

A photograph of the Aurora Borealis (Northern Lights) in shades of green and yellow, dancing across a dark night sky. The lights are reflected in a calm body of water in the foreground. The silhouettes of evergreen trees are visible along the horizon.

Copper Valley

Ruralite

MAY 2019

A Life-Changing Legacy

Nevada town, hosts three-day free health clinic

Page 12

Night Fury, by photo contest
winner Dan Heckathorn.



Automated Meters Successfully Deployed at CVEA

Account Number: 000001347409
Address: FAIRBANKS & HAZLETT
Location:
Old Meter: 92122527
Out Read: 1739
Demand: 0.132
New Meter: KZD79820877
Seal Number: 52535
Module Number: 56206488
Route: 014
Latitude: 61.13030332
Longitude: -146.35975155
Date Changed: August, 10 2018 15:18:49
Trouble Code:
Failed Attempt:
Failed Date:
Tech ID: CVEA01
Comments:

Photo courtesy Anixter Power Solutions

Copper Valley Electric Association has installed new, automated meters to increase the efficiency and reliability of the electric system in CVEA's service territory. Improving the efficiency of both operations and electricity delivery within the existing electric distribution system can help keep down costs for members.

The biggest change? The automated meters will enable the Cooperative to perform several functions remotely, such as reading meters and reconnecting power. Remote meter reading will save time, labor and money. In fact, the metering system is expected to pay for itself within eight years.

In addition to reducing operational costs, the new meters, which can receive and send information to computers at the dispatch center at Solomon Gulch and to the Co-op headquarters, will help improve the reliability of the system.

The technology allows CVEA to detect problems more quickly and to locate outages more precisely. In some cases, problems may be fixed before members even know their power has been out. The meters will also report when power has been restored. CVEA will know if there are single member outages without relying solely on a phone call from that member.

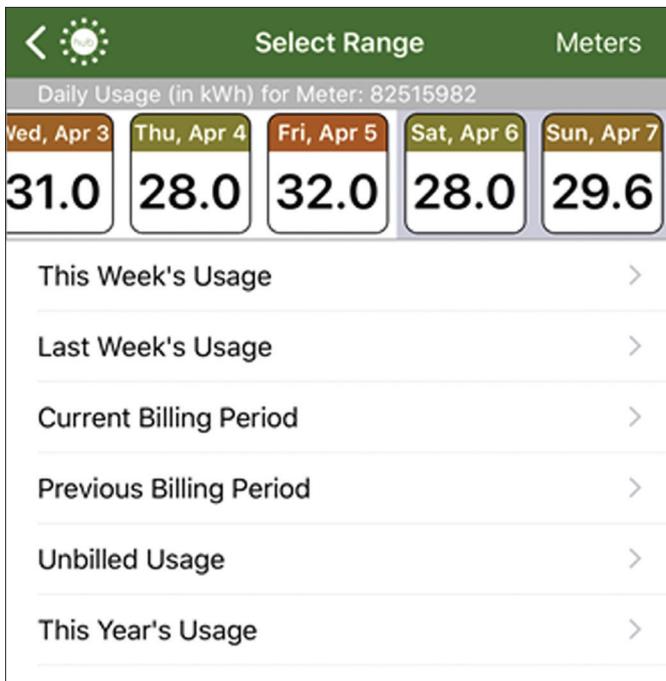
The new technology allows the team to monitor the electrical system in almost real-time. This information can be used to make the process of delivering power much more efficient. Members can also expect to experience fewer blinks, surges and spikes as a result of the upgrade.

The meters, which provide daily information about power use will help consumer-members understand how and when they are using electricity. Armed with this information, CVEA's customer service representatives will be better able to help members address unusual circumstances and billing inquiries.

According to Travis Million, CVEA COO, "The AMI project is very exciting for CVEA and the membership. Not only will this project save the co-op time, money, and improve the safety of our team, but the ability to identify and respond to outages in a much quicker and more tactical way will be very beneficial. I know the entire team is thankful to have the new tools in place, allowing them to provide better service to the members."

CVEA began deploying the AMI meters in July 2018 in the Valdez District. The process of replacing a meter consisted of taking a final read and picture of the original meter, removing the original meter, installing the new meter (which in most cases was so quick that the homeowners microwave and oven clocks didn't need to be reset), scan the new meters bar code, capture a GPS waypoint of the meter location, and take a picture of the new installation. This information is kept in a database, should the information be needed in the future.

The Valdez meter deployment was lead by CVEA's Valdez linecrew foreman, Todd Stahley, and assisted by CVEA meter reading contractor, Tom Johnson. A majority of utilities subcontract the meter deployment to keep a dedicated crew on the



project and typically speeding up the deployment process.

After talking to other utilities who have taken this approach, it appears that CVEA met or exceeded the contractor deployment rate of nearly 110 meters per day.

One of the big advantages of utilizing in-house resources is that it provided the opportunity to inspect every meter base on the system. CVEA was able to identify a number of meter bases that had given to age and extreme weather, and could have become serious safety hazards. Thankfully, those meter bases were corrected by working with the property owners.

The Copper Basin deployment began in January 2019, due to delivery timing of the meters. The team was lead by Glennallen linecrew foreman, Mark Kirkpatrick, working with Tom Johnson. Two big challenges the Copper Basin team faced were weather and long distances between service locations. Even with these difficulties, they averaged nearly 90 meters per day, and had completed deployment by the end of February, three months ahead of the May 2019 schedule. In total the teams deployed 3,773 meters between the two districts.

There are multiple benefits that the new meters provide, some we've already experienced since deployment. CVEA successfully read the meters remotely for the March and April billing cycles, system wide, eliminating the need for a meter reader, and reducing the potential risk for vehicle accidents or injury to the meter reader. Additionally, the meters provide daily reads, rather than once per month, so higher than normal usage has been detected much more quickly, allowing the Co-op to contact members prior to the end of the cycle and before racking up a costly power bill.

There will be additional benefits as we move forward. The Co-op will implement an outage notification module which will notify the dispatch operators at Solomon Gulch when a meter

or group of meters lose power. This will also enable dispatch to identify the closest outage causing device so they can provide more accurate information to the line crews looking for the cause. All of these benefits are expected to lead to reduced outage response and duration times.

Pre-paid billing is another module that will be deployed in the future. Pre-paid billing is a program that allows the member to put a pre-determined amount of money onto their account. That money will pay for usage, and members will be notified when the amount of energy they have used has caused the balance to fall below a set threshold, \$20 for example. The member will then add more money to their account at their leisure, prior to using all available credit on the account, rather than once a month. This allows the member to pay for what they wish to use, when they wish to use it; sort of a 'pay as you go' program.

CVEA received a few concerns as the new meters were being deployed. The first had to do with radio frequency (RF) radiation. A common AMI meter type uses RF signals to communicate to the substations. However, the meters CVEA selected communicate utilizing a technology called 'power line carrier', in which a small voltage signal is sent back to the utility using the existing power lines between the meter and the substation. The type of meters CVEA selected do not produce RF radiation.

Another concern was of privacy issues and CVEA's ability to control appliances in the member's home. It is true that there are AMI meters that have the ability, with approval from the member, to control various appliances such as air conditioners, refrigerators, and electric hot water heaters. This application is utilized in areas where the utility purchases power from the open market. There are points when the cost to purchase electricity above a certain peak (amount of power needed) can be very costly. By turning off appliances at times when the system peak load is high, they can save their consumers money.

Because CVEA generates our own power, keeping peak loading low is not a significant concern. When purchasing the AMI meters CVEA elected to forego this option. The information CVEA receives from the new meter, on a daily basis, is the amount of energy used (kWhs) and peak demand (kW). Members can view their daily energy use through the SmartHub mobile app or online at cvea.smarthub.coop.

CVEA is very proud of this project and the team that worked diligently to ensure the project's success. This project is another way the Cooperative is improving reliability and reducing expenses for members.

For additional questions, review the information on cvea.org or contact Sharon Scheidt at 907-822-5506, 907-835-7005, or email scheidt@cvea.org. ■

Opposite, Anixter software showing meter details and location information used by the team for deployment
Above, daily usage as shown on the Smarthub app and website

National Electrical Safety Month

Plug into safety this May

By Anne Prince

This month, take a moment to reflect on the importance of safety. May is Electrical Safety Month, and Copper Valley Electric will share safety tips and reminders on the co-op's Facebook page throughout the month to help raise awareness about the dangers of electricity. We all depend on electricity to power our lives, but accidents can happen when electricity is improperly used.

Responsibility to CVEA employees

It is no accident that safety is a top priority at CVEA. The co-op is committed to a culture of safety that is integral to daily operations. Lineworkers and power plant operators are required to wear personal protective equipment at all times when on the job.

This includes special fire-resistant clothing that will self-extinguish, limiting potential injuries from burns and sparks. Insulated and rubber gloves are worn in tandem to protect from electrical shock.

The CVEA safety team regularly discusses important safety issues pertaining to work in the field as well as within the building, and employees meet

annually to discuss the safety program and receive reminders on staying safe at work and at home.

In April, CVEA COO Travis Million accepted a first place safety award from the Northwest Public Power Association, on behalf of the Cooperative. This is the second consecutive year to receive this top honor.

Responsibility to CVEA members

CVEA's concern for safety extends beyond just employees. The entire team cares deeply about the safety of cooperative members. According to the Electrical Safety Foundation International, thousands of people in the U.S. are critically injured and electrocuted as a result of electrical fires, accidents and electrocution in their own homes.

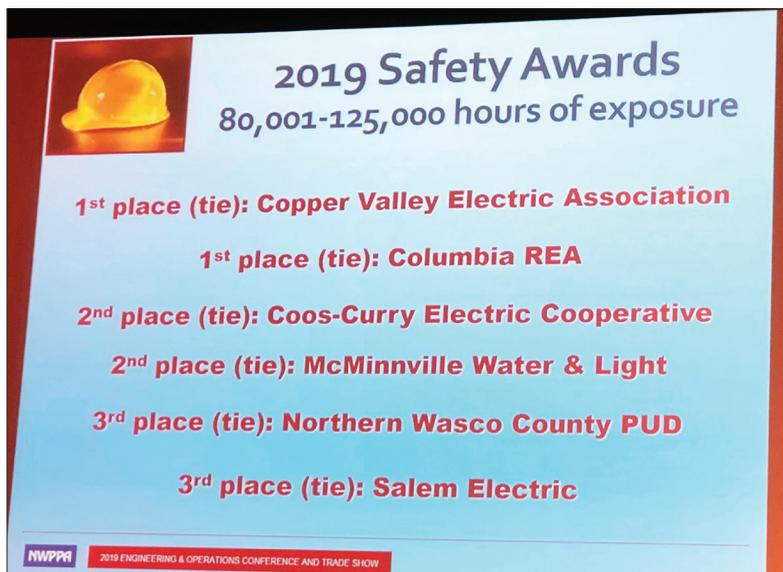
To promote safety education in local communities, CVEA frequently provides electrical safety content in Ruralite, the monthly member magazine, on Facebook, and cvea.org. Co-op representatives also provides live 'Power Town' safety demonstrations at the annual meeting, community events, and in the classrooms at schools within the service territory.

In addition, CVEA encourages the public to contact the co-op if they see a downed power line or any other type of dangerous electrical situation.

CVEA strives to provide our communities with *safe*, reliable and affordable electricity and to serve as your trusted energy provider, now and well into the future.

CVEA believes in its responsibility to raise awareness about the importance of electrical safety and encourages everyone to take a moment to plug into safety this May. In addition to looking for tips on CVEA's Facebook page and website throughout National Electrical Safety Month, visit esfi.org for information on electrical safety in and around your home and workplace. ■

Anne Prince writes on consumer and cooperative affairs for the National Rural Electric Cooperative Association, the Arlington, Va.-based service arm of the nation's 900-plus consumer-owned, not-for-profit electric cooperatives.



2019 Safety Awards
80,001-125,000 hours of exposure

1st place (tie): Copper Valley Electric Association

1st place (tie): Columbia REA

2nd place (tie): Coos-Curry Electric Cooperative

2nd place (tie): McMinnville Water & Light

3rd place (tie): Northern Wasco County PUD

3rd place (tie): Salem Electric

NWPPA 2019 ENGINEERING & OPERATIONS CONFERENCE AND TRADE SHOW



Wells Rural Electric Co. Foreman Jacob Manning, right, tailgates with Apprentice Lineman Joey Payne, left, and Journeyman Lineman Chris Duffy prior to changing out an insulator on an energized line, opposite page. The Nevada co-op has pledged to maintain a culture of safety through the National Rural Electric Cooperative's Commitment to Zero Contacts initiative.

Photos by Layla Welsh



An Initiative to Work Safely

By Pam Blair

Nearly two decades ago, Northfork Electric Cooperative's Heath Martin survived a 7,200-volt shock on the job. He admits the accident was his fault.

Heath and his co-worker, Chad Crompton, had worked all night, then were called to a routine outage.

Heath says he was thinking about an upcoming fishing trip with his buddies.

"I was in a hurry, but it was no reason to take a shortcut," he says.

Heath suffered severe burns to his hands and face, resulting in skin grafts, multiple surgeries and physical therapy.

"Grounding that line down would have taken me maybe five minutes at the most," says Heath, who now is safety director at the Oklahoma co-op. "I just made a bad decision that day."

Although the overall injury rate has fallen dramatically, serious injuries and fatalities among electric cooperative line-workers are happening with alarming regularity, says Bud Branham, director of safety for the National Rural Electric Cooperative Association.

"Research shows you can have the best injury rates in the world, but you can still fall victim to a catastrophic incident," Bud says. "We must all remain focused."

A nationwide survey of 51,000 co-op employees conducted annually between 2006 and 2015 found an average of more than 23 serious injuries and fatalities, which is defined as any claim greater than \$100,000—"a life-altering event for an employee," Bud says.

"The No. 1 cause of claims—40 percent—are electrical contacts that result from failure to use appropriate personal

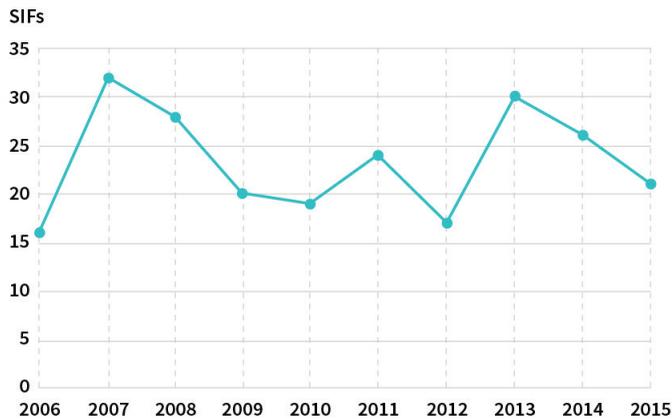
A Positive Spin on Safety

Commitment to Zero Contacts suggests co-ops avoid a "bad cop" mentality and instead focus on a systemwide approach that helps them:

- ▶ Clarify and define life-saving rules.
- ▶ Verify use of life-saving rules.
- ▶ Create effective job planning on all jobs, including the routine.
- ▶ Form a structured safety management process.
- ▶ Seek employee involvement.

protective equipment or insulated covers, or to test and ground facilities—the life-saving rules everyone has been taught," Bud says. "It's like blocking and tackling in football. There are always pressures to take shortcuts. As we become more skilled, we

Serious Injuries and Fatalities for Co-op Lineworkers



In the past decade, the overall injury rate has fallen among co-op lineworkers, but high rates of serious injuries and fatalities persist.

Source: Federated Rural Electric Insurance Exchange and statewide associations



become less risk-aware. The simpler the task, the less our brain focuses on it. With fast-brain thinking, we skip steps.”

Especially during outage restoration work, the tendency is to “hurry up and get it done,” Bud says, noting the thought pattern can be, “I’ll just do it this one time. It won’t hurt me.”

Sometimes it doesn’t. Other times it does. Either way, it’s a trend safety leaders across the country want to stop.

In April 2018, NRECA, Federated Rural Electric Insurance Exchange and electric co-op statewide safety leaders introduced the voluntary Commitment to Zero Contacts initiative.

It is designed to provide CEOs, senior leaders and field personnel with resources to help eliminate serious injuries and fatalities due to electrical contact and enhance co-op safety programs.

The campaign provides a toolkit of resources, including field guides, videos, logos and written commitment forms.

One aspect of the campaign is a downloadable job-planning app—Stop and Focus Everyday—for use on mobile devices. It requires step-by-step acknowledgement of the life-saving rules of the job, with a goal of building and reinforcing safe work habits.

Use of the app encourages crew leaders to stop, focus and review crucial risk factors that could lead to employee contacts. The app also provides efficient job-planning processes for energized work, outage restoration and daily tasks.

Job-briefing data is automatically submitted to Federated’s website with a time and date stamp. It is accessible in real-time and searchable by date, time, submitting employee, job type or job number so it can be used for training.

“We must do job planning on all jobs,” Bud says. “The worst accidents tend to happen during routine jobs where risk awareness declines and complacency is more likely. They know they need to do certain things, but do they?”

“If we can get crews to increase job briefings to 100 percent of the time, we will decrease accidents. If you follow these rules every single time, you will go home with your arms, legs and life.”

Creating a strong culture of safety helps mitigate the risk at all levels.

Wells Rural Electric Co. in north-eastern Nevada has signed onto the Commitment to Zero Contacts initiative and uses the S.A.F.E. app.

“We’ve been very dedicated at WREC to making sure our job briefings are

religiously filled out,” says Foreman Jacob Manning. “The one thing that is etched into our heads from day one is that electricity will kill you. Being safe can be a matter of life and death.”

Jacob says it is important to him to make sure all of his guys are safe, that they understand the job at hand and the hazards associated with every job.

“Regardless of how high or low on the totem pole a guy might be, every person always has a say in what we are doing and the ability to ask any questions about the job or any hazards they might not understand,” Jacob says. “It’s important every single person involved understands exactly what we’re doing.”

At the end of the day, the priority must be safety and doing everything possible to make sure their linemen go home to their families, says WREC CEO Clay Fitch.

“Our guys do a great job in terms of the quality of their work, attention to their training and observing safety on the job,” Clay says. “We owe it to them and to their families waiting at home to give them the tools they need to build a culture of safety. That’s really the benefit of Commitment to Zero Contacts and the S.A.F.E. app. It’s about creating a constant awareness of safety.” ■



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Valdez District

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 (907) 835-4328 (fax)
 367 Fairbanks Dr.

After hours outage line

(866) 835-2832

Important Dates

May

Annual Meeting: The CVEA Annual Meeting and 60th Birthday Celebration will be Tuesday, April 30, in the Copper Basin District and Thursday, May 2, in Valdez; registration begins at 5:30 p.m. and the meeting begins at 6

CVEA Board Meeting: The May meeting of the Board of Directors is 1 p.m., Thursday, May 16, 2019, in Valdez

CVEA Offices Closed: The CVEA offices will be closed, Monday, May 27, 2019, for Memorial Day

June

CVEA Board Meeting: The June meeting of the Board of Directors is 1 p.m., Thursday, June 20, 2019

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When the power goes out, so do CVEA's line crews. Lineworkers are the first to respond after an outage occurs, and they work tirelessly to restore power to the communities in CVEA's service territory.

Additionally, when the lights are on, crews work daily throughout the community making repairs and performing maintenance work on the system.

If you're traveling and see crews on the side of the road, CVEA kindly asks that you move over if possible and give them a little extra space to work. Safety of everyone involved is top priority, and this extra precaution ensures just that.

If you approach a crew while traveling on a two-lane road, moving over to the next lane might not be an option. In this case, please slow down when approaching roadside crews.

Utility crews aren't the only ones who could use the extra space. Emergency responders, such as police officers, firefighters and emergency medical technicians, often find themselves responding

to emergency situations near busy roadways. Please follow the same procedures mentioned above to help keep these crews safe.

There's plenty of room for all. Let's work together to keep everyone safe on our local roadways. ■

