

# THE WIRE

CURRENT NEWS FROM THE ELKHORN RURAL PUBLIC POWER DISTRICT

August 2016

Serving the Elkhorn River Valley since 1940

Volume 25, Number 8

ERPPD is dedicated to providing **SAFE, RELIABLE, COST-EFFECTIVE** electricity for **ALL** customers.

## WHAT IS SCADA?

Believe it or not, most of us use a Supervisory Control and Data Acquisition (SCADA) system everyday. Do you drive? Consider the dashboard your car's personal SCADA system. From the driver's seat, you can instantly gauge your speed, fuel level and engine diagnostics.

Utility-scale SCADA is similar, because it helps Elkhorn Rural PPD quickly spot and solve power outages – this means safer, more reliable electricity for our customer/owners.

What are the components of a SCADA system? Both hardware and software are used. The software provides the intelligence. It processes the data gathered, allows our

staff Mark Gronau, Energy Service Representative and Kevin Zohner, IT, to program automated responses to particular situations and displays the data in a graphical format so they can easily interpret what is happening in ERPPD's service ter-

ritory.

The hardware consists of sensors that collect data, remote terminal units (RTUs), that monitor the sensors and transmit the data on the SCADA network, actuators that perform **continued on page 2**



*Left, Brian Suckstorf, SCADA Tech, explains SCADA equipment and load management to customers at ERPPD's 75th Anniversary open house in 2015.*

## YOUTH ENERGY LEADERSHIP CAMP

Elkhorn Rural Public Power District sponsored four youth to attend Youth Energy Leadership Camp at the state 4-H camp in the Nebraska National Forest west of Halsey, NE. All participated for the week long camp, July 11 - 15. Colton Beed, Plainview High School, son of Mike and Janet Beed; Alexis Pokorny, Clearwater-Orchard High School, daughter of Bob and Jayne Pokorny; Andrew Steskal, Clearwater - Orchard High School son of Troy and Michele Steskal; Kira Widger, Elgin Public School, daughter of Marty and Lori Widger. All of the youth are pictured on page 2. Jennifer Adams, HR/Corporate Communicator was an adult counselor for the week, as well.

Each youth has different reasons for attending youth camp, but there are some themes that came out in the essays they wrote on why they wanted to come to youth camp: have fun and meet new people; experience what siblings have experienced and find to out more about public power districts and what they do.

Youth Energy Leadership Camp is about having fun, but also learning about operating a power district and having hands-on experience. The first day of the camp a board of directors was elected; they oversaw the operations of the newly formed district. The board then chose a general manager to oversee the committee activities and act as a liaison between the counselors and campers. Every participant had a role in the working of the "power district". . . **continued on page 3**

**SCADA continued from page 1** actions based on data and system commands, and communications gear. Staff members, Brian Suckstorf, SCADA Tech, along with other staff, maintain the hardware for the SCADA system.

So how does the SCADA systems impact you? Let's walk through an example. We want to ensure that everything is operating correctly at all of our 26 substations. Inside the substation, sensors and actuators that are connected to a Remote Terminal Unit (RTU) are installed. A communication link is created between the devices and the office by using secured radio connections.

Mark and Kevin working with our third party vendor, program the operating characteristics they want to monitor and control. At ERPPD, a couple of things we monitor are voltage and breakers. As we continue our example, breakers, known as over current relays or OCR's are activated when something comes in contact with the line. The OCR trips, which you experience as a blink, up to three times and if the line is not clear the fourth time it trips, it stays open and there is no electricity to the line and it creates an outage. These breakers keep the lights on for minor disruptions on the line.

For the SCADA, a display is created that shows where that circuit is open and an outage is occurring and this allows staff to assess the situation and issue commands from their computer to correct the problem or to send out a crew to fix it.

The system is flexible, so staff can automate some controls, which helps with efficiencies, or opt for human intervention for especially important actions.

Another way that ERPPD utilizes the SCADA system is for load management. Load management helps to decrease peak load, so that additional generation is not needed and that keeps rates lower for everyone.

There are a total of 2,168 irrigation services, which includes pivot drives. 1,826 of the 2,168 are pumping services. Of the 1,826, 1,265 or 69.28% of our pumping services, are in the load management program. That equates to 96,435 horsepower (hp) out of a total of 132,290 hp or 68.43% of all irrigation services (including pivot drives) in load management.

Those services are in a database in the SCADA system and when load management is called for, services can be automatically shut off. When the load management time is over the SCADA will automatically turn the service back on.

Since the data to the SCADA is supplied in near real-time, these systems are extremely valuable to ensuring the safe, reliable and stable operation of the grid. They are also becoming important in the creation of the Smart Grid. The Smart Grid uses technology to monitor and maintain the electrical system's network, but that is a topic for a future article.

At its most basic, SCADA involves two-way communication between devices installed within the grid. At its most advanced, it automates major portions of grid operations to provide immediate response to grid conditions that could lead to problems.

This is just one way that ERPPD uses technology to improve efficiency and reliability of the system.

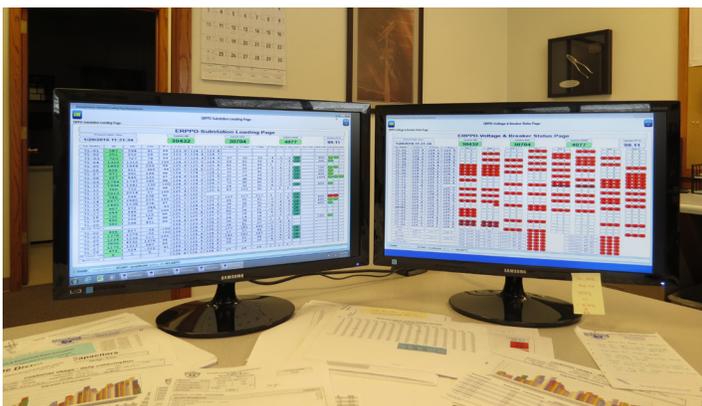
If you have questions about SCADA or load management, please visit our website, [www.erppd.com](http://www.erppd.com) or call the office at (800)675-2185.

### Check on Irrigation Control Status

—  
June 1-Sept. 15  
—

**Irrigation hotline:**  
1-800-238-0185

**Website:** [www.erppd.com](http://www.erppd.com)  
(on menu to the left side of the page)



*Left, SCADA displays that monitor voltage and breakers at Elkhorn Rural PPD's 26 substations. This keeps your lights on and your beverages cold.*



## ...Youth Leadership Camp Con't From Page 1.

Campers can participate in the Ambassador competition or seek a position on the board of directors.

Each camper also volunteered for at least one of the committees responsible for various camp activities. The participants learned a lot about leadership, team work, and communication, all skills that will help them to be the leaders of our future Public Power Boards!

It was not all work and no play. The campers also participated in recreational activities such as basketball, volleyball, a dance and canoeing.

Participants could also compete to represent Nebraska during the Youth Tour in Washington D.C. the following June. This year's campers are also selected by their peers to return the following year as junior counselors.

This was a great opportunity to learn about leadership in their communities and how to make a difference for Public Power, while making great friends and having some fun!

Check out Elkhorn Rural PPD Facebook page for pictures of the students and camp activities.



*Colton Beed*



*Andrew Steskal*



*Alexis Pokorny*



*Kira Widger*

## Maintaining Your Air Conditioner

Annual maintenance can help improve your comfort and the efficiency of your air conditioner while prolonging the life of your unit. Hire a certified professional when your unit needs more than basic maintenance.

1

Routinely replace or clean your air filters. This can lower your air conditioner's energy consumption by 5-15 percent.



2

Check your air conditioner's evaporator coil every year and clean it as necessary.

3

If your coil fins are bent, use a "fin comb" to straighten them.

4

If you have a split system, be sure to clean debris and leaves from the fan, compressor, and condenser.



5

Occasionally pass a stiff wire through your unit's drain channels to prevent clogs.

6

For window air conditioners, inspect the window seals to keep cool air from escaping.



Source: Department of Energy

**SCHOOL IS IN.**



**LOOK OUT!**

# SAFETY ON THE ROAD

**Put Safety into Action!** While the majority of work-zone crashes are preventable, the number is on the rise. According to the National Highway Traffic Safety Administration factors such as exceeding the posted speed limit, driver impatience and traffic congestion contribute to more crashes, more deaths and more injuries.

According to the Nebraska Department of Roads, (<http://www.transportation.nebraska.gov/nohs/pdf/tollcomparison.pdf>) as of July 5, 2016, there were 100 traffic fatalities in Nebraska. Seventy of those accidents occurred on rural roads.

We at Elkhorn encourage you to “Give ‘em a Break” when you see the flags, cones and crews working on the roads. That way you and they will come home safe at the end of the day!



## WORK-ZONE SAFETY FACTS

**REAREND**  
is the most common work-zone crash

a crash happens every 14 minutes

Slow down  
Pay attention  
Obey signs and flaggers

**20%** other work zone crash deaths

**80%** driver and passenger deaths in work zone crashes

Workers killed in work-zone crashes annually **100**

another **20,000** are injured

Protect men and women on the job, yourself and your passengers in work zones

## GRASSROOTS NEWS

### BOARD OF DIRECTORS

with Board position and subdivision

- Rod Zohner  
President.....II
- Tim Means  
Vice President ..II
- Larry Lindahl  
Secretary .....III
- Dennis Kuchar  
Treasurer ..... I
- Jerrell Dolesh  
Director .....II
- Mark Miller  
Director ..... I
- Joe Thiele  
Director .....III
- Greg Weidner  
Director ..... I
- David Hoefler  
Director .....III

### MANAGER

Tom Rudloff

## Register to Vote!

It has never been easier or more imperative that you have your voice heard by your elected representatives in the Unicameral and Congress.

Don't underestimate the power of your voice and your vote. There will be an opportunity at the general election this fall to let lawmakers know what is important to you, your family and your community.

If you are not registered to vote, you can now register on-line. Check out [www.erppd.com](http://www.erppd.com) or the link below for more information. Register today and vote on November 8.

RURAL VOTES COUNT

Register to vote @ [www.nrea-action.org](http://www.nrea-action.org)