

CIRCUITS

NEWS FOR DAKOTA ELECTRIC MEMBERS

Planning for the electric grid of the future

Editor's Note: Dakota Electric would like to thank Commissioner Nancy Lange of the Minnesota Public Utilities Commission for discussing the Grid Modernization Initiative.

Remember 10 years ago when cell phones were used primarily for talking and texting? Fast forward to today's smart phones that allow us to do that and so much more — surf the web, watch movies, listen to music, check the weather and pay bills, just to name a few.

Technology has changed dramatically over the years and so have customer expectations. Much like the evolution of cell phones, the same can be said for the electric grid. Not only has technology improved over the years, but customer expectations and desires about how they use electricity and interact with their utility have changed.

"Today's electric grid is functioning well and delivering safe and reliable electricity," said Nancy Lange, commissioner of the Minnesota Public Utilities Commission (MPUC). "But changes in technology, customer behavior, preferences and public policy are causing all of us in the utility industry to think about the changes that are coming and how to be prepared."

The MPUC recently hosted a three-part

series of workshops on grid modernization. Grid modernization is a term being used around the country to describe bringing the electric grid to a place where it can meet customer needs, take advantage of technologies that exist and meet public policy goals. Dakota Electric, along with other utilities throughout the state, participated in the workshops to start a conversation among stakeholders about how they are planning for and investing in the "electric grid of the future."

"As a commission, it's important for us to understand where and how utilities are investing in their electric distribution systems and also, to some extent, provide guidance in some of the planning and investment that the utilities are making," said Commissioner Lange.

Dakota Electric's engineers were selected to participate as panelists at the three workshops. "It was an excellent opportunity to share our experiences and learn from others about the challenges facing us in the future," said Craig Turner, Dakota Electric's director of engineering services. "What new capabilities do the majority of our mem-



Nancy Lange, Commissioner
Minnesota Public Utilities Commission

bers want the system to provide for them in the next five to 10 years?"

Dakota Electric has made several investments over the years to automate systems and improve the quality and reliability of electric service, including load management programs, SCADA remote monitoring, geographical information systems (GIS) and outage management software. The cooperative continues to evaluate new technologies that would better serve its member-owners in the future, such as advanced metering infrastructure (AMI).

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Upcoming events

Youth Tour application deadline	Feb. 24
Board Meeting	Feb. 25, 8:30 a.m.

February 2016



Greg Miller
President & CEO

Dakota Electric's plan for the year ahead

Dakota Electric Association's Promise of Service states that our cooperative will strive to exceed our member-owners' energy expectations in a changing world.

While we are constantly immersed in change, our industry now has several challenges coming at us including substantial federal and state regulations, meeting members' expectations for convenient online services, physical and cyber security measures, relatively flat sales growth, two-way power flows from member-owned generation, the need to invest in new technologies and manage the data gathered by these technologies for the benefit of our members.

The board of directors at Dakota Electric Association recently reviewed and approved the 2016 budget which builds on our reputation for reliability, safety and member services. During the upcoming year, we will complete our major customer information system and communications projects that began in 2015. These projects will create the platform on which to build for the future. Many of our new projects will enhance our members' experience, while other projects will work to manage risk related to our critical systems.

The budget projects the addition of more than 900 new members, which are primarily residential

electric grid of the future (cont.)

AMI would provide benefits to both the cooperative and its members, including improved proactive outage management detection and tools to help members monitor daily electric consumption. It would improve member services and turnaround time for outage restoration. AMI would also provide the foundation to offer members new rate options and energy management solutions that could save them money on their electric bill, and it would allow Dakota Electric to better integrate and accommodate member-owned renewable energy systems.

"Some of our current metering and communication systems are reaching the end of their useful life and will need to be replaced at some point," said Turner. "Implementing AMI is a significant investment, and the questions we are evaluating right now are 'when is the right time to do it, and is it in the best interest of our members?'"

Because utilities are looking to make significant investments in their infrastructure to meet the needs of the future grid, Commissioner Lange says it's important to make sure they are the right investments. "It's our job as a regulatory agency to evaluate the costs and benefits of these investments to ensure the grid will continue to meet the diverse needs of customers into the future," she said.

The challenge for utilities when planning for the future grid

will be anticipating what the new uses, desires and wants are going to be in the years to come, so they can make sure their systems are set up to provide those services.

"We know we need to be ready, but we don't know what all the rules of the road are going to be yet," said Doug Larson, Dakota Electric's vice president of regulatory affairs. "And when we get on the road, the rules could change."

Commissioner Lange agrees and says the grid modernization initiative will be with the commission for a long time. "Technology is going to continue to drive innovation, customers are going to continue to change how they use and manage their energy, and our policies will evolve along those lines as well."

In the coming weeks, the commission will distribute a summary report to utilities and stakeholders throughout the state with recommended next steps based on information received at the grid modernization workshops.

Dakota Electric and its wholesale power supplier, Great River Energy, have established a future grid committee. Dakota Electric's President and CEO Greg Miller is currently serving on the committee, along with representatives from other Great River Energy cooperatives, to continue discussions related to the planning and investments needed for its distribution systems to be ready for the electric grid of the future.

members, but we will also add some sizable commercial loads throughout the year. We will continue our economic development efforts in our quest to add significant high load-factor commercial and industrial accounts to our system for both growth and new jobs in our area.

Dakota Electric plans to launch a new website later this year, and we plan to introduce a user-friendly app that can be used to easily report an outage or view an outage map. Dakota Electric is also pursuing the addition of a significant solar array to add to our resource portfolio to serve our member-owners.

On behalf of your board of directors and staff at Dakota Electric, we thank you for the opportunity to serve you. We are proud of what we have accomplished and are excited about the projects and activities we have planned for 2016.

2016 RTA details

The Resource and Tax Adjustment (RTA) charge will increase on most members' bills in 2016.

How much is the increase?

For residential members, the 2016 RTA charge will be \$0.0030 per kilowatt-hour, which is \$0.0002 higher than December 2015. This will increase the average residential member's bill by approximately \$0.16 per month. Commercial and industrial accounts should contact an account representative to discuss the RTA charge for their rate class.

What is the RTA?

Dakota Electric uses the RTA to adjust prices according to changes in wholesale power cost, property and real estate taxes and conservation spending. The charge is a direct pass-through of costs and is reviewed by the Minnesota Public Utilities Commission.

What else can increase bills?

Winter can unexpectedly increase electricity use. February bills reflect energy use from January when short, cold days require more energy for lighting, furnace fans and electric space heaters. Humidifiers, electric blankets, heat tapes and heaters for engine blocks, birdbaths and outdoor water dishes for animals all increase electricity consumption.

Members can visit the Energy Efficiency section at www.dakotaelectric.com or call an Energy Expert® at 651-463-6243 for energy-saving tips.

Vineyard Community Services wins Touchstone Energy Community Award

Dakota Electric Association named Vineyard Community Services of Burnsville as the 2015 Touchstone Energy Community Award winner. The award recognizes organizations for outstanding contributions to the local community.

Vineyard Community Services works to make food access easier for seniors and working poor. Vineyard has a large food shelf and assists more than 26,000 households annually. The organization also has a mobile food pantry to deliver food to the homebound or those with limited access to transportation.

Dakota Ramblers 4-H of Eagan and Hope for Tomorrow of Rosemount were named runners up. Dakota Ramblers 4-H provides gifts and activities to teens in homeless shelters in Dakota County. They help make a difficult time of transition in teens' lives easier. Hope for Tomorrow is a mentoring program for students in eighth grade to help prepare them for high school and other life decisions. The program now has 21 students and 18 mentors.

Each organization received a plaque and a check for \$500. The Vineyard Community Services award application will be submitted to the statewide Minnesota Touchstone Energy Community Award. The statewide award recipient will be selected from local award winners throughout Minnesota and will receive \$1,000. The winner will be announced in March during the Minnesota Rural Electric Association's annual meeting in St. Paul.

Dakota Electric board member Bill Holton presented Vineyard Community Services Program Director Edna Browder (R) and Executive Director Brian Geraty (L) with the Touchstone Energy Community Award.



Dakota Electric is your source for renewable energy options

Electric cooperatives have emerged as leaders in bringing the benefits of renewable resources and energy efficiency to consumers, and that is certainly the case at Dakota Electric. While the electricity delivered to your home includes increasing amounts of renewable energy, the programs below allow members to do even more to support the use of renewable resources like wind and solar. For more information on these programs, contact the Energy Experts® at 651-463-6243 or visit www.dakotaelectric.com.

Solar Installation Rebate

Members who are interested in installing solar panels on their home or property can receive \$0.50 per watt of installed solar, not to exceed \$4,000. Monthly payment is based on kilowatt-hour (kWh) production as recorded by Dakota Electric's production meter.

Wellspring Renewable Energy®

Dakota Electric's Wellspring Renewable Energy program gives you the option to purchase blocks of wind and solar energy without having to install a wind turbine or solar panel on your home or property. Wellspring is sold in 100 kWh blocks and members can purchase a fixed number of blocks each month or enough to power their monthly electricity use.

RevoltSM

Do you have a plug-in electric vehicle or are you thinking about purchasing one? Members who want to do more for the environment can now power their electric vehicle with 100 percent wind energy at no additional cost.

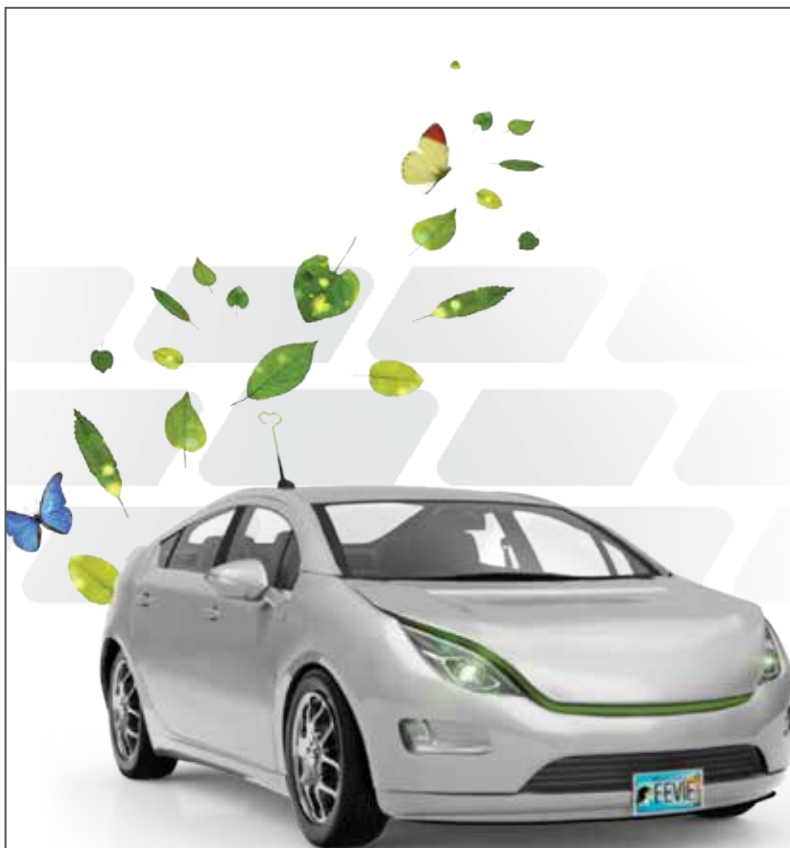


Dakota Electric purchases electric vehicle

Dakota Electric recently purchased a Ford Focus all-electric vehicle for use in its fleet. The energy services staff will use the vehicle for daily appointments at member homes and businesses.

The vehicle is powered with 100 percent wind energy through the cooperative's Revolt program.

If you have an electric vehicle and are interested in Dakota Electric's charging options and rates, contact us at 651-463-6243 or visit www.dakotaelectric.com.



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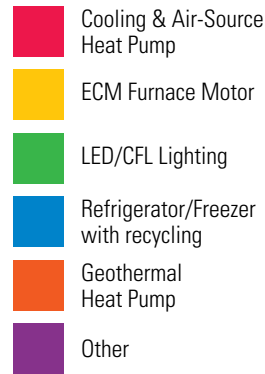
Thank you to our members!

2015 conservation and energy savings

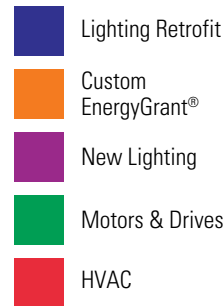
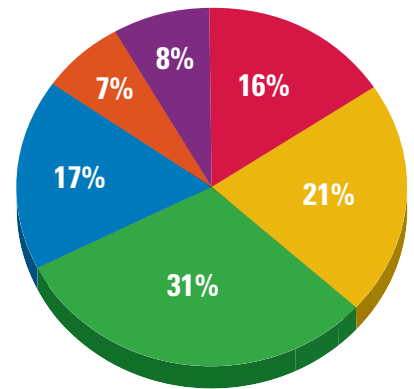
Thank you to Dakota Electric members who participate in our Energy Wise® off-peak and energy-efficiency programs. You helped us exceed our 12.5 million kilowatt-hour (kWh) Conservation Improvement Program (CIP) goal for 2015. CIP is a state law that requires every electric utility to achieve energy savings equivalent to 1.5 percent of their annual retail energy sales. Member participation in the organization's energy conservation programs is essential for Dakota Electric to meet this challenging goal.

In 2015, our members saved more than 15 million kWh of electricity through rebate programs, off-peak programs and energy conservation. By participating in off-peak programs, you helped save about \$17 million in wholesale power costs. The pie charts to the right indicate the top rebate programs for residential and commercial members in 2015.

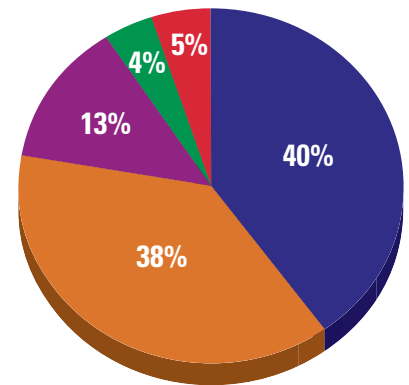
Dakota Electric offers a variety of off-peak programs and energy-efficiency rebates. Visit www.dakotaelectric.com for a full list of programs or call the Energy Experts® at 651-463-6243.



Residential Programs



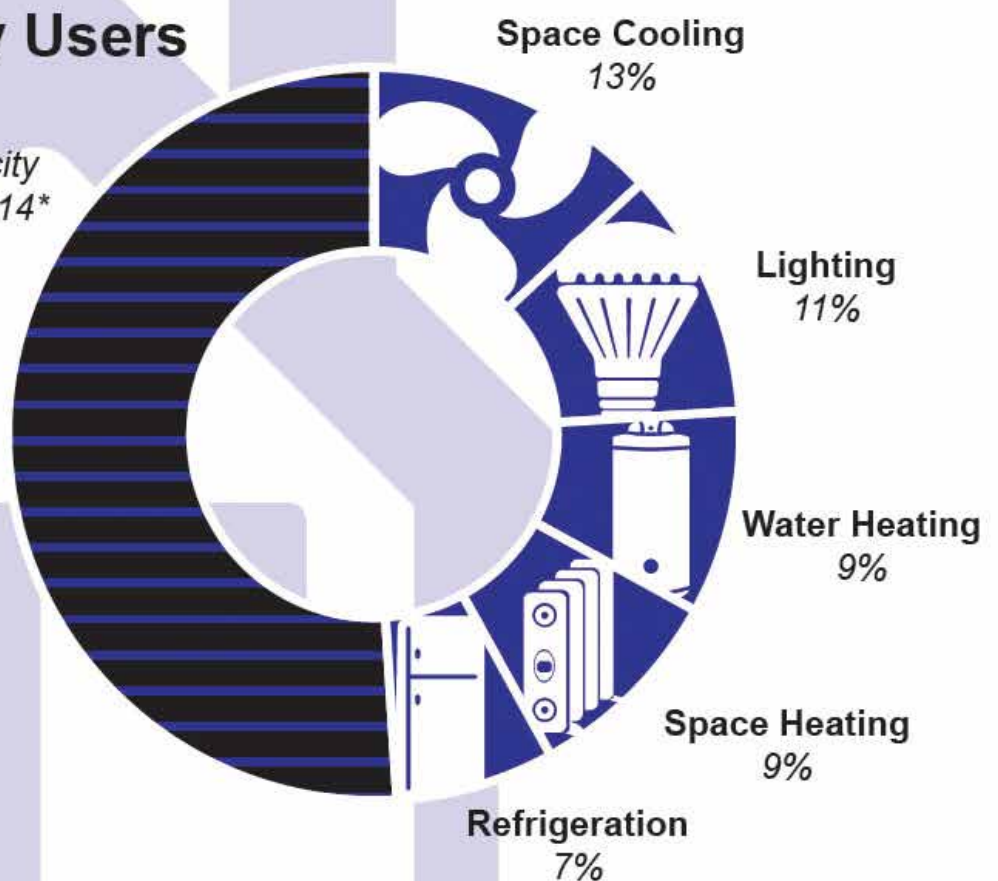
Commercial Programs



Top Five Energy Users in U.S. Homes

*Estimated residential electricity consumption by end use, 2014**

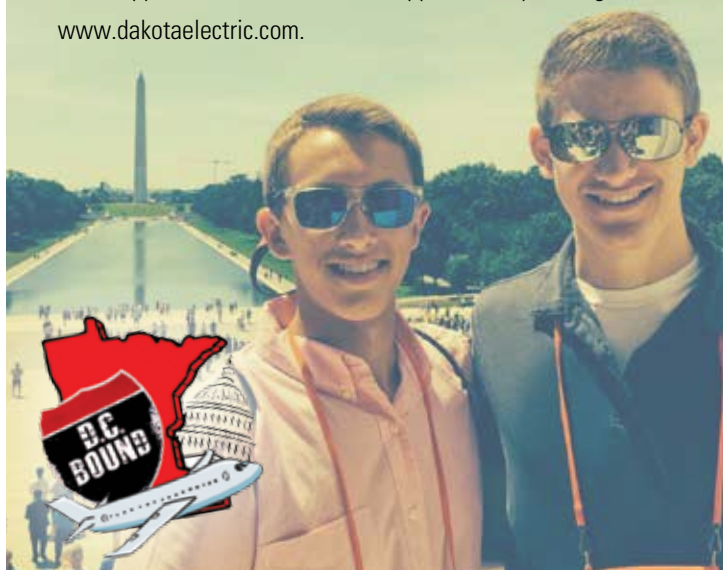
Other uses include TV, set-top boxes, home entertainment and gaming systems, monitors and networking equipment, clothes dryer, small electric devices, heating elements and motors.



*Source: EIA

2016 Youth Tour application deadline February 24

Dakota Electric is sending five local high school juniors or seniors on an all-expenses-paid trip to Washington, D.C. June 11-16, 2016. Ask your high school guidance counselor for an application or download the application by visiting www.dakotaelectric.com.



SAVE THE DATE Dakota County Crops Day Wednesday March 16

Dakota Electric
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Circuits Quick Clips

Visit **Electropolis** for history, science behind city's electrification

Dakota Electric's wholesale power supplier, Great River Energy, is a sponsor of a new exhibit at The Bakken Museum in Minneapolis titled "Electropolis."

As part of this sponsorship, our members can take advantage of a buy-one, get-one-free admission deal by clipping out the coupon below and presenting it at the museum's visitor services desk.

Electropolis is an exhibit on electricity in Minneapolis that combines science and history to engage children ages 4-8 and their families in educational play. It features a variety of fully-interactive stations where children can light up and power the Foshay Tower and also learn about circuits by connecting and lighting up a small city.

Electropolis presents young museum visitors with a combination of "how things were" and "how things work," framing basic principles of electricity within the history of electrification in Minneapolis.

The Bakken Museum, located at 3537 Zenith Ave. S., Minneapolis, is open from 10 a.m. to 5 p.m. Tuesday through Saturday. Visit thebakken.org or call 612-926-3878 for more information.

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ADMISSION TO ELECTROPOLIS**

At The Bakken Museum

Dakota Electric Association

Name of cooperative _____

Valid through October 2016

Redeem at The Bakken Museum visitor services desk. Buy one admission and get one free admission of equal or lesser value.

Limit 1 coupon per household. Not valid with any other offers or discounts. Not for cash redemption.



The Bakken Museum – 3537 Zenith Avenue South – Minneapolis, MN 55416 – thebakken.org

Thank you for your generosity

Dakota Electric
members donate
more than \$28,000
to Helping Neighbors®

Dakota Electric would like to thank those members who donated to our Helping Neighbors® program. In 2015, we collected \$28,719 in donations. That money supports the energy assistance programs of 360 Communities, the CAP Agency and the Salvation Army, and helps struggling families and individuals catch up on utility bills during unexpected hardships.

Dakota Electric created the program in 1994 and since then, members have donated more than \$500,000.

For more information on how you can help, visit www.dakotaelectric.com > Residential > Programs & Rebates or call 651-463-6212.



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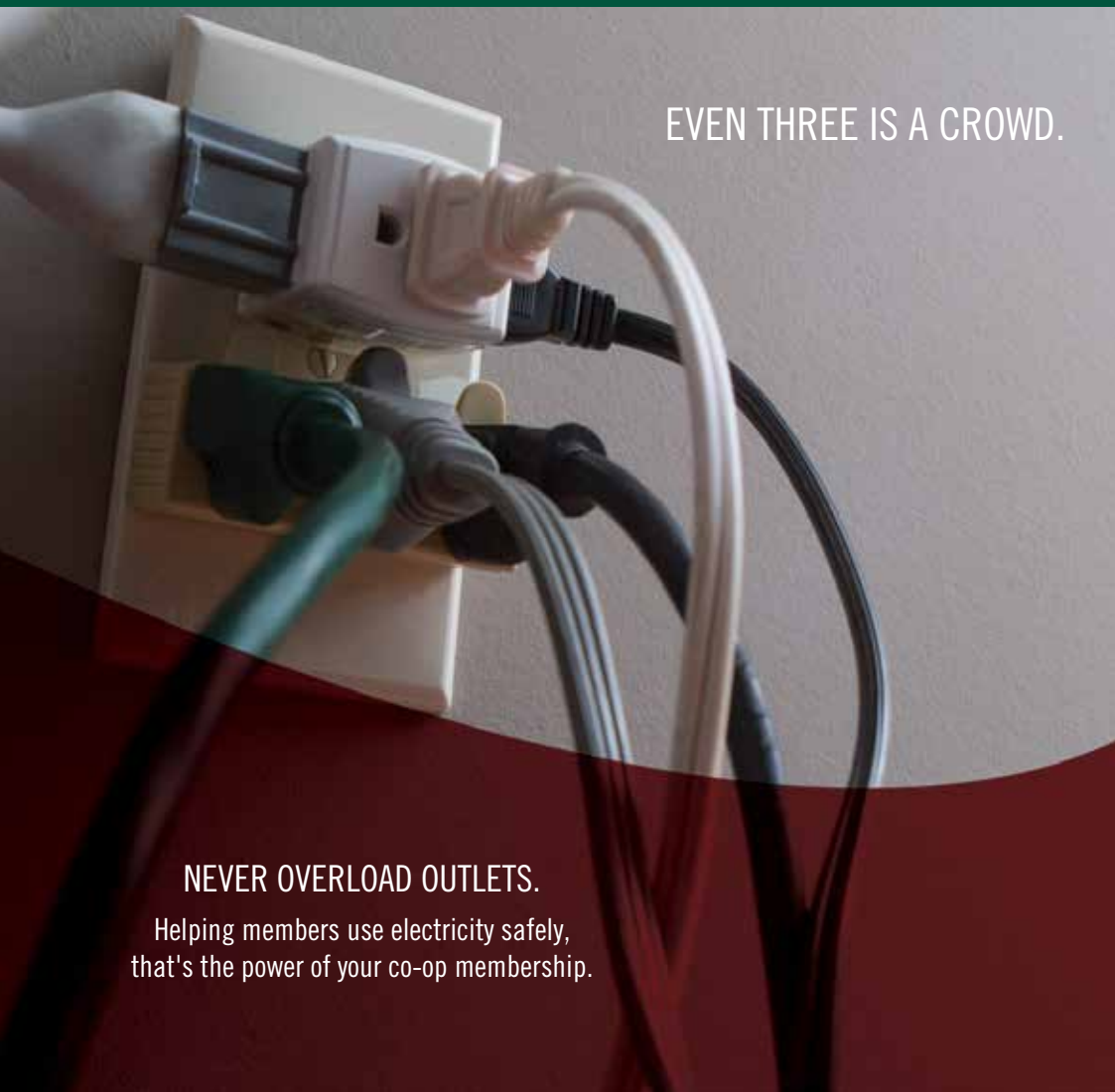
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