

NEBRASKA

Magazine

NREA.org

April 2023

YOUTH ENERGY LEADERSHIP CAMP

Inside:

- Questions to Ask Before You Invest in Solar
- Staying One Step Ahead of Mother Nature •
- Watch Out for Overhead Power Lines • Easy Behavior Changes to Save Energy

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

Remember when...

Think about the things you loved to do that are difficult today — going for a walk or just sitting comfortably while reading a book. And remember the last time you got a great night's sleep? As we get older, health issues or even everyday aches, pains and stress can prevent us from enjoying life.

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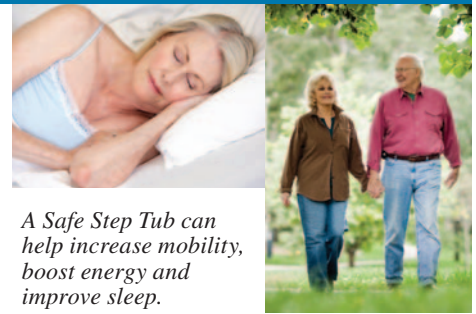
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Investing in solar is a big decision as the investment is large for a long-term project. Whether you are motivated to put solar on your home or business for environmental, economic, or other reasons, it is important to reach out to your local rural electric utility before you begin the project.

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The NREA Youth Energy Leadership Camp teaches high school students about the electric utility industry, electric safety and careers. See the related article on Page 10. Photograph by Wayne Price



Wayne Price

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nebraskamagazine.org



The Power Behind Your Power

You've likely noticed your rural electric utility's crews out and about, working on power lines and other electrical equipment in your community. It's no secret that a lineworker's job is tough—but it's a job that's essential and must be done, often in challenging conditions. This month, as we celebrate Lineworker Appreciation Day on April 10, I thought I'd share some interesting facts about electric lineworkers with you.

The work can be heavy, in more ways than one. Did you know the equipment and tools that a lineworker carries while climbing a utility pole can weigh up to 50 pounds? That's the same as carrying six gallons of water. Speaking of utility poles, lineworkers are required to climb poles ranging anywhere from 30 to 120 feet tall. Needless to say, if you have a fear of heights, this likely isn't the career path for you.

Lineworkers must be committed to their career—because it's not just a job, it's a lifestyle. The long hours and ever-present danger can truly take a toll. In fact, being a lineworker is listed in the top 10 most dangerous jobs in the United States.

When the power goes out, for whatever reason, Nebraska's electric linemen are the first to jump into action. Crews from neighboring systems will join in the effort to help restore power as quickly as possible.

Lineworkers often work non-traditional hours, outdoors in difficult conditions. While the job does not require a college degree, it does require technical skills, years of training and hands-on learning. Did you know that to become a journeyman lineworker can take more than 7,000 hours of training (or about four years)? That's because working with high-voltage equipment requires specialized skills, experience and an ongoing mental toughness. Shortcuts are not an option, and there is no room for error in this line or work.

So, the next time you see a lineworker, please thank them for the work they do to keep power flowing, regardless of the time of day or weather conditions. After all, lineworkers are the power behind your power. Please join us as we recognize them on April 10, and follow "#ThankALineworker" on social media to see how others are recognizing lineworkers.



Barb Fowler

Barb Fowler is the General Manager of Polk County Rural Public Power District, headquartered in Stromsburg, Nebraska

The Power of Nebraskans Working for Nebraska

In Nebraska, Public Power began in the early 1900s with the belief that electricity should be accessible and affordable to everyone, not just the wealthy or those living in the larger cities. At that time, private power companies provided unsafe, unreliable, and expensive electric service in densely populated areas. In response, civic-minded citizens and elected officials began the movement to form publicly owned utilities that would be controlled by and operated in the best interests of the communities they serve. In 1933, Nebraska's Legislature passed a law allowing the formation of public power districts and soon the first public power district was formed by a group of local businessmen and farmers to provide electricity to rural communities not being served by private companies. The success of this first public power district served as a role model and the founders assisted in the formation of other public power districts across Nebraska, the only state served entirely by customer-owned electric utilities.

This marked the beginning of the collaborative effort of public power districts in working together to provide safe, reliable, and affordable energy to all Nebraskans. No matter the size, public power districts engage in activities together to increase efficiencies and reduce costs. Public power districts perform joint planning of their electric systems to avoid redundancy and ensure interconnection abilities that allow neighboring utilities to lean on each other in urgent situations.

Public power districts may share personnel and equipment resources or participate in joint purchasing to capture economies of scale or mitigate supply chain issues. Public power districts across the state come together through electric utility statewide organizations, such as the Nebraska Rural Electric Association and the Nebraska Power Association, to work together on the development and training of our workforce and to advocate for public power policies at the state and federal levels. When Mother Nature strikes, public power districts coordinate and work together by sharing personnel, equipment, and material to respond to outages and restore power more quickly.

Our public power districts are regulated by the Nebraska Power Review Board, an independent agency formed by the Legislature in 1963. One of the functions of the Power Review Board is to administer the certification of all retail service areas and operating agreements between electric utilities. These agreements establish the geographic areas in which any one utility may serve. However, there are occasions when a customer may be better served by a neighboring utility due to the location of existing power lines. The neighboring utilities must apply, and the Power Review Board must approve, for any transfer of the right to serve. By working together, the neighboring public power districts eliminate infrastructure duplication and ensure costs remain low for all customers.

Perhaps the most important tenet of public power is local control and accountability. District directors are responsive to the needs of the community and are held accountable by voters living within the service territory. As customer-owners themselves, directors are equally subject to the decisions made by the board of directors. The legacy of Nebraska's public power forefathers is still alive today as your community leaders continue their commitment of Nebraskans working for Nebraska.

A photograph of a utility pole with power lines and a drone flying in the air. The drone is positioned between two horizontal cross-arms of the pole. The background is a clear, bright blue sky. The utility pole is made of wood and has several metal brackets and insulators attached to it. The drone is a small, black, four-rotor aircraft.

By Jenna Denney

Staying One Step Ahead of Mother Nature

Mother Nature tends to have a mind of her own. Utility power lines are constantly at risk from severe storms—particularly fallen and overgrown tree limbs, which can lead to power outages. It's estimated that 50% of outages can be attributed to overgrown vegetation, which is why public power districts and electric co-ops regularly trim and maintain their local systems.

This tried-and-true method requires a significant amount of on-the-ground labor, including manual data collection, in which dozens of workers assess the vegetation that needs to be cleared while walking below the infrastructure, as well as manual verification of the work's quality and completion by contractors.

This is how things have been done for the past few decades. This method has been effective, but in the era of extreme weather events and accelerating digitalization, rural electric utilities are looking to innovative vegetation management methods to improve power reliability for the members they serve.

Technology advancement will continue to impact vegetation management, and rural electric utilities are

Drones fly very close to utility assets to take the clearest images and provide data to help keep an eye on how close vegetation is to equipment. Photograph by Brandi Williams

committed to staying informed and undertaking modernization efforts. By utilizing technology, utilities may be able to dispatch crews to perform trimming at the ideal moment and location, preventing additional outages while enhancing productivity, cutting costs and providing better service. Timely monitoring and maintenance are necessary to identify assets that are prone to sustain damage or catch fire, so utilities are tasked with selecting the right technology to make this process more efficient.

The ideal technology will ensure a consistent supply of energy while managing the environment. Today, there are several cutting-edge vegetation management tools, each with its advantages.

LiDAR, which stands for "light detection and ranging," gives exact, three-dimensional data about the shape of the surface around utility assets. LiDAR is a

popular way to scan portions of forests to determine how tall trees are and acquire information about their health, like whether a tree has leaves. LiDAR doesn't provide data on how healthy plants are in general, but the technology can be paired with high-resolution multispectral satellite imagery to obtain accurate information about the health of the plants surrounding power lines. Timely data like this is extremely beneficial and can help rural electric utilities make more proactive planning decisions.

Satellites provide coverage 24 hours a day and can supply two kinds of images: a wide macro view of the area near utility assets and a more detailed micro view. Satellite data can often be used in place of other monitoring methods. With satellite technology, utilities can learn a lot about local vegetation, including:

- Health: This knowledge makes it possible to predict vegetation growth based on real conditions rather than guesses.
- Dryness: This information is valuable for determining the likelihood of a wildfire—and how to protect wildlife around utility infrastructure.
- Satellites are always in orbit around the Earth, so data can be updated quickly, in real-time. This makes it possible to act more precisely and on time.

Today, satellite images can have a spatial resolution as small as 1.6 feet, which makes it easy to spot when vegetation is growing in the right of way near power lines and utility equipment. Typically, satellites can speed up the process of inspecting power lines because they give the utility a solid foundation for making data-driven decisions about vegetation management. Drones and helicopters are effective but can take longer to fly along a network of power lines. A satellite can take pictures of the same area in just a few hours.

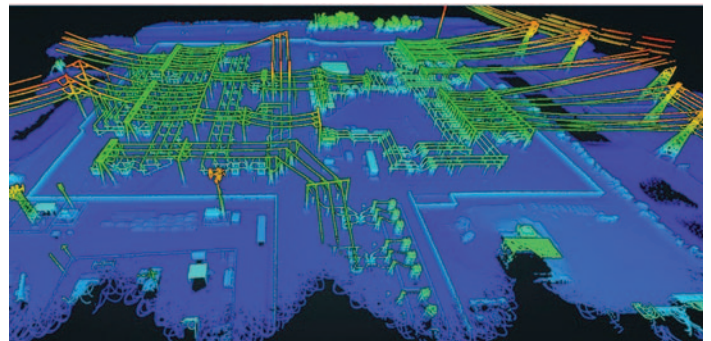
Public power districts and electric co-ops are also using fixed-wing aircrafts and drones to keep an eye on and control the growth of trees and plants near power lines. Drones fly very close to assets so they can take the clearest images and provide data to help keep an eye on how close vegetation is to equipment and check the health of trees to see if they are likely to fall.

Many utilities are utilizing drones with cameras, which began as a novelty tech for utilities but are now considered essential tools. When it comes to taking care

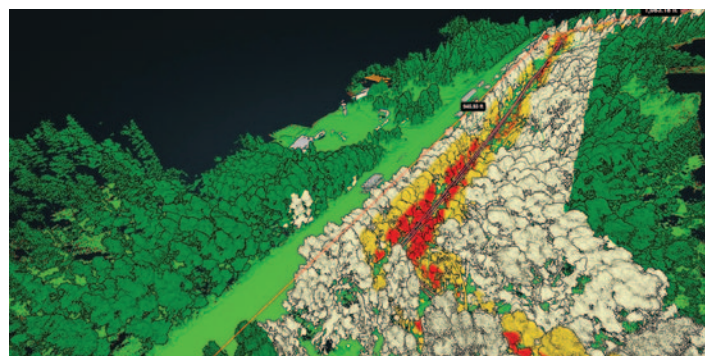
of surrounding vegetation, drones are often used for detailed surveys rather than large-scale monitoring like satellites. Once LiDAR or satellites (often together) have collected data on a large amount of vegetation near power lines, drones are used to inspect a single area and do all the necessary checks without putting operators in danger.

Rural electric utilities place a high focus on vegetation management. It is the most crucial tool for reducing the likelihood of power outages. A thorough understanding of the vegetation's past, present and projected future is essential for a successful approach to reducing these risks.

The growth of LiDAR, drone and satellite data presents an opportunity to close the loop with continuous data-driven vegetation management intelligence, and to increase the power line system's dependability and safety. In the end, all three technologies for managing vegetation serve different purposes, and rural electric utilities choose the ones that work best for them.



LiDAR technology, which stands for "light detection and ranging," gives exact, three-dimensional data about the shape of the surface around utility assets.





Easy Ways to Control Water Use in the Home

By Katherine Loving

Conserving water at home can result in several downstream benefits and savings. Being mindful of home water use helps preserve the amount of water in our local reservoirs and reduces costs associated with water and wastewater treatment, including the cost of delivering it to the home (for those using a public water service).

Leaky toilets, showerheads and dripping faucets can waste up to 2,700 gallons of water annually. Home water conservation can simply start by checking your house for any leaks and drips. Another simple way to conserve water is to limit running water when it isn't necessary. For example, turn off the faucet while brushing your teeth, and defrost food in the refrigerator or in the microwave instead of placing frozen food under running water.

Home gardens are another potential area for water conservation. Thoughtful planning can transform your home garden from a water drain to a water-efficient oasis.

Start by planting drought-resistant plants or those with minimal water needs. Group the plants by similar water needs to avoid waste by watering from plant-to-plant. Additionally, a drip irrigation system for plants that require more water can boost efficiency by using less water over a longer period. Alternatively, set lawn sprinklers on a timer to limit water use and place them where the water will only reach plants, not pavement.

Another conservation option is to use a rain barrel to collect water for non-potable purposes. Harvested rainwater is an excellent option for watering ornate gardens and washing cars.

Another option for collecting water for the garden is to collect cold water that runs while you're waiting on the water to heat. Every drop of running water you can utilize helps.

Reducing water use at home can also help lower your energy use. The Department of Energy estimates that water heating accounts for about 20 percent of a home's energy bill. Switching to an energy efficient heat pump water heater can save considerable money on electric bills. Heat pump water heaters have higher upfront costs than storage tank models, but tax incentives and potential rebates can offset this cost. Check with your local electric cooperative to see if they offer rebates or a load management program.

If upgrading your water heater isn't an option, there are small changes you can make to increase water heating efficiency. Reduce hot water use by switching to low-flow faucets and showerheads. You can also turn down the water heater thermostat to 120 degrees and insulate hot water lines to increase energy savings.

Additional ways to conserve both water and electricity in the home include upgrading clothes washers and dishwashers to newer, more energy efficient models. Running these appliances only when full or selecting a "light wash" setting reduces water and electricity use. Washing dishes by hand uses more water than an energy efficient dishwasher, so avoid this method when possible.

If your home uses well water, it's important to be mindful of water conservation, particularly in drier climates. Well pumps run on electricity and can be a source of higher energy bills. Dry, over pumped wells can cause the pump to run continuously, using excess energy in the process. Malfunctioning well pumps also lead to spikes in energy use. Regular maintenance can help identify problems, such as leaks and faulty intake, which can lead to increased use of both water and electricity.

As you can see, there are a variety of changes—some large, some small—that can help you conserve water at home. Regardless of how you do it, thoughtfully managing water use can protect our water supply and make significant changes on energy bills.

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July 9 - 13, 2023



Each year member-systems of the Nebraska Rural Electric Association select high school students to attend the NREA Youth Energy Leadership Camp. The 2023 Youth Energy Leadership Camp will be held July 9-13 at Camp Comeca, near Cozad, Neb.

The popular week-long camp was created to give young people a better understanding of public power, electricity, power generation, and the rural electric industry. The goal is to offer a program that challenges students educationally, socially, and recreationally.

The NREA Youth Energy Leadership Camp provides a “hands-on” approach to the public power industry and member-owned businesses. The students will join other high school students from Nebraska and Wyoming, along with adult counselors and junior counselors. The adult counselors are employees of rural electric systems who donate their time and talents to the camp. The junior counselors are campers from the previous year who are selected by their peers to return in a leadership role.

On the first day of camp, a board of directors is elected to oversee the operation of the newly formed electric power district. The board then interviews and chooses a general manager to oversee the committee activities and act as a liaison between the counselors and campers.

Every participant has a role in the workings of the camp. Students can participate in the Ambassador competition or actively seek a position on the Board of Directors. Each student must also volunteer to serve on at least one of the committees responsible for various aspects of the camp

activities.

A highlight of the camp involves a tour of the Kingsley Hydro Station at Lake McConaughy and Gerald Gentleman Station, a coal-fired power plant at Sutherland, Neb.

High school students who attend the energy camp may compete for a chance to participate in the National Rural Electric Cooperative Association’s Youth Tour in Washington, D.C. with expenses paid by the NREA.

Three students are chosen as part of the Ambassador competition held during camp.

The competition involves submitting an application at camp, presenting a self-introduction speech, and delivering a five-minute speech on an assigned topic. Each camper votes for three candidates following the speech with the top male, top female and the person with the next highest vote total becoming next year’s ambassadors. The top six finalists are invited to return to next year’s Youth Energy Leadership Camp as junior counselors.

Recreational activities include basketball, volleyball, and swimming.

Camp costs and transportation are provided by each sponsoring rural electric system. Students that are currently freshmen, sophomores, and juniors whose families are customers of NREA member-systems may apply.

For more information about attending Youth Energy Leadership Camp, send the RSVP form to your rural electric utility.



2023 Youth Energy Leadership Camp RSVP Form

Name _____ Age _____ Current Grade _____

Address _____

City _____ State _____ ZIP _____

Phone number (_____) _____

Name of parents _____

Sponsoring rural electric system : _____

Charging by the Kilowatt: Electric Vehicle Charging Stations

As we begin to see more electric vehicles (EV) on Nebraska's roads, Nebraska's public power utilities continue to evaluate the impacts of this emerging technology. EV charging stations will be used along our highways and at our homes. The amount of electricity that could be needed to power our automobiles could be dramatic, and public power has started to make plans to meet this emerging load. Beyond the transformation and upgrades that will be required within the electric industry, state laws may also need to be altered to accommodate EVs.

One such change is being discussed in this year's legislative session. LB 505 was introduced to address the taxation of EVs. The highways we drive on, and their never-ending maintenance, are primarily funded through the taxes we pay on fuel at the pump. EVs do not use petroleum which means that although they use the roads, they may not be fully contributing to the Highway Trust Fund. As more EVs replace fossil fuel vehicles, the state will need to develop a plan to collect the money it needs to ensure we have a strong system of roads and highways.

The NREA agrees that all vehicles should help to pay their fair share for the costs of our highway system, but the level at which the state sets registration fees and how the state collects fuel taxes on electric vehicles are not issues that the NREA will weigh in on this year. We do, however, have an issue within LB 505 that impacts public power in a significant way.

In our all-public-power state, public power utilities are the only entities that are authorized to sell electricity to end-use consumers. Although public power electric utilities are selling the electricity to the EV charging station operators, these operators are ultimately reselling the electricity to the end consumer despite the fact that they are not electric utilities and they do not have a service territory. Existing EV charging stations have been able to sidestep state law by charging EV customers by the time they charge and not by the kilowatts they use.

Consumer confidence and knowledge in the product they are purchasing is an important aspect of this discussion and public power does not want to be a roadblock to this emerging industry. After all, the

electrification of the transportation industry could be a great thing for the electric industry. The NREA helped to draft a provision within LB 505 that would provide a limited exemption allowing commercial EV charging station operators to sell electricity by the kilowatt at these stations. In effect, the language provides a small carve out within the public power statutes to allow for EV charging stations to sell kilowatt hours.

LB 505's hearing was held on March 8th and it is clear that this bill does not have a smooth path forward. Any increased registration costs or taxes on electric vehicles will have detractors. In addition, the hearing also attracted opposition from some convenience stores and gas stations that are looking to provide EV services. Although public power has worked in good faith to provide an avenue to authorize EV charging stations to sell electricity, they opposed LB 505 on the premise that public power could charge them a demand charge to pay for the infrastructure needed to provide electric service to these stations. They were also concerned that although public power helped to draft legislation authorizing them to sell kilowatts to end use customers (something that only public power utilities can do right now) we could somehow unfairly undercut their business if we were to operate our own charging stations.

In his closing at the hearing, the bill sponsor, Senator Eliot Bostar stated it well when he said that demand charges are common in the electric industry and are a necessary tool used to ensure that businesses are paying for the needed electric infrastructure. If station owners are not paying for the infrastructure needed to operate their charging stations, those costs will be transferred to other electric ratepayers. He went on to state, that public power entities have worked in good faith to authorize commercial EV charging station operators to sell electricity at EV stations. The claim that public power now poses a threat to the very same operators that LB 505 would grant this new authority is a ridiculous claim.

As this bill looks for a path forward, the NREA will continue to support the development of this emerging technology within our state's low-cost and reliable public power model.

What You Should Do When Someone Is Choking

By Larry Oetken



According to Injury Facts, choking is the fourth leading cause of unintentional injury death. Of the 3,000 people who died from choking in 2020, 1,430 were older than 74. Food is often responsible for choking incidents in the elderly. Living alone and having dentures or difficulty swallowing can increase risk. If you see someone clutching their throat, coughing, gagging, wheezing or passed out, would you know what to do?

The Heimlich Maneuver

If a person is coughing forcefully, encourage continued coughing to clear the object. A person who can't cough, speak, or breathe, however, needs immediate help. Ask if they are choking and let them know you will use abdominal thrusts,

also known as the Heimlich maneuver, to prevent suffocation. The procedure is not recommended for children younger than one year of age.

- Stand behind the victim with one leg forward between the victim's legs. For a child, move down to their level and keep your head to one side.
- Reach around the abdomen and locate the navel.
- Place the thumb side of your fist against the abdomen just above the navel.
- Grasp your fist with your other hand and thrust inward and upward into the victim's abdomen with quick jerks.
- For a responsive pregnant victim, or any victim you cannot get your arms around or for whom abdominal thrusts are not effective, give chest thrusts from behind; avoid squeezing the ribs with your arms.
- Continue thrusts until the victim expels the object or becomes unresponsive.
- Even after choking stops, seek medical attention.

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

What Lurks Under the Dirt

If you are considering an outdoor project that breaks ground, don't forget to get underground utilities marked in advance. Having them marked is free and easy to do; simply call 811 at least two full business days prior to starting a digging project. While state laws vary, utility companies generally have a few days to respond to your request.

If you don't take the time to call before you dig, you could become the person who digs in an unmarked yard and strikes an underground line every nine minutes. No one wants to be that person.

People are tempted to skip calling in advance because they think striking a buried line will not happen to them. They assume that they will 'not dig too deep' or that they will 'be careful.' However, underground lines are unyielding. Their path is unpredictable and hitting one can happen with one strike of a shovel or other tool.

"You might think you are just installing a mailbox or just using a post-hole digger or planting only a small flower bed" says Erin Hollinshead, executive director of Safe Electricity. "However, underground utility lines could be anywhere, and they also shift over time. They should always be marked in advance because some can be found only a few inches below the surface."

Dig Smart. Dig Safe.

Before you dig, call 811 or visit call811.com to mark underground utility lines. 811 is a free service that helps keep our community safe.



April is National Safe Digging Month.

Questions to Ask Before You Invest in Solar

Investing in solar is a big decision as the investment is large for a long-term project. Whether you are motivated to put solar on your home or business for environmental, economic, or other reasons, it is important to reach out to your local rural electric utility before you begin the project. Use the following checklist to assist in making an informed decision on solar.

Things to Consider

○ Determine if your home or business is adequately sealed and insulated and that you have energy efficient space conditioning and appliances. Doing this first may reduce the size and cost of the solar array you need to install. Suppose your property has no wall insulation or minimal attic insulation, or you plan to replace air conditioning, a heat pump, or an electric water heater. In that case, you may qualify for an EnergyWise Program incentive and Federal Income Tax Credits.

○ Make sure your home or business is ideally suited for solar. To maximize energy production solar systems should be tilted unshaded, oriented to the south and tilted 20 to 40 degrees. East or west-facing systems will reduce energy production by approximately 17% and 15%, respectively. Northerly will reduce energy production by approximately 35%.

○ Make sure your roof is in good condition (or location for a ground mount system) with ample southerly, westerly and/or easterly space to support solar panels and racking system.

○ For the safety of utility crews, PV solar systems automatically shut down and are not available for backup power during a utility outage unless a specialized inverter or a battery storage system is included in the project that prevents back-feeding to the utility distribution system.



○ Review your annual electric energy history to see how much you would like to reduce through onsite generation. Contact your rural electric utility to request a copy of your home or business' electric billing history report.

Financial Considerations

○ Acquire multiple quotes from different solar contractors. A list of Solar Trade Ally contractors is available on www.nppd.com. These contractors have committed to the Solar Trade Ally requirements.

○ Financial savings is primarily achieved by reducing the energy you will need to purchase from your rural electric utility. The value of that energy is determined by the energy rate component of your electric bill.



contractor is using in their proposal.

- Familiarize yourself with the Federal Investment Tax Credit and low-interest financing offered by the Nebraska Department of Environment and Energy's Dollar and Savings Loan Program for residential and commercial PV solar projects. Commercial PV solar projects can also qualify for additional Federal tax credits through accelerated depreciation Modified Accelerated Cost-Recovery System, and the USDA Rural Development Rural Energy for America Program.

WattPlan Solar Calculator

Check out the WattPlan Solar Calculator at publicpowered.wattplan.com/pv/solar to model energy production and associated savings with different size solar systems. Be sure to use the current residential or commercial energy rate to accurately reflect savings from the solar system's annual production.

According to the WattPlan Solar Calculator, one kilowatt DC of optimally oriented and tilted solar (southerly facing, unshaded) should produce approximately 1,400 kWh annually. (Approximately 150 kWh/month during the summer months and 100 kWh/month during the winter months.



Photograph by EE Image Database

According to the National Renewable Energy Lab, an owner should budget at least \$20/kW annually for ongoing maintenance, inverter replacement, insurance, and other expenses. Ensure this is included in your solar contractor's proposal.

- Customer charges will continue to be assessed no matter how much energy your system produces. The fixed customer charges recover costs to build and maintain infrastructure and provide customer account support to provide highly reliable service.
- When reviewing solar proposals, make sure the correct energy rate, customer facility charge, and a reasonable annual rate adjustment factor are being used. Projected financial savings should be calculated based on the current energy rate.
- According to the Energy Information Administration's Annual Energy Outlook, nominal (not adjusted for inflation) retail electric rates are projected to increase up to 1.5% annually over the next 30 years for the west north-central region. Understand what annual rate escalation amount your

It is very important to keep your distance from overhead power lines. Each year, construction and farm workers are injured or killed because they have accidentally made contact with the high voltage lines that pass overhead.

To prevent this from happening to you, pre-plan your job. Go out to the area you plan to move large equipment into, stack bales within, or where irrigation pipe will be laid, and look around for overhead wires and electric poles. Then plan your job around them. Remember, high voltage power lines are not insulated. Also, be aware that there are laws that prohibit any work within six feet of lines that carry between 600 and 50,000 volts, and require a minimum distance of 10 feet from these lines when operating boom-type lifting equipment.

Changing temperatures during the spring can cause power line clearances to change as well.

“Power line clearances change with fluctuations in air temperature, so it is important to verify safe clearances,” said NREA Job Training and Safety Coordinator Larry Oetken.

“Clearances on driveways and over land not normally used as a roadway may have ground to line clearances as low as 11.5 feet.”

When you’re working or performing other activities around the farm or ranch, watch out for overhead electrical lines. Know where power lines are located and treat all overhead power lines as though they are bare and uninsulated. Keep all equipment away from overhead lines.

It’s a good idea to know what to do if equipment you are operating

comes in contact with an overhead power line. Don’t panic!

- Stay on the equipment, unless there is a fire.
- Ask for someone to immediately contact the local utility company to remove the danger.
- If there is an emergency such as an electrical fire and you must leave the equipment, jump as far away from the equipment as possible. Do not allow any part of your body to touch the equipment and the ground at same time. Shuffle away from where you jumped; do not take large strides. Too large a step could put each foot in a different voltage zone and electrocute you.
- Once away from the equipment, never attempt to get back on or even touch it. Many electrocutions occur when the worker dismounts, then gets back on the equipment.

Murphy



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2023 South African Krugerrand: The Krugerrand continues to be the best-known, most respected numismatic coin brand in the world. 2023 is the Silver Krugerrand's 6th year of issue. Struck in 99.9% fine silver at the South African Mint.

2023 China Silver Panda: 2023 is the 40th anniversary of the first silver Panda coin, issued in 1983. China Pandas are noted for their heart-warming one-year-only designs. Struck in 99.9% fine silver at the China Mint.

2023 British Silver Britannia: One of the Royal Mint's flagship coins, this 2023 issue is the **FIRST** in the Silver Britannia series to carry the portrait of King Charles III, following the passing of Queen Elizabeth II. Struck in 99.9% fine silver.



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When looking at electric bills, many people focus on the total dollar amount of the bill. When trying to manage your energy costs, I suggest changing your focus to energy use.

While you don't have control over the cost of the energy, you can control how much energy you use.

Set Goals.

Instead of thinking about your bills in terms of dollars, think about them in terms of kilowatt-hours. A kilowatt-hour is the unit of energy used for most electric bills. Review your monthly kWh use to get an idea of how much you use every month.

Once you've reviewed your energy use, set goals for the next month. Try to use less energy than the month before, and check your results on your next bill.

Know When to Use Less Energy.

Some electric utilities offer time-of-use rates, which means electricity costs are dependent on the time of day. This pricing structure more closely reflects the cost to electric utilities and helps consumers understand that energy costs more when the demand for it is higher.

Even if your electric bill does not include time-of-use rates, it can be beneficial to delay energy-intensive chores or tasks to when demand is lower. Peak hours are typically in the morning as we prepare for work and in the evening when we get home and start preparing food and turning on entertainment devices. Doing laundry and running the dishwasher are easy activities to delay until after peak hours.

Power "Off" for Energy Savings.

When looking for energy savings, remember that "off" is the most efficient setting. Turning off lights is a classic strategy, especially if your lighting is incandescent. Consider switching to energy-saving LED lightbulbs.

Computers and gaming systems can waste energy even when in sleep mode. The higher the wattage and the more hours the device is on, the more energy used. Laptops use the least energy, followed by personal computers at about 200 watts. Gaming consoles typically use less energy than gaming PCs. Don't forget to turn off the monitor as well.



Photograph by Mark Gilliland, Pioneer Utility Resources

You can lower your energy use even more with smart power strips, which cut power to devices that are not in use. Many electronics continue to draw power even when they are turned off. This could add 5% to 10% to your monthly bill, according to the Department of Energy. Installing smart power strips is an easy way to ensure devices are completely turned off and not drawing power.

Adjust the Temp.

When it comes to lowering your energy use, the settings on your thermostat are another great place to check. Keep in mind, the weather affects your electric bill for heating and air conditioning.

The closer you can keep the indoor temperature to the outdoor temperature, the more you will save. You want to protect your home from damage in extreme heat and cold, but if you can turn the temperature down a few degrees in winter and up in summer, you will save on energy costs.

Ensuring your filters in your heating and cooling system are clean is an easy way to keep your system maintained and operating efficiently. Adding annual servicing by a professional maximizes the efficiency and can lengthen the life of your system.

Understanding your energy use and making small adjustments to your routine will help you reach your energy use goals.

There are a number of reasons why people are interested in cutting back on energy consumption—some are primarily motivated to save on their monthly energy bills while others may be more concerned about reducing their personal carbon footprint.

Actively practicing energy efficiency and conservation provides multiple benefits. For parents, being more conscious about energy use can be used as a tool to teach kiddos about sustainable habits for the future; conserving energy also means fewer carbon emissions, which results in better air quality and a healthier environment; and I think we can all agree that saving money on our monthly utility bills is a great reason to monitor home energy use.

Regardless of why you're interested in using less energy, there are several smart phone apps that can help you do just that!

Here a few apps that can help you achieve meaningful energy savings:

1. Smart thermostat apps: I know what you're thinking, and yes—to use a smart thermostat app, you must purchase a smart thermostat. But heating and cooling make up a large portion of the average home's energy consumption (and cost!), so saving on heating and cooling can make a big impact on bills. Smart thermostats and their accompanying apps are handy and promote energy efficient behavior—and these devices have become much more affordable over the years. You can purchase an EnergyStar-certified smart thermostat for as low as \$100, which can save you 8% on annual heating and cooling costs, about \$50 per year. The device will quickly pay for itself, and you'll gain insight into better ways to heat and cool your home. Plus, the ability to control the thermostat from anywhere can equate to real savings. We recommend trusted brands and devices, like Google's Nest Learning Thermostat and Ecobee's Smart Thermostat.

2. Energy cost calculators: If you're wanting to reduce energy use at home, it's important to know where your consumption is going. Energy cost calculators can help pinpoint your energy use with a few simple steps and identify areas to save. The concept is pretty simple; just plug in the wattage of your various



appliances and how often you use them to see which are using the most energy. Most energy cost calculator apps are free and can be downloaded to any Apple or Android device. If you browse the app store, you'll find multiple energy cost calculator apps, but most are similar in functionality. Be sure to read the app's reviews and download the one that best aligns with your energy efficiency goals.

3. JouleBug app: If you're competitive and enjoy gamifying—well, everything—the JouleBug app is right up your alley. JouleBug makes energy conservation simple and fun through personal tasks and badges earned within the app, group challenges you can tackle with friends, and communities you can join to learn about local sustainability efforts. The JouleBug app is free and can be downloaded to Apple or Android devices, and it's an easy tool to make saving energy fun.

These are just a few apps that can help you find new ways to save energy. Smart light bulbs are typically paired with apps for convenient control of home lighting; smart plugs also come with apps to help you control how you power everyday devices and electronics.

Whether you use an app or not, saving energy is always a smart idea that can help you save money on your monthly bills and reduce your carbon footprint.

Say Goodbye to Basic Brunch Menu

The same old brunch menu week after week can become tiresome and dull. It's bland, boring and your tastebuds get used to the same flavors repeatedly.

It's time to add something new to the table with fresh ingredients and simple instructions to enhance your weekend spread.

Try this recipe for an Easy Brunch Quiche that is sure to have your senses swirling with every bite. This quiche is layered with many tastes and a variety of ingredients to give it crave-worthy flavor.

With a range of ingredients from broccoli to bacon, this quiche is a brunch hero. While baking, the cheese gets all melty, and with every bite the mushrooms add texture and earthy flavor. The ingredients combine together to make something warm, hearty and fresh.

If you're looking for a tasty way to start the day it's hard to beat a fresh, oven-baked breakfast, especially one loaded with sausage and eggs complemented by the sweetness of diced apples and maple syrup. This Maple Breakfast Braid delivers a tempting flavor combination perfect for a weekend morning with loved ones.

Find more brunch recipes and cooking ideas at Culinary.net.



Easy Brunch Quiche

- 1 package (10 ounces) frozen broccoli with cheese**
- 12 slices bacon, chopped**
- 1/2 cup green onions, sliced**
- 1 cup mushrooms, sliced**
- 4 eggs**
- 1 cup milk**
- 1 1/2 cups shredded cheese, divided**
- 2 frozen deep dish pie shells (9 inches each)**

Heat oven to 350 F.

In medium bowl, add broccoli and cheese contents from package. Microwave 5 minutes, or until cheese is saucy. Set aside.

In skillet, cook chopped bacon 4 minutes. Add green onions; cook 2 minutes. Add mushrooms; cook 4 minutes, or until bacon is completely cooked and mushrooms are tender. Drain onto paper towel over plate. Set aside.

In medium bowl, whisk eggs and milk until combined. Add broccoli and cheese mixture. Add 1 cup cheese. Stir to combine. Set aside.

In pie shells, divide drained bacon mixture evenly. Divide broccoli mixture evenly and pour over bacon mixture. Sprinkle remaining cheese over both pies.

Bake 40 minutes.

Allow to cool at least 12 minutes before serving.

Note: To keep edges of crust from burning, place aluminum foil over pies for first 20 minutes of cook time. Remove after 20 minutes and allow to cook uncovered until completed.



Maple Breakfast Braid

- 1 package (16 ounces) breakfast sausage
- 1/4 cup maple syrup
- 2 eggs, beaten
- 1/2 cup green onions, sliced
- 2 Granny Smith apples, peeled and diced
- 1 1/2 cups dry herb stuffing mix
- 1 package (17 1/4 ounces) frozen puff pastry, thawed
- 2 egg whites
- 1 teaspoon water

Heat oven to 400 F.

In large bowl, combine sausage, syrup, beaten eggs, green onions, diced apples and stuffing mix.

Dust surface with flour; roll out pastry sheet to 12-by-18-inch rectangle. Transfer pastry to large baking sheet with parchment paper. Spoon half of sausage mixture down center of pastry.

Make 3-inch cuts down sides of pastry. Fold one strip at a time, alternating sides. Fold both ends to seal in filling. In bowl, beat egg whites and water; brush over pastry.

Repeat steps for second pastry sheet.

Bake 25-30 minutes, or until brown, rotating pans after baking 15 minutes.

Creamed Asparagus Soup

- | | |
|--|--|
| <ul style="list-style-type: none"> 3 tablespoons butter 1 leek, sliced 1 large clove garlic, crushed 1 lb. fresh asparagus spears, cut into small pieces 1 cup chicken broth 1 cup water | <ul style="list-style-type: none"> 1 teaspoon salt 1/2 teaspoon pepper 1/2 cup Philadelphia Chive & Onion Cream Cheese Spread 1/4 cup milk |
|--|--|

Melt butter in medium saucepan on medium heat. Add leeks, cook 5 minutes or until tender, stirring occasionally. Stir in garlic; cook and stir for 2 minutes. Add asparagus, broth and water; stir. Simmer on medium to low heat 5 minutes or until asparagus is crisp-tender. Stir in salt and pepper. Mix cream cheese spread and milk until well blended. Process asparagus mixture in a blender until smooth. Pour into 4 soup bowls. Add cream cheese mixture, swirl gently with spoon. By using a blender this makes the soup creamy.

Leola Ward, Kearney, Nebraska

Dilled Pot Roast

- | | |
|---|---|
| <ul style="list-style-type: none"> 2 teaspoons dill weed, divided 1 teaspoon salt 1/4 teaspoon pepper 1 pot roast, 2 to 3 lbs. 1/4 cup water 1 tablespoon cider vinegar | <ul style="list-style-type: none"> 3 tablespoons flour 1/4 cup cold water 1 cup sour cream 1/2 teaspoon browning sauce, optional Hot cooked rice |
|---|---|

In a small bowl, combine dill weed, salt and pepper. Sprinkle over both sides of roast. Place in a 3-quart slow cooker. Add water and vinegar. Cook on high for 7 – 8 hours until tender. Remove meat and keep warm. In a small bowl, combine flour and remaining dill; stir in cold water until smooth. Gradually stir into drippings in slow cooker. Cover and let cook on high for 30 minutes or until thick. Stir in sour cream and browning sauce. Heat through. Slice meat. Serve with sour cream sauce and rice. Yields 6 to 8 servings.

Claudeen Penry, Atkinson, Nebraska

Snickers Cheesecake

- | | |
|---|--|
| <ul style="list-style-type: none"> 3 8 oz. packages cream cheese 1 8 oz. sour cream 5 Snickers bars, chopped | <ul style="list-style-type: none"> 2 eggs 1 cup sugar 1 cup chocolate chips 2 pre-made Oreo pie crusts |
|---|--|

Beat cream cheese until fluffy. Beat in eggs, one at a time. Beat in sour cream and sugar. Stir in Snickers pieces and chocolate chips. Pour in crusts. Bake at 375 degrees for 65 to 70 minutes until top is golden and puffed. Refrigerate at least 6 hours, or until firm, before serving. Garnish with additional Snickers pieces.

Cindy Brandner, Norfolk, Nebraska

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