

RELIABILI 2024

Weather, public, nature impact power outages

By Tim Velder, PRECorp Marketing/Communications

As PRECorp crews, engineers, and technicians preemptively tighten the power distribution system, outside forces play the largest role in random power outages.

In 2023, according to statistics from PRECorp System Operations, nearly two-thirds of the total outages were linked to weather, animals, or damage by the public.

Most of the remaining outages were attributed to maintenance and planned projects on the system.

Overall, outage frequency and duration have been dropping consistently since 2007.

In 2023, there were more lightning-caused and animal-related outages than the previous five years. Despite that, the typical member was only without power for about a total of four hours in 2023. That is about 90 minutes less per year than the 17-year average.

Simply put, when you flip the light switch, PRECorp has power there 99.9% of the time.

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PRECorp photo

Winter storm outage repair.

Regular business: 1-800-442-3630 • Report an outage: 1-888-391-6220 www.precorp.coop

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BRIAN MILLS, CEO

Telephone Townhall meeting Wednesday, February 28

Plan to join me on Wednesday, February 28, for our first **Telephone Town** Hall of the year. I will be joined by PRECorp CFAO Bill Mertz as we share some insights on PRECorp's Financial Forecast and a look ahead to 2024. We will call PRECorp members at 6:30 p.m. to start the call. Also, join us on Facebook live, or dial toll free 888-886-6602 to participate via phone.

It is fair to say that northeast Wyoming could be considered "rural" in anybody's book. In serving northeast Wyoming, three PRECorp counties are among the least densely populated in Wyoming.

While low member density may be one reason we all call this place home, that statistic is also indicative of a formidable challenge your coop spends a great deal of effort planning for, budgeting for, and measuring as one of the primary value-adds we can provide to you the member: reliability. Sure, back in the early years, just getting electrical service was a value-add, but today that service is a given, and the reliability of that service comes to the forefront...and rightfully so.

With essentially one mile of line for just two meters, the amount of infrastructure that must be built and maintained is considerable...let alone the weather extremes that we experience. And we know - besides safety and affordability - reliability is how this coop is measured by you the member. That is why we must be focused on it in everything we do.

As much as I may have played up the challenge that reliability is for a system like PRE-Corp's, the fact of the matter is that when we are able to apply our innovation in the design and/or perform a maintenance task just a little bit more efficiently, it can result

in some serious time and financial savings because of the magnitude of our system. In fact, we have an employee program specifically designed to encourage and foster innovation, efficiency, and cost savings from the employees...ultimately improving system reliability. It is core business that we strive to improve every day.

I have always contended that reliable power can only be served by a reliable team.

As you read through this month's WREN, we have highlighted some of the programs that we used and are currently using that ultimately provide the reliability that you have today. You may be surprised to know that of all the different facets of business, system reliability is at the forefront. From an informed membership to a robust system design and maintenance program, to cyber security, there are many things that provide for reliability.

In the end, however, I have always contended that reliable power can only be served by a reliable team. Case in point is the gentleman you will read about on the next page, whose career was dedicated to his trade and serving the members. Now that is reliability. I am honored to work with a group of people that take pride in their work and the reliability they deliver to you the member.

On page 7, you can see how over time we have continued to whittle away at the total number of outages and average outage minutes our members have experienced. It is something we will always keep striving for in our service to you.



Calendar:

The list of PRECorp events includes Board meeting dates, holidays, telephone town hall meetings, and more.

- Monday, February 19 Presidents Day, PRECorp offices WILL BE OPEN.
- Tuesday, February 20 PRECorp Board of Directors meeting, 9:30 a.m., Gillette.
- Tuesday, February 27 PRECorp Foundation Board of Directors meeting, 9:00 a.m., Gillette.
- Wednesday, February 28 PRECorp CEO Telephone Town Hall meeting, 6:30 p.m.
- Friday, March 1 Application deadline for PRECorp and Lineman scholarships.
- Thursday, March 14 PRECorp All-Team Meeting, PRECorp OFFICES CLOSED. Call 888-391-6220 with an outage.
- Tuesday, March 19 PRECorp Board of Directors meeting, 9:30 a.m., Sheridan.
- Tuesday, March 26 PRECorp Foundation Board of Directors meeting, teleconference.
- Tuesday, April 16 PRECorp Board of Directors meeting, 9:30 a.m., Sundance.
- Tuesday, April 23 PRECorp Foundation Board of Directors meeting, 9:00 a.m., Gillette.
- Tuesday, May 21 PRECorp Board of Directors meeting, 9:30 a.m., Gillette.
- Wednesday, May 22 PRECorp CEO Telephone Town Hall meeting, 6:30 p.m.
- Monday, May 27 Memorial Day Holiday, PRECorp OFFICES CLOSED. Call 888-391-6220 to report an outage.
- Tuesday, May 28 PRECorp Foundation Board of Directors meeting, teleconference.
- **Saturday**, **June 1** Durham Ranch Buffalo Stampede 5K/10K.
- Tuesday, June 18 PRECorp Board of Directors meeting, 9:30 a.m., Sheridan.
- Tuesday, June 25 PRECorp Foundation Board of Directors meeting, 9:00 a.m., Gillette.
- Saturday, August 24 PRECorp Annual Meeting, Upton Middle School.

Rene Watts retires after 33 years at PRECorp

PRECorp recently said farewell to dedicated lineman Rene Watts who retired on January 1 after 33 years of service to the cooperative membership.

Rene began his career in October of 1990 as an Apprentice Lineman in Sundance. In October 1991 Rene earned his Journeyman's status. Then in February 2017 Rene was promoted to Crew Chief. His most recent promotion to the District Foreman role came in April of 2020.

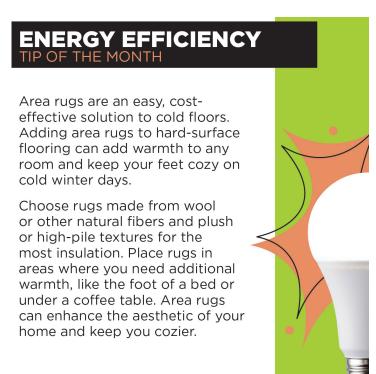


Watts

Rene and his late wife Beverly have two grown sons – Justin (Danielle) and Tyler (Ashley) - and five grandchildren. "I was able to raise my family in great communities. Sundance and Hulett are home," Watts said.

Working the lines primarily in the Crook County area for more than three decades created many memorable experiences and achievements for Rene. "Having been able to work at PRECorp for 33-plus years, I have many memories. Most involve all the crews over the years. It has been a great pleasure. Thank you all."

Rene's retirement plans are to take life one day at a time and spend time with family.



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"First and foremost, I am proud of our safety record as our crews are called out in some very harsh working conditions. I commend the work of our line crews, dispatchers, engineering team, and member service representatives who coordinate all of this data behind the scenes," said PRECorp VP of System Operations Rich Halloran. "There is a lot of planning and training that goes into rolling a truck to the location of an outage. We continue to work diligently to provide more reliability on our power grid each and every year. We also appreciate the patience and support that our members show for our crews during those cold, dark, or stormy nights restoring power."

Fire mitigation

PRECorp has been diligent in times of high fire danger to ensure the system is as resilient as possible. In extreme heat, members use electricity for immediate needs such as pasture water pumps and residential air conditioning. However, PRECorp is also sensitive to detecting problems as quickly as possible. The Advanced Metering Infrastructure (AMI) system can send important indications of potential issues from each meter location, but on Red Flag weather days, PRECorp takes a more structured approach as part of its Wild Fire Risk Mitigation Plan (WFRMP).

The National Weather Service with issue advisories for Red Flag weather days. These advisories are forecast based on humidity, temperature, and wind speeds, which can rapidly spread fire in vegetation on the ground.

"Typically, when we have equipment in normal service, that breaker will open up and close back in. Your lights might go off, then come back on. During Red Flag days, we temporarily change the setting. If there is something on the line, re-energizing that line can throw sparks," said PRECorp VP of System Operations Rich Halloran. "When we have Red Flag settings on the breakers, the line crew is dispatched to the outage. We have a software tool that shows a fault current on a computer screen where the crew can patrol before restoring power with dry conditions on the ground."

Other uses of technology

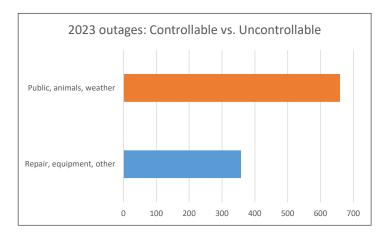
With the AMI system PRECorp installed in 2020 and 2021, each meter is sending its voltage data. "We can look

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PRECorp photo

PRECorp crews fixing a burned pole in the middle of the night.



B E L Of the network.

Cyber threats evolve with technology

Computer-generated activity and automated processes have ramped up the digital war between critical infrastructure and those who want to disrupt and extort wealth for criminal purposes.

There are thousands of attempts to break into PRECorp computer systems every year, and that number has tripled since 2020.

According to PRECorp Cybersecurity Analyst Josef Chesney, the artificial intelligence (AI) community can be on opposing sides in this war. "AI is a big thing," Chesney said. "We need to understand how that is going to change the threat landscape and improve our own efforts. It can be used for good."

Chesney said that computer systems can now generate emails that read like a legitimate message. These same ideas can mimic voices to sound authentic. Once they convince a victim that these are real and legitimate requests for money or security log-in credentials, they can do major damage to a company's work.

However, AI is also being used to detect fake messages and attempts to infiltrate systems. Without going into specifics, Chesney said there are real-time monitoring platforms inside PRECorp, and through partner organizations, that give immediate alerts of infiltration attempts.

Chesney said there were no cybersecurity events in 2023 that caused economic or reputational damage to PRECorp or its members. There was one failed hack that took some staff time to investigate and resolve.

On the global stage, conflicts in the Middle East cause disruption in the utility industry. Some hacks upon utilities within the United States can be traced to bad actors abroad. "Malware is no longer a kid in the basement. It is organized crime, and it is nation states," Chesney said.

He added that supply chain attacks are a threat if manufacturers of parts are shut down for extended periods of time. Software providers can also be infiltrated and unknowingly send a virus or malware in their online patching programs.

At home, PRECorp employees are the first line of defense against infiltrations of any kind.

Each employee utilizes computer technology to effectively serve the membership, which means bad actors are trying to break into each individual device with a malicious attack. These attempts usually present themselves as a deceiving email. Employees are randomly tested to ensure a high level awareness and suspicion when it comes to random and unfamiliar emails, calls, or requests for information.

One example occurred in 2023 when an employee noticed something odd with a remote connection to a cloud-based system. The employee immediately notified IT. At the same time an alert came across Chesney's monitoring platform. "If we keep on investing in our user education, these are the kind of wins we're going to chalk up," he said. "I am not the only one staring at the screen. Other trained responders are in place at PRECorp along with our trusted industry partners."

PRECorp's internal testing scores are beating industry standards, which means the PRECorp employees are performing well when put on the spot. "Cybersecurity is a team sport," Chesney said.

The investigation after the failed hack revealed that the attackers masked their origins, making it difficult to determine whether it was domestic or foreign. Where the attack comes from is not always the concern. The concern is how PRECorp responds and the consequences of that response. The cooperative leadership conducts annual attack simulations to work through the decision points.

PRECorp members can also participate. Members are encouraged to report any strange activity regarding their PRECorp account – including phone calls. Take measures to protect your own data and remember the only number you can trust when in doubt is 1-800-442-3630 for PRECorp Member Service.

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at voltage fluctuations and determine the location of an outage," Halloran said. "We can also look at the fluctuations and pre-emptively make repairs to faulty clamps or other things, even if there isn't an outage."

Line crews are now using mobile computer applications to look at a wide range of service orders, outage data, and can efficiently serve the membership. For example, linemen can look at information on a trouble call and most of the time they can know what equipment to load before leaving the shop. This cuts down the amount of time that elapses with having to run back to the shop for a special size crossarm, or transformer, or whatever.

Drone technology on the rise in 2023

To control the rising costs of inspecting power infrastructure and sensitive telecommunications equipment, PRECorp continues to use drone technology in the daily business.

The remote-controlled flying machines are equipped with cameras so a person on the ground can record in detail areas of concern. Some drones also have special sensors to detect high heat or electrical shorts that are not detectible by visual inspection. Discoveries like these are also a key component of the WFRMP.

PRECorp has four licensed drone operators in the Information Technology and Engineering departments. PRECorp also hires a contractor named Constellation Clearsight to perform specialized drone inspections on larger sections of power line.

"We have a robust system of maintaining our line and helping crews respond faster to address outages," said VP of Engineering and Technical Services Quentin Rogers. "We get to see those poles from a different perspective than we can see on the ground. If we find things that need attention, we prioritize them, and schedule repairs. Crews also know what equipment, parts, and tools they will need before they leave the shop."

"There are outages that are going to happen from worn equipment. Drone inspections have been a major success identifying problems before they show up as an outage," said CEO Brian Mills. "We categorize the problems from high priority to low priority. The highest priority items are addressed right away. The lowest priority items are bundled into larger projects so crews can fix multiple items at the same time and have more efficiency in that area. We would rather deal with those

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during working hours. Plus, we don't roll tires to the same spot multiple times."

Each year, PRECorp inspects a portion of its system with visits to the structures, aerial viewing through binoculars, and now drone flights over the poles and wires. This maintenance plan will continue in 2024.

Drone inspections have no reason to fly beyond the scope of the easement area. Photos and information are only taken for specific items of concern that need further review back at the office.



How can members help?

Safe interaction with PRECorp infrastructure is a must for members' safety. Always be aware of overhead power lines and transformer boxes when navigating around PRECorp poles and line. Do not stack or store large items under power lines.

Before digging, call 811 for an underground line locate. This is required for major construction projects, but also

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PRECorp photo

Pole maintenance in Johnson County.

Reliability...

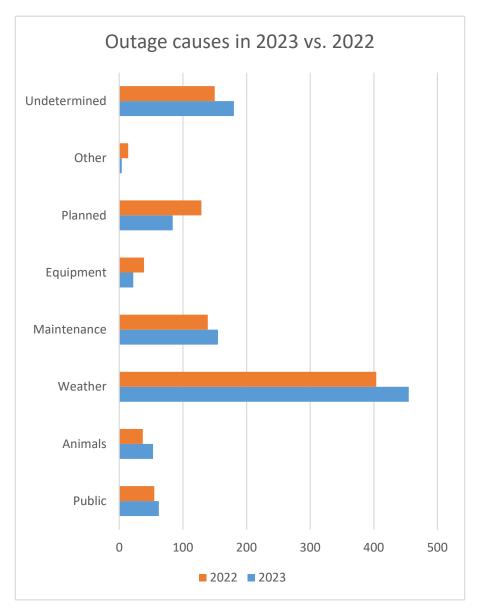
for simple projects such as building fence or planting a tree.

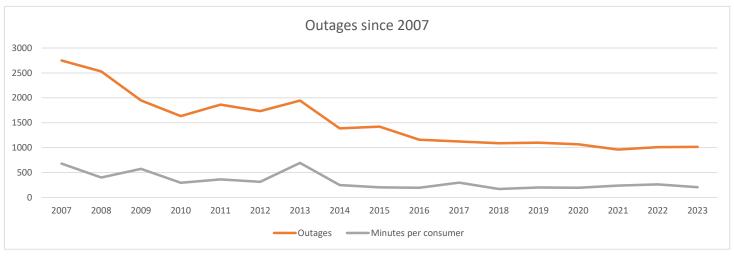
When inspectors are scheduled to work in members' private property areas and easements, PRECorp attempts to notify members of the scheduled inspection within a few weeks. Members who might see PRECorp employees or contractors inspecting lines, should also expect to see a drone flight going on as well.

"One area we need to improve is having updated contact information for our members," Rogers said. "There are times we make best attempts to give members advance notification that drone inspections are planned for their area, but there are times those notifications aren't received on the other end. We need to make sure we have current phone and email contacts."

Members who would like more information on drone technology or to update their contact information should call PRECorp at 1-800-442-3630.







Update contact info to stay in the know

When Powder River Energy Corporation (PRECorp) employees need to contact members about service issues, account matters, upcoming field work, or safety issues, the information can be delivered more quickly when current contact information is available.

As you change addresses or phase out land-line telephones for mobile phones, contact information can quickly become outdated. This makes it difficult for PRECorp to contact you ahead of time for planned outages, field inspections with crews or drones, tree trimming, and other service-related reasons.

Your primary contact phone can be a home phone, a cell phone, or a business phone. PRECorp representatives rely upon this contact information, especially during emergencies.

Our automated notification system will let you know about planned outages or outage restorations, as well as other important information from PRECorp. These updates could also be sent via e-mail, to keep you informed about PRECorp's operations.

PRECorp WILL NOT sell or share these numbers with other organizations.

Use will be limited to the important cooperative business mentioned above.



PRECorp will not call you to promote any products or services.

If the phone number(s) shown on your SmartHub account are incorrect, please go to the "Notifications" tab and select "Manage Contacts" to update your preferred telephone number.

If you would like to take care of your phone number update right now, fill in the form below. You can mail this with your bill payment, drop it off at either PRECorp office in Gillette or Sundance, or speak with a Member Service Representative at 1-800-442-3630 during business hours. Business hours are Monday-Friday, 9 a.m. to Noon, and 1 p.m. to 5 p.m.

Please help us keep contact information updated for your account.

Name:	
Home Phone:	Business Phone:
Mobile Phone:	
Best number to reach me during a power	er outage:
F-mail address:	



Regular business: 1-800-442-3630 Report an outage: 1-888-391-6220

www.precorp.coop

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