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November 2023

WIND ENERGY IS SOARING

Wind is generating more electricity from larger turbines

Inside:

• **Mini-split Systems are Gaining Traction** • **Energy-saving Gadgets and Gizmos** • **Consumer Guide to Stovetops**

How a Safe Step Walk-In Tub can change your life

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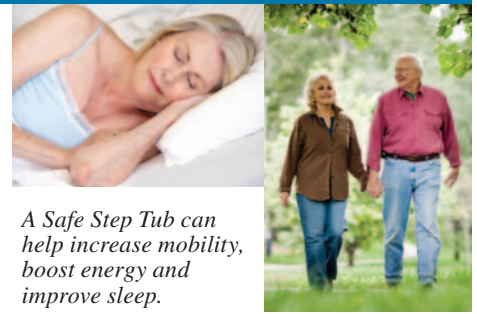
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A ductless air conditioner offers a variety of options for heating and cooling, particularly for older homes and buildings. Writer Leslie Tate explains why installing a mini-split system can provide several benefits, including the capability to regulate temperatures in specific rooms or areas of the home.

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In the U.S., wind currently generates twice the amount of electricity it did five years ago. Photograph by Wayne Price



Wayne Price

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Be Prepared For An Electrical Outage

When winter temperatures drop and storms hit, it can be challenging to stay safe and warm. Winter storm severity varies depending on where you live, but nearly all of us are affected by extreme winter storms at some point.

Heavy snow and ice can lead to downed power lines, leaving you without power. During extremely low temperatures, this can be dangerous. During a power outage, rural electric utility crews will continue to work as quickly and safely as possible to restore power, but there are a few things you can do to prepare yourself.

Listen to weather forecasts every day so you'll know when high winds or heavy snows or ice are on the way. That kind of winter weather is most likely to affect power lines.

Prepare an outage kit that contains: a battery-powered radio, fresh batteries, a flashlight, candles, matches, a wind-up clock, bottled water, and paper plates and plastic utensils.

Keep a stock of canned food in your cupboard, along with a manual can opener. Consider buying a camp stove and fuel that you can use (outdoors only, please) if you can't cook on your electric stove.

Tape your rural electric utility's outage report phone number on your refrigerator so it will be handy if you must report an outage. Don't expect your neighbors to call in the outage.

Pile a few extra blankets and sweaters together so you can find them easily if the heat goes off. Be sure to dress in layers to stay warm.

Teach children to stay away from fallen or sagging power lines. They could be energized and dangerous, even if the power is out.

Winterize your house to help keep warm air in by insulating walls and attics, caulking and weather-stripping doors and windows, and installing storm windows or covering windows with plastic.

Clear leaves and debris from rain gutters; repair roof leaks and cut away tree branches that could fall on a house or other structure during a storm.

Insulate pipes with insulation or newspapers and plastic and allow faucets to drip a little during cold weather to avoid freezing.

It's a good idea to keep fire extinguishers on hand, and make sure everyone in your house knows how to use them. House fires pose an additional risk, as more people turn to alternate heating sources without taking the necessary safety precautions.

If the electricity goes out, rest assured that your rural electric utility is working to get the lights back on as quickly as possible. But in case it takes a while, it is better to be prepared than sit in the dark.



Curtis Kayton

Curtis Kayton is the General Manager of Chimney Rock Public Power District, headquartered in Bayard, Nebraska

Trust Public Power For An Honest Answer

I was at a conference recently where the speaker shared his observations of the energy transition we are told is happening. He contrasted the increasing demand for fossil fuels and electric reliability with the performance of renewable electric generation technologies. One technology aligns with the laws of physics, the other does not. He concluded that if we as industry professionals are going to be honest with ourselves and our ratepayers, we can say that in their current form, renewable energy sources will never be a meaningful share of the nation's energy mix. Notice he kept the door open for improvement but was very honest and very accurately stating that "in their current form" renewables will never be meaningful.

This honest truth was reinforced earlier this summer on June 6, 2023, when the power plant fleet supplying the Midwest had 60,000 megawatts of wind capacity available, but only 300 MWs were running. I'll say that again: 60,000 were available and 300 were running. That is certainly not meaningful. This is not an isolated occurrence; it happens more than ever makes the news. Winter storm Uri in February 2021, and Elliot in December 2022 are only two examples of near grid failures that have occurred in the recent past. Why? Overzealous ambitions to transition from fossil-fueled generation sources to technologies that have been given the same level playing field to perform but haven't.

So how can you know if what you hear is honest? I'll give you a place to start. Call your local public power district and talk to someone informed on the issue. Nebraska's public power model is the only one in the nation where YOU, the public, own every inch of the high-voltage electric infrastructure. A fraction of the state's population has the privilege to work in public power. The dedication of the governing boards and employees operate this public power system for the good of all Nebraskans. Our track record consistently delivers less than the nation's average cost and often leads the nation in reliability.

I say this to assure you that we know what we're doing, and you can ask a question and expect honesty. We work for you; we have no reason to lie. We don't want to transition to a new technology that will cost you more and make your service less reliable. You see us in the store, at ball games, at church, and in communities across Nebraska. You can trust your public power district for an honest answer.

You will know a generation technology is real when you see public power adopting it, not when forced by policy and law. Until then, we will keep an open mind but will not abandon what has made electricity affordable and reliable for so long. If something doesn't work, we will tell you. If it does, we will also tell you that and more importantly why.

That is how honesty works in Nebraska's public power industry.

WIND ENERGY IS SOARING

Wind is generating more electricity from larger turbines — here's what's next.

by Paul Wesslund

Wind energy is big and getting bigger, in more ways than one.

In the U.S., wind currently generates twice the amount of electricity it did five years ago and provides 10% of the nation's electricity—a share expected to grow to more than 25% by 2050.

The basics behind wind power technology is a tall pole with rotor blades at the top. If you've taken a road trip across the Midwest, you've likely seen huge fields of those turbines, with white rotor blades spinning lazily around. But they're actually not lazy at all, and that's another way wind energy is big—in physical size.

Bigger turbines make more electricity

Wind turbine blades seem to circle slowly due to an optical illusion resulting from how big they are. The tips of those rotors are likely to be moving at more than 150 miles per hour.

There's a reason for that size. Wind turbines are getting bigger and taller to capture more wind high in the air. The average wind turbine height has increased from about 190 feet in 2000 to nearly 300 feet today—as tall as the Statue of Liberty. During that time, the size of the rotor blades has doubled, making a circle more than 400 feet in diameter. That size

Above: In 2021, 99 turbines were constructed for the Milligan 1 Wind Farm Project owned by EDF Renewables located in Saline County.



Left: The 44-turbine Steele Flats Wind Farm in Jefferson and Gage counties began commercial operation in 2013. Photographs by Wayne Price

growth has tripled the amount of electricity a wind turbine can produce, lowering the cost of wind power.

One wind turbine can generate enough electricity to power about 900 homes, and they're being installed at a rate of about 3,000 a year. Today, there are more than 72,000 turbines in the U.S., primarily located in the middle part of the country. But that's about to change.

Federal and state governments are encouraging developers to build wind turbines out in the ocean, where winds are more constant and the rotors could be even larger. Sixteen projects have been proposed and one estimate shows there's enough potential for offshore wind to supply nearly all our electricity. Offshore wind turbines are generally even larger than those used on land.

Protecting birds from wind turbines

Bigger sizes can cause problems though, like transporting rotor blades that average more than 100 feet long. Delivering those monsters can cost more than \$30,000 in finding the right truck for the oversized load, planning the route, obtaining permits, checking

Continued on Page 8

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clearances and recruiting escort vehicles. Researchers are already working on those problems. One solution is flexible blades that could be carried on three train cars. The blades could bend to allow the train to maneuver around curves.

As the wind industry has evolved, attention has been focused on bird deaths—as many as a million birds a year fly into spinning rotors. This poses a dilemma for wildlife and nature groups, who are generally supportive of renewable energy. The National Audubon Society, for example, supports wind power as a way to reduce greenhouse gas emissions, but urges careful planning to locate wind farms in ways that minimize risk to wildlife.

Besides large onshore and offshore wind farms, wind turbines can be used as a distributed energy resource. With support from the

U.S. Department of Energy, there have been significant innovations in smaller-scale wind turbines to integrate some of the improvements seen in larger models, including longer blades to capture more wind and advanced composite materials. Smaller turbines can even be used to help power homes, farms, schools and businesses.

Across the U.S., several electric cooperatives and other rural utilities have deployed one or more large-scale wind turbines in their local service territories as a local utility-scale resource to supplement their wholesale power supply. These kinds of local resources can help boost resiliency, hedge or reduce power supply costs, and support local economic development.

We'll have to watch as wind energy and the technologies that power it evolve. For wind power, there will be opportunities for growth at both smaller and larger scales, as well as on land and



Wind is used to produce electricity by converting the kinetic energy of air in motion into electricity. The wind rotates the rotor blades, which convert kinetic energy into rotational energy. This rotational energy is transferred by a shaft to the generator, producing electrical energy. Photograph by Wayne Price

WIND FARMS IN NEBRASKA

Wind Facility	MW	Turbines	County	Wind Facility	MW	Turbines	County
Salt Valley	1.32	2	Lancaster	Cottonwood Wind Project	89.7	52	Webster
Ainsworth Wind Energy	59.4	36	Brown	Creston Ridge II Wind	6.9	3	Platte
Elkhorn Ridge Wind	81	27	Knox	Seward Wind	1.7	1	Seward
Flat Water Wind Farm	60	40	Richardson	Hastings Wind Farm	1.7	1	Adams
Laredo Ridge Wind Farm	80	54	Boone	Kimball Wind Project	30	12	Kimball
Springview II	3	2	Keya Paha	Rattlesnake Creek Wind	320	101	Dixon
Petersburg	40.5	27	Boone	Perennial Wind Farm	6.9	3	Fillmore
Crofton Bluffs Wind Farm	40.6	22	Knox	Prairie Wind	2.5	1	Polk
Broken Bow Wind	77.6	50	Custer	Upstream Wind Energy	202.5	81	Antelope
Steele Flats Wind	75	44	Gage/Jefferson	Sholes Wind Energy Center	160	71	Wayne
Broken Bow Wind II	75	43	Custer	Cuming County Wind	2.5	1	Cuming
Prairie Breeze I	200.6	118	Antelope	Plum Creek Wind	230	82	Wayne
Valentine Wind	1.85	1	Cherry	Milligan 1 Wind Farm	300	99	Saline
Prairie Breeze II	73.39	41	Antelope	Little Blue Wind Farm	250	100	Webster/Franklin
Creston Ridge	6.8	4	Platte	Haystack Wind Farm	255	51	Wayne
Prairie Breeze III	35.8	20	Antelope	Franklin County	5.64	2	Franklin
Grand Prairie Wind	400	200	Holt	Thunderhead Wind	300	108	Antelope/Holt/Wheeler

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Larry's Safety Lesson

Beware of Damaged Power Equipment

By **Larry Oetken**



The transmission and distribution of power is safe and reliable much of the time.

However, storms, critters and car accidents can damage energized utility equipment such as power lines, poles and padmount transformers (green boxes). Not only can this cause minor inconveniences, like service interruptions and road closures, it can also create life-threatening situations when energy invisibly spreads like ripples on a pond.

Here is what can occur when utility equipment is damaged:

Step potential happens when a person walks from one voltage "ripple" to another and their feet experience a difference in voltage.

Touch potential happens when someone touches something at one voltage and steps on or contacts something else at a different voltage.

Both types of potential can cause serious internal and external injuries and death, since electric current enters the body at one point and exits at another.

Larry Oetken is the Job Training & Safety Coordinator for the Nebraska Rural Electric Association.

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With the holidays approaching, shoppers will soon be eyeing an abundance of devices and gadgets to gift friends and loved ones—or to buy for themselves.

When it comes to cool new technology, many consumers are turning to smart home devices that offer convenience as well as other benefits, including one often-overlooked perk: energy savings. With so many options available, choosing the best tech for your needs can be overwhelming.

Here are four tips to help you determine the right smart home technologies for your home.

1. Ask yourself how smart you want your home to be.

Smart plugs, energy-use apps and home monitors are cool devices that can help you save energy. But to make the most of them, it helps to understand how they work. Before you invest your time and money, ask yourself, how much technology do you want? What are your habits when it comes to setting up and using the latest development? If you like to tinker, an energy app on your phone could be fun and help you save money. But as electronics get smarter, even non-tech savvy people are finding them easier to use.



Energy-Saving Gadgets and Gizmos

Four tips for getting the
right smart technologies
for your home

by Paul Wesslund

2. Determine your energy-saving goals.

A home energy monitor is one way to save on electricity, and the range of choices means you'll need to ask how much you're willing to pay and if it's worthwhile. One study found that spending about \$1,800 on a full home, commercially installed energy monitor could save about 16% on electric bills and pay for itself in 10-15 years. Much less ambitious approaches involve downloading an app on your phone so you can keep track of your electricity use, and even turn smart appliances on and off when you're away.

3. Get the most bang for your buck.

The most frequently-recommended energy saving device is a smart thermostat. And that makes sense, because the thermostat controls your heating and cooling, which account for the most energy consumption in your home. Smart thermostats can do things like program an energy schedule to adjust the heating or cooling when you're sleeping or out of the house during the day. Additional smart thermostat features include detecting movement in a room to adjust energy use, learning your daily habits, responding to voice commands and tracking the weather.

Renters might even be able to convince a landlord to pay for an energy-saving smart thermostat.

If you have a heat pump, you could benefit by contacting your public power district or electric co-op before using a smart thermostat. Lowering the temperature too much when you're not home could result in switching to more expensive auxiliary heat to bring the house back to room temperature.

Other devices that can produce energy savings for minimal cost and effort include smart light bulbs, outlets and charging stations.

4. Do a simple energy checkup.

Take a walk through your home with the intention of identifying everything that uses electricity. You'll likely notice a lot of functions that could be managed with smart devices. If your phone sits plugged in long after it's charged, smart power strips and smart outlets can stop the electricity use when the battery is at 100%. Smart light bulbs can be controlled with an app on your phone, saving energy and giving your home that lived-in look when you're away. Ceiling fans can now adjust themselves for the best air flow depending on the temperature. Motion detectors can turn indoor lights on and off when you enter or leave a room, and even solar-powered outdoor lights can detect when you're approaching and light the way.

With just a little planning, you can make sure this gift-giving season is merry, bright—and smart.

5 WAYS TO FIGHT THE WINTER CHILL AND SAVE ENERGY

We all have our favorite season. Some people love crisp, cool weather and bundling up under a favorite blanket, while others prefer the warm temperatures summer brings and all fun outdoor activities that go with it.

But there's one thing we can all agree on: high winter bills are never fun. Your local rural electric utility is here to help you find ways to manage your home energy use and keep winter bills in check.

Winter months often bring some of the highest energy bills of the year. By being proactive about saving energy, you can increase the comfort of your home and reduce monthly bills.

Here are five tips to help increase your home's energy efficiency this winter:

1 MIND THE THERMOSTAT

This is one of the easiest ways to manage your home energy use. We recommend setting your thermostat to 68 degrees (or lower) when you're home. When you're sleeping or away for an extended period of time, try setting it between 58 and 62 degrees; there's no need to heat your home when you're away or sleeping and less active.

2 BUTTON UP YOUR HOME

The Department of Energy estimates that air leaks account for 24% to 40% of the energy used for heating and cooling a home. Caulking and weather stripping around windows and doors is another simple, cost-effective way to increase comfort and save energy. If you can feel drafts while standing near a window or door, it likely needs to be sealed.

3 USE WINDOW COVERINGS WISELY

Open blinds, drapes or other window coverings during the day to allow natural sunlight in to warm your home. Close them at night to keep the cold, drafty air out. If you feel cold air around windows, consider hanging curtains or drapes in a thicker material; heavier window coverings can make a significant difference in blocking cold outdoor air.

4 SELECT EFFICIENT APPLIANCES

When combined, appliances and electronics account for a significant chunk of our home energy use, so assess how efficiently you're using them. For example, if you're running the dishwasher or clothes washer, only wash full loads. Look for electronic devices that consume energy even when they're not in use, like phone chargers or game consoles. Every little bit helps, so unplug them to save energy.

5 THINK OUTSIDE THE BOX

If you're still feeling chilly at home, think of other ways to warm up—beyond dialing up the thermostat. Add layers of clothing, wear thick socks and bundle up under blankets. You can even add layers to your home! If you have hard-surface flooring, consider purchasing an area rug to block cold air that leaks in through the floor.



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Together with your local public power utility

By Leslie Tate

Mini-split Systems are Gaining Traction

A ductless air conditioner, also referred to as a mini-split system or air source heat pump, offers a variety of options for heating and cooling, particularly for older homes and buildings. Several years ago, mini-split models were thought to be inefficient for colder climates, but these systems have made great strides, making them a more viable option for most U.S. regions.

Installing a mini-split system can provide several benefits, but the capability to regulate temperatures in specific rooms or areas of the home is the most attractive feature.

An indoor air-handling unit (evaporator) and an outdoor compressor/condenser make up the two major components of a mini-split system. In many ways, mini-split air conditioners operate like conventional air conditioning systems. In cooling mode, the system transfers heat from inside the home to the outside. With a central air system, cold air is blasted throughout all the ducts in the home from a single air handler, such as a large fan in an attic or basement. Because a mini-split can blow air from up to six independent air handlers, it can regulate temperatures for different rooms or areas inside the home.

Mini-splits are a viable alternative to duct systems for home additions or for homes where a duct system may not be practical. When a duct system is too expensive to install, a mini-split system can efficiently heat and cool a space while keeping installation costs down.

A mini-split can also settle thermostat disagreements in a home or business for those with different comfort preferences. For example, to give teachers control over the temperature in their spaces, mini-split systems are frequently installed in classrooms.

Compared to conventional HVAC systems, mini splits



can significantly reduce energy consumption and have the potential to save up to 30% on cooling costs and 50% on heating costs. Additionally, inverter technology, which enables variable-speed operation, is frequently included with mini-split systems. This results in increased energy efficiency and a cheaper cost of operation as the system adjusts its output based on the actual heating or cooling demand.

In addition to greater control over heating and cooling, mini-splits can also be managed with a mobile app, smart thermostat or remote control. They provide better air quality, and homeowners can easily replace the



Above: Mini-splits are a viable alternative to duct systems for home additions or for homes where a duct system may not be practical. Photograph by Gary Cziko

Left: A qualified contractor can offer advice on the size of the system and the number of units you will need. Photograph provided by Phyxter Home Services

Below: Installing a mini-split system can provide several benefits, but the capability to regulate temperatures in specific rooms or areas of the home is the most attractive feature. Photograph by Dennis Schroeder, NREL



filters themselves, saving money on the pricey duct cleanings needed for conventional air conditioners. Reheat dehumidification is a common feature of mini-split systems to maintain a steady room temperature while lowering humidity.

A few factors should be considered before installing a mini-split system. Determining the right size and quantity of units is a key first step. The location of the system is another important factor to consider. A mini-split should be installed where it will help maximize air distribution throughout the home. A qualified contractor can offer advice on these factors.

Additionally, your home should be properly sealed in order for the mini-split system to operate efficiently.

For many homeowners, a mini-split ductless heating and cooling system can be a fantastic alternative for heating and cooling. Contact your public power district or electric cooperative if you have questions about mini-split systems.

While you're busy in the kitchen preparing your family's holiday feast, be thinking about ways to keep your family safe and your energy bills low.

According to the National Fire Protection Agency, cooking equipment is the cause of approximately 40% of home structure fires.

Always know the location of a working fire extinguisher and know how to operate it. Cooking is also a great area to save energy. Keep these energy-efficient tips in mind while preparing your holiday meals this year:

- Think small. Use a smaller appliance, such as a toaster oven or microwave, whenever possible. Efficient microwave ovens use around 50% less energy than conventional ovens.
- Turn the oven or stove burners off a few minutes before your food is ready—they will remain hot enough to finish cooking the food.
- Don't preheat the oven unless you are baking, or a recipe requires it.
- Bake with ceramic or glass pots and pans— this will allow you to lower the oven temperature by about 25 degrees Fahrenheit.
- Don't peek. Opening the oven door can lower the internal temperature by as much as 25%.
- Don't cover oven racks with foil. This reduces heat flow and increases cooking time.



Smart microwaves like the GE model shown here include barcode scanning technology to allow product-specific cooking instructions to be sent to the appliance. Photograph provided by GE

- Make sure your pan covers the coil of your range. If you can see coil peeping out from the sides of your pan, you need a bigger pan (or a smaller burner).
 - Put a lid on it. Cover pans while cooking to prevent heat loss.
 - Plan ahead. Defrosting food in the microwave may be convenient, but it costs nothing more to defrost in the refrigerator.
- These steps are easy to follow and come at no extra cost. Making a habit out of them will save you both energy in the kitchen and money on your electric bill.

Murphy



When Should You Replace Your Water Heater?



Photograph provided by Rheem

When planning out home projects and brainstorming items that you'd like to upgrade in your home, a new water heater likely isn't at the top of your list. Despite the fact that we use it every day for many purposes, your water heater is out of sight and out of mind – that is, until it stops working. Often, water heater replacement can be unplanned or happen out of necessity when your existing water heater stops working properly, whether due to age or other factors. To ensure you make the best decision for your home and save the most money, it's important to understand your options ahead of time so that you don't land yourself in "hot water" with an emergency replacement.

After heating and cooling systems, your water heater is the second largest energy user in your home and uses more energy than your refrigerator, clothes washer, dishwasher, and dryer, combined. Given this high energy intensity, planning to upgrade your standard water heater to an energy efficient heat pump model, specifically one that has been independently certified to earn the EnergyStar label, can help you save BIG on your annual energy costs.

Source: www.energystar.gov

What are the signs my water heater is failing or may need significant repair?

Sometimes water heaters can appear to be working fine and then fail without warning. Most times, though, there are early signs that your water heater may need help. Some of the more common red flags for possible water heater failure are:

Visible corrosion – Corrosion is a sign that the water heater is breaking down. Whether the corrosion is around the water lines or on the unit itself, it is a sign of deterioration that can lead to weakening the system and contributing to the water heater failing.

Water leaking – Leaks from any joints, seals, or seams of your hot water heater is usually an indication there is a problem (potentially caused by corrosion, as mentioned above). Hot water heaters are designed to be a "closed" system and any moisture outside of that system is an indication that something is breaking down. Water leaking can get worse and not only be damaging to the water heater itself, but potentially the area and things around it.

Rust in your water – Rust in the water is usually a sign that the interior of the water heating system is corroding and breaking down.

Lack of available hot water – Aging and poor maintenance can cause sediment to build up inside the tank in a way that reduces capacity. Chemicals and minerals in our water can contribute to the corrosion and breaking down of the inside of the tank. The sediment and particulates can then build up and reduce the available water to be heated and used by your home.

Rumbling noises – Water heaters are designed to operate consistently, quietly, and reliably. If your water heater is making unusual noises, rumblings, or vibrations, it is likely straining to operate correctly. Very often rumbling can be attributed to a build-up of sediment on the bottom of the tank, which can lead to bigger problems. Any noises should be checked out.

Ignoring these issues can lead to sudden failure of the water heater, cold water, and in some cases, tank rupture and water damage to the floor and carpets. The other downside to sudden failure is that you may have to schedule an emergency replacement with the plumber, which can be more expensive, and typically limit your replacement options to inefficient models with high operating costs.

I have found that most people who enjoy cooking have pretty strong opinions about their preferred fuel choice: gas or electric. Induction is a newer option for home stovetops, which is growing in popularity.

According to a study completed by Electric Power Research Institute, 74% of the energy from an electric range is transferred to food, versus 40% on a gas range.

Induction cooktops are the most efficient option at 90% energy transferred to food.

Regardless of your stovetop choice, right-sizing pots and pans to the burner is important to avoid wasting energy.

Electric cooktops are a tried-and-true option for many homes, and they are typically the most affordable option. Glass top models offer a cleaner look than the traditional coil elements and are easier to clean but tend to be a bit more expensive. The most common complaint about electric cooking is that the heating controls are not as fast or precise.

Many home chefs prefer gas stovetops because you can easily see the size of the flame, a visual clue that helps you control the cooking temperature.

Temperature adjustments are also faster and more precise than on electric stovetops. However, there are some concerns with safety and indoor air quality associated with gas stoves because gas emissions can be harmful to your health. To help reduce indoor air pollution, always use your exhaust fan when using your gas stovetop. Ideally, your exhaust fan should be vented to the exterior of the home.

Access is also a consideration. Natural gas is typically available in more populated areas, while rural customers may need a propane storage tank installed outside their homes to use a gas stove.

An induction stovetop can offer a higher-end cooking experience than a standard electric stovetop, and some



Induction stovetops use electromagnetic energy to heat the pan, reducing energy waste. Photograph by Ela Haney, Pexels

people prefer it to cooking on gas.

Induction stovetops use electromagnetic energy to heat the pan, reducing energy waste. Instead of heating the stove's surface, they heat the pans themselves. Because the pans heat directly, you don't have to wait for the heat to transfer like you do with gas and electric stovetops, resulting in faster cooking times. They also allow for more precise temperature control, which can deliver better results.

Cool burners offer additional safety benefits. You don't have the indoor air quality issues associated with gas, and they won't ignite items like dishrags or paper left on the stovetop.

Induction cooktops are typically more expensive than similar gas or electric models. They also require you to use specific cookware. Stainless steel and cast-iron cookware are both compatible with induction cooktops. If you want to test your pots and pans to see if they are induction compatible, do the magnet test. If a magnet sticks to the bottom of the pan, it will work on an induction stove.

Cooking on an induction stovetop takes a little time to get used to, but many people have made the switch and enjoy the experience.

If you are remodeling and have a gas range, consider running electrical to support an induction cooktop if you change your mind in the future. Setting up the power supply during a remodel can offer significant savings.

If you are considering making the switch, be sure to keep an eye on any incentives for your state or region. The Inflation Reduction Act may offer a rebate for replacing your gas stove with an electric one.

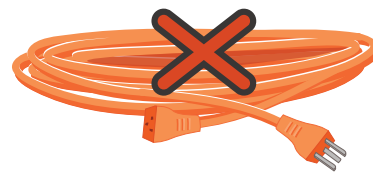
ELECTRIC BLANKET FIRE PREVENTION TIPS

Heating pads and electric blankets cause around **500 fires each year**. Almost all of these fires involve electric blankets that are **more than ten years old**. Learn how to stay safe.

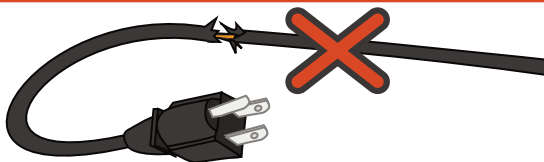
Heating appliances should **never be left unattended** or used while **sleeping**.



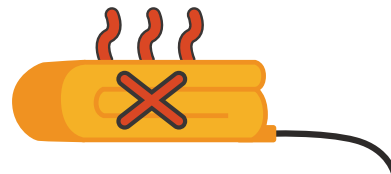
Do not plug electric blankets into an **extension cord** or **power strip**, as they could overheat and **cause a fire**.



Look for dark, charred, or frayed spots or electrical cords that are cracked or frayed. **Replace** any worn or old heating pads or electric blankets.



Never fold electric blankets when in use. Folded or tucked-in blankets could overheat and **cause a fire**.



When purchasing electronics, including electric blankets, be sure to only **purchase from reputable retailers**. Purchase devices that have been approved by a **Nationally Recognized Testing Laboratory**.



Do not allow anything to **rest on top** of a heating pad or electric blanket when it is in use. It may cause the device to **overheat**.



There are **two types** of personal heating appliances, **heating pads** that are placed directly on the mattress and **electric blankets**. They are not meant to be used interchangeably or at the same time.



Win Your Tailgate With Tasty Appetizers

Before the end zone dances and sideline celebrations, settling in for a winning game day experience starts with delicious foods. Whether your football parties take place at home, in the backyard or right outside the stadium, kicking it off with savory appetizers can get the crowd on its feet.

Keep your game plan simple this season and light up the scoreboard with fan favorites like dips and wings. These versions are both easy to prepare and can be enjoyed fresh or made in advance and kept warm or reheated to energize your fellow diehards.

This Buffalo Chicken Dip is a perfect solution for firing up your crowd as it requires little preparation so you save precious time before kickoff. Whether you bake shortly before the game begins or make it ahead of time for a parking lot party, simply keep it warm and serve with chips or veggie sticks for a quick, shareable appetizer.

Whether you pick through your pieces or clean each wing to the bone, these Game Day Chicken Wings are perfect for eaters of all types. A simple flour-based coating keeps the recipe easy to make and baking in the oven means you can skip the messy fryer or firing up the grill.

Visit Culinary.net to find more touchdown-worthy tailgate recipes.



Buffalo Chicken Dip

- 2 cups shredded chicken**
- 8 ounces cream cheese**
- 1/2 cup sour cream**
- 1 1/2 cups sharp cheddar cheese, plus additional for topping, divided**
- 1/2 teaspoon onion powder**
- 1/2 teaspoon garlic powder**
- 1 heavy pinch dried dill**
- 1/2 cup hot sauce**
- 2 green onions, chopped**
- blue cheese crumbles**
- chips**
- vegetable sticks**

Heat oven to 400 F.

In bowl, mix shredded chicken, cream cheese, sour cream, 1 1/2 cups shredded cheese, onion powder, garlic powder and dried dill

until combined. Add hot sauce; mix until combined.

Transfer mixture from bowl to oven-safe dish. Top with additional shredded cheese, to taste.

Bake until cheese is melted, approximately 15 minutes.

Top with blue cheese crumbles and chopped green onion.

Serve warm with chips and vegetable sticks.



Game Day Chicken Wings

- 1/2 cup butter, cubed
- 1/3 cup flour
- 2 teaspoons paprika
- 1 teaspoon garlic powder
- 1 teaspoon salt
- 1 teaspoon black pepper
- 10 chicken wings, thawed
- dipping sauces (optional)
- fresh parsley (optional)

Preheat oven to 425 F.

Line baking sheet with foil.

Arrange butter cubes on foil.

In medium bowl, combine flour, paprika, garlic powder, salt and pepper.

Coat both sides of wings in flour mixture then evenly space among butter cubes on baking sheet.

Bake wings 30 minutes.

Turn wings over and bake 15 minutes, or until crispy and fully cooked.

Serve with dipping sauces and sprinkle with fresh parsley, if desired.

Cranberry Fruit Salad

- | | |
|--|-----------------------------------|
| 1 lb. cranberries, ground | 1 small package mini marshmallows |
| 1 1/4 cup sugar | 1 cup whipped topping |
| 1 can (20oz.) crushed pineapple, drained | 3/4 cup chopped walnuts |

Combine the first 4 ingredients, refrigerate overnight. Before serving add the walnuts and whipped topping

Cheryl Kaczor, Ewing, Nebraska

Crockpot Dressing

- | | |
|--------------------------|------------------------------|
| 1/2 cup butter or oleo | 1 teaspoon poultry seasoning |
| 2 cups chopped onion | 1 1/2 teaspoons salt |
| 2 cups chopped celery | 1 1/2 teaspoon sage |
| 2 cans (8 oz.) mushrooms | 1 teaspoon thyme |
| 12 cups bread cubes | 1/2 teaspoon pepper |
| 2 well beaten eggs | 1/2 lb. cooked pork sausage |
| 1-2 cups chicken broth | |

Melt butter, sauté onions, celery, and mushrooms. Pour over the breadcrumbs. Add pork sausage, seasonings, and enough broth to moisten. Add the beaten eggs. Pack ingredients lightly into a Pam sprayed or lined crockpot. Cover and cook on high for 45 minutes then on low for 4 – 6 hours. Stir occasionally to keep from sticking. If you use seasoned breadcrumbs do not use the spices listed. You may add broth or cream to make it moist.

Elnora Ronnekamp, Gothenburg, Nebraska

Sweet Potato Souffle

- | | |
|------------------------------|------------------------------------|
| 3 cups mashed sweet potatoes | Topping: Mix until crumbly. |
| 2 eggs, well beaten | 1 cup brown sugar |
| 1/2 cup milk | 1/2 cup flour |
| 1/4 teaspoon salt | 1 cup chopped nuts |
| 1/2-1 cup sugar | 1/3 cup melted butter |

Mix all ingredients and place in a buttered 8” or 9” pan and sprinkle topping mixture evenly over the top. If using a 9” X 13” pan, make 1 1/2 times recipe, but do not increase butter for topping. Bake in 350 degrees oven until center is set, about 30 to 40 minutes.

Karen Christensen, Harvard, Nebraska

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When increasing your home's energy efficiency, keep in mind that it may require a service panel upgrade. As you receive quotes for electrical equipment always be sure to ask for a load calculation to ensure your electrical panel can handle the new equipment.

To learn more about rebates and incentives for electrification programs, contact your local co-op or public power district. Visit us at www.tristate.coop/electrifyandsave



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