big roll and it is



looped and laid in a trench 3 feet wide by 100 feet long per ton. Horizontal systems work best in wet or moist areas of clay or black dirt.

If the ground is sandy and dry, or if you just don't have the space to trench in pipe for either horizontal system, then you may opt for a vertical system. It will be more expensive because of the added expense of hiring a company to drill one closed loop well for each ton of heating and cooling needed, at an average cost of \$1,500 to \$2,200 per well. This does not require a large area of your lawn but it adds to the up-front cost of the project.

There are also options for running the closed loop field in a lake or body of water instead of in the earth. This is less common for residential applications.

Open loop or pump 'n dump systems are more energy efficient but less environmentally friendly because of the waste of resources. They also require more maintenance and require special Department of Natural Resources approval. These systems may no longer be granted permits in the future.

Photos provided by A.R. Engh Heating & Air Conditioning.

GSHP systems have a longer estimated life than average heating systems. The furnace part located inside the house averages a 28-year life and the loop underground is rated for 50 years. Approximately 50,000 geothermal heat pumps are operating in the U.S. but that number is rapidly growing.

Most installers tell us the average payback is about ten years. GSHPs are a great option for homes that use large amounts of fuel oil or propane. Harold Pettis, who has been with Isakson's in Gibbon for 29 years, said that "big old farm houses have the fastest payback because they are the ones that are burning oil like crazy." Installing a GSHP can reduce heating and cooling costs by thousands of dollars a year.

Andy Engh of A.R. Engh Heating & AC of Cokato, has been in the heating business ten years and installing GSHPs for two years. He told us that the payback can be much shorter (2-7 years) for new construction where you need to invest in a heating

Continued on Page 5

One easy phone call to 811 starts the process to get your underground utility lines marked for free. When you call 811 from anywhere in the country, your call will be routed to your local One Call Center. Local One Call Center operators will ask you for the location of your digging job and route your call to affected utility companies. Your utility companies will then send a professional locator to your location to mark lines that they are responsible for.

NOTE: It is the member's responsibility to hire a locator or electrician and pay for location services for any wires located between the meter and the home.



In this home's mechanical room the heat pump unit sits on the floor on the right. It uses hydronic in-floor heat. It is smaller than a standard furnace. If the unit were used on a force air system it would have a furnace fan/air handler and be attached to duct work. In this installation (above), a desuperheater heats domestic hot water using spare heat from the heat pump system.

system anyway and can finance it on a 30-year mortgage. Figuring the payback cost also varies if you plan to operate your heat pump uncontrolled on the regular electric rate or operate it with an automatic backup furnace (oil, gas, or electric storage) on the Dual Fuel Program. Each consumer needs to calculate which method is most economical for them, based on an estimated 250 hours of Dual Fuel control time per winter season.

Both of the contractors we talked to sell Econar brand heat pumps. That brand is designed and sized for cold weather climates like Minnesota. They cautioned consumers to be careful of brands that are not designed for northern climates as they may not provide 100% the heat that you need.

What surprises homeowners who install GSHP systems the most? The amount of energy savings, how quietly the unit operates and the consistent heat, seem to be the biggest pluses GSHP owners comment about.

Desuperheaters are waste heat recovery devices that can be installed as part of the heat pump system to provide domestic hot water. Once installed, they can provide a large amount of domestic hot water at about 130 degrees for practically no cost, except for the cost of circulating the hot water. These units are not recommended for use with off-peak storage water heating systems.

Please do not confuse geothermal or ground source heat pumps with the very common air source heat pumps. Air source units operate at efficiencies up to 300 percent, which is great, but not as efficient as a GSHP. Air source units cost less, have no pipes buried in the ground, and require a backup furnace.

INDUSTRY

News

Lieberman-Warner climate change legislation fails

On June 6, the U.S. Senate voted not to move forward on the Lieberman-Warner Climate Security Act. Had the legislation passed, studies showed that electricity and gas prices would have risen substantially. A U.S. Energy Information Administration (EIA) analysis projected that under this bill there would be increases in Americans' average annual household energy bills of up to \$325 in 2020 and \$723 by 2030. The EIA analysis found that the bill would lead to higher coal, natural gas and petroleum prices.

While this bill will not move forward in its present form, it is expected that further climate change legislation will be debated in 2009 as both presumptive presidential candidates - Sen. Barack Obama and Sen. John McCain - have said they favor a cap and trade approach to reducing carbon dioxide emissions.

GreatRiver News, June 2008

Greenpeace founder comes full circle on nuclear energy

Dr. Patrick Moore, a founding member of Greenpeace, reconsiders the global benefits of nuclear energy in the latest edition of ElectricTV.net. Says Dr. Moore, now chairman and chief scientist of the Vancouver-based consultancy Green Spirit Strategies, the protest against nuclear energy that began in the 1970s was "so focused on nuclear weapons and nuclear war that we lumped all things nuclear in the same category as being evil. We made the mistake of not recognizing that nuclear energy was a beneficial use, [that] it was a clean energy source that does not produce greenhouse gas and air pollution.

-Press Release

Air conditioning use grows in the U.S.

Belinda Manolis lives in a Twin Cities suburban rambler with her children and husband and says they've just turned on the air conditioning for the season. She grew up in a northern Twin Cities suburban family home without AC. "When it became really unbearable in the drought years of the late '80's we'd just put out our sleeping bags in the basement and sleep there if we needed to," she says.

The picture these days is very different. A government survey two decades ago found 25 percent of the households in our region didn't have air conditioning. Now that number is down to 8 percent with 92 percent of the households reporting they have either central or window air conditioning.

-Minnesota Public Radio

How much of the power I receive comes from wind?



As Americans' energy awareness increases, more attention is being placed on renewable sources, such as wind. Have you ever wondered if you are purchasing wind energy from your Cooperative? The answer is "Yes!"

Our wholesale power supplier Great River Energy (GRE), currently purchases the output of five wind projects in Minnesota, for a total of 218 megawatts (MW) of renewable energy. To demonstrate their commitment to renewable energy resources, GRE uses electricity generated by their own 160-foot, 200-kilowatt wind turbine and photovoltaic panels installed in their new Maple Grove facility.

At this time, GRE purchases energy from the following wind projects:

- The 100 MW Trimont Area Wind Farm — Minnesota's first commercial-scale, landowner-developed wind farm. Forty-Three landowners in Jackson and Martin counties partnered with PPM energy and GRE to develop the project.

- The 100 MW Prairie Star Wind Farm in Mower County, Minnesota — The 61 turbines generate enough electricity to power approximately 36,000 homes.

- GRE also purchases the output of three smaller Minnesota wind projects located in Chandler, Dodge Center and Jackson County.

New wind project

GRE has agreed to purchase all the wind power generated from the Elm Creek Wind Farm near Trimont, in southern Minnesota. Construction of this proposed 99 MW wind farm is expected to begin in the fall of 2008.

In addition, the power we purchase from GRE includes refuse-derived fuel and hydropower. GRE is further exploring ways to diversify its energy portfolio by exploring biomass, fuel cells and other technologies as they become available. As a result, GRE is on track to reach the goal set by the Minnesota Legislature to generate 25 percent of their energy from renewable sources by the year 2025.

Heartland Community Action is offering foreclosure counseling

If you are a resident of McLeod, Renville, Meeker or Kandiyohi County and you are worried about:

- your next house payment
- your home equity payment
- your interest rate changing
- ramifications of already missing a house payment or two

Then help may be available for you at Heartland Community Action.

Heartland Community Action has recently received funding to provide foreclosure counseling. This is part of a national and state effort to provide foreclosure mitigation counseling to homeowners at risk of losing their home. While their services may not remedy every situation, Heartland hopes their information will help families understand the foreclosure process. Heartland can provide individualized counseling services including advocacy services between the homeowner and the mortgage lender and even budgeting assistance. Heartland can provide referrals and community resource information to help families work towards a plan of stabilization.

Call Heartland Community Actions Energy Assistance Division at 1-800-992-1710.

You may qualify for weatherization services

If you are a resident of McLeod, Renville, Meeker or Kandiyohi County and you are eligible for energy assistance (fuel assistance), you may also be eligible for weatherization services. Check with Heartland Community Action Energy Assistance at 1-800-992-1710 to apply. If you reside in Carver County, call Scott-Carver-Dakota Community Action Agency in Shakopee at 952-496-2125 to find out about their energy assistance and weatherization program. If you live in Sibley County, call Minnesota Valley Action Council at 1-800-767-7139.

Heartland Community Action Agency, Inc.

409 19th Avenue SW, P.O. Box 1359
Willmar, MN 56201

Name: _____
Address: _____ City: _____
Physical Address of Property _____:
Phone Number: _____

WEATHERIZATION APPLICATION

(Este formulario es su aplicación para el programa de Weatherization)

The Weatherization Program goal is to reduce home energy costs to eligible households by improving the energy efficiency of their homes while ensuring their health and safety. A household must be eligible for Energy Assistance Program for the current year to be considered for the Weatherization Program. The Program prioritizes services to the elderly, people with disabilities, high energy consumers, and families with young children. During a Weatherization Audit, the Housing Inspector evaluates the home as a system comprised of the building structure, the mechanical systems, and the residents. These three elements are interactive and interconnected.

Weatherization services include:

- Energy conservation education
- Home energy audit (home evaluation) to determine which energy saving measures are appropriate, emphasizing the most cost-effective measures and those which are essential for the health and safety of the occupants. Diagnostic equipment, such as blower door, infrared camera, and manometer, is used to detect air infiltration, duct leaks, and pressure imbalances in the home. These measures could include:
 - Attic and wall insulation
 - Air infiltration and bypass sealing
 - Test, repair, and/or replace home mechanical systems to ensure efficiency and safety.
- Final inspection to ensure all work is performed correctly and satisfactorily.

A house can be weatherized one time only. If your home was weatherized after December 1993, your home would not be eligible for services again. If you are interested in Weatherization services, please complete the following questions and **return this form to: HCAA, ATTN: Housing Coordinator, P.O. Box 1359, Willmar, MN 56201.**

Is there anyone in household that is handicapped? Yes No
Is there anyone in household over age of 60? Yes No
Has your house been weatherized? Yes No Don't Know
If yes, When? _____
What type of fuel do you use to heat your home? Propane Natural Gas

Renters: If interested, you will need to provide the name, address and contact information of your landlord.

CEILING FANS ARE ENERGY EFFICIENT VENTILATION

Circulating fans include ceiling fans, table fans, floor fans and fans mounted to poles or walls. These devices create a wind chill effect that will make you more comfortable in your home, even if it is cooled by natural ventilation or air conditioning. Ceiling fans are considered the most effective of these fans.

If you use air conditioning, a ceiling fan will allow you to raise the thermostat setting about 4 degrees F with no reduction in comfort. During only moderately hot weather, ceiling fans may allow you to avoid using your air conditioner altogether. Install a fan in each room that needs to be cooled in hot weather.

Ceiling fans are only appropriate in rooms with ceilings at least eight feet high. Fans work best when the blades are seven to nine feet above the floor and ten to twelve inches below the ceiling. Fans should be installed so the blades are no closer than

8 inches from the ceiling and 18 inches from the walls.

Larger ceiling fans can move more air than smaller fans. A 36-inch or 44-inch diameter fan will cool rooms up to 225 square feet, while fans that are 52 inches or more should be used in larger rooms. Multiple fans work best in rooms longer than 18 feet. Small and medium sized fans will provide efficient cooling in a four to six-foot diameter area, while larger fans are effective up to ten feet. A larger blade will also provide comparable cooling at a lower velocity than a smaller blade. This may be important in areas where loose papers or other objects will be disturbed by a strong breeze. A more expensive fan that operates quietly and smoothly will probably offer more trouble-free service than cheaper units. Check the noise ratings, and if possible, listen to the fan in operation before you buy it. When buying window fans, look for the ENERGY STAR® label. Fans that earn the label move air 20 percent more efficiently, on average, than standard models.



Appliance rebates

Members of McLeod Cooperative Power may receive a \$25 Energy Star rebate for purchase of a new dehumidifier, refrigerator, freezer, or clothes washer. Window air conditioners and mini-split systems that do several rooms are a \$35 rebate.

Members may also receive a rebate for each Energy Star central air conditioner or

heat pump that has a SEER rating of 13 or higher and is installed on co-op lines by a contractor that is certified to do "quality installations." Contractors that have achieved the quality installation certification are listed on MCPA's web site at www.mcleodcoop.com on the Partners page. Just click on the qualified contractor title.



Call the energy experts at MCPA for details at 1-800-494-6272.

Rebates	Central Air Conditioners	Air Source Heat Pumps
SEER 13	\$30	\$30 - \$180
SEER 14	\$180	\$180 - \$330
SEER 15	\$280	\$280 - \$430
SEER 16 or higher	\$330	\$330 - \$480

Additional rebate of \$150 for any air source heat pump connected to the Dual Fuel and Cycled Cooling Programs.

Marathon Water Heaters

- Lifetime limited tank warranty —6-year parts warranty
- Highest energy efficiency rating with Envirofoam® insulation
- Designed for easy installation. There's no need for an anode rod

Available in 50-gallon, 85-gallon and 105-gallon capacities. For sale to electric members and the general public.

Call or stop by the Cooperative today. Speak with one of the Energy Experts on programs and rebates designed to save you money and conserve energy.



Comparative energy costs for space heating

Electricity (Cents/kWh)	Fuel Oil Regular Furnace (\$/Gal.)	Fuel Oil Super Efficient Furnace (\$/Gal.)	Propane Regular Furnace (\$/Gal.)	Propane Super Efficient Furnace (\$/Gal.)	Natural Gas Regular Furnace (\$/MCF)	Natural Gas Super Efficient Furnace (\$/MCF)
3.0	0.74	0.98	0.48	0.72	5.27	7.91
3.2	0.79	1.05	0.52	0.77	5.62	8.44
3.4	0.84	1.12	0.55	0.82	5.98	8.96
3.6	0.89	1.18	0.58	0.87	6.33	9.49
3.8	0.94	1.25	0.61	0.92	6.68	10.02
4.0	0.98	1.31	0.64	0.97	7.03	10.54
4.2	1.03	1.38	0.68	1.01	7.38	11.08
4.4	1.08	1.44	0.71	1.06	7.74	11.60
4.6	1.13	1.51	0.74	1.11	8.09	12.13
4.8	1.18	1.58	0.77	1.16	8.44	12.66
5.0*	1.23	1.64	0.81	1.21	8.79	13.18
5.5	1.35	1.80	0.89	1.33	9.67	14.50
6.0	1.48	1.97	0.97	1.45	10.55	15.82
6.5	1.60	2.13	1.05	1.57	11.43	17.14
7.0	1.72	2.30	1.13	1.69	12.31	18.46
7.5	1.85	2.46	1.21	1.81	13.18	19.78
8.0	1.97	2.63	1.29	1.93	14.06	21.10
8.5	2.09	2.79	1.37	2.05	14.94	22.41
9.0	2.22	2.95	1.45	2.17	15.82	23.73
9.5	2.34	3.12	1.53	2.29	16.70	25.05
10.0*	2.46	3.28	1.61	2.42	17.58	26.37

The above figures are based on the assumptions and formulas listed below.

*5.0¢ per kWh is McLeod Cooperative's off-peak rate

10.0¢ per kWh is McLeod Cooperative's regular rate

Formulas

Alternate fuel price to electric rate conversion formula:

$$(\text{Fuel Price}) \div (\text{Efficiency}) \times (341,300) \div (\text{Btu Heat Content}) = \text{Electric Rate}$$

Example of \$0.72/Gal. Propane to Electricity with a Super Efficient Furnace:

$$(0.72) \div (0.90) \times (341,300) \div (91,600) = 3.0\text{¢kWh}$$

Electricity rate to alternate fuel price conversion formula:

$$(\text{Electric Rate}) \times (\text{Efficiency}) \times (\text{Btu Heat Content}) \div (341,300) = \text{Fuel Price}$$

Example of 2.9¢/kWh Electricity Rate to #2 Fuel Oil with a Regular Furnace:

$$(3.0) \times (0.60) \times (140,000) \div (341,300) = \$0.74/\text{Gal.}$$

North Dakota air quality earns American Lung Association distinction

The American Lung Association's "State of the Air" annual report for 2008 was released on May 1. It gave North Dakota Counties an "A" grade for lack of ozone, also known as smog. Five counties received "A" grades for lack of particulates, also known as soot.

The counties, which are chosen because of major population centers or proximity to national parks and grasslands, include Billings, Burke, Burleigh, Cass, Dunn, McKenzie, Mercer and Oliver. The last two counties are home to five of the state's seven power plants and the nation's only lignite-to-natural gas synfuels plant.

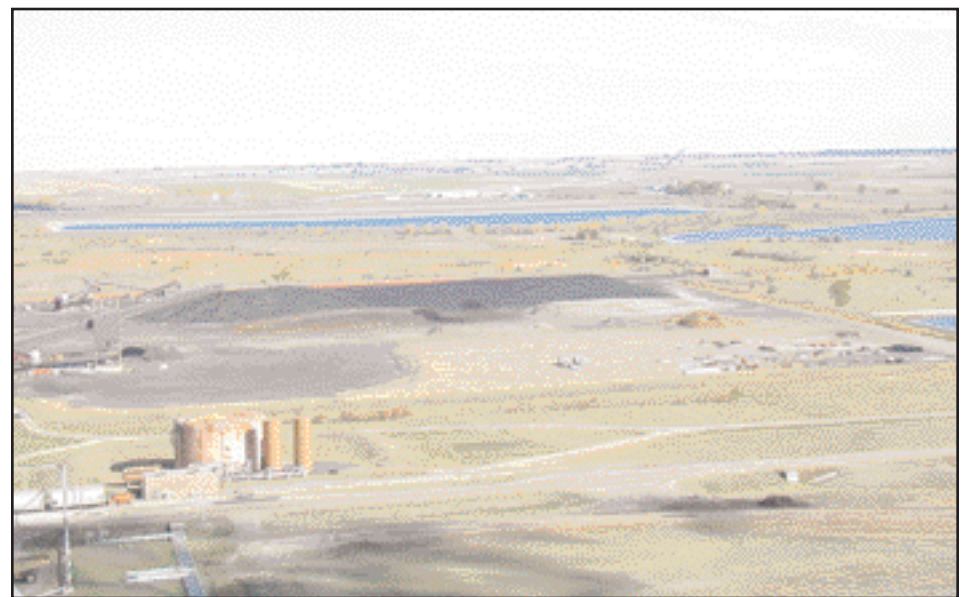
"North Dakotans breathe some of the cleanest air in the United States, in part because of the emissions control technologies at the state's seven coal-based power plants," said Steve Van Dyke, communications director for Partners for Affordable Energy. "The lignite industry provides 28,000 jobs in North Dakota, \$2.8 billion in total business activity, \$100 million in state taxes and clean, affordable energy to more than two million people in the Upper Midwest while

ensuring that mines and plants are compatible with the environment."

Utilities in North Dakota have invested more than \$800 million in technology to protect the environment and spend \$60 million annually to operate it. Four power plants have announced plans to invest another \$700 million in new technologies to further reduce emissions.

The American Lung Association is not alone in its assessment of North Dakota's air quality. The U.S. Environmental Protection Agency (EPA) has also designated North Dakota as one of only 13 states to meet all of the nation's strict federal ambient air quality standards. To see the American Lung Association's 2008 report, log on to www.stateoftheair.org.

Coal Creek Station and Stanton power plants, which provide power to our members, are both located in North Dakota. Any member who wishes to view first-hand the fresh, pristine air and clean environmental conditions of North Dakota (and tour our Coal Creek Station power plant) are encouraged to sign up for the tour

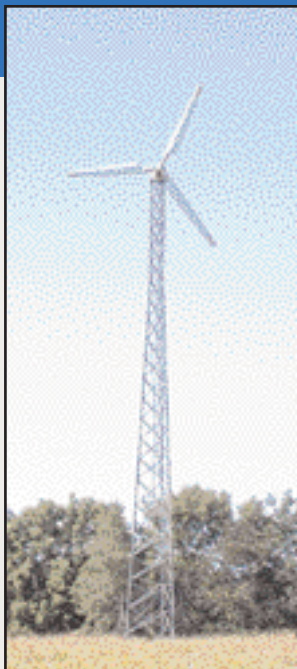


A picture from the roof of Coal Creek Station, our power plant located near Underwood, ND. The photo overviews miles of reclaimed land adjacent to the plant and the Falkirk Coal Mining Company in the distance.

we offer each summer. North Dakotans have a several-hundred year supply of coal resources available to produce electricity at an affordable cost. They are willing to build more coal generation to supply surrounding states with energy using new technologies that reduce emissions to even less than they are today. North Dakotans understand that coal can be good for their economy without harming their environment, air, or wildlife. Maybe it's time the Minnesota politicians

and special interest lobbyists who oppose any coal generation in neighboring states and have tried to impose carbon taxes on electricity produced in neighboring states, take a visit to the Dakotas to see first-hand how clean the air, water and environment can be. They should visit those counties with coal power plants that have cleaner air than Minnesota. North Dakota rated significantly better than Minnesota in the American Lung Association report.

Considering a small wind system?



These days attention is often focused on large, utility-scale wind projects, which often produce enough electricity to power whole towns. Over the past year or two, McLeod Cooperative Power has been fielding questions about the practicality of installing the newer, small-scale wind turbines on private property.

Advancements in small wind technology have boosted efficiency (how well the turbine converts wind to electricity) and the most typical residential turbines today generate around 10 kilowatts (kW) according to the American Wind Association.

Installing a system requires a sizeable up-front investment and as a rule of thumb, the cost of

installing and connecting a turbine to the grid ranges from \$4,000 to \$10,000 per kilowatt (kW), according to the National Rural Electric Cooperative Association, which represents electric cooperatives nationwide. In our area, the average 20 kW turbine project has been in the range of \$70,000 to \$90,000 total cost. Besides the cost of the system itself, other expenses will include costs for permitting, testing, concrete base, grid connect converter, lightning protection and enclosures. Minnesota turbine owners are required to carry at least \$300,000 in liability insurance. The consumer putting up a turbine bears the cost of metering and service upgrade expenses and for the full cost of building a service to the turbine

site if it will not be interconnected at the home's existing meter site.

To determine if a small wind turbine is right for you, do your homework. Just because it is windy a couple of days in a row does not mean your site has sustainable wind speeds all year. You should hire an expert to conduct wind measurements for at least a year before installation. For a general idea, wind resource maps make it easy to gauge how wind typically will blow in your area, go to the Minnesota Department of Commerce website (www.commerce.state.mn.us) for wind speed maps and a wealth of other wind resource information. Also talk to other wind turbine owners about maintenance, possible noise problems and issues involving power quality.

Keep in mind that small turbines, like any type of backyard generation, must meet cooperative interconnection standards before excess power can be sold back to the cooperative. An electrical inspection is also required before interconnection to insure that it is in compliance with Minnesota and national electrical codes.

The rate that McLeod Cooperative Power currently pays its members for small co-generation accounts (less than 40 kW in size) is 10.31 cents per kWh in summer and 9.31 cents per kWh the other nine months of the year. As the retail electric rate or power cost adjustment changes, the small co-generation rate changes to the same amount.

If you have questions on interconnection of a small wind turbine, please call Sue Pawelk at the Cooperative. Helpful information packets are available upon request for members considering doing a small wind project.