Sioux Valley Energy
A Touchstone Energy® Cooperative
July 2018 Vol. 19 No. 3

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You are invited to Join SVE

For Summer Picnics

Tim McCarthy, GM/CEO
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Who doesn't love a summer picnic? One of the core principles of Sioux Valley Energy's mission of 'Serving Our Members. Always.' is a commitment to community. We take that commitment seriously and to demonstrate that, we plan to hold a series of nine 'Pop-Up' picnics around our service territory. There won't be a big program associated with it and in fact, it will be pretty casual. That is by design. We want our members in those areas to come and enjoy a picnic lunch while offering the opportunity to talk with myself, the Board of Directors and the rest of the Leadership Staff.

There are over 25,000 members of Sioux Valley Energy and while there is no way we can talk face-to-face with everyone, we want to provide ample opportunity for members to communicate with leaders of the co-op.

Communication isn't always easy but it is essential to connecting with our cooperative membership. Currently, we try to keep members informed through a variety of methods--in person at our three offices or at district/annual meetings, by phone or email, through the monthly printed newsletter, with bill stuffers and via the website and social media. There will be a few more methods available this year as well--live chat through the website and a blog/vlog that will feature issues that may not get as much attention as some others.

If you have additional ideas of communication methods we are not utilizing and you think they would be useful for the membership, send us a quick email with your ideas to sve@siouxvalleyenergy.com.

Here are the dates and locations on the upcoming 'Pop-Up' picnics...so mark your calendars! We would love to see you:

2018 'POP-UP' PICNICS

July 27:	Colman - City Park
July 30:	Pipestone - SVE Service Center
August 1:	Brandon - SVE Service Center
August 2:	Hartford - Pizza Ranch/Sunshine Foods Parking Lot
August 6:	Luverne - City Park
August 15:	Volga - City Park
August 17:	Flandreau - Pool Park
August 21:	Madison - Library Park

Join Sioux Valley Energy for its inaugural member picnics this summer (weather dependent).

The picnics will run from **11:30 TO 1**.

Meet the faces behind the Cooperative, talk with the leadership team and Board of Directors and enjoy lunch on us! *Bring your own chair/blanket*

Sioux Valley Energy is an equal opportunity provider and employer.

Sioux Valley Energy
Cooperative Connections

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Operation Round Up Funds Bike Program

A $1,000 Operation Round Up grant was awarded to the Sioux Falls Center of Hope to help fund its Bike-to-Work ministry. Last year, the Center of Hope provided bicycle transportation to 600 individuals, helping them get to work.

Nearly 15 years ago, in response to the number of donated bicycles, the Center of Hope began a ministry that would go on to help thousands get to work more efficiently. They call it 'Bike-to-Work', and it is designed for those who need quick, efficient transportation to get to work but cannot afford a car.

"Getting around in Sioux Falls can be a challenge for our guests as the bus system doesn't go everywhere that people would desire and it shuts down at 9 p.m. If you are working a swing shift you might be able to get to work on the bus, but not home," said Calvin Ver Mulm, Development Officer for the Center of Hope.

The bikes cost Center of Hope guests between $10 and $60. Ver Mulm said by having people pay a small amount they gain a greater sense of ownership. "The bike gets used more intentionally for work transportation and it helps cover our costs."

This past year just over 600 bikes were sold to Center of Hope guests and over 900 came back to have their bikes repaired, "Our bikes come from people's garages--bikes that they are no longer using and looking to get out of the way or people have upgraded. Because we are helping people get to work, we look for bikes that have a 24 inch wheel size or larger," offered Ver Mulm.

Ver Mulm also said that because the bike ministry helps people get and keep work, it reduces the financial burden on social services.

Operation Round Up provides funding to many worthy programs such as 'Bike-to-Work'. More than $1.5-Million has been donated to worthwhile causes throughout the Cooperative's service territory. The Operation Round Up program works when participating members agree to have their electric bill rounded up to the next highest dollar and that money is collected and placed into a trust. Nearly 75 percent of members and employees participate in the program.

Safety Before and After Storms

Severe storms are more common in the spring and summer, but they can occur any time of year. Be prepared for storms and know how to stay safe.

Before the storm:

- Assemble a kit of essentials, like water, battery-operated flashlights, and radios. Keep a list of emergency phone numbers, including the electric utility.
- If severe weather is on its way, pay attention to local weather reports and recommendations. A tornado or severe storm watch means conditions are favorable for those weather conditions forming. A warning means dangerous weather conditions are imminent.
- Lightning can travel up to 10 miles away from a storm, so seek shelter when you hear thunder.
- Consider installing ground fault circuit interrupters (GFCIs) or purchasing a portable GFCI. GFCIs detect dangerous electrical situations and cut off power before a person can be shocked. These dangerous electrical situations are likely to occur around water, so GFCIs should be installed in bathrooms, laundry rooms, kitchens, basements and outdoors – anywhere water and electricity may meet.
- If power goes out, switch off lights, large electronics and appliances to prevent overloading circuits and damaging appliances when power is restored. Leave one lamp or switch on as a signal for when your power returns.

After the storm:

- When venturing outside, stay away from downed power lines and be alert to the possibility that tree limbs or debris may hide an electrical hazard. Assume any dangling wires you encounter are energized and dangerous. Warn others to stay away and contact the electric utility.
- If you are driving and come upon a downed power line, stay in your vehicle, warn others to stay away and contact emergency personnel or electric utility. Also, when driving, be careful at intersections where traffic lights may be out. Stop at all railroad crossings and treat road intersections with traffic signals as a four-way stop before proceeding with caution.
- Before re-entering storm-damaged buildings or rooms, be sure all electric and gas services are turned off. Never attempt to turn off power at the breaker box if you must stand in water to do so. If you can't reach your breaker box safely, call your electric utility to shut off power at the meter.
- Never step into a flooded basement or other area if water is covering electrical outlets, appliances or cords. Be alert to any electrical equipment that could be energized and in contact with water. Never touch electrical appliances, cords or wires while you are wet or standing in water.
- Do not use water-damaged electric items until a qualified electrician has inspected them and ensured they are safe.
- When using a portable generator, follow all manufacturers' recommendations. Keep the generator dry and never plug it into a wall outlet or directly into the home's wiring. This could inadvertently energize the utility lines and injure yourself or others working to restore power.
- A permanent standby generator should be professionally installed and include a transfer switch to prevent electricity from leaving your generator and going into power lines where it can kill line workers.

Source: safeelectricity.org

KIDS CORNER SAFETY POSTER

"Don't fly kites near power lines."

Sophia Bad Warrior, Second-grader at Dupree Public School

Sophia is the daughter of Dugan and Peg Bad Warrior, Dupree, S.D. They are members of Moreau-Grand Electric Cooperative, Timber Lake, S.D.

Kids, send your drawing with an electrical safety tip to your local electric cooperative (address found on Page 3). If your poster is published, you'll receive a prize. All entries must include your name, age, mailing address and the names of your parents. Colored drawings are encouraged.

Delectable Desserts

Rhubarb Dessert

1 white cake mix
4 cups diced rhubarb
1 cup sugar
1 (3 oz.) pkg. strawberry jello
Whipped topping

Prepare cake according to package directions. Spread in a 9x13-inch pan. Layer rhubarb over cake batter. Sprinkle with sugar and dry jello. Bake at 350°F. for 35 to 40 minutes. Serve with Cool Whip.

Pam Hofer, Carpenter, SD

Best Ever Chocolate Chip Cookies

1 cup white sugar
1 cup brown sugar
2 cups butter-flavored Crisco
2 eggs
2 tsp. vanilla
2 tsp. baking soda
2 tsp. cream of tarter
2 tsp. baking powder
1 tsp. salt
3-1/2 cups flour
12 oz. chocolate chips

Cream together the first 5 ingredients; add next 5 ingredients. Stir in chocolate chips. Bake on air bake pan at 350°F. for 10 to 12 minutes. Let set a few minutes before removing from pan.

Sharon Sunvold, Renville, MN

Honey Bun Cake

1 yellow cake mix
4 eggs
2/3 cup vegetable oil
1 (8 oz.) container sour cream
1 cup brown sugar
1 T. cinnamon

Icing:

1-1/2 cups powdered sugar
3 T. butter, melted
2 T. milk (or to desired consistency)

Combine cake mix, eggs, oil and sour cream. Pour 1/2 of batter into a greased 9x13-inch pan. Mix together brown sugar and cinnamon; sprinkle over batter in prepared pan. Pour remaining batter over top of cinnamon mixture. Run a butter knife through to marble the batter. Bake at 350°F. for 45 minutes. Let cake set 5 minutes, then frost with icing. For icing, mix together powdered sugar, butter and milk; pour over cake. Let cool at least 30 minutes before serving.

Sheryl Fromm, Hartford, SD

Raspberry Almond Crumb Bars

2-1/2 cups flour
1/2 cup confectioners' sugar
1/2 cup granulated sugar
1/2 tsp. baking soda
1/2 tsp. salt
1 egg
1 tsp. McCormick® Pure Almond Extract
3/4 cup (1-1/2 sticks) cold butter, cut into chunks
1 cup raspberry preserves
1/2 cup sliced almonds

Mix flour, sugars, baking soda and salt in food processor until well blended. Add butter; pulse until mixture resembles coarse crumbs. Mix egg and almond extract in small bowl. Add to food processor while pulsing. Reserve 1/3 of crumb mixture for topping. Press remaining crumb mixture into an even layer in foil-lined 9x13-inch baking pan. Spread raspberry preserves over top. Sprinkle clumps of the reserved crumb mixture over preserves. Sprinkle with almonds. Bake at 350°F. 35 to 40 minutes or until edges are lightly browned. Cool in pan on wire rack. Cut into bars. Makes 24 servings.

Nutritional Information Per Serving: Calories 175, Total Fat 7g, Sodium 129mg, Cholesterol 23mg, Carbohydrates 26g, Protein 2g, Dietary Fiber 1g

Pictured, Cooperative Connections

Mother's Day Pie

1 cup sugar
2 T. all-purpose flour
1/4 tsp. salt
6 T. butter, melted
1 tsp. vanilla extract
3 eggs
1 (12 oz.) can evaporated milk
1 cup shredded coconut

In a medium bowl, combine sugar, flour and salt. Stir in butter and vanilla extract. Add eggs, one at a time, mixing well after each addition. Mix in evaporated milk followed by coconut. Pour into a greased and floured 9-inch pie plate or quiche pan. Bake at 325°F. for 35 to 40 minutes or until custard is nearly set and a knife inserted in center comes out clean. Let cool. Refrigerate before serving.

Joy Hagen, Webster, SD

Please send your favorite salad, garden produce and pasta recipes to your local electric cooperative (address found on Page 3). Each recipe printed will be entered into a drawing for a prize in December 2018. All entries must include your name, mailing address, telephone number and cooperative name.

Enter this month's contest and watch for next month's challenge to enter to win another valuable prize!

12 MONTH CHALLENGE TO SAVE MONEY AND WIN BIG!

You Could be a Winner!

The Energy Makeover Contest gives you 12 chances to win valuable prizes to enhance efficiency and conservation efforts in your home or business. Each month we will focus on a new topic to help you learn how little changes can help you save big!

The information gathered will help Sioux Valley Energy continue to educate our members about energy saving practices, safety, and to ensure the programs we offer meet your needs.

Please complete the entry below and mail to Sioux Valley Energy, Energy Makeover Contest, PO Box 216, Colman, SD 57017.

The entry is also available online at www.siouxvalleyenergy.com.

One entry per member. Challenge Month Ten entry must be received by July 31st to be eligible for the drawing.

ENTER FOR A CHANCE TO WIN A WIFI DAVY CROCKETT GREEN MOUNTAIN PELLET GRILL ($375 VALUE).

CHALLENGE MONTH TEN

BEAT THE HEAT

Cooking in the summer can be unbearable, and the last thing you want to do on the hottest, most humid days is turn on the oven to make dinner. Your air conditioner gets a work out during the summer months to keep your home cool, so why not give it a break and do your cooking outside. Not only does your food taste great on a grill or smoker, it keeps the extra heat outdoors.

Smart cooking appliances also give you the convenience of being able to cook a perfect meal away from home utilizing Wi-Fi technology. Range or oven cooking can really warm up a kitchen—especially in the summer. Microwaves, convection ovens, induction cooktops, crockpots and toaster ovens put more cooking heat where you need it. A toaster or convection oven uses one-third to one-half of the energy required of a full-sized oven and microwaves consume about 80% less energy. Pressure cookers are gaining popularity again and they are another great way to reduce your cooking time dramatically.

When you cook inside, make sure the pans you are using match the correct size heating element or flame. Using lids on pots and pans will heat food more quickly than cooking uncovered. When using conventional ovens, foods should be placed on the top rack. The top rack is hotter and will cook food faster. Convection modes use about 20% less electricity since they use fans to force hot air to circulate more evenly allowing food to be cooked at a lower temperature. Always run your exhaust fan when cooking on the stove to get rid of the extra humidity.

This month's challenge: Avoid heating up your home this summer by cooking outside or using other appliances that require less energy than your stove. When cooking inside, match the pan to the correct size heating element, use a lid, and place pans on the top rack of the oven.

Beat the Heat

Name:_____

Address:_____

City:_____

State:_____ Zip: _____

Account Number: _____

Phone Number:_____

Email: _____

How do you avoid heating up your kitchen in the summer? _____

_____

_____

When you use your range/oven in the summer, do you practice efficient cooking and prevent adding extra humidity in your kitchen by matching the pan to the correct size heating element, using a lid to cover the pan, placing pans on the top rack of the oven, and running your exhaust fan to cook?

yes ☐ no ☐

I would like more information on:

☐Sealing/Insulation Guide ☐Heat pump rebate ☐Residential LED program ☐Commercial/Ag LED program ☐Weatherization Program ☐Yard Light rebate ☐Residential Water Heater ☐Energy Audit ☐Electric Heat Rate ☐Electric Car Charging Rate ☐Time of use Rate ☐Energy Tips ☐Commercial/Ag Water Heater ☐Third Party Irrigation Rebate

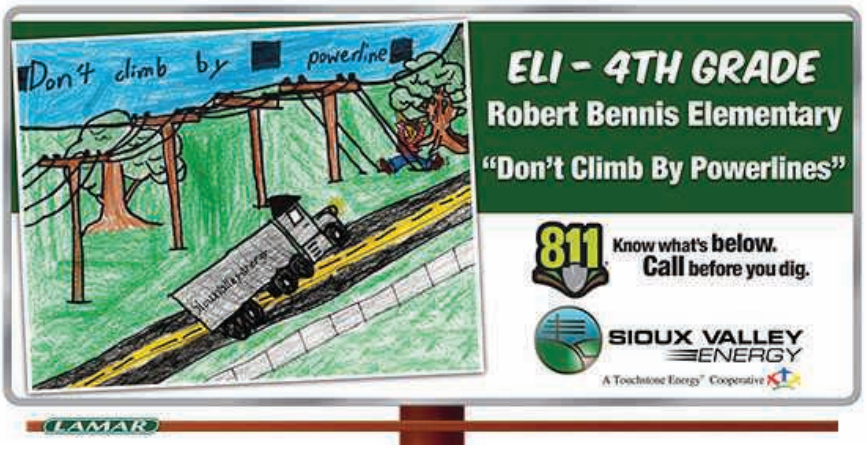
Safety Poster Contest Winners

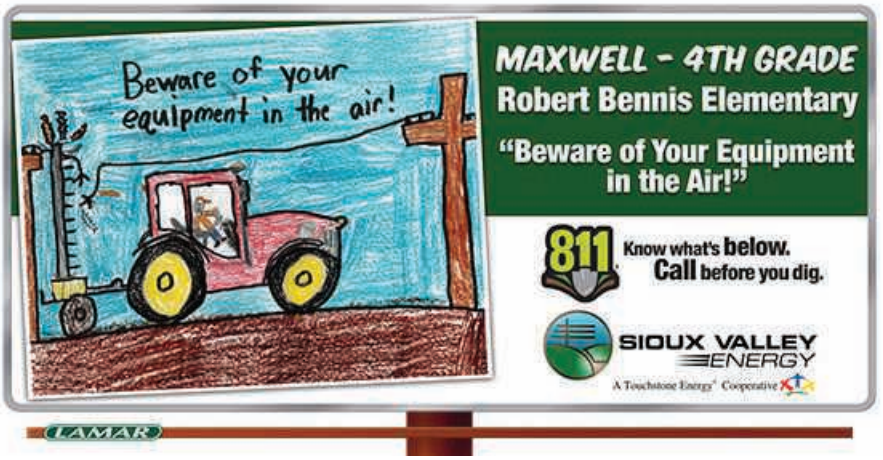
Fourth grade students from across the Sioux Valley Energy service territory submitted approximately 200 safety posters and three winners were selected. Robert Bennis Elementary students, Eli Woidyla and Maxwell Peters and Colman-Egan student, Zandyr Lipes each had their posters chosen to display on an outdoor billboard.

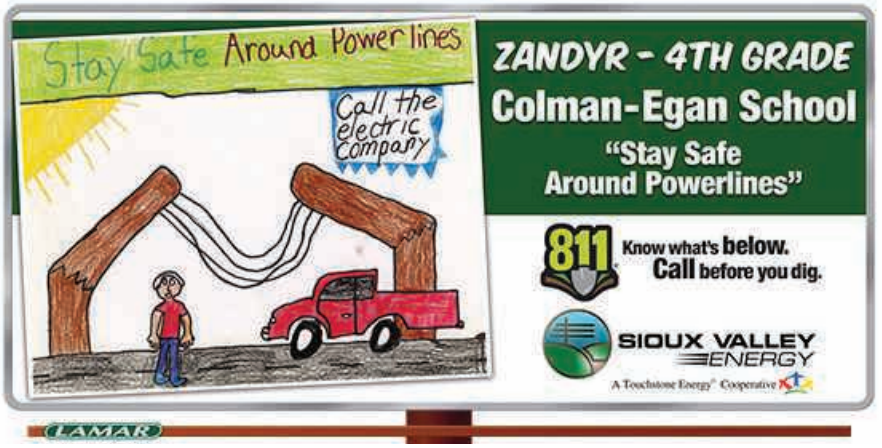
Eli is the son of Melissa and Jason Woidyla of Brandon; Maxwell is the son of Kevin and Laurissa Peters of Brandon; and Zandyr is the son of Tara Hall from Egan. The contest winners received a $50 cash prize in addition to having their posters displayed on billboards.

Sioux Valley Energy partnered with Lamar Advertising to construct the billboards, serving as public service announcements for electrical safety awareness. The most important tool in preventing electrical injuries is educating the public about the potential dangers of working and playing around electricity.

Debra Biever, Director of Customer and Employee Relations at Sioux Valley Energy, said, "The safety billboard contest is a great way to showcase the students' creative artwork and lifesaving electrical safety messages."







Pictured Below (Top to Bottom): Eli and Maxwell are pictured with Terry Ebright (SVE); and Zandyr is pictured with Debra Biever, (SVE).

New and emerging technologies are continuously offering innovative ways to effectively manage and reduce energy consumption. Unfortunately, not all technologies can live up to their hype. Your local electric co-op can help you navigate these emerging technologies and provide the most cost-effective and beneficial energy management solutions.

NAVIGATING

Emerging Efficiency Technologies

Kaley Lockwood
National Rural Electric Cooperative Association

Investing in energy efficient technology is becoming an increasingly attractive way to cut costs for homeowners and renters alike. This rings true especially in the deep heat of summer. Hotter days often result in higher energy bills, partially due to A/C units working overtime to keep homes cooled and comfortable.

Electric cooperatives know it's important to help our members navigate these emerging technologies and provide the most cost-effective and beneficial energy management solutions.

New and emerging technologies are continuously offering innovative ways to effectively manage and reduce a home's energy consumption. Smart thermostats, for example, have proven their worth in shaving 10 to 15 percent off an average home's electric bill. These thermostats, in time, will effectively pay for themselves which make them an attractive option to many. Unfortunately, not all technologies can live up to their hype and some even come with side effects that can arguably overshadow their benefits.

The Mistbox Air Conditioner Cooler is one such technology. Mistbox claims to save its customers between 20 to 38 percent on their electricity bills. This technology requires a simple installation to a home's outdoor A/C unit and works by spraying a mist to precool the air around the unit. In using this evaporative cooling method, you're a/C unit theoretically doesn't have to work as hard to pump cool air into your home. This may be beneficial when air temperature is at its highest. In the short term Mistbox may work, but there are some real caveats that need to be considered.

A primary point of concern is that an A/C unit is not designed to be sprayed down with such frequency. Although the Mistbox system comes with a water filter, the company only recommends using its technology if your home's water has a hardness less than 500 parts per million. This automatically rules out anyone who uses well water. Even if you do have a home with the required water hardness, the filtration system can't completely prevent your system from rusting. Corrosion will occur resulting in a damaged unit.

Electric cooperatives know it's important to help our members navigate these emerging technologies and provide the most cost-effective and beneficial energy management solutions. If you're interested in taking steps to become more energy efficient, we recommend these tried and true tips:

- Clean and change the filters on your HVAC system regularly to make your unit run more efficiently, keeping your house cooler in the summer and warmer in the winter.
- In spring and summer months, set your ceiling fans to turn in the counterclockwise direction to create a cool breeze. In autumn and winter months, set your fan to turn in the clockwise direction. This will redistribute warm air throughout the room.
- Add caulk or weather stripping to seal air leaks around leaky doors and windows.
- Insulation is important. Properly insulating your home reduces heating and cooling costs, and improves comfort.
- Remember, there are easy steps you can take now to improve the energy efficiency of your home. To learn about additional ways to save, contact the energy experts at your local electric cooperative.

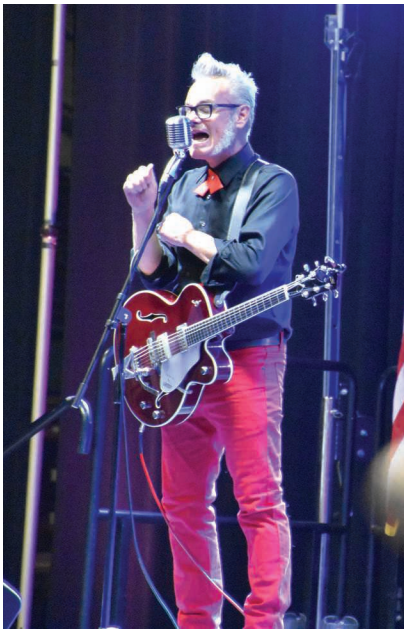
Kaley Lockwood writes on consumer and cooperative affairs for the National Rural

Electric Cooperative Association, the national trade association representing more than 900 local electric cooperatives. From growing suburbs to remote farming communities, electric co-ops serve as engines of economic development for 42 million Americans across 56 percent of the nation's landscape.

Annual Meeting Overview

900 Attend Annual Meeting

Sioux Valley Energy members were Cruisin' with the Co-op at the annual meeting held on Tuesday, June 5th in Brookings. The 1950's themed event did not disappoint with a classic car show, kids drive-in theatre, technology display, games and a show-stopping performance by the 'Holy Rocka Rollaz' band. During the meeting, Kim Hansen and Jim Kuyper were honored for their 25-year careers at SVE and Brandon resident, Linda Weber was recognized for her volunteerism with the Power and Hope award. Current and future EmPOWER Youth students were also introduced to the membership. Solar car finalists also competed and a costume contest was held.



Solar Car Race Winners

1st- Karter Wixon (pictured)

2nd- Taryn Birger and Tahliya Kruger

3rd- Bennet Sebert and Camden McDonald

Power and Hope Award Goes to Linda Weber

Linda Weber of Brandon was the recipient of the 2018 Power and Hope Award. Linda was the driving force in starting the Brandon Food Pantry. She helped secure the volunteers needed to operate the organization and is there each week to make sure things are running smoothly. She also implemented the annual event which helps to raise funds for the food pantry and she works with local organizations and churches to set up food drives.

Energy Audits

Savings You Can Count On

Derrill Holly

National Rural Electric Cooperative Association

Better energy efficiency at home starts with savings, not sales, and an energy audit conducted by a trained energy advisor can help you get there.

"Members are our community and we are the experts in the electric energy arena," said Manuela Heyn, an energy services representative for Gulf Coast Electric Cooperative, who is also a member of the Southport, Florida-based Co-op. "We have the tools, knowledge and commitment to assist our people. Saving energy can also help shave peak loads."

Heyn conducted her first energy audits with very basic tools: a flashlight, laser temperature gun and candy thermometer (to check water heater output temperature). She now has access to more sophisticated equipment such as thermal imaging equipment.

Members become frantic when they see a major increase in the power bill and want almost immediate answers as to why. In conjunction with experience and the ability to refer to meter data reports, the process of identifying major power consumption problems has been simplified and resolved in many instances in the office.

During on-site audits, she uses all her senses to find abnormalities such as hot water line leaks, running well pumps, damaged power cords, construction issues – one case leading to spongy drywall, disconnected ducts and lack of insulation to name a few.

She also checks household systems many homeowners seldom see or consider unless they spend time with their HVAC technician.

"One home I visited had an overflowing air handler water pan and extreme fungal growth" said Heyn. "Some members, particularly renters, don't realize that their HVAC systems have an air filter. When they are dirty, they can freeze up the system and cause an increase in power consumption."

Expert advice

Many of the electric co-ops that provide energy audits support professional development for energy advisors that includes exposure to building science concepts.

Training focused on both new construction techniques designed to improve energy efficiency and retrofitting options for upgraded older housing are common. Specialized training for multi-family units and manufactured housing are also common.

"By providing a picture of how energy is used in the home, people can concentrate on what can save them the most energy," said Eileen Wysocki, an energy auditor with Holy Cross Energy, headquartered in Glenwood Springs, Colorado.

Wysocki starts with a baseload estimate of energy use based upon meter data. Talking with the consumer-member, she learns about household size and behavior patterns, and considers seasonal factors like heat tape used to prevent water lines from freezing.

"We have many 'second homes' in our service territory," said Wysocki, adding that even when those homes are empty, energy use continues. "Fan coil blower motors, whole house humidi-

fiers, boiler pumps, ventilation systems, driveway snowmelt pumps, pool pumps, hot tubs, garage heaters, heated toilet seats and towel bars are using energy, regardless of occupancy."

The co-op serves Colorado's popular ski areas around Aspen and Vail, and is currently designing a new audit form. It will stress benefits members can receive through efficiency upgrades, including comfort, said Mary Wiener, energy efficiency program administrator for Holy Cross Energy.

Co-ops that offer energy audits use the service to reinforce their roles as trusted energy advisors, helping members save energy in an effort to help them control their electricity costs.

While some co-ops provide complementary audits free of charge, especially when they are requested in response to high bill concerns, others may charge a small fee, offering rebates to members who implement some of the recommendations provided.

Time spent with an energy auditor can help a member avoid ineffective upgrades or the purchase of outsized equipment that might not improve their comfort or produce savings through recoverable costs.

Offering solutions

An energy advisor's home visit usually gets far more attention than a brief discussion about energy efficiency at a co-op district meeting, a county fair or other community event. Most audits are initiated following a request tied to high bill concerns, when members are really motivated to control their energy costs.

On average, a member can reduce their energy use by about 5 percent if they follow the low-cost or no-cost advice given during the audit.

On average, a member can reduce their energy use by about 5 percent if they follow the low-cost or no-cost advice given during the audit. Additional savings of up to 20 percent can be achieved by addressing issues with big-ticket items, such as HVAC replacement, attic insulation or major duct repair discovered during the audit.

Improved energy efficiency not only helps the co-op control peak demand and wholesale power costs, it also provides opportunities to discuss services available to members. Those include rebates, weatherization programs and payment assistance.

To learn more about energy audits available to you, contact your local electric cooperative.

Derrill Holly writes on consumer and cooperative affairs for the National Rural Electric Cooperative Association, the national trade association representing more than 900 local electric cooperatives. From growing suburbs to remote farming communities, electric co-ops serve as engines of economic development for 42 million Americans across 56 percent of the nation's landscape.

Energy Audits Point the Way to Savings

Conducting an energy audit of your home is a great way to identify opportunities for energy savings. Below are five areas an auditor will typically cover.

- **Leaks and Losses:** Damaged, missing or improperly installed insulation can increase energy use year-round. Knowing where and how to check can identify problems.
- **Comfort Costs:** A visual inspection of your thermostat, water heater, heating and air conditioning equipment and ductwork, can identify performance problems.
- **Assessing Appliances:** The age, condition, location and use patterns for washers, dryers, refrigerators, and other major appliances can impact their efficiency levels.
- **Learning Lighting:** A quick discussion about lighting options with an energy auditor can take the guesswork out of choosing the best bulbs and fixtures.
- **Activity Adjustments:** Knowing how and when you use energy can help you save money. Shifting the time of day you use energy to do things (like laundry and cooking) to cooler, less humid hours can ease the load on HVAC systems.

Amanda Groethe and Whitney Ditlevson drove from Stearns Electric Association's Melrose, Minnesota, headquarters to Salt Lake City in a Tesla Model 3. Their route took them along Interstate 90 through Worthington, Minn., Mitchell, Chamberlain, Murdo, Wall and Rapid City, S.D. *(Photo Courtesy of Stearns EA)*

EV ROAD TRIP

Co-ops' Road Trips Lead to Valuable Research on Long-Distance EV Travel

Derrill Holly

National Rural Electric Cooperative Association

Charging is the next big hurdle for long-haul travel in electric vehicles, and the nation's electric cooperatives could play huge roles in delivering sustainable solutions for their consumer-members and other travelers.

"Charging presents a challenge. We who live in and drive through rural America still charge our vehicles, but it often requires more creativity, more time, or help from a friend," said Alan Shedd, director of energy solutions for Touchstone Energy® Cooperatives. "Ready access to public charging is not commonplace in rural areas."

The Touchstone Energy Drive to CONNECT Event, during which teams of co-op employees from different parts of the U.S. drove EVs to a conference in Utah, provided opportunities for real-time research on long-distance travel. The event involved the use of several different vehicles, including plug-in hybrids and a range of EVs produced by different manufacturers, and the research took into account the various routes, driving conditions and charging options.

An EV enthusiast for nearly 45 years and a national expert on the topic, Shedd has made many trips covering more than 200,000 miles using both plug-in hybrid vehicles and EVs. That experience has paid off in knowing when, how and where to plug in.

"I'm a member of four different charging networks," Shedd admits. But he still keeps extension cords, adapter plugs, a custom charger, tools and test equipment handy so he can plug in at a motel or other location where EV chargers are not available.

"There are still large areas of the country that are underserved," said Shedd. "You don't have to stray far from an interstate or urban area to outrun charging convenience."

Road-Tested Travelers

Shedd was among the co-op staffers who spent several days in May learning firsthand about the challenges facing motorists traveling long distances in electric cars. While electric vehicles are gaining popularity for commuter use, with home and workplace charging options becoming more common, experience with long-range travel remains limited.

"Driving cross-country is part of the American psyche – the lure of the open road," said Shedd. "We take the car for granted while not too many years ago a cross-country trip in a gas-powered car was a big undertaking and not altogether certain."

Sharing their adventures on social media using the hashtag #DriveEVent, teams started out in six states with a goal of arriving in Salt Lake City on or before May 7 so they could discuss their travels at a pre-conference workshop. While every team arrived in time, some faced more challenges than others.

Mike Smith and his son Colin, 16, drove a Chevy Bolt from Cayce, South Carolina, to Salt Lake City by way of Interstate 80 and documented parts of the trip on Twitter.

"The route we chose had everything to do with charging availability and avoiding the mountains if we could," said Smith, vice president of business and technology strategy for The Electric Cooperatives of South Carolina.

In Wyoming, they used a 240-volt dryer outlet to charge the car at one stop and a 50 amp campground power pedestal at another.

"We did a 5,000 mile road trip in a first-generation Honda Insight gasoline-powered car last year, and sometimes covered 1,100 miles a day," said Smith, who traveled 2,116 miles one-way to Utah. "This time we had trouble doing 300 to 400 miles a day through Nebraska and Wyoming because of the lack of fast chargers."

Direct current fast chargers (DCFC) operate at high power outputs of between 20 and 150 kilowatts, said Smith. "The fastest we have been able to charge the Bolt is 45 kW, which adds 170 miles of range per hour of charging. If a DCFC is not available, our next choice is a Level II charger, which adds between 20 and 30 miles of range per hour."

"This is what we had to use on the last half of our trip," Smith added "If we are really desperate for a charge, which we weren't this time, we can get a Level I charge from a standard 20 amp 120 volt outlet, delivering a paltry five miles of driving range per hour. At that rate, a full charge would take about 46 hours for our car."

The event involved the use of several different vehicles.

"We could drive for about three hours and then we had to charge for six," said Colin Smith. "Our days and nights got mixed up towards the end. When the car was fully charged, we went; but when the car needed a charge we stopped and slept while the car was charging."

Two employees of Melrose, Minnesota-based Stearns Electric Association made much better time in a Tesla Model S, in part because they had access to Tesla's fast-charging network.

Amanda Groethe and Whitney Ditlevson, who staff Stearns Electric's communications and marketing department, made the 1,216-mile trip to Salt Lake City with just nine recharging stops, and none of those lasted more than two hours.

With planning, they were able to time charging stops to coincide with meal breaks or sight-seeing, and the Tesla charging stations were always conveniently nearby.

"Generally the Tesla was fully charged by the time we were done with everything we wanted to do," said Groethe. She added that on a typical road trip with her family, she'd stop every two or three hours to see to the needs of her younger children.

The Cooperative Key

Teams from Montana and Colorado also completed the trip, but William Boyd Lee, vice president of strategic planning at CKEnergy, faced big challenges trying to get his Chevy Bolt from Binger, Oklahoma, to Salt Lake City.

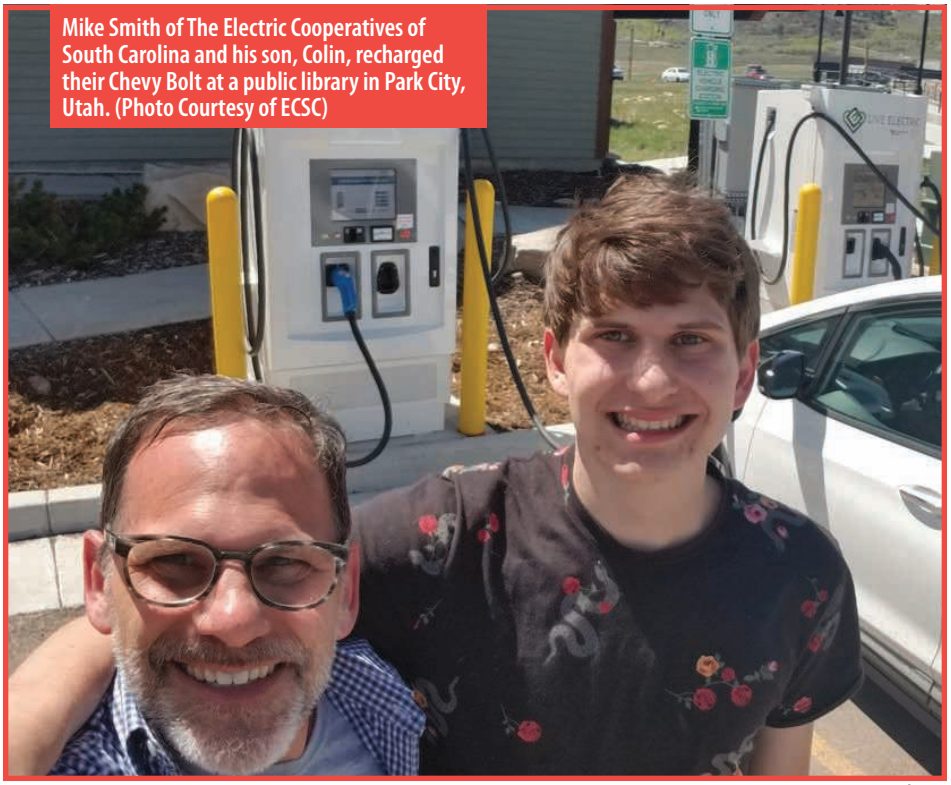
"Charging facilities west of Oklahoma City and up to Albuquerque, New Mexico are very lacking," said Lee, who blogged about facing frustrating detours and charging equipment performance issues, in Amarillo, Texas.

Lee and his son, Jay, 27, decided to tow his EV to Salt Lake City from Oklahoma with a gasoline-fueled F150 pickup truck, but his data will help provide a comparison to EV travels to be discussed in an upcoming Touchstone Energy national webinar.

Increased consumer demand for EVs and the need for manufacturers to ensure that charging options are available will create opportunities for private-sector investment in charging stations, said Lee. He added that it could also offer new markets for power sales for electric cooperatives.

"With more automotive manufacturers entering the EV market, there's a lot of incentive for building out a reliable charging network," said Lee. "Electric vehicles are going to be a huge part of our world in the years ahead."

Derrill Holly writes on consumer and cooperative affairs for the National Rural Electric Cooperative Association, the national trade association representing more than 900 local electric cooperatives. From growing suburbs to remote farming communities, electric co-ops serve as engines of economic development for 42 million Americans across 56 percent of the nation's landscape.



Mike Smith of The Electric Cooperatives of South Carolina and his son, Colin, recharged their Chevy Bolt at a public library in Park City, Utah. (Photo Courtesy of ECSC)

June 23-24
Dakota Royal Charity Draft Horse Show, 1 p.m., Swiftel Center, Brookings, SD, 605-543-5051

June 24
Pastured Meats and Egg Production Goosemobile Tours, Free, 1 to 5 p.m., Canistota and Canova, SD, 605-681-6793 or SDSPAinfo@gmail.com

June 24
Variety Show, Prairie Village, Madison, SD, 800-693-3644

June 24
Ice Cream Social, 4 to 7 p.m., Lutheran Church, 47474 258th St, Renner, SD, 605-338-7120

July 7
Divas Through the Decades concert, Prairie Village, Madison, SD, 800-693-3644,

July 7-8
Railroad Days, Prairie Village, Madison, SD, 800-693-3644

July 14
Movies in the Park, "Barnyard" sponsored by CHS Eastern Farmers. Crafts and games beforehand brought to you by Garretson FFA, Garretson, SD

July 14
Meat and Dairy Goat Workshop, 9 a.m. to 3 p.m., $30, Meal included, Brookings, SD; 605-681-6793

July 25
Stockyard Ag Experience - Local Foods Fair, 3 to 8 p.m., Free, Sioux Falls, SD, Contact 701-883-4304

July 27-29
Arlington Days, Arlington, SD, Becky at 605-203-3087

July 29: 13th Annual Langford Car Show, 10 a.m. to 2 p.m., trophies awarded at 1:30, Park of the Pines, Langford, SD, Contact Russell Nickelson at 605-493-6597

Photo courtesy: Langford SD Facebook Page

July 27-29
Honey Days, Car show, parade, street dance, volley-ball tournament, burger feed and craft show, Bruce, SD, 605-627-5671

July 28
Abbey Road concert, Prairie Village, Madison, SD, 800-693-3644

July 28
Growing Ancient Grains and Greenhouse Tomato Tours, Local Foods Potluck, 1 to 5 p.m., Free, Bring a dish to share, Newell, SD, 605-681-6793

July 28
Garden Tour, 10a.m. to 3 p.m., Brookings, SD, Cheryl Palmlund at 605-203-1701 palmtreeclp@gmail.com

August 4-5
Riverside Park Days, City Park, Flandreau, SD

August 5
25th Annual Car Show, Prairie Village, Madison, SD, 800-693-3644,

August 11
Ninth Annual Camaro Fun Days, 10 a.m. to 2:30 p.m., Parade Line-up at 9 a.m., Cruise at 3 p.m., Pioneer Park, Brookings, SD, Contact Terry 605-695-1560 or Calvin 605-690-1057

August 11
Movies in the Park, "Jumanji: Welcome to the Jungle" (PG-13) sponsored by Marmen Energy, Great Plains Zoomobile beforehand brought to you by Crete Pros., Garretson, SD

August 18
Outside Christian Concert featuring Turkey Creek Revival Band, Faith Lutheran Church, 511 S Main St., Humboldt, SD, 605-363-3700

August 18
City Wide Rummage Sale, 9 a.m. to 3 p.m., Arlington, SD, Michele at 605-203-0052

August 19
Car Show, City Park, Arlington, SD, Contact Mike at 605-203-0728

August 23-26
56th Annual Steam Threshing Jamboree featuring the Minneapolis Moline National Show, Prairie Village, Madison, SD, 800-693-3644

August 25
McCrossan Boys Ranch Xtreme Event Rodeo, 4:30 p.m. – Pre-show entertainment, 5:30 p.m. – Rodeo Show, McCrossan Boys Ranch Campus, 605-339-1203 www.mccrossan.org

To have your event listed on this page, send complete information, including date, event, place and contact to your local electric cooperative. Include your name, address and daytime telephone number. Information must be submitted at least eight weeks prior to your event. Please call ahead to confirm date, time and location of event.