AN ADVANCED GRID
THE FUTURE IS NOW
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GIVING BACK IS IN OUR DNA

(Editor’s Note: Ben Fowke, chairman, president and CEO, regularly shares his thoughts in this column for Xtra.)

The first Saturday in September has become one of my favorite days of the year, thanks to Xcel Energy’s annual Day of Service.

This year the day took a giant leap forward as – for the first time in the Upper Midwest – we invited the public to join us and volunteer side by side with employees to complete service projects for local nonprofits. It’s a tradition that has been underway in Colorado for the last six years and has been going so well that we decided to replicate it in Minnesota and Wisconsin.

Last Saturday, we had more than 5,000 employees and neighbors contributing their time to support communities in the Upper Midwest and Colorado. Volunteers helped clean up rivers and shorelines, painted homes for military veterans, planted trees and restocked baby closets for young families.

I had the opportunity to help assemble boxes of popcorn for Northern Star Scouting in the Twin Cities. Scouts in the program will sell the popcorn to friends and neighbors to raise money to attend scouting camps where they have hands-on opportunities to develop their leadership skills.

Day of Service is special because it showcases the scale of our volunteerism on one single day, but the reality is that many of you – our valued employees – give back throughout the year, oftentimes with little fanfare.

I am so proud of our employees who volunteer in so many ways...doing everything from delivering meals on wheels and packing backpacks with school supplies, to supporting animal shelters or even serving on nonprofit boards.

I’m also proud that we work to build stronger communities through our annual United Way campaign, which just kicked off this week. Bob Frenzel, our chief financial officer, is chairing our campaign this year, which has set a goal to raise $2.7 million.

But the dollars we collectively contribute are so much larger thanks to the 100 percent employer match from the Xcel Energy Foundation. The United Way is the best way to give back financially and literally double the impact. It’s the best return on investment out there.

Thanks to all of you for your gifts of time and dollars. It has a tremendous impact on our communities, and it matters to our customers as well.

Our customers want to work with a company that is known for contributing to the local community – it actually helps to build customer loyalty and enhances our corporate reputation. ✲
INNOVATOR AND I DELIVER AWARDS

Editor’s Note: Innovator and I Deliver awards at Xcel Energy reward performance when teams and employees deliver greater-than-expected results. Xtra is running a series of articles on select winners.

INNOVATOR AWARDS

Transmission Capital Projects

A cross-functional team of employees from Transmission, CFO, Supply Chain and the Customer and Innovation group received a joint Innovator Award. The Capital Lean and the Transmission Scrub teams were recognized for identifying more than 140 improvement opportunities that could achieve more than $51 million in scope savings and 20% in field productivity improvements.

Reinforced by change management and Lean methodologies, the teams identified and implemented valuable new processes across Transmission capital projects. Their work will help optimize capital expenditures and in-service goals and will provide the company with reliable infrastructure to support corporate objectives.

For example, the team’s review of the New Mexico Tierra Blanca substation project resulted in reducing the amount of land needed to be purchased by 50% and also cut the total amount of equipment required, decreasing the project cost by $3 million.

And on the LaCrosse-Coulee line in Wisconsin, safety and efficiency were increased on the project. The team’s work avoided $50,000 in mobilization/de-mobilization costs and reduced the need to spend $1,500 per hour for a helicopter to install conductor.

Cheyenne Ridge Self-Build

As part of the Colorado Energy Plan (CEP), Xcel Energy was granted ownership of the proposed 500-megawatt Cheyenne Ridge wind facility under a build-own-transfer arrangement that will have the company owning the new wind farm but not actually building it.

Immediately following CEP approval, employees ran into difficulties that required quick action and strong commercial acumen to save the project. Ultimately, an internal cross-functional team was able to change the build-own-transfer agreement to a self-build project within an aggressive four-week timeframe and obtain commission approval prior to a crucial deadline – all without changing the cost of the facility. The effort also resulted in customer savings estimated at $215 million.

The approach shows the company’s advancement in being able to design, build and operate wind projects in a cost competitive manner – showing it is on par with the industry. The project also showed the agility of internal teams to pivot and change direction and leverage solid competitive thinking.

The ability of the team to transition this project to a self-build effort was essential to the company’s growth and clean-energy strategies. If the team had not been successful, Xcel Energy would have lost out on the $630 million-plus investment opportunity in the wind farm.

I DELIVER AWARDS

Mountain Division Drone Work

Last winter saw heavy snow totals in Colorado and hundreds of avalanches in the high country. Avalanche conditions in Summit County near many large ski areas resulted in down power poles and lines.

These conditions proved too dangerous for teams to go out and assess the damage on the ground. Areas were off limits due to the possibility of ongoing avalanches. To help the Mountain Division identify impacted assets, two Energy Supply engineers who fly drones offered to help.

The engineers flew the drones while always maintaining Federal Aviation Administration line-of-sight rules. The drones recorded power poles and lines in high-resolution, GPS-enabled videos, and provided a valuable aerial view of the damage caused by avalanches.

The videos proved invaluable to division employees who were safely able to gain a view of the area. The GPS tracking also helped the team pinpoint exact coordinates for future repair work.

Combustion Turbine Simulator

As Xcel Energy’s focus on clean energy is shifting its fossil fleet away from coal and toward natural gas, there is a need for a combustion turbine simulator for operator training became apparent.

A senior technical instructor has been the driving force to ensure that a new simulator is available for control specialist apprentices.

Before this simulator was purchased, all control specialists were trained using a coal plant simulator. The instructor was
instrumental in selecting the new unit, as well as preparing it for both coal and gas as a training tool.

The instructor worked with subject-matter experts, the vendor, controls engineers and management to ensure that the tool will be a benefit to control specialist apprentices. The new simulator more closely resembles the generating units that the operators will work on, providing more realistic training and more confident operators that should enable increased plant reliability.

Black Dog Preparation

Black Dog Generating Station is situated on the Minnesota River in Burnsville and is subjected to frequent flooding during spring thaw and abnormal rain events. This year’s flooding was predicted to possibly be at unprecedented levels at some point – with very short notice – leaving little time to develop, design, and procure and deliver material, labor and services to provide additional flood protection.

If flood waters were to breach the flood boundary, damages could result in environmental incidents, property loss costs exceeding $36 million – and result in generation impacts lasting 18 months or more. A team worked extensive hours with the goal of ensuring that plant and substation operations could continue in a safe and reliable manner.

The team successfully completed prevention activities prior to flood waters cutting off normal access to the plant. The work was done in parallel with ongoing inspections and handling of flood-protection measures, while maintaining the operation of generating units – especially during the planning and execution of spring outage activities.

Liquid Propane Tank Sale

A senior siting and land rights agent worked on a complicated sale of Xcel Energy’s liquid propane storage tanks at the Wescott plant in Minnesota. This sale helped lower customers’ costs both now and in the future by generating revenue and reducing O&M costs through the sale of an asset the company no longer needed.

The agent worked through a complicated subdivision of the property in which Xcel Energy needed to share access, protect plant systems and make sure multiple stakeholders were satisfied.

As part of this process, the company had to perform multiple appraisals on unique equipment and work closely with the Minnesota PUC. The agent played a key role in this appraisal process by finding engineering firms that could help provide replacement costs to help set the sales price.

Foundation Grant-Approval Process

One of the ways the Xcel Energy Foundation supports the community is through investing in nonprofit organizations by offering grants to support their work. Previously, the grant-approval process began with an online application and was completed with a manual, paper-driven process that required signed agreements and payment information before funds were disbursed. The process was inefficient and time consuming for both grant recipients and Foundation representatives.

Two employees in Human Resources worked to create a new process for grant approvals through CyberGrants. Under the new system, nonprofits receive a system-generated email with instructions to login to the CyberGrants portal. Once in the portal, they can view all documentation, including all needed documents and agreements.

They also are able to electronically sign and submit their grant agreement and provide their payment information, limiting delays to receive funding. Most importantly, all of the data is stored and tracked in a single location. As a result of the new process, the company’s community partners now benefit from a seamless, fully integrated online process, saving time and money.

Colorado Flood Preparedness

Preparing for potential flooding in Colorado after a snowy winter is an area of focus for the company to ensure minimal service disruptions for customers.

To prepare, a manager in Electric Operations helped develop a proactive model for use in occurrences of severe flooding. Leading a cross-functional team, she held meetings to improve and institute processes that are sustainable for future use. The three-part plan devised included steps to follow before a flood, during a flood and for recovery efforts after a flood.

One crucial aspect involved the creation of a predictive flood model. The model entails an overlay map of Xcel Energy’s assets within the Federal Emergency Management Agency’s flood map.

Before a flood, it gives the company greater insight to make decisions about power distribution before customers and assets are affected. During and after a flood, it provides a detailed view of impacted resources to aid with cleanup and repair efforts. The predictive model will provide a real-time blueprint to help Xcel Energy improve response to widespread flooding.
Xcel Energy’s Foxtail Wind Facility in North Dakota will be the first to debut a new technology that addresses one of the biggest landowner complaints in living near a wind farm—the red blinking lights on top of turbines.

At Foxtail, an aircraft-detection lighting system will be used instead.

“It means those lights will come on only when they’re really needed, which is to alert an aircraft in the area that there’s a wind farm here,” said Julie Fedorchak, commissioner on the North Dakota Public Service Commission.

“Otherwise, the night skies will be dark, and basically when it’s dark outside, the wind farm will be invisible,” she added.

“It’s a great way to mitigate one of the complaints about wind, and make it more tolerable to all who live around it.”

In an effort to balance aviation safety with the “dark sky” demands of surrounding communities, the Federal Aviation Administration has for the first time allowed for the use of a Aircraft Detection Lighting System (ADLS) at wind farms.

ADLS is a radar system that communicates with the red obstruction lights on the wind turbine towers. The obstruction lights are turned off until the ADLS detects a plane within approximately 3.5 miles of the nearest turbine, at which point the lights are turned on for safety. The lights are once again disabled after the plane leaves the area.

ADLS was implemented at the Foxtail before the project reached commercial operations. ADLS also will be installed at the company’s Courtenay and Borders wind farms in North Dakota in the near future.

In addition, and in another first at the facility, the Grand Forks-based company, Airtonomy, is hoping to use the same aircraft-detection radar system to support truly autonomous drone flights for maintenance and inspection work within the footprint of Foxtail.

Construction on the 150-megawatt wind project began in May 2018 and was expected to be completed by the end of September.

Recently, landowners, regulators, industry experts and government leaders gathered with Xcel Energy leaders and personnel to celebrate the wind project, which at the time was nearing completion near the small town of Kulm, North Dakota.

“As any of you who’ve been involved in this project know, easy doesn’t accurately describe the process of planning and building a large wind farm,” said Teresa Mogensen, senior vice president of Energy Supply. “It sure doesn’t happen overnight, and it takes the efforts of many.

“With nearly 300 workers on the project, all 75 turbines will be erected and spinning by early fall,” she said during the Foxtail celebration in August. “They will take full advantage of some of the best wind resources in the country to power nearly 80,000 homes with low-cost energy.”

Held during American Wind Week, the event took place while others across the country were also celebrating wind power—a resource that is abundant in the northern Great Plains state.

“North Dakota’s wind industry continues to grow,” said North Dakota Lieutenant Governor Brent Sanford at the event. “We
now host 38 wind farms, and per capita, we’re the No. 1 state for wind-generated power.

“Wind energy supplies about 26 percent of our electricity in North Dakota,” he said. “And wind plays a vital role in jobs, income to our local communities, and tax revenue to local and state governments.”

Mark Nisbet, the company’s principal manager for North Dakota, added, “I would like to thank the Foxtail team for their efforts to earn the trust of local officials, landowners and residents. It’s obvious that we are welcome and appreciated in Dickey County.”

The Foxtail Wind Farm is part of Xcel Energy’s clean energy transition that includes building an additional 1,850 megawatts of new wind energy in the Upper Midwest. It will contribute to Xcel Energy’s plan of reducing carbon emissions by 80% by 2030, putting it on a path to aim for 100% carbon-free electricity by 2050.
XCEL ENERGY CELEBRATES SOLAR*CONNECT COMMUNITY GARDEN IN ASHLAND

A recent celebration marking completion of the third and final Solar*Connect Community Garden in Ashland, Wisconsin, drew a crowd of more than 50 people including community leaders, elected officials, subscribers and the media.

In his opening remarks, Mark Stoering, president of Xcel Energy–Wisconsin and Michigan, thanked customers for their strong support of the program and highlighted Xcel Energy’s leadership in building a clean energy future.

“We started this community solar program with plans to build two gardens – one in Eau Claire and one near La Crosse – but thanks to strong interest in this area, we were able to expand the program and build this third garden in Ashland,” Stoering said.

“We’re excited about our future and our plans to reduce carbon emissions by 80% by 2030 – and gardens like this one help us get there.”

Deb Lewis, Ashland mayor, highlighted the strong partnership with Xcel Energy over many years and thanked the company for supporting the community’s clean energy goals.

Mark Abeles-Allison, Bayfield County administrator, noted that the county was one of the major subscribers and strongly supported the company’s program and use of more locally sourced renewable energy. Bayfield County’s subscription accounts for nearly one-third of the entire output of the Ashland solar garden.

Solar*Connect Community is now fully subscribed with about 150 “founding members” benefiting from the renewable energy generated by the three-megawatt program.

In addition, Renewable*Connect, which features a blend of wind and solar energy and flexible subscription terms, was introduced on the heels of Solar*Connect Community. All Wisconsin Windsource customers transitioned to Renewable*Connect in March and several new customers enrolled, resulting in a current total of more than 6,500 Renewable*Connect customers in Wisconsin.

XCEL ENERGY’S TEXAS-NEW MEXICO SYSTEM BEATS THE HEAT

Xcel Energy’s Texas-New Mexico service area set an all-time demand record on Aug. 26, helped by big investments in the reliability of power lines and substations, and a growing amount of wind energy boosting the region’s power generating resources.

“The investments we’ve made in new power lines, substations and power generating resources have better prepared us for really hot days,” said David Hudson, president, Xcel Energy–Texas and New Mexico. “Only a decade ago, we were challenged by a shortage of electricity reserves and overloaded lines and substations, so we’ve come a long way in a relatively short amount of time.”

Total demand around 5 p.m. on Aug. 26 was 6,198 megawatts, beating the old peak demand record of 6,148 megawatts set in July 2018.

Xcel Energy’s strategic investments in the grid over the past decade have been made in order to avoid not only power shortages, but also to strengthen the systems that deliver electricity to the customers’ homes and businesses, Hudson said.

Through the Power for the Plains initiative, which began in 2011, Xcel Energy has built more than 800 miles of new high-voltage transmission lines, as well as built or upgraded more than 70 substations. These improvements have enabled the company to tap into a broader market for additional and often more economical power supplies, and to move that power more efficiently to areas of growing demand.

A growing supply of wind energy on the system has added additional reserves of electricity, while displacing higher-cost electricity generated at fossil-fuel plants, he said, saving customers millions in fuel costs. On Aug. 26, wind energy made up between 13 and 40 percent of the hourly power supply throughout the day, with close to 1,400 megawatts of wind energy, or about 23 percent of the total mix, coming onto the system at the peak time around 5 p.m.

For the entire day, wind accounted for 27 percent of the average energy mix. The rest of the electricity was supplied by natural gas and coal-fueled power plants and solar facilities, located in the Xcel Energy Texas and New Mexico service region.

“Even though wind energy doesn’t normally peak in the afternoon hours during the summer, we now have enough wind resources on the system that it often makes up a material amount of our electricity supply at the peak of demand from our customers,” Hudson said.

“Long term, the benefits of investing in wind energy and a more resilient grid will enable business and industry to continue creating jobs in our Texas and New Mexico service area,” he added. “The near-term benefits are that we can weather the hottest and coldest days with an ample supply of electricity and a system that can hold up under extreme conditions.”
Xcel Energy’s Bird Cams continue to be a big hit.
This past season, Bird Cam social promotions received more than 1.5 million page views (up 200,000 from last season) and a whopping 99.8% overall positive reaction rate. There also were nearly 23,000 total engagements on social channels, reaching nearly 1 million people across the service territory. Bird cam posts fill the top three slots for engaged posts across all states for 2019.

Although the stars of the show had to endure 80-plus mph winds and snowstorms that interrupted their egg-laying process, they persevered and created another successful season.
Not all company nesting sites have cameras trained on them, yet many are active nests nonetheless. At Prairie Island Nuclear Generating Plant this year, there was some drama when two different nesting pairs of peregrine falcons competed for the same box. The resident pair won the battle and tried incubating all seven eggs that had been laid by both females. In the end, however, only one falcon successfully hatched.
A recap of this year’s Bird Cam activities included:
• Fort St. Vrain/Bald Eagles – Three eggs laid, two hatched. This camera is the most popular and has even resulted in an enthusiastic group of viewers starting a Fort St. Vrain Eagle Cam Facebook page. Here they share pictures, videos and their at times daily observations.
• Fort St. Vrain/Great Horned Owls – No nest activity seen in the box this year, but hope remains that owls will move in next season.
• King Plant/Peregrine Falcons – The falcons were healthy and hatched three eyass (as baby falcons are called). King is the oldest and most productive plant site.
• Sherco Plant/Peregrine Falcons – The first clutch failed due to an April snowstorm, but a second clutch produced two eggs and two hatchings.
• Riverside Plant/Peregrine Falcons – Although two falcons were on site, they did not lay eggs this year.
• High Bridge Plant, Peregrine Falcons – Two falcons hatched, were banded and were named Anton and Polly, both after retired employees.
• Ashland Plant/Peregrine Falcons – Four falcons hatched in late June. The falcons didn’t begin laying eggs until late April, which means they missed the late, cold spring that reduced production at many of company sites.
• Prairie Island Nuclear Plant/Peregrine Falcons – Of the two falcons hatched, only one survived. He was named Joker after retiree Gerald Joachim, a longtime plant employee.
• Monticello Nuclear Plant/Peregrine Falcons – The resident peregrine falcons produced one healthy male falcon this year, which was named Matt in honor of the employee who helped with the nest.

Plans for the 2019-2020 season include repairing the American kestrel box at Pawnee Generating Station in Brush, Colorado, after a severe storm destroyed the box, but left the camera intact. The box will be rebuilt and should be ready for next year’s nesting season.

There also are plans to add a Heron camera at Riverside Generating Station in Minneapolis. Herons established a colony on two small islands near the plant after a tornado wiped out their previous nesting spot.

Bird Cam was one of the first programs put in place to support the company’s position on protecting wildlife and its habitat. Many company locations serve as ideal places for birds to live and thrive.
The grid of the future is being built today. The grid of the past – some of it constructed as far back as a century ago – is ready to be modernized, and Xcel Energy is stepping up by building a smarter, more resilient energy grid that will better serve customers in the decades to come.

The Advance Grid Intelligence and Security initiative, also known as Advanced Grid, will lay a foundation for a more efficient, intelligent and interactive system—a pathway where electricity and information can flow between the company and its customers.

“Our advanced grid effort will lead to better and more reliable service, make finding and repairing service problems easier, and provide greater visibility of the grid as more renewable energy, battery storage and electric vehicle charging capabilities are added,” said Julie Simon, senior director of Advanced Grid Intelligence and Security (AGIS) Business Readiness. “It also will feature smart meters that will give insight into energy consumption and power quality, and help our customers better manage their electric bills.”

“We wanted to get some new and fundamental technologies in place so we could offer more advanced services and capabilities, as well as better monitor and control the grid,” added Sue Henderson, director of AGIS Change Management. Those technologies entail five new initiatives that will lead to benefits for customers and Xcel Energy. They include:

• Enhanced abilities to manage the grid – The Advanced Distribution Management System allows for real-time, enhanced visibility and control of the distribution power grid. It is the “brain” of the advanced grid initiative, and connects and orchestrates numerous advanced devices in the field.

• Improving system efficiency – A new application uses devices in the field to increase distribution system efficiency.
by optimizing voltage and power factors as power travels from substations to customers. Known as Integrated Volt-VAR Optimization, it also has the opportunity to incrementally save customers money over the coming years.

- Faster outage restoration – New technology will estimate the location of outages by using information carried over a new communications network from field devices. More precise outage location will not only minimize the number of customers affected, but will also decrease restoration times. The application is called Fault Location Isolation and Service Restoration. The company also is deploying new automated switches that enable automated restoration, reducing outage duration for customers.

- Better communications on the system – A new private two-way communications network, called the Field Area Network, will allow information to flow from customer electric meters into the grid control systems and other billing applications. This secure wireless network features base stations at substations that connect with antennae units on utility poles. They then broadcast out to meters, allowing a two-way information flow.

- Smart meters – New electric meters will connect the advanced grid to customer homes and businesses. Unlike meters of old, smart meters have the processing and communications power of a small computer, opening new possibilities for grid management and customer programs. Customers will start seeing benefits as early as 2021. Meters will deliver more detailed energy-use data to customers and create possibilities for them to better manage their energy use, as well as enabling new future products and services. For instance, with the new meters, both the company and customers can more effectively manage the impact of electric vehicles on the grid.
Data security is an integral component of the advanced grid and a key priority when deploying all technologies. Xcel Energy is ensuring the security of the communication network by design, layered defense and a zero-trust model.

As for the nuts and bolts of the effort to date, the Advanced Distribution Management System will go live at the control center at Lipan Distribution Center in Denver at the end of October, Simon said. Extensive training for employees has been under way since February. And the communications network that connects everything is in place across the Denver metro area.

“The Advanced Distribution Management System will provide system operators greater visibility into the electric distribution grid, provide faster response to issues, and provide an Xcel Energy One Way across all our distribution control centers,” said Troy Browen, senior director of the Distribution Control Center. “The platform marries engineering and control center skills, establishing strengthened human performance. This enhanced visibility and organizational alignment fully supports the company’s vision to enhance the customer experience.”

On the meter side, 13,000 new meters will be installed in the Denver area by the end of the year, using the new voltage-optimization and communications-network capabilities, providing greater insight into customers’ actual voltages. Between 2021 and 2024, the company’s remaining electric customers in Colorado will receive smart meters. That’s when customers will start seeing the benefits of applications that show them energy usage, which will help them make choices on how to use their energy.

In Minnesota, approximately 17,500 customers in the Midtown area of Minneapolis and several southwest suburbs will receive smart meters starting in October. This is part of a pilot program in which customers will have the chance to save on their bills by shifting energy use outside of peak times.

“Xcel Energy is believed to be the first utility company to implement all five of these advanced grid technologies at the same time, and we’re starting with a small footprint to prove the model before expanding,” Simon said. “We’re building our future – and that’s impressive and exciting.”

“We’re building the future and paving a path forward for both our customers and employees,” said Lee Gabler, senior director of Digital Channels. “The advanced grid initiative is aligned with our customer experience transformation initiatives, and will enable customer products and services to deliver incredible customer experiences in their preferred channel.”

As these new technologies start to transform the grid, customers will see benefits right from the beginning. So far, the new application to improve system efficiency and optimize voltage is producing the expected energy savings in the Englewood area of Colorado, Henderson said. Any percentage of energy savings will add up to a lot over time, considering the amount of power involved to serve a service territory of millions. These savings are possible because the new control systems use a flow of information to run complex calculations. They then adjust the system as needed through the advanced devices stationed in the field.

“Many devices run better and save money at lower voltages,” said John Lee, senior director of Electric Distribution Engineering, who has been involved in advanced grid planning since its beginnings in 2012. A reduction of two volts can produce about a one-and-a-half percent savings. Xcel Energy is seeing evidence from the initial deployment, showing that it can enable technology to achieve savings without introducing any operational problems for the company or its customers.

Another benefit that customers are sure to appreciate is the “self-healing restoration” of the grid, Lee said. The application uses sensors to control switches that can automatically reconfigure the system to get customers back online more quickly – with restoration much of the time occurring almost immediately. It also provides details on what is wrong and where, so repairs are expedited.

“The advanced grid initiative provides us with a foundation for the future in delivering to customers the products and services they want,” Lee said. “It aligns well with the company’s goals of reliability, low bills and more offerings, many of which will benefit our clean-energy strategy.

“This comprehensive package of technologies will put us in a leading position in the industry,” he added. “And we know we can deliver what we’re promising.”
ADVANCED GRID

The five main components of the advanced grid being built by Xcel Energy will create a more efficient, intelligent and interactive system where electricity and information can flow between the company and its customers. Pictured on these pages are different pieces of the project, covering everything from secure communications to new meter technology.
Between June and September, the Enterprise Security Services group sponsored four separate Knowledge Fairs – held in Denver, Amarillo, Eau Claire and Minneapolis – attracting more than 3,000 Xcel Energy employees.

This year’s theme was Power UP!, and business areas across Xcel Energy came to showcase what they are doing to deliver on the company’s commitments to customers and communities, and to share their work with fellow employees.

“This is one of my favorite days each year at Xcel Energy,” said Ben Fowke, chairman, president and CEO, as he kicked off the Minneapolis event.

Fowke encouraged employees to get involved in the fairs by learning more about the work being done in other departments, finding opportunities to drive improvements in their own organizations, and looking for chances to evolve their careers at the company.

With some of the Knowledge Fairs hosting more than 50 booths, there was something for everyone, including:

- The Living Securely Lab featured smart home technologies and provided fair-goers with tips for securing their smart home devices. Educating employees on security in the workplace and at home is a core mission for Enterprise Security Services.
- The Advanced Grid team was on hand to demonstrate how Xcel Energy is leveraging technology to modernize the electric distribution grid.
- Gas Engineering and Operations showed how they are working to increase reliability of the gas system, which includes more than 37,000 miles of gas pipelines and other assets.
- Outdoor Lighting demonstrated how their group is literally powering up communities by maintaining street and security lighting.
- And Total Rewards connected employees with resources to take advantage of the benefits Xcel Energy employees receive.

Participants at each booth engaged employees through technology, games and giveaways, while educating them about their group’s programs, projects and outcomes.

“The Knowledge Fair has helped us expose hundreds of
employees to the Idea Management platform,” said Jerry Ligrani, consultant with Business Management. “The fair was a great, meaningful way for us to engage with others, get people excited about the platform and hear some of the developments taking place across the company.”

The company’s Bird Cam effort also participated in this year’s Knowledge Fairs in both Minnesota and Colorado. And employees in Colorado had the opportunity to see two American kestrels, one male and one female. “The birds drew large crowds of employees to our booth, allowing us to share information about the Bird Cam program and other programs that Environmental Services supports,” said Curtis Dominicak, manager with Environmental Services and Media Compliance. “I’ve been involved in both the renewable customer programs booth and the electric vehicles demonstrations over the past couple years,” said Eric Van Orden, strategic segment team lead with Customer Solutions. “We always look forward to the opportunity to share emerging technologies and love engaging with other teams.”

The 2019 Knowledge Fairs also saw the debut of the Whova app, which enhanced engagement at the events. Employees who installed the app were able to chart their path through the fair, read about each exhibitor, access online tools, share photos from the event and interact with other attendees.

XpressTalks were another addition to this year’s Knowledge Fair experience. They were designed to reach beyond the walls of the actual fairs, and bring the energy and inspiration of Knowledge Fairs to all employees.

The talks featured a dozen employees and leaders from across Xcel Energy who shared inspirational and educational talks in the style of TED Talks. Topics ranged from “Aligning Our Clean Energy Vision with Customer Goals” to “The Power of Innovation,” and focused on improvements both at the individual and company level.

XpressTalks were live-streamed in July, and are now available for playback via the Whova app on mobile devices or on XpressNET (search for ‘Knowledge Fair’).
The CapX2020 utilities plan to study the transmission system that serves the Upper Midwest to identify system improvements and infrastructure upgrades that may be needed to achieve the ambitious 2050 carbon-reduction goals established or proposed by utilities and policymakers.

The study, which is called the CapX2050 Transmission Vision Study, will look at maintaining a safe, reliable and cost-effective electric grid as the system adds more carbon-free energy. According to CapX2020, the study is critical to the eventual development of a comprehensive plan that will ensure the continued reliable delivery of low-cost electricity in a cost-effective manner.

The utilities believe an emphasis on holistic long-term planning will ensure a successful transition to a clean-energy future as the Upper Midwest generation fleet transitions to use higher levels of carbon-free generation, distributed generation and new energy-storage technologies.

Executive leaders of the 10 CapX2020 member utilities recently approved the transmission system study, which will help them better understand regional transmission needs to ensure grid reliability, flexibility and low-cost electricity. They said it will provide valuable data for sharing with policymakers, regulators and the public, while providing opportunity for stakeholder input. The study is targeted to be completed in January 2020.

CapX2020 is a joint initiative of 10 transmission-owning utilities in Minnesota and the surrounding region formed to plan, upgrade and expand the electric transmission grid to ensure continued reliable and affordable service. In 2017, CapX2020 successfully completed an 800-mile, nearly $2 billion grid expansion in the Upper Midwest.

The projects included four 345-kilovolt transmission lines in Minnesota, North Dakota, South Dakota and Wisconsin, and a 230-kilovolt transmission line in northern Minnesota.


**PHOTO OP**

Zuni Generating Station is located along the South Platte River, near downtown Denver. Paul Storm, electrical designer with Substation Engineering Design at 1800 Larimer, captured this image. “There’s a bike trail that runs along the Platte River that I take for my commute,” he said. “The photo was taken on my morning commute.”

Editor’s Note: “Photo Op” is a standing feature in Xtra. Each issue, a photo submitted by a reader or produced by a member of Corporate Communications will be published. Please submit high-resolution digital photos to the editor at the email address listed on the back page of this publication. By submitting images for “Photo Op,” employees give Xtra permission to run the photos.
LETTERS

‘Don’t always have this kind of experience’

Dear Xcel Energy:

I just spent some time on the phone with Angie Powers (energy efficiency representative, Customer Care), talking about my electric bill and some changes to consumption that I made last fall that have been eroding my solar bank. I found Angie to be very knowledgeable and happy to share information to help me make better choices with my energy consumption.

She also has a very sound understanding of the tradeoffs between using kilowatts versus therms, which she was able to share with me at a level that was easy for me to understand. I don’t always have this kind of experience when looking for help from a service company by telephone, and I wanted you to know that she did a fantastic job for me. Thank you.

—Jeff, Colorado customer

‘A significant amount of damage’

Dear Xcel Energy:

Looks like there was a significant amount of damage from the storm that hit Fargo/Moorhead last night. A shout-out to the Xcel Energy crews for their hard work into the night restoring our power.

—A Fargo customer

‘Your hard work does not go unnoticed’

Dear Xcel Energy:

I’m thankful for the crews tonight in North Dakota working as fast as possible to fix things after the storm. Your hard work does not go unnoticed, and I appreciate all of you.

—A Fargo-Moorhead customer

AROUND THE COMPANY

XCEL ENERGY PROPOSES NEW COLORADO ELECTRIC-VEHICLE PROGRAMS

Xcel Energy wants to add infrastructure to help communities and customers achieve their goals to increase electric vehicle (EV) use. If approved by the Colorado Public Utilities Commission, a recent filing will lay the groundwork for Xcel Energy’s larger Transportation Electrification Plan to be filed next year.

The company is working with communities such as Denver and Lone Tree to determine the communities’ goals to electrify fleets and pinpoint locations for charging. Xcel Energy also has been working with the Regional Transportation District (RTD) — discussing EV supply infrastructure, RTD’s recently-received grant for additional electric buses and the company’s proposed commercial EV rate, which is currently before commission.

“The cost of and access to charging infrastructure are critical barriers to Colorado’s EV aspirations, and we look forward to helping our customers and communities increase their electric-vehicle use,” said Alice Jackson, president of Xcel Energy—Colorado.

“Electrification of transportation is an important consideration in achieving our company vision to be carbon free by 2050.”

Accelerating the timeline for these projects enables Xcel Energy and RTD to work together to implement infrastructure improvements for RTD’s next fleet of 17 battery-powered electric buses.

“RTD is excited that Xcel Energy is supporting our agency’s efforts to deploy electric buses by covering some of the upfront costs of infrastructure improvements,” said Dave Genova, RTD general manager and CEO. “This type of support from Xcel Energy will make electric buses more financially feasible and may allow RTD to continue expanding our zero-emission bus fleet.”

Xcel Energy also recently unveiled an EV smart-charging pilot, called “Charging Perks” in Colorado, which will use onboard communications systems on electric vehicles to help owners decide when and how to charge their cars, while saving on energy bills and using more zero-carbon electricity.

Xcel Energy is proposing to partner with several automakers to reach EV owners through connected car systems. Each participating automaker will work with Xcel Energy and its customers to schedule overnight charging to meet customer driving needs, while charging the vehicle at the best times for the power grid.

The Charging Perks pilot proposes to offer EV owners a $100 sign-up incentive, plus a $50 to $100 bill credit at the end of the study’s first year, depending on what kind of home-charging station they use. By using technology already inside EVs, Xcel Energy will better understand when, where and how drivers charge their electric vehicles, and how to make charging easy for the customer and beneficial for the grid.

“Smart charging is a significant opportunity and an important role for Xcel Energy as we ensure EV charging benefits all of us who use the grid,” Jackson said. “Very few energy companies nationwide have tested this approach with automakers. We believe the Charging Perks pilot will show us how smart charging can keep costs low while we integrate more renewable energy as part of Xcel Energy’s zero-carbon strategy.”

The Charging Perks pilot proposes an initial test group of 600 electric vehicles. Testing the smart charging technology with a small group of customers and automakers will help Xcel Energy design programs that make charging easier and more affordable for all EV customers in the future.
PEOPLE

FRIENDS WE’LL MISS


PETER BERGREN, 84, storekeeper, Central Stores, Eau Claire Service Center, Eau Claire, Wis., died on Aug. 11, 2019. He worked for NSP from 1953 to 1994.

DONALD BEST, 88, local service representative, Windsor, Colo., died on Aug. 16, 2019. He worked for PSCo from 1957 to 1996.


LEWIS CLAWSON, 76, planner, Engineering, Mesa County Operations Center, Grand Junction, Colo., died on June 10, 2019. He worked for PSCo from 1968 to 2001.


DAREL DAY, 90, project consultant, Riverside Plant, Minneapolis, Minn., died on July 20, 2019. He worked for NSP from 1963 to 1997.


RICHD EDELBROCK, 92, material man, Electric Operations, St. Cloud Service Center, St. Cloud, Minn., died on July 29, 2019. He worked for NSP from 1948 to 1981.

MARK ELLINGSON, 54, call reporting supervisor, Call Center Resource Management, Centre Pointe, Roseville, Minn., died on June 28, 2019. He worked for Xcel Energy from 2006 to 2018.


ERVIN GEILERT, 77, lead mechanic, Fleet Operations, Lipan Transportation Center, Denver, Colo., died on July 5, 2019. He worked for PSCo from 1964 to 2002.


MARY GOAD, 72, customer information representative, Customer Information, Amarillo Call Center, Amarillo, Texas, died on July 11, 2019. She worked for SPS from 1967 to 2003.


JOHN HAMMONS, 94, died on June 18, 2019. He worked for SPS from 1949 to 1986.


DAVID MASBERG, 81, district supervisor, Southeast Electric Delivery, Watertown Office, Manistock Service Center, Manistock, Minn., died on May 16, 2019. He worked for NSP from 1963 to 1996.


ANITA PECORE, 79, receipt processor manager, Receipts Processing, 414 Nicolet Mall, Minneapolis, Minn., died on July 16, 2019. She worked for NSP from 1980 to 2000.


DAVID MASBERG, 81, district supervisor, Southeast Electric Delivery, Watertown Office, Manistock Service Center, Manistock, Minn., died on May 16, 2019. He worked for NSP from 1963 to 1996.


ANITA PECORE, 79, receipt processor manager, Receipts Processing, 414 Nicolet Mall, Minneapolis, Minn., died on July 16, 2019. She worked for NSP from 1980 to 2000.


CLARICE SHOOK, 90, telephone operator, Customer Telephone Service, Headquarters Office Building, Denver, Colo., died on July 17, 2019. She worked for PSCo from 1970 to 1990.

ARLEENE SILVERNAIL, 85, administrative assistant, Customer Service Group, Centre Pointe, Roseville, Minn., died on Aug. 22, 2019. She worked for NSP from 1967 to 1996.


WILLIAM WALSH, 83, lead troubleman, Electric Service, Rice Street Service Center, St. Paul, Minn., died on Aug. 6, 2019. He worked for NSP from 1971 to 1996.


RETIRED

MARGARET BARNETT (mbarnett36@xcel.com), work coordinator, Amarillo Line Department, Northeast Service Center, Amarillo, Texas, retired on Aug. 26, 2019. She worked for Xcel Energy for 44 years.

DON O’CONNELL, working forerman, High Pressure Gas, Campion Service Center, Loveland, Colo., retired on Aug. 21, 2019. He worked for Xcel Energy for 35 years.

DANIEL CANAR (danielcanarjnr@gmail.com), classified mechanic, Substation Shop, Lipan Distribution Center, Denver, Colo., retired on Oct. 21, 2019. He worked for Xcel Energy for 37 years.

JIMMIE YOUNG, 77, tractor/truck driver, Utility Group Operations, Renaissance Square, Minneapolis, Minn., died on June 15, 2019. He worked for Xcel Energy for 35 years.

GANE HENSLEE, principal environmental analyst, Environmental Services, 790 Buchanan, Amarillo, Texas, retired on Aug. 15, 2019. He worked for Xcel Energy for 42 years.

BRYAN IRONS (bryan.ironsbiz.com), technical and resource compliance manager, Technical Services, 790 Buchanan, Amarillo, Texas, retired on July 15, 2019. He worked for Xcel Energy for 36 years.


TINA KINESSE, electrician working forerman, Substation Construction, Denver, Colo., retired on July 31, 2019. He worked for Xcel Energy for 36 years.

LINDA LEE (leehome@fiveareas.com), business analyst, Finance, Portal Station, Earth, Texas, retired on July 31, 2019. She worked for Xcel Energy for 27 years.

KEN LOWMAN, senior designer, Distribution Design, Hayden, Idaho, retired on Aug. 6, 2019. He worked for Xcel Energy for 34 years.

ROB THOMPSON, serviceman/foreman (journeyman/foreman), Service Department, Borger, Texas, retired on Sept. 30, 2019. He worked for Xcel Energy for 33 years.

PATTI TUDOR (pattit@denaliho2874@gmail.com), electrician, Engineer and Construction, 1800 Larimer, Denver, Colo., retired on May 31, 2019. She worked for Xcel Energy for 12 years.

JOHN VOIGT (johndenav@ gmail.com), senior I&C specialist, Tech Services, Sheroz Plant, Becker, Minn., retired on Sept. 5, 2019.

WARREN WERTMAN (warrenwv@aol.com), leadership excellence manager, Site Focus Team, Prairie Island Nuclear Generating Plant, Welch, Minn., retired on Sept. 30, 2019. He worked for Xcel Energy for 20 years.
At Xcel Energy, we’re not waiting for the future, we’re already building it. And to make energy cleaner, safer, and less expensive for everyone, we’ve laid out a bold vision to deliver 100% carbon-free electricity by 2050.

Visit xcelenergy.com to learn more.