



POWER CONNECTION

member driven. community focused. energy smart.

FEBRUARY 2019



ELECTRIFYING EDUCATION

In 2019, 1,735 students learned about energy efficiency and electrical safety from Stearns Electric Association line workers and communication team.

Every year as part of the Cooperative's commitment to safety and community, Stearns Electric Association presents a one-hour energy efficiency and safety demonstration to local fourth grade classrooms throughout our service territory. This year, we presented to 1,735 fourth graders at 35 schools throughout Central Minnesota.

In each presentation, students learn what electricity is and how it is generated, see the safety equipment

used by electrical line workers and gain an understanding of how our distribution system operates. The highlight of the presentation is the live electric home and farm model, where students see firsthand what happens when people, vehicles or equipment come into contact with electricity.

Although students are always excited to see the arcs and sparks on the live safety demonstration, the energy education presentations reiterate the

Cooperative's messages regarding safety around electrical equipment.

"By far, showing area students why they need to be safe around electricity is the most important part of these annual presentations," Whitney Ditlevson, Stearns Electric's energy education coordinator, said. "When we leave, we hope students understand how dangerous high voltages can be and why it's

...continued on page 3

MANAGER'S MESSAGE

KEEPING YOU INFORMED

STEARNS ELECTRIC ASSOCIATION UPDATES



LEGISLATIVE

District 5 Director Tony Ampe and I recently returned from Washington, D.C. after a visit with members of Congress and senators from Minnesota. We traveled with a group of Minnesota rural electric cooperative representatives to discuss rural energy and rural economy items with our federal legislators. The primary message that we presented (again) was our responsibility to continue providing safe, reliable and competitively priced electricity to our cooperative members in rural Minnesota. In addition, we asked for their support on tax and regulatory items that would allow us to reduce the need to raise electricity prices.

Our group arrived in Washington, D.C. just as the government shutdown ended. Legislators were eager to get to work on the 2019 session. The electric cooperative group thanked our legislators for passing the Farm Bill. We know how important that was to the areas that we serve. Emphasis was also put on the fact that rural electric cooperatives are different than other electric utilities. We are different because we serve sparsely populated areas and receive less revenue per mile of electric line than investor-owned or municipal utilities. We work closely with our elected officials in hopes of avoiding burdensome and expensive legislation.

TRANSMISSION AND DISTRIBUTION ELECTRICAL SYSTEMS

You have probably all seen a diagram of how electricity

is generated, moves across transmission grids, is delivered to distribution substations, transferred to distribution circuits and finally arrives at your homes. What you may or may not realize is that Stearns Electric Association is an electric "distribution" cooperative. We do not own power generation or transmission facilities. We purchase the power that we deliver to your homes and businesses from Great River Energy (GRE), our wholesale power provider. The power they generate is transported to Stearns Electric's 33 substations by our transmission line partners, Xcel Energy in the southern, western, and eastern areas and Minnesota Power in the north.

In recent months, we have experienced a few power outages on the various transmission lines that serve our substations. Unfortunately, when a transmission outage takes place affecting a Stearns Electric substation, power to a substantial number of members can be affected. During this type of outage, Stearns Electric crews assist in identifying transmission issues, but ultimately Xcel Energy and Minnesota Power make the repairs and restore power.

It is important to remember that just like the Stearns Electric's distribution power lines, transmission lines are exposed to threats like storm damage, weather elements, vehicle accidents and more. While all the utilities involved in delivering electricity to your home prioritize reliability, some outages are simply unavoidable. Stearns Electric and all our utility partners continuously

work to maintain our systems, reduce outages and improve reliability. In addition, you can be confident that Stearns Electric works closely with our transmission partners to expedite the process for restoring transmission system outages that impact you.

STRATEGY

Finally, I want to touch on an exercise that your Stearns Electric board of directors and Stearns Electric executive team conducted in early February. We worked for several days to discuss our current state and identify potential future scenarios and strategies that will assure future success for Stearns Electric. Strategic planning is critical to your Cooperative's success. It provides a road map for the strategies, goals and activities we undertake to maintain a well-run cooperative. It is also a great tool for identifying the best ways to serve our members in new and innovative ways. We had good discussion on opportunities with our power supplier, technology, staffing and industry regulation. From the priorities identified in this strategic planning session we will now be working to develop specific goals and action plans to implement positive advancement for the Cooperative that ensure we continue to provide premier services to our Stearns Electric members. Thank you for continued support of your Stearns Electric board of directors and employees.

Sincerely,

A handwritten signature in dark ink, appearing to read "Robin Doege".

Robin C. Doege
Chief Executive Officer (CEO)

CLASSROOM PROGRAM



important to be aware of their surroundings, especially while playing outside. We want students to understand it is not safe to play on electrical equipment or climb trees near power lines.”

As line workers at Stearns Electric respond to several incidents annually where vehicles go off the road and hit power poles, ultimately, the most important safety takeaway from the presentation is the students’ knowledge about what to do if their vehicle hits a power pole.

“One thing I hope fourth graders walk away knowing after each presentation is what to do if the car they are in hits a power pole,” Mike Siemers, Stearns Electric journeyman lineman, said. “When they leave our presentation, I hope they all know to stay in the vehicle unless it starts on fire.”

Stearns Electric Association values community involvement and public safety. Our energy education presentations reinforce these important messages with the hope that local students will bring their new electrical efficiency and safety knowledge home to their families.

“Measuring the specific impact of these energy education presentations is difficult, but our goal is to educate area students, who will hopefully tell their parents about the safety information they learned. We hope students keep this knowledge of the dangers of electricity with them as they grow older,” Ditlevson concluded.

For more information on our annual energy education programming, please visit www.stearnselectric.org/community.



BOARD MEETING

The regular meeting of the Board of Directors of Stearns Electric Association was held on December 27, 2018 at 1:23 p.m. at the Stearns Electric Association Headquarters in Melrose, Minnesota.

Manager of Finance Ralph Martin reviewed cooperative financial and statistical information. A motion was made and approved to apply for a nearly \$41 million loan which will be used for capital projects, including construction projects, substation upgrades, and transformer and meter replacements. Mr. Martin explained how the Construction Work Plan, Long Range Financial Forecast and Sensitivity Analysis are all components of the FBB Loan AR8 application and document the need for additional funds.

Mr. Doege explained the RUS Approval for a Revenue Deferral Plan. Essentially, GRE is retiring excess revenue from 2018, which was only announced to its cooperative owners two weeks prior to this meeting. Mr. Doege requested to defer some of that revenue for future years. A motion for approval was made and carried.

The Nominating Committee for the Board of Directors is now accepting applicants interested in serving districts 2, 3 and 6. Additionally, Districts 4, 6, and 7 are in process of accepting new Operation Round Up Board Members.

Manager of Engineering Matt O'Shea reviewed major points within the Construction Work Plan including: over 1,000 new service installations, over 20 miles of line or line conversion, a substation upgrade to higher voltage capacity and changes to several other substations, over 500 service capacity increases, several thousand pole and security light replacements, non-site specific conductor replacements and several thousand load management receiver replacements. The most important point of consideration is that the construction proposed in the plan is based on upgrading the existing distribution system to provide adequate service through 2022 in peak conditions.

The 2019 budget was reviewed and approved by the board.

Next Meeting: March 28, 2019



Member-owner Bayer Built Woodworks recently completed two efficiency projects with the help of Stearns Electric Association. Learn more about the company's new electric forklifts and LED retrofit lighting project.

When employees at Bayer Built Woodworks in Belgrade noticed increased Carbon Monoxide levels in certain areas of their warehouse, the leadership team knew they needed to do something to keep their employees safe. In December 2017, Bayer Built added the first electric forklift to its fleet. After positive trials, the second electric forklift was added in January 2018 and three more units were introduced last November.

ELECTRIC FORKLIFTS: INITIAL CONCERNS, UNEXPECTED BENEFITS

Unsure if replacing a few internal combustion engine (ICE) forklifts with new electric forklifts would help with the Carbon Monoxide levels within the warehouse, leaders at Bayer Built decided to do a test run and purchase one electric forklift to start.

"Initially we had some concerns about how the electric forklifts would perform when traveling outdoors between buildings," Scott Duchene, process improvements, Bayer Built, said. "But they have performed well traveling outdoors and we have not needed to restrict their usage."

Once the company confirmed that the functionality of the new electric unit would work for Bayer Built, additional

units were added to the forklift fleet.

"Electric forklifts cost more up front but we have seen a reduction in Bayer Built's Carbon Monoxide levels which make that cost worth it," Paul Weller, operations manager, said. "In fact, the unexpected benefits of the new units far outweigh any concerns our leadership team initially had."

"The new electric units actually offer a smaller turning radius, higher lifting ability, better functionality and more operator friendly controls," Duchene said. "Our forklift operators do not like having to go back to a gas-operated forklift once they get used to electric."

Overall, the noise level in areas of the shop where electric forklifts are used has decreased significantly, another unexpected benefit.

"The units are so quiet, we've had to stress the use of horns to alert pedestrians who might be walking in the warehouse," Duchene continued. "Pedestrians have also been made aware of the need to take extra care before stepping into aisles because a forklift could be moving by, making very little noise."

Additionally, the electric forklifts are

very easy to charge and battery life has not been a problem for employees at Bayer Built.

"Charging is as simple as plugging in the unit and walking away," Duchene said. "Charging time from a dead battery to 100% is only six hours, so right now, we are able to charge overnight after second shift with no problems."

CHARGING FORWARD

Bayer Built's current fleet of forklifts now include 27 ICE (internal combustion engine) units and 5 electric units. With such great feedback and benefits of the new electric units, the company plans to transition to mainly electric over the next three to five years.

Company leaders are currently working on a project to maximize the battery life through an internal study. "Our manufacturer recommends using the full battery before charging. We are conducting an internal study to see how much battery life we use during the day to determine when the best time to charge is and if we can get through both first and second shift without fear of the batteries running out," he said. "We have also added an indicator light to alert the operator

when the battery needs to be filled.”

CONTINUED EFFICIENCIES

Bayer Built recently completed an LED retrofit lighting project and replaced 8,300 fluorescent bulbs with LED bulbs.

“The continuing maintenance for our fluorescent lighting led us to explore better lighting options,” Weller said. “Our research determined it would be more cost effective in the long run to buy all LED lights and replace the old fluorescents. Our energy savings alone will outweigh the cost of the overall LED bulb purchase.”

According to Stearns Electric’s calculations, Bayer Built will save 441,437 Kilowatt hours of energy every year. “Additionally, maintenance time should reduce as we only need to change the bulbs at the end of their life instead of determining whether or not the ballast was the problem,” Weller continued.

Bayer Built has already completed installing the new LED lights in the production, warehouse and trucking areas of its facility and is now working on finishing the office areas, outdoor lighting and some mechanical spaces.

“The only comment we have heard so far regarding the LED lights, is that in some office areas they are much brighter. It’s taking time for employees to adjust,” Duchene said.



An electric forklift charging station at Bayer Built.

THERE’S A REBATE FOR THAT

Stearns Electric Association was a proud partner for these projects, offering rebates to Bayer Built for their efficiency improvements.

“Working with Stearns Electric Association to complete the efficiency rebates for these projects was extremely easy,” Tyler Kochmann, assistant controller, said. “We were easily able to download the rebate forms from the Co-op’s website. We answered a few questions and Stearns Electric helped us calculate our energy savings.”

“Our electrician actually made the connection back to Stearns Electric for us as we completed the LED lighting project,” Kochmann said. “Through the relationship we created with James Pachan, manager of energy services at Stearns Electric, on the lighting project, we learned of the rebates that were also available for our electric forklift project.”

WHAT’S NEXT?

“In the past we’ve completed a few efficiency projects with Stearns Electric, including a previous lighting project and a variable frequency drive (VFD) project to help us understand our energy usage peak. Although we don’t have plans set in place for our next efficiency project yet, as technology changes, we try to keep up on our awareness in order to stay on the cutting edge,” Weller concluded.

Stearns Electric Association is committed to helping our members use energy both safely and wisely. We offer a variety of rebates to help our commercial, industrial and agricultural (CI&A) members be more energy efficient. Rebates are available for LED lighting projects, electric forklifts, electric HVAC upgrades and robotic milking units, among other things. Please visit our website, www.stearnslectric.org, or contact our Energy Services Department at (320) 256-4241 for more information.

ENERGY EFFICIENCY TIP OF THE MONTH

HERE’S AN EASY WAY TO SAVE ENERGY IN THE LAUNDRY ROOM!

Laundry Tip: Dry towels and heavier cottons separately from lighter-weight clothing. You’ll spend less time running the dryer for lighter-weight items, which saves energy.

ELECTRICAL SAFETY CHECKUP



EXTENSION CORDS

Never substitute extension cords for permanent wiring; they should be used as a temporary solution only.



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THE IMPORTANCE OF LOAD MANAGEMENT

MAXIMIZING BENEFITS,
MINIMIZING INCONVENIENCE

Electrical energy is a form of energy that cannot be effectively stored in bulk at this time; it must be generated, distributed, and consumed immediately. When the need for electricity (demand) requires maximum generating capacity, network operators must either find additional supplies of energy or find ways to reduce the load. If they are unsuccessful, the system would become unstable and blackouts could occur.

Stearns Electric Association has over 10,000 members who allow us to cycle their air conditioner; over 5,000 members who participate in the Cooperative's stored water heating program; and over 7,000 controlled electric heating systems. All of these members are helping the Cooperative manage energy costs by participating in load management.

Load management, also known as demand response, is a strategy that Great River Energy and Stearns Electric Association use to reduce the electric load at times when demand and costs for electricity are at their highest, typically the hottest and coldest days of the year. These programs help members install equipment that store less expensive, off-peak energy or by cycling or interrupting electric service to certain appliances during particular hours of the day, shifting it to off-peak times. Successful load control maintains a balance between managing electric use and keeping members satisfied. Generally load management is non-invasive and imposes no hardship on the consumer.

WHY DO WE CONTROL ELECTRIC LOADS?

EnergyWise programs help the Cooperative control costs and keep rates competitive. EnergyWise programs, allow the Cooperative to reduce the electric load at times when it's most costly and shift it to times when

it is economically advantageous. The cost of electricity is constantly changing throughout the day. The kilowatt-hour delivered at dinner time is far more expensive than the one at midnight. EnergyWise programs take advantage of that cost difference. Since demand is one of the components of the wholesale power bill we receive from Great River Energy, the reduction we achieve through control directly reduces our bill and we can pass those savings on to our members. In 2018 alone, Stearns Electric saved over \$1.5 million dollars in energy by utilizing these load management strategies.

EnergyWise programs help save money for the member. Members that voluntarily participate in EnergyWise programs are not only contributing by helping Stearns Electric and Great River Energy control costs; they are benefiting from monthly bill credits and/or nearly half price electric rates. The Cooperative also offers a variety of rebates to help members install energy efficient equipment on these programs.

EnergyWise programs help delay the need for additional future generation resources. Without demand response, Great River Energy and other utilities would need additional infrastructure (generation and transmission) in order to meet the region's increasing electrical demand. These programs also help us to avoid building high-cost peaking plants or purchasing expensive energy in the wholesale market.

EnergyWise programs help the Cooperative to integrate renewable energy. Finally, storage programs such as the Stored Water Heating and Electric Vehicle Charging are proving to be valuable tools in integrating more renewable wind energy into Great River Energy's generation portfolio mix. Since renewable energy is variable and uncertain, storage is critical to its

integration on the grid. Essentially these programs use water heaters and electric vehicles as a battery to take advantage of low cost energy when it's available.

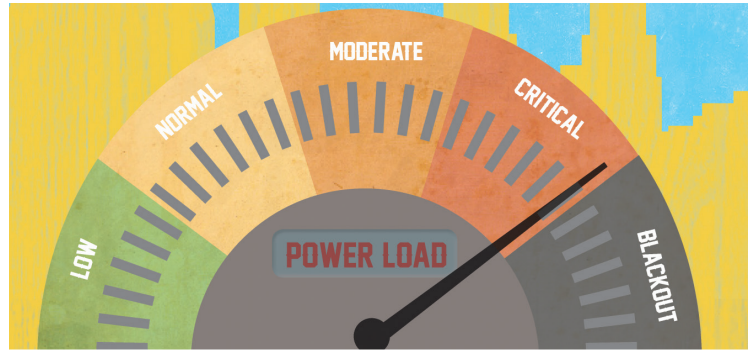
HOW DO WE DECIDE WHEN TO CONTROL LOADS?

While most often we control loads to avoid high-cost wholesale energy periods, Great River Energy controls loads for a variety of additional reasons, all of which are designed to benefit members and keep costs low.

They include:

- **System Emergencies.** Controlling loads during system emergencies helps reduce the stress on the electric grid and maintain system reliability in the region.
- **Resource Adequacy Limitations.** As a member of the Midcontinent Independent System Operator (MISO), the region's electric grid operator, Great River Energy must manage its load to its forecasted projections.
- **Billing Peaks.** Controlling during the peak hours once a month allows Great River Energy to measure the effects of load control so distribution cooperatives like Stearns Electric can be accurately billed for their electric purchases and validate the rate savings we provide to members participating in our EnergyWise programs.

We appreciate the many members who participate in our EnergyWise programs. These members are helping the Cooperative provide reliable service and hold down power costs for the entire membership. More information on our EnergyWise programs, load control notifications and hours of control can be found on our website at: www.stearnselectric.org. Our Energy Services team is also available to assist you and answer your questions during regular business hours at (800) 962-0655.



MEMBER NOTICE

CO-GENERATION AND SMALL POWER PRODUCTION NOTICE

In compliance with Cooperative Rules Implementing Minnesota Statute section 216B.164 Co-generation and Small Power Production, Stearns Electric Association is required to interconnect with and purchase electricity from co-generation and small power production facilities that satisfy the conditions of a Qualifying Facility.

Stearns Electric has available and will provide free information to all interested members regarding rates and interconnection requirements. An application for interconnection is required for a Qualifying Facility to interconnect and operate in parallel with the Cooperative's distribution system and is subject to approval by the Cooperative. For more information on co-generation, please contact Stearns Electric Association during regular business hours at (320) 256-4241 or (800) 962-0655.

CMBA HOME SHOW



Join us for the 2019 CMBA Home Show, March 8-10, at the St. Cloud River's Edge Convention Center!

- Admission \$5 adults, 17 and under plus military FREE
- March 8-10 | Friday 12-7 p.m. | Saturday 9-6 p.m. | Sunday 10-4 p.m.
- River's Edge Convention Center, St. Cloud
- Over 200 home and lifestyle vendors
- Forever Home featuring the latest innovations
- Kids Build Project Seminar
- Landscape Area
- Junk Junktion Market

Stop by the Forever Home to see Stearns Electric showcasing smart electricity use and innovative energy programs. Learn about how electric vehicles, Marathon water heaters and air source heat pumps work alongside Stearns Electric programs in an effort to use energy wisely and save you money.



cookingcorner

ONE-POT CHEESY TACO PASTA

Submitted by: Megan Lynch

Ingredients:

1 lb ground beef
1/2 tsp salt
Pinch of black pepper
1 packet taco seasoning
or about 3 1/2 Tbsp
homemade taco seasoning
2 C water
1 C mild salsa
8 oz uncooked rotini pasta
1 1/2 C shredded Mexican
Style cheese
(Optional toppings:
chopped tomatoes,
avocado, crushed tortilla
chips, chopped cilantro,
etc.)

Directions:

Preheat a large deep skillet over medium heat. Add ground beef and season with salt and pepper. Cook, stirring occasionally until cooked thoroughly. Drain grease. Stir taco seasoning into ground beef then stir in water, salsa and pasta noodles. Bring mixture to a boil. Stir, cover and reduce heat to a simmer. Cook for about 15 minutes until pasta is tender. Turn off heat and stir in cheese. Season with additional salt and pepper if needed. Serve with optional toppings if desired. Enjoy!

CONTEST DETAILS:

One member per account may submit one recipe per month. Recipes will be saved for future publications. The recipe selected each month will receive a \$10 credit on their electric bill. Submit your recipe to agroethe@stearnselectric.org or mail to: Stearns Electric, Cooking Corner, PO BOX 816, St. Joseph, MN 56374.



STEARNS ELECTRIC ASSOCIATION

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and Marketing*

YOU'RE INVITED TO STEARNS ELECTRIC'S 82ND ANNUAL MEETING

Thursday, April 4, 2019

MELROSE AREA HIGH SCHOOL AUDITORIUM

DOORS OPEN: 6:30PM | BUSINESS MEETING: 7:00PM

The first 300 members present will receive a one pound block of cheese and one pound of butter as a gift from the Cooperative. Plus we'll be giving away a trip to Coal Creek and 10 - \$100 gift card door prizes. Watch for the March Power Connection or visit us online at www.stearnselectric.org for more information.