

November 2013

Serving the Elkhorn River Valley since 1940

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### \*\*Irrigators-Please Take Note\*\*

This is a reminder that all electric irrigation motors (50 hp and above)

need to have a Power Factor Corrective Capacitor (PFCC) installed and verified by June 1, 2014, to avoid a \$3.00 per



horsepower fee for the 2014 irrigation season and each year thereafter until the PFCC is installed and verified.

A Power Factor Corrective Capacitor is a device that is installed on the pump panel to enhance the efficiency of motor operation on the electric system. Also, PFCCs have important customer benefits, such as:

- *Guarding against low voltages on startup.*
- Assisting in keeping your system's voltage at a proper level while operating.
- Reducing service amperage and heating due to a poor power factor.
- Lessening the chance of dimming your neighbor's lights when the motor starts.
- Prolonging the life of your motor and electrical equipment.
- Reducing the demand (measured horsepower) of your irrigation service.
- Reducing consumption of kilowatthours by utilizing more efficient practices.
- Maximixing the output of the electricity purchased.

If you have installed a PFCC on your irrigation service, or if you have any questions, please call our office at 1-800-675-2185.

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## No Rate Increase for 2014

The Elkhorn Rural Public Power District board of directors took action at their October meeting to freeze the electric rates for 2014. The action was made possible through a continuing effort by ERPPD personnel to focus on increasingly more efficient operations, coupled with a zero percent rate increase from Nebraska Public Power District, our power supplier.

The rate freeze for 2014 follows a series of annual rate increases dating back to 2007. Those increases were necessary to keep up with the escalating cost of power, fuel, and materials. The increase in power costs was attributed to a doubling of fuel used to generate electricity, along with the costs associated with increased environmental regulations. Power costs make up nearly 65% of the expenses of the district, which explains why ERPPD rates are so closely tied to the cost of power.

ERPPD board, management, and employees are to be commended on their efforts to control costs and finding ways to increase the efficiency of the operation of the district. We will continue to strive to keep costs down without jeopardizing the integrity and reliability of the distribution system. This is in accordance with our mission statement: "Elkhorn Rural Public Power District is dedicated to providing **SAFE**, **RELIABLE**, **COST-EFFEC-TIVE** electricity to **ALL** customers."

## As of 09/05/2013, the state's "Move Over" Law now includes Utility Vehicles

The Nebraska Legislature passed LB 154 during the 2013 session, which added utility vehicles doing work from the roadway to the existing "Move Over" law.

The law basically states that on roadways with two or more lanes, drivers must either switch to an adjacent lane or slow down and proceed with caution around the emergency or utility vehicle. The emergency vehicle, utility vehicle, or roadside assistance vehicle shall have emergency lights, strobes, or flashers operating to notify drivers of their presence.



General Manager Tom Rudloff states, "The safety of the folks that work along our highways every day is extremely important. LB 154, which became law on September 5, 2013, helps protect our workers. Please help us keep our people safe; slow down and move over if possible when approaching utility vehicles. Thank you for your assistance in keeping our workers safe."

> ERPPD offices will be closed on <u>Veterans Day</u>-Mon., Nov. 11 <u>Thanksgiving</u>-Thu., Nov 28 & Fri., Nov 29

# **OPERATIONS NEWS**

## Mutual Aid Provided to Northeast Nebraska Public Power District

Elkhorn Rural Public Power District sent personnel and equipment to assist in the restoration efforts of Northeast Nebraska Public Power District, based in Wayne, Nebraska.

**Construction and Maintenance Projects** 

Following are the latest highlights from the Operations and Maintenance department:

- ERPPD crews constructed a new 3-phase line south of Elgin along Highway 14. The line will serve to strengthen the backbone of the electrical distribution system in the area, as well as to serve as a tie-line between our Sub 3, located three miles east of Elgin, and our Sub 19, located five miles west of Elgin. This will allow our operations personnel to better backfeed customers in the area whenever it is necessary during planned or unplanned outages and line switching.
- Another project that has kept the crews very busy this summer and fall includes all the line moves, underground and line drops associated with the transmission line being built by Invenergy to carry electricity generated at the Prairie Breeze Wind Energy Farm project near Elgin, to the transmission grid.

NNPPD suffered extensive damage to their distribution lines as a result of a massive tornado that ripped through their service area on Friday, October 4, 2013. Six linemen traveled to Wayne Saturday morning to help restore power to NNPPD customers, and continued to assist through Sunday evening.

This is another example of the benefits of the public power system and the willingness to help each other in times of need.

- Planning is underway to convert the city of Clearwater electrical system from a 2400-volt system to a 7200-volt system, which is scheduled for the first half of 2014. This project will allow for tying the city electrical system to the rural system. Tying into the rural system will provide ERPPD personnel the means to feed the city from other substations in the event of planned or unplanned outages.
- The contractor spraying trees in the ERPPD rightsof-way will be finishing up for the year sometime in November, depending on the weather. In 2013, he covered rights-of-way west of Pierce, west of Neligh, and west and south of Tilden. Controlling tree growth early with one person is much more cost-effective than waiting until the trees have grown close to or into the lines, which then requires an entire crew or several crews to clear the right-of-way.

# 'Blinks' signal properly working system

We often hear the question from customers "Why do my lights blink?" The local utility network, known as a distribution grid, is subject to short-term losses of power, and ERPPD takes all possible measures to prevent these occurrences and to minimize the effects to its customers.

Blinking lights can be a result of momentary outages that occur when some type of disturbance exists on the line.

This could be a lightning strike or an automobile striking a pole, or a squirrel or tree branch coming into contact with an energized power line.

When lights blink, it is an indication that the district's equipment is operating properly. If a fault or short circuit happens on a power line, a device called an "oil circuit recloser" (OCR) opens to stop it, then it quickly recloses restoring the circuit.

Although the process is quick—and usually temporary—it may cause your lights to blink, making it neces-



The OCR is essentially a breaker, functioning much like a *WIRE* 

circuit breaker in the electrical panel of your home. It permits power to continue flowing through the line with only a brief interruption of service—rather than causing an extended power outage. If the short or fault continues, the OCR will operate, or "trip" three times before eventually stopping the flow of electricity altogether, causing a power outage, and requiring a manual reset by an ERPPD lineworker. This process protects the lines from damage, cutting off power to the affected section of the line and isolating the problem until it can be repaired.

Although the weather and nature's creatures are beyond ERPPD's control, district customers can lessen the effects and inconveniences of "blinks" when they occur. When purchasing small appliances and digital alarm clocks, consider models with battery back-ups. You may also want to install meter-based surge protection for the major appliances in your home and surge protection with a built-in uninterrupted power supply (UPS) for your computer or other electronic devices, whose "memory" would be lost with a power interruption.

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### NPPD's Gerald Gentleman Station to be part of demonstration project for CO2 capture

A demonstration project involving Nebraska Public Power District's Gerald Gentleman Station will be used as part of a Department of Energy grant to study the potential of a new CO2 capture process.

The Department of Energy is funding \$15 million towards the project that will involve ION Engineering, Inc., based in Boulder, Colo., the University of North Dakota Energy and Environmental Research Center (EERC) located in Grand Forks, N.D., the University of Alabama Department of Chemical and Biological Engineering, and NPPD. Total cost of the project is \$19 million with NPPD's share being in-kind services amounting to \$750,000. This will be the first demonstration project testing ION's unique solvent outside of a laboratory setting.

The EERC identified ION Engineering's solvent as being a potential low-cost solution for carbon capture from the Partnership for CO2 Capture Program. The EERC contacted NPPD to determine interest in hosting a pilot carbon capture project. NPPD is a member of the Partnership for CO2 Capture (PCO2C), a partnership administered by the EERC.

"NPPD is interested in the project because our coal burning generating resources bring significant value to our customers," said NPPD Vice-President and Chief Operating Officer Tom Kent. "We also want technologies that can capture CO2 in a cost-effective manner. Testing such technologies should be done on a larger scale to collect 'real world' data. We are pleased to be a participant in this project and hope to learn if the potential exists to capture carbon and advance the technologies in this area for the power industry."

Initial laboratory test results with the solvent conducted by ION Engineering and the EERC indicate it potentially could be a more cost-effective solution for carbon capture than other solvents currently being proposed or tested. "ION is very pleased to have this opportunity to work with DOE and our project team, which includes some of the world's leading experts in CO2 capture technology and organizations strongly committed to developing sustainable energy solutions," noted Alfred Brown, ION Engineering's CEO and Chairman.

The demonstration project will be operated by ION Engineering and will be designed so that the carbon dioxide capture equipment installed will divert a small percentage of the exhaust gas from Unit 2 at Gerald Gentleman Station, a 700-megawatt unit. Less than one-half of a percent of the exhaust gas will be diverted for carbon dioxide capture and then will be returned to the unit's exhaust. Personnel from the ION Engineering and EERC will monitor the project and analyze testing results.

The project will begin October 1 and will be conducted in three phases (e.g. site prep/design; construction; testing/deconstruction) with each phase lasting approximately 15 months; and concluding June 30, 2017. NPPD will be securing the appropriate permits for the pilot project with the Nebraska Department of Environmental Quality.

NPPD will provide oversight for the engineering, construction, operations, maintenance, safety, security, procurement, environmental permitting, etc., as well as operational support for the test facilities.

### EPA Issues Rule to Curb Carbon from New Power Plants

On Sept. 20, 2013, the Environmental Protection Agency issued a new proposal for capping carbon pollution from new power plants. This rule effectively prevents construction of any new coal-based power plants. Nebraska has a robust portfolio of energy generation sources including coal, nuclear, hydroelectric, natural gas, and renewable energy. Nearly 50 percent of our electricity is generated by coal combustion generators that provide a vital source of low-cost and reliable power.

The proposed EPA regulation is inconsistent with the "all -of-the-above" energy independence strategy the President has outlined in the past and is not in the nation's best interest. It is unachievable and opens the door for special-interest groups that wish to expand this proposal to existing power plants. The adoption of this rule would be devastating to the reliability of our nation's electric power system and greatly increase costs for all consumers.

Once this rule is published in the Federal Register, the EPA will begin to accept public comment. Once that opportunity begins, ERPPD, with the help of the Nebraska Rural Electric Association (NREA), will look to our grassroots supporters to engage and let the EPA know where you stand. You may have already received an email asking you to 'Take Action' and submit your comments.

If you have not received the Take Action Alert, and want to comment on the rule, please use the following link: *www.action.coop/epa*, or call our office at 800-675-2185 or email us at erppd@erppd.com, and we will get you signed up.

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## IRRIGATION

### 2013 Load Control Season in Review

The 2013 Load Control Season for Elkhorn Rural Public Power District was a different year to say the least.

Beginning with the late season startup and then followed by the periodic rains early on, we did not have to control the irrigation wells during the month of June. This seemed to be not all that unusual for the month of June, compared to several past years.

However, starting on Saturday July 6th that all changed with load control necessary through July 24th. Although we actually did not, it really seemed that we controlled almost every day.

Then the season changed again on July 25th and continued through most of August with no load control required, and it looked to be a repeat of June. This again changed on the 20th and 21st of August, but even more so from the 26th through the 31st where two of our four season On-Peak peaks for Elkhorn were set.

The average hours of control for the different rates are noted below.

Rate 38-12 hour control 224.40 average hours of control Rate 37-10 hour control 160.38 average hours of control Rate 36-8 hour control 107.91 average hours of control Rate 35-6 hour control 112.56 average hours of control Rate 34-4 hour control 61.44 average hours of control

An interesting note is that the 2013 load control season had about 68.9% of the number of hours controlled, compared to the 2012 season, for all rates.



We appreciate your patience and understanding throughout the load control season. Now would be a good time to think about the 2014 season, and what control schedule will work for your particular system. If it is feasible for your operation, we encourage you to consider one of the load control schedules listed above for the 2014 season.



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