

RELIABILITY

Vigilance, technology help keep the lights on

The total number of outages within the PRECorp power distribution system remains at landmark lows, but due to a major April snowstorm in 2022, members experienced longer-than-average restoration times.

In 2022, there were 1,009 power outage incidents, the second lowest since 2007 when PRECorp began tracking this type of detailed data. A record low of 960 outages was set in 2021. In 2022, each consumer averaged about 4 hours and 20 minutes of power outages, compared to record low of only 3 hours and 30 minutes in 2020.

There are many factors that contribute to variations in the outage numbers year-over-year, but the

absence of thunderstorms and milder weather in the latter half of 2021 reduced the outage incidents. In 2022, there were significant spring snow and wind events, followed by a major cold blast to close out the year.

One April 2022 snowstorm left broken poles throughout the entire service territory. Restoration was hampered by blinding blizzard conditions and inaccessible roads.

What are the common causes?

Outages can be grouped into two categories – Controllable and Uncontrollable. Controllable outages involve scheduled replacement

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PRECorp photo

The Newcastle crew repairs an outage after dark in 2022.

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Enter a \$100 drawing!



BRIAN MILLS,
CEO

Our Vision:

We will be pioneers of excellence in the Cooperative Network while delivering extraordinary value to our members, embracing a visionary outlook, leveraging accelerating technologies, empowering our team and engaging our membership.

Our Purpose:

Positively influencing and improving lives for those we serve by providing reliable energy and services while paving the way for access and affordability.



Our Moonshot:

Drive down costs so that the first megawatt hour of energy usage is at or near zero cost by 2050.

The new year is out of the gate. I trust you all had a joyous holiday season despite the weather and complications that it may have brought. I can share that I am grateful for our system and the great team we have to manage it. Our system performed well under the conditions considering the extreme temperatures we experienced. The safety of our line crews and staff guided our efforts, and they once again rose to the occasion when needed.

As many of you saw in the news, beyond the challenges that weather impacts may have on keeping a system reliable, there have been a couple notable situations where bad actors carried out what looks like targeted attacks on power substations resulting in thousands losing power. While this is disconcerting to say the least, PRECorp is taking the opportunity at this point to review procedures and protocols as well as design standards for our system in our effort to deter and quickly detect issues in our effort to deliver reliable power.

To put it in perspective, however, this review is just one facet of our overall system reliability strategy. PRECorp has many initiatives focused on system reliability. We have dedicated this issue to sharing about how PRECorp goes about system reliability covering topics such as outage management, wildfire mitigation, drone inspections, and cybersecurity. These programs create a more stable and reliable power distribution system.

Some of them are visible when you see our crews working along the road. Others are unseen but just as important in this ever-changing world in which we live.

Inside this issue, you will learn more about how PRECorp takes proactive measures to guard against outages of all types, and the steps we take to restore power safely and in a timely manner. You will also learn about the 2023 plans to up our game another notch to serve our membership even better.

Last August, I shared three goals in taking

over as CEO. 1) Finish the year soundly performing core business operations; 2) Prepare a clean 2023 Budget; 3) Prepare the company to “Re-snap the line” on our strategy. With credit due to the strong PRECorp Team, we completed each of those. During our efforts, I had the opportunity to gain additional insights and direction from our Board of Directors as they hold fast to two value points this cooperative will strive to deliver for the membership: reliable power and rate stability. As we complete our “Re-snap” of the strategy in the first two quarters of 2023, those value points will be resident tenets in the design of our future initiatives.

One perspective I will share at this point is: For us to maintain our value proposition to members, we have to be good at foreseeing the changing environment, courageous to change and adapt, and quick to learn and course correct when needed. Keeping you informed and listening is how we plan to be effective in doing this.

Let me encourage you to join our quarterly **Telephone Town Hall at 6:30 p.m. on Tuesday, February 28**. The meeting will cover some of the aforementioned topics, and will focus upon some of the financial tools we are using in terms of rates stability and predictability for the longer term.

Finally, I want to remind our members of the scholarship program deadlines on March 1. The PRECorp Lineman Scholarship Committee and PRECorp Foundation Board will make their selections for the scholarships this spring. Changes to the PRECorp programs have increased the potential scholarship funds available so it might be worth your while to apply for consideration.

Here’s wishing all of our members a safe and successful 2023 calving and lambing season!

Basin bill credit passed on to membership

Basin Electric Power Cooperative (Basin), PRECorp's wholesale power supplier, provided PRECorp with a \$1.1 million bill credit for purchased power. PRECorp has a variety of financial options of how to best leverage this credit. Based on current conditions, the PRECorp Board approved passing the credit on to its members.

These funds come from excess revenues Basin received as part of its diverse enterprises including the Dakota Gasification plant and selling excess power it generates on the wholesale market. Increased prices from commodities including natural gas, fertilizer, and others, have increased revenues for the gasification plant. The price Basin receives for power sold on the wholesale market has also significantly increased, resulting in excess revenues at Basin. By receiving these excess revenues from Basin, PRECorp can, as one financial option, directly pass the funds on to its membership in the form of a bill credit. PRECorp's Board of Directors, in its discretion, believes it is equitable to flow this bill credit back to the members.

These bill credits will appear on PRECorp members' February billing statements. The amount of the credit for each member is calculated based upon each individual member's power usage from June 2021 to May 2022. The credits will be given to those members who were still active members as of January 1, 2023.

Anyone with questions or concerns about the timing and receipt of this credit on their monthly power bill, should contact PRECorp Member Service at 1-800-442-3630.

Calendar:

- **Monday, February 20** - Presidents Day, PRECorp offices **WILL BE OPEN**.
- **Monday, February 27** - PRECorp Board of Directors meeting, 9:30 a.m., Gillette.
- **Tuesday, February 28** - PRECorp Foundation Board meeting, 10 a.m., Gillette.

Two employees retire from PRECorp in 2023

Dale Crabb and Yvonne Moberg retired from PRECorp in December 2022 and January 2023, respectively. Following are capsules of their service to the membership and future plans.

Dale Crabb

When Dale Crabb started as a Radio Frequency Engineer at the PRECorp Sheridan office in February 2003, he was tasked with building a robust telecommunications network for the far-flung electric cooperative that stretches from the Big Horn Mountains to the Black Hills.

"I've always like doing projects and so the fit was good," he said. "I was thinking about my tenure with PRECorp and realized that to a major extent it was a series of contiguous projects building a wide area comms network for the five-county cooperative. Pretty cool. It is nice to step back at the end of the day and look at what you got accomplished."

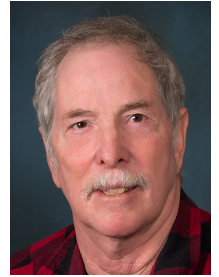
In parting, Dale says he doesn't have any particular goals. Rather he plans to give back to his community in meaningful ways and enjoy time with his wife, daughters and four grandchildren.

Yvonne Moberg

In April 1993, Yvonne and her husband Jeff moved from California to Sundance for the quality of life. She started as a PRECorp Member Service Representative and finished as a Billing and Accounts Receivable Specialist. "I always felt valued as an employee and the benefits offered fit my family's needs. PRECorp has great work conditions along with fair wages," Yvonne said.

During her time at the cooperative, Moberg has fond memories of community service projects, including the Walking Taco Booth in downtown Sundance, raising funds for local charities during the Sturgis Motorcycle Rally.

In retirement, Yvonne plans to travel, spend time with their two grown daughters, and help with bookkeeping at the family-owned newspaper The Sundance Times. In parting, Yvonne reminds the members of the following: "Powder River is always looking out for the membership... in keeping costs as low as possible."



Crabb



Moberg



PRECorp photo

PRECorp crews and contractors team up for an overnight planned outage for construction and maintenance near Rozet in 2022.

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and repair of equipment, and anytime crews require an outage to complete a project. PRECorp teams schedule maintenance projects throughout the year and notify members days ahead of time that power will need to be off while they work.

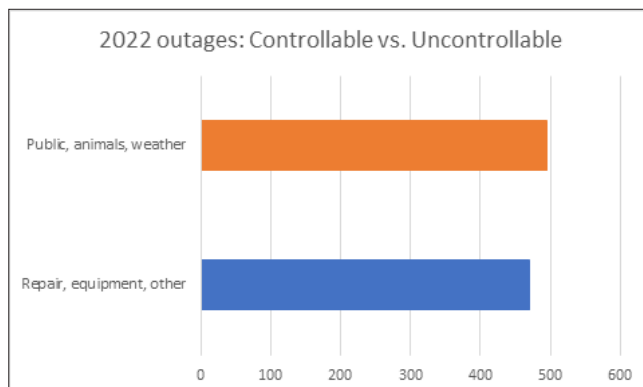
Uncontrollable outages are generally related to animals, weather, or accidental events caused by humans. These can occur anytime without warning, but crews are ready to respond. The Advanced Metering Infrastructure (AMI) system assists in isolating the location of the outage and provides speedy notification of an event on the system, but on-scene repairs are still required.

"First and foremost, I am proud of our safety record for 2022 as our crews were called out in some very harsh

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weather 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."

See Page 8 to enter a \$100 drawing!



PRECorp implements various measures to reduce the number of Uncontrollable outages. These include: planning routes for new line where accessibility is good; implementing construction designs that are robust for the environment of northeast Wyoming; rebuilding existing power line at an economically optimum timeframe; retiring power lines that are no longer utilized; installing protective covers to keep animals away from delicate equipment; installation of lightning arrestors; scheduling line patrol and drone inspections, and public education. Members are reminded to be aware of power lines through ongoing safety messaging in advertisements, social media, newsletters, and bill inserts.

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RELIABILITY *of the network.*

Cybersecurity is a 'Team Sport' at PRECorp

Threats. Individuals and organized groups present a variety of threats to the national, regional, and even local power grid.

These threats can be physical such as firearm attacks, vandalism, copper theft, or vehicle collisions. Other threats are under the cover of criminal cyber or computer network attacks where individuals or organized groups coordinate an infiltration of the computer systems of an electric cooperative.

These criminals can steal information, deploy a shutdown virus to disrupt the system, while others hold the cooperative's data hostage by demanding a ransom for its release.

They create immense economic impact on a cooperative, but more importantly the attacks can impact the trust that its members place in them.

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

PRECorp has been engaged in a years-long effort to mitigate cyber-attacks and improve overall security of its computer systems and facilities. Industry experts emphasize that attacks are inevitable.

"If someone is highly motivated, they are going to get us," says PRECorp Cybersecurity Analyst Joe Chesney. "While we did not experience any economic or reputational damages in 2022, we continue to build our safety systems and training throughout the company. Cybersecurity is a team sport."

Chesney refers to the variety of resources that ultimately protect the PRECorp membership from threats to power reliability and affordability. The front line is the PRECorp employee team. 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 of awareness of malicious emails.

Employees also complete regular training in the latest security threats.

After training, there is response planning.

Having robust plans in place to act on a moment's notice are key to isolating threats and minimizing the damage of any attempted attack or breach.

Chesney will not divulge details about specifics, but PRECorp continues to build stronger defenses for its infrastructure and computer systems. In 2023, PRECorp will conduct a random attack exercise, add system encryption protections, expand around-the-clock monitoring of its key infrastructure, and increase testing of the email portals where bad actors hang out.

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 - when in doubt call PRECorp Member Service at 1-800-442-3630.



Enter the Moonshot Logo Contest to win a prize.

1. Look for the Moonshot logo in 2023 editions of the PRECorp News or PowerLines bill insert.
2. Email communications@precorp.coop with your name, phone number, and where you saw the logo in this edition. That's it! Don't have email? Call our office at 1-800-442-3630 to enter. Mention the "Moonshot Logo Contest".
3. In February, we will hold another drawing for a Moonshot prize package. Previous non-winning entries remain in the hunt for drawings throughout the year.

January winners:

1. Denette P., Newcastle
2. Mary D., Pine Haven
3. Skip & Gloria F., Kaycee
4. Anne P., Newcastle
5. Greg W., Rozet

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Wildfire 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 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).

Outages could be more frequent as select breakers will be set to de-energize power at the first indication of a fault, rather than allow the automatic restoral of power. An example might be the incidence of high winds on a hot day, when a tree branch or small bird might contact a power line. Instead of re-energizing the line automatically, a crew will be dispatched to the scene to inspect the line before restoring power. This is being done to try to prevent a situation where a spark from a branch could start a fire on the ground.

"We have a lot of exposure to extreme weather events because we have thousands of poles carrying thousands of miles of line in the open country of northeast Wyoming. Whenever there is a major storm, some of those structures crack under the pressure," Halloran said. "We also experience infrequent power supply issues where a provider outside our territory has an issue that only they can fix. These outages aren't always connected to weather but take time to safely restore."

Staying the course

In the past decade, PRECorp has seen vast reductions in outage frequency because greater attention is being paid to preventative maintenance of infrastructure, starting at substations and extending out to the single-phase distribution lines.

In late 2021 the AMI installation project was completed. This provides real-time reports of outages from each meter location and brings in power quality and usage data throughout the day. There are many uses for this technology. One benefit is improved response times and restoration of power. These AMI readings immediately notify dispatchers and line crews where an outage could be occurring, enabling them to safely deploy resources to the right places at the right times.

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The AMI also archives data and uses it to create predictive scenarios when combined with weather data. Soon PRECorp will have the ability to target areas of the system that are susceptible to weather damage such as icing and sustained winds, which cause galloping lines, power blips and outages.

Drone technology on the rise in 2023

To control the rising costs of inspecting power infrastructure and sensitive telecommunications equipment in 2022, PRECorp adopted drone technology into the daily business.



The tiny remote-controlled flying machines are equipped with video cameras so a person on the ground can view 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. PRE-

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PRECorp photo

A Sundance lineman de-energizes a line ahead of a wildfire on the Crook and Weston county line in 2022.

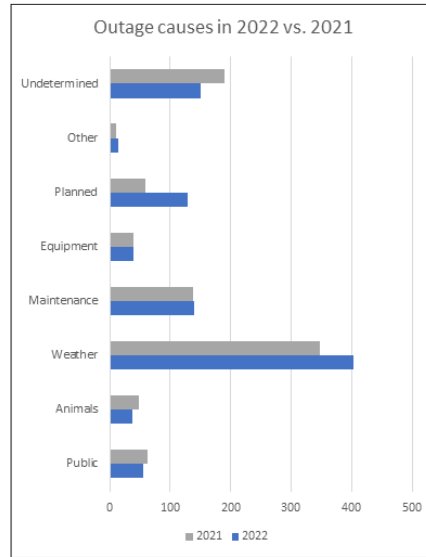
Reliability...

Corp also hires a contractor named Clearsight to perform specialized drone inspections on larger sections of power line.

In 2022, PRECorp and its contractor flew more than 3,000 miles to inspect power lines. That is the same distance as flying a drone from New Jersey to Arizona and inspecting each power pole and line along the way. The scope of this effort would not be possible without the speed, agility, and bird's-eye-views drones provide. These flights target the poles, wire, and all connections that cannot be seen from the ground.

"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."

This is a clear efficiency to make fewer trips to an area for inspections, repairs, and ultimately outages. "It



feels like it is starting to pay off," said CEO Brian Mills. "All that goes back to efficiently managing our system and ultimately controlling costs to our members."

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 wire. This maintenance plan will continue in 2023.

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.

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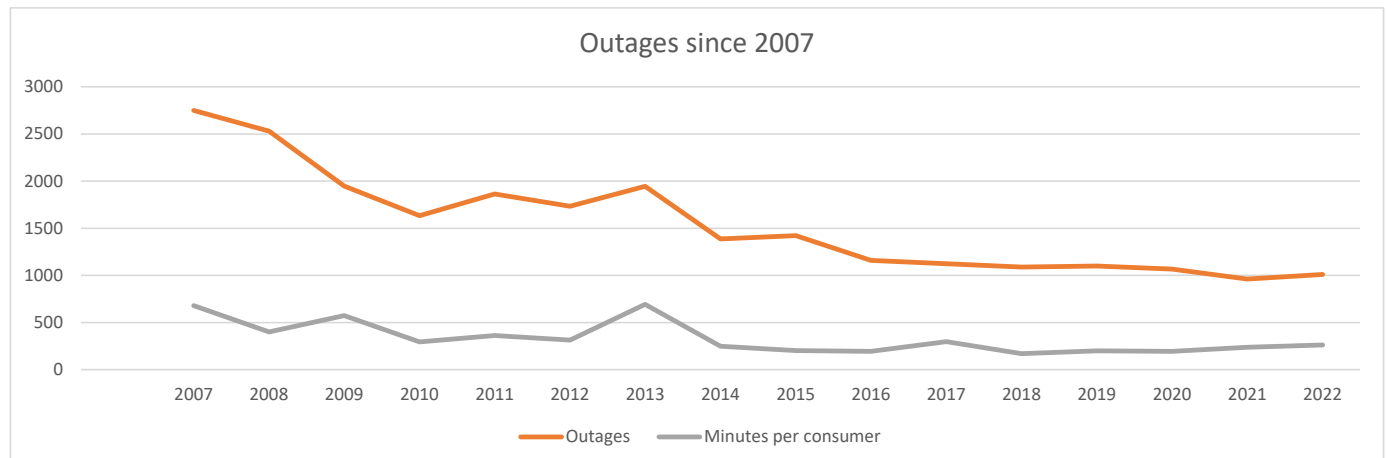
For the WFRMP, PRECorp is planning detailed inspections of high-risk areas in search of hazards. "We are hardening our system against the potential of wildfires," Rogers said. "That has been our focus for the past several years."

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."

See Page 8 to enter a \$100 drawing!

Members who would like more information on drone technology can contact PRECorp Engineering at 1-800-442-3630.



Update your contact info and you could win \$100

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, a business phone - or all three. PRECorp representatives rely upon this contact information, especially during emergencies.

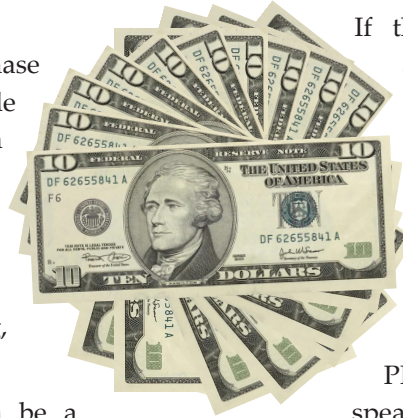
Our automated notification system will let you know about planned outages or outage restorations, as well as other important information from PRECorp. These updates could also be sent via e-mail, to keep

you informed about PRECorp's operations. PRECorp WILL NOT sell or share these numbers with other organizations. Use will be limited to important cooperative business mentioned earlier. 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.

Members who update their information by Monday, April 3, will be entered in a drawing for a \$100 bill credit or a \$100 gift card of their choice.



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 outage: _____

E-mail address: _____

If you update your information by Monday, April 3, 2023, you'll be entered in a drawing for \$100 bill credit or gift card of your choice.



Regular business: 1-800-442-3630

Report an outage: 1-888-391-6220

www.precorp.coop

Powder River Energy Corporation is an equal opportunity provider and employer.