

THE WIRE

CURRENT NEWS FROM THE ELKHORN RURAL PUBLIC POWER DISTRICT

June 2016

Serving the Elkhorn River Valley since 1940

Volume 25, Number 6

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

ENERGY NEWS

Unmanned Aerial Vehicles (UAV)



On April 19, 2016, the United States Senate passed a bill to reauthorize the Federal

Aviation Administration (FAA). Amended to that bill was a provision that would allow companies with critical infrastructure to use unmanned aerial vehicles (UAV) or drones for activities currently carried out by manned aircraft. The UAV could be used to meet federal, state or local regulations and industry best practices and may be operated beyond the line of sight and during nighttime hours, which is a departure from existing FAA rules.

Operation Manager, Jim Ridder, along with staff, is investigating the cost/benefit of drones for our

system. We believe that a UAV will be significantly instrumental in reducing operating costs, enhancing services and increasing safety and reliability, which is why a UAV was considered and budgeted for purchase this year.

UAVs have considerable potential in preventive maintenance. UAVs can be programmed to fly over remote transmission and distribution lines using a public power district's mapping data, or piloted from a different location to assess potential problems. By integrating GPS data, the exact areas needing attention are pinpointed, and crews are then dispatched to correct the issues. This eliminates a lot of time and expense patrolling lengthy rights-of-way.

Assessing storm damage would be another way UAVs could be used. With ground access frequently blocked by debris, hazardous conditions or flooding, getting a comprehensive assessment of damage is both time consuming and dangerous. Flying a UAV over the area can capture



Ice Storm Damage 2006

detailed images of the situation and help the district dispatch the right crews with the right materials to the right location. This kind of intelligence gets our customers' lights back on faster.

Further applications include the use of 3-D imaging to assess the condition of poles and towers in hard to reach areas, the impact of
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In Observance of Independence Day ERPPD Offices will be closed Monday, July 4.



ERPPD Offices *will be closed* as our employees and their families remember the day in history when our American forefathers first made their Declaration of Independence.

UAVs continued from page 1

construction on wildlife could also be monitored if required by government agencies and equipping the drone with an infrared (IR) camera to search for hot spots on power lines or inside substations. Many co-ops use handheld IR devices for just such purposes today.

Jim Ridder stated, “Elkhorn is looking at the UAV technology to assist our customers and employees with reducing costs and increasing safety and reliability. It would help to get information about lines in hard to reach areas and give us a ‘bird’s eye’ view of the line, because it can be more difficult from the ground to assess wear and tear on the system.” Jim continued, “You can get up very close to the wires and pole tops to evaluate the situation and find the cause of blinks or outages that might not be apparent from driving the line. This will get the lights on quicker during an outage.”

We expect this use of technology to have a positive impact on our operations through increased efficiencies, safety and reliability of the system.

Implementation is expected later this year, as regulations and information about this technology become more readily available.

With sources: ECT Today and StraightTalk



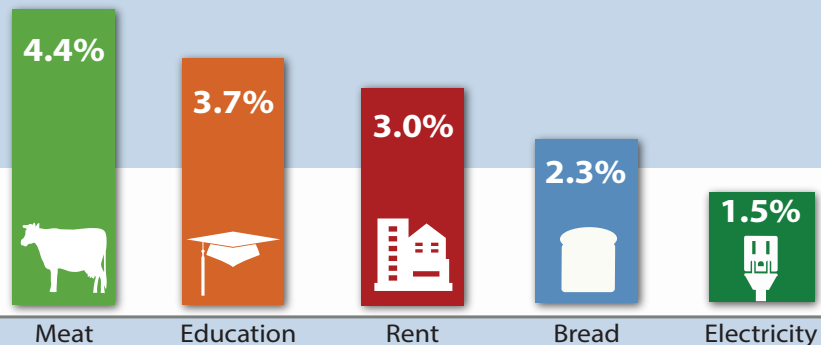
2010 flooding around Neligh, NE. An unmanned aerial vehicle or drone could be used in a situation such as this to assess damage.

Electricity Remains a Good Value

The cost of powering your home rises at a slower pace than many of your typical expenses. Compare the average price increase of these expenses each year over the last five years, and the value of electricity shines.



Average Annual Price Increase 2010-2015



Source: U.S. Bureau of Labor Statistics Consumer Price Index

SAFETY NEWS

The safety of you, our customers and our employees is a top priority at Elkhorn Rural Public Power District, especially during dangerous times. When storms hit our area, we come to your aid as soon as weather conditions allow our line workers to travel and make repairs safely.

Our line crews take necessary precautions before they work on downed power lines. First, they verify a circuit has been de-energized, and that proper lines are opened and tagged to isolate the circuit from the system and the line is properly grounded.

But even after these mea-

asures, our workers' lives remain in your hands.

Elkhorn is proud of our outstanding safety record, but sometimes, no matter how many steps we take to keep everyone safe, the very people we are there to help unknowingly put our lives—and their own—in danger.

Portable generators, widely used when power lines are down, can prove fatal to line workers and your neighbors when used improperly.

Of course, no one would ever purposely cause the death of a line worker. Nevertheless, a generator connected to a home's wiring or plugged into a regular household outlet can cause backfeeding along power lines and electrocute anyone who comes in contact with them—even if the line seems dead.

Elkhorn's employees are not the only ones in danger when a portable generator is used improperly. Generator owners themselves may be at risk of electrocution, fire injury, property damage, or carbon monoxide poisoning if they do not follow the necessary safety rules. Portable generators can be very helpful to consumers during outages. But we urge you to follow these safety guidelines when using one:

***Never** connect a generator

Overloaded cords can cause fires or equipment damage.

***Ensure** your generator is properly grounded.

***Never** overload a generator. A portable generator should only be used when necessary to power essential equipment or appliances.

***Turn** off all equipment powered by the generator before shutting it down.

***Keep** the generator dry. Operate it on a dry surface under an open structure.

***Always** have a fully charged fire extinguisher nearby.

***Never** fuel a generator while it is operating.

***Read** and adhere to the

manufacturer's instructions for safe operation. Never cut corners when it comes to safety.

We encourage you to protect the well-being and safety of your family during outages, and safeguard those who come to your aid during emergency situations. When we work together for safety and the good of our communities, we all benefit.

Source: NRECA StraightTalk



Staying Safe: Portable Generators

directly to your home's wiring unless your home has been wired for generator use. This can cause backfeeding along power lines and electrocute anyone coming in contact with them, including line workers making repairs. Have a licensed electrician install the equipment necessary to safely connect emergency generators to your home.

***Always** plug appliances directly into generators. Connecting the generator to your home's circuits or wiring must be done by a qualified, licensed electrician who will install a transfer switch to prevent backfeeding.

***Use** heavy-duty, outdoor-rated extension cords. Make sure extension cords are free of cuts or tears and the plug has three prongs.

Energy Efficiency Tip of the Month



Save energy and money by lowering your water heater thermostat to 120 degrees Fahrenheit. This will also slow mineral buildup and corrosion in your water heater and pipes.

Source: energy.gov

JUNE IS NATIONAL SAFETY MONTH

June and the start of summer means being outside, working in the sun, using irrigation equipment, enjoying recreational activities and going on vacation. Elkhorn Rural Public Power staff want to make sure that you are safe this summer season.

Remember good safety practices when you are outside - wear sunscreen and protective clothing if you will be out in the sun for prolonged periods of time. Drink lots of water (every 15 minutes) and don't over do. Be aware of the signs of heat stroke - loss of consciousness, seizures and no sweating.

When in and around water - whether a swimming pool or large

lake, be aware of electrical dangers. Keep any electronics that are plugged in at least 10 feet away from the water. Stay out of the water if there is thunder or lightning in the area.

When leaving your home for a time to go on a vacation, make sure to unplug appliances and electronics to decrease your risk of an electrical fire and, as a bonus, save you some money on your electric bill.

When using large equipment, be sure to look up and out for high voltage wires.

To avoid potentially deadly electrical accidents around irrigation systems it is important to:

*make sure the irrigation system

wiring is properly grounded,

*check wiring if fuses or circuit breakers repeatedly trip,

*avoid moving irrigation pipes on windy days, as they might get blown into power lines,

*position water jet streams so that there is no chance of them spraying onto power lines - if it does you risk the entire system becoming energized and dangerous to anyone around, and

*position irrigation pipes at least 15 feet away from power lines.

For more summer safety tips, visit www.erppd.com and click on the safety link at the top of the page. Have a safe and fun summer!

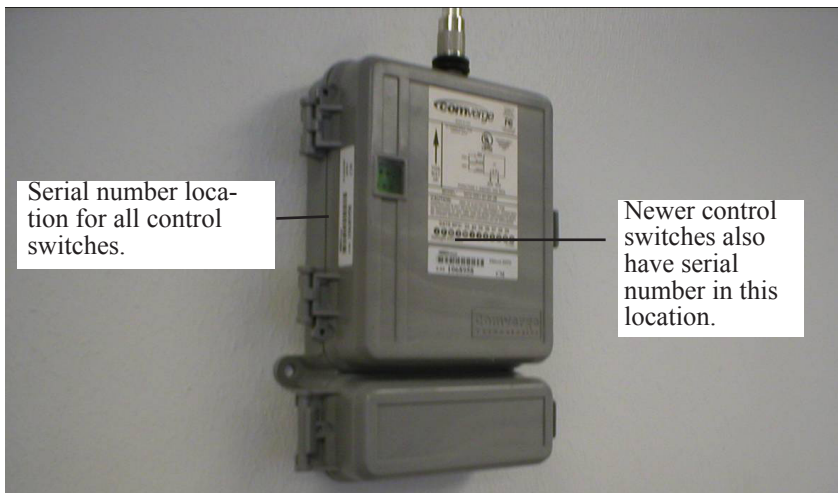
IRRIGATION

Irrigator's switch number is important

This irrigation season, an ERPPD irrigator who has occasion to call the utility should reference the system's switch number when giving information.

While account number and location are necessary components, it is the switch number that will best help district personnel to provide the irrigator with the fastest resolution to his or her situation.

See illustration below for location examples:



Lights have meaning

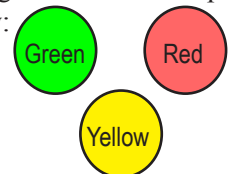
Three LED lights on the control box have particular significance.

Red - No Control

Red and Green - Control

Yellow - Signal Test (has no effect)

The light configuration on the display appears this way:



If the lights are not working, please check the fuses before calling ERPPD's outage number at **800-675-2185**.

Check on Irrigation Control Status

—
June 1-Sept. 15
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Phone: 1-800-238-0185

OR

Internet: www.erppd.com

(click on "Irrigation Control")