



A Touchstone Energy® Cooperative 

1511 14,000 Road, P.O. Box 368, Altamont, KS 67330

866-784-5500

www.twinvalleyelectric.coop

**TWIN VALLEY
ELECTRIC CO-OP**

NEWS

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1511 14,000 Road
P.O. Box 368
Altamont, KS 67330
866-784-5500
www.twinvalleyelectric.coop

FROM THE MANAGER

New Ways to Use Electricity

If you listen carefully, you can hear a quiet transformation happening. Electric appliances and equipment are becoming more popular than ever among consumers.

Advancements in technology and battery power coupled with decreasing costs are winning over consumers looking for comparable utility and versatility. A bonus is that use of electric equipment is quieter and better for the environment.

Inside the home, consumers and homebuilders alike are turning to electric appliances to increase energy efficiency and savings. Whether choosing between a traditional electric stove or an induction stove top, both are significantly more efficient than a gas oven. That's because conventional residential cooking tops typically use gas or resistance heating elements to transfer energy with efficiencies of approximately 32% and 75% respectively (according to Energy Star®). Electric induction stoves, which cook food without any flame, will reduce indoor air pollution and can bring water to a boil about twice as fast as a gas stove. Robotic vacuums are also gaining in popularity. Fortune Business Insights attributes the growth and popularity of robotic vacuums like Roomba to a larger market trend of smart home technology and automa-

tion (think Alexa directing a Roomba to vacuum).

More tools and equipment with small gas-powered motors are being replaced with electric ones that include plug-in batteries. In the past few years, technology in battery storage has advanced significantly. Hand-held tools with plug-in batteries can hold a charge longer and offer the user the same versatility and similar functionality as gas-powered tools. For DIYers and those in the building trades, national brands such as Makita, Ryobi and Milwaukee offer electric versions of their most popular products like drills, saws, sanders and other tools. In addition to standard offerings, consumers can now purchase a wider array of specialty tools that plug-in such as power inverters, air inflators and battery chargers.

Keith Dennis, an energy industry expert and president of the Beneficial Electrification League notes that, "A few years back, the list of new electric product categories that were making their way to the market was limited — electric scooters, lawn mowers, leaf blowers and vehicles."

Today, the number of electric products available is exploding.



Angie Erickson

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Add Awnings for Energy Savings BY JIM DULLEY

Dear Jim: We need to block the intense heat of the sun coming through my windows and door glass. We like awnings but are not sure what is the best size or material. What do you recommend?
— William B.

DEAR WILLIAM: Window and door awnings can be very effective at reducing heat transmission into your house. If less heat comes in, your air conditioner needs to run less, especially during the peak cooling times of the day. This not only lowers your monthly electric bills, but also helps reduce peak electricity demand, which helps your electric cooperative keep costs down. This is a win-win for everyone.

In addition to the energy savings and improved comfort, adding window awnings reduces the fading of curtains, carpeting and furniture. Most fading is from the direct UV rays of the sun through windows. An efficient window with low-e (low emissivity) glass does block some UV rays, but plain window glass lets almost all the UV rays through.

Research has shown the summertime electricity savings by adding properly sized and positioned awnings typically ranges from 20% to 25% and the room temperature drops 5 to 10 degrees. Awnings are effective in all climates. The sun is hottest from the south but higher in the sky so a large roof overhang may provide adequate shading. The sun is less intense from the east and west, but lower in the sky so it shines farther into your house.

The choice of awning sizes, designs and material is practically endless making your selection process difficult. For awnings to be most effective, you will likely install different awning designs and sizes depending on the orientation of

the windows to the sun. Those on the east and west sides will have to project out farther because the sun is lower in the sky.

You must first decide between fixed or adjustable awning designs for each side (except the north) of your house. Fixed awnings are less expensive and durable because there are no moving parts. If you are mostly concerned about the south-facing windows, fixed ones are effective with the sun located high in the sky around noon. Select awnings are made with a powder-coated square or rectangular tubular aluminum frame.

When selecting fabric awnings, pick colors and patterns that complement your window and overall house size. Awnings with narrow stripes may look busy on a large house and ones with wide stripes would not be flattering to a small ranch-style house. It is aesthetically wise to use the same pattern for the entire house.

If you want awnings that are waterproof in addition to just blocking the sun, choose vinyl or polyester composite fabrics. They stay tightly stretched over their lifetime for a pleasing appearance. Acrylic fabrics repel most of the rain but are not waterproof. Acrylic fabric has some of the most brilliant colors. It also is good for humid and/or sunny climates because it resists mildew and is less damaged by the sun's UV rays.

Adjustable awnings can be tilted at different angles throughout the summer or the rest of the year as the position of the sun changes. This allows you to install the same awning style on many windows to provide a consistent exterior appearance while still varying the amount of shading for each. Look for strong aluminum frame designs that lock well into the various positions. Flimsy



Fabric window awnings can be retracted up against the wall to expose the window glass when more light is needed indoors.

ones will rattle during storms and can be annoying at night.

Some adjustable awnings have a full range of motion. They can be raised to provide a complete view from the window and can be lowered down almost flat against the window. This can provide some protection to your windows during storms or for extra privacy. Aluminum is often used instead of fabric for these designs because of its durability and resistance to damage from the sun.

The typical Venetian-style awning with no sides works particularly well for most windows and is the least expensive design. Awnings with sides can be effective for shading south-facing windows. As the sun moves from east to west an hour or two either side of noon, it is still intense and can shine in on an angle past a Venetian awning with no sides.

As a general sizing rule of thumb, the lower edge of the awning should be at half the window height and six inches wider on each side. To be more specific for each window, the awning projection depends on the window height and the sun's height in sky. If you are a trigonometry whiz, use sun angle charts to determine the sizes needed. For most of us, just hold various-length sticks at the top of the window and tilt them down at various angle. Observe their shadows on the window to determine required size and angle.

Send inquiries to **JAMES DULLEY, Kansas Country Living**, 6906 Royalgreen Drive, Cincinnati, OH 45244 or visit www.dulley.com.

THE FOLLOWING COMPANIES OFFER WINDOW AWNINGS:

▶ **AWNTECH**

800-200-5997, www.awntech.com

▶ **CRAFT-BILT**

800-422-8577, www.craftbilt.com

▶ **EASTERN AWNING**

800-445-4142, www.easternawning.com

▶ **GENERAL AWNINGS**

888-330-3115, www.generalawnings.com

BEFORE YOU JUMP IN:

Consider Potential Electrical Hazards

If you own a pool or hot tub, you know there are several steps required to keep it clean and well maintained. One aspect of owning a hot tub or pool that is not often top of mind for homeowners is the electrical system, which can pose a significant or even deadly hazard.

Since pool and hot tub areas mean wet skin and wet surfaces, the chance of electrocution increases when electricity is present.

The U.S. Consumer Product Safety Commission (CPSC) points out that electricity around pools, hot tubs and spas can be found in underwater lights, electric pool equipment (e.g., pumps, filters, vacuum), extension and power cords, electrical outlets or switches, electrical devices such as TVs and overhead power lines.

To keep swimmers and hot tubbers as safe as possible, be sure to have the electrical system inspected, repaired and upgraded to local and National Electrical Code by a licensed contractor. Also, do not set up a pool (temporary or permanent) where power lines are overhead or within 25 feet of water.

Electrical Safety Around Water Also Includes:

- ▶ Making sure ground-fault circuit interrupters (GFCIs) are installed on:
 - ▶ Underwater lighting circuits operating at 15 volts or more.
 - ▶ All electrical equipment, including 120- and 240-volt heaters close to the pool.
 - ▶ All outdoor receptacles (outlets) within 20 feet of the water's edge.
- ▶ Testing permanently installed GFCIs monthly. Test those that are portable or connected to a cord before each use.
- ▶ Looking for signs of mold or other growth on the inside lenses of lights, which can indicate water leakage.
- ▶ Ensuring that the power switch and GFCI for underwater lights are clearly

marked and easily accessible in an emergency.

- ▶ Labeling power switches for pool, hot tub and spa equipment, as well as lighting.
- ▶ Using battery-operated electronics whenever possible.
- ▶ Ensuring that hands and feet are dry while using electrical devices.
- ▶ Keeping long-handled tools and poles away from nearby power lines, including the drop-down lines to your home.
- ▶ Holding pool skimmers and other long-handled tools as low as possible to the ground and carrying them horizontally.
- ▶ Keeping electrical cords, wires and devices out of reach and at least 5 feet from the water.
- ▶ Unplugging a device that has fallen into the water before touching it. Even submersible pumps designed to run under water may not be safe to use when someone is in the water.

Electrical Shock Drowning — What to Look For

You may hear complaints of tingling or other odd sensations. Swimmers may feel a tingling sensation, experience muscle cramps or may not be able to move. You may see panicked behavior by others or a motionless swimmer in the water. You might also see underwater lights that are not working properly.

If you think you are being shocked while in the water, move away from the source of the shock and get out of the water. If possible, exit without using a metal ladder; touching metal may increase the risk of shock.

If you think someone in the water is experiencing an electrical shock, immediately turn off all power. If the power is not turned off, rescuers can also be shocked or electrocuted. After the power is disconnected, call 911, or have someone else make the call.

SOURCE: CPSC

BEFORE JUMPING IN

Know These 6 Pool Safety Tips

Keep these electrical safety tips in mind before and during swimming season. These safety tips also apply to hot tubs.



Keep anything that is plugged in at least 5 feet from the pool. The farther, the better.

Have a licensed contractor inspect the pool/hot tub wiring to ensure it meets code requirements.



Keep pool skimmers and other far-reaching tools more than 10 feet away from overhead power lines.

Make sure all outdoor outlets are GFCI protected. Test them once a month.



Do not touch electrical devices when you are wet or in contact with wet surfaces.

Know where electrical switches and circuit breakers are and how to operate them.



Teach these tips to kids and teens, especially when it comes to using a cellphone that is plugged into an outlet.

SOURCE: SAFE ELECTRICITY

5 Tips for Hiring an Electrician

A licensed electrician can help with a variety of home projects from lighting upgrades to full renovations. Keep the following tips in mind if you're looking to hire an electrician.



- 1 Hire a licensed, qualified electrician for the job.** Look for a master electrician to manage the project. Master electricians have the most experience and will often oversee the work of a journey-level electrician or apprentice.
- 2 Make sure the electrician is insured.** Seasoned electricians know the importance of protecting themselves in case of an accident.
- 3 Read all the reviews.** Hire an electrician that has several positive reviews — not just one or two. Read reviews on different sites, like Nextdoor, Yelp and HomeAdvisor, and consider asking your neighbors for recommendations.
- 4 Determine your budget.** Get two quotes. Knowing your budget upfront helps move the process along. Prices can vary greatly, so get at least two quotes.
- 5 Talk timelines.** Some electricians accidentally overbook projects. If your job is time-sensitive, convey that early on and discuss a realistic timeline with the electrician.

New Ways to Use Electricity Continued from page 12A ▶

“There are electric bikes, school buses, pressure washers, utility terrain vehicles, backhoes — even airplanes and boats,” says Dennis. “With the expansion of batteries and advancements in technology, we are seeing almost anything that burns gasoline or diesel as having an electric replacement available on the market.”

A case in point is the increased use of electric-powered tools and equipment, with more national brands offering a wider selection including lawn mowers, leaf blowers, string trimmers and snow blowers. The quality of zero- or low-emissions lawn equipment is also improving.

Electric equipment also requires less maintenance, and often the biggest task is keeping them charged. In addition,

electric equipment is quieter so if you want to listen to music or your favorite podcast while performing outdoor work, you can; something not possible with gas-powered equipment. On the horizon, autonomous lawn mowers (similar to the robotic vacuum cleaners) will be seen dotting outdoor spaces.

Another benefit of using electric appliances or equipment is that by virtue of being plugged into the grid, the environmental performance of electric devices improves over time. In essence, electricity is becoming cleaner through increased renewable energy generation, so equipment that uses electricity will have a diminishing environmental impact over time. Quite a hat trick — improving efficiency, quality of life and helping the environment.

ONE MORE CAST could be deadly

Don't become part of a tragic fishing story.
Keep an eye on weather conditions and know when to call it a day.

SEEK SHELTER
If you see or hear signs of weather rolling in, stop fishing and retreat to a four-sided building or hard-top car. If you ignore the signs and keep fishing, it could cost you your life.



LIGHTNING FACTS 2006-2020

Two-thirds of lightning deaths occurred during outdoor activities.



WAIT 30 MINUTES
Wait 30 minutes after you see or hear lightning before heading back outside.



Of those deaths, **33%** happened during water-related activities.



REMEMBER
Always look up for overhead power lines before casting.



Fishing accounted for most, **or 44%**, of those water-related activities.

