

INNOVATION

PRECorp team is Phase 1 winner of cash prize

The U.S. Department of Energy's (DOE's) Office of Electricity (OE) announced recently that PRECorp is one of nine Phase 1 winners of the inaugural American-Made Digitizing Utilities Prize. This \$675,000 prize – \$75,000 for each team – connects utilities with interdisciplinary teams of software developers and data experts to transform digital systems in the energy sector through data analytics, processing, quality assurance, storage, and deletion, according to a media release.

"The electric industry sector is facing a massive amount of data from various sources, challenging traditional methods of data acquisition, use, and storage," said Gene Rodrigues, Assistant Secretary for Electricity, in the announcement. "There is an emerging need to quickly process large data sets to improve reliability and resilience of the electric grid and meet new demands from the integration of renewable energy."

Phase 1 of the Digitizing Utilities Prize invited developers to solve predetermined utility challenges in Tracks 1 and 2, and allowed for any solutions to be proposed in Track 3. Competitors worked on utility partner challenges within one of three tracks to propose software solutions that improve how the



energy industry manages, stores, and processes data. Judges selected three teams from each track — nine in total — to receive a \$75,000 cash prize and advance to Phase 2 of the competition where they will have the opportunity to work directly with the partner utilities.

PRECorp's project

PRECorp's project is focused on detection of anomalies that can contribute to outages, wildfires, or diminished power quality. "This is something we were already pursuing, but

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BRIAN MILLS,
CEO

Springtime in Wyoming! As the country begins to re-emerge after winter, the fresh green grass, wildflowers blooming, new calves bucking around in the warm sun...the resiliency of this country is pretty amazing given the long cold winter we have had. I speak for the rest of the employee team when I say it feels good to be done with winter, and we are looking forward to warmer weather.

As we look ahead to the summer season, one of the programs that has captured a lot of our attention and about which I would like to share with you is the **Wildland Fire Risk Mitigation Plan (WFRMP)**. While proactively addressing wildland fire risk is the moniker, underlying it all is system reliability, and growing the membership's value in system reliability is the target outcome.

While PRECorp has always had programs and activity focused on system maintenance and the procedures we follow in times of extreme conditions, the WFRMP is a large-scale program that we created that encompasses all facets of what PRECorp does to mitigate risk around our system. The plan continues year around, however, with summertime, some of the activities we do are more visible to you as members. As we head into the summer months, I would like to share with you some of those activities.

Just for perspective PRECorp has 11,300 miles of power line, with hundreds of transformers moving the electrons and thousands of clamps and other equipment holding it together; plus more than 26,000 meters at each service location.

Annually, personnel inspect about 1/12th of the entire system. This amounts to the visible presence of PRECorp employees or contractors in the field testing poles, inspecting line, checking hardware, taking photos, and documenting information. Beyond the on-ground activity, we utilize drone inspection to further inspect and detail our system. Last year was our first year of this program and we have been so impressed with the level of detail and eminent outages we were able to proactively address. We were able to detect loose connections, cracked arrestors, split pole tops that are simply undetectable with ground-based inspections. This detailed information proves valuable in times of outage as the crews are better prepared when they head out to the field as well as for the system planning team as they plan for new services or are just updating the existing system. Averting outages in a more planned approach with this data further bolsters reliability with efficient use of crews' time.

Another way that you may notice the WFRMP in action is in times of outage when there is high fire danger. Some-

times there are unavoidable circumstances, whether it be wildlife or weather caused outages that impact our system. **During high fire danger 'red-flag' days**, outages may extend longer than usual because of the precautions we use procedurally before re-energizing a line. Typically, our system is designed to re-energize the line when an intermittent outage occurs. Devices called reclosers will try to re-energize the line on its own to see if the fault has cleared the line. While this works well most of the times, on red flag days, we simply don't want to take the chance of re-energizing the line without visually clearing the line. This translates to extra time spent by the crews to do this which may result in longer outage times in the long run, the precaution provides an extra layer of diligence in providing reliable power in the long run.

While these may be a couple of the more visible or realized impacts, there are other activities behind the scenes that the team is doing to proactively prevent outages like vegetation management and wildlife-initiated outages. In the end, reliability is the goal and "an ounce of prevention is worth a pound of fix" is a good way to describe our approach.

As I close, I would like to share a significant milestone that PRECorp has achieved in terms of living out one of our core values, Commitment to Community. Back in 2007 the PRECorp Board created the **PRECorp Foundation** and charged it with managing the tangible monetary presence of this cooperative back into the communities. The Foundation is primarily funded through unclaimed capital credits that have been returned to the cooperative for the betterment of the membership. The PRECorp Foundation Board is an all-volunteer board that consists of representatives from all five counties. In 2019, we hit a milestone of providing \$1 million back into our communities. In just three more years, in 2022, the Foundation crested \$2 million in value given back to our communities. This is a remarkable success story of this cooperative having a meaningful impact beyond delivering power to our members. The efforts of the Foundation Board and the support staff within the PRECorp team that has made this happen are truly remarkable. On behalf of the entire membership, I would like to say "thank you" for your time and dedication.

I hope you will join me on May 31 for our **quarterly telephone town hall meeting**. We have found these meetings to be a great way to share information with the membership and more importantly provide an opportunity for you to ask questions about your cooperative. We will start initiating phone calls using the phone number we have on file for you at 6:30 p.m. If you are reading this and have never received one of our calls to join the telephone townhall meeting, I would encourage you to call in to the office and make sure we have the correct number for you. We would love to have you join the hundreds members who typically tune in for the meeting.

Idle line retention rate reminder

The Idle Line Retention process provides a rate structure that allows members to retain idle lines that they intend to reenergize in the future, while contributing to the maintenance, depreciation and property taxes associated with the idle line.

In this designation, the member may have the meter disconnected and continue to pay a minimum charge to ensure the electric line is left in place. Transformers and secondary line can be removed at PRECorp's option.

If you have an idle service on your property for which you are

not paying the Idle Line Retention rate, PRECorp will contact you to find out whether you have future plans for this service or would like to have it removed.

To retain the idle line, you will be required to pay the idle line retention charge associated with the type of service it was when energized.

The monthly rates are:

- Residential/Seasonal: \$15
- Irrigation: \$15
- General Service: \$18
- Large Power: \$79

For more information, contact the PRECorp Member Service Department at 1-800-442-3630.

Line inspections near your property

Powder River Energy linemen and distribution design technicians are inspecting and testing poles, patrolling line, and other infrastructure throughout our service territory in Campbell, Crook, Johnson, Sheridan, and Weston counties as part of our maintenance program. Landowners and local residents might see PRECorp personnel

working within power line rights-of-way, or using binoculars or drones in their area.

PRECorp personnel can provide identification on demand if there is a question about their presence on your property.

Call 1-800-442-3630 if you have any additional questions.

Lace up for the Buffalo Stampede

Runners and walkers from northeast Wyoming are encouraged to participate in the annual Durham Buffalo Stampede 5K/10K walk or run on Saturday, June 3.

In addition to the challenge of competing in the run or walk, participants will raise money for some of the most critical community needs in northeast Wyoming.

The event is an annual fundraising effort of the Powder River Energy Foundation for its wide range of

giving to local children's charities, feeding the hungry, and helping local veterans.

The event showcases the Durham Buffalo Ranch in Campbell County, four miles north of Wright. Walkers kick off the event at 8 a.m., and runners start at 8:30 a.m.

Registration forms can be picked up and dropped off at the Powder River Energy Corporation office at 200 S. Garner Lake Road, Gillette; go to the Foundation website at www.precorpfoundation.org

Events calendar

- **Monday, May 22** - Deadline for county committees to post their list of PRECorp Director candidates.
- **Tuesday, May 23** - PRECorp Foundation Board meeting, teleconference.
- **Monday, May 29** - Memorial Day, PRECorp offices closed.
- **Wednesday, May 31** - PRECorp Telephone Town Hall meeting with CEO Brian Mills, 6:30 p.m.
- **Saturday, June 3** - Durham Ranch Buffalo Stampede 5K/10K Walk/Run. Register at: <http://precorpfoundation.org/>
- **Friday, June 16** - Deadline for PRECorp Director candidates to file nominating petitions.
- **Tuesday, June 20** - PRECorp Board of Directors meeting, 9:30 a.m., Sheridan.
- **Tuesday, June 27** - PRECorp Foundation Board meeting, Gillette.
- **Tuesday, July 4** - Independence Day, PRECorp offices closed.
- **Monday, July 17** - Publication of notice of Annual Meeting in the July WREN magazine.
- **Saturday, August 26** - 78th PRECorp Annual Meeting, Buffalo High School.
- **Friday, September 15** - PRECorp Foundation Golf Scramble, Golf Club at Devils Tower.

April Moonshot Logo contest winner:

Dave C., Rozet

To enter, email communications@precorp.coop with your name, phone number, and where you saw the Moonshot logo; or, call our office at 1-800-442-3630.

Innovation...

it was an opportunity to supplement funding to continue our work product and concept," said PRECorp VP of Engineering Quentin Rogers. "Electrical connections on the grid are mechanical in nature and can deteriorate over time. These can ultimately fail and show up as outages or even cause arcing that can lead to a wildfire. The Advanced Meter Infrastructure (AMI) meters already installed at many utilities provide real-time sensors across the entire distribution system that can provide insight to the issue. Inspection of connections can be difficult and costly to assess with the naked eye or even with specialized tools." The PRECorp Team – named "Moonshot" – are fine tuning complex algorithms where data from these meters can be used as alerts to problems on the electrical system that may not be easily discoverable by humans with a regular ground-based inspection.

To put it simply, PRECorp staff in Engineering and IT developed software and a process using AMI to detect instances when the voltage at the meter is not what is expected for the power being delivered. The software sensors can send up red



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flags indicating a problem before it becomes a failure that could result in an outage or wildfire. This is a direct use of machine learning, where computer systems can help predict problems before they happen.

The other two winners in the Digitizing Utilities Prize Track 3 are an Electric Vehicle Integration solution from Riverside, CA; and a solution to mismatches in distribution data models from Orlando, FL.

In Phase 2 of the Digitizing Utilities Prize, PRECorp and other Phase 1 winning teams will have until September to work with utility partners to implement their proposal and demonstrate how other utilities could use their software solution in the future. Up to three winners of Phase 2 will receive a portion of the \$425,000 total cash prize pool.

The Digitizing Utilities Prize is funded by the U.S. Department of Energy Office of Electricity and directed and administered by the National Renewable Energy Laboratory. Learn more and follow our progress at <https://www.herox.com/digitizingutilities>.

