

# GreatRiver NEWS

For the Member Systems, Friends and Employees of Great River Energy

## EPA takes over responsibility for N.D. air quality plan

Section 169 of the Clean Air Act was enacted to establish a national visibility protection goal. It calls for the U.S. Environmental Protection Agency (EPA) to establish rules to ensure reasonable progress towards meeting this national goal. It also gives states the primary authority to implement the visibility

The intent of the regulation is to return the ambient air clarity to “natural background” levels by 2064.



The goal of regional haze regulation is to improve visibility in Class I areas, such as Theodore Roosevelt National Park in western North Dakota.

protection requirements through state implementation plans. The EPA’s role is to provide oversight and assume authority if a state’s plan is inadequate. The EPA recently announced its intention to exercise this authority. On Sept. 21, the EPA published its determination to approve part of North Dakota’s state implementation plan and override certain aspects regarding the implementation of

regional haze regulations for several power plants with respect to nitrogen oxides (NOx). Known as a federal implementation plan, the EPA’s oversight will apply to NOx regulation of Great River Energy’s Coal Creek Station units.

“The goal of regional haze regulation is to improve visibility in Class I

areas, such as national parks and wilderness areas,” said Great River Energy Environmental Services Manager Mary Jo Roth.

It is not a health-based requirement. The intent of the regulation is to return the ambient air clarity to “natural background” levels by 2064. In the meantime, eligible facilities

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must demonstrate reasonable progress toward reducing those emissions that are known to contribute to haze, such as sulfur dioxide (SO<sub>2</sub>), NOx and particulate matter.

In its state implementation plan, North Dakota determined the necessary NOx reductions would be achieved at Coal Creek Station as a result of Great River Energy’s DryFining™ system and the installation of further traditional controls. After investing millions into the first-of-its-kind technology, the plant is expected to emit 40 percent less SO<sub>2</sub> and 20 percent less NOx than prior to the installation.

EPA has proposed an emissions limit that would require the use of selective non-catalytic reduction (SNCR) technology at Coal Creek Station. Because NOx emissions from Coal Creek Station have already been significantly reduced as a result of the DryFining installation, SNCR would have minimal impact on visibility and is not a cost-effective technology.

The EPA is currently accepting public comments on its determination and hosted a public hearing in mid-October. Great River Energy testified at the hearing and provided written comments to the EPA.

Learn more or get involved by visiting [stopEPAnd.com](http://stopEPAnd.com).

## Busloads of employees help Minot flood recovery

Great River Energy employees got a first-hand look at the flood damage in Minot, N.D., while volunteering to help restore a dwelling that recently housed four Minot families.

The volunteers demolished the interior of a fourplex and prepared it to be cleaned and rebuilt.

Two buses filled with Great River Energy employees descended upon

Minot in early September to help repair a home destroyed by the flooding.

En route to Minot, employees passed through areas surrounding the Souris River to find deserted neighborhoods, dirt dikes being hauled away and homes wearing water level marks on the exterior.

The volunteers demolished the interior of a fourplex and prepared it to be cleaned and rebuilt. After two days of hard work, the interior demolition was complete and the building was ready for a high-pressure sanitizing

cleaning. The building is expected to be completed before the snow falls and provide shelter for four families.

Great River Energy coordinated the volunteer event with All Hands Volunteers, a nonprofit organization that provides hands-on assistance to survivors of natural disasters around the world.

The disastrous flood damaged more than 4,000 homes as well as businesses, schools, churches and other community buildings, leaving more than 11,000 people homeless.

## G&T data show construction growth in 2010

The Cooperative Finance Corporation (CFC) released the results of its 2010 G&T Trend Report to participating generation and transmission cooperatives (G&T). The results reflect a year of continuing economic recovery and growing electric demand. The average times interest earned ratio (TIER) reached 1.47 in 2010, down from 1.73 in 2009. Modified debt service coverage (MDSC) was 1.15, down slightly from 1.17 in 2009. Equity as a percentage of assets continued a climb maintained over at least the past six years, reaching 16.1 percent in 2010 – up from 15.9 percent the prior year. Construction work in progress also increased in 2010, to 12.5 percent from 10.8 percent in 2009. The analysis, published since 1982, is similar to CFC's annual Key Ratio Trend Analysis for distribution systems, and provides G&T systems with key performance indicators for comparison with national figures.

# Elk River energy project hosts environmental regulators



At the Elk River Resource Processing Plant municipal solid waste is processed to create a refuse-derived fuel which is used to generate renewable electricity.

In late September, Great River Energy hosted representatives from the city of Becker, Sherburne County and the Minnesota Pollution Control Agency on an in-depth tour of the Elk River Resource Recovery Project (ERRRP).

The ERRRP is a project comprised of three Great River Energy facilities. Attendees first visited the Elk River Resource Processing Plant, a facility that processes municipal solid waste to remove valuable recyclable metals and

create a refuse-derived fuel (RDF). The group then toured Great River Energy's Elk River Energy Recovery Station, the 33-megawatt power plant where the RDF is combusted to generate renewable electricity.

As a waste-to-energy plant, the Elk River Energy Recovery Station meets the definition of biomass energy in Minnesota, a renewable energy classification.

The Elk River Resource Processing Plant processes municipal solid waste to remove valuable recyclable metals and create a refuse-derived fuel.

The group then visited the Becker Ash Landfill, the final destination for the un-combusted portion of the RDF. This represents a small fraction of the municipal solid waste that is delivered to the ERRRP.

The purpose of the tour was to inform regulators of future plans for the project.

# U.S. House considers protection of ash reuse

The U.S. House of Representatives is considering a bill that would prevent the Environmental Protection Agency (EPA) from regulating coal ash as a "hazardous waste," provide regulatory certainty and protect the beneficial use of coal ash.

Great River Energy markets much of the fly ash from its Coal Creek Station

The ash is used as a replacement for Portland cement in concrete, as a soil stabilizer and in other industrial applications.

and Stanton Station power plants. The ash is used as a replacement for Portland cement in concrete, as a soil stabilizer and in other industrial applications. House Resolution 2273 would prevent the EPA from regulating coal ash as a hazardous waste. A hazardous waste designation would add huge costs to consumer electric bills and potentially eliminate Great River Energy's beneficial coal ash recycling efforts.



Fly ash is used throughout the Upper Midwest to replace a portion of Portland cement in concrete production, making the concrete more durable. A large concrete dome (pictured at right) collects fly ash produced during electricity generation at Great River Energy's Coal Creek Station power plant.

In addition, Citizens for Recycling First, an organization that supports recycling coal ash as a safe, environmentally preferable alternative to disposal, is gathering signatures on a White House petition that encourages coal ash recycling and opposes a "hazardous waste" designation for coal ash. Learn more by visiting [recyclingfirst.org](http://recyclingfirst.org).

# Economic development boosts rural economies

One of the guiding principles of cooperative businesses states that, in addition to providing good service to member owners, cooperatives must aid in the development of sustainable communities. One of the ways Great River Energy embodies that principle is by helping ensure the communities it serves have healthy economies.

Great River Energy recently received notice that three loan applications and one grant application that have been submitted to the United States Department of Agriculture (USDA) for funding have been approved. Although each project originated at a Great River Energy member cooperative, the

the products and services they deliver.”

Twenty-one utilities in 11 states received loans and grants to help rural businesses expand and create jobs. In Minnesota, those recipients included:

- Federated Rural Electric Association: \$740,000 loan to expand a business in Jackson
- Lake Region Electric Cooperative: \$320,228 loan and \$300,000 grant to purchase medical equipment and furnishings for a new medical clinic in Pelican Rapids
- Steele Waseca Cooperative Electric: \$740,000 loan to construct a manufacturing plant

Great River Energy represents its member cooperatives in economic development activities ranging from the municipal to federal level. Most electric co-ops don't have the staff to dedicate to economic development, but Great River Energy is a resource and has a voice to speak up for their interests.

Great River Energy provides advocacy for rural economic development among its member cooperatives, consultation to local communities and independently operates several loan programs that provide financial incentives for rural economic activity.

economic development expertise of Great River Energy staff aided in the pursuit of funding.

In total, the projects will provide more than \$2 million to economic development projects in the service areas of Great River Energy's member cooperatives.

“These loans and grants help cooperatives and utilities support local projects that create jobs and improve rural economic conditions,” said Agriculture Secretary Tom Vilsack in a news release. “USDA is proud to be a partner in the effort to bolster these cooperatives and help them win the future by increasing the value and appeal of

# Cooperatives a force in nation's economy

Every October, cooperative businesses celebrate their work, the cooperative business model and their role in the community and economy.

This year's theme “Cooperative Enterprises Build a Better World” encapsulates what has long been the cooperative promise. After a year



that has posed economic and financial challenges for people around the world, this theme honors cooperatives' philosophy of putting people before profits in order to meet the needs of members and the communities they serve.

Cooperatives are unique because they

are not-for-profit, democratically controlled, member-owned enterprises. The cooperative spirit has been embraced by 130 million members, who are served by 29,000 cooperatives across the United States.

Cooperatives play a vital role in the economic development and stability of the communities they serve. A philosophy of member service lies at the core of all cooperatives, and it's an advantage that has distinguished co-ops for more than 150 years. Socially responsible business is not a fad with cooperatives; it's just how co-ops work.

The cooperative movement traces its roots to a store started by weavers in the town of Rochdale, England, in 1844. The “Rochdale Principles” were introduced into the United States in 1874 and have since led to the creation of cooperative businesses ranging in size from small storefronts to *Fortune* 500 companies

## The Rochdale Principles hold that a cooperative must provide:

- Voluntary and open membership
- Democratic member control
- Members' economic participation
- Autonomy and independence
- Education, training and information
- Cooperation among cooperatives
- Concern for community

## National co-op group visits Minnesota

Minnesota recently hosted the organization that represents electric cooperatives across the country when the regional meeting of the National Rural Electric Cooperative Association (NRECA) convened in Minneapolis.

Representatives from electric cooperatives in six Midwestern states attended presentations about future mix of generation sources and the direction of national energy policy. More than 1,000 people took part in a panel discussion about the culture of safety in electric cooperatives.

NRECA is the national service organization for more than 900 not-for-profit rural electric cooperatives and public power districts providing retail electric service. NRECA's members include consumer-owned local distribution systems and 66 generation and transmission cooperatives, like Great River Energy, that supply wholesale power to their distribution cooperative member owners.

## FERC chair praises electric co-ops

When it comes to energy efficiency, electric cooperatives should “keep doing what you're doing, and do more of it,” according to Federal Energy Regulatory Commission (FERC) Chairman Jon Wellinghoff.

The FERC chief called for continued efforts to assist consumers in accessing information about energy efficiency, as well as low-cost financing to incorporate such efficiency into homes and businesses.

Wellinghoff, FERC chairman since 2009, said that he anticipates continuing progress in energy efficiency, due in large part to advanced technologies that provide more data about consumers' use of energy.

# MemberCo-op CORNER

## CO-OP TEACHES CONSERVATION

Dale and Marie Katterhagen have a passion for conservation in its many forms, and their farm near Browerville, Minn., exemplifies that. This is especially true one day each year in September, when the Katterhagen farm becomes a classroom for dozens of sixth graders in Todd County.

One station is staffed by Todd-Wadena Electric Cooperative. At this year's event, Todd-Wadena employees Mary Williams and Tim Pavék engaged students in a game that revealed efficient lifestyle

choices in each of several common scenarios. For example, they were asked, "Which appliance uses less electricity to cool the home, an air conditioner or a heat pump?" Flipping a switch the correct way (heat pump) lit up a bright red bulb – a compact fluorescent, of course.

Students were rewarded for their participation with a coupon for a free Blizzard®, compliments of Dairy Queen.

The Katterhagens have been hosting Conservation Days at their farm for the past 17 years, helping to educate more than 4,000 students.

## CROW WING SUBSIDIARY COMPLETES MINING TEST

An electric cooperative sitting on a store of valuable metal is one step closer to mining. Cooperative Mineral Resources (CMR), a subsidiary of Crow Wing Power, recently completed the extraction phase of a manganese demonstration project in Emily, Minn.

The project is testing a mining method that uses groundwater to retrieve manganese ore from 200 to 400 feet underground.

Project planners will next determine whether that mining method will retrieve enough manganese ore to support commercial operation without harming the environment.

In 2008, CMR purchased the land and mineral rights to a 12-acre site that contains approximately 1 billion pounds of the richest manganese ore known in North America.

Manganese is used in the steelmaking industry and is being considered for new environmentally friendly technologies, including power plant emissions reduction, air and water pollution abatement, water purification and rechargeable car batteries.

## Testing new technology

Fifteen cooperatives are testing a new technology that may reduce the energy needed to heat water. Known as heat-pump water heaters, the technology moves heat from one place to another, rather than generating heat.

Inside a heat pump water heater, a refrigerant passes through an evaporator where it absorbs heat from the air. The heated refrigerant then moves a compressor that raises its temperature before it is used to heat the water in the tank. As a result, the unit uses roughly half the electricity of a conventional electric water heater.

Water heating can account for up to 25 percent of the energy consumed in a home, according to the U.S. Department of Energy.

Heat pump water heaters cost about \$1,500 to \$2,000 and have a bit more complicated installation process than a standard water heater.



Mary Williams, Todd-Wadena's member services representative, leads a group of sixth graders in a game that shows how to use energy wisely in the home.

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