

September 2020 Share Package

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CUT YOUR UTILITY BILLS

Convert Your Garage or Basement Into Living Space

Q: What are some options, on a limited budget, to convert a garage or basement into an efficient room?

A: This is a common project, and probably the least expensive method to add a bedroom. Only one new wall is needed to replace the garage door, so material and labor costs will be reasonable.

The techniques to insulate a wall for converting a garage or a basement into living space are similar. It actually is easier to insulate a basement because much of the wall area is below ground level. This reduces the magnitude of temperature swings across the wall insulation.

If you plan to do the conversion project yourself, adding stud wall framing on the interior is relatively simple. Use 2-by-4, or 2-by-6 in very cold climates. The studs will not carry any weight, so they can be spaced as wide as possible to accommodate the insulation width. When built over a concrete slab or floor, use pressure-treated lumber for the footer.

The location of the vapor barrier for the insulation varies



For more information or to ask a question about energy savings, go to www.dulley.com. © 2020 James Dulley



This room has masonry wall finished with a professional wall system, which consists of pressed fiberglass panels covered with fabric. PHOTO BY OWENS CORNING

for basements and above-ground garages. For basements, moisture usually flows from the ground through the foundation into the insulation.

Attach a film vapor barrier to the wall before the studs. When using faced fiberglass batt insulation, place the facing against the foundation wall. For above-ground walls, place the vapor barrier toward the room side.

When converting a smaller garage or basement area—where maximizing usable floor space is a concern—attach narrow furring strips to the wall. Place thinner sheets of rigid foam insulation between the furring strips. Rigid foam insulation has a higher R-value per inch thickness than batt insulation.

Foam insulation must be covered by drywall to meet fire codes.

Every room must have an egress window in case of a fire. The window must have an opening at least 20 inches wide and at least 24 inches high. The window must have a minimum net clear opening of 5.7

square feet with a maximum sill height of 44 inches above the floor.

A good choice for bedrooms is an acrylic casement-style block window. It looks like a regular glass block window when closed to provide security and privacy. It opens with a crank like a regular casement window for ventilation and egress. It comes as a complete unit.

Many companies—often replacement window contractors—offer conversion systems for garages and basements. Fully insulated wall and ceiling panels are custom-sized to fit your specific project. The cost of these is not outrageous compared to buying all the materials and equipment to do it yourself.

Snap-in insulated fabric-covered panel systems are effective for a bedroom. They provide insulation, block moisture and are relatively soundproof. Look for one where the panels can easily be snapped out to access the old wall or to make other changes. These systems are also good for

home theaters.

Don't forget the attic area when converting a garage. Just like in any room, most heat is lost or gained through the attic. Insulate the attic to the code recommendations for your area and place the vapor barrier down toward the living area.

Especially in a bedroom, a cold floor can make you feel uncomfortable. A typical concrete garage slab or basement sucks heat out of the room. Install a breathable insulation panel over the floor and cover that with thick carpet padding and carpeting. Consider installing electric in-floor radiant heating.

A low ceiling height can be a problem with a basement conversion. To minimize the loss of headroom, insulate around the outside of the garage concrete slab. Dig down several feet and place rigid extruded polystyrene insulation panels against the sides of the slab. Make sure to use extruded, not expanded, foam panels for below-ground applications. ■

CUT YOUR UTILITY BILLS

A Guide to Seal Air Leaks

Q: What can I do to reduce drafts in my older home that won't cost an arm and a leg?

A: This is a common problem, particularly in older homes. In many homes, about half of the conditioned air leaks to the outside every hour.

The good news—especially if you don't want to spend a lot of money or you're hesitant to invite contractors into your home right now—is that you can seal air leaks on your own with a little time and effort.

Here are three steps to get you started. There's more to learn about sealing your home than we can cover in this article, so consider researching trusted websites for additional tips and tutorials.

Step 1: Find the Leaks

The first step is a thorough visual search of the home's interior and exterior. Look for gaps and holes in exterior walls, flooring and the ceiling. These often occur where different building materials meet, such as the top of cement foundation walls or around windows and doors. Another common source of air leaks is where pipes or wiring penetrate a wall, floor or ceiling. Ductwork in unheated crawl spaces or attics can also contain air leaks.

This column was co-written by Pat Keegan and Brad Thiessen of Collaborative Efficiency. For more energy tips, go to www.collaborativeefficiency.com/energytips.



Use caulk to seal gaps around non-moving parts of doors and windows. PHOTO BY SCOTT VAN OSDOL

Exterior doors and windows that open deserve your attention. Open each door or window and place a dollar bill between the door or window sash and the frame. If you can pull the bill out easily when the door or window is closed again, the seal is not tight enough. Also, a window that rattles when it's closed or when it's windy probably isn't sealed sufficiently.

The best way to find all air leaks is to hire an energy auditor to do a blower door test. The blower door is a large fan mounted in a doorway to depressurize the house. The auditor can find the leaks and may be able to recommend ways to seal them.

It's also possible to conduct your own whole-home pressure

test. The Department of Energy provides detailed instructions at www.energy.gov/energysaver/weatherize/air-sealing-your-home/detecting-air-leaks.

Step 2: Gather Supplies

Here's a quick list of materials to get you started:

- **Caulk.** You will need a caulk gun and caulk, about \$4 and \$10, respectively. We recommend indoor/outdoor waterproof silicone or latex caulk that is water-soluble until it cures and paintable when dry.
- **Expanding spray foam.** One can typically costs \$4 to \$6. This is an effective way to plug leaks, but it's a messy job.
- **Weatherstripping.** Prices vary depending on type and length of materials, but there's a variety of weatherstripping options made of vinyl, metal and felt, or open-cell foam that works for most situations.
- **Pre-cut foam socket sealers.** A pack of 24 sealers

typically costs about \$3.

- **Chimney plug balloon.** Prices range from \$50 to \$90. You may need a chimney plug balloon if your chimney flue doesn't seal well. Buy a square or round one to match the shape of your chimney flue.
- **Adhesive plastic window insulation sheets.** Prices range from \$2 to \$14 depending on size. You may need insulation sheets later in the year for windows that can't be sealed and don't have storm windows.

Step 3: Do It!

If you are unfamiliar with how to apply any of these materials, we recommend watching online tutorial videos.

Sealing air leaks is one of the best ways to boost your home's energy efficiency. Whether you're a do-it-yourself pro or novice, with a few simple steps and low-cost materials, you will be well on your way to a sealed, more efficient home. ■

Working Together

Hydropower is crucial to a reliable system as intermittent renewables are added to the region's energy mix

By Pam Blair

Power systems require balance at all times. Supply must always equal demand—no more, no less—or the system will crash and the lights will go out.

In the Northwest, hydroelectricity is the key not only to ensuring the region has enough power for a stable, reliable system, but to integrating all other sources of power generation.

By adjusting the amount of water flowing through the dams, hydropower can be increased or decreased quickly to meet changes in demand. It can be ramped up when the wind is not blowing, and dialed down at times of high winds.

“Northwest hydro is such a great resource because it is carbon free and it can be relied upon 24/7,” says Public Power Council Executive Director Scott Simms. “The value only increases as resource adequacy becomes more of an issue here.”

Adequacy means ensuring there is enough of the right kind of generating resources available at the right time to keep electricity flowing to consumers all of the time.

“With retirement of coal and gas facilities, we are backing

By the Numbers

Northwest hydro—including 31 federal projects—forms the backbone of the region's energy system, supplying 47% of the electricity used annually, with an average of 16,200 megawatts.

Wind provides about 10%, averaging 2,880 MWs a year.

Solar contributes about 1%, averaging 150 MWs annually.

The remainder comes from natural gas, nuclear, coal, biomass and geothermal.

2019 data from the Northwest Power and Conservation Council and U.S. DOE Energy Information Administration

ourselves into a corner,” says Northwest RiverPartners Executive Director Kurt Miller. “We’ve campaigned to keep the lower Snake River dams in place. Even with them, we face resource adequacy issues.”

Energy efficiency gains have kept load growth relatively flat in recent years, but the region is expected to need another 400 megawatts of always-on generating capacity by 2035, according to the Northwest Power and Conservation Council.



Wind turbines rotate on a ridge above John Day Dam. Because hydropower is always accessible, it complements other forms of renewable energy—such as wind—which is not always available.

PHOTO BY JESSICA SCRIVNER/BONNEVILLE POWER ADMINISTRATION

“Regardless of how one feels about coal and gas power plants, you can’t ignore they are there when needed,” Simms says. “They are tremendously reliable. Just like hydro, you can call on them and they are dispatched to start producing power.”

That’s not true of wind.

“Wind is variable and hard to plan for,” Miller says. “We can have a period where there is no output at all from wind. Solar also is variable. It’s great to add to the mix, but it requires the

same partnership with hydro to keep the grid in balance.

“In a carbon-constrained environment, building a coal plant is not an option, and it is not easy to build a gas plant. It makes our existing carbon-free resources even more valuable. Hydro is the cornerstone of our clean energy future. It is the glue that holds it all together.”

Simms and Miller say it would be helpful to distinguish between perceptions and actual operating characteristics of



different power resources.

“Energy portfolios are like having a mix of vegetables in your backyard garden,” Simms says. “It’s good to have a variety if you can, because some do better than others under various conditions. Hydro is like wind and solar in that it is renewable and non-fossil fuel emitting, but it has the added advantage of being predictable and able to respond when needs arise.

“It would be great to get to a place where we can talk openly about the merits and drawbacks of all kinds of power plants so we can have fully informed policy and cost decisions.”

Miller echoes the importance of having an educated public.

“People think of generating resource decisions as impacting the planet, but they also greatly affect affordability, reliability and accessibility,” he adds.

If energy policies accurately reflected hydro’s true value, the region’s public power customers would benefit, Simms says.

“As more renewable-friendly policies emerge in the West, we have the opportunity to not only educate people about hydro having similar renewable characteristics as wind and solar, but also high availability or capacity,” Simms says.

That could lead to better rates for Northwest customers of the Bonneville Power Administration, Simms says, adding, “Imagine a world in which the intrinsic value of hydro commanded a price premium over other sources in surplus sales transactions.”

While some consider battery technology to be a good alternative to dams, Miller notes that batteries face challenges.

“The process for mining the rare earth minerals needed for batteries is carbon-intensive,” he says. “They are not renewable. They don’t have a second life. They have not been fully

tested on a utility scale.”

According to a recent federal report, it would cost \$1 billion a year to replace the lower Snake River dams with solar, wind and batteries—leading to a 50% increase in rates to BPA customers, Miller says.

“That cost would be devastating to communities around the Northwest,” he says. “It is not a good option to replacing dams.

“At the end of the day, we are in a carbon-constrained world where people don’t want fossil fuel resources to back up renewables. None of the alternatives are even close to as good as hydroelectricity.” ■



Line crews from Klickitat PUD and Northern Wasco County PUD worked together to restore service after fires damaged the area. PHOTOS COURTESY OF NORTH WASCO COUNTY PUD

The Rewards of Cooperation

For public power providers and electricity cooperatives, working together helps everyone

By David Herder

Northern Wasco County PUD and Klickitat PUD look at the same water from different directions. While Klickitat PUD provides power in Washington, and Northern Wasco does the same in Oregon, the two utilities' service territories meet along the banks of the Columbia River.

For most companies, jostling up against the territory of another business providing the exact same product means competition. For public power providers, it means opportunity.

"There are benefits to partnering with other similar organizations that aren't profit driven," says Roger Kline, Northern Wasco County PUD general manager. "That we're all just trying to do the best thing for our customer owners, that's a good joining of the energy."

Public power providers have outlined service territories, and largely do not compete for customers. Instead, it is often in their best interests to cooperate. Costs of the facilities that

generate electricity and the miles of line that deliver it—the fixed infrastructure costs—are far greater than the cost of producing additional energy to serve more customers. Rather than creating huge costs by building competing dams or having neighboring lanes of power lines going to the same places, power can be provided at lower costs when utilities work together.

Cooperation Among Cooperatives is one of the Seven Cooperative Principles guiding electric cooperatives. Whether PUDs, municipals or cooperatives, working together can benefit all members. Examples include the member utilities of Utah Associated Municipal Power Systems that are partnering to generate electricity from a small modular nuclear reactor, and the Association of Louisiana Electric Cooperatives donating to the Nebraska Farm Bureau Association in 2019 after a bomb cyclone damaged crops.

In the 1990s, Northern Wasco looked to build the McNary Fishway Hydro Project, which would put a 10-megawatt generator in one of the fish ladders at McNary Dam. Building the plant would cost nearly 30 million dollars, which could burden a single rural power provider with debt. But joining forces with a friendly neighbor spread the expense and benefits.

"Northern Wasco turned to their neighbor to the north, Klickitat, and said, 'You're also a growing utility that has the same



Klickitat PUD and Northern Wasco County PUD opened the McNary Dam Fishway Hydro Project together in the 1990s.

value system that we do,'” Roger says. “Klickitat came in and brought funds to the table, and we essentially split the project.”

Both utilities now draw power from the fishway as 50% owners. The two cooperate on other projects, too. Northern Wasco and Klickitat PUD host joint wildfire prevention trainings, even inviting other surrounding utilities and splitting costs. The utilities share specialized equipment, because it would be inefficient for each utility to invest in their own.

“It would be cost prohibitive to do some of these things on our own,” Roger says. “I may have a specific piece of rolling stock or tool, like a wire trailer, or a longer bucket truck. Well, it wouldn’t behoove each organization to have one of those. If the neighbor has one, you can borrow it.”

Cooperatives around the country partner to benefit their members. Organizations such as the Northwest Public Power Association formalize these partnerships to help all members. NWPPA focuses its efforts on training and education, communication, and public policy and government relations. Just like a co-op can help members who would have a tough time generating their own power, trade associations such as NWPPA combine the strength of its members for the benefit of all.

“They’re all behind the same mission of providing safe, reliable, at-cost power,” says Scott Corwin, NWPPA executive director. “I think to the extent we can help get people together, help them network together to share best practices, help them stay on the same page to fulfill that mission, that’s a good role we can play.”

Associations such as NWPPA can also elevate the voices of

its members to great effect. This year, NWPPA helped connect utilities and legislators to ensure rural electric cooperatives qualified for Paycheck Protection Programs loans as part of America’s response to the coronavirus pandemic.

The Alaska Power Association provides many of the same functions to its region. Executive Director Crystal Enkvist says APA member utilities are eager to cooperate with each other.

“It’s been disappointing not being able to have our annual meeting this year, because so many of our members have likened the APA annual meeting to a family reunion,” Crystal says.

Much like relatives swap stories and share updates on life events at family reunions, APA members treat meetings as the chance to listen to each other and get up to speed. Now many meetings happen electronically, with ideas shared over videoconferences.

“When you’re at a small rural utility, you can feel like you’re in a vacuum sometimes,” Crystal says. “When you’re there on the phone with a CEO of a large utility in Anchorage, and the CEO of a utility on Kodiak Island, you realize that you’re not alone, and you can all share each other’s experiences.”

Along the Columbia River, utilities are quick to collaborate. Roger says that a few years ago, in the midst of a rough fire season, Northern Wasco County PUD spent more time rebuilding neighboring utilities’ equipment than its own. In a time of need, public power providers turn to cooperation and helping others.

“We know that eventually it might be us who needs the help,” Roger says. “Pay it forward, or do a good turn daily, however you look at it.” ■

Celebrating National Cooperative Month and Public Power Week

Electric co-ops join credit unions, food co-ops and other member-owned businesses each October to celebrate National Cooperative Month. Public power utilities across the U.S. celebrate Public Power Week the first full week of October.

By understanding what makes your member- or community-owned utility special, you can better benefit from its offerings.

- ▶ There are 834 distribution electric co-ops and 2,006 publicly owned utilities nationwide.
- ▶ PUDs have an average of 48 customers per mile of line, while co-ops average 7.4 customers per mile.
- ▶ Co-ops and public power providers provide power to a combined 91 million customers, with public power serving 49 million, and co-ops serving 42 million.

Evolution In Electricity

Battery advancements may change the game for electric utilities and make integrating renewable technologies easier

By Paul Wesslund



AES Distributed Energy worked with Kaua'i Island Utility Cooperative on the world's largest operational solar-plus-storage system. The 28-megawatt solar plant in Lawai is connected to a 100-megawatt-hour battery energy storage system, providing cheap, clean energy when it is most valuable, instead of just when the sun shines. PHOTO COURTESY OF AES

Business is betting big on batteries in a way that could streamline the electricity service in your home.

Battery production capacity has grown eightfold during the past eight years, mostly to meet demand for the rapidly expanding electric vehicle market. Companies believe expansion will continue, so they plan to build new manufacturing plants in the United States, Europe and Asia that will increase production to five times the current capacity in the next eight years.

As with other technologies, more production means improved performance and lower prices, says Jan Ahlen, director of energy solutions for the National Rural Electric Cooperative Association.

"Batteries are becoming better, faster and cheaper," Jan says. "As more and more of these new manufacturing plants get built, there are economies of scale that are bringing down the prices."

Batteries developed to make electric vehicles run better are being connected to one another to make utility-scale batteries to store energy.

A New Tool for Electric Utilities

The U.S. Department of Energy's Energy Information Administration reports utility battery storage capacity has quadrupled in the past five years. During the next three years, the EIA predicts utility battery capacity will triple, and could supply enough electricity for 2.5 million homes.

Although that is a small share of the electricity market, the effects of



utility battery use can be huge.

Jan calls these batteries "the Swiss Army knife" of the utility industry because they can be used for different applications and reasons.

- **Timing for the best price.**

The cost of the electricity to a utility varies throughout the year and even the day as demand for electricity changes depending on things such as the need for heating or air conditioning. If a utility could buy electricity when it is the least expensive and store it in a battery, then draw from the battery when market prices for electricity are highest, it would result in cost savings that could be passed on to the consumer.

- **Helping renewable energy.**

One factor preventing greater use of renewable energy is a lack of solar power at night or wind energy in calm weather. Batteries could store electricity during peak production, making renewables more useful.



A worker with Green Power EMC works on a battery energy storage system that backs up a solar site. The company provides renewable energy to 38 Georgia electric membership corporations. PHOTO BY DENNIS GRAINER

Future of Energy Storage

By Maria Kanevsky

Energy storage technology is extremely versatile. It is small enough to fit in your phone or large enough to power your entire home.

Many people are familiar with small-scale batteries for handheld devices, but utility-scale batteries take energy storage to a new level. The ability to store energy helps ensure energy demand meets supply at any given time, making electricity available when you need it.

The most widespread form of energy storage in the U.S. is through pumped hydropower—a form of mechanical energy storage. Pumped hydropower energy storage has been used for several decades, and makes up about 95% of the country's utility-scale energy storage.

Energy is stored by pumping water uphill from a lower elevation reservoir for storage in an upper water basin. When energy is needed, the water is allowed to flow through an electric turbine to generate energy, the same way it flows through a hydroelectric dam.

This is the cheapest way to store large amounts of energy, but is largely dependent on the surrounding geography and ecosystem.

Batteries are quickly gaining attention as another form of energy storage. In 2018, the power capacity from battery storage systems in the U.S. more than doubled from 2010.

The most common type of battery chemistry is lithium-ion, which has a high-cycle efficiency and fast response time. Ninety percent of large-scale battery system capacity in the U.S. uses lithium-ion chemistry.

Less-common battery types for utility storage include lead-acid batteries, nickel-based batteries and sodium-based batteries. However, each chemistry has varying limitations.

Beyond pumped hydropower and batteries, there are a few other forms of energy storage used at a utility scale: thermal, hydrogen and compressed air.

Energy storage plays a crucial role in incorporating renewable energy into our electric grid. Solar and wind energy are weather-dependent, so when energy demand is low but energy supply is high from the sun or wind, storing the excess energy makes it possible to use it later when electricity demand is higher.

As renewable energy becomes more prevalent, energy storage will help create a more resilient grid.

Although battery prices have decreased steadily the past several years, energy storage can be expensive to attain. Currently, there are 25 gigawatts of electrical energy storage capacity in the U.S. Experts expect capacity to grow.

As technologies improve, equipment costs decrease and more renewable energy is generated, utility-scale energy storage has the potential to continue expanding in the coming decades. ■

- **Construction management.**

Batteries could defer the need to upgrade or replace existing utility infrastructure, such as substations, allowing a utility to save money on expensive upgrades.

- **Utility outage management.**

Microgrids designate high-priority parts of the larger electric grid—such as hospitals—to help a community manage during a power outage. Those areas might have extra wiring or power sources, such as small generators or utility-scale batteries.

Consumers at the Forefront

Government policies drive the use and development of utility-scale batteries. Several states are directing utilities to consider batteries as part of power restoration plans, or to meet renewable energy goals.

For decades, one of the fundamental truths of the electric power industry has been that electricity can't be

stored. Electricity had to be delivered immediately to homes and businesses through a precise network of wires, transformers and other equipment.

Even just a few strategically placed batteries could change that structure.

In addition to creating options for utility operations, it gives consumers more choices.

High-end electric vehicle maker Tesla took one of its vehicle batteries and redesigned it to hang on the wall of a consumer's living room. Called the Powerwall, Tesla promotes it as backup power in case of an outage, or to store energy from rooftop solar panels for evening use.

"Batteries are opening up many new opportunities for utilities to help provide more affordable and reliable power for their consumers," Jan says. "The other implication is it's part of a larger trend of putting the consumer at the forefront now more than ever and giving them more choices." ■



Start thinking about compost as we head into fall. ADOBE STOCK PHOTO BY MARINA LOHRBACH

Feeling Clueless About Compost?

As leaves fall and yard debris bins fill up, it's a good time to think of a different solution to having all those resources trucked away.

"Compost is good for the environment and for the garden," says Ross Penhallegon, horticulturist with Oregon State University's Extension Service. "You take all these things you don't know what to do with—grass clippings, leaves, garden refuse, anything left over—and throw it into the compost pile. Then it decomposes and you put it back into the soil. It's a sustainable system."

Compost provides inexpensive, nutrient-rich material.

"It's one of the best soil builders there is," Ross says.

Ross teaches the "one-third" system of composting: Layer thirds of manure or carbon material, a nitrogen material and a soil. The carbon ingredient—known casually as brown stuff—includes dried

leaves, woody plant prunings, straw and sawdust. The nitrogen part—or green stuff—is composed of grass clippings, soft prunings and animal manure.

Other things such as coffee grounds, tea leaves, eggshells and kitchen scraps can be thrown in as well, but Ross warns they can attract unwanted guests such as rats, opossums and raccoons. Don't add pet waste, meat, dairy products, fats, or diseased or poisonous plants.

Getting the right amount of air and water into the pile is key. You don't want too much water, or the microbes and other critters that break down the material can't do their job. On the other hand, a too-dry situation stops the process, too.

The idea is to keep the pile moist but not soggy, especially during winter. Too-little air can also bring decomposition to a halt. The more you turn the pile, the more air gets introduced, keeping everything on track. ■

Composting Guidelines

Ross Penhallegon, horticulturist with Oregon State University's Extension Service, offers the following composting guidelines:

- ▶ Locate the compost pile on well-drained soil in sun or shade. Place on plastic to prevent unwanted insects from moving into the compost pile.
- ▶ You can build containers out of materials such as wood pallets, concrete blocks or chicken wire, but a large pile works equally well.
- ▶ Start a pile with a layer of twigs or small branches to enhance air circulation and drainage.
- ▶ Add material—carbon, nitrogen and soil—in three layers of about 2 inches. You can repeat the layers, but don't make the pile much taller than 3 feet.
- ▶ Sprinkle the pile with water. Check moisture periodically by squeezing a handful of compost ingredients. It should feel like a wrung-out sponge. If it's too wet, add dry material and turn to mix.
- ▶ To retain heat and keep rain from saturating the pile, cover it with a piece of plywood, plastic, tarp or burlap sacks.
- ▶ Turn the pile once a week to keep air circulating. Re-cover the pile after turning.
- ▶ Check the pile periodically to monitor the amount of heat generated. If it is heating up, the right balance of ingredients has been added. If it is not, add green material and turn the pile to mix and aerate. Water if necessary.
- ▶ After two to three months, the pile should no longer heat up and will smell and look like fresh, crumbly soil. The original material shouldn't be readily recognizable, although small pieces may still be evident.



Kym Pokorny

is a communications specialist for Oregon State University's Extension Service. Previously, Kym worked for The Oregonian, most notably covering gardening and horticulture.



Fall is an ideal time to shop for and plant trees. ADOBE STOCK PHOTO BY PASKO MAKSIM

Welcome Fall With Fiery Foliage

When trees get dressed in fall colors, it's time to go shopping.

"If you're specifically interested in fall color, it will soon be the time to start looking," says Neil Bell, a horticulturist with Oregon State University's Extension Service. "There are already some trees starting to display color."

First, though, Neil recommends doing some research. Walk around neighborhoods, parks and public gardens to get ideas. If you can't identify the trees you like, snap good photos, pick up several leaves or ask the owner for a cutting. Take them to a nursery or local extension office for identification. You can also cut out pictures from magazines and flip through gardening books to find possibilities.

After filtering down your favorites, be absolutely sure about size, soil and sun requirements. You don't want to be stuck with a 60-foot tree where a 30-foot tree should be.

"The biggest problem people have," Neil says, "is that a tree gets too large, and then they are forced to prune just to reduce the size of the tree, which can look horrible."

Topping—or cutting off the tips of trees—is especially undesirable. The practice increases the possibility of disease and gives pests more access. Topping also encourages weaker growth and alters the shape.

Before buying, find out if the tree needs sun or some shade, and if it requires irrigation in summer.

Fall is an ideal time for planting. Soil is warmer than in spring, so roots get a good head start. The weather is cool so trees are under less stress. Rains will start soon and reduce the need for watering.

"All in all, fall is the perfect time to select and plant a tree," Neil says. "Wait for the leaves to start changing color and go for it." ■

What to Plant

Here are several of horticulturist Neil Bell's recommendations for trees with excellent fall color:

▶ **Red maple (*Acer rubrum*).** Not much beats the vibrant scarlet color this maple displays in autumn. Make sure you have room for it, though; red maples grow quickly and eventually reach 60 feet tall and 25 to 35 feet wide. Hardy to Zone 4.

▶ **Vine maple (*Acer circinatum*).** Native to the Northwest, vine maple really comes into its own in fall when the foliage lights up in lively shades of red and orange. It is a useful small tree up to 15 feet that often grows with multiple trunks. It is not suitable for full sun. Hardy to Zone 6.

▶ **Paperbark maple (*Acer griseum*).** Unmistakable cinnamon-colored peeling bark and glowing orange-red fall color make this slow-growing, small tree (25 feet eventually) a much-loved specimen in any size garden. Prefers a partially shady exposure. Hardy to Zone 4.

▶ **Katsura (*Cercidiphyllum japonicum*).** The unmistakable heart-shaped leaves emerge purple in spring and seem to turn buttery yellow overnight in autumn. Falling leaves smell wonderfully like burnt sugar. The form is tall—up to 60 feet—and rounded. Hardy to Zone 4.

▶ **Sourwood (*Oxydendrum arboreum*).** A little-known but deserving tree that has the unusual feature of sending out long streamers of fragrant, white flowers in fall just as the foliage turns to heady shades of red, orange and purple. At 25 to 30 feet tall, sourwood fits nicely into a small garden. Hardy to Zone 5.

▶ **'Eddie's White Wonder' dogwood (*Cornus kousa*).** A spectacular cultivar of Korean dogwood that is blanketed in large, white star-shaped flowers in spring and strawberry red color in fall. Its 20-foot stature makes it ideal for small spaces. Hardy to Zone 5.

▶ **'Wild Fire' black gum (*Nyssa sylvatica*).** Glossy green leaves emerge a deep red in spring and end the season with a spectacular show of orange, yellow, scarlet and purple. Has a nice pyramidal shape and grows up to 20 feet. Hardy to Zone 6.



Kym Pokorny

is a communications specialist for Oregon State University's Extension Service. Previously, Kym worked for The Oregonian, most notably covering gardening and horticulture.



4 Ways to Stay Cyber-Safe

By Paul Wesslund

The internet can be dangerous and scary. We've seen the lists of ideas for better cybersecurity. The problem is, the tips aren't helpful unless we act on them.

We know we should use long passwords and change them regularly. But do we?

Here are three reasons to encourage you to make yourself safer from cyber scammers and hackers, followed by four tips to put into action.

Be afraid. Be very afraid. Bad things really can happen on the internet. A smooth-talking con artist on the other end of the phone can charm or bully you into revealing your Social

Security number or credit card number, or malware can monitor your keyboard and capture your password to your favorite website. Criminals use this information to access your credit cards and bank accounts, especially if you use the same password for multiple accounts.

Make a plan you will act on. Think about what's on your computer or smartphone that you don't want to lose or give away. Keeping that top of mind can help motivate you to take steps to prevent you from being a victim of cyberattacks.

Maybe you know you won't keep track of different passwords on all your internet-connected devices, but you

are more likely to regularly update a strong password on the server in your home. That can be a good option if all your connections come through that one point of entry.

The time is now. Experts warn of a triple-threat these days. First, scammers are taking advantage of COVID-19 uncertainty, from offering phony cures and tests to promises of financial assistance. Second, with more people working from home due to social distancing, there may be fewer office-based security measures in place. Third, the FBI warns that increased use of mobile banking offers more chances for cybercrime.

October is National Cybersecurity Awareness Month, which can be a great time to act on this year's theme, "Do your part, #BeCyberSmart—If You Connect It, Protect It."

Here are four cybersecurity tips to keep you safe.

Use strong passwords and change them regularly. Many sites and apps make changing your password easy to do by clicking on the "forgot your password" link. The best passwords are *at least* eight characters and include different types of characters. Try using a memorable verse from your favorite song and adding a few numbers and special characters



ADOBE STOCK PHOTO BY TIERNEY

(\$! _ &) or even a space.

If you are like most people, remembering all your passwords is a challenge. Choose a security option based on the value of what you're protecting. The options to secure your bank and retirement account passwords might be different than how you store your social media passwords. Password apps keep them in one place and may be a great option for *some* passwords, but you can be in big trouble if you forget the password that lets you into that app.

Keeping passwords on paper in a notebook might be more secure than using the same password for everything, depending on how hidden that paper is from other people at the office or kids at home.

Install software updates.

Apps and operating systems periodically send updates. Install them. They often include protections against the latest security threats.

But remember: Those

updates come from the apps and not emails or social media notices. An email containing an update may be a scam. Instead of clicking on the link, go to the app's website to see if updates really are available.

Use two-factor authentication. That's just a fancy term for a technique that adds an extra layer of security to a password.

Banks increasingly use this system. When you try to connect with your bank, it may text a code number to your phone that you type in to complete the sign-in process for your account.

Answering a security question is similar to having a password. Both are something you know. That won't provide the same level of security as a second factor, which will be something you have, like your phone to receive a passcode, or something you are, like a biometric fingerprint—which is in *addition* to something you know, like a password or

security question.

Think before you click. Be wary of any offer or link that comes through the internet, whether by email or social media, or even a phone call instructing you to get online.

Don't click on a link unless you know for certain what it is. Ideally, you should be expecting to receive the link.

Even emails from friends should be suspect. Hackers can impersonate someone you know to send a link or an attachment. Both can result in you downloading malware that can take control of your computer in ways you may not be able to detect. If you have any doubt—whether it's a link to a software update or an attachment to a funny cat video—call the person to find out if they really sent it.

To take advantage of the great promise of the internet, we must recognize the peril. These simple steps can keep you reasonably safe. ■



**CYBERSECURITY
AWARENESS
MONTH**

Connected devices are an integral part of how we communicate and access services essential to our well-being. Data collected from these devices can include highly specific information about a person or business, which can be exploited by bad actors for criminal gain.

National Cybersecurity Awareness Month is recognized each October. Weekly themes this year focus on understanding and following security hygiene for connected devices and home networks; maintaining the security of connected devices for remote workers; the pivotal role connected devices play in the future of health care; and the overall future of connected devices.

If everyone does their part—implementing stronger security practices, raising community awareness, educating vulnerable audiences and training employees—our interconnected world will be safer for everyone.

Visit staysafeonline.org.

Are You Prepared?

By Courtney Cobb

Are you and your family prepared if a disaster strikes today? Do you have a go-bag ready with essentials and critical paperwork? What about supplies for a month?

September is National Preparedness Month. Now is a great time to evaluate your preparedness for any emergency that might occur.

Make Your Plan

As you start to make your emergency preparedness plans and kits, there are several sites you can visit to get more information and helpful tips.

- ▶ www.sheriff.deschutes.org/divisions/special-services/emergency-management
- ▶ www.ready.gov
- ▶ www.redcross.org

“Preparedness means taking personal accountability and responsibility for our safety and the safety of our family in times of crisis,” says Ashley Volz, Deschutes County Sheriff’s Office emergency services coordinator. “Being prepared also ensures that first responder resources—always stretched critically thin during emergencies—can focus on those most in need. It’s your duty to ensure your safety and the safety of your family during a crisis by being prepared.”

A great place to start is to create a 72-hour go-bag. It should contain everything you or your family will need if you have to leave your home in a hurry.

“If you were evacuated for a wildfire or other emergency, some of the things you’d want to have with you would include important documents: birth and marriage certificates, Social Security cards, etc.,” Ashley says.

The bag should also contain a change of clothes, spare hearing-aid batteries or contact lenses, medications, water and a



Emergency Alerts

Stay informed about important information during an emergency by signing up for alerts.

- ▶ Deschutes County: www.deschutes.org/911/page/sign-deschutes-emergency-alerts
- ▶ Jefferson County: member.everbridge.net/892807736724035/login
- ▶ Crook: <https://member.everbridge.net/index/892807736723739#/signup>

few days’ worth of high-calorie food.

Once the go-bag is ready, stock up supplies to meet the needs of you and your family for one month.

“Because Central Oregon relies heavily on outside imports—and because of our geographic position in the middle of the state—supply chains could easily be

interrupted to where it takes weeks or even months for commodities to reach us,” Ashley says.

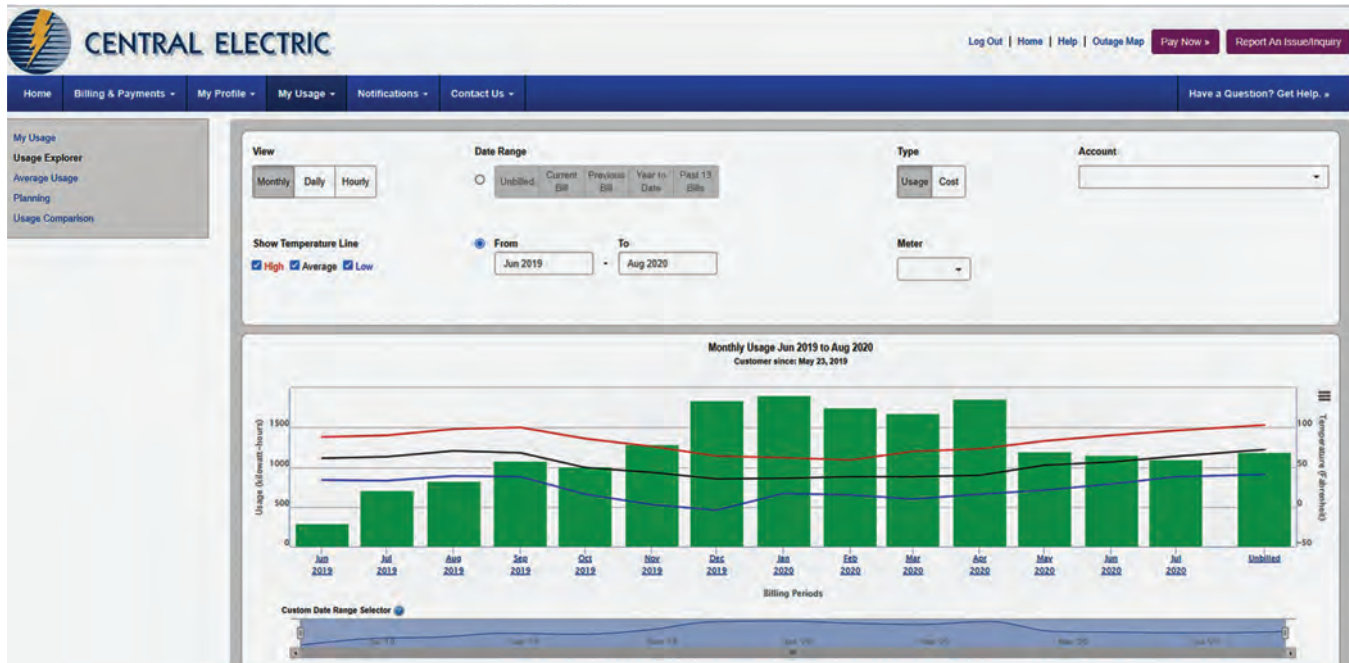
As you build up your supplies, imagine what you would need to be comfortable, fed and sheltered in your home—especially if you didn’t have power, running water or any other amenities.

Ashley says to think of it like camping at home.

The rule of thumb is to have at least one month of food, water and other essentials for humans and animals in your home.

One final tool of preparation is to sign up for emergency alerts.

“These systems are how emergency management notifies you of evacuations or other critical incidents happening in your area,” Ashley says. ■



SmartHub online offers a host of features, including securely updated account information and different use measurements.

SmartHub: Your Account at Your Fingertips

By Courtney Cobb

In today’s fast-paced world, Central Electric Cooperative members have their account information and energy use right at their fingertips.

Through CEC’s SmartHub program, members can manage their accounts from their computer, tablet or mobile device.

“SmartHub allows members to easily and securely access their accounts to make payments, make changes to their account information, print billing statements, and view and monitor their daily usage,” says Ryan Davies, CEC director of customer and energy services. “The program also provides members another method of contact.”

Members who go with paperless billing use the SmartHub platform. The program sends an email reminder when bills are available, as well as an email receipt after making payment.

“It’s very convenient for our members to use SmartHub to make one-time payments or set up auto-pay, but they are not required to pay their bills online to use all the features of SmartHub,” Ryan says.

An often-overlooked tool is the ability

Register for SmartHub

Online:

- ▶ Go to www.cec.coop.
- ▶ On the main screen, click Register for Online Access.
- ▶ On the New User Registration screen, fill out your billing account number, last name or business name, and email address. Click submit and follow further prompts.

On the mobile app:

- ▶ Download SmartHub from the app store for Apple or Google Play for Android.

- ▶ Find your service provider by either your zip code or by provider name Central Electric Cooperative Inc.
- ▶ Confirm your provider.
- ▶ If you don’t have an online SmartHub Account, click Register Now. On the following screen, enter your billing account number, last name or business name, and email address. Click submit and follow further prompts.
- ▶ If you already have an online SmartHub Account, enter your email and password.

for a member to track home power use.

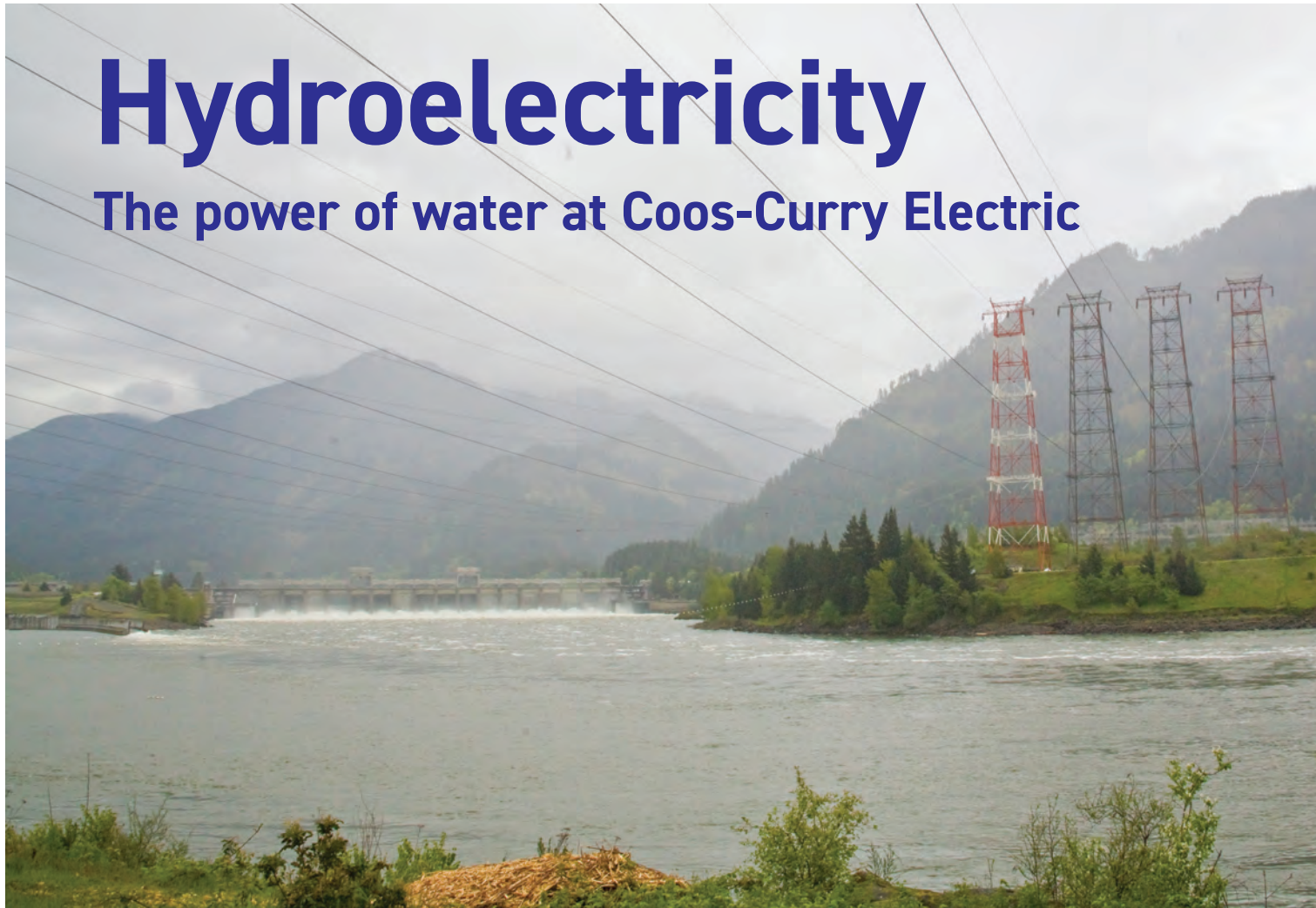
“The usage explorer and comparison tools allow members to monitor their energy consumption and compare to previous months and years,” Ryan says. “Members can see their patterns and make adjustments to their energy usage throughout the year.”

SmartHub’s energy use tools allow members to see data for up to three years and print use-history graphs. Members thinking about lowering their energy consumption can find quick and easy tips on the cooperative’s website

at www.cec.coop under the Energy Efficiency tab.

Members do not need to sign up for paperless billing to view their use. Members can use SmartHub to look at their use without affecting their current billing preferences.

SmartHub also allows members to make inquiries on their accounts. Requests include updating account information, service changes, signing up for new service, general questions about billing or programs, or signing up for green power or autopay. ■



Hydroelectricity

The power of water at Coos-Curry Electric

By Kelsey Bozeman

Since wind and solar get much of the public's attention these days, it can be easy to forget hydropower remains the world's largest form of renewable energy.

In the Pacific Northwest, water energizes just about everything—from your coffee maker at home to many electric vehicles on the roadway.

As of 2019, hydropower accounted for about 6.6% of the nation's power supply, ranking it as the largest renewable resource in the United States. It accounts for more than 90% of all electricity that comes from renewable resources, including solar, wind, biomass and geothermal.

While utilities across the country struggle to secure a clean, reliable and affordable power supply, more than 84% of the electricity distributed by Coos-Curry Electric

Cooperative comes from clean hydropower.

A Brief Hydropower History

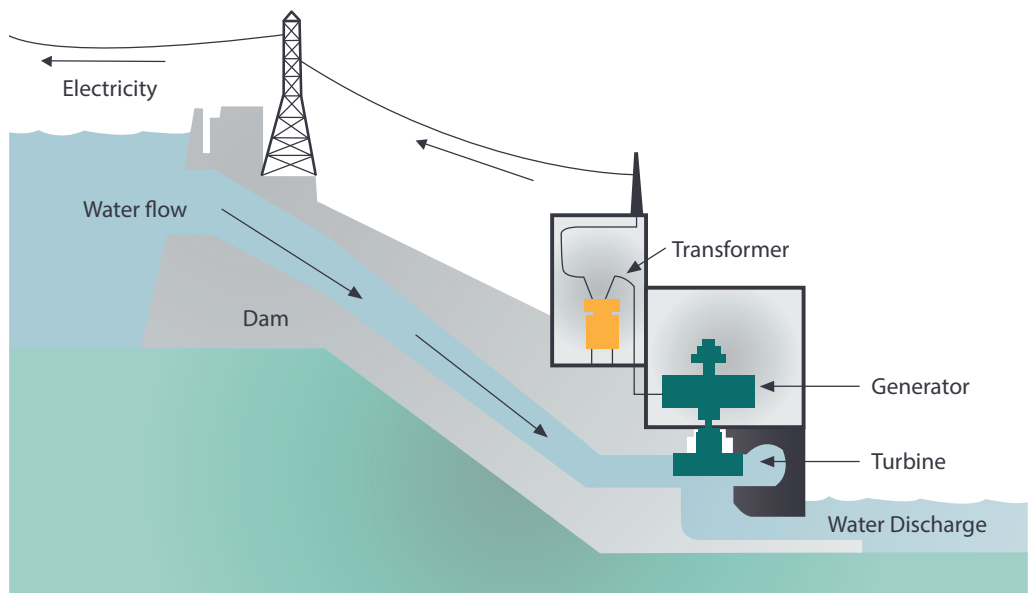
Hydropower is one of the oldest forms of generating energy. Humans have been using the power of water to perform work for thousands of years.

More than 2,000 years ago, Romans used water to turn paddle wheels to grind their grain. Later, in the 1800s, hydroelectricity was industrialized to power lumber mills using Pelton wheels.

In 1882, Appleton, Wisconsin, became the first central station hydroelectric generation facility in the United States, producing 12.5 kilowatt-hours of power. This was enough electricity to power 250 lightbulbs.

Since then, many hydropower facilities have been built in the United States, including Hoover Dam in 1936 and Grand Coulee Dam in 1942.

By the 1940s, hydropower production accounted for approximately one-third of the



ABOVE: How electricity is generated at a hydroelectric dam. **OPPOSITE PAGE:** Transmission lines carry clean energy from Bonneville Dam on the Columbia River to homes and businesses throughout the West.

United States' electrical energy. Today, there are about 1,460 hydropower facilities energizing communities in the U.S.

How Does it Work?

Hydropower is derived from the energy of falling water. A typical large hydropower system functions by storing water—potential energy—in a reservoir or river behind a dam. This water is released from the dam and into the turbine, which rotates and turns a generator.

The water is discharged on the downstream side of

the dam while the energy generated is distributed to communities across the region.

Benefits of Hydroelectricity

Hydropower is renewable energy replenished by nature. The water that drives hydroelectric facilities is derived from melted snow and rainfall held in a reservoir or basin.

The water used to produce hydroelectricity is a clean fuel source and is climate-friendly. There are no carbon-emitting fossil fuels such as coal or natural gas.

Hydropower is an extremely flexible and dependable resource. The power output can increase or decrease almost

instantaneously, allowing it to easily adjust for demand. This is accomplished by controlling the amount of water that flows through the dam and into the turbines.

For example, wind power can be intermittent. If a lack of wind reduces the power generated from a wind farm, a hydropower facility can increase the output to provide essential power.

Hydropower remains consistent compared to other forms of generation. Variable sources such as solar and wind may not be able to produce energy dependably. Since solar and wind energy rely on sun or wind, electricity cannot be

generated when the sun doesn't shine or the wind doesn't blow, which causes a need for alternate power sources.

Lastly, hydropower is one of the least expensive forms of electricity because the energy source of falling water is free. Hydropower often offers the lowest cost of electricity across all major fossil fuels and renewable energy sources.

This low-cost source of power provides households in the Pacific Northwest with generally lower power costs than the rest of the nation—a benefit evident on your power bill. ■

Source: www.eia.gov/energyexplained/hydropower



Good Neighbor Food Bank volunteers in Bandon receive a \$2,150 matching donation from Coos-Curry Electric Charitable Foundation and United Way of Southern Oregon.

Making a Difference

Coos-Curry Electric Charitable Foundation and United Way join forces to fight hunger

As closures and social-distancing orders extend across the nation, many people without an adequate food supply in Coos-Curry Electric's service territory are seeking assistance during the COVID-19 pandemic. Changes to employment, lost income and additional factors have pushed individuals in need into a precarious situation of juggling stacking bills or buying a meal.

Coos-Curry Electric Charitable Foundation is working to address food insecurity along the Southern Oregon Coast and inland.

It has teamed up with United Way of Southern Oregon to donate \$13,975 to eight local food banks in Brookings, Gold Beach, Port Orford, Bandon, Coquille, Mrytle Point and Powers.

These volunteer organizations are working to ensure individuals in need are not only full, but are weathering the impacts of the COVID-19 pandemic.

"If we can get them two weeks with food, they can pay their car payments, rent, purchase school clothes," says Kathleen Power of the Bear Cupboard Pantry in Coquille. "That's our goal and we've been doing it." ■



CCEC Launches New Website

We have something shiny and new to share with you! After three months of hard work and dedication, Coos-Curry Electric Cooperative is delighted to announce the launch of its new and improved website at www.ccec.coop.

As your local member-owned cooperative, CCEC's goal is to improve our service and provide our members with a more responsive and easier way to navigate through CCEC information.

The updated website delivers better access to areas most important to our members: My Account, My Cooperative, Outages & Safety, My Energy and News & Community.

In addition, CCEC wants to ensure members have the ability to browse information on their device of choice. We know members' lives are busy and more on-the-go than ever, which is why we designed a site with convenience in mind, regardless if you are working from a desktop computer, laptop or mobile device.

Members can explore information about CCEC on the homepage of our website and find quick links, fresh pictures and important features members are most frequently searching for.

Stay in the know with the Recent News feature, which highlights projects and information about happenings at CCEC.

Whether you are managing your account, learning about energy-saving opportunities, finding information on our community programs or discovering the benefits of co-op membership, our new website is a reliable and accessible resource for all your needs.

A new and shiny website would not be complete without integrated social media feeds for Facebook, Twitter and Instagram to foster enhanced communications with our members. CCEC will constantly update content with helpful information, programs, news and announcements.

CCEC would like to thank our amazing team of staff who spent their time and energy to include content to the site to make it what it is, and our partners at Co-op Web Builder for the efficient support they offered when designing the site.

For questions, feedback or comments you would like to share with our team, please do so on our "Contact Us" page under the My Cooperative tab or email member services at ms@cooscurryelectric.org. ■

CVEA Cares For Kids Summer Activity Program

CVEA Lineman Walt Lynch generously donated \$2,000 to fund kid's program prizes

Heading into summer CVEA recognized the difficulty local youth had been experiencing as a result of COVID-19. It has been a tough year. To assist with the negative impacts of the pandemic, CVEA created a summer activity program for kids, ages 2-18, to support their physical, social, and mental well-being.

The CVEA Cares For Kids Summer Activity Program provided an opportunity to complete fun, healthy, tasty, and kind activities in order to earn gift cards for local businesses and a chance to win \$500.

According to CVEA CEO, Travis Million, "this program was created by a volunteer group of employees wishing to support our kids and make sure they know that we are all in this together. Our goal for this program was to remind kids there are still so many great things to do, and so much fun to be had, even during difficult times."

There were three age groups (2-6 years old, 7-12 years old, and 13-18 years old) in each district. All participants who completed 10 activities were entered into a drawing, for their age group, for a \$500



grand prize.

The grand prize was funded in part by CVEA Copper Basin Lineman, Walt Lynch. Walt felt strongly that the youth in our community deserved something special, and he donated \$2,000 towards the grand prize to ensure there was a prize big enough to encourage participation from kids of all ages.

CVEA is grateful to Walt for his incredibly generous donation, and the large grand prize worked. In total 153 kids completed activities and submitted their photos. It has been a joy to see all of the fun

and smiles shared with the Co-op.

The \$500 winners were announced on August 10.

Copper Basin

2-6 Thandrew Carlson
7-12 Evelyn Johnson
13-18 Jessica Hale

Valdez

2-6 Carl Hamman
7-12 Paxson Williams
13-18 Madeline O'Neil

CVEA would like to congratulate the winners and thank all of the kids and families who participated. ■

"The kids enjoyed doing all sorts of activities this summer for sure – the kids loved getting mail today. Thank You CVEA!" - Dahlia O'Neil



"Oh wow! Thanks so much! Carl is pretty excited that he won! Thanks for the program!" - Caris Hamman



"The CVEA kids program was a great spark of happiness while enduring the COVID-19 self quarantine of 2020." - Clare Jaeger



Opposite, CVEA Lineman, Walt Lynch, preparing the Co-op float for the 4th of July parade
 Top left, Valdez 13-18 age category winner, Madeline O'Neil, and her siblings posing with the local gift cards they earned from the CVEA Cares for Kids Summer Activity Program
 Top right, winner Carl Hamman with his sisters completing their 'activity in or near water'
 Above left, winner Paxson Williams with his brothers taking a picture with a fish
 Above middle left, Copper Basin 7-12 age category winner, Evelyn Johnson, completing her 'fishing' activity
 Above middle right, Jessica Hale picking up garbage, to check off one summer activity and support her community
 Right, winner Thandrew Carlson chose to pick wildflowers as one of his summer activities

ABOVE PHOTOS BY DAHLIA O'NEIL, CARIS HAMMAN, LARISSA WILLIAMS, CLARE JAEGER, JESSICA HALE, AND ANDREW & KELSIE CARLSON

No Dummies About Safety

OTEC lineworkers perform annual pole-top rescue exercises

By Joseph Hathaway

On a sunny summer day in John Day, Oregon Trail Electric Cooperative line crews buckled their fall-restraint equipment belts, dug their steel gaff spikes into utility poles, and began their annual pole-top and bucket rescue safety exercises.

An Occupational Safety and Health Administration-mandated safety training requirement, the course is designed to evaluate each lineman on his ability to properly rescue an injured and/or stranded lineman.

Each lineman must balance their skills with safety, and climb a pole and rescue a 185-pound training mannequin. The lineman must secure the mannequin using ropes and pulleys and safely deliver it to the ground.

In a perfect world, this is one skill a lineman hopes he never needs to use. But if he does, the training prepares him. While other crew members would likely help during a real-life rescue, this exercise is practiced as a single-man operation.

“During the exercises, no electricity is running through the lines,” says Pat McCluskey, OTEC’s senior operations superintendent. “But attention to detail remains key, and the linemen are evaluated as if every aspect of the training were real, with a focus on the safe and efficient methods

with which the rescue is accomplished. It’ll never be exactly the way they would perform the rescue out in the field. But with this type of training comes repetition, and it allows the linemen the opportunity to have in their mind the things they will need to prepare for.”

The bucket rescue training is similar. Linemen use the bucket on an OTEC service truck to get the mannequin out safely using the lower controls.

“We are not timing their performance,” Pat says. “We are focused on the safe and efficient methods with which the rescue is accomplished.”

During training, mayday calls are relayed to OTEC dispatch and local offices to familiarize field crews with making these calls. The training also gives office personnel practice receiving information and relaying it to 911.

These rescue exercises are some of the many required safety trainings OTEC linemen perform throughout the year.

To further strengthen its high safety standards, OTEC implemented the Rural Electric Safety Achievement Program, which promotes safety among electric cooperatives and elevates OTEC’s internal safety guidelines for the benefit of its employees and members.

Before the onset of the COVID-19 pandemic, OTEC emphasized awareness of



Oregon Trail Electric Cooperative Lineman Jeremy Adair participates in pole-top rescue training in John Day. PHOTO COURTESY OF OTEC

electrical safety in its four-county service territory by performing demonstrations at local schools and community events.

“We’re hoping to resume safety demonstrations at schools and at events around our communities once things return to some sense of normalcy,” says Mike Pommarane, OTEC’s director

of operations. “It’s important for us to show our members that we care deeply about their safety and the safety of the communities by teaching them about the dangers of electricity.” ■

OTEC members can learn more about electrical safety by watching the cooperative’s innovative virtual reality safety videos. Videos are available at www.otec.coop/safety.

Attention, Photographers!

Your photo could be on the cover of Ruralite magazine

Oregon Trail Electric Cooperative is hosting a Ruralite cover photo contest. Winners will be selected by OTEC's communications team.

- Contest is open only to OTEC members.
- Each member can submit up to three photos.
- Submitted photos must be vertical (portrait) orientation.
- All submissions must include the photographer's name and location of the photo.
- All submitted photos must be taken within the OTEC service territory.
- Submissions must be high-resolution digital images in jpeg format, 300 dpi at approximately 8-by-10 inches.
- Prints WILL NOT be accepted.

Email your high-resolution photos to communications@otecc.com. Winning photos will be featured on the covers of the OTEC edition of Ruralite throughout the year. Winners also will receive a \$100 gift card and a poster print of the cover with their winning photo.

Winning Tips:

- Make photos near sunset or sunrise. The light is low in the sky and makes for prettier landscapes.
- Include people doing interesting things such as kayaking, hunting, fishing or biking.
- Get close to your subject so it fills the viewfinder.
- Only send your best photos.

By submitting photos to this contest, you agree to give Oregon Trail Electric Cooperative the right to use submitted photos on the cover of Ruralite magazine and on the OTEC website.



Contest Deadline: December 18, 2020

Currents

MARLBORO ELECTRIC COOPERATIVE

SEPTEMBER 2020

Your Pick for a Great Time

McArthur Farms educates and entertains
with old-fashioned farm fun

Page 6

PHOTO BY JODY JOHNSON



DIY Kitchen Renovation
Page 28

Electric Farming Trends
Page 32

An aerial photograph of a farm at sunset. The sky is filled with vibrant orange and yellow clouds, with the sun low on the left horizon. Below, a large green field is visible, featuring a prominent red barn with a white roof on the right side. Other farm structures, including a smaller red barn and a white building, are scattered across the landscape. A winding road or path is visible in the distance, and a small pond is on the left. The overall scene is peaceful and scenic.

Your Pick for a Great Time

McArthur Farms educates and entertains the community with old-fashioned farm fun.

PHOTOS BY JODY JOHNSON



From left, Tabatha Freeman, Larry Howard, Rebecca McArthur and Cindy Ainsworth make McArthur Farms a popular agritourism destination.

By Jodi Helmer

Growing up in Bennettsville, Rebecca McArthur remembers climbing pear trees, riding tractors, picking pecans and eating just-picked produce on her grandparents' farm.

"Those are memories that you cannot place a dollar figure on," she says.

Rebecca knows the number of family farms is dwindling and children are more disconnected from agriculture than ever, but she had never considered turning her farm into an education and entertainment destination. Her plans changed around 2007

when a local teacher pulled up to the farm and asked if she could bring her kids to tour Rebecca's farm.

"I said, 'Why, certainly,' having not even a game plan for what to do," Rebecca says. "We started that year and created some hay bale mazes, and every year it's grown. Now we have one of the largest agritourism parks in South Carolina."

On fall weekends, thousands of families flock to the farm to experience the 12-acre corn maze, pumpkin trail, tower of slides, cow train, wagon rides, pedal carts, tire climbing wall, duck races and jumping pillow. The farm even turned

a John Deere combine and cotton picker into larger-than-life slides, giving children an up-close look at the size of the farming equipment required to plant and harvest crops.

The agritourism destination has been voted Pee Dee's best attraction.

In addition to the regular activities, McArthur Farms hosts school field trips, birthday parties and catering for special events, as well as seasonal events such as a strawberry festival, harvest festival, pumpkin smash festival and breakfast with Santa.

While smashing pumpkins and pie-eating contests were

designed for fun, McArthur Farms is more than just a rural theme park.

Rebecca is a dedicated farmer. She grows traditional row crops such as corn and cotton, and vegetables for a U-pick operation and the on-site farm market, tending to more than 400 acres of land. The agritourism operation is just one element of McArthur Farms and part of an overall goal of diversifying the farm to ensure its success.

"When I first started farming, I was hustling strawberries, and a neighbor—a regular row crop farmer—saw me loading watermelons up

and hustling them on the side of the road,” she says. “He said, ‘Where are you going with all of those watermelons?’ I told him, ‘You need to diversify.’ Having worked in agriculture and seeing farms really fall on hardship, I knew I was going to need to have a good diversification for my farm to always be present.”

Agricultural Education

During school field trips, “Farmer Rebecca” talks about the challenges farmers face, from hurricanes and drought to the coronavirus pandemic. She hopes educating students about the art and science of farming builds greater agricultural literacy and encourages respect for family farmers.

“Folks, even right here in rural America, do not understand where their food and clothes come from,” she says. “Just because you see strawberries and watermelons in the grocery store in December doesn’t mean they grow locally all year long.”

For younger students, one of the biggest surprises on the farm tour is learning that their jeans and T-shirts started out as cotton seeds grown by farmers just like Rebecca.

In the spring, students go into the strawberry fields and learn about the life cycle of strawberries and the important role pollinators play in producing their food. Rebecca also explains the reasoning behind the plastic mulch laid out in the fields.

“We put our hands on the plastic, and I explain how that warms up the soil and allows the roots to grow because they’re in a warm bed,” she says.

School field trips include important lessons about the economics of farming.

Students in older grades calculate how much it costs to plant a corn maze and are surprised at how much farmers spend on a single bag of corn seed. Their guesses often range from \$20 to \$100 for a 50-pound bag. Rebecca stuns them speechless when she explains corn seed can cost upward of \$500 per bag.

“I have a cotton picker slide, and those are things that a lot of children would never be able to get up close to,” she says. “Here, they actually get to walk up next to them and see how big it is. I talk to them about how much it would cost if I had to call up the John Deere dealership and order this piece

of equipment. We try lots of different aspects for education out here.”

The Accidental Farmer

While it is obvious Rebecca is passionate about farming, she never planned to pursue it as a career.

Rebecca worked in outside sales for an agriculture company during college. The job taught her a lot about seed fertility, soil science and other aspects of farming, but she viewed it as a way to pay the bills while she pursued her nursing degree. She started growing strawberries while working in the intensive care unit at a local hospital, expanding her operation from a single tent in a field to 40 acres of strawberries—all while tending to critically ill patients.

“I decided that I needed to do one or the other full time, and I decided on farming,” Rebecca says. “People always ask, ‘Oh, you don’t like nursing?’ I love nursing and I love being a caregiver, but farming is a form of caregiving, too. It’s tending the land, it’s tending the people that you feed off the land, it’s growing memories and cultivating experiences when folks come

to the farm that they will have with them forever.”

Rebecca has made a lot of her own memories on the farm and developed relationships with farmers near and far who have lifted her spirits, carried her through difficult times and made her a better farmer.

During a North American Farm Director Marketing Association conference in Pennsylvania in 2010, Rebecca met Craig and Sara Jane Underwood, husband-and-wife farmers and ranchers from California, who took her under their wing.

“I was so amazed at everything they did and thought, ‘Oh my gosh, they are just the coolest,’” she says. “Miss Sara Jane gave me a handwritten list of American companies that she used at their farmers market. Their friendship and advice are instrumental to me being where I am.”

Closer to home, Rebecca credits Bill O’Neill, a friend and farmhand from Darlington, for helping with the day-to-day operations of the farm.

“I cannot repay them for everything they’ve ever done for me,” she says. “I just hope to learn and be able to give back to other folks in some manner.”



Cultivating Community

Rebecca gives back to her community in countless ways. In addition to providing agricultural education and a destination for family fun, she hosts an annual charity event called Belles in Boots.

The October event raises funds for local and national charities. The 2020 event—Belles, Boots and Buckles—includes light bites, cocktails, mocktails, live entertainment, prize drawings and an artisan market. The money raised from the ticketed event will go to two local charities: Community Kitchen of Bennettsville and Hope House in McColl. Both nonprofit organizations support neighbors in need.

“We always try to give back,” Rebecca says.

Perhaps the biggest contribution to the community is the Market at McArthur Farms, which opened in 2007. In addition to selling fresh produce grown on the farm, McArthur sources produce ranging from muscadine grapes and peaches to sweet potatoes and apple cider from other local farms. It’s one more way Rebecca supports local agriculture.

“My goal and my desire was always to have fresh stuff from here and be able to work with other local farmers in providing local South Carolina products through our market,” Rebecca says.

The always-expanding market, which started out as a small tent in the middle of a field, is not just stocked with produce. It also is the place to find fresh baked goods, including cakes, cookies and pies. The peach, blueberry, strawberry, apple and sweetpotato pies, and specialty items such as fudge-dipped strawberries, are made with



ABOVE IMAGES: Guests can buy farm-fresh produce or visit the market for a delicious treat. **OPPOSITE PAGE:** McArthur Farms offers fresh produce, education programs and seasonal entertainment.

local produce. More than 20 varieties of fudge are made on the farm.

The Market at McArthur Farms is a shopping destination for locals and passersby and has developed a loyal following.

“There are folks who have been shopping here from the time I had a tent in the field,” Rebecca says. “They’ve been there through the loss of my parents and emailed me sentiments of sympathy after

our farm dog, Rudy, was killed. Some people stop in and tell us, ‘We stop here every year on our way to the beach and back,’ and the children who were once on their hip and now are standing shoulder-to-shoulder with them. We love that.”

Rebecca says she hopes the farm—and her commitment to living her dream and supporting local agriculture—serves as an inspiration to others.

“There are good people in

our county, and I hope that we can all work together and see our community prosper,” she says. “Farming gives me the opportunity to meet people—good people—and work the land and see folks grow. I’m always striving to make my farm better, and we want to do our part in this portion of the county to make it better not just for the folks who travel through here, but the hometown crowd who are here.” ■



Assistant General Manager Phil Cook grew up in Safford and Pima. He is excited to be back home after working for the Central Arizona Project for 23 years.

A new face at Graham County Electric Co-op

Phil Cook Returns Home

It seems like not too long ago, you were able to see the faces of our employees. However, our lobby has been closed since March 16 as COVID-19 infection rates continue to rise in Graham County.

One of the faces you likely haven't seen is GCEC's newest employee, Assistant General Manager Phil Cook. He joined the management team in late February.

Returning to the Gila Valley, Phil retired from the Central

Arizona Project with more than 23 years of service. At CAP, Phil was the director of technology and managed 98 employees, including field crew operations and technology departments, and was responsible for computer system infrastructure and critical operation systems.

"I believe my career has been defined by troubleshooting system, process and people challenges," Phil says. "I enjoy working with people and

finding creative ways to solve problems. I am excited to be back home, and appreciate the challenge and opportunity to work for the co-op and the members."

Prior to CAP, Phil worked for Freeport MacMoran when the mining company was known as Phelps Dodge, Stapleton and Denver international airports, and Gila Communications.

He earned a bachelor's degree in business

administration from Western International University. In 1989, Phil was honorably discharged from the United States Marine Corps.

Phil, who grew up in Safford and Pima, graduated from Pima High School. He married Becky (Boren), who also grew up in Pima. They have three daughters, a son and a granddaughter. Phil loves spending time with his family and enjoys the outdoors, golfing, hunting and fishing. ■



ABOVE: Wesley Clark, left, and Tony Moody fit underground pipe that will house electric lines. BELOW: Underground electric lines eventually have to come up for air. Tony connects an underground service to the overhead power system.



Stay Away From the Big Green Box

Pad-mounted transformers pose the same safety risks as overhead power lines

Electricity can flow into your neighborhood over your head or under your feet.

It is easy to spot wires on top of wooden poles and figure out electricity is delivered by overhead power lines. There is also a way to deduce you have underground lines. Look for green metal boxes about the size of a mini-fridge sitting in a yard.

The boxes are pad-mounted transformers. They do the same thing as the gray transformer cans on top of the poles. They step higher-voltage electricity down so it's more useful and safer for your home. The major difference is a pad-mounted transformer connects to underground power lines.

Escambia River Electric Cooperative has line crews dedicated to installing underground power lines. While the concept of power delivery for overhead and underground power is basically the same, installation of the equipment is different.

One industry study estimates 18% of power lines in the U.S. are underground. They are much more expensive to install—five to 10 times the cost of overhead lines, according to the U.S. Energy Information Administration.

While underground power lines are not susceptible to falling tree limbs and cars crashing into poles like overhead lines, underground problems can be more difficult to pinpoint and correct. That can result in longer outage times.

Many people consider underground lines more aesthetically pleasing than overhead lines, but that may not be the case if a pad-mounted transformer is in your yard. If you want to try to conceal the green box, when you design your landscaping, keep in mind our crews need access to the transformer.

When there is a power outage, an emergency or

Immediately call Escambia River Electric Cooperative at 850-675-4521 if you see pad-mounted transformers that are unlocked, leaking oil, struck by a car, etc.



Jason Bedsole prepares a pad-mount transformer for energization.

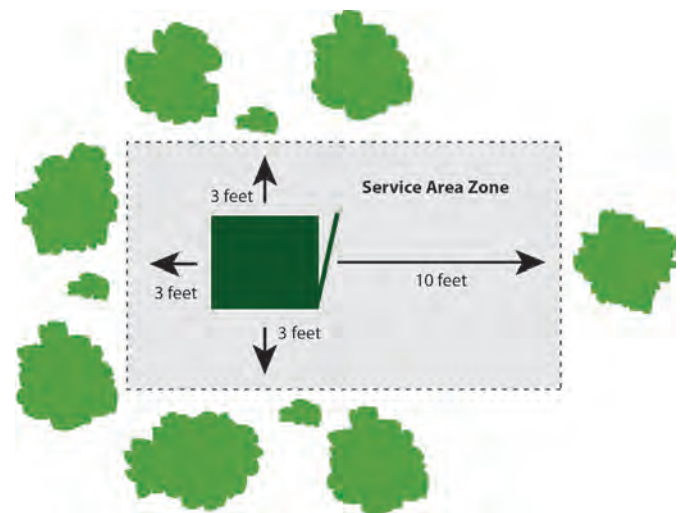
required maintenance, our crews need to be able to get to the transformer quickly and easily. To work safely, lineworkers need a minimum of 10 feet of clearance in front of the transformer doors and 3 feet on the sides and back. Do not put up a fence, wall, structure or plantings that restrict safe access to the unit.



ABOVE: Pad-mounted transformers route large amounts of electricity. Only utility lineworkers and crews should be near them. **RIGHT:** If you decide to plant landscaping around transformers, respect the required safe clearance zone at plant maturity.

If you plant shrubs, trees or greenery around the transformer box, allow room for them to grow and still meet clearance requirements. Keep in mind our crews may need to remove anything within the safety zone when doing maintenance or making outage repairs.

The big green boxes that connect power lines are surprisingly simple inside. Wires come in and go out through the transformer. Now that you know that, you don't have to go looking inside, and you shouldn't. Those locked boxes route a lot of electricity, so only expert lineworkers should be near the equipment.



For your protection, avoid contact with a pad-mounted transformer. Always call 811 before you dig near any electrical equipment, including pad-mounted transformers. Do not allow children to play on or near transformers.

Regardless of whether you are around underground or overhead utility equipment, the same safety rules apply: Stay away from power lines. ■



Report power outages by phone, computer or app.

Reporting Outages: Three Easy Ways

Please contact EREC if service is interrupted

When the power goes out, Escambia River Electric Cooperative's outage management system rapidly gathers and compares data from automatic meter signals and incoming reports to provide precise outage details to the dispatch center.

Although EREC's electric meters are designed to automatically detect and report power outages, members are asked to report all outages in case the meter signal is obstructed.

Reporting an outage has never been easier. Please report any outage using one of these three options to ensure the outage management system has all the information needed to restore your power as quickly as possible.

- Report outages by calling the EREC outage number at **1-877-OUT-EREC**, or 1-877-688-3732.
- To report an outage on **www.erec.com**, click on Pay Your Bill & Manage Account. Log in to your account using your account number and password. Click on the Outage tab, enter the requested information and click Report Outage.
- For **mobile app** outage reporting, log in to your account. Press the right arrow. Next, press the menu icon in the top left corner and choose Report an Outage. Enter the requested information and press Report an Outage to submit. You can download the mobile app by searching for Escambia River Electric Cooperative in the Apple and Android app stores. ■

Use Energy Wisely

Keep Your Refrigerator Humming

Look for ways to maximize its energy efficiency

The refrigerator is one of the home's biggest energy hogs. You can help it run more efficiently. Follow these tips:

- **Keep it level.** A fridge on an uneven floor can lean forward just enough to prevent the door gasket from sealing tightly.
- **Check gaskets.** Even on a level floor, a refrigerator's door gasket can wear out over time. If your door isn't closing tightly, replace the gasket.
- **Fill it up.** Full refrigerators and freezers work more efficiently than a half-empty one. If you don't have enough food and beverages in the refrigerator, fill it with jugs of water until about two-thirds of the empty space is taken. The same goes for the freezer. Pack bags full of ice and scatter them around the freezer so it is at least three-quarters full.
- **Cool food before refrigerating it.** Putting hot food into a refrigerator or freezer forces the unit to adjust its temperature to compensate for the heat.

- **Cover food before storing it in the fridge.** Uncovered food and liquids release moisture and can force the compressor to work harder.
- **Give it some breathing room.** For proper ventilation, a refrigerator needs clearance between its top and the cabinets above it and between its sides and the walls. Likewise, don't use the top of a refrigerator for storage. Cartons



For maximum energy efficiency, keep your refrigerator and freezer well stocked.

and other items can restrict airflow.

- **Move the unit out of the sunlight and away from the oven.** The refrigerator has to work harder to keep everything cool inside when its outside is exposed to heat.
- **Clean it.** Regularly wipe dust, dirt and cobwebs from the top of the fridge and from the coils behind it. ■

Need a New Fridge? Upgrade and Save With an Energy Star Model

Got an old, energy-wasting refrigerator? Replace it with a new Energy Star-certified model. Not only will you enjoy a state-of-the-art fridge, according to the Energy Star website, you can save more than \$270 during the next five years and do something good for the environment.

Thanks to improvements in insulation and compressors, today's refrigerators use much less energy than older models. With an Energy Star-certified refrigerator, you can maximize your energy and dollar savings without sacrificing the features you want.

When shopping for a new fridge:

- ▶ Look for the Energy Star label to ensure it is energy efficient.
- ▶ Check the yellow EnergyGuide label to determine the model's energy use, compare it to similar models and estimate annual operating costs.
- ▶ Buy a refrigerator with a top-mounted freezer. They use 10% to 25% less energy than bottom-mount or side-by-side models.
- ▶ Buy an appropriately sized refrigerator. Generally, the larger the fridge, the greater the energy use. The most energy-efficient models are 16 to 20 cubic feet.
- ▶ Skip the automatic ice-maker and through-the-door dispenser. They increase energy use 14% to 20% and raise the price \$75 to \$250.

Don't forget to recycle your old refrigerator. If you have a second refrigerator in your basement or garage, you should recycle that one, too. Refrigerators more than 10 years old could be costing you \$110 a year. ■

Keep It Safe

Stay Focused During Harvest

Farmers reap benefits of advancements in agricultural technology

With the help of GPS auto-steer devices, farmers are able to decrease driver error and maximize productivity. Despite these advances, safety risks remain.

To help farmers stay out of harm's way, Safe Electricity—a public awareness initiative of the Energy Educational Council—shares tips for a safe harvest.

GPS with auto-guidance provides farmers with real-time location data about a field, which can be used for planning crops, making maps, assisting navigation and guiding machinery.

During harvest, this technology allows drivers to have their hands off the steering wheel as the combine maneuvers itself through the field. Thanks to this technology, farmers can more easily and efficiently maintain accuracy even during low-light conditions, which enhances productivity.

“One critical part of safety around electricity is awareness,” says Kyla Kruse, communications director of the Safe Electricity program. “It’s important to remember that

farm machinery is vulnerable to hitting power lines because of its large size, height and extensions. Being aware of the location of overhead power lines and planning a safe equipment route can help reduce accidents.”

In equipment with auto-guidance systems, less focus is needed on steering, which may lead some drivers to think they do not need to be as aware of navigation issues. Even while using a GPS with auto-steering, farm workers need to keep safety in mind and stay focused on their surroundings.

Putting safety first requires alertness, focus and knowledge of potential hazards and safety steps. Varying pass-to-pass accuracy levels and potential issues—such as power poles not being correctly plotted in the system—reinforce the need for drivers to stay focused on the location of the farm equipment while in the field and to be ready to take action if necessary.

Regardless of the technology used on the farm, keep the following electrical safety guidelines in mind:

- Use a spotter when operating large machinery near power lines.
- Keep equipment at least 10 feet away from power lines at all times, in all directions.
- Look up and use care when moving equipment, such as extending augers or raising



Keep electrical safety in mind on the farm. Look up and use care when moving any equipment around power lines.

the bed of grain trucks around power lines.

- Inspect the height of farm equipment to determine clearance.
- Always set extensions to the lowest setting when moving loads to prevent contact with overhead power lines. Grain augers should always be positioned horizontally before being moved.
- Never attempt to move a power line out of the way or raise it for clearance.
- If a power line is sagging or low, contact Escambia River Electric Cooperative.
- If your equipment makes

contact with a power line, do not leave the cab. Immediately call 911, warn others to stay away and wait for the utility crew to cut the power.

- The only reason to exit equipment that has come into contact with overhead lines is if the equipment is on fire, which is rare. However, if this is the case, jump off the equipment with your feet together and without touching the ground and machinery at the same time. Then, still keeping your feet together, hop to safety as you leave the area. ■

Visit SafeElectricity.org for more electrical safety information.



Electric Farm Equipment An Energy Trend to Watch

By Maria Kanevsky

Our nation's farmers have worked for generations in fields across the country. They have seen firsthand how farming equipment has improved to increase efficiency and to feed an ever-growing population.

A major change on the horizon for farming is switching from fossil fuel-powered equipment to electric. This trend builds on the idea of beneficial electrification, where switching to an electric end-use technology satisfies at least one of the following conditions without adversely affecting the others: saving consumers money over time, benefiting the environment, improving product quality or consumer quality of life, and fostering a more robust and resilient grid.

The most common form of electrification for farms has been electric irrigation pumping systems. Irrigation systems are crucial for farmers and can make or break the crop yield for the entire year. Water heaters are the second most-used form of electric technology on farms. They are used for a variety of purposes, including dairy farm processing, sterilizing equipment and general cleaning. Choosing an electric water heater for the right application depends on efficiency, size, recovery speed and peak temperature.

There are many benefits of replacing diesel motors with electric motors. Highly efficient electric motors can operate at 90% efficiency, while by comparison, diesel motors operate at 30% to 40% efficiency. Increased efficiency provides cost savings over time. Farmers simply plug in the electric equipment without needing to refill a diesel tank. One of the greatest benefits of electric motors is they do not emit fumes, which means farmers breathe in cleaner air around them. Electric motors are cleaner, quieter and easier to maintain.

Some farmers are switching to electric tractors as John Deere, AgCo and other companies perfect electric models. Electric tractors are more efficient, quieter and better for the environment than conventional diesel tractors, but they lack the battery power many farmers need for a long day working in the fields.

By far, the largest barrier to converting to electric technologies is cost: both the price of the electric technology and for the wiring to connect it to the entire farm. Even with savings on fuel costs over time, farmers may be reluctant to replace their farming equipment because of high initial costs. However, federal and local government programs can help lessen the upfront costs for farmers.

Local electric cooperatives also can help farmers with energy audits, identifying energy-efficiency opportunities, or applying for funding from federal programs such as the Rural Energy Savings Program or the Rural Business Development Grants.

Other electric farming technologies—such as grain dryers, thermal electric storage systems and heat pumps—are in the early stages of commercialization. Implementation of these technologies will depend on the type of farm, electricity versus fossil fuel prices and incentives that decrease upfront costs for buying new equipment.

Despite these challenges, there are opportunities for expansion—especially for electric farm vehicles. Given more time and investment, watch for use of electric farming equipment to become more widespread. ■



Thanks to GPS auto-steer devices, farmers are able to decrease driver error and maximize productivity. PHOTO COURTESY OF SAFE ELECTRICITY



ADOBE STOCK PHOTO BY MAREKPHOTODESIGN.COM

With Auto Pay, Set It and Forget It

Make it easy to pay your electric bill, and never forget to pay on time

Daily life can get hectic at times, so it's helpful to take a step back and look for ways to simplify things.

In the digital age, we have more opportunities to streamline our lives than our parents or grandparents ever had.

At Peace River Electric Cooperative, the goal is to make every interaction as simple and easy as possible. If you're someone who likes to set it and forget it, our Auto Pay option may be for you.

Auto Pay is the easy way to pay your electric bill. It automatically deducts your monthly bill amount directly from your checking/savings account or credit/debit card on your bill's due date.

With Auto Pay, you never have to worry about forgetting to pay your bill. ■

How to Register For Auto Pay

- ▶ Log in to your account on our SmartHub mobile app or at www.preco.coop.
- ▶ Click on Billing and Payments.
- ▶ Click Auto Pay Program.
- ▶ Submit your credit card, debit card or checking account information.

Your auto payment will not take effect until your next billing cycle. Please be sure to pay your current bill.

A How-to Lesson

Check Your Circuit Breakers

Parts of your home—including outlets and entire walls—can lose power when circuits are overloaded. If your power goes out unexpectedly, check your home's circuit breakers before calling to report an outage.

Here's how to do it:

- Find your electrical panel, or breaker box. Inside, you will see black switches. These are the circuit breakers.
- If a circuit breaker is tripped, it may appear to be in the same position as the others, but it won't be pushed fully to the ON position.
- Find the affected breaker and flip it to the OFF position. If you don't think there is an electrical overload, try flipping the breaker back to the ON position. If you suspect an electrical overload, unplug appliances and other items in the area not receiving power, then flip the breaker back to the ON position.
- Check to see if power is restored. Wait a few seconds, then slowly begin plugging in and turning on electrical equipment to determine which item is causing the overload. If the circuit trips again when an item is plugged in, that item is causing the overload. Try moving it to a different outlet in your home.
- If the circuit continues to trip, or if it won't flip to the ON position, stop trying to reset the breaker. There may be a fault in the circuit. You should contact a qualified electrician to make repairs.

When power goes out to an area of your home, it's often just a temporary power surge. You may be able to restore power on your own by simply resetting the breaker. ■

Questions? Contact Peace River Electric Cooperative at 800-282-3824 to learn more.



Fighting for Your Access

Electric co-ops seek to improve broadband in rural Louisiana

A bill that would have significantly hampered the ability of electric cooperatives in Louisiana to provide retail broadband to their members was struck down by the governor following a broad grassroots effort by the state's co-ops.



Louisiana Gov. John Bel Edwards vetoed the bill June 8, noting amendments to the measure ran counter to the original intent of the bill, which was to allow electric cooperatives to enter the broadband business and serve their 1 million members.

Quick work by the Association of Louisiana Electric Cooperatives—with assistance from the National Rural Electric Cooperative Association—helped derail the legislation, which passed unanimously in the state House and Senate.

ALEC CEO Jeff Arnold delivered 500 signed petitions to the governor opposing the bill, and explained the concerns of co-ops and their members.

“Our member Louisiana electric cooperatives have done an excellent job of cultivating relationships with their member-consumers,” Arnold said. “It is truly impressive to watch their members jump into action when they are called upon by their local electric cooperative. Relationships like these are only built with integrity and being a trusted source for political information.”

The original bill would have authorized electric cooperatives to allow internet service providers access to their poles without requiring additional consent of property owners. But it was amended to restrict electric co-op broadband projects to areas deemed “unserved” by the Federal Communications Commission.

These FCC designations are based on service provider filings at a census block level and are known to be inaccurate.

“Such a law would have been bad for electric cooperatives that seek to serve all their members equally and bad for consumers generally by depriving them of competition and, in some cases, depriving them of access in the first place,” said Kelly Wismer, NRECA’s legislative director for broadband initiatives.

The Louisiana electric cooperatives worked with Sen. Beth Mizell to ensure Louisiana electric cooperatives were able to compete in the broadband market.



Jeff Arnold, CEO of the Association of Louisiana Electric Cooperatives, with some of the 500 petitions he delivered to Gov. John Bel Edwards opposing a bill that would have interfered with the state’s electric cooperatives’ ability to provide broadband access to their members.

The Senate bill advanced in the state legislature facilitates Louisiana electric cooperatives entering the broadband space or allowing internet service providers to use their infrastructure without the restrictions of the vetoed bill.

In addition, House Bill 69 provides a 50% rebate on sales and use tax for fiber-optic cable for grant winners under the Rural Development Opportunity Fund—a \$20.4 billion initiative to deliver high-speed fixed broadband service to rural homes and small businesses that lack it. ■



Ways to Support Local Businesses During the COVID-19 Pandemic

By Danielle Tilley

We all have our favorite spots: the best cup of joe at the coffee shop on the corner, the best chips and salsa at the Mexican place down the road, the coldest drink served up by friendliest staff in town, the cutest shop that has the best gift for any special occasion. These are the places we tout to our friends and look forward to going to at the end of a long work week.

While the economic impact of the COVID-19 pandemic began on the global scene, its long arms have begun to reach into the corner shops and little haunts of our own hometowns.

According to George Swift, president of the SWLA Economic Development Alliance, and Lisa Adams, executive director at the Greater Beauregard Chamber of Commerce, all is not lost for our small businesses. Here are some ways you can support the local economy during these trying times. (Account No. 144422-001)

Shop Local, Stay Local

The ease and convenience of shopping online is tempting, especially when people are being encouraged to stay at home. While fast and free shipping services such as Amazon Prime can seem like a bargain, dollars invested in local businesses go a long way in terms of returns to the community.

Lisa and George encourage shoppers to check with local businesses for what you need before turning to online merchants.

“Our local business owners are our

friends and neighbors,” George says. “They are the ones who help support community events, civic organizations, church organizations and local fundraisers.”

Understand the Economic Impact of Local Business in Your Community

More than half of Louisiana’s workforce is employed by the state’s 447,000 small businesses. Small business accounts for more than half of the nation’s gross domestic product. (Account No. 145188-002)

While online shopping offers convenience and variety, ignoring local business has real-life consequences for the community. When a local business suffers, it creates a ripple effect. If a business owner has to lay off employees or cut inventory, it causes a decrease in sales for local suppliers, leading to more layoffs and a negative impact on the quality of life within our community.

“Loss of local business means job loss for folks we know,” George says. “And we have a lot of people out of work.”

The SWLA Economic Development Alliance has taken action to curb the effect of job loss by investing in workforce development to train those who are out of work to transition into other fields.

Capitalize on Social-Distancing Shopping Options

If you are unsure about going into shops during this time, there are many options to help you stay safe and keep your business local. You can buy gift cards, order take-out meals, use curbside pickup and take

advantage of online shopping with local retail. A visit to your local farmers market for produce can provide a much-needed boost for local growers.

Mena Thibodeaux, co-owner of Sure Darlin’ Boutique in Ragley, used social media to reach her customers before COVID-19. She was happy to have that online presence when the pandemic hit.

“Online sales had become the trend for us long before COVID,” Mena says. “But we are so glad to continue to stay connected with our customers and do business in an environment that makes them feel safe and is very convenient.”

Lisa encourages shoppers to turn to local nurseries for plants and garden supplies, and Stines—a Louisiana-owned company—for home improvement needs. She says that while larger areas can take advantage of food delivery services such as Waitr and Uber Eats, EZ Street food delivery provides the same service locally.

“EZ Street delivers food to Beauregard and Vernon Parish,” Lisa says. “Since COVID, almost every local restaurant uses it, and the radius of delivery has been increased.”

Early Christmas Shopping

It’s never too early to think about Christmas. Consider taking the money you would usually spend at Christmas and spend it at businesses that need revenue now and mark off one thing on your holiday to-do list.

“When our small businesses are hurting, our community is hurting” George says.



Supporting local businesses while staying safe during the COVID-19 pandemic is possible. Take advantage of delivery services such as EZ Street or use curbside pickup for groceries; share great experiences on your social media channels; and encourage people to interact nearby chambers of commerce. ADOBE STOCK PHOTO BY HALFPOINT

“And they need us now more than ever.”

Most businesses experience a jump in sales during the holidays, but getting a head start on your Christmas shopping during this difficult time could end up being the vital thing that small businesses need to keep their doors open until the end of year.

Support Local Chambers of Commerce

Chambers of commerce are the one-stop shop for everything a local business needs. Most chambers—including the ones mentioned in this article—provide lobbying in the state legislature, encourage leadership, provide workforce development and work to secure economic development projects vital to the fiscal success of the region. (Account No. 98812-001)

If you are a local business owner who is not a member of your local chamber, join now. As a member of the community, you can support your local chamber by getting involved with the chamber by serving on a committee and board.

Harness the Power of Social Media

Is there a place you go that always provides top-notch customer service? Give them some free advertising on your social media channel(s). You can like and follow your favorite spots on social media and share their posts to your friends. You can write a five-star review on your favorite shop’s Facebook page or write a Yelp! review about an incredible meal you had at a local restaurant. While COVID-19 may not last forever, a good review is timeless.

Practice Social Distancing

As the virus continues and experts learn more about how to prevent and combat this invisible enemy, the impact of COVID-19 can be seen in all of our communities.

Prior to the pandemic, Southwest Louisiana was leading the nation in the number of economic development projects. While the SWLA Alliance says the area is in better shape than most, and it is hopeful to regain its spot in leading

the nation’s economic development efforts, its leaders know that can’t be done until we have COVID-19 under control.

We don’t know when this virus will fade into the background of our news cycles and daily routine, but if we all come together under the banner of community and resiliency, we will soon pass the time in true Louisiana fashion—over a pot of gumbo, shoulder-to-shoulder in a church pew, over at grandma’s house with all the family, and cheering on our Louisiana State University Tigers as they take to the field in Death Valley. (Account No. 152643-001)

Practicing social distancing and supporting local business is a step in that direction. Our state has weathered its share of storms before, and we can do it again. ■

This article was written in July 2020. Please adhere to the most recent guidelines suggested by the experts as this information may have changed at the time of publication.

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Louisiana Country



Concern for Community

Discover 7 ways to support local
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BEAUREGARD ELECTRIC CO-OP

A Touchstone Energy® Cooperative

Prepare Your Manufactured Home for Winter

By Pat Keegan and Brad Thiessen

With winter approaching, some electric cooperative members may be dreading high winter heating bills for their manufactured homes.

In difficult times such as these, it's more important than ever to ensure the money spent yields the results needed.

Here are five tips for winterizing your manufactured home, which can help you capture significant energy savings. It's worth noting some of these suggestions are quick, easy and cheap, but some require more money than you may want to spend. Choose the approach that works best for your home and budget.

1. Furnace. It costs nothing to lower your thermostat. Make sure you clean or replace your furnace air filter as often as recommended. Reducing your thermostat temperature in the winter can equal almost 3% savings on your electric bill. Use extra blankets and clothing to stay comfortable.

2. Water heater. You pay a lot to heat water. A simple way to lower that amount is to lower your water heater's thermostat. Set it at 120 F.

Energy-efficient showerheads also save energy. Some are equipped with a button or valve to reduce or stop the flow while you lather up.

Another simple fix is to insulate the first several feet of the hot water pipe where it exits the tank. If there is room around your water heater, you could wrap the tank with an insulation jacket, which you can buy from a home supply store for about \$20. If your water heater uses gas or propane, be careful not to restrict the air needed for combustion or install insulation too close to the exhaust flue.



Insulating the first several feet of the hot water pipe where it leaves the tank is an energy saver. PHOTO COURTESY OF MARCELA GARA, RESOURCE MEDIA, EE IMAGE DATABASE

3. Ducts. Leaky furnace ducts are a major source of energy loss. A simple first step is to make sure all supply and return registers are open and not covered by furniture or rugs. Closed registers take a toll on your heating and cooling system. You might be able to save energy by sealing your ducts at the floor registers.

The biggest leaks, however, are likely under your manufactured home and could require the services of a contractor. Check with your electric co-op to see if it can recommend contractors who can provide this service.

4. Windows and doors. That window A/C unit that kept you cool all summer can be a major source of heat loss in the winter. Before the cold hits, cover it up or, better yet, remove it during winter.

Another easy way to cut down on energy loss is to install window insulation—plastic, disposable sheets stretched over a window and held in place with double-sided tape. Thick curtains do a remarkable job at cutting drafts and adding insulation around a window.

The most involved step is to fill cracks and holes in walls and around windows and doors with caulk, filler and/or expanding foam.

5. Floors. Cold floors can be costly and uncomfortable. The easiest solution is to lay down area rugs for additional warmth.

To really make the floor comfortable, you may have to venture into the crawlspace and insulate the floor or skirting. If you're not sure how to do this, look for video tutorials online. ■



Battery power and upfront costs are issues, but some farmers are already switching to electric tractors.
PHOTO COURTESY OF JOHN DEERE

Electric Farm Equipment an Energy Trend to Watch

By Maria Kanevsky

Our nation's farmers have worked for generations in fields across the country. They have seen firsthand how farming equipment has improved to increase efficiency and to feed an ever-growing population.

A major change on the horizon for farming is switching from fossil fuel-powered equipment to electric.

This trend builds on the idea of beneficial electrification, where switching to an electric end-use technology satisfies at least one of the following conditions without adversely affecting the others: saving consumers money over time,

benefiting the environment, improving product quality or consumer quality of life, and fostering a more robust and resilient grid.

The most common form of electrification for farms has been electric irrigation pumping systems. Irrigation systems are crucial for farmers and can make or break the crop yield for the entire year.

Water heaters are the second most-used form of electric technology on farms. They are used for a variety of purposes, including dairy farm processing, sterilizing equipment and general cleaning.

Choosing an electric water heater for the right application

depends on efficiency, size, recovery speed and peak temperature.

There are many benefits of replacing diesel motors with electric motors. Highly efficient electric motors can operate at 90% efficiency, while by comparison, diesel motors operate at 30% to 40% efficiency. Increased efficiency provides cost savings over time.

Farmers simply plug in the electric equipment without needing to refill a diesel tank. One of the greatest benefits of electric motors is they do not emit fumes, which means farmers breathe in cleaner air around them.

Electric motors are cleaner,



quieter and easier to maintain.

Some farmers are switching to electric tractors as John Deere, AgCo and other companies perfect electric models. Electric tractors are more efficient, quieter and better for the environment than conventional diesel tractors, but they lack the battery power many farmers need for a long day working in the fields.

By far, the largest barrier to converting to electric



technologies is cost: both the price of the electric technology and for the wiring to connect it to the entire farm.

Even with savings on fuel costs over time, farmers may be reluctant to replace their farming equipment because of high initial costs. However, federal and local government programs can help lessen the upfront costs for farmers.

Local electric cooperatives also can help farmers with

energy audits, identifying energy-efficiency opportunities, or applying for funding from federal programs such as the Rural Energy Savings Program or the Rural Business Development Grants.

Other electric farming technologies—such as grain dryers, thermal electric storage systems and heat pumps—are in the early stages of commercialization.

Implementation of these

technologies will depend on the type of farm, electricity versus fossil fuel prices and incentives that decrease upfront costs for buying new equipment.

Despite these challenges, there are opportunities for expansion—especially for electric farm vehicles.

Given more time and investment, watch for use of electric farming equipment to become more widespread. ■

Although it still has a ways to go before it is widely implemented, farmers are expected to put more electric farming equipment in use. PHOTO BY SUE PAWELK



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Volume 37, Issue 5

Louisiana Country (USPS 473-180) is published bimonthly by the Association of Louisiana Electric Co-ops Inc., 10725 Airline Hwy., Baton Rouge, LA 70816, in partnership with Pioneer Utility Resources.

Annual subscriptions: Members \$2.64, Nonmembers \$5.

Postmaster: Send form 3579 to 10725 Airline Hwy., Baton Rouge, LA 70816.

Periodicals postage paid at Baton Rouge, Louisiana 70821, and additional mailing offices.

Meet Your Board of Directors

Alexander Doyle

District 6, President

A resident of Houma, Doyle has served as president since his election to the board in 1985. A member of the Louisiana Bar Association, Doyle was an attorney in Houma for 45 years, served as assistant district attorney for Terrebonne Parish for 12 years and was qualified to practice law in federal court. Doyle served as a lieutenant in the Army for two years and as a captain in the Louisiana National Guard. He serves Mulberry, Barrios, Summerfield, Little Bayou Black, Coteau and Oakshire.



David Luke

District 4, Vice President

A board member since 1981, Luke is a wholesale seafood processor. For more than 35 years, the Dulac native has worked in seafood processing, beginning as a boy in his father's plant (Luke Seafood). He and his wife, Elaine, are former owners of D'Luke's Seafood Inc., in Dulac and St. Michael Ice & Fuel in Biloxi. A lifetime member of the VFW 4752 Rifle Team and the 2nd Marine Division Association, Luke is a member of the Knights of Columbus Council 7722, Grand Caillou Volunteer Fire Department, Holy Family Finance Council and does volunteer work for Holy Family Church. He represents Grand Caillou and Dulac areas.



Brian Rivet

District 1, Secretary

A Gheens resident who has served on SLECA's board since 1983, Rivet is owner/operator of Bayou Quick Stop in Lockport. He serves on the Association of Louisiana Electric Cooperatives Inc. board and previously was on the Cajun Electric Power Cooperative board and is a past director of Western Fuels. Rivet represents Gheens, Raceland and Mathews, and portions of Upper Bayou Blue, Coteau and Lockport.



Terry Trahan

District 7, Treasurer

Elected to SLECA's board in 1987, the Bayou Black native retired from Trahan's Heating and Air Conditioning after 34 years. He enjoys hunting on his property in north Mississippi. He serves Bayou Black, Gibson, Southdown West, Ouiski Bayou and The Lakes.



Julien "J.D." Boudreaux III

District 2

Active in the Donner-Chacahoula Fire Department and Jaycees, the Donner resident has served on the St. Lawrence Church Parish Council and received the Bishop's Medal in 1987. A self-employed grocery operator and bulk-fuel dealer, he served as the last president of the Terrebonne Parish Police Jury, was a member and first chairman of the Terrebonne Parish Council and is a former Justice of the Peace. He received the Roland J. Thibodaux Award as a Terrebonne Parish school bus driver. He was appointed to the SLECA board in January 2006.



Larry J. Daigle

District 3

The Bayou Blue native was elected to the SLECA board in 2004. Daigle served 39 years as senior vice president of Caro Produce and nine years as president of Prime Source and Southland Distribution. He recently retired as local produce buyer and grower liaison for Rouse's Supermarket. A SLECA member since 1965, Daigle serves on the finance committee of St. Louis Catholic Church and has served on the parish council for nine years. He served as adviser to Bishop Boudreaux on the Pastoral Council, and received the Bishop's Award in 1988 for outstanding service to the parish. He represents parts of Bayou Blue and Gray.



Roger Dale DeHart*District 5*

The Dularge native was elected to the SLECA board in 1997. He also serves on the Association of Louisiana Electric Cooperatives Inc. board. DeHart has been a member of the Terrebonne Parish School Board for 30 years. He served more than seven years as a commissioner for Fire District 10. He is active in his community. He serves all of Bayou Dularge and Ashland North Subdivision.

**Eroy Acosta***District 8*

The Stephenville native was elected to the board in 1987. He owned a restaurant and lounge for many years. The Stephenville Volunteer Fire Department was established through Acosta's fundraising efforts. He served 21 years as its president. Acosta is on the board of the combined St. Martin Parish sewage and water districts. He serves Stephenville, Bayou L'Ourse, Deadwood and parts of Gibson, Morgan City and Greenwood. He also has represented SLECA on the ALEC board.

**Trevor Benoit***District 9*

The Amelia native and longtime resident is a semi-retired mechanic who is in the hotshot trucking business, making deliveries to local, regional and national locations. Benoit worked for the city of Morgan City in the Central Garage Department, where he was responsible for maintaining more than 100 pieces of specialized equipment. He retired as supervisor of the department. Benoit is a member of the Knights of Columbus and has served as Deputy Knight, Grand Knight and District Deputy. He represents Amelia, Siracusville and part of Bayou L'Ourse. Benoit follows in the footsteps of both his parents, who served on the SLECA board.



Saluting Our Businesses

If the culture of our area gives us a distinct character, then the labor of our people defines who we are. For generations, because of our location in southeast Louisiana, we have been associated and identified with oil and gas production, the seafood industry, shipping and all its supporting businesses and enterprises.

We should be proud of this distinct and one-of-a-kind commerce. After all, our "homegrown" seafood is the envy of the nation. Our offshore oil and gas production literally helps fuel large swathes of the country, and ships manufactured in our own backyard help protect our citizens and contribute to the national defense.

This is indeed unique work produced by unique people that powers our unique local economy. SLECA is fortunate to be the electric provider for many of these businesses and industries, which makes us unique among the electric cooperatives in the state.

One sector of the local economy that so many people in our area depend on for their livelihoods, and has been handed down from one generation to the next, is the offshore oil and gas industry. It doesn't take a rocket scientist to know that for the last seven years this industry has experienced an historic meltdown that has yet to rebound.

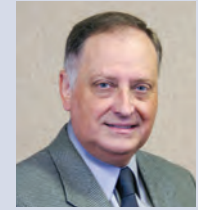
In 2019, 72% of the employment in SLECA's service territory was directly tied to one commodity: oil and gas. This is the highest dependency in the state on one industry and four times the statewide average. In the last five years, SLECA's service territory lost 17,500 jobs. That is a remarkable 17.5% decline. In 2019, another 2,400 jobs were lost, with more predicted to come in 2020.

Those aren't just numbers. They represent real people with real families.

Though present times may be trying, the good news is we are a resilient people. We have been through this before and didn't just survive. We were made stronger because of it. [90114001](tel:90114001)

SLECA salutes our local businesses and is proud to serve you. Whether a large multimillion dollar corporation or a small locally owned and operated small business enterprise, we thank you for the valuable services you provide and the contribution you make to the health, stability and morale of our community.

Joseph A. Ticheli
General Manager

**Joseph A. Ticheli****Lloyd Gibson***Adviser to the board*

A resident of Gibson and consultant for Cookie's Construction Co., Gibson has advised the board since 1984. He served as Terrebonne Parish Constable for 41 years and chairman of Terrebonne Parish Recreation Board for 19 years. Gibson is a member of St. Luke Baptist Church of Houma, serving as president of the Building Fund, and is an associate member of St. James Baptist Church. Gibson is concerned about his community and actively involved in its development.

**SLECA Sweepstakes**

Did you know SLECA gives away cash just for reading **Louisiana Country**? In each issue, four account numbers are randomly selected by computer and hidden in articles on SLECA's pages (4, 5, 8, 17, 20 and 21). If you see your account number, call SLECA and win \$25 cash or have the money applied to your bill.

If you are not reading **Louisiana Country**, you're missing out on great articles and the chance to win money.

SLECA offices are closed Monday, September 7, in honor of Labor Day. Standby crews are on call.

