

# CIRCUITS

NEWS FOR DAKOTA ELECTRIC MEMBERS

## Multi-year Advanced Grid Infrastructure (AGi) project will begin this fall

Improved technology to serve you even better



At its June board meeting, Dakota Electric Association's board of directors voted to approve the installation of new technology to serve our members even better. The multi-year Advanced Grid Infrastructure (AGi) project is set to begin later this fall and is expected to be complete by the end of 2021.

### What is AGi?

AGi is a term we are using to refer to new technologies that will enhance communication and operation of our distribution system that delivers electricity to our members. This project includes the installation of new smart meters, but it also refers to the wider scope of the project, from the meter to our con-

trol center to our customer information system.

### Why is Dakota Electric installing this new technology?

Our existing meters and load management devices are aging, and the average age of these devices is more than 20 years old. Dakota Electric has more than 116,000 electric meters and about 50,000 load control devices in use today, and it is time to replace this aging infrastructure.

"This new infrastructure will provide a foundational system for our future that will allow us to provide even better service to our members," said Greg Miller,

president and CEO. "This technology will help us monitor our system for better efficiency and operation and allow us to have two-way communication to field equipment, providing numerous benefits to our members and Dakota Electric."

### What are the benefits of AGi?

- Automated power outage reporting, improved restoration and customer communications.
- Enhanced reliability and power quality improvements.
- Improved energy usage information and options for our customers.
- Reduced costs for power delivery to our customers.

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### Upcoming events

Dakota County Fair .....	Aug. 6-12
Board Meeting .....	August 30, 8:30 a.m.

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August 2018



# Bring your skis and your EV!

Buck Hill is more than just a ski destination, it is now an EV charging destination!

After hearing about Tesla's Destination Charging program, Don McClure and Dave Solner, co-owners of Buck Hill Ski Area in Burnsville, knew it was an opportunity they didn't want to pass up.

"We believe the electric vehicle (EV) market will grow exponentially over the next decade, and we want to be ready," said McClure. "We see it as an opportunity. We are unique in that we sit on 65 acres in the middle of the suburbs, along a major interstate that on any given day has several hundred thousand cars driving by."

Tesla operates two different charging networks. The Supercharger network is made of DC fast-charging stations for long distance driving, and the Des-

tination Charging network consists of level 2 chargers installed at restaurants, shopping centers and hotels for charging an EV once Tesla owners arrive at their destination, hence the name.

On average, a vehicle will get 25 miles per hour on a level 2 charger, so the placement of these chargers is meant to provide guests with opportunities to occupy their time for a few hours while they wait for their car to charge.

In an effort to expand its electric vehicle charging infrastructure, Tesla provides qualified properties personalized assistance with installation and appropriate charging hardware — at no cost — as part of its Destination Charging program.

McClure and Solner went through the application process, and Tesla provided them with four Tesla level 2 chargers exclusively for Tesla vehicles, and two Clipper Creek level 2 chargers that can charge all other EVs. Buck Hill provides the electricity at no charge to its guests.

About 200,000 visitors pass through Buck Hill in a year. You may think of it as a winter destination, but they offer several year-round activities including summer skiing, youth camps, mountain biking and a summer concert series that just debuted in July. They also have the Black Diamond Restaurant that stays open throughout the year.

Because of these year-round activities, in which guests spend an extended

## AGi (cont.)

- Increased support of renewable energy integration.
- More efficient internal business processes regarding billing and metering.
- Better planning, utilization and operation of our distribution system.
- Operational savings.
- Improved and more effective load management system.
- Improved employee safety.

### How much will AGi cost?

We estimate the entire project will cost approximately \$1-\$2 per customer per month through the life of the system, though this estimate may change. Besides the up-front costs of the installation of the new technology, there will be ongoing costs to operate the system.

However, there are ongoing costs with our current metering system and infrastructure that will be avoided.

### What if I don't want the new meter installed?

We plan to offer an "opt-out" feature, so that those who do not want a smart meter can request that we do not install one. Choosing to opt-out will most likely incur a monthly charge for the cost of manually reading the meter, but that cost has not yet been finalized.

### When will the new meters be installed?

Meter installation will begin late next year, and members will be notified ahead of time. This is a large project and will take up to three years for full

installation and deployment (see project timeline below). We will continue to keep you updated throughout the project.

*For more information or questions regarding the AGi project, please visit [detaelectric.com/agi](http://detaelectric.com/agi) or call 651-463-6243.*

## AGi Project Timeline

### Fall 2018 - Spring 2019

Internal system design, meter testing and verification.

### Fall 2019

External testing; installation of 5,000 meters and 500 load control devices.

### Spring 2020

Full meter deployment begins.

### Fall 2021

Meter installations complete.

amount of time, and their close proximity to Interstate 35, McClure says Tesla found their property to be an ideal location for their destination chargers.

"If you're traveling with your EV and you need a charge, what better way to charge your vehicle while you ski, snowboard, bike, or have a meal in our restaurant," said McClure.



Dave Solner (left) and Don McClure, co-owners of Buck Hill Ski Area stand next to their new Tesla level 2 chargers installed as part of Tesla's Destination Charging program. Because Buck Hill operates 100 percent on wind energy through Dakota Electric's Wellspring Renewable Energy® program, every vehicle that plugs in to one of their chargers will be powered completely by wind.

★ **Dakota Electric is hosting an electric vehicle ride and drive event at Buck Hill on Sept. 12. See more details about the event on page 6.**

## Do you have **unclaimed capital credits** waiting for you?

When you signed up to receive electric service from Dakota Electric Association, you became a member of an electric cooperative. While investor-owned utilities return a portion of any profits back to their investors, electric cooperatives allocate profit margins to members as "capital credits," and retire—or pay—them when the cooperative's financial condition permits. Dakota Electric has paid out capital credits to members who purchased electricity through 1990.

If you move, it is important that you inform Dakota Electric of your current address.

To determine if you, or someone you know, have capital credits waiting, visit [dakotaelectric.com](http://dakotaelectric.com) and click on About Us > Capital Credits. You can also view a list of frequently asked questions that explains how the capital credits process works.



## Is an electric vehicle right for you?

Consider the following questions if you are thinking of purchasing an electric vehicle (EV) but aren't sure if one suits your lifestyle or budget. And contact the Energy Experts® at 651-463-6243 to learn more about our EV charging programs.



What are your typical daily driving patterns?

The average driver puts on 40 miles each day commuting to work or running errands. If that aligns with your daily mileage, consider an EV. Most EVs have a range between 60 and 200 miles per charge.



How will you charge the vehicle?

A 120-volt outlet in your garage or driveway will handle overnight charging if you are driving only about 40 miles per day and have a full eight hours overnight to recharge the battery. If you want more rapid charging, you will need a 240-volt outlet.

**Dakota Electric offers a \$500 incentive for putting a Level 1 or Level 2 charger on one of its EV ChargeWise programs. Learn more at [dakotaelectric.com](http://dakotaelectric.com) or call 651-463-6243.**



How much do you want to spend on a vehicle?

Purchase price for EVs may be somewhat higher than a standard vehicle, but prices have been coming down in recent years. The most popular brands range from \$26,000-\$32,000. With EVs, the premium paid to purchase the vehicle is offset by the lower cost to operate and maintain.



How much will you spend on maintenance and operation of an EV?

Maintenance costs will be far less in an EV, as there are fewer moving parts than in gas-powered vehicles, and they don't require regular oil changes. Very little is required beyond changing windshield wipers and tires. Even brake pads last longer because of regenerative braking.



## Factors that affect your electric bill

You can take control of your electricity expenses with efficient habits and smart decisions, but there are some factors beyond your control that can dramatically affect your energy consumption.

### Season

Electric bills will typically jump in the summer due to air conditioner use. You may see similar increases in the winter if you heat with electricity. Electric bills tend to be lower in the spring and fall when temperatures are milder.

### 'Phantom' load

When you turn something off, that doesn't necessarily mean that it has stopped using electricity. Many electronics have a standby mode that draws

an electric current even while turned off. Known as "phantom" loads, they can add up quickly. Unplug all electronics that display a clock or light while turned off, or use a smart power strip to limit phantom loads.

### Vacation

Many people believe that when they leave for vacation, their electric meter stops until they return. If you've ever wondered how an empty house can use so much energy, ask the following questions:

**Was the water heater turned down or off during your vacation?** Remember, if the water heater is left on during vacation, it will continue to operate and maintain the tank temperature even if you're

not using any hot water.

**Did other appliances and electronic devices run while you were on vacation?** Clocks, cell phone chargers, DVD players, heating and air conditioning equipment, computers, fax machines and TV sets may draw some "phantom" electricity. Unplug them while you're away for an extended period of time.

### Vintage

Older appliances and electronic devices often draw more current than newer ones. While it can be difficult to invest in new appliances or electronic devices when you've got reliable older models, the cost savings from reduced energy use can, in some cases, recoup the cost of an upgrade.

## Local students return from Washington, D.C. Youth Tour

As part of the National Rural Electric Association's (NRECA) Youth Tour, Dakota Electric sponsored five area students to attend the week-long event in Washington, D.C. June 9-14.

The students joined more than 1,800 others from across the nation (40 from Minnesota). While on the trip, students enjoyed sightseeing, meeting with elect-

ed government officials, learning about electric cooperatives, politics and today's social issues.

Students wishing to participate in next year's trip should contact their high school guidance counselor or watch for application information in the January issue of *Circuits* and online at [dakotaelectric.com](http://dakotaelectric.com)



Jacob Widen  
Burnsville H.S.

Michelle Quan  
Rosemount H.S.

Emily Hull  
Eagan H.S.

Sarah Most  
Eastview H.S.

Mitchell Conzemius  
Hastings H.S.

"This was such an incredible experience and will be one of the most memorable weeks of my life."

- Emily Hull, Eagan High School

# Dakota Electric's third solar project under construction

Construction is underway on Dakota Electric's latest solar project. The 2-MW solar array, located near Randolph, is in addition to the cooperative's 20-kW solar array in Farmington and the 1-MW solar array south of Hastings.

The Randolph project is unique in that the solar panels will be trackers, which means they will move, or track the sun for increased energy output.

As with the other Dakota Solar projects, all energy produced will be put back into the cooperative's distribution system for use by its members.

"We know our members want more renewable energy, and these projects help us diversify our power supply," said Mike Fosse, vice president of energy and member services. "Not only that, these projects are designed to help

reduce our long-term wholesale power costs throughout the life of the projects, which is about 25 years."

The Randolph solar project is a joint partnership with Dakota Electric's wholesale power supplier, Great River Energy, and solar developer ENGIE (formerly SoCore). The solar array will have more than 7,700 panels and is expected to be energized later this year.



Construction has begun on Dakota Electric's third solar project, located on Donnelly Avenue near Randolph. Dakota Solar III is a 2-MW solar project containing more than 7,700 panels that move, or track the sun for increased energy output. The solar array is expected to be energized later this year.

## \*PLEASE NOTE\*

Annual wind farm tours are cancelled this year due to plant maintenance.

We plan to resume the tours again next year. Watch for more information next August.

**In honor of National 811 Day on Aug. 11, we remind you to always *call before you dig!***

## 5 STEPS FOR SAFE DIGGING

Working on an outdoor project? Always call 8-1-1 first, because you never know what's below. Here are five easy steps for safe digging:

Source: call811.com

### 1. NOTIFY

Call 8-1-1 or make a request online two to three days before you start.



**Know what's below.  
Call before you dig.**

### 2. WAIT

Wait two to three days for a response to your request. Affected utilities will send a locator to mark any underground utility lines.



### 3. CONFIRM

Confirm that all affected utilities have responded by comparing the markers to the list of utilities the 8-1-1 call center notified.



### 4. RESPECT

Respect the markers provided by the affected utilities. They are your guide for the duration of your project.



### 5. DIG CAREFULLY

If you can't avoid digging near the markers (within 18-24 inches on all sides, depending on state laws), consider moving your project.





## Test drive electric vehicles at Dakota Electric's EV Ride & Drive event!

Are you interested in electric vehicles? Are you considering purchasing one? Are you curious about the features, performance and handling of an electric vehicle?

Then you need to attend Dakota Electric's EV ride and drive event on Wednesday, Sept. 12 at Buck Hill Ski Area.

Come out and test drive various makes and models, enjoy refreshments and hear a local EV owner present the features and benefits of owning an electric vehicle.

The event is free and open to Dakota Electric members.

Please register online to attend:

<https://dearideanddrive.eventbrite.com>

Wednesday, Sept. 12 | 4-7 p.m. | Buck Hill Ski Area | Register online at <https://dearideanddrive.eventbrite.com>

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# Circuits Quick Clips

## Dakota Electric adds more pollinator habitat to substations, solar sites

It's been about one year since Dakota Electric Association announced planting pollinator-friendly habitat at some of its substations, and it recently announced plans to expand its pollinator-friendly habitat at another substation and further explore more locations.

Many Dakota Electric substations are located in urban areas, which are surrounded by grass and limit the potential for pollinator plantings, but the cooperative ran a trial project where it restored natural prairie habitat around some rural substations.

"The locations we planted last year are doing well," said Craig Knudsen, Dakota Electric's land use manager. "It will take another couple of years for the sites to fully mature, but we wanted to expand the project and plant pollinator-friendly habitat in at least one more rural substation."

By adding another substation this year, and including newly constructed solar sites, Dakota Electric will have pollinator grasses at seven locations, covering nearly 30 acres.

"We plant the locations with ecologically appropriate species from the Midwest after we complete site preparation," said Beth Markhart from Prairie Restorations, the contractor managing the projects for Dakota Electric. "The final habitat becomes a perfect environment for bees, butterflies and other pollinators."

In addition to assisting the pollinator population, a naturally restored environment has tangible benefits, such as reduced fertilizer and chemical weed control and reduced mowing.

Prairie Restorations says it can take up to three years to get the landscape habitat fully functioning.



## Stay cool in the kitchen

Refreshingly easy recipe  
to save energy on hot days

### Caribbean Grilled Salmon Kabobs

Total Time: 20 mins. Servings: 4-6

- 2 lbs. fresh salmon (skinned), cut into 1" cubes
- 2-3 cups fresh pineapple, cut into 1" cubes
- 1 red onion, cut into 1" cubes
- 15 mini bell peppers (assorted colors), may need to half some depending on size
- 2 tablespoons cajun seasoning spice
- 1 teaspoon garlic powder

Soak wooden skewers in water for 15-30 minutes. Preheat grill to medium high heat or 400 degrees. Pat salmon dry and cut into 1" cubes.

In a small bowl mix cajun seasoning spice and garlic powder. Season both sides of the salmon cubes with cajun spice blend. Gently rub the seasoning in to make sure it sticks to the salmon. Alternate the red onion, pineapple, bell peppers and salmon on the skewer until it is full. Repeat process.

Spray grill grates with PAM or rub down with olive oil. Place salmon kabobs on grill and cook for 2-3 minutes per side.

Remove from grill and serve.



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## Contact Us

Member service & drive-up window  
7 a.m. – 7 p.m. Monday - Friday  
651-463-6212 or 1-800-874-3409  
Minnesota Relay Service 711

Lobby 7 a.m. – 4:30 p.m., Monday - Friday  
4300 220th Street West, Farmington, MN 55024

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