May 2020 Share Package
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Seven-Step Efficiency Checklist

Inspecting and sealing furnace ducts are high-impact projects best left to professionals.
PHOTO BY UNITED COOPERATIVE SERVICE

Q: I recently moved into an older home that's definitely not efficient. What upgrades should I consider?

A. Making your home more energy efficient can be done one step at a time, or you can take it on all at once. Either way, it's helpful to have a plan before you dive in so you don't end up doing unnecessary work or repeating steps along the way.

Here's a seven-step checklist to help you get organized.

Set goals and constraints

Start by setting your primary goal. Are you mainly looking to save money on your home's energy bills, make it more comfortable, increase the resale value or help the environment?

Then set a deadline to complete the project. This may affect whether you do some of the work yourself and which contractor you choose.

Last, but not least, set a budget. How much is it worth to you to live in an energy-efficient home? One way to look at this is to review your annual energy bills. If they're around $2,000 a year, ask yourself how much you are willing to spend to cut that expense in half. Maybe you are willing to spend $10,000 to save $1,000 each year That would be a 10% rate of return on your investment. If your home is drafty and cold, how much are you willing to spend to make it more comfortable?

Educate yourself

This step is crucial so you can weigh the costs and benefits of each potential improvement. There are many helpful lists of small and large energy-efficiency upgrades available online. There are also some great resources such as the Department of Energy, Energy Star and Consumer Reports. Your electric utility can be a great resource, too.

Schedule an energy audit

An energy audit will help you prioritize spending on the measures that will bring you the most benefit.

An energy auditor can help in other ways. My neighbors hired a contractor to do some major energy-efficiency upgrades. They asked an energy auditor to take a look at the work before they paid for it, and the auditor found it wasn't even close to the level agreed to in the contract. It took three or four return visits for the contractor to get the work up to the promised level of efficiency.

Plan your projects

Now that you have set your budget and priorities, and have a sense of the work and costs involved, make a list of the items you want to include in your efficiency upgrades.

How much DIY?

Some work, such as caulking windows or weatherstripping, can easily be done by the homeowner, especially with the help of online tutorials. Other work, such as insulating an attic, can be dangerous and may require special equipment or knowledge.

Identify and select contractors

This can be challenging. You want a contractor who knows how to do energy-efficiency work. You may need multiple contractors, such as one for your heating system and another for insulation. Maybe you want one who can do air sealing or duct sealing. In some rural areas, contractors may not specialize in the efficiency measures you are interested in.

Get several quotes if possible, as well as references from past clients. Create and sign a contract with guaranteed work and completion dates, with payments due only as work is completed and inspected.

Oversee the work

The quality of the work makes a big difference in the amount of energy savings and added comfort you desire. Keep an eye on the project and don't be afraid to ask questions—lots of questions. Remember, it's your home. You're the one paying the bills. ■

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

PHOTO COURTESY OF EMERSON FANS

Ceiling Fans Offer Comfort and Savings

Q: What are some ceiling fan efficiency tips? Which fans are best?

A: In addition to improved comfort during summer, ceiling fans reduce winter heating bills. This is why most ceiling fans have a switch to reverse the direction of the blade rotation.

A ceiling fan is not actually a cooling device like an air conditioner. You only feel more comfortable under a ceiling fan because of the windchill effect of room air moving over your skin. Room air is cooler than your skin temperature, and moisture evaporation further cools your skin.

Running a ceiling fan actually increases the room air temperature. The electricity used by the fan motor ends up as heat. Switch the fan off when the room is not being used.

The overall energy savings comes from being able to set your air-conditioning thermostat a few degrees warmer. For each degree the thermostat is set higher, the electricity savings can be up to 5% for each eight-hour period. The actual savings depends on many factors, including your local climate and outdoor temperature.

During winter, flip the switch and reverse the rotation of the fan blades to blow air upward. This gently moves the warmest air, which stagnates up near the ceiling, out and down the walls where people are. Run it on the lowest speed so as to not create a chilly breeze. You should not feel the air movement.

If energy savings is your primary concern, the simplest way to select a ceiling fan is to pick one that is Energy Star certified.

It is important to size the ceiling fan properly. If it is too small, it won't create enough breeze to make you feel comfortably cool. If it is too big, it will flow too much air when rotation is reversed during winter.

A rule of thumb for sizing is 36-inch blades for rooms up to 75 square feet, 36 inches to 42 inches for rooms 75 to 144 square feet, 44 to 50 inches for rooms 144 to 225 square feet, and 50 to 54 inches for rooms 225 to 400 square feet.

Fan style may be important to you. Lower-cost fans have five relatively narrow blades, but fans with three wide decorative blades are becoming more popular.

Always check the fan's air flow specification. The size and number of blades is not the best air flow indicator. The speed and pitch of the blades have a greater impact on air flow.

The best ceiling fans use efficient ECM motors, which simulate direct current motors, and use as little as 33 watts of electricity. These fan motors provide more speed settings and less noise. Generally, though, three speeds are more than adequate for comfort and saving, and are less expensive.

There are many options for lighting kits for ceiling fans. Some stylish models have an integrated circular LED mounted inside a glass globe. Most are dimmable and provide a moderate amount of brightness on high. The drawback is it can cost up to $60 to replace the bulbs.

Lighting kits with three- or four-bulb medium base fixtures allow you to select the type of dimmable LEDs you want to install. You may prefer warm white—3,000 Kelvin—or daylight—5,000 Kelvin—bulbs. These bulbs last as long as the integrated ones and cost about $1.50 a bulb to replace.

Models with a hand-held remote control are the most convenient to adjust speed and turn off the fan when leaving a room. For high-tech homeowners, some fans can be controlled from your cellphone with an app.

When installing a fan, the blades should not be lower than 7 feet from the floor for safety. Most fans include 3- and 6-inch downrods.

For a high ceiling, select a long downrod length so the blades are 8 feet above the floor. A downrod is the piece that connects the motor housing to the ceiling mount. This is a good height for effective air flow.

For lower ceilings, select a ceiling-hugger model, but realize the flow will not be as effective that close to the ceiling. ■

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

Look for Fun Things to Do Indoors

By Alyssa McDougle

The past several weeks, the COVID-19 pandemic has dramatically changed the way we shop, work and gather for all kinds of social activities. We are challenged to find activities that can be done indoors.

Social distancing doesn't have to mean boredom and isolation. From homeschooling tips to porch decorating competitions, try out some of these fun and creative ideas.

Book Binge

There's no better time to dive into books you haven't had the chance to read yet. Sitting down with a good story can help ease tension—and you can support local businesses.

Bookstore Finders:
bookshop.org

www.indiebound.org/indie-bookstore-finder

www.newpages.com/independent-bookstores

Get around to reading your pile of books. PHOTO BY RASTLILY

Live Webcams

Streaming footage of a zoo's animal exhibits has become a popular trend in recent years. While it is not quite like being there in person, webcam feeds are the next best way to marvel at some amazing animals until zoos reopen.

Smithsonian National Zoo, Washington, D.C.:
nationalzoo.si.edu/webcams

Miami Zoo Meercat Cam:
www.zoomiami.org/animals#item=429890

San Diego Zoo:
zoo.sandiegozoo.org/live-cams

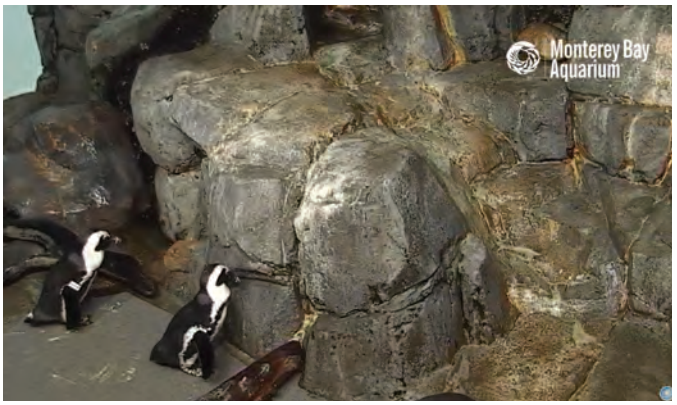
Monterey Bay Aquarium:
www.montereybayaquarium.org/animals/live-cams

Activities for Youngsters

Keeping children busy and helping activate their young brains while school is closed can challenge families. Resources to help parents are plentiful.

Scholastic, Mystery Science and Khan Academy are free resources for at-home learning and activities. Khan Academy is ideal for high school students, and offers free ACT, SAT and AP test prep help. Scholastic has activities for many age ranges and lists ways for parents to discuss COVID-19 with their children.

Toddler-specific sites offer activities for homeschooling environments—perfect for helping little ones release their crankiness and promote indoor independent play. Days With Grey sells materials, with prices ranging from $9 for a PDF activity card to $42 for activity bundles. Busy Toddler offers its Playing Preschool—190 days of at-home learning—for $39.90, or $69.80 with two e-books.



Take a virtual visit and watch penguins hanging out in California.

Toddlers
www.dayswithgrey.com
www.busytoddler.com

Scholastic Learning K-9:
classroommagazines.scholastic.com/support/learnathome.html

How to talk about COVID-19:
classroommagazines.scholastic.com/support/coronavirus.html

Mystery Science, K-5:
www.mysteryscience.com/school-closure-planning

Khan Academy, ages 4-18:
www.khanacademy.com

For Older Adults

Because they are in a higher risk category from the virus, seniors may suffer the most from self-isolating.

Covia's Well Connected is a phone and internet program that offers classes and support groups to seniors from the comfort of their home. It is free to anyone 60 or older. All phone numbers are toll-free.

AARP's Connect2Affect offers a database of resources for seniors to help mitigate social isolation. It can be searched by area and has an option to highlight activities compatible with social distancing.

Well Connected, Covia: 877-797-7299; coviaconnections@covia.org; www.covia.org/services/well-connected

Connect2Affect AARP:
www.connect2affect.org

Porch Design Competitions

Residents in Jacksonville, Florida, decided to keep their neighborhood connected with a front porch design competition. It's a simple idea anyone can replicate with holiday lights, cardboard and a little creativity.

To hear more and see photos to inspire ideas for your own porch, check out the reporting.

Sarasota Herald-Tribune:
www.heraldtribune.com/news/20200326/coronavirus-florida-residents-host-porch-decorating-contest

Free University Courses

At-home learning does not have to be exclusive to students currently enrolled at a university. Many schools and e-learning sites feature free classes and educational content to keep your mind sharp. Open Culture's e-learning site offers free e-books, audio, movies,

Maggie Noe, 4, draws with children's author and illustrator Peter Reynolds. He reads and draws live daily on his Instagram channel, then the video is available for 24 hours. In this picture, she's making a heart flower after Reynolds read a book he illustrated, "I Am Love: A Book of Compassion." PHOTO BY MEGAN MCKOY-NOE

lectures and more. To find free college courses throughout the world, check out Classroom Central's website, which catalogs free university courses. It even has an Ivy League-specific section for the extra-ambitious.

Open Culture:
www.openculture.com

Classroom Central:
www.classcentral.com

Indoor Gardening

The outdoors might have felt far away in recent weeks—especially for those without gardens or backyards.

Epic Gardening offers tips on indoor gardening for beginners interested in reconnecting with the natural world.

For a step into the more fantastical, consider an indoor fairy garden, which can be a great activity for the entire family. HGTV's article offers step-by-step pictures to get your fairy garden started.

Epic Gardening Tips:
www.epicgardening.com/indoor-gardening-for-beginners

Fairy Gardens:
www.hgtv.com/design/make-and-celebrate/handmade/make-an-indoor-fairy-garden-pictures

Virtual Tours and Exhibits

Like zoos, museums have temporarily closed. Many have adapted, offering free virtual tours and online content.

Google Arts and Culture provides free virtual tours of the Guggenheim Museum, the Louvre Museum and the Uffizi Gallery. It also features 360-degree interactive virtual reality views of iconic sites such as the Great Wall of China, the Eiffel Tower and the Taj Mahal.

Salvador Dalí Museum in St. Petersburg, Florida—which houses the largest American collection of the famous surrealist's stunning work—offers an interactive tour.

Google Arts and Culture:
artsandculture.google.com

The Dalí:
www.thedali.org/virtual-tour

Exercise and Relaxation

Many who rely on gyms or exercise classes have had their normal routines upended. Luckily, gyms including Planet Fitness, Corepower Yoga and Moda Yoga are offering online classes to keep you moving. Some are free. Moda Yoga suggests a $5 to $10 donation.

Planet Fitness:
www.facebook.com/planetfitness/videos

Corepower Yoga:
www.corepoweryogaondemand.com/keep-up-your-practice

Modo Yoga:
www.instagram.com/modoyoganyc

Streaming Concerts

Artists are taking the show online to share musical joy.

Billboard staff regularly updates its list.

Billboard:
www.billboard.com/articles/columns/pop/9335531/coronavirus-quarantine-music-events-online-streams

Electric co-ops are leaders in community solar installations, such as the one here. Even though electric co-ops comprise about 10% of the nation's utility industry, at one point, electric co-ops maintained about 60% of all utility-led solar programs in the U.S.
PHOTO BY DENNIS GAINER, NRECA

SOLARSUCCESS

Vibrant community support aids the growth of solar power

By Jennifer Paton

Central Electric Cooperative in Bend, Oregon, hit the streets in the fall of 2014 to solicit feedback on a community solar program. Members expressed interest and enthusiasm at the cooperative's nine public meetings. That year's member satisfaction survey results for community solar participation also were favorable.

By the end of 2018, CEC's 200,000-watt project was built and its costs fully recovered.

The community solar concept is simple: A utility builds a facility that uses photovoltaic panels to generate electricity and invites members to participate in its costs and benefits. Participation is voluntary.

Utiilities often invest in community solar projects in response to member requests and to satisfy legislative mandates to provide more environmentally friendly power.

"The CEC program, ultimately, proved successful because it allowed for greater access for participation," says Brent ten Pas, director of member and public relations.

To appeal to the broader membership, CEC took a unique approach and offered members two ways to participate in the community solar project.

The Shared Solar program was designed for those seeking a direct connection between energy production and their energy use. For members who could not afford to put solar on their roofs, the program provided them an opportunity to subscribe to the output of a full, half, quarter or multiple solar panels. For their participation, they would see a credit on their bill equaling the energy their subscription produced the previous month.

Members could also participate in CEC's Green Power program. These members opted to pay a premium—1.8 cents per kilowatt-hour—which went toward the community solar program and future renewable energy initiatives.

CEC's Community Solar Project's 700 panels are fully subscribed. The project is designed for future expansion, but there are no immediate plans to do so.

"While the project served the interests of those members willing to make an additional investment in renewable power, the demand to expand has not hit a tipping point," ten Pas says.

The community solar project continues to generate interest throughout the community and the state. For example, students from Skyline High School in Bend recently toured the project to learn about the benefits of solar energy and how that energy is distributed to the local electric grid. Representatives from other small utilities have inquired about the project as they consider doing something similar.

Benton REA in Richland, Washington, has found success in its smaller-scale community solar project, Co-op Solar. Benton REA has almost 11,000 members compared to CEC's roughly 35,000.

In August 2018, Benton REA members were given the opportunity to buy 550 solar units at $200 per unit. The project sold out in eight days.

Co-op Solar went live January 2, 2019. In one year, the project produced 41,000 kilowatt-hours of electricity—enough to power two efficient, modern, all-electric, 2,000-square-foot homes for one year.

Although the system's production was lower than hoped during its first year—January and February were cloudy and snowy—the sun came out in March and produced steadily through October.

July, the sunniest month of the year, produced 6,280 kWh.

Co-op Solar has a payback of just more than 14 years.

"With that said, most people did not participate for the money," says Ron Mitchell, Benton REA energy adviser. "Our membership is very interested in technology and doing something good for our environment. As co-op members, they also have a sense of ownership and want to participate to do their part in the community to make it a better place for the future generations."

Although plans for additional phases are far down the road, Mitchell says the co-op already has a waiting list of 60 members who would like to get into a second or third phase.

"For a second-phase community solar system, we would need the legislation to change adding new incentives or find additional funding sources to make it pay for itself in a reasonable amount of time," he says.

Mitchell is optimistic about what lies ahead.

"We look forward to a future of working together with our members on new renewable energy projects to continue making our Benton REA electrical system efficient, reliable and safe for all," he says. "The popularity has been fantastic." ■

Electric Cooperatives Lead the Way

By Paul Wesslund

Not long ago, solar energy was considered an oddity. Electricity generated from the sun was expensive, so not many people used it. Solar power barely registered on the list of electricity sources.

Pushed by improving technology and declining costs, solar is spreading across the country. Solar supplies 2.3% of the nation's electricity—the equivalent of more than 40 nuclear power plants.

One industry analysis finds the cost for electricity from large-scale solar energy installations has fallen 13% a year for five years. It is competitive with other fuels.

Electric cooperatives can claim a portion of the credit for the solar energy boom, pioneering community solar. With community solar, the co-op builds a bank of solar panels, and members can buy or lease the electricity the panels generate.

"Co-ops are leaders in community solar," says Debra Roepke, a solar energy specialist who consults with the National Rural Electric Cooperative Association. "At one point, co-ops had about 60% of all the utility-led solar programs.

"There's been a tenfold increase in electric co-op solar capacity in the last five years. That's on track to more than double over the next one or two years."

Community solar is one of three ways solar panels are used to make and deliver electricity. Probably the most well-known technique is called rooftop solar, where a homeowner lays solar panels on their roof or in the backyard.

But most of the growth happens with utility-scale solar—fields of panels that can cover several acres. The growth in utility-scale solar is one reason costs are coming down. A bigger project can sell a lot more electricity without being that much more expensive to build, lowering the cost of each kilowatt.

As solar energy becomes more widespread, utilities are figuring out ways to make it more useful. It once seemed obvious there was no solar power at night. But bigger and more powerful storage batteries can soak up the sun for use later. At one time, solar power wasn't as useful because it peaked during the day when no one was home. But utilities are using sophisticated computer software to figure out how to juggle power sources such as solar, wind, coal and hydro among users, such as homes, businesses and manufacturers.

Other technologies make solar installations increasingly efficient and productive. Improvements in tracking technology mean more power as solar panels move to follow the sun across the sky. Bifacial solar panels contain solar cells on both sides of their surface, adding reflected light to the energy they receive.

May Is Electrical Safety Month

Protect Your Home and Family

By Juan D. Alfonso

Whether it's watching TV, charging cellphones or flipping a switch to light a room, we owe many of our modern comforts to the electricity flowing through our walls and the power lines above our heads. As wonderful as electricity is, it is extremely powerful and can threaten your life and home if used incorrectly. Follow these tips, and remind your family to use electricity responsibly.

Watch for Overhead Power Lines

Checking for overhead power lines before starting work on household projects is a fundamental safety measure.

- Never touch a power line. Contact with an energized line can injure or kill you.
- If you see a downed power line, stay at least 35 feet away, call 911 immediately and warn anyone nearby of the danger.
- Always stay at least 10 feet away from overhead power lines. Do not assume the lines are for cable or telephone service.
- Tree branches can become electrical conductors. If a tree is in contact with or near a power line, call your utility and make arrangements to de-energize the line before trimming branches.
- Do not assume a power line is insulated. Often, what appears as insulation is only a soft covering to protect energized metal wires from the weather.
- Carry ladders and other long equipment horizontally to avoid contact with power lines.

Extension Cord and Power Strip Safety

According to Electrical Safety Foundation International, 50 people die every year from more than 3,300 fires caused by extension cords. Extension cords can overheat if used inappropriately.

- Buy only cords approved by an independent testing laboratory.
- Make sure extension cords are appropriately rated for their use—indoor or outdoor—and meet or exceed the power needs of the device being used.
- Do not plug extension cords into one another. Extending the length of your cord, or "daisy chaining," is the most common cause of overheating. It overloads the cord and creates a serious fire hazard.
- Inspect extension cords before plugging them in. Look for tears along the insulated cord, and check your sockets for bare wiring, metal parts and loose connections.
- Do not use an extension cord or power strip with heaters or fans, which could cause cords to overheat and result in a fire.
- Do not staple or nail extension cords to any surface. This could damage the cords. Do not run extension cords through walls, doorways, ceilings or floors. Keep the cords uncovered so heat can escape.
- Keep outdoor extension cords away from standing water.
- Never use three-prong plugs with outlets that only have two slots. Anything in contact with the loose prong could catch fire.
- Never cut off the ground pin (the third pin on a three-pronged plug) to force your cable to fit a socket. It could lead to electrical shock or worse.
- Use only surge-protected power strips. This helps prevent fires and protects your electrical equipment from surge-related damage.
- If your home is littered with extension cords and power strips, hire an electrician to install additional wall outlets.
- Remember that power strips only add additional outlets; they do not change the amount of power received from the outlet.

If your lights flicker and you smell burning plastic, call an electrician. This outlet was found thanks to an attentive homeowner.
PHOTO BY RANDY WISEMAN

Avoid Overloading Circuits

Do not overload your electrical system. Overloaded circuit warning signs are flickering, blinking or dimming lights; frequently tripped circuit breakers or blown fuses; warm or discolored wall plates; cracking, sizzling or buzzing from receptacles; a burning odor from receptacles or wall switches; and a mild shock or tingle from appliances, receptacles or switches.

To prevent electrical overloads:

- Never use extension cords or multi-outlet converters for appliances.
- All major appliances should be plugged directly into a wall receptacle outlet. Plug only one heat-producing appliance into a receptacle outlet at a time.
- The Consumer Product Safety Commission estimates more than 50% of electrical fires that occur every year can be prevented by arc-fault circuit interrupters.
- Use the appropriate watt bulb for lighting fixtures. Using a larger watt lightbulb may cause a fire.

Other Home Safety Tips

- Place safety caps on unused outlets to prevent children from accidentally placing items in the socket, which may cause a fire or injure them. It will also help you save energy by eliminating drafts.
- Consider installing tamper-resistant receptacles on all outlets.
- Do not yank electrical cords from the wall. Pulling cords can damage the wall, socket and insulating material surrounding the wire.
- Make sure your electrical cords are tucked away. Electrical trip hazards can cause fire, electrocution and other injuries.
- Never stick nonelectrical items in outlets. They are electrified. ■

Planning to add coffee grounds to your plants? Think again. In many cases, coffee grounds are more harmful than helpful. MONTHIRA/STOCK.ADOBE.COM

The Truth Behind Five Gardening Myths

As the gardening season gears up, it's time to bust some myths. Myths tend to stick around, no matter how many times they're corrected. Once you know the truth, pass it on.

Myth: Add gravel to the bottom of plant containers to improve drainage.

Reality: This practice makes the soil more waterlogged. Instead, make sure your pots have drainage holes and use high-quality potting media specific to your needs. Mixes with smaller particles and high components of vermiculite, peat or compost hold water for your water-loving plants better than a mix with larger particles such as bark, which will have more drainage for plants that don't like wet feet.

Myth: Add sand to loosen clay soil.

Reality: A resounding "no" is the answer. When sand is added to claylike soil, it will set up into rock-hard adobe once it is watered, making it even more difficult for plants to grow.

Instead, add compost to clay soil to loosen it. The addition of organic matter to this type of soil improves the soil structure, creating more pores and thereby improving the drainage and the capacity for plant roots to work their way through the soil.

For a new garden, work 3 to 4 inches of compost into the soil with a shovel or spading fork. This organic matter also helps feed the millions of microbes in the soil, helping to drive the soil food web.

Myth: Drought-tolerant plants never need irrigation.

Reality: A drought-tolerant plants is one that, when established, requires no supplemental water and will still grow and flower normally. It gets by on what falls from the sky. If you are considering native plants for the garden, most of Oregon's native plants (streamside or wetland plants excepted) fit that definition.

Many non-native plants may also be grown without supplemental irrigation. However, these plants require irrigation to get established. If planted in the spring, they may require irrigation at planting and periodically through the first summer.

In mild areas, the best way to establish drought-tolerant plants is to plant them in the fall and water until it starts to rain. This results in a truly drought-tolerant plant established by the following summer.

Myth: Grass clippings cause thatch.

Reality: Clippings don't cause thatch. Thatch is caused by lateral growth of the grass—more specifically, by rhizomes, which are the below-ground lateral growth, and stolons, the above-ground lateral growth. Turf such as creeping bentgrass and Kentucky bluegrass produce rhizomes and stolons. The dominant lawn grass in the Willamette Valley is perennial ryegrass, which does not produce rhizomes or stolons, and therefore does not accumulate excessive amounts of thatch.

Returning your grass clippings when mowing makes grass greener because you are recycling essential nutrients such as nitrogen, phosphorous and potassium back into the soil.

Myth: Coffee grounds in the soil help plants grow better.

Reality: Coffee grounds may benefit some plants—as they break down, they add some great organic byproducts—but in many cases, they harm the plant. Use coffee grounds sparingly around plants or in your compost pile. Mix grounds with another organic product if using it as a topical mulch.

Coffee grounds create an acidic environment in the soil. Research shows coffee grounds may increase or decrease soil pH, and this change may be short lived. Do not depend on spent coffee grounds to keep a lower soil pH (more acidic soil). You are better off using elemental sulfur if the goal is to consistently keep a lower soil pH. ■

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.

Hundreds of species of bees are hard at work in their role as pollinators. Make it easier for them by planting a mixture of flowering plants. JES/STOCK.ADOBE.COM

Give Bees a Chance by Knowing Their Needs

Andony Melathopoulos is out to bust some myths about the 500 species of bees living in the Pacific Northwest, most notably a myth about bee stings.

"I've been covered in 30,000 honeybees and didn't get stung and I'm nobody special," says Andony, a bee expert with Oregon State University Extension Service. "The key message is that most bees don't sting."

Honeybees sting, but only if their hive is disturbed or they are approached aggressively.

Wasps and yellow jackets, which sting without provocation, can be controlled with a variety of traps available at garden centers and home supply stores. The most effective traps use a synthetic attractant to lure yellow jackets into a trap. Fruit juice or meat can be used as attractants as well.

Hundreds of native bees live in the ground and aren't even recognized as bees. These solitary insects come out to pollinate and return to their nests so quickly most people never see them.

"There are a lot of bees in the city that are solitary," Andony says. "They have radically different lifestyles than honeybees. I'm struck by people who want to save the bees who don't know this. They'll see an insect that looks like a fly and not realize it needs your help, too."

Andony calls out bumblebees—one of the largest-sized bees in the country—as a group to be concerned about. Not as much research has been done compared to honeybees, but there is evidence of decline of some species. One bumblebee in the Midwest has been relegated to the endangered list.

There's good news, though. Home gardeners, whether they know it or not, provide pollen and nectar for pollinators simply by planting a mixture of flowering plants. In fact, it's been shown that cities provide better forage than bordering agricultural land that tends to be planted in large, one-crop fields that may attract only one or a few types of bees.

"If you have diversity, as in many cities," Andony says, "there's an opportunity to feed many mouths. You lay out a smorgasbord for everyone. So the more things you plant, the better."

There are three general principles to attracting bees to the garden.

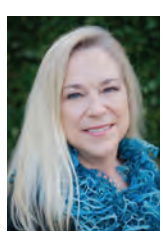
- **Choose plants attractive to bees.** Walk through the neighborhood to see what they're visiting. Many nurseries have areas where they display pollinator-friendly plants. Keep in mind, not all flowers provide food for bees. Some plants have been bred that don't provide nectar or pollen. The rule of thumb is that natives tend to be better sources, but that doesn't mean there aren't exotic plants that offer food, also. Rosemary or cherry laurel—both bee magnets—are good examples.
- **Plant in swaths.** Planting something is better than nothing, but a single plant rarely has visiting pollinators.

"Bees are economical," Andony says. "They want to go to a big-box store. No mom-and-pop stores for them."

- **Have plants that bloom at different times of year.** For example, in spring in the Willamette Valley, a big burst of cherries, maples and Oregon grape is followed by ceanothus and lupine, but after that there are gaps. Pay attention and fill in those lulls with flowers.

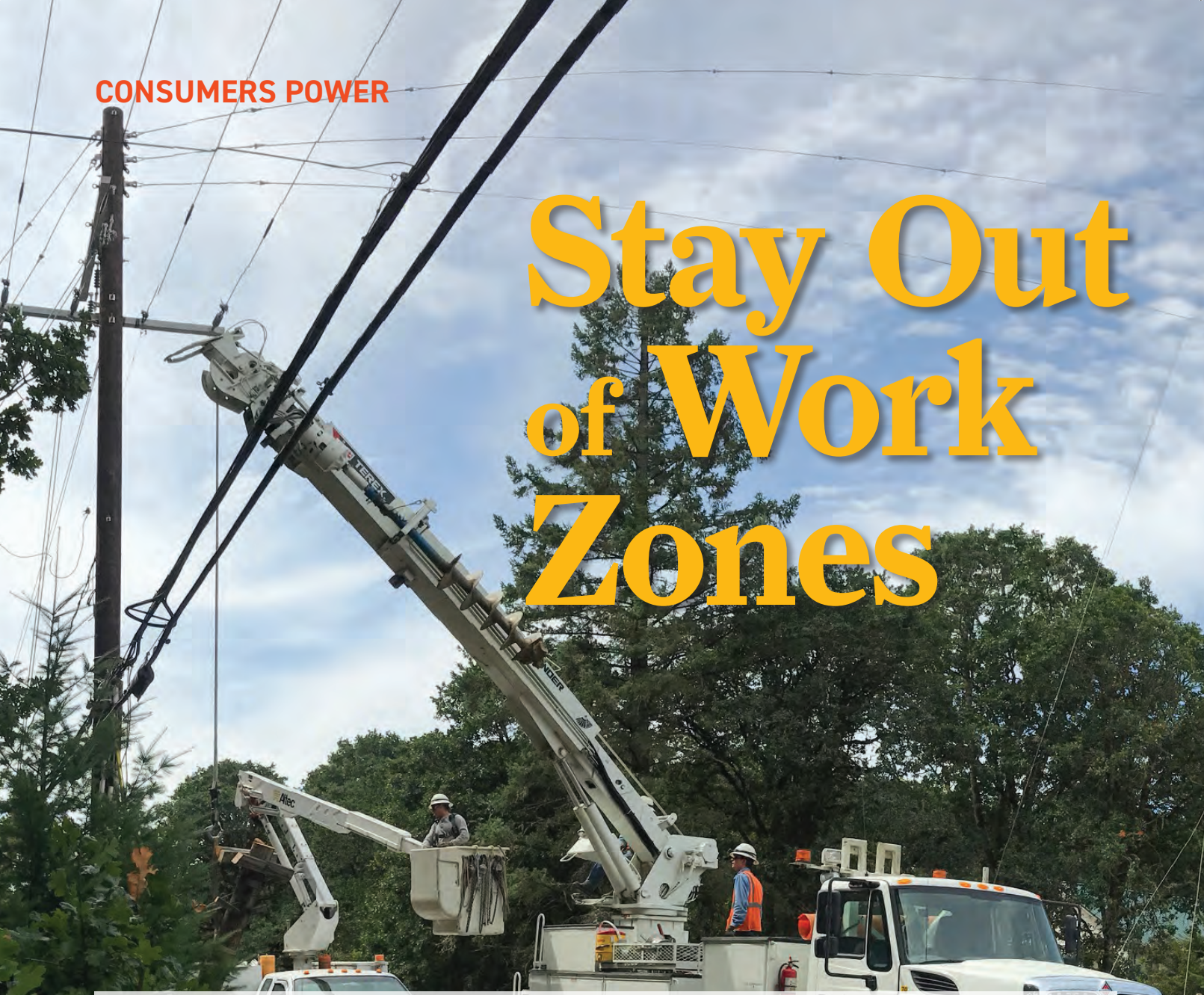
Even if all you do is plant a patch of pollinator plants, you're giving a hand to the honeybees and native bees living in your neighborhood.

"A lot of people want a different aesthetic," Andony says. "There's nothing wrong with planting plants that don't attract bees if you have a good percentage of bee-attractive plants in among them. That can be a stunning success." ■



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.

Stay Out of Work Zones



By Danita Cahill

Consumers Power linemen crews have two main goals: "To do our job safely, and provide a good service to our members," says CPI Director of Operations Billy Terry.

Since being a lineman is hazardous work, and the job takes intense concentration, there are a few things members can do to help the crews reach their goals in a timely manner. One of the most important is to stay out of work zones. Brightly colored cones clearly mark areas where the public cannot and should not enter. It's necessary for CPI crews to maintain a clear and unobstructed safety zone to protect the public and themselves while they are doing their jobs.

"It's imperative for people to understand it's dangerous work and we have to pay attention to detail," Billy says. "Please don't cross the cone barrier. The cones are there for work site safety protection."

Billy has seen a growing number of co-op members approach him and his crews while they're out in the field trying to do their jobs.

"While we're doing routine scheduled work, people increasingly are coming out with their concerns and impeding the work zone," Billy says. "It's important for the public and members to understand that crews must not be distracted."

Journeyman Lineman and Line Crew Foreman Aric Williamson has noticed a similar dangerous pattern. He's watched members of the public approach crews while they are busy. He says there have been a few instances when crews were having a tailboard—lineman lingo for a briefing—on work they were going to do, or when they were switching line from overhead to underground. Co-op members might mistakenly view it as workers just idly standing around talking.

"It might look like we're not really busy," Aric says, "and the public might think it's a good time to come up and talk to us."

Even if the linemen don't appear to be actively working with overhead lines, it's still

hazardous because of the potential for a dangerous arc flash. The path of an arc flash is unpredictable. It's drawn to the nearest thing with the greatest conductivity, such as an unsuspecting person. An arc flash can cause serious electrical burns, or worse.

If linemen are working on downed lines, don't assume the lines aren't harmful. They may still be live. Even the green transformers and junction boxes that members might see in their yards or along streets can pack a wallop of a charge.

Aric's advice is to give the linemen space.

"Try not to interrupt us as we do our work, so we can do our work safely," he says. "Our job is dangerous on a good day. We're there to help. If your power's out, we intend to get it back on as quickly as possible."

Crews often work in lift buckets around lines with voltage as high as 115,000 volts. That voltage level could cause severe harm or death to the public or CPI employees if crews are distracted instead of left alone to do their job.

"It's not the time to bring up concerns," Billy says. "It's detailed work. The crews don't need any distractions."

Besides the possible hazard of falling objects within the safety zone, the operation and moving of heavy equipment can also cause serious injury.

"We don't want anyone to get run over," Billy says.

Members' concerns are taken seriously, but finding the right channel for those issues and concerns is important. Voicing concerns to employees while they're working around high-voltage power lines and heavy machinery is not the right time or the proper channel.

If you have an issue or a concern, please don't bother the linemen for your safety and for theirs.

"A better course of action would be to call CPI's office and ask to speak to a supervisor," Billy says.

Co-op members can call the CPI main office at 800-872-9036 or send an email to info@cpi.coop. Staff will direct your call or email to the right department. Your concerns will get the attention they deserve by someone in the right position to help. ■

Don't Leave Money on the Table

Unclaimed Capital Credits

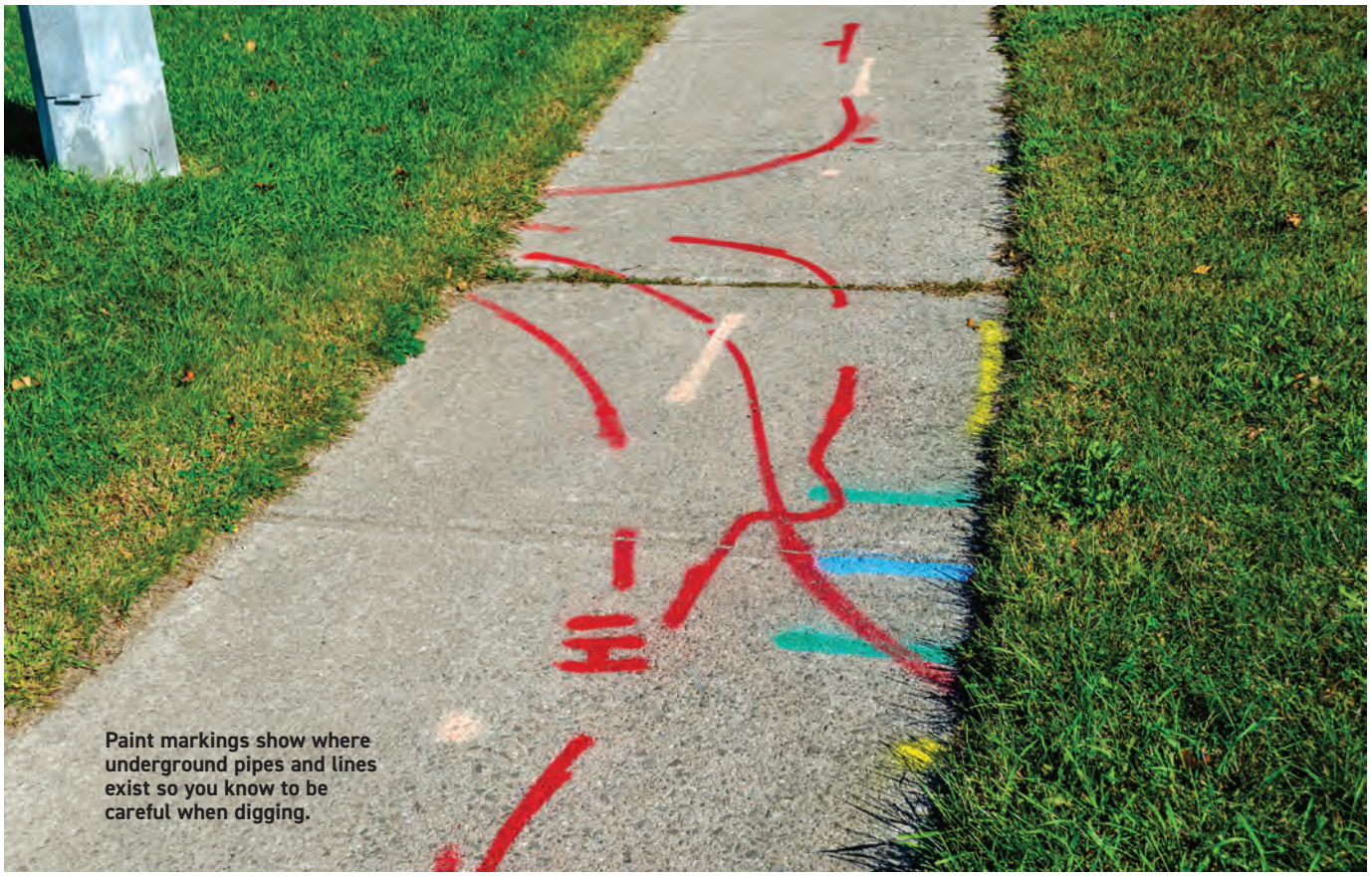
Consumers Power is attempting to locate former members of the cooperative whose capital credit checks issued in 2016 were not cashed. These checks are for members who received electric service from CPI in 1989.

The capital credit checks of these former members have been returned by the U.S. Post Office as "undeliverable" or have otherwise been unclaimed.

The last possible date to claim these funds is Monday, November 30, 2020, at 5 p.m. If these checks are not claimed by this date, the funds will be forfeited and no longer can be issued.

CPI has set up an unclaimed capital credits area on its website that can be searched by name or address. Find it at www.cpi.coop.

To claim a refund or submit questions about this notice or the lists, contact Susan Faust at 541-929-3124, or send an email to capitalcredits@cpi.coop. ■



Paint markings show where underground pipes and lines exist so you know to be careful when digging.

Know What's Below

Dial 811 before you dig

Spring is an optimal time to achieve your landscaping masterpiece. Perhaps you're planning to build a new deck to enjoy those warm summer days. If any of your spring or summer projects require digging—such as planting trees or shrubs, or setting posts—remember to dial 811 first.

Underground utilities—such as buried gas, water and electric lines—can be a shovel thrust away from turning a summer project into a disaster.

Play it safe by dialing 811 to find out where utility lines run on your property. Your call will be routed to a local one-call center. Tell the operator where you're planning to dig and what type of work you will be doing, and a locator will be notified.

In a few days, the locator will arrive to designate the approximate location of any underground lines, pipes and cables. These areas will be marked with flags or paint so you will know what's below. Then safe digging can begin.

Although many homeowners tackling do-it-yourself digging projects are aware of call-before-you-dig services, most do not take advantage of the service. A national survey showed only 50% of homeowners called to have their lines marked before starting digging projects, according to the Common Ground Alliance, a federally mandated group of underground utility and damage prevention industry professionals. CGA data also shows an underground utility line is damaged every six minutes in the U.S. because someone decided to dig without first dialing 811.

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

Even simple tasks such as installing a new mailbox post can damage utility lines, which can disrupt service to an entire neighborhood, harm diggers, and potentially result in fines and repair costs.

Never assume the location or depth of underground utility lines. There's no need: The 811 service is free, prevents the inconvenience of having utilities interrupted and can help you avoid serious injury.

For more information about local services, visit www.call811.com. ■

Plant the Right Tree in the Right Place

For more tips on smart tree planting in your community, contact your local electric cooperative or visit www.ArborDay.org.

Trees beautify our neighborhoods, and when planted in the right spot, can even help lower energy bills. But the wrong tree in the wrong place can be a hazard... especially to power lines.

LARGE TREES

Height/spread of more than 40 feet, such as:

- Maple
- Oak
- Spruce
- Pine
- Birch
- Sweetgum
- Linden

MEDIUM TREES

Height/spread of 25 to 40 feet, such as:

- Washington hawthorn
- Goldenraintree
- Eastern redbud
- American arborvitae
- Dogwoods

SMALL TREES

Avoid planting within 20 feet of power lines. When planting within 20 feet is unavoidable, use only shrubs and small trees.

Height/spread of no more than 25 feet such as:

- Star magnolia
- Crabapple
- Lilac

Be safe! Always call 811 before you dig to locate any buried utility lines.

Source: The Arbor Day Foundation and the National Rural Electric Cooperative Association

Tips To Help You Save

While Working From Home

As American families and businesses transition to working remotly, they may see a surge in home energy use—and in upcoming electric bills. Simple money-saving steps can help lower monthly bills without jeopardizing safety or comfort.

"America's electric cooperatives understand the increased financial hardships facing families and businesses due to the economic impact of COVID-19," says National Rural Electric Cooperative Association CEO Jim Matheson. "While many electric cooperatives have suspended disconnections for nonpayment and are waiving late fees, consumers will still be responsible for those bills when the pandemic has passed. It's important for families to be mindful of their energy use and consider adjusting certain habits to avoid higher costs later on."

Recommended energy-saving tips include:

- **Program your thermostat to maximize energy savings.** Setting your thermostat 1 degree lower when heating or 1 degree higher when cooling can reduce energy use by up to 5%.
- **Do full loads of laundry and wash with cold water.** Using warm water instead of hot can cut a load's energy use in half. Using cold water will save even more.
- **Air-dry dishes.** This step can cut your dishwasher's energy use by up to 50%.
- **Substitute LEDs for conventional lightbulbs.** Lighting can amount to up to 12% of monthly energy use. LED bulbs can cut lighting costs by 75%.
- **Unplug appliances and electronics when not in use.** Small appliances and electronics use energy even when not in use. When powered on, game consoles, televisions and similar electronics are responsible for up to 12% of energy use. ■

For more information on energy-saving tips, visit Touchstone Energy, the national brand affiliated with NRECA that is dedicated to helping electric cooperatives better engage and serve their members: www.electric.coop/tips-for-managing-energy-use-during-covid-19.

Landscape for Electrical Safety

If landscaping is on your list of projects this summer, Golden Valley Electric would like to remind you to plan for power lines in your design. While power lines – overhead or underground – aren't likely to be the first items on your list, they're important to consider. Proper planning helps ensure reliable electric service and safety for your family and our crews.

Landscaping and underground power lines

Members often try to disguise or cover up the metal transformer boxes with flowers or shrubs planted nearby. While we know they're not a particularly aesthetic element in your yard, it's for your safety and the safety of our crews that we recommend these guidelines:

- Call 811 to locate cables before digging. This includes landscape contractors.
- Digging by hand is required within five feet of located primary underground lines.
- Plant trees a minimum of eight feet from transformer pads and underground cables so roots can't grow into the equipment. Appropriate distance is specific to each species.
- Create and maintain an eight-foot clearance between GVEA's underground facilities and large growing trees. Maintain a five-foot clearance for shrubs. This assures crews access to poles and transformers for maintenance and repair.

Landscaping and overhead power lines

Large trees near power lines can disrupt service and pose safety hazards. Planting the right tree in the right place is the key.

Planting large trees away from rights of way helps ensure more reliable electric service and greater public safety. Proper selection of trees for use near power lines will reduce hazards and the need for expensive, unsightly pruning or removal.

- Consider the height of the tree at maturity in relation to the height of the conductor.
- Consider the spread of mature trees in relation to the location of power lines and poles.
- Plant trees at least 15 feet from the center line of power lines, from the power pole or where they will not interfere with guy wires or other equipment.
- Plant small trees and shrubs along the edge of the right of way to allow access to the right of way by utility personnel and vehicles for constructing, operating and maintaining utility equipment.

Balancing trees and power lines

Trees falling or growing into power lines are one of the leading causes of power outages on our system. Although these types of outages are inconvenient, they're also dangerous. Trees contacting power lines can become energized, catch fire and create deadly situations for anyone coming into contact with them.

In addition to educating members to plant the right tree in the right place, we also have a right of way maintenance program. Covering about 20 percent of our 3,200 miles of power line annually, we clear vegetation from under distribution and transmission lines, remove trees in danger of falling into these lines and cut limbs growing into power lines.

Crews identify and remove hazard trees. Hazard trees are dead, diseased, damaged, severely leaning or overhanging trees that will likely cause damage or interruption to our electrical system. Under no circumstances should you attempt to cut hazard trees yourself – the result could be damage to our facilities, and you will be responsible for any repairs. More importantly, you could be injured.

Never touch a tree that is in contact with a power line. Trees do conduct electricity and can cause serious injury or death. If you suspect a tree is hazardous to power lines, call GVEA and we will evaluate it for you.

For more information, visit http://www.gvea.com/resources/treemgmt. There you can watch a video on safety tips for tree removal and landscaping.

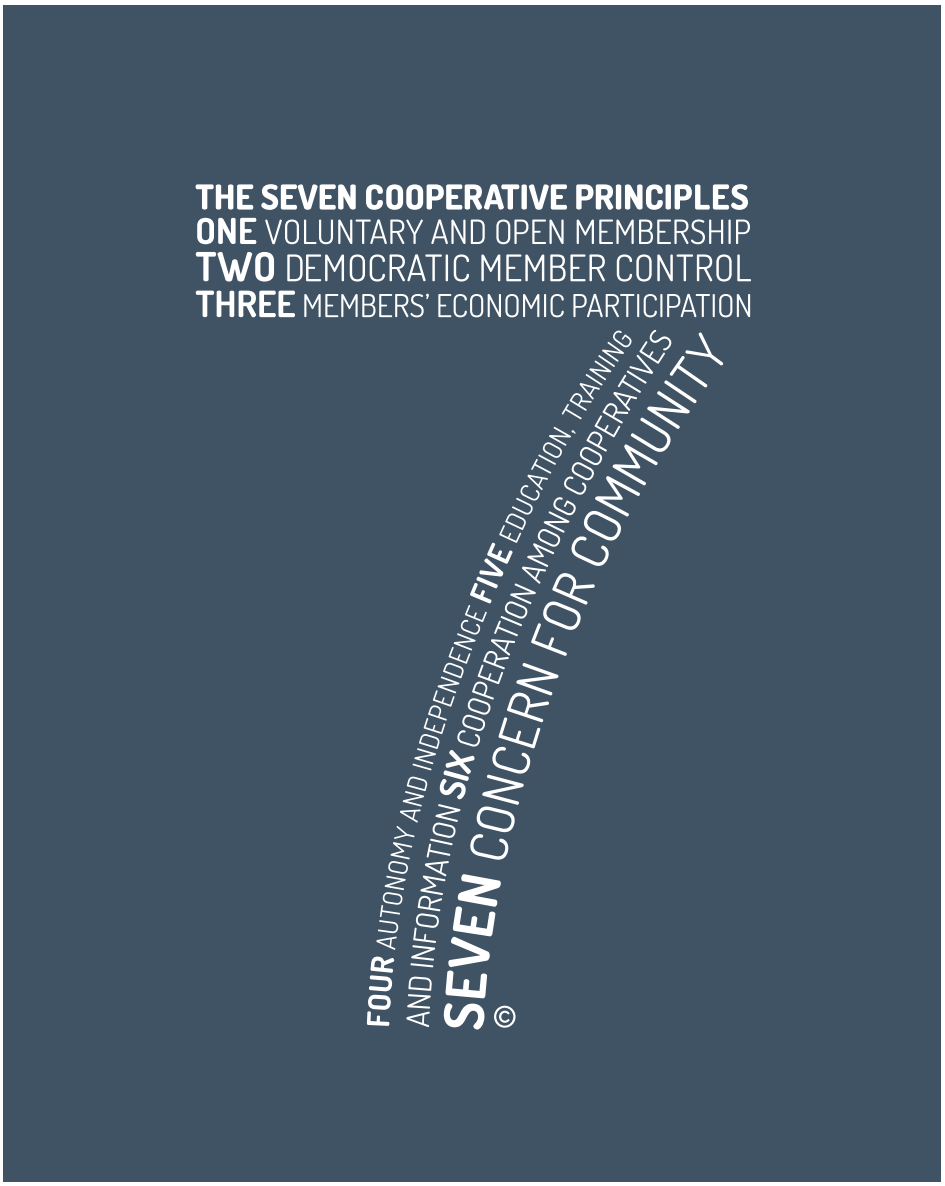
Landscape for energy efficiency

Consider planting deciduous trees on the south and west sides of your house. You can benefit from the warmth of the sun in the spring and fall while taking advantage of their shade to help cool your home during the summer.

Use trees to help lower your heating costs as well. Plant coniferous trees on the north and east sides of your home as a shield from cold winter winds.

Fencing and power lines

While fences make good neighbors, they can pose obstacles to GVEA crews needing access to the power lines. This creates safety issues and the potential for longer restoration times in the event of an outage. For guidelines on fencing near power lines, call GVEA. ■



Co-ops Come in All Shapes and Sizes

By Abby Berry and Sherri Stafford

What is a co-op, exactly?

When you hear the word co-op, what comes to mind? We hope you think of your friends here at Anza Electric Cooperative, but maybe you think of a credit union or some other business.

You might be surprised to learn co-ops can be found in many industries and offer a variety of services, each designed to serve their members in the best way possible.

A cooperative is a not-for-profit organization owned by its members. Across the globe, cooperatives remain steadfast, annually generating more than $500 billion in revenue and providing more than 2 million jobs.

AEC is a not-for-profit electric utility established under the Rural Electrification Act of 1935, part of Franklin Delano Roosevelt's New Deal, which was intended to put Americans to work building lines to serve rural communities that were not connected to electricity.

AEC was established in

Volunteers set up the Anza Electric-sponsored Find Food Band, a mobile food panty.

1951 to bring electricity to the rural areas of Anza, Aguanga, Pinyon Flats and Red Mountain. With the persistence and determination of local families, we energized our first residents in 1955.

Electric cooperatives were created to provide at-cost electric service. Unlike investor-owned utilities, cooperative members can earn capital credits. Each year that AEC earns a margin—revenue collected that is not needed to cover the cost of providing service—it is assigned to members in proportion to the amount they were billed for electricity for that year. These funds, called capital credits, are retained by the co-op as a source of working capital for approximately 20 years and are refunded at the discretion of the board.

Local Support

AEC is guided by the Seven Cooperative Principles, one of them being Concern for Community. We work year-round to strengthen our community by supporting economic development and upgrading infrastructure to improve distribution efficiency and keep electric rates as low as possible.

As our service area grows, our distribution system grows, which makes it easy to see why strengthening the local economy makes sound business sense.

We are involved in various local projects, such as hiring locals to work on our construction projects; working with the government to apply for grants for broadband and various energy-related projects; participating in the Washington Youth Tour program; providing donations for numerous local events each year; and supporting many financial assistance programs, along with our new Find Food Bank mobile food pantry, hosted each month at our co-op.

Co-ops Offer a Variety of Services

Co-ops fall under a variety of categories and services, including agriculture and forestry, consumer and retail, banking and credit unions, and health and wellness.

Here are a few national co-ops you might recognize:

- **REI.** What began as a group of 23 mountain climbing buddies is now the nation's largest consumer cooperative, specializing in quality outdoor gear.
- **Sunkist.** This not-for-profit company's membership is comprised of numerous growers throughout California and Arizona.
- **Best Western.** Owned by independent operators of more than 4,000 hotels in 80 countries, Best Western is one of the world's largest hotel chains.

The list of cooperatives goes on and on, and as you can see, we come in all shapes and sizes. Being part of a cooperative has many benefits. Our mission at AEC is to provide you with safe, reliable and affordable utility services. We encourage our members to reach out to us at any time with questions or suggestions. ■

For more information about your cooperative and the services we offer, visit www.anzaelectric.org or our Facebook page, or contact us at 951-763-4333.

Team Effort Speeds Repairs In Kalskag

These crates with 800 pounds of parts were picked up in Aniak and delivered to the Kalskag power plant in the back of a pickup truck.
PHOTO BY CIRO RIVERA

In early March, Alaska Village Electric Generation Foreman Ciro Rivera flew to Kalskag to do routine engine tuneups and rebuild heat exchangers. Upon arrival, plant operator Lucy Jordan informed Ciro the engine in position No. 2 was out of service.

Ciro fixed a short circuit and got the generator back online. Ciro said when Lucy came to the plant and found her position No. 2 back online, the smile on her face was priceless.

Next, Ciro inspected position No. 1, a Detroit Diesel Series 60, and found a damaged camshaft. Ciro called Operations Manager Dan Allis in Anchorage to report the issue and place an order for parts and supplies.

Ciro continued inspecting and finding other problems he fixed. He discovered an issue in the main control room where the master cell showed fluctuations on the total kilowatts requested, making the gensets turn on and off frequently and causing outages. After checking the meters and the transducer in the master control panel, Ciro determined the transducer had to be replaced. AVEC engineer Aimie Morgan programmed a new meter and sent it to the village.

Unfortunately, by now the weather was not cooperating. A snowstorm with fog and freezing rain was moving in that would delay the arrival of much-needed parts. On top of that, the cargo airline from Aniak to Kalskag was not able to deliver the parts to rebuild the exchangers to repair position No. 1 and position No. 3 and the camshaft for position No. 1 for at least another week. This would delay getting all the engines online, leaving the community's power plant dependent on a single engine.

Ciro called Kalskag City Administrator Lena Stewart and notified her the parts for Kalskag were at Aniak. He asked for her help to move the parts from the hub airport to the village to avoid having to wait a week or so until a plane was available to fly the parts.

The crates contained about 800 pounds of parts. Lena told Ciro she would drive to Aniak to pick up the freight. Then Lena and Derrick Holmberg drove a pickup from Kalskag to Aniak, about an hour's drive each way on a frozen river in bad weather.

Lena and Derek delivered the crates to the plant. It took nearly five days to get all of the engines and heat exchangers working at 100%.

Lena expressed her gratitude for AVEC's service to the community.

Ciro is thankful for the concern the city administrator showed for her community. He appreciated Lena's willingness to personally travel to Aniak to pick up the freight needed to complete repairs to the village power plant.

Lena and Derrick earned big kudos for their assistance. Their efforts saved at least six days of waiting for the cargo plane. They helped ensure their community's power plant was no longer dependent on a single engine, and the heat and lights stayed on! ■

Savoonga Survives Severe Winter Storm

This scene greeted AVEC crews numerous times as they opened the door to this generating module in Savoonga, even though they removed snow every hour. Strong winds blew snow into the module through the intake louvers. The snow built up from the roof to the floor, creating a snow wall near the entrance. Snow covering the Hampton Drive melted and fried some components on the control panel.

By Amy Murphy

Savoonga and Gambell, on St. Lawrence Island in the Bering Sea area, are no strangers to extreme weather conditions. Heavy snowfall and strong winds converge to create havoc, including snowdrifts that nearly bury the power plants and bulk fuel tank farms in both villages.

In March, Mother Nature once again unleashed her fury on Savoonga, knocking out power and canceling airline service due to wind speeds estimated at 50 to 60 mph.

William Parks, the Alaska Village Electric plant operator in Gambell, went above and beyond helping the community of Savoonga when the entire plant went down. Planes were unable to fly in spare parts to fix the engines and restore power and lights.

Since all the engines were running in Gambell, William was directed to take one of its engines out of service. He removed electronic circuit boards from the QSX-15 Cummins controller and delivered them to Savoonga by snow machine.

The trip was dangerous because of poor visibility. Efforts were made to recruit someone in Savoonga to

William Parks

ride toward Gambell and meet with William, but no one volunteered. Thankfully, Walker Craft rode with William, so he didn't make the journey alone in the dark.

William and Walker made three attempts before arriving in Savoonga around 5 a.m. Their daring dash across the frozen landscape took five hours one way, including a ride through the mountain cliffs where conditions were sketchy.

Meanwhile, AVEC employees John Snyder and Patrick Shick worked with the plant operators and locals to shovel snow out of the unit No. 2 generating module and snow-covered walkway. They borrowed generators and heaters to melt snow in the module and dry it out. Someone even donated a hair dryer to help out.

Efforts were made to slowly start heating up the cold

TOP: Savoonga on a more typical day.

ABOVE: The Savoonga power plant when not buried in snow.

TOP LEFT: The covered walkway that runs between the power plant modules. The plant sits on a 4-foot-high platform designed to reduce the amount of snow that builds up in the walkway, blocking access to the individual module doors. Savoonga's forceful winds blew falling snow into the walkway faster than the crew could shovel it out. The south entrance to the walkway was covered to slow the snow buildup.

engine. John and Patrick made repairs using the parts William delivered. They got one engine going and the lights came on in Savoonga. William and Walker returned home.

However, the next day Patrick discovered more failed components in the QSX-15 controller. AVEC was unable to get the parts in Anchorage so William stepped up again. He removed the needed parts from his engine and made another trip to Savoonga. Using these parts, Patrick was able to get two engines running.

AVEC designs power plants to have redundant generating capacity in case an engine goes down.

Much of Savoonga's equipment is new. The generators and engines on units No. 1 and No. 2 were replaced in the past 18 months.

Despite the upgrades, they still had failures. In this case, Mother Nature's ferocious winds took a toll on Savoonga's power plant.

It takes a lot of teamwork to keep the power on in our remote communities that experience such severe weather conditions. AVEC appreciates everyone who helps when needed.

Thankfully, numerous residents stepped up during this precarious situation. Big thanks go to Mayor Myron Kingeekuk, Bering Air and the local plant operators and residents who helped shovel lots of snow by hand. ■

A young annual meeting attendee draws door prize tickets at the Graham County Electric Cooperative Annual Meeting in 1967.

Three GMs Tell Their GCEC Stories

By Dan Curtis

Past Graham County Electric Cooperative General Managers Nelson Peck and Steve Lines, and current GM Kirk Gray, provide a retrospective on how the co-op began, the changes and growth, and the future. Managers' podcast is on GilaValleyCentral.net, under Voice of the Valley.

Nelson Peck—Beginnings of the Co-op, General Manager from 1998 to 2001

Nelson Peck began his career on the line crew in 1965. The co-op had been in existence for just 20 years at that time. Back then, the line crews didn't have any heavy equipment to help with their job. Postholes were dug by hand with shovels. The original electrical grid was crude, but it served the needs of the community at the time.

One of the early challenges Nelson faced as a lineman was river flooding.

"The river crossings we had at that time were not very reliable," Nelson says. "Everything north of the river lost its power, sometimes for weeks."

Nelson became general manager of the co-op in 1998. Just after he started in his new position, a microburst took out power for most of the valley. Crews managed to get power back on in most places fairly quickly, but some of the outlying areas—such as Pima and residences across the river—were out for nearly 48 hours.

Up to that time, maintenance was done

only when something was broken. Nelson recognized improvements were needed to make the system more reliable.

Technology rapidly changed during Nelson's tenure as general manager. His work maintaining and improving the line and equipment set the stage for major improvements.

Nelson retired in January 2001 after 36 years with GCEC.

Steve Lines—Reliable Power and Building Up the Co-op, General Manager from 2001 to 2016

Steve Lines succeeded Nelson as general manager in January 2001. He picked up right where Nelson left off.

Like his predecessor, Steve grew up in Pima. After attending Eastern Arizona College for a couple of years, he was offered a four-year lineman apprenticeship at Phelps Dodge (now Freeport McMoran). In February 1979, Steve went to work for Graham County Electric Co-op as a certified lineman.

Shortly after completing a business degree through EAC in 1997, Steve was promoted to administrative assistant. In April 2000, he was promoted to assistant general manager. When Nelson retired in 2001, Steve was promoted to general manager.

Following in Nelson's footsteps, Steve went to work on system reliability. The Gila Valley was starting to grow and the current electric system was showing symptoms of overload.

Steve secured low-interest loans to upgrade the system. The co-op began using steel poles to handle bigger electrical wires. Several substations were rebuilt to handle a bigger load and three substations were added to the system, bringing the total number of substations to nine. A substation was added on the north side of the river to better serve the area.

All the upgrades and improvements not only provided power to a rapidly growing community, but improved the quality of electrical service the co-op provided to its members.

The old system wires were not stout enough to handle the load, which created a line loss throughout the system. Line loss occurs when electrical power turns into heat and is dissipated from the system. Line loss cost the co-op a substantial amount of money. Prior to the improvements, line loss was about 13%. The improvements brought line loss down to 4%.

"Our savings in line loss was just about paying for our system upgrades," Steve says.

After spending 15 years aggressively upgrading the electrical system, Steve retired in January 2016.

Some of the crew in front of the old GCEC office building. This building was replaced in 2008.

Kirk Gray—Future of the Industry and Changes, General Manager and CEO, 2016 to Present

Kirk Gray succeeded Steve Lines as general manager and CEO in February 2016. Kirk is a certified public accountatnt by trade and had a private accounting practice before coming to the co-op.

In 2010, Kirk was offered the finance manager position. In mid 2015, he was offered the assistant general manager's job with the understanding he would succeed Steve when he retired. The additional title of CEO allowed more leeway in executing contracts for the co-op as an officer of the corporation.

The system was in good shape when Kirk took over. Operating procedures were changed to ensure continued system reliability and safe operation of the utility. The co-op has moved from repair maintenance to preventive maintenance.

The co-op is now more proactive, doing pole inspections and replacing lines before they become a problem. Line inspections are conducted with infrared cameras that show hotspots and allow crews to fix problematic connections before they cause outages.

Since Kirk came on board, the co-op has stopped borrowing money to maintain the system. No money has been borrowed for nine or 10 years. In fact, it built a $2 million substation without borrowing money.

Kirk says the future of the co-op is automation. Meter reading will eventually be done from the office via computer network. Currently, approximately 16% of the system's 8,000 meter readings can be collected while driving down the road. The new automation will allow the meter readings to be taken automatically at the office.

Kirk has tremendous confidence in his staff.

"I believe we have the greatest group of professional employees that I've ever been associated with in my 45 years of being in business," he says. "We have some great people working here looking out for the member's interests." ■

See page 8 for a timeline for the co-op.

Keep It Safe

Be Cautious Around Piers and Docks

Don't take the power of electricity for granted while enjoying the outdoors

Residents in our region of the country love the water. But we are acutely aware electricity and water are a dangerous—potentially fatal—combination.

Swimmers and boat owners at piers, docks and marinas need to take a few steps to make sure their time in and on the water is safe.

While this may seem like common sense, boats and docks are often powered by electricity—and one mistake could lead to tragedy.

Consider the following points:

- There is no visible warning to electrified water. Electric current in water causes a paralysis of muscles, which results in drowning. As a little as 10 milliamps—1/50th of the amount used by a 60-watt lightbulb—can cause paralysis and drowning.
- If you are swimming—or have contact with water—and feel a tingling, the water might be electrified. Immediately alert others who are in the water, try to stay upright, tuck legs to be smaller and swim away from anything that could be energized.Get out of the water and avoid using metal objects, such as a ladder.
- If you believe an electrical drowning is occurring, immediately turn off all power, throw a life ring to the person and call 911. Do not enter the water, as it could still be electrified.
- If you own a dock or pier, install ground-fault circuit interrupters and test them monthly. Be sure to use portable UL-Marine List GFCIs when using electricity near water.
- If you own a boat that uses electricity, consider having equipment-leakage circuit interrupters installed to protect swimmers from electric shock in the water around the boat.

The Energy Education Council recommends all electrical installations be performed by a professional electrical contractor familiar with marine codes and standards.

Neighboring docks can present a shock hazard. Make sure your neighbors are aware of the need for safety inspections and maintenance.

The organization also recommends individuals not swim around docks with electrical equipment or boats plugged into shore power. Many electrical shock drowning deaths have occurred around private docks and boats plugged into shore power while docked. ■

At EREC, safety is our top priority.

Be aware of hazards that surround outdoor activities around the water.

Use Energy Wisely

Be Strategic and Save on Your Bill

Search out the small changes you can make to save big dollars

Adjust your thermostat to use less and save more. A programmable thermostat is one of the easiest ways to make a big impact on energy efficiency.

The goal of every Escambia River Electric Cooperative member is to keep their energy bill as low as possible while remaining comfortable. Here are steps you can take to help achieve those goals.

- **Start with the thermostat.** The power is in your hands. Adjust it to use less and save more. That means keeping it at 78 degrees in the summer and 68 degrees in the winter. Keep the thermostat on auto so the fan only runs when the unit runs. Setting the fan to "on" will result in the fan running continuously and higher bills. For more control of your system, consider buying a programmable thermostat that makes it easier to create optimal settings.
- **Change air filters routinely.** Follow the recommended replacement schedule. A clean filter allows your heating and cooling unit to work more efficiently and reduce the amount of dust in your home. Buy filters in multiple packs so you always have them available.
- **Use drapes and blinds.** In the summer, close them to keep the interior of your home cooler and more comfortable. In the winter, open them during the day to warm your home and close them at night to create an extra barrier against drafts.
- **Caulk cracks around windows and doorjambs.** Since heating and cooling is 40% to 50% of your energy costs, prevent gaps that allow interior air to escape.
- **Keep water heater temperature at 120 degrees.** That keeps more money in your wallet and, more importantly, reduces the risk of scalding accidents.
- **Wash only full loads of dishes and clothes.** Appliance costs on average comprise 9% of monthly electrical use. Run full loads of dishes and clothes to maximize your dollars spent. Wash clothes in cold water. When drying clothes, try to run loads consecutively to take advantage of heat already in the dryer. Make sure the lint filter is clean and the drying vent hose is not kinked or clogged.
- **Plug home electronics into power strips.** Turn off power strips when the equipment is not in use and when you will be out of town for an extended time.
- **Keep your garage door down.** A closed door will result in a warmer garage in the winter and cooler in the summer, and will save energy. ■

Escambia River Electric Cooperative offices are closed Monday, May 25, for Memorial Day.

A Word About Water

Is Your Water Heater Wasteful or Wise?

It can wake you up, prepare you to face the day, relax you and wash your cares away, clean a load of dishes after a big meal—even preserve your home from the potential damage of muddy children.

Hot water is essential and a luxury at the same time, but it can come at a high price if not used wisely. Escambia River Electric Cooperative knows how important a reliable supply of hot water is to your family, as are your energy dollars.

Water heating is the second-largest user of electricity in the average home. It consumes 15% to 25% of household energy depending on tank capacity, climate and lifestyle. The average household uses 3,500 kilowatt-hours of electricity to heat water annually.

Though some components of the cost of electricity are beyond our control, you control one big factor: use. Your electric bill is based on how much power you use each month, so lowering your bill is easy. It is all about conservation.

You can implement simple, free or low-cost conservation methods and reduce your monthly household electric use. Take action and lower your water-heating costs by following these easy tips:

- **Lower your water heater thermostat setting to 120 F.** For each 10-degree reduction in water temperature, you save 3% to 5% in energy costs. Reducing the temperature also slows mineral buildup and corrosion in your water heater and pipes, promoting longer use and more-efficient operation.
- **Install low-flow fixtures.**
- **Promptly repair leaky faucets and pipes.**
- **Once a year, drain a bucket of water from the bottom of your water heater.** This removes sediment buildup that can waste energy by impeding the water element from heating the water properly.

Only use warm water for heavily soiled clothes. Cold water detergents allow you to get your laundry clean and still save money.

- **Insulate water pipes.** Insulation reduces heat loss and can raise water temperature 2 to 4 degrees compared with noninsulated pipes. Insulate all accessible hot water pipes, especially within 3 feet of the water heater. It also is a good idea to insulate the cold water inlet pipes for the first 3 feet.
- **Install a timer.** It can save 5% to 12% of water heater energy. Program it to turn off your water heater at night when you do not use hot water.
- **Use energy-saving settings.** This applies to dishwashers, washing machines and dryers.
- **Do not leave water running if you wash dishes by hand.** Rinse dishes in groups rather than one at a time. ■

Try Our "Social Distancing" Friendly Payment Options

People are looking for ways to reduce face-to-face transactions. To help you and protect our community, ***PRECO*** *provides a number of convenient ways to pay your bill.*

SMARTHUB
Pay with a credit/debit card or electronic check on your computer, smartphone or tablet.

KIOSK
Our kiosks accept cash or checks, 24/7, at our Wauchula, Indian Lake Estates or Lakewood Ranch offices. Have your PRECO account number handy when making your payment.

PAYNOW
Make your payment with your account number and last name at **www.preco.coop**.

MONEYGRAM
Make cash payments at MoneyGram locations, such as CVS and Walmart. For a $1.50 merchant fee, the service posts your payment securely within minutes. You will need your PRECO account number and PRECO's receive code 17898 when making your payment.

AUTO PAY
Set up an automatic payment plan through your checking/ savings account or credit/debit card. Visit **www.preco.coop** to enroll online or download the enrollment form.

MAIL YOUR PAYMENT
Peace River Electric Cooperative
P.O. Box 1547
Wauchula, FL 33873
Due to delivery time, mail at least 10 days in advance of your payment due date.

PAY BY PHONE
Pay with a credit or debit card by calling **855-386-9924**.

More information on these payment options is available on **www.preco.coop** or by speaking with our customer care team at **800-282-3824**.

Peace River Electric Cooperative, Inc.
A Touchstone Energy® Cooperative

DID YOU KNOW?

Capital Credits Allocation Coming in May

Find your amount on your bill's information box

Like all electric co-ops, Peace River Electric Cooperative is owned by the people it serves.

While investor-owned utilities strive to create profit for stockholders, electric co-ops exist to provide electric service to their member-owners at cost.

Technically, since cooperatives are not-for-profit organizations, they don't create profits. Instead, they generate margins. Margins are PRECO's revenues minus expenses.

As a member-owner, you share in the margins PRECO generates. Margins are allocated to your capital credits account in proportion to the amount of electricity you buy in a given year. Your capital credits account is the sum of your allocations earned through 2019, less any refunds issued to date.

Capital credits are used to build and maintain the facilities needed to provide electricity to the cooperative's members until it is financially feasible to return them. PRECO members with an active electric account will find their 2019 capital credits allocation listed in the "Important Information" box on their May electric bill.

Postcards will be sent to inactive members informing them of their allocation amount. ■

MAY/JUNE 2020

Louisiana Country

Coronavirus and the Class of 2020