

CIRCUITS

NEWS FOR DAKOTA ELECTRIC MEMBERS



Dakota Electric is researching ways to better manage outages and improve operations through Advanced Grid Infrastructure (AGi)

As Dakota Electric continues to make investments to improve our electric grid, we are researching the replacement of aging electric meters with advanced meters, similar to what other cooperatives and utilities around the country have already done.

For the last several years, Dakota Electric has researched new technology to serve you even better.

Advanced Grid Infrastructure (AGi) refers to important new technologies that would enhance the communication and operation of the distribution system that delivers electricity to our members. Anyone who purchases electricity from Dakota Electric is a member-owner of the cooperative.

These technologies will help Dakota Electric monitor our system for better efficiency and operation. It will allow

two-way communication to field equipment, providing numerous benefits to our members and Dakota Electric.

When we use the term AGi, we are referring to what has been called "smart meters," but it is also referring to more than that. AGi captures the wider scope of this project, from the meter to load management to meter data management software and analytics.

Why are we researching this new technology?

Dakota Electric's existing meters and load management devices are nearing

the end of life. The average age of these devices is more than 20 years old. We have more than 116,000 electric meters and about 50,000 load control devices in use today. We are looking at the best technology to replace this critical infrastructure.

What are the benefits of AGi?

New metering technology can communicate meter readings and outage information directly to Dakota Electric's office. This would help avoid outages by identifying failing equipment or overloaded situations before they turn into extended power outages. When an out-

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Upcoming events

C&I Member Meeting	May 4, 8-10 a.m.
GreenTouch	May 6, 9 a.m. - Noon
Energy Trends Expo	May 9, 6-8 p.m.
Twins Youth Baseball Clinic	May 13
Board Meeting	May 25, 8:30 a.m.
Memorial Day - Office closed.	May 29

May 2017



Your Touchstone Energy® Cooperative 

Dakota Electric reminds members to **practice electrical safety**

In May, electric cooperatives across the country promote safety awareness to coincide with National Electrical Safety Month, and Dakota Electric is committed to educating our members about potential electrical dangers in and around your home and business. Follow these simple tips and reminders to stay safe around electricity.



Home safety

- Bulb wattage matters! Light bulbs with wattages too high for the light fixture can overheat the fixture, causing a fire hazard.
- How well do you know your home's electrical system? Make a map showing which fuse or circuit breaker controls each switch, light or outlet.
- Recurring tripped circuit breakers or multiple blown fuses? This can signify a serious electrical problem. Contact a licensed electrician immediately.
- Frayed or damaged extension cords are dangerous and should never be used. Damage to the cord can expose wires and cause fire and shock hazards.
- Flying a kite is great for outdoor fun, but remember to always be mindful of overhead power lines.
- DIY project for the home? Always turn off the power to the circuit you plan to work on by switching off the circuit breaker in the main service panel.



Farm safety

- Avoid raising the arms of planters, cultivators or other equipment near power lines, and never attempt to raise or move a power line to clear a path.
- If your equipment does come into contact with power lines, stay in the cab and call Dakota Electric for help.
- If exiting the cab is absolutely necessary because of fire, the proper action is to jump — not step — with both feet together hitting the ground at the same time. Hop to safety, keeping both feet together as you leave the area, until you are at least 40 feet away.



Storm safety

- Stay away from downed power lines and avoid walking through flooded areas. Power lines could be submerged and still live with electricity. Report any downed lines you see to Dakota Electric at 651-463-6201.
- Never use electrical equipment that is wet — especially outdoor electrical equipment, which could be a potential danger after a summer storm. Water and electricity don't mix!



Generator safety

Never connect a standby generator into your home's electrical system. There are only two safe ways to connect a standby generator to your equipment.

Stationary Generator:

- An approved generator transfer switch, which keeps your house circuits separate from the electric co-op, should be installed by a professional.

Portable Generator:

- Plug appliances directly into the outlet provided on the generator.
- Set up and run your generator in a well-ventilated area outside the home.
- Use a heavy-duty extension cord to connect electric appliances to the outlet on the generator.
- Start the generator first before connecting appliances.

Source: Electric Safety Foundation International (ESFi), SafeElectricity.org, OSHA

AGi (cont.)

age does occur, the system will rapidly collect information from individual meters and automatically report the outage so power can be promptly restored, even if the member is away from home.

AGi is also needed to support the increased integration of member-owned renewable energy on the distribution system.

What is the timeline for AGi implementation at Dakota Electric?

Dakota Electric's AGi project is a long-term initiative. Over the last few years, we have studied AGi technology and the business case. This past year, Dakota Electric staff visited several electric utilities to learn from their experience with similar infrastructure implementation.

Requests for proposals (RFPs) have been sent to potential vendors and a team of employees will review and evaluate proposals in the next couple of months. If a proposal meets our objectives and budget, we will present the

project to your board of directors for a decision by the end of this year.

If approved, a limited number of meters and equipment will be installed next year to verify operation and performance of the interconnected systems. If all is in order, installation of the new meters will begin in 2019, with meter installation taking approximately 24 months.

What will AGi cost?

The entire project is estimated to cost less than \$1 per member per month, though exact costs will not be known until proposals are received.

Dakota Electric is still early in this process. As we complete the evaluation process and select a vendor, we will know more about the equipment and how it functions. We will continue to update you regularly with information as it becomes available. For questions, call 651-463-6243, email customerservice@dakotaelectric.com or visit dakotaelectric.com/agi.

Advanced Grid Infrastructure (AGi)

Summary of Benefits

MEMBERS

- Automated power outage reporting, improved restoration and member communications.
- Enhanced reliability and power quality improvements.
- Improved energy usage information and options for our members.
- Support increased integration of member-owned renewable energy.

OPERATIONS

- Improved employee safety.
- Replaces aging infrastructure with current technology.
- Better planning, utilization and operation of our distribution system.
- More efficient internal business processes regarding billing and metering.
- Improved and more effective load management system.
- Reduced costs for power delivery to our members.
- Operational savings.

DOWNLOAD OUR OUTAGE APP

For quick and easy outage reporting

Once you have installed the app, you must request a code by visiting dakotaelectric.com and clicking on Power Outages > Outage App. The code is specific to your account and is required to personalize the app to your residence.



Area students traveling to Washington, D.C. in June

Five local high school students were recently selected to receive a trip to Washington, D.C., sponsored by Dakota Electric Association. The students will participate in the National Rural Electric Association's (NRECA) annual Youth Tour, scheduled for June 10-15.

The winners are Emma Anderson, Eagan High School; Holly Anderson, Christian Life Academy; William Barnes, Lakeville South High School; Kyle Ringley, Christian Life Academy; and Kelsey Shaw, School of Environmental Studies. Theresa Passe, School of Environmental Studies, was selected as an alternate. A panel of judges selected the students after reviewing their applications and interviewing them.



Each June, more than 1,200 high school students from around the United States travel to Washington, D.C. for the NRECA Youth Tour. Participants are selected and sponsored by their local electric cooperatives. During the week, the students learn about government and electric cooperatives. They will have the opportunity to tour many of Washington, D.C.'s sites, including the Smithsonian, the FBI Building and the Vietnam Memorial, and they also have a chance to meet their elected officials.

Each January, Dakota Electric makes Youth Tour applications available for high school juniors and seniors. Students should watch for information about the tour in our *Circuits* newsletter, visit our website or talk to their high school guidance counselor about the trip.



Emma Anderson
Eagan High School



Holly Anderson
Christian Life Academy



William Barnes
Lakeville South High School



Kyle Ringley
Christian Life Academy



Kelsey Shaw
School of Environmental Studies

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 - » \$25 on a cooling-system tuneup by your contractor
- Cycled Air Conditioning® bill credit of \$13 every June, July and August
- \$79.95 cooling-system tuneup by a contractor assigned by Dakota Electric

For more information, contact the Energy Experts® at 651-463-6243 or visit dakotaelectric.com.

Power strips vs. surge protectors

Do you know the difference between power strips and surge protectors? They look very similar, but they each serve a different purpose.

As the proliferation of electronics impacts our daily lives, we realize there simply are not enough outlets in our homes. This is particularly true for older homes. As a result, we end up with power strips. Power strips are generic, inexpensive and fulfill a very simple function.

Surge protectors, on the other hand, are the power strip's more talented cousin. They are generally more expensive and for good reason — they provide protection against power surges that may damage electronics.

The following are some things to consider when purchasing a power strip or surge protector:

Power Strips

- Look for a power strip with a built-in circuit breaker. If you connect too many electronics and devices, the strip will

kick out the circuit breaker rather than causing the breaker in your electric panel to trip.

- Get a smart strip. These are becoming more common and less expensive. With smart strips, one outlet serves as a master, receiving power all the time. The other outlets do not receive power until the master device is turned on. This is ideal for home entertainment setups.

Surge Protectors

- Go for a significant joule rating. This is a measure of how much energy it can withstand.
- Cable and internet connection protection. You may want to consider this for your entertainment and computing needs as surges can enter via any wired connection.
- Indicator light that shows if protection has burned out.
- A power conditioning feature (for PCs, this is a nice-to-have feature but not a necessity).
- A smart capability as mentioned above.

Important Tip: Make sure you know the amperage rating of the outlet into which you are connecting the strip and other equipment. A residential circuit can overload if you are not careful.



Source: NRECA



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Circuits Quick Clips

Visit us at the Energy Trends Expo!

Tuesday, May 9 | 6:00-8:00 p.m. | Eagan Community Center

Check out our FREE event featuring a vendor trade show, electric vehicle car show, energy storage technologies, home automation, residential solar testimonial and door prizes. We hope to see you there!

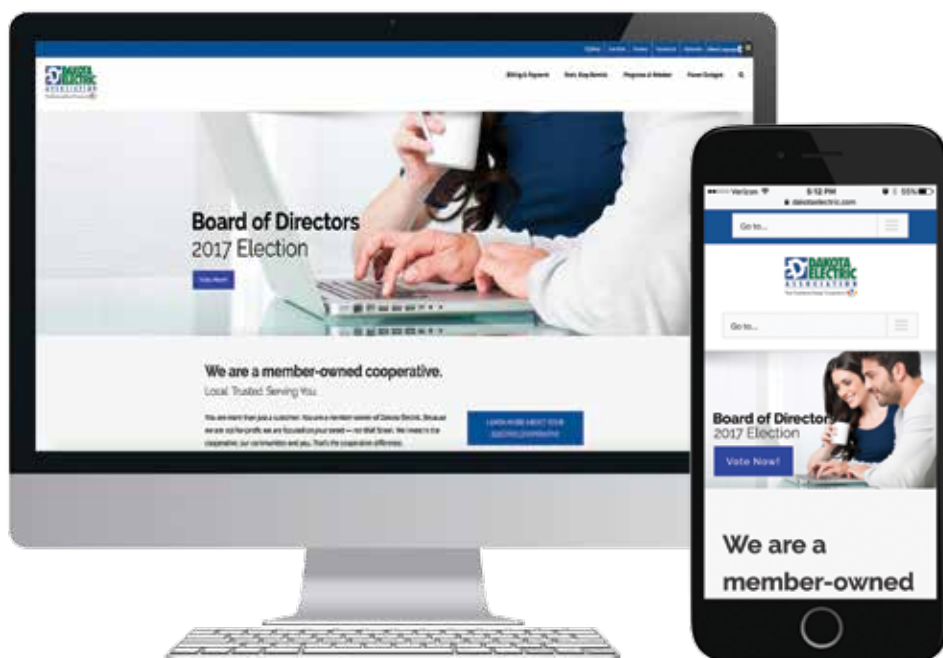
We have a new website!

Have you visited our website recently? If not, you should! We have given our site a major facelift — improving the design and navigation, content organization and overall user experience. And it's mobile responsive, which means the website looks and fits great on all mobile devices.

The site still offers the same great features and some new ones, including:

- online outage reporting that allows members to report an outage by simply entering the phone number associated with their account.
- a language tab at the very top of the page that will translate the entire site to Spanish with the click of a button.

We invite you to check out the new website, if you haven't already done so, for valuable information on co-op news and events, energy-saving programs and rebates, power outages, community involvement, convenient online bill pay and more!



Welcome to your new energy-efficiency online store

Dakota Electric is dedicated to providing you with new ways to control your energy use.

That's why we're excited to tell you about **EnergyWise MN Store**, an online marketplace where you can learn about and purchase products that can help you save energy and money.

Visit us online at:

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4300 220th Street West
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Member service & drive-up window
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24-hour outage & emergency service
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Underground cable locations
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Tree trimming & street lights 651-463-6287

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