Northern Electric
A Touchstone Energy® Cooperative
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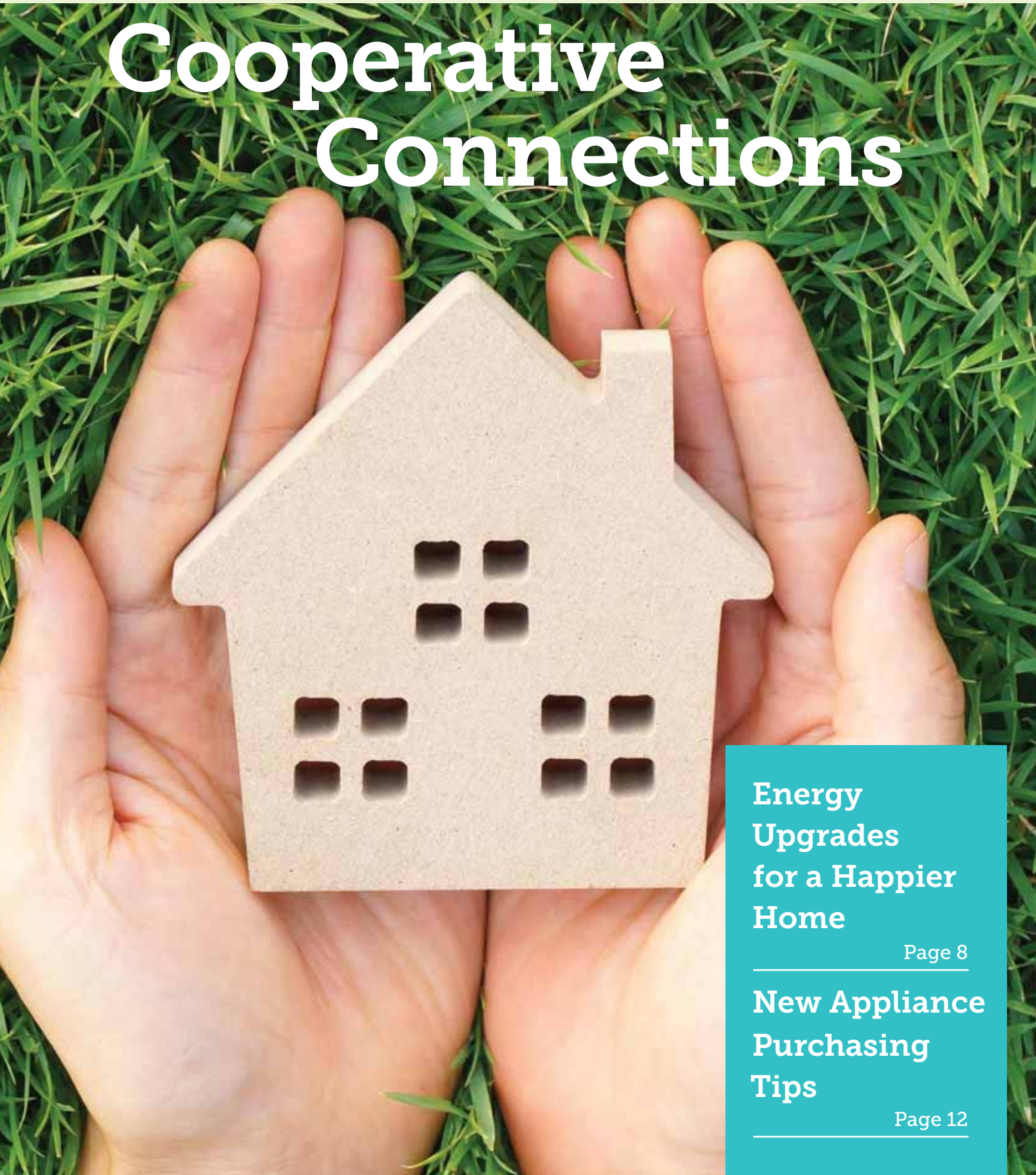
# Cooperative Connections



## Energy Upgrades for a Happier Home

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## May Is National Electrical Safety Month

# Safety Must Be A Priority Every Day

**Ben Dunsmoor**
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Electricity is a useful and necessary tool in our everyday lives. Without electricity, our communities would not function as efficiently or in the manner they do today. On the other hand, electricity can also be very dangerous. Overloading an outlet or getting a source of water too close to an electrical appliance can cause severe injury, damage, or even death around your home. Taking the wrong turn in a field with a large piece of farm equipment could mean life and death if it gets tangled in the power lines. Making a poor decision during a storm restoration job could result in severe injury or even death for co-op linemen who work around high-voltage electricity every day. The month of May has been designated as 'National Electrical Safety Month' but safety needs to be a priority every day at an electric co-op.

In March, the website 247wallst.com released a list of the nation's 25 most dangerous jobs. Electrical power-line workers ranked number 15 on the list with an average of 14.6 fatalities per 100,000 workers in 2016. Northern Electric works to build a culture of safety with its employees by holding monthly safety meetings and participating in programs like the Rural Electric Safety Achievement Program (RESAP) which includes unannounced safety inspections and an annual comprehensive safety improvement plan. One of the main duties of an electric cooperative is to provide a safe workplace and ensure that its employees can go home to their families at the end of the day.

**During National Electrical Safety Month I would encourage you to think about ways you can improve electrical safety around your home, farm, or business.**

Member safety is also a top priority for any utility. In 2017, Northern Electric partnered with neighboring co-ops in eastern South Dakota and western Minnesota to launch a campaign called 'Powering Your Safety.' The campaign focuses on alerting farmers to the dangers of operating large equipment around power lines. As farm equipment gets bigger the margin for error around high-voltage lines is getting smaller. 'Powering Your Safety' also aims to spread the message about the proper steps to take if a piece of machinery or a vehicle contacts a power line. Many consumers believe you should immediately get out of the vehicle or the equipment if it contacts a power line. However, the best option is to stay inside and call for help. You can learn more about the proper steps to take at www.poweringyoursafety.com.

Northern Electric also works to spread the message of safety with the youth of our communities by discussing different safety topics with grade school students during the annual 'Co-ops in the Classroom' program. During this program, students learn how electricity is generated and how to use electricity in a safe manner. 'Co-ops in the Classroom' is just one way Northern Electric reaches out to youth to teach them about safety. The co-op also participates in summer safety camps and sponsors safety information which is distributed in local schools.

During National Electrical Safety Month I would encourage you to think about ways you can improve electrical safety around your home, farm, or business. I know that your local co-op is working to ensure members and employees stay safe around electricity but safety is everyone's job and should be a priority every day.

(USPS 396-040)



NORTHERN ELECTRIC COOPERATIVE CONNECTIONS is the monthly publication for the members of Northern Electric Cooperative, PO Box 457, Bath, SD 57427. Families subscribe to Cooperative Connections as part of their electric cooperative membership. The purpose of Northern Electric Cooperative Connections is to provide reliable, helpful information to electric cooperative members on electric cooperative matters and better rural living.

**Subscription information:** Northern Electric Cooperative members devote 50 cents from their monthly electric payments for a subscription. Non-member subscriptions are available for $12 annually. Periodicals postage paid at Bath, SD 57427.

Postmaster: Please send address changes to Northern Electric Cooperative Connections, PO Box 457, Bath, SD 57427; telephone (605) 225-0310; fax (605) 225-1684



Northern Electric Cooperative's regular board meeting was held March 23, 2018, at the headquarters in Bath with all directors present. As the first order of business, the board approved the March 2, 2018, minutes and February expenditures. The Board then reviewed and accepted monthly reports by management including details on financial, operations, member services, safety, communications and IT.

Directors viewed the East River Electric Power Cooperative video report. East River Director Mark Sumption reported on actions taken by the East River Board at the March 8, 2018, meeting in Madison. General Manager Char Hager reported on the East River MAC meeting which she attended March 7, 2018, in Madison. The next South Dakota Rural Electric Association board meeting will be March 28-29, 2018, in Rapid City, SD. Director Glen Larson and Communications Director Ben Dunsmoor reported on the LAMONT-RHODES Lecture Series which they attended March 21, 2018, at the Johnson Fine Arts Center at Northern State University, in Aberdeen.

## Manager's Report

General Manager Char Hager's report to the board included the following items:

- Update and discussion on new and progressing development projects and activities taking place in the community and service area.
- Brief update on Rural Electric Economic Development (REED) revolving loan fund activities.
- Legal and Legislative report.
- Reported to the board that Communications Director Ben Dunsmoor's work on the *Northern Electric Cooperative Connections* magazine has won the gold award for the 'Best External News Publication' for co-ops with 20,000 meters and under.
- Announced 2018 Scholarship winners: Matthew Sperry chosen for the $1000 Basin/Northern Electric Scholarship and Sadie Vander Wal chosen for the $500 Northern Electric Cooperative Scholarship.
- Reminded the board of the CFC Forum, June 10-13, 2018, in Indianapolis, IN.
- Notified the Board of Directors that the Basin VIP Tour will be June 26-27 in Bismarck and Beulah, ND.
- Calendar review of upcoming meetings and events.

## Board Report

The board considered and/or acted upon the following:

1. Approved the date and time of the next regular board meeting for 8:30 A.M. on Thursday, April 19, 2018.
2. Approved payment of legal fees for Harvey Oliver in the amount of $1,747.13.
3. Approved ten estate requests for out of order capital credit retirements totaling $10,647.98.
4. Approved revision to existing Electric Tariff 15.3 to be effective March 1, 2018.
5. Approved a donation of $500.00 to Mellette Community Center.

Questions or more details on any of these matters? Please ask your cooperative manager, staff member or director.

| Financial Report | February 2018 | February 2017 |
|---|---|---|
| kWh Sales | 31,255,311 kWh | 26,259,047 kWh |
| Electric Revenues | $2,587,307 | $2,317,848 |
| Total Cost of Service | $2,396,634 | $2,414,596 |
| Operating Margins | $190,673 | (-$96,748) |
| Year To Date Margins | $380,471 | (-$708) |

**Residential Average Monthly Usage and Bill**

| | | | |
|---|---|---|---|
| February 2018 | 3,468 kWh | $280.30 | .0808 per kWh |
| February 2017 | 2,571 kWh | $224.09 | .0872 per kWh |

Wholesale power cost, taxes, interest, and depreciation accounted for 86.7% of NEC's total cost of service.

# Fly Drones Safely

Drones are unmanned aircraft systems (UAS) that are increasingly being used recreationally and professionally. As a result, there is an increasing need to ensure these craft are flown safely and within regulations.

Keep drones away from overhead power lines. If a drone flies into a power line, it could cause power outages. It could also result in downed lines, which pose a dangerous electrical safety hazard. The falling debris could also endanger public safety.

Touching a downed line or anything it has fallen on, like a fence or a tree limb, could get you injured or even killed. Stay away and instruct others to do the same. If you come across downed power lines, call 911 to notify emergency personnel and the utility immediately.

Follow federal guidelines for registering your drone or getting business approval, and be aware of and abide by community and state-specific legislation. Also, keep these FAA safety guidelines in mind:

- Before flying the drone, check it for damage. Have a damaged drone repaired before use.
- Never fly drones higher than 400 feet.
- Do not fly the drone beyond your line of sight.
- Do not fly near airports, manned aircraft, stadiums or people.
- Do not fly for commercial purposes, unless specifically authorized by the FAA.
- Do not fly in bad weather conditions, such as low visibility or high winds.
- Never fly your drone recklessly. You could be fined for endangering people or other aircraft.

Source: safeelectricity.org


## KIDS CORNER SAFETY POSTER

**"If a power line is touching a car, stay in the car or jump out!"**

**JaeShawnia Iron Hawk,** Second-grader at Dupree Public School


JaeShawnia is the daughter of Lindsey Flying By, Dupree, S.D. She is a member 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.

# Comforting Casseroles

Photo courtesy: McCormick

## Quesadilla Casserole

1 lb. ground beef
1/2 cup chopped onion
2 (8 oz. each) cans tomato sauce
1 (15 oz.) can black beans, drained and rinsed
1 (8-3/4 oz.) can whole kernel corn, undrained
1 (4-1/2 oz.) can chopped green chiles, undrained
2 tsp. chili powder
1 tsp. ground cumin
1 tsp. garlic, minced
1/2 tsp. oregano leaves
1/2 tsp. crushed red pepper
6 (8-inch) flour tortillas
2 cups shredded Cheddar cheese

Brown beef and onion in large skillet on medium-high heat; drain. Add tomato sauce, beans, corn and green chiles; mix well. Stir in all seasonings. Bring to boil. Reduce heat to low; simmer 5 minutes. Spread 1/2 cup of the beef mixture on bottom of 9x13-inch baking dish sprayed with no stick cooking spray. Top with 3 of the tortillas, overlapping as needed. Layer with 1/2 of the remaining beef mixture and 1/2 of the cheese. Repeat with remaining tortillas, beef mixture and cheese. Bake at 350°F. for 15 minutes or until heated through. Let stand 5 minutes before serving. Makes 8 servings.

*Nutritional Information Per Serving: Calories 391, Total Fat 19g, Sodium 950mg, Cholesterol 63mg, Carbohydrates 31g, Protein 24g, Dietary Fiber 4g*

**Pictured, Cooperative Connections**

## Ham and Cauliflower Casserole

4 cups chopped fresh cauliflower
1/4 cup butter, cubed
1/3 cup flour
2 cups milk
1 cup shredded Cheddar cheese
1/2 cup sour cream
2 cups cubed cooked ham
1 (4 oz.) can mushrooms, drained

**Topping:**

1 cup soft bread crumbs
1 T. butter, melted

In a large saucepan, cover cauliflower with water. Bring to a boil. Reduce heat; cover and simmer for 5 to 10 minutes or until tender. Meanwhile, in another large saucepan, melt butter; stir in flour until smooth. Gradually add milk. Bring to a boil; cook and stir until thickened. Remove from heat. Stir in cheese and sour cream until melted. Drain cauliflower. In large bowl, combine cauliflower, ham and mushrooms. Add cheese sauce and toss to coat. Transfer to a greased 2-quart baking dish. Combine topping ingredients; sprinkle over casserole. Bake, uncovered, at 350°F. for 40 to 45 minutes.

**Rebecca Hauser, Tripp, S.D.**

## Chicken Crescent Casserole

4 cups cubed cooked chicken or turkey
1 can cream of chicken soup
1 can cream of celery soup
1 (8 oz.) can sliced water chestnuts, drained
1 (4 oz.) can mushroom stems and pieces, drained
2/3 cup mayonnaise
1/2 cup chopped celery
1/2 cup chopped onion
1/2 cup sour cream
1 (8 oz.) can refrigerated crescent rolls
6 oz. shredded Swiss or American cheese
2 to 4 T. butter, melted

In a large saucepan, combine first 9 ingredients. Cook over medium heat until hot and bubbly. Pour into an ungreased 12x8-inch baking dish. Place rolls on top of hot chicken mixture. Combine cheese and butter; spread over rolls. Bake at 350°F. for 20 to 25 minutes or until crust is deep golden brown. ***Variation:*** *Substitute 4 cups of imitation crabmeat for the chicken or turkey and 1 can cream of shrimp soup in place of the cream of chicken soup.*

**Mary Crane, Mitchell, S.D.**

## Jalapeno Tater Tot Casserole

1 (2 lb.) bag tater tots
2 (8 oz.) pkgs. cream cheese, softened
1 cup sour cream
2 cups Mexican Cheddar jack shredded cheese, divided
1 lb. bacon, cooked and crumbled
6 jalapeno peppers, deseeded and diced
6 green onions, thinly sliced

Line a casserole dish with tater tots. Bake at 425°F. for 15 minutes. In a medium bowl, combine cream cheese, sour cream, 1 cup Cheddar jack cheese, bacon (reserve some for topping), diced jalapeno peppers and sliced onions (save a few for the top). Stir to thoroughly combine ingredients. Spread the jalapeno mixture over the tater tots. Top with remaining cup of cheese. Sprinkle with reserved bacon pieces and onion. Bake for 20 minutes. Serves 12.

**Sandi Litschewski, Spearfish, S.D.**

Please send your favorite dairy, dessert and salad recipes to your local electric cooperative (address found on Page 3).

Each recipe printed will be entered into a drawing for a prize in June 2018. All entries must include your name, mailing address, telephone number and cooperative name.

# Plant Trees In The Proper Place

## Trees Planted Today May Impact Power Lines In The Future

**Ben Dunsmoor**
bdunsmoor@northernelectric.coop

A Northern Electric contractor works to trim a pine tree that grew into a power line in Spink County.

Trees can be a great asset to any landscape, and when planted appropriately, can offer shade during the heat of the summer and protection against the cold winds of the winter. However, trees planted in the wrong place can become a nuisance – and even dangerous - when they grow near power lines.

"We have a responsibility to keep the line clear for the safety of everybody," Northern Electric Operations Manager Mike Kelly said.

**"They (trees) look so innocent when they are two feet tall but after a few years they can become a problem. It's very important to not make a future problem."**

Northern Electric Cooperative employs a contractor to systematically trim trees around power lines throughout the entire year. Keeping tree limbs away from high-voltage lines is crucial to the maintenance program of the co-op so the foliage does not pose a safety hazard or cause power outages.

Cooperative members can do their part by reporting any trees or branches that have grown into the line on their property to Northern Electric Cooperative. The co-op will trim or remove the trees that are interfering with the line at no cost to the member. To prevent a future issue, members are also encouraged to follow a few simple guidelines when planting new trees.

"They (trees) look so innocent when they are two feet tall but after a few years they can become a problem," Kelly said. "It's very important to not make a future problem."

When planting a new tree, members should do some research on the height and width of the tree once it reaches its full maturity. The size of a fully mature tree guides the distance it should be planted from an overhead power line.

- **Plant Large Trees 60 Feet Away:** A tree that will grow and spread more than 40 feet such as a maple, oak, birch, or pine tree should be planted at least 60 feet away from any overhead power lines.
- **Plant Medium Trees 40 Feet Away:** A medium tree that will grow to 25-40 feet tall at its full maturity such as an ash or birch tree should be planted 40 feet away from overhead power lines.
- **Plant Small Trees 30 Feet Away:** Small trees that will never grow more than 25 feet tall should be planted at least 30 feet away from a power line.

There should always be a clearance distance of 20 feet around any overhead power line. This is considered the 'no tree zone' as depicted in the graphic on page 7.

Northern Electric uses a contractor to systematically clear trees and limbs from power lines throughout the year.

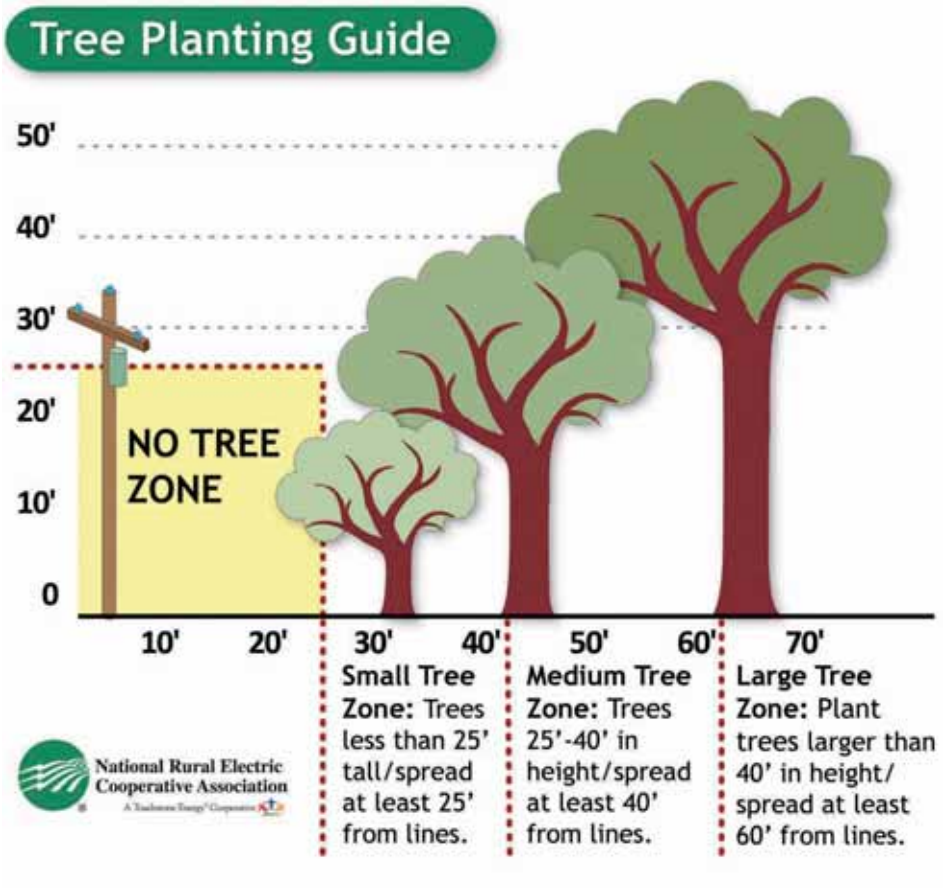
## Keep Trees and Shrubs Away From Underground Equipment

Co-op members who are planting shrubs and flowers this spring should also remember to keep plants clear of any underground pad-mount transformers or enclosures that may be on their property.

"It's not just the overhead we need to keep clear and that we need to perform maintenance on," Kelly said.

Small shrubs and trees should be kept at least ten feet away from any underground cabinets or cables. It is important to call 811 at least two business days before any type of planting so underground utility lines can be located and homeowners can avoid costly damage or severe injury.

**"It's not just the overhead we need to keep clear and that we need to perform maintenance on."**




Planting trees and shrubs in the appropriate place will alleviate the need for Northern Electric Cooperative to trim or remove trees that may grow into power lines. The co-op does not want to cut or trim a beautiful mature tree on a member's property but if it is interfering with the line it must be maintained.

"It's a shame if they had been planted far enough away we wouldn't have to worry about it," Kelly said.

Which is the reason tree-planting planning today will prevent problems in the future.

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

Boosting attic insulation is one way to cut energy bills.

# ENERGY UPGRADES FOR A HAPPIER HOME

## Boost Your Home's Comfort And Cut Energy Use

**Diane Veto Parham**

Contributing Writer

Imagine your house is not just the place you sleep, eat and store your stuff, but more like a part of your family, with its own unique needs. Ignore those needs and both you and your home suffer the consequences. But, pay closer attention, and you can find ways to enjoy a more pleasant – and efficient – living environment.

"It's amazing how much comfort you can provide by spending a few dollars," says Brian Sloboda, program manager for the National Rural Electric Cooperative Association, Arlington, Va., "You're going to increase your quality of life."

Knowing what your house needs is job one. Your heating-and-air system, your appliances, your insulation and even your lightbulbs can affect not only how your home is behaving, but also how much you're paying to keep it all running.

Need some ideas to get started? Here are seven smart ways to invest in a comfortable and energy-efficient house.

### 1. Get a professional home-energy audit

**Cost:** About $250 to $650.

**Benefit:** Making recommended improvements can cut energy use 10 percent to 40 percent.

**DIY potential:** None; use a certified professional.

A whole-house energy audit will take a few hours and evaluate household energy use, how the heating-and-air system is func tioning and whether there's adequate insulation. Using diagnostic tools like a blower door and a thermal imaging camera, an auditor tests for leaks in ductwork and around windows and doors, plus other problems with the home's "envelope" – essentially, the parts of the house that separate its insulated, air-conditioned interior from unconditioned spaces like attics and crawlspaces.

### 2. Seal your house

**Cost:** Ranges from a few dollars for weather stripping and caulk to thousands of dollars for whole-house weatherization.

**Benefit:** Annual energy savings of 10 percent to 20 percent, according to the U.S. Department of Energy.

**DIY potential:** You can do simple tasks; professionals should handle large-scale insulation or ductwork improvements

"Make sure your house is well insulated and well sealed," says Alan Shedd, director of energy solutions for Touchstone Energy® Cooperatives. A handy do-it-yourselfer can tackle simple sealing tasks. Feel for drafts or look for cracks and gaps around windows and doors, around electrical outlets and light fixtures, where pipes and wires penetrate walls, floors or ceilings, around fireplaces and where ceilings meet walls. Basic DIY materials like weath er-stripping tape, tubes of caulk and spray foam are available at home-improvement stores.

If you invested in a professional home-energy audit, you know exactly where air is leaking and what repairs are needed. For fixes outside your skill set – for example, adding insulation or repairing leaky ductwork – ask your co-op for a list of certified contractors or visit Building Performance Institute's website.

## 3. Replace your HVAC system

**Cost:** Ranges from a few thousand dollars for a single-zone, mini-split system up to tens of thousands to install a geothermal system.

**Benefit:** Upgrading to ENERGY STAR®-certified heating and cooling equipment can deliver annual energy-bill savings of 10 percent to 30 percent, according to the Department of Energy; geothermal systems can cut energy use for heating and cooling by 25 percent to 50 percent.

**DIY potential:** You'll need a trained professional to properly size and install a system for your needs.

Heating and cooling account for about half of typical household energy costs. Minimize those expenses by upgrading to a more efficient system when your current unit ages out. Expect an HVAC system to last, on average, about 10 to 12 years.

Air-source heat pumps, which draw heat from the air and move it indoors or outdoors as needed, provide efficient heating and cooling from a single unit. Ground-source (geothermal) heat pumps are the most efficient, albeit more expensive, heating-and-cooling option. Drawing heat from stable ground temperatures rather than fluctuating air temperatures, geothermal heat pumps use about 25 percent to 50 percent less electricity than conven tional HVAC systems.

Geothermal is "the gold standard" for peak efficiency in heating and cooling, Shedd says, where the property can accommodate an extensive vertical or horizontal underground-loop system.

For any heating-and-cooling system, proper installation is essential to reap full benefits of energy-efficient performance. A certified HVAC contractor will do a load calculation to determine what size HVAC unit is right for your house and whether any special adjustments are necessary for your location.

## 4. Modernize major appliances

**Cost:** Hundreds of dollars for major appliances; zero dollars for unplugging energy hogs that are not in use.

**Benefit:** Save anywhere from a few dollars up to hundreds of dollars a year.

**DIY potential:** You'll need a professional to install some appli-ances, but you can unplug small appliances around the house in minutes.

Among your appliances, the two biggest energy users are water heaters and refrigerators, which are nearly always on duty. After that, you might be surprised by another energy hog: consumer electronics.

"The fastest-growing user of electricity in your house is all the things you plug in," Shedd says.

## 5. Boost your attic insulation

**Cost:** National averages range from $1,300 to $2,000, depending on home location, attic size and type of insulation.

**Benefit:** Reduce your energy bills by keeping heated and cooled air in your living space.

**DIY potential:** Handy homeowners can add insulation with proper tools, safety gear and precautions, but it's a job best left to professionals.

It's all about the R-value. That's the number assigned to insu lating materials based on how well they resist the transfer of heat. Higher numbers mean more resistance to heat flow and more effective insulation. For attics, recommended R-values range from 30 in warmer climates to 60 in colder regions. To learn what's recommended for your climate zone, consult the R-values map at www.energystar.gov/index.cfm?c=home_sealing.hm_improve-ment_insulation_table.

Older homes are more likely to lack enough attic insulation for peak efficiency, because "energy-efficiency standards keep going up and getting higher," Shedd says. "Thirty years ago, R-19 was standard practice."

What you spend to upgrade your attic insulation will depend on multiple variables, including the type of insulation – for example, fiberglass or cellulose, batts or loose fill – as well as the size of the attic space and the contractor's labor costs.

## 6. Switch to efficient light bulbs

**Cost**: A few dollars per bulb .

**Benefit:** Save about $50 per year by replacing 15 traditional incandescent bulbs with more efficient energy-saving light bulbs.

**DIY potential:** You can handle this.

You're going to change your light bulbs sooner or later. When you do, why not invest in bulbs that will save energy and create the lighting environment you want in your home?

When you're shopping, pay attention to lumens – the bright ness of the bulb – rather than watts, which indicate how much energy it uses. Packaging often refers to the wattage a new bulb can replace – for example, an energy-saving 800-lumen bulb can replace a 60-watt bulb. Look at the lighting-facts label for details about the bulb's lumens, estimated yearly energy cost and lifespan and the lighting color. ENERGY STAR®-certified bulbs can deliver the brightness you want while using 70 percent to 90 percent less energy.

## 7. Install smart thermostats

**Cost:** Products range from about $170 to $250.

**Benefit:** Manufacturers estimate annual savings of 9 percent to 23 percent on heating and cooling costs.

**DIY potential:** Video and written instructions can guide you through installation and Wi-Fi set-up.

Early versions of programmable thermostats were hailed as tools that would help homeowners save energy and money and increase home comfort, all by tailoring thermostat settings to daytime, nighttime, weekend and vacation schedules. And they did – but only for those who bothered to manually program them.

Thanks to the internet connection and remote-control options, smart thermostats are ideal for use in electric cooperative load-control programs. Across the country, cooperatives are testing new programs that use this technology to help members save energy and help co-ops reduce demand.

# Vander Wal Named Scholar of the Week


Northern Electric Cooperative Communications Director Ben Dunsmoor presents a check to Northwestern High School senior Sadie Vander Wal.

Northwestern Area High School senior Sadie Vander Wal has had a busy school year. Vander Wal is the student body president at Northwestern, co-editor of the yearbook, Future Business Leaders of America (FBLA) chapter president, FFA chapter president, and she walked across the stage as 2018 Miss Northwestern Snow Queen in January.

Vander Wal was also named the recipient of the $500 Northern Electric Cooperative Scholarship in February, and on April 23, Vander Wal will be recognized as the Touchstone Energy Scholar of the Week for eastern South Dakota and western Minnesota.

"Being in so many extracurriculars has taught me how to balance my time and set my priorities," Vander Wal said.

Vander Wal has a 4.089-grade point average and is involved in several other extracurricular activities including chorus, band, and 4-H. Vander Wal received a $100 check from Northern Electric Cooperative and will be featured on KSFY-TV on April 23 for being named the Touchstone Energy Scholar of the Week.

# *Northern Electric Cooperative Connections* Magazine Receives National Award

30TH ANNIVERSARY SPOTLIGHT on Excellence Awards

Northern Electric Cooperative has received a national award from the National Rural Electric Cooperative Association (NRECA) for its monthly publication - *Northern Electric Cooperative Connections.*

Communications Director Ben Dunsmoor, who is the editor of *Cooperative Connections*, was notified in March that the magazine won the gold 'Spotlight on Excellence' award for 'Best External News Publication' for small electric cooperatives with 20,000 meters or less.

*Cooperative Connections* is the co-op's official monthly publication which focuses on providing reliable and helpful information to members about the operation of their cooperative.

Dunsmoor will officially receive the award in May.

## Sarah Aman Selected For Youth Tour Trip To Washington D.C.

# 2018 Youth Tour

Warner High School sophomore Sarah Aman is heading to Washington D.C. this summer to represent Northern Electric Cooperative during the 2018 Electric Cooperative Youth Tour.

Youth Tour is a gathering of more than 1,500 students from electric cooperatives across the country. Students will tour the memorials and monuments and meet with members of their congressional delegations during the week-long event.

Aman was selected to represent Northern Electric in April after she submitted the winning Youth Tour essay.

"Getting to see our nation's capital up close, and the idea of working with other teens to learn about cooperatives inspired me to apply," Aman said about her application.


**Sarah Aman**
2018 Youth Tour Participant

Aman participated in the 2017 South Dakota Rural Electric Association Youth Excursion trip to Bismarck, North Dakota, last summer where she learned about cooperatives and electric generation. Aman says she is excited to learn about government this summer.

"I am most looking forward to meeting with our state's elected officials, to ask many questions, and get a better understanding of how the federal government works," Aman said.

The 2018 Electric Cooperative Youth Tour will be held June 7-14.

2018 NORTHERN ELECTRIC VIP TOUR

BISMARCK, ND • BEULAH, ND

JUNE 2018

# 2018 VIP TOUR

**WHO:** All Northern Electric Cooperative member/consumers can apply for the VIP Tour; even if they have gone on the tour before.

**WHAT:** Tour Basin Electric Power Cooperative headquarters, the Garrison Dam, a coal mine, the Antelope Valley Station power plant, and the Great Plains Synfuels plant in Beulah, North Dakota.

**WHERE:** Bismarck and Beulah, North Dakota

**DATES:** June 26-27, 2018

**COST:** FREE (bus, meals, and lodging are covered by the cooperative. Members must bring their own shopping/spending money)

**APPLY:** Mail in the completed form below or apply online at www.northernelectric.coop/content/vip-tour by **May 25, 2018.**

NORTHERN ELECTRIC VIP TOUR:

Name: _____

Address: _____

_____

E-mail: _____

Phone: _____

DEADLINE FOR ENTRIES IS MAY 25, 2018

Return form to: Northern Electric
Attn: Kay Albrecht
PO Box 457
Bath, SD 57427

# Make, Model, Capacity, Oh My!

## Tips for Purchasing New Appliances

By Paul Wesslund

NRECA Contributing Writer

**The No. 1 problem for homeowners is trying to determine which of the things actually presents value.**

The Sloboda family needed a new refrig erator so Brian volunteered to do the shopping. After all, he's a national expert on electric appliances.

He came home frustrated. There were just too many choices, even for the guy whose job title is program and product line manager for energy utilization, delivery, and energy efficiency at the National Rural Electric Cooperative Association, Arlington, Va.

"Just buy whatever you want," he told his wife, Sami Jo.

He finally got to use his in-depth knowledge when he looked over the model that Sami Jo brought home.

"Why didn't you get the version that has a camera inside, so you can use your smartphone in the grocery store to see if we need more milk?" he asked.

"Because it costs $500 more," she said.

That, said Brian, was a good reason.

That's the kind of reasoning we're all going to be doing in the coming months and years as we grapple with the newest trend in appliances – connection to the internet.

"The No. 1 problem for homeowners is trying to determine which of the things actually presents value," says Sloboda. For example, when you're on vacation you can use your smartphone to check whether you've left the oven on or the garage door open.

Sounds nice, but is it worth it?

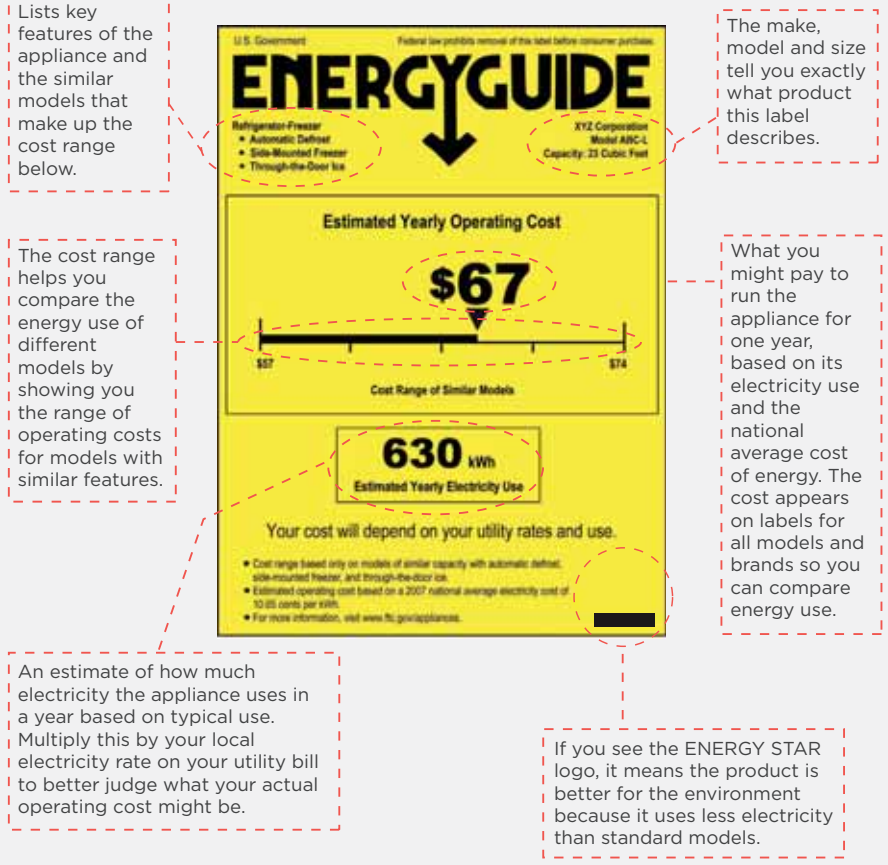
"There's a Crock Pot® app," he says. "Does that have value to you? It might if you use a Crock Pot® a lot."

"There are infinite possibilities," says Sloboda. "They sound nice when you first hear about them, but you have to remember you are paying more for those features."

Web-connected appliances could also offer online diagnostics. There might not be strong everyday reasons for a washing machine to be hooked into cyberspace, but

## Understanding the ENERGYGUIDE Label

**The ENERGYGUIDE label is a great tool that helps consumers compare the energy use and costs of new appliances. Use the sample below to better understand how to use the information found on the label.**




*Source: Federal Trade Commission*

Home owners have a wide array of choices when it comes time to upgrade major energy-using appliances.

if it broke, the manufacturer could log in to figure out what's wrong. That could help decide the best way to repair or replace the equipment. But is it worth the extra cost?

"It's a good feature," says Sloboda, "but one you're only going to use when the appliance breaks."

If you're longing for lower-tech help in decision-making, look to the yellow and black U.S. Department of Energy's EnergyGuide label on each appliance.

"It's one of the single greatest pieces of information that you can find when you buy an appliance," says Sloboda.

He says the most useful info is the big dollar figure right in the middle of the label, showing what it will cost to use that appliance for a year.

Sloboda cautions that the number doesn't tell you exactly what you will pay because it doesn't use your local utility's kilowatt hour rate. But it's a perfect way to compare appliances because every appliance's label is based on the same national average electric rate.

"You can stand in that aisle looking at all the washing machines and you can scan the entire row and narrow your options down from a dozen," says Sloboda, "down to the three or four that use the least amount of money."

## Taking charge of your appliances

Other especially useful parts of the label, he says, include the lower right corner – if you see an ENERGY STAR® logo it means the appliance will use less energy than one without. He also singles out the upper right corner that lists the manufacturer and model number, which you can use for more detailed comparisons with other models.

Sloboda also advises to pay attention to the age of your major energy-using appliances. In addition to dramatic energy efficiency advances over the past several years, motors start degrading in refrigerators and in heating and air conditioning systems. He says to consider upgrading air conditioners and heat pumps older than 10 years and refrigerators older than eight years.

**Pay attention to the age of your major energy-using appliances.**

The Department of Energy offers a handy way to check whether it's time to replace your refrigerator: visit the EnergyStar.gov website and in the search box, type "flip your fridge calculator." You'll find a link to a page where you can enter your type of refrigerator and its age to calculate how much you'd save buying a new one.

All these options mean more decisions for consumers. But help is on the way.

Sloboda says that electric co-ops are working with two national laboratories to study the most useful ways to connect appliances with the internet and with the utilities that provide the electricity. He says that over the next two years the study will report on how consumers can more easily make decisions on how to use appliances and even how to enhance cybersecurity for the growing number of internet-connected devices in the home.

Sloboda says the aim of the study is "to understand what the value of internet-connected devices is to the consumer. Then the manufacturers can start to build products that the consumer wants."

The study will also look for futuristic-sounding ways that co-op members can sign up for optional utility programs to help homeowners decide how they want to use electricity.

"The appliances would be networked together and they would talk to one another," says Sloboda. "In a very advanced scenario, the home could actually reconfigure the way appliances are being used depending on occupancy of the home at the moment and the weather conditions."

That setup could even let homeowners decide if they are a person who wants to save as much energy and money as possible or if they would rather the house be warmer or cooler.

"They won't have to figure out if they want to set the thermostat back," says Sloboda. "The homeowner would tell the system whether they wanted to maximize comfort or maximize savings, then the home would communicate to the utility. That way it won't be the utility controlling the system, it won't be the appliance manufacturer, but it will be the occupant of the house who is making the decisions."

*Paul Wesslund writes on cooperative issues for the National Rural Electric Cooperative Association, the Arlington, Va.-based service arm of the nation's 900-plus consumer-owned, not-for-profit electric cooperatives.*

Installing fiberglass batting should be done wearing gloves and a mask.

# WHAT'S IN YOUR ATTIC?

Diane Veto Parham
Contributing Writer

A peek in most attics will reveal the tried-and true materials commonly used to insulate homes: fiberglass, cellulose, mineral wool or spray-foam insulation. Regardless of type, the keys to effective insulation are the same – getting the right R-value for your home's insulation, proper installation and air sealing.

**Fiberglass:** This is the insulation that looks like cotton candy, commonly seen in long strips – called batts or rolls – between wall studs and ceiling joists. It might be pink, white or yellow, and it also comes in a loose-fill form, often blown into attic spaces. Made of tiny glass fibers, it can be uncom fortable to touch; wear gloves and a mask while handling it.

**Cellulose:** Grayish in color, cellulose is a loose-fill insulation that can be blown in between attic joists. It chemically is treated to be resistant to moisture, fire, insects and nesting rodents. Over time, it can settle, reducing its insulation value and requiring an additional layer to bring it back to the recommended R-value for your home.

**Mineral wool:** Like fiberglass, this comes in batts, rolls or loose-fill forms. It's made from natural and recycled materials and often appears greenish-brown in color.

**Spray-in foam:** More expensive than other types of insulation, spray-in foam is becoming a more common choice because it provides more insulation and better air sealing, Touchstone Energy®'s Alan Shedd says. Sprayed on the interior of your roof, it wraps the attic into your home's envelope; if your HVAC unit is in the attic, it's going to operate more efficiently in that more temperate environ ment. "It's more expensive than blowing in another six inches of fiberglass or cellulose, but it's certainly worth getting prices," Shedd says. "For new construction, it's a no-brainer."

Spray-in foam insulation is a no-brainer for new construction.

If you're climbing up to look at what you've got, be sure to protect yourself. Bring a flashlight, so you can check your insulation in every nook and cranny and also see where you are stepping. Only walk where you are sure of secure footing, so you don't drop through the ceiling below. Wear gloves, eye protection and a dust mask if you'll be handling any insulation. Limit your time up there if temperatures are very hot or cold.

# A Shopper's Guide to Heat Pumps

Baffled by the alphabet soup that greets you when you start looking at heat pumps? If an HVAC contractor starts spouting numbers for SEER, EER, HSPF and COP, just remember those terms are a handy shorthand for comparing the efficiency of one heat pump to another. A higher number indicates a more efficient system. That can save you money in energy costs over the life of the unit, but you may have to pay a little more for it up front.

**SEER:** Seasonal Energy Efficiency Ratio. This rates the cooling efficiency of an air-source heat pump. To earn ENERGY STAR certification, heat pumps must have a SEER of at least 15; mini-split SEER ratings can be in the 30s. You can buy less expensive, traditional models with a SEER of 13, the NRECA's Brian Sloboda says. "The good news is, if you have an older unit, it's probably below that, so the lowest amount you spend on a new unit will still save you money," he says.

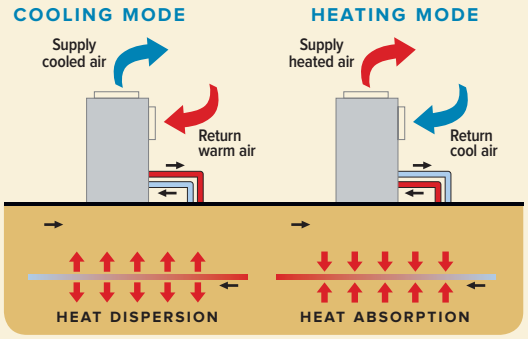
**EER:** Energy Efficiency Ratio. It's not tied to seasonal performance, but it is a measure of cooling performance. You'll find this on geothermal (ground-source) heat pumps, usually rated 18 and up.

**HSPF:** Heating Seasonal Performance Factor. The flip side of SEER, this rates an air-source heat pump's heating efficiency. Look for a rating of 8.2 or above for ENERGY STAR-certified models.

**COP:** Coefficient of Performance. If you're shopping for geothermal systems, watch for this measure of heating efficiency, and aim for a rating of 3.6 or higher for more efficient models.

## How ground-source heat pumps work

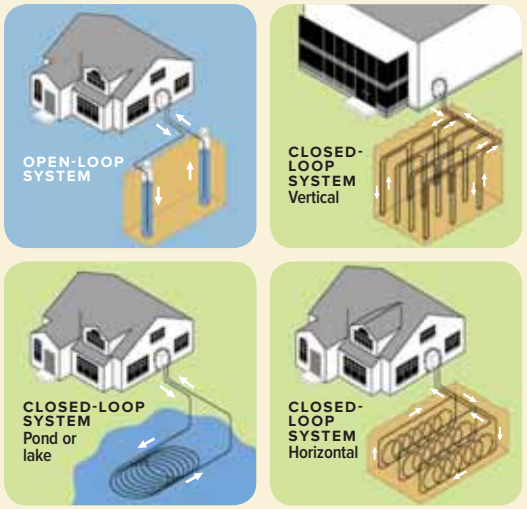
Geothermal heat pumps operate on the same heat-transfer principles seen in air-source heat pumps, but they use 25 to 50 percent less electricity than conventional HVAC systems.




SOURCE: WATERFURNACE

### TYPES OF GEOTHERMAL HEAT PUMP SYSTEMS

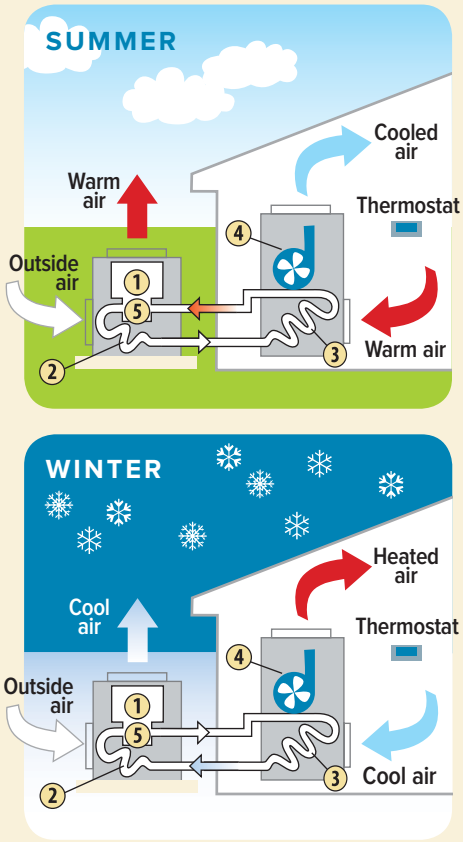
There are four basic configurations for geothermal heat pump ground loops. One is an "open-loop system," where ground water or well water is used. Three others are "closed-loop systems," where a water and antifreeze solution is continually moved through pipes.




SOURCE: U.S. DEPARTMENT OF ENERGY, OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY

## How air-source heat pumps work

By transferring heat between a house and outside air, these devices trim electricity use by as much as 30 to 40 percent in moderate climates.




1. **COMPRESSOR**
   Increases refrigerant pressure to accept the maximum heat from the air.
2. **OUTSIDE COIL**
   Refrigerant moves through coils, absorbing heat from the outside air in winter or releasing heat to the outside air in summer.
3. **INSIDE COIL**
   Refrigerant moves through coils, absorbing heat from the inside air in summer or releasing heat to the inside air in winter.
4. **AIR HANDLER**
   Fan blows air over the inside coil and into a home's ducts.
5. **REVERSING VALVE**
   Switches the direction of the refrigerant flow, changing the heat pump's output to hot or cold air (controlled by thermostat).

SOURCE: NRECA

**April 25-29**
Black Hills Film Festival, Hill City, SD, 605-574-9454

**April 28-29**
Bike Show, Ramkota Convention Center, Aberdeen, SD, 605-290-0908

**May 4-6**
Naja Shrine Circus, Rapid City, SD, 605-342-3402

**May 5**
Rummage Day, Groton, SD, Contact April Abeln at 605-397-8422, Facebook: Groton SD Lions Club

**May 10**
Chris Young, Rapid City, SD, 605-394-4115

**May 12**
Art and Wine Festival, Rapid City, SD, 605-716-7979

**May 13**
1880 Train Mother's Day Express, Hill City, SD, 605-574-2222

**May 18**
Turkey Races, Huron, SD, 605-352-0000

**May 18-19**
Sioux Empire Film Festival, Sioux Falls, SD, 605-367-6000

**May 18-20**
State Parks Open House and Free Fishing Weekend, Pierre, SD, 605-773-3391

**May 18-20**
Tesla Road Trip Rally, Custer, SD, 605-673-2244

**May 19-20**
Black Hills Mud Days, Lead, SD, 605-569-2871

**May 5, 19; June 2, 16; July 7, 21; Aug. 25; and Sept. 8**
Lawn Mower (Points) Races, Pukwana, SD, 605-680-1718 or 605-682-9781

Photo courtesy: **travelsd.com**

**May 19-20, May 26-27**
Northeast Area Pari-Mutuel Horse Racing, Aberdeen, SD, 605-715-9580

**May 25-September 30**
Legends in Light® Laser Light Show at Crazy Horse Memorial, Crazy Horse, SD, 605-673-4681

**May 25-27**
South Dakota Kayak Challenge, Yankton, SD, 605-864-9011

**May 26-27**
Annual SDRA Foothills Rodeo, Wessington Springs, SD, 605-770-4370

**June 1-3**
Fort Sisseton Historical Festival, Lake City, SD, 605-448-5474

**June 1-3**
Annual Black Hills Quilt Show & Sale, Rapid City, SD, 605-394-4115

**June 1-3**
Wheel Jam, Huron, SD, 605-353-7340

**June 1-3**
Fish Days, Lake Andes, SD, 605-487-7694

**June 2**
Annual Casey Tibbs Match of Champions, Fort Pierre, SD, 605-494-1094

**June 2-3**
Spring Volksmarch at Crazy Horse Memorial, Crazy Horse, SD, 605-673-4681

**June 7-9**
Senior Games, Sioux Falls, SD, Contact Nicole Tietgen at 605-665-8222

**June 15-16**
Czech Days, Tabor, SD, www.taborczechdays.com, taborczechdays@yahoo.com

**July 7**
Hedahls Auto Value Car Show, Hav-A-Rest Campground, Redfield, SD, 605-380-9985

**July 10-15**
4th Annual 3 Wheeler Rally, Deadwood, SD, 605-717-7174,

**July 22**
Summer Fest/Car Show, City Park, Groton, SD, Contact Topper Tastad at 605-397-7337, Facebook: Groton SD Lions Club

**July 28**
Make-A-Wish South Dakota Poker Run, On the Road to Wishes, Aberdeen, SD, Contact Lorren and Jan Weber at 605-225-7262, www.facebook.com/bieglers

**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.**