

South Dakota Electric

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Cooperative Connections

AUGUST 2015 VOL. 67 NO. 8



CO-OPS PREPARE FOR 75TH STURGIS RALLY



We power your life.

You might call us the backbone of rural America. From wind turbines to gas turbines and coal-based facilities and beyond, we make the electricity that powers your daily lives. We're a part of an electric cooperative network that takes great care to assure that your lights always come on and your communities thrive. We believe service extends beyond electric delivery. We're here to make your life better. That's the cooperative difference.



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South Dakota Electric Cooperative Connections

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Black Hills Electric, Custer, S.D.
Bon Homme Yankton Electric, Tabor, S.D.
Butte Electric, Newell, S.D.
Cam Wal Electric, Selby, S.D.
Central Electric, Mitchell, S.D.
Charles Mix Electric, Lake Andes, S.D.
Cherry-Todd Electric, Mission, S.D.
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Codington-Clark Electric, Watertown, S.D.
Dakota Energy, Huron, S.D.
Douglas Electric, Armour, S.D.
East River Electric, Madison, S.D.
FEM Electric, Ipswich, S.D.
Grand Electric, Bison, S.D.
H-D Electric, Clear Lake, S.D.
Kingsbury Electric, De Smet, S.D.
Lacreek Electric, Martin, S.D.
Lake Region Electric, Webster, S.D.
Lyon-Lincoln Electric, Tyler, Minn.
Moreau-Grand Electric, Timber Lake, S.D.
Northern Electric, Bath, S.D.
Oahe Electric, Blunt, S.D.
Renville-Sibley Co-op Power, Danube, Minn.
Rosebud Electric, Gregory, S.D.
Rushmore Electric, Rapid City, S.D.
Sioux Valley Energy, Colman, S.D.
Southeastern Electric, Marion, S.D.
Traverse Electric, Wheaton, Minn.
Union County Electric, Elk Point, S.D.
West Central Electric, Murdo, S.D.
West River Electric, Wall, S.D.
Whetstone Valley Electric, Milbank, S.D.
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Brenda Kleinjan, Editor
Dawn Trapp, Communications Specialist
Design assistance by
TDG Communications, Deadwood

Guest Editorial

Keeping Energy Affordable

Like shelter, food and clothing, electricity has become a staple of our lives. When the price of energy goes up, you have less money to spend on other things. For many families, increases in energy costs mean hard choices, such as whether to pay the light bill or the grocery bill.

South Dakota's electric cooperatives understand that reality and work hard every day to keep rates as low as possible while still maintaining a safe and reliable system.

A detailed explanation of all the ways cooperatives work to keep energy affordable could fill every page of this magazine, but here are a few you should know about.

Not-for-profit model

The most powerful weapon in your cooperative's fight to keep energy affordable is the not-for-profit business model. Unlike investor-owned utilities, electric cooperatives aren't in business to make profits for shareholders.

Electric cooperatives exist to provide safe, reliable and affordable energy to members in the communities they serve. Any surplus revenue is reinvested in the cooperative, used to pay down debt or returned to members over time through capital credits.

Energy policy advocacy

Regulation is a necessary and important part of a modern world, but well-intentioned regulations often have costly and unintended consequences.

Your electric cooperative is a member of the South Dakota Rural Electric Cooperative Association and the National Rural Electric Cooperative Association, which act as a voice for you and your fellow co-op members in Pierre and Washington, D.C.

These associations work hard every day to ensure lawmakers and regulators understand the impact changes they propose could have on the cost and reliability of your electric service.

In addition to their efforts, there are two member-driven programs that give electric cooperative members a powerful voice in the democratic process.

The first is the Action Committee for Rural Electrification®, or ACRE®. Founded in 1966, ACRE is the federal political action committee (PAC) of America's electric cooperatives. ACRE supports candidates for the U.S. House and Senate who will speak for and protect the interests of electric cooperatives and their consumer-owners.

ACRE contributions to candidates are backed by more than 31,000 eligible employees, directors and consumer-members across 47 states with an average contribution of \$56, making it truly a grassroots PAC.

The second is the Cooperative Action Network – the advocacy hub for America's electric cooperatives. This program is free to join and allows co-op members to band together and promote common sense solutions to the problems facing our nation.

The Cooperative Action Network boasts a grassroots army of more than 1 million advocates across the country. When you join the Cooperative Action Network, you can sign up to receive alerts related to proposed state and federal regulations that could impact you and the price you pay for electricity. Each alert includes an explanation of the issue, its potential impact and information on how you can make your voice heard. To learn more about this program, visit action.coop.

Technology and innovation

The energy industry is in the midst of a period of significant change and many of these advances have the potential to improve the affordability, reliability and efficiency of our nation's electric system. Your local electric cooperative is actively involved in the development of new technologies and monitoring the advances of other researchers through its national association.

Take Steps to Avoid Injury or Death While Walking

We rarely are more vulnerable than when walking in urban areas, crossing busy streets and negotiating traffic. And we all are pedestrians from time to time, so it's important to pay attention to what is going on around us.

Cell Phone Distracted Walking

It has become such a big problem in recent years that Injury Facts® 2015, the statistical report on unintentional deaths and injuries published by the National Safety Council, for the first time has included statistics on cell phone distracted walking.

According to Injury Facts, distracted walking incidents involving cell phones accounted for more than 11,100 injuries between 2000 and 2011.

- 52 percent of cell phone distracted walking injuries happen at home
- 68 percent of those injured are women
- 54 percent are age 40 or younger
- Nearly 80 percent of the injuries were due to a fall.

The Vehicle Factor

While many communities are implementing measures to become more “walkable,” like adding more paths and traffic-calming measures, there still is a long way to go to keep pedestrians safe. Malls surrounded by parking lots, few sidewalks, blind intersections and high traffic areas all contribute to pedestrian fatalities and injuries.

According Injury Facts 2015:

- In 2013, 6,100 pedestrians were killed by motor vehicles
- That same year, about 160,000 pedestrian injuries required medical attention
- 23 percent of deaths and injuries result from pedestrians darting into the street, with the majority of those younger than age 15
- The number of pedestrian deaths has decreased significantly since the 1970s; during that decade, deaths were between 8,400 and 10,300
- During the decade from 2002 to 2013, death rates didn't change much; they hovered around 6,000, with a low of 5,300 in 2009

Head Up, Phone Down

While pedestrian-vehicle injuries are the fifth leading cause of death for children ages 5 to 19, according to SafeKids.org, no age group is immune. Here are a few tips from NHTSA and NSC for children and adults of all ages:

- Look left, right and left again before crossing the street; looking left a second time is necessary because a car can cover a lot of distance in a short amount of time
- Make eye contact with drivers of oncoming vehicles to make sure they see you
- Be aware of drivers even when you're in a crosswalk; vehicles have blind spots
- Don't wear headphones while walking
- Never use a cell phone or other electronic device while walking
- If your view is blocked, move to a place where you can see oncoming traffic
- Never rely on a car to stop
- Children younger than 10 should cross the street with an adult
- Only cross at designated crosswalks
- Wear bright and/or reflective clothing
- Walk in groups

Source: nsc.org

Always call 8-1-1 **BEFORE** you dig.

Aug. 11 is
National One Call Day.



Kids' Corner Safety Poster “Take a look when lifting up the bucket!”



Josie Mousel, 10 years old

Josie is the daughter of John and Jessie Mousel, Colman, S.D. They are members of Sioux Valley Energy, Colman, 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.

Succulent Salads



Cran-Chicken-Corn Salad

- | | |
|--|--------------------------------------|
| 1 (13 oz.) can premium chicken breast, drained | 1/2 cup Vidalia onion salad dressing |
| 1 can whole kernel corn, drained | 1/2 cup chopped red onion |
| 2 T. Miracle Whip | 1/2 cup Craisins |

Mix together all ingredients and serve cold.

M.J. Knopp, Madison, MN

Strawberry Pecan Pretzel Salad

- | | |
|------------------------------|----------------------------------|
| 1 cup crushed pretzels | 1/2 cup granulated sugar |
| 1/2 cup pecans, chopped | 1 tsp. vanilla |
| 3/4 cup brown sugar | 8 oz. whipped topping |
| 3/4 cup butter, melted | 2 cups fresh strawberries, diced |
| 8 oz. cream cheese, softened | |

Mix together pretzels, pecans, brown sugar and melted butter; spread in a pan. Bake at 400°F. for 7 minutes. Cool, then break into small pieces. Beat together cream cheese, sugar and vanilla. Fold in whipped topping. Before serving, stir the strawberries and pretzel/pecans pieces into the cream cheese mixture.

Lillian Schlechter, Scotland

Party Salad

- | | |
|-------------------------------|-----------------------|
| 2 (3 oz.) pkgs. lemon gelatin | 1 cup cream, whipped |
| 2 cans chicken rice soup | 1/2 cup nuts, chopped |
| 1 can tuna | 1 cup Miracle Whip |
| 2 cups chopped celery | |

Dissolve gelatin in hot soup; cool and refrigerate until partially set. Pour hot water over tuna in strainer; drain. Whip jello; fold in remaining ingredients. Prepare salad the day before so it sets well.

Zona Schanzenbach, Aberdeen

Garbage Salad

- | | |
|--|--------------------------------------|
| 16 oz. dry pasta | 1 cup milk |
| 6 cups raw vegetables, any combination | 2 pkgs. dry Ranch salad dressing mix |
| 2 cups mayonnaise | |

Cook pasta, drain and cold rinse. Cut any combination of vegetables into a large bowl. Add pasta. In separate bowl, mix mayonnaise, milk and dry Ranch. Add dressing to pasta/vegetables. Option: Substitute 1 (16 oz.) bottle of Italian dressing for Ranch dressing.

Tina Suhr, Dimock

Southwestern Bean and Quinoa Salad With Cilantro-Lime Dressing

- | | |
|---|---------------------------------------|
| 1 (15 oz.) can READ Southwestern Bean Salad | Dressing: |
| 1/2 cup red cherry tomatoes, halved | 1-1/2 T. canola oil |
| 1/2 cup yellow cherry tomatoes, halved | 1 T. fresh lime juice |
| 1/2 cup chopped tomatillos | 1/2 tsp. shredded lime peel |
| 1/2 cup thin bell pepper strips | 1/8 tsp. cayenne pepper (or to taste) |
| 2 cups cooked quinoa | 1/4 cup chopped cilantro |

Drain bean salad. Discard liquid or save for another use. In large bowl, combine bean salad, tomatoes, tomatillos and bell pepper. For dressing, whisk together oil, lime juice, peel and cayenne. Stir in cilantro. Toss with quinoa. Add to bean salad mixture; toss lightly to combine. Serve at room temperature or chilled. Makes 4 servings.

Nutritional information per serving: 250 calories; 10 g fat; 8 g protein; 35 g carbohydrate; 7 g dietary fiber; 0 mg cholesterol; 8.98 mg iron; 210 mg sodium; 0.12 mg thiamin; 781.13 IU vitamin A; 20.44 mg vitamin C

Pictured, Cooperative Connections

Summer Bean Salad

- | | |
|---|----------------------------|
| 1 (15 oz.) can green beans, drained | 1 cup sliced green pepper |
| 1 (15 oz.) can yellow beans, drained | 1 cup sliced yellow pepper |
| 1 (15 oz.) can kidney beans, rinsed and drained | 1 cup chopped celery |
| 1 (15 oz.) can black beans, rinsed and drained | 1 cup sliced black olives |
| 1 (8 oz.) bag frozen peas | |
| 1 cup sliced onion | Dressing: |
| | 1-1/2 cups white vinegar |
| | 3/4 cup sugar |
| | 1/4 cup oil |
| | 1 tsp. salt, optional |

In a large bowl, combine all vegetables. Stir together dressing ingredients, mixing well so sugar dissolves. Pour over vegetables. Refrigerate.

Jane Ham, Rapid City

Oreo Fluff Salad

- | | |
|---------------------------------|-------------------------------|
| 1 box instant chocolate pudding | 1 (8 oz.) container Cool Whip |
| 2 cups cold milk | 1 pkg. Oreo cookies, crushed |

Prepare pudding with milk according to package directions. Refrigerate for 15 minutes. Fold in Cool Whip and Oreos. Refrigerate for at least 2 hours. Note: cheesecake or white chocolate pudding may also be used.

Jillian Nedved, Harrisburg

Please send your favorite garden produce, pasta and crockpot 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 2015. All entries must include your name, mailing address, telephone number and cooperative name.

Understanding Home Heat Loss and Heat Gain



Jim Dulley
www.dulley.com

Dear Jim: I plan to make a few efficiency improvements to my home and hire a contractor for the job. I would like a better understanding of how a home loses and gains heat so that I am not persuaded into unnecessary projects. Can you help?
– Sheri W.

Dear Sheri: It never hurts to be as informed as possible about the projects you are considering. Using just a few of the proper terms and displaying some knowledge can keep a contractor from attempting anything unnecessary or unethical. Keep in mind, you will not know if the improvements helped until next year's utility bills arrive.

There are many DIY books about efficiency improvements, which would be a great starting point. Each home is unique though, so what some books recommend in general may not provide the best payback for your specific living space.

The most common misconception about a home is that heat rises. Heat does not actually rise. Instead, heat, which is a form of energy, flows equally in all directions. What does rise is warm air because it is less dense than cool air. This is important to keep in mind when determining where, how much and what types of insulation to use for various areas of your home.

The basic types of heat flow, out of your home during winter or into it during summer, are conduction, convection, radiation and air infiltration (leakage). Conduction is probably the most common type. This is how the handle on a cup gets hot from the coffee or how heat flows through the wood studs inside the walls.

The amount of heat lost or gained from conduction is primarily a function of the temperature difference (also called ΔT) between the indoor and outdoor surfaces of an outside wall. If the outdoor temperature drops so that the temperature difference is twice as large, twice as much heat will be lost through the wall. This is why setting the thermostat lower during winter or higher during summer saves energy.

The insulation level of a home also affects heat loss. If the insulation R-value is doubled, the amount of heat loss is cut in half.

Convection refers to heat flow from a fluid, such as air or water, moving over a surface. The heat lost by convection will also double if the temperature difference doubles, but it will increase even more as the air blows faster. This is what causes a wind chill factor during winter months.

Radiation is heat flow, which moves through space or air. This is how the sun warms us. Just as it warms you, your home also loses radiant heat to the outdoors, especially on a clear cold night.

Radiant heat flow is different in that when the temperature difference is doubled, the heat flow increases by 16 times. On a clear night, outer space is minus 460 degrees Fahrenheit, so the heat loss increases dramatically. You may have noticed how chilly you feel standing by a window at night. On a summer afternoon, a black shingle roof can easily reach 160 degrees Fahrenheit, which radiates heat down through the insulation and the ceiling.

The insulation level of a home also affects heat loss. If the insulation R-value is doubled, the amount of heat loss is cut in half.

Now that you have this background knowledge, make a list of problem areas, such as a persistently chilly room. If the room is located on the northwest side of the home, convection losses and air infiltration from winter winds could be a factor. Erecting some type of windbreak – a privacy fence or even planting evergreen trees – can help.

Since heat moves down as well as up, check the lumber band joist, which rests on the foundation. If it is not insulated, which is not uncommon, much heat can be lost by conduction moving out of it. If this is the case, I recommend insulating the joist. While the insulation is being installed, caulk where the joist rests on the top of the foundation. This spot is often uneven and leaks air.

Installing shades and closing them at night can block the direct radiant heat flow to the cold night sky or from the hot afternoon sun. This is much less expensive than installing new windows. Have low-emissivity, reflective foil stapled under the roof rafters. This dramatically reduces the radiant heat flow downward on hot summer afternoons.

Have a question for Jim? Send inquiries to: James Dulley, *Cooperative Connections*, 6906 Royalgreen Dr., Cincinnati, OH 45244 or visit www.dulley.com.

Come and See Us!
South Dakota's electric co-ops will be on hand at these events:

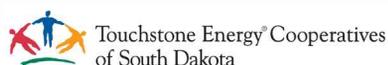


Stop by the Touchstone Energy® Cooperatives building (Booth 215) at Dakotafest for safety information, energy efficiency displays and more!



Check out the latest energy efficiency and technical displays and more at the Touchstone Energy® Cooperatives booth in the Expo Building!

Register to WIN at both shows!



Cell Phones and the Do Not Call Registry

Despite viral email, there is no new cell phone database. Consumers may place their cell phone number on the National Do Not Call Registry to notify marketers that they don't want to get unsolicited telemarketing calls.

The truth about cell phones and the Do Not Call Registry is:

- The government is not releasing cell phone numbers to telemarketers.
- There is no deadline for registering a cell phone number on the Do Not Call Registry.
- Federal Communications Commission (FCC) regulations prohibit telemarketers from using automated dialers to call cell phone numbers without prior consent. Automated dialers are standard in the industry, so most telemarketers are barred from calling consumers' cell phones without their consent.

There is only one Do Not Call Registry, operated by the Federal Trade Commission (FTC), with information available at donotcall.gov. There is no separate registry for cell phones.

The Do Not Call Registry accepts registrations from both cell phones and land lines.

To register by telephone, call 1-888-382-1222 (TTY: 1-866-290-4236). You must call from the phone number that you want to register. To register online (donotcall.gov), you will have to respond to a confirmation email.

If you have registered a mobile or other telephone number already, you don't need to re-register. Once registered, a telephone number stays on the Do Not Call Registry until the registration is canceled or service for the number is discontinued.

Funding Future Linemen



Pictured are the 2015 recipients of the South Dakota Line Superintendents Association scholarships at Mitchell Technical Institute. The superintendents organization awarded eight \$500 scholarships to students enrolled in the Power Line Construction & Maintenance program in March. Standing left to right are: Austin Stahl, Hitchcock; Tyler Pickett, Sturgis; Brandon Houska, Chamberlain; Garrett Metzinger, Pierre; Adam Major, Sioux Falls; Rhett Bothwell, Pierre; Bradley Hahn, Martin; and Dylan Parker, Box Elder. In addition to the line superintendents scholarships, Bothwell was awarded a \$500 Larry Brink Memorial Scholarship and Hahn received a \$500 Mark and Kathy Hofer Scholarship.



Photos Courtesy S.D. Tourism/Chad Coppess

Left: Banners welcoming bikers are a common sight in August in western South Dakota.

Opposite Page: The night lights up at the Buffalo Chip during the rally.

On the cover: A trio of motorcyclists are silhouetted against the night sky.

Cover Photo Courtesy S.D. Tourism/Chad Coppess

grounds – the Buffalo Chip Campground on the east edge of Sturgis.

“We try to have two guys up there during the rally,” Letcher said. The linemen, equipped with infrared cameras, inspect the system, looking for hot spots which signal a malfunction.

“We typically burn up a transformer every year,” said Letcher, noting that they keep a couple of the devices on hand for emergency repairs.

Like WREA, Butte Electric Cooperative in Newell, S.D., is also planning ahead.

“We’re anticipating traffic issues,” said Brett Fosheim, manager of operations at Butte Electric. “It makes it harder for our guys to get around.”

The co-op has an outpost in Sturgis, but gaining access to the building requires the crews to cross the city’s main highway which is extremely congested during the motorcycle gathering.

“Getting the employees to the outposts and offices is the biggest challenge,” Fosheim said. In addition to having linemen based in Newell and Sturgis, the co-op also has four workers in Spearfish.

Even the backways, usually known only to locals, will see traffic, lots of traffic.

“We see cycles 30 to 50 miles off of pavement, riding on gravel,” noted Fosheim.

While the rally provides for some variety, both co-ops still have their normal day-to-day work to see to.

For Fosheim, his co-op plans to stop working on a project in Spearfish Canyon in late July and early August, but, work in other areas will go on.

“We have some bigger projects in Butte County that we’ll probably keep working on as they’re pretty rural,” Fosheim said.

Planning for the logistics of getting employees around during the rally is just one challenge the co-ops are faced with.

As the region’s population swells for the annual gathering, the demand for electricity soars.

At Butte Electric, the co-op has a set of dedicated regulators that are turned on just for the rally. The equipment helps the co-op maintain its electrical service.

“There are usually some surprises; we’ve had troubles in the

past, but hopefully we’re beefed up this year,” said Fosheim.

Another component of Fosheim’s game plan for the rally is establishing travel corridors and staging co-op materials and equipment strategically to avoid traffic snarls.

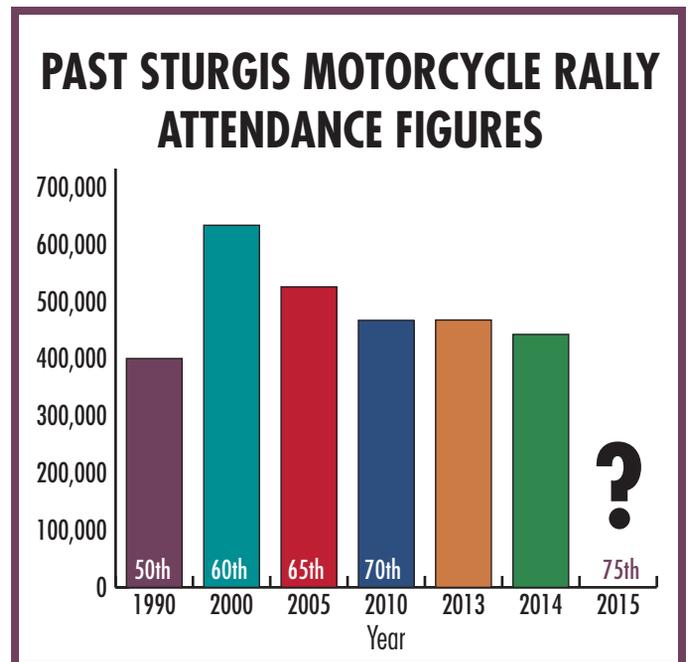
For West River Electric, the Buffalo Chip Campground will become one of the co-op’s top loads. Typically, the co-op’s largest customer is about a 1.5 megawatt load. The Chip is poised to surpass those energy needs during the rally.

“The hardest part is trying to predict the load. You don’t know how many people are going to show up or what the weather will be like,” said Letcher.

Both Letcher and Fosheim agree that milder temperatures will go a long way for making the rally more manageable for everyone.

“The numbers and weather are going to be what the problem is,” Fosheim said.

Letcher concurred. “How it all ends up depends on the weather,” he said.



2015 Youth Tour Teens Challenged to Make a Difference

YOUNG ELECTRIC COOPERATIVE MEMBERS THAT attended NRECA's 51st annual Youth Tour were encouraged to make a difference in the world by finding ways to help others.

During a spirited June 15 rally marking NRECA Youth Day, more than 1,700 young co-op members heard from speakers who've shared the experiences of the Electric Cooperative Youth Tour. Since NRECA launched the first Youth Tour in 1964, more than 50,000 young people have participated. South Dakota first sent students in 1963 and has sent 1,265 teens – including the 2015 delegation of 44 students – since then.

“The essential message of history is that we must all work together,” said Breonna Hammon, who attended last year as a member of Loa, Utah-based Garkane Energy which also serves part of Arizona.

Hammon, from Centennial Park, Ariz., served as NRECA Youth Leadership Council spokesperson during the past 12 months and addressed the NRECA annual meeting earlier this year.

A first-time experience for most participants, Youth Tour includes visits to institutions such as the Supreme Court, the U.S. Capitol and the National Archives, and opportunities to meet with members

of Congress.

“Youth Tour is a vital opportunity for youth living in co-op service territory to visit our nation's capital and learn about the importance of electric cooperatives,” said NRECA CEO Jo Ann Emerson. “Our youth are our future leaders, politicians and educators, and the Youth Tour is a strong reminder each year of how bright that future will be.”

Daniel Sanders, a 2008 Youth Tour participant from Texas who later worked for NRECA International, told participants how co-op volunteers from 16 states helped build and train staff for Haiti's first electric cooperative.

“Every single one of us knows a story about co-ops going above and beyond,” said Sanders, now an apprentice lineman with Johnson City, Texas-based Pedernales Electric Cooperative.

The event stresses community involvement, particularly in rural America, said Kirk Johnson, NRECA's senior vice president for government relations.

“Co-ops back home stay engaged with the youth so there are ongoing benefits to communities,” said Johnson. “There's a long-term value proposition for everyone involved.”

By
Derrill Holly
ECT Staff Writer





Above: A stop at the U.S. Archives, which houses the Declaration of Independence and other documents, ended with a group photo with a friendly security guard. **Bottom Left:** During their Job Shadow Day, the South Dakota teens met with Sen. Mike Rounds, Sen. John Thune and Rep. Kristi Noem and members of their staff. **Above left:** The South Dakota Youth Tour delegation poses for a photo with the Washington Monument in the background. Elevator problems trapped part of the group in the elevator while the rest of the group had to walk down the monument's internal staircase. One South Dakota teen helped a fellow tourist by carrying the woman's young grandchild down the Monument's 897 steps on her back. **Top Right:** The South Dakota group poses for a photo in front of the Supreme Court building prior to starting their Job Shadow Day. **Opposite Page:** Among the tour's stops was a photo opp outside the White House.

2015 Youth Tour Participants

Black Hills Electric Cooperative, Custer
Kendra Dykstra, Rapid City
Leo Dykstra, Rapid City

Bon Homme Yankton Electric Association, Tabor
Samuel "Sam" Caba, Lesterville, S.D.

Butte Electric Cooperative, Newell
Haley Jensen, Spearfish

Central Electric Cooperative, Mitchell
Hailey Bruckner, Wessington Springs
Logan Hattervig, Carthage
Miranda Henglefeldt, Alexandria
Tia Pawlowski, Gann Valley
Aften Pennings, Stickney
Nathan Powell, Chamberlain
Shelby Riggs, Mitchell
Casey Zoss, Letcher

Charles Mix Electric Association, Lake Andes
Bridget DeKam, Platte
Ramsey Standy, Platte

Cherry-Todd Electric Cooperative, Mission
Kylee Stoner, Kilgore, Neb.

Clay-Union Electric Corporation, Vermillion
Kaci Madsen, Volin

Codington-Clark Electric Cooperative, Watertown
Hanna Hoium, Watertown

Dakota Energy Cooperative, Huron
Sarah Pedersen, Miller

Douglas Electric Cooperative, Armour
Samantha "Sam" Ringling, Platte

FEM Electric Association, Ipswich
Brandon Beutler, Ipswich
Joseph Kretchman, Ipswich
Victoria "Tori" Moore, Ipswich
Autumn Pitz, Ipswich
Jesse Weber, Eureka

Grand Electric Cooperative, Bison
Ethan Anderson, Shadehill
Shawnee Mollman, Buffalo

H-D Electric Cooperative, Clear Lake
Morgan Bublitz, Altamont

Kingsbury Electric Cooperative, DeSmet
Kristen Longville, Lake Preston

Lacreek Electric Association, Martin
Miranda Orth O'Bryan, Martin

Lake Region Electric Association, Webster
Heather Block, Watertown

Moreau-Grand Electric Cooperative, Timber Lake
Olivia Dosch, Dupree

Northern Electric Cooperative, Bath
Carson Beaner, Bath

Oahe Electric Cooperative, Blunt
Melinda "Mindy" Ravnaas, Harrold

Sioux Valley Energy, Colman
Kelsey Geraets, Humboldt

Southeastern Electric Cooperative, Marion
Abby Hora, Irene
Jordanna Kruse, Lennox
Anne Mayrose, Salem

Union County Electric Cooperative, Elk Point
Madalyne Schuldt, Jefferson

West Central Electric Cooperative, Murdo
Ellie Coyle, Philip
Phyzon Milton, Lower Brule
Scout Sudbeck, Kadoka

West River Electric Association, Wall
Gabel "Gabe" Sandal, Quinn
Brianna "Bre" Warren, Caputa

Whetstone Valley Electric Cooperative, Milbank
Jessica "Jesi" Zempel, Wilmot

Chaperones

Sherry and Michael Bakley
Lacreek Electric Association, Martin

Brandon and Christina Flack
Northern Electric Cooperative, Bath

Jesse and Michelle Sorenson
Black Hills Electric Cooperative, Custer

Brenda Kleinjan
South Dakota Rural Electric Association, Pierre

Shining Brightly

LED Lights Brighten Regional Truck Stop

FOR THE TRAVELING PUBLIC, A STOP AT A HIGHWAY truck stop is usually helpful for refueling one's vehicle and refreshing the driver with a quick dose of caffeine.

But for the observant, a stop at the Coffee Cup Truck Stop on Interstate 29 and SD Highway 50 at the Vermillion exit can be an illuminating experience.

In 2014, the truck stop replaced the lights in its parking lot with energy-efficient LED bulbs.

LED lights can also be seen at work at other Coffee Cups in the state.

In fact, across the country, truck stops are looking at more energy efficient lighting as a way to cut costs.

Since truck stops and travel plazas are typically open 24 hours a day, seven days a week, the business is constantly using electricity. Many operators and owners of the businesses find that exploring ways to reduce the energy needed to run the business makes financial sense.

Among the many ways to reduce energy needs is to install LED lighting in their fuel canopies. Experts say that the move can be cost effective, with payback coming within less than two years in some cases. Payback is the point where cost savings in energy costs covers the expenses in making the efficient changes.

Another advantage of LED lighting is that the light is directed to a more focused area – namely the space directly below the bulbs.

The Coffee Cup at Vermillion went the extra step to replace its general overhead parking lights with the LED models.

Inside the stores, many operators have also looked at replacing lighting in coolers as well. Switching from fluorescent bulbs to LED lighting in the coolers can have a 2.5-year payback.

Retrofit kits are available that let operators swap out fluorescent bulbs in coolers with LED, typically with a 2.5-year payback.

Truck stops and travel plazas are not the only

By
Brenda Kleinjan



Eight Things to Know about LEDs

8. A light-emitting diode, or LED, is a type of solid-state lighting that uses a semiconductor to convert electricity into light. Today's LED bulbs can be six to seven times more energy efficient than conventional incandescent lights and cut energy use by more than 80 percent.

7. Good-quality LED bulbs can have a useful life of 25,000 hours or more – meaning they can last more than 25 times longer than traditional light bulbs. That is a life of more than three years if run 24 hours a day, seven days a week.

6. Unlike incandescent bulbs – which release 90 percent of their energy as heat – LEDs use energy far more efficiently with little wasted heat.

5. From traffic lights and vehicle brake lights to TVs and display cases, LEDs are used in a wide range of applications because of their unique characteristics, which include compact size, ease of maintenance, resistance to breakage, and the ability to focus the light in a single direction instead of having it go every which way.

4. LEDs contain no mercury, and a recent Energy Department study determined that LEDs have a much smaller environmental impact than incandescent bulbs. They also have an edge over compact fluorescent lights (CFLs) that's expected to grow over the next few years as LED technology continues its steady improvement.

3. Since the Energy Department started funding solid-state lighting R&D in 2000, these projects have received 58 patents. Some of the most successful projects include developing new ways to use materials, extract more light, and solve the underlying technical challenges. Most recently, the Energy Department announced five new projects that will focus on cutting costs by improving manufacturing equipment and processes.

2. The first visible-spectrum LED was invented by Nick Holonyak, Jr., while working for GE in 1962. Since then, the technology has rapidly advanced and costs have dropped tremendously, making LEDs a viable lighting solution. Between 2011 and 2012, global sales of LED replacement bulbs increased by 22 percent while the cost of a 60-watt equivalent LED bulb fell by nearly 40 percent. By 2030, it's estimated that LEDs will account for 75 percent of all lighting sales.

1. In 2012, about 49 million LEDs were installed in the U.S. – saving about \$675 million in annual energy costs. Switching entirely to LED lights over the next two decades could save the U.S. \$250 billion in energy costs, reduce electricity consumption for lighting by nearly 50 percent and avoid 1,800 million metric tons of carbon emissions.

This article is part of the Energy.gov series highlighting the "Top Things You Didn't Know"



type of businesses exploring lighting efficiency.

U.S. Department of Energy's Better Buildings Alliance supported the Lighting Energy Efficiency in Parking (LEEP) Campaign. More than 100 U.S. businesses and organizations are participated in the campaign and are planning or installing energy efficient lighting in their parking lots and garages. These organizations have committed to install efficient lighting across more than 270 million square feet of parking space – cutting energy use by up to 90 percent.

“By making parking lots and garages more energy efficient, our partners in the Lighting Energy Efficiency in Parking Campaign are saving energy, improving their bottom lines and serving as models for other organizations to increase the use of energy efficiency in their communities,” said Assistant Secretary for Energy Efficiency and Renewable Energy David Danielson.

Building owners spend more than \$6 billion to light their parking lots and garages, and much of this could be saved if parking lots and garages were upgraded to the most efficient lighting solutions. LEEP Campaign participants have upgraded their facilities to high efficiency metal halide, fluorescent, and LED solutions that last three times longer than their previous technology and by using controls are able to reduce energy use when parking facilities are not in use. Through the LEEP Campaign, the Energy Department's Better Buildings Alliance, the Building Owners and Managers Association, the Green Parking Council and the International Facility Management Association are working together to help owners of parking lots and garages upgrade to energy efficient lighting.

The Energy Department joined LEEP Campaign co-organizers to recognize 12 organizations for leading the way in efficient lighting. Combined, these 12 winners save nearly 45 million kilowatt-hours and \$4 million per year by upgrading to high efficiency lighting in 500,000 parking spaces nationwide.

Since 2009, the Energy Department's Better Buildings Alliance has provided technical assistance to help building and parking facility owners and managers install energy efficient lighting. Find more information on the Energy Department's broader efforts to save money by saving energy at U.S. parking facilities and a full list of the organizations recognized today.

Left: As dusk approaches, two styles of canopy lighting can be seen at the Coffee Cup fuel stop near Vivian, S.D. The canopies at the far left and far right use LED lighting which is bright in the immediate area but does not spill beyond where needed. The center canopy uses a different lighting style.

Above: The setting sun casts a glow over the Vivian Coffee Cup. The canopy to the south of the building employs efficient LED lights.

Taking it to the Streets: LEDs Light Up Towns

By Brenda
Kleinjan

A TRIO OF TOWNS IN WESTERN MINNESOTA HAVE had some brighter nights – and lower electric bills – in the past year due to upgrades in street lighting.

Last year, Lyon-Lincoln Electric Cooperative in Tyler, Minn., received \$8,600 in funding from the Southwest CERT (Clean Energy Resource Teams) to implement an LED lighting project in three southwestern Minnesota communities.

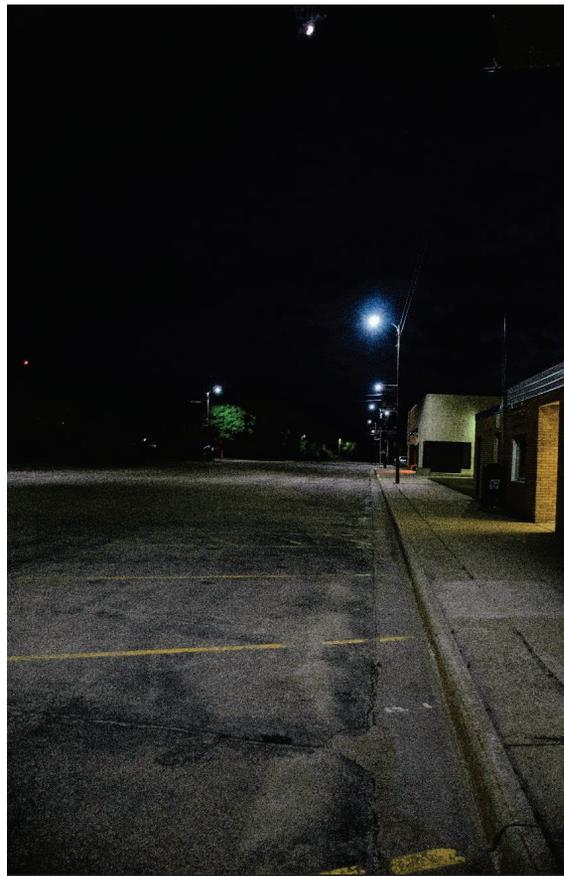
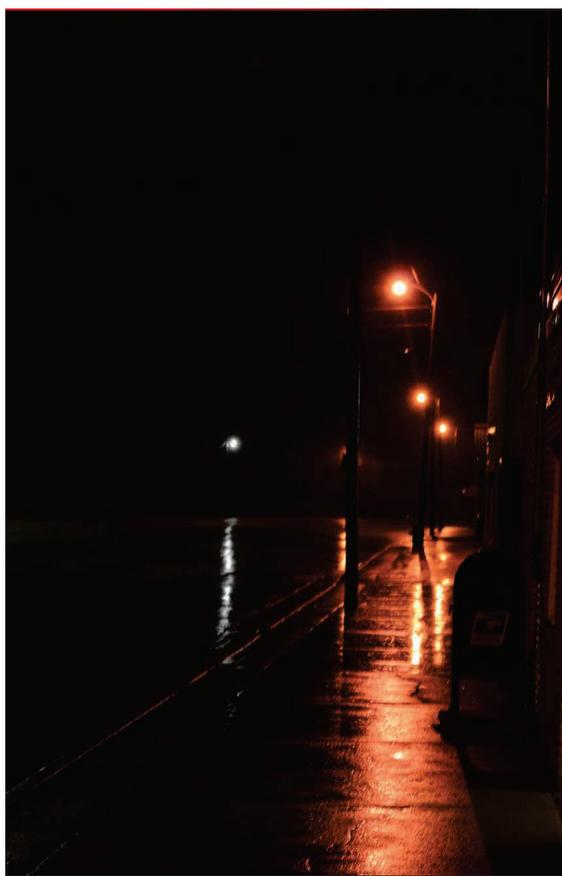
Through funding provided by the Minnesota Department of Commerce's Division of Energy Resources, CERT awarded \$20,000 worth of seed grants, catalyzing energy efficiency and renewable energy projects across the region.

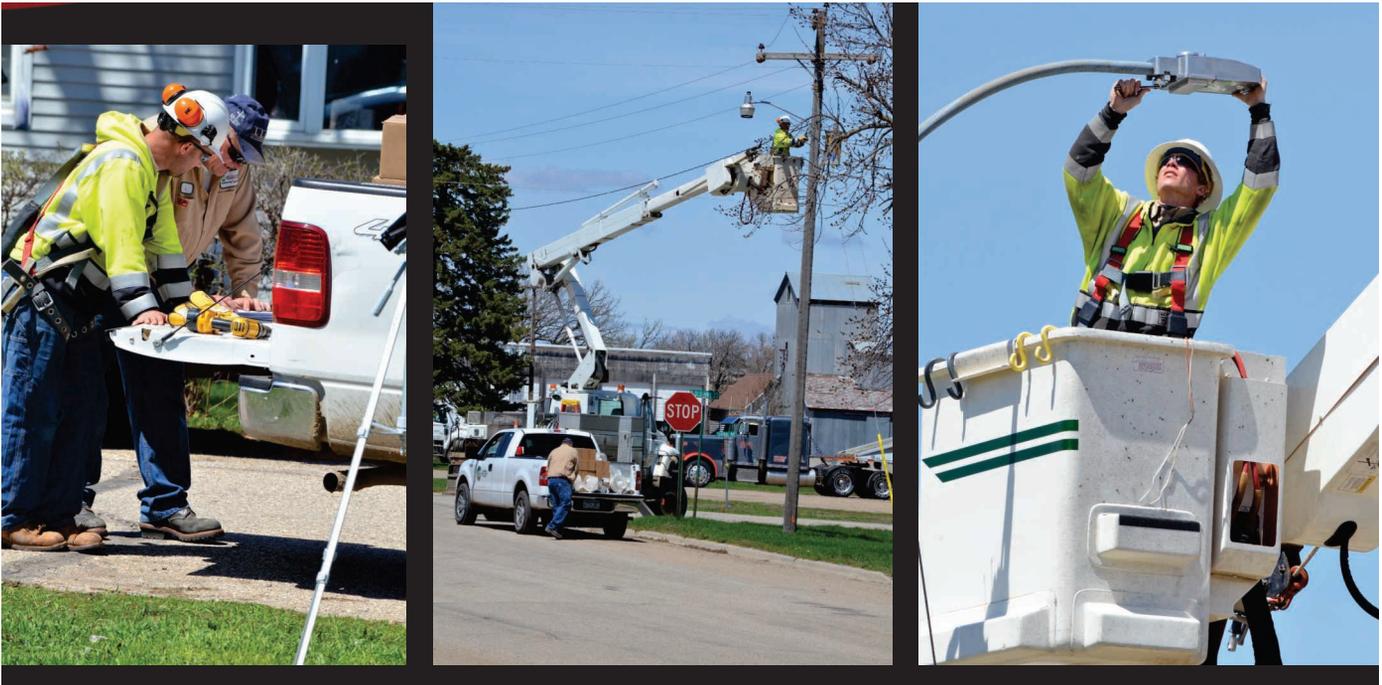
Lyon-Lincoln's award, the City of Russell LED

Lighting Project, allowed the cooperative to replace several existing mercury vapor and high pressure sodium street lights with LED lights to reduce energy use by the cities of Russell, Arco and Lynd, Minnesota.

Since the installation of the lights (the City of Russell switched its lights in May 2014) Lyon-Lincoln Electric Cooperative has been and will continue to study the results of the project and share that information with its nearly 4,000 utility members and through energy education programs at area schools.

Before the retrofit, the project included 72 mercury vapor lights of 175 watts each, 23 high





pressure sodium lights of 100 watts each and seven 400-watt street lights. The lights used about 80,000 kWh annually (84,473 kWh in 2012 and 79,092 kWh in 2013) and cost more than \$9,600 a year to light.

As part of the retrofit, 104 48-watt Type III 5,700 K lights were purchased and installed.

The project is estimated to save more than 61,600 kWhs a year and reduce lighting expenses by \$5,570.

Lyon-Lincoln also worked to replace 38 mercury vapor lights (175 watts each), 21 high pressure sodi-

um lights (100 watts each) and one 400-watt street light in the City of Lynd, population 450. The new lights were expected to drop the community's light bill from right at \$5,000 a year to \$3,400 a year, reducing energy use from more than 50,000 kWh a year to just under 35,000 kWh.

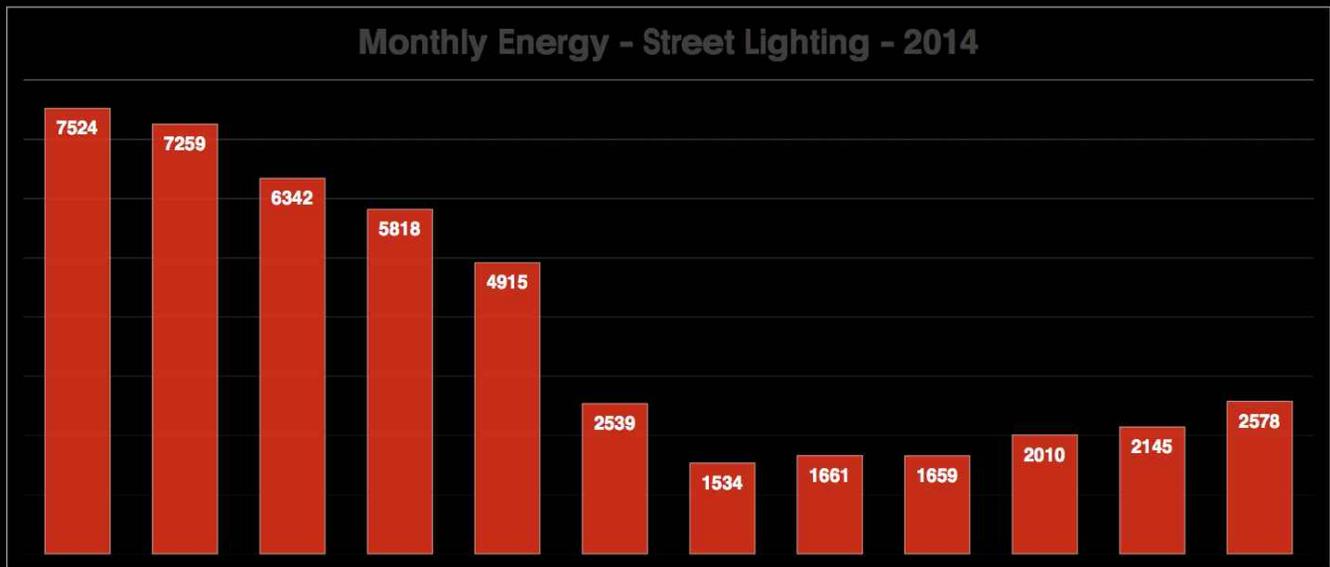
In the City of Arco, the co-op was replacing 37 lights (17 at 175 watts, 14 at 100 watts and six at 400 watts), a move that was projected to save the community of 78 people about \$2,000 a year, shaving nearly 21,000 kWh of energy use.

Above: Lyon-Lincoln Electric Cooperative workers work on installing LED street lights in three communities in southwestern Minnesota in 2014.

Opposite Page: A street in the project before the retrofit (left) and the same street after the retrofit (right).

METER 1 – 1 YEAR OVERVIEW

Monthly Energy - Street Lighting - 2014



The bars above show monthly energy use for streetlights in the city of Russell, Minn., starting with January 2014 on the left and ending with December 2014 on the right. The sixth bar marks the month of June. The

decrease in energy consumption is due largely to a conversion to LED lights. Also, longer daylight hours in the summer cause a natural dip in the amount of night lighting needed.

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 ABERDEEN, SD

Regional Dateline

Wednesdays in July & August
 Weekly Tours of the Governor's Mansion, 30-minute tours will begin at 1 p.m. and will be conducted by volunteers, including the First Lady. Tour groups will consist of up to 40 people, Free tickets must be obtained in advance from the Pierre Chamber of Commerce at 605-224-7361

July 21-25
 Days of '76 Rodeo and Parades Deadwood, SD
 605-578-1876

July 24
 Storybook Land Festival
 Aberdeen, SD
 artscouncil@nvc.net

July 24-26
 Laura Ingalls Wilder Pageant
 "By the Shores of Silver Lake"
 DeSmet, SD, 800-776-3594 or
 800-880-3383

July 24-26
 24th Annual Honey Days
 Bruce, SD, Find us on Facebook

July 24-26
 Gold Discovery Days
 Custer, SD, 605-673-2244

July 26
 Folk Off & Rib Challenge
 Renner, SD, 605-543-5071

July 30
 Bad River Music Series –
 BlackHawk, The Outlaws
 Slamabama, Silver Spur
 Fort Pierre, SD, 605-220-9405



PHOTO COURTESY OF S.D. DEPARTMENT OF TOURISM

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.

Events of Special Note

August 8-9
 Threshing Show
 Twin Brooks, SD
 605-432-9487 or 605-432-7990

September 11-13
 James Valley Threshing and
 Tractor Show
 Andover, SD, 605-881-5978

July 31
 Bad River Music Series – Little
 Texas and The Beer Slingers
 Fort Pierre, SD, 605-220-9405

August 1
 BBQ Pit Row, Winner, SD
 605-842-1533

August 2-8
 Motorcycle Rally, Sturgis, SD
 605-720-0800

August 5-9
 Day County Fair
 Webster, SD, 605-345-4668

August 7-9
 Harvey Dunn Society Plein Air
 'Paint Out', De Smet, SD
 605-854-9011

August 8
 Lake Eureka Carp Classic
 Eureka, SD, ecdc@valleytel.net

August 10-16
 Brown County Fair
 Aberdeen, SD, 605-626-7116

August 14-16
 Frontier Days Rodeo
 White River, SD, 605-669-3310

August 14-16
 Black Hills Steam and Gas
 Threshing Bee, Sturgis, SD
 605-721-6967

August 15
 Wing and Brew Festival
 Brookings, SD, 605-692-7539

August 15
 Culture Shock: Young Artist
 Festival, Rapid City, SD
 605-716-7979

August 15-16
 27th Annual Threshing Bee
 Rosholt, SD
 www.rosholtthreshingbee.com

August 16
 Leading Ladies
 Marathon, Spearfish, SD
 edoll@rushmore.com

August 16
 Bull-a-Rama, Redfield, SD
 605-472-4550

August 20-23
 Kool Deadwood Nites
 Deadwood, SD, 605-578-1876

August 21-23
 Summer Arts Festival
 Riverside Park
 Yankton, SD, 605-665-9754

August 27-30
 Hugh Glass Rendezvous
 Lemmon, SD, 605-393-5832

September 3-7
 South Dakota State Fair
 Huron, SD, 605-353-7340

September 4-6
 LifeLight Festival
 Worthing, SD, 605-338-2847

September 5
 Third Annual Rush-No-More
 Car Show and Shine
 Sturgis, SD, 605-347-2916