April 2020 Share Package
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Ruralite/Currents magazine 2020 Schedule of Important Dates

August 2020 Issue

pages 1, 4-5 due .....June 24
pages 8, 25, 28-29 due .....July 7
mailing labels due.....July 9
page 32 due.....July 15
camera-ready pages due .....July 17

September 2020 Issue

pages 1, 4-5 due .....July 24
pages 8, 25, 28-29 due .....Aug. 7
mailing labels due.....Aug. 10
page 32 due.....Aug. 14
camera-ready pages due .....Aug. 18

October 2020 Issue

pages 1, 4-5 due .....Aug. 24
pages 8, 25, 28-29 due .....Sept. 8
mailing labels due.....Sept. 9
page 32 due.....Sept. 16
camera-ready pages due .....Sept. 17

November 2020 Issue

pages 1, 4-5 due .....Sept. 25
pages 8, 25, 28-29 due.....Oct. 6
mailing labels due.....Oct. 9
page 32 due.....Oct. 16
camera-ready pages due .....Oct. 19

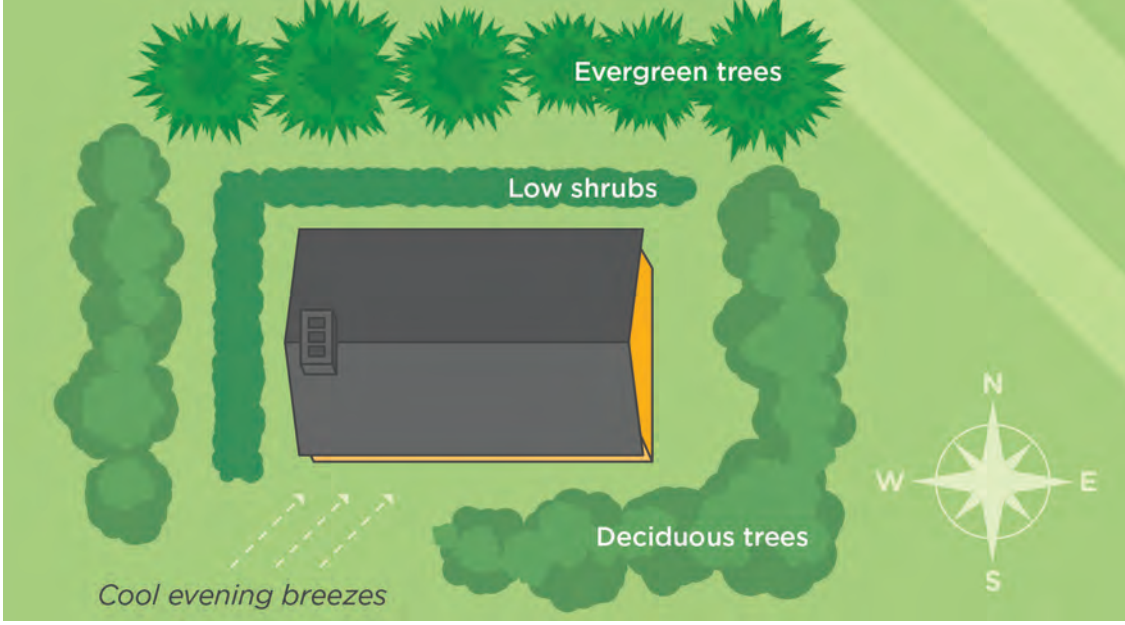
December 2020 Issue

pages 1, 4-5 due .....Oct. 26
pages 8, 25, 28-29 due.....Nov. 6
mailing labels due.....Nov. 9
page 32 due.....Nov. 16
camera-ready pages due .....Nov. 18

January 2021 **Issue**

pages 1, 4-5 due .....Nov. 25
pages 8, 25, 28-29 due.....Dec. 4
mailing labels due.....Dec. 9
page 32 due.....Dec. 15
camera-ready pages due .....Dec. 17

This schedule is only applicable to Ruralite/Currents.



Plant for Efficiency

Q. What landscaping choices can we make to lower our home's monthly energy use?

A. The decisions you make about your home's landscaping can help you stay cooler in the summer and warmer in the winter. With summer just around the corner, let's start by looking at how strategic planting can help cool your home.

Direct sunlight hitting windows is a major contributor to overheating your home during summer months. By planting trees that block sunlight, you can improve comfort and reduce your air conditioning energy use. If the trees eventually grow tall enough to shield your roof, that's even better.

The most important windows to shade are those facing west, followed by windows that face east. Morning and evening sunlight hits more directly than midday sunlight. An eave on the south side of your home can help shade your windows during midday sun.

If you live in a colder climate, planting deciduous trees that lose their leaves in fall will shield your windows in summer and allow sunlight in during winter to help warm your home. A simple approach that can deliver some shade the first year is to plant a "living wall" of vines grown on a trellis next to your home.

One cooling strategy is to make sure your air conditioning compressor has some plants near it. Just make sure the plants aren't too close. The compressor should have a 5-foot space above it and a 2- to 3-foot gap around so it gets enough air movement to do its job.

There are two other factors to consider that are important in some areas of the country.

Water is becoming more precious and more expensive. When you pay your water bill, much of that cost is for the energy required to pump water to your home, or perhaps you have your own well. Either way, reducing water use saves you money and reduces energy use.

If you live in an area prone to wildfires, take that information into consideration as you develop a landscaping plan. What and where you plant on your property can either increase or decrease the risk of fire reaching your home.

Now let's talk about how landscaping impacts your home's energy use and comfort in the winter.

If you live in a colder climate, a solid windbreak can cut harsh winter winds. The best solution for this is a solid row of trees—preferably evergreen—on the windward side of the home, with shrubs underneath the trees to keep the wind from sneaking through.

Deciduous trees can help keep your home cool in summer by blocking the sun, and help warm it during winter by allowing sunlight in. PHOTO BY MARCELA GARA, ENERGY EFFICIENCY DATABASE

If you live in a warmer climate, you do not want a wind barrier because wind flow will help cool your home.

If you live in a cooler climate that isn't too humid, plant a row of shrubs a foot from your home for more efficiency. Stopping air movement can form a dead air space around the home that acts as bonus insulation.

While you're at it, you could add some foundation insulation if you have a home with a basement or if it's built on a slab. In a humid climate, however, leave several feet between landscaping and the home as air flow is necessary to avoid moisture-related home damage.

As with any landscaping projects that require digging, remember to dial 811 to ensure all underground utility lines are properly marked and flagged before you start the work. Happy planting! ■

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

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.

Keeping Lines Clear

Tree trimming and vegetation removal improve safety and help your utility keep electricity flowing

By Pam Blair

A 2018 wildfire destroyed the electric distribution system serving Eagle Lake in Northern California, leaving about 1,000 people without power. PHOTO COURTESY OF LASSEN MUNICIPAL UTILITY DISTRICT

Despite your electric utility's best efforts to maintain a safe and reliable system, Mother Nature often has the last word.

Strong winds snap trees like toothpicks. Heavy rains saturate the ground, weakening tree root systems. Ice and heavy snowfall weigh down and break branches. Sparks ignite vegetation and spread fire.

Regardless of the cause, when any part of a tree contacts a power line, the result is the same: loss of electrical service and compromised public safety.

Even before alleged poor maintenance of transmission lines by Pacific Gas & Electric caused deadly wildfires in California, community-owned utilities invested millions on inspections and tree trimming.

At $1.76 million a year, vegetation management is the largest single line item in the budget of Lane Electric Cooperative, based in Eugene, Oregon, says Tony Toncray, operations manager.

"In 2001, we realized we needed to look deeper into our tree program," Toncray says. "We had not been clearing our rights-of-way, and it was causing problems. We added staff, and began a three-year rotational trimming schedule.

"We know some trees grow faster—cycle busters—so we drive our system every year looking for those. We now are gathering data about the species in each right-of-way and entering it into a database."

A minimum of three and up to four contract crews work year-round in Lane's territory.

Northern Lights Inc., based in Sagle, Idaho, annually spends about $2 million on trees, says Kristin Mettke, engineering and operations manager.

"We want to keep the lights on," Mettke says. "If trees don't get into the lines, we have less outages—and with less outages, we spend less on overtime for line crews. It's buying an insurance policy, essentially."

NLI has two year-round contract tree-trimming crews and a full-time tree foreman. From April through October, that balloons to five to six aerial crews and two to three ground crews that clean up debris or grind stumps.

Trees along the system's 1,570 miles of overhead line are trimmed an average of every five to six years, although faster-growing areas are visited more often, and crews are redirected as new hazards are discovered.

"During a storm, people are more willing to have their trees trimmed," Mettke says. "They want their power on."

Pat Holley, assistant general manager at Lassen Municipal Utility District in Susanville, California, says LMUD inspects every distribution and transmission line in its system every year. The 1,900-square-mile district ranges from desert valleys to high alpine, and includes private as well as federal forests.

"Now we are inspecting at ground level, but we are gearing up to begin drone inspections this year," Holley says. "We will be able to look down on structures to detect problems."

One contract crew works year-round trimming trees. LMUD personnel each spend about a month a year doing inspections and related work. A 20-foot area is brushed clear of vegetation around the base of all poles with equipment mounted overhead in high fire danger zones every year so sparks have nothing to ignite.

As part of its state-mandated wildfire mitigation plan, LMUD plans to extend easement width clearing from 50 feet to 200 feet where possible to provide better protection from windstorms and serve as a fire break.

Distribution line rights-of-way typically are 20 feet—not enough to prevent things

A contract crew with Asplundh Tree Experts trims trees away from power lines along a snowy roadway in Northern Idaho. PHOTO BY TRAVIS COTTIER/NORTHERN LIGHTS INC.

outside the right-of-way from causing problems, Toncray notes.

Wildfire is a serious concern. In 2018, the Whaleback Fire—suspected to have started from lightning—burned 18,703 acres, closed portions of Lassen National Park, forced evacuations and destroyed LMUD's 125-pole Eagle Lake distribution line. A portable generator provided power to the area for months while the 6.5 miles of overhead line was replaced with 10 miles of underground wire.

Although PG&E was ruled responsible for wildfires because it failed to correct maintenance issues it had tagged, "nine of 10 wildfires are manmade or naturally occurring," Holley notes.

As part of its mitigation plan, LMUD is expanding the capabilities of its computer monitoring and control system. Rather than automatically fixing a fault during fire season, a crew checks the line before it is re-energized.

Federated Insurance CEO Phil Irwin, who works with electric utilities on coverage, appreciates the investments.

The mutual insurance company buys reinsurance to mitigate its risk—and in the wake of PG&E's proposed $24.5 billion settlement of all wildfire claims, reinsurers have little appetite to write policies for utilities, Irwin says.

When talking to reinsurers, Irwin says he emphasizes the difference between PG&E and publicly owned utilities, where staff live in the communities they serve and problems are much more personal.

Drought, more dead trees and an extended fire season mean trimming is not only the law, but it is the right thing to do, Toncray says.

"It's important to keep public safety as our highest priority," he says. ■

If you see a tree problem, please contact your utility. Most have a program to replace removed trees.

Prevent Problems: Plant the Right Tree in the Right Place

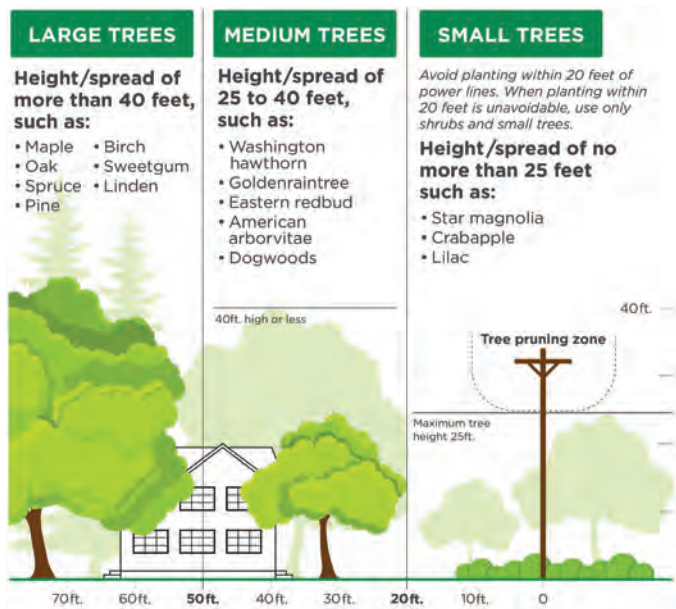
Be safe. Always call 811 before you dig to locate buried utility lines.

Trees beautify homes and property, and can lower utility bills if planted in the right spot. But care should be taken with trees near power lines. Outages are caused by trees or limbs falling on lines. Restoring power is expensive. So is trimming trees.

Before planting trees, bushes or shrubs, look up to see where overhead power lines may conflict with their growth. Remember: A 2-foot-tall fir seedling will grow more than 100 feet tall and 30 to 50 feet wide.

After you have looked up, look down. Planting over underground utilities can result in outages when tree or shrub roots grow into the lines, or in a potentially deadly shock if you dig into buried lines.

Your local nursery, garden center, electric utility or state forestry department can help you determine the appropriate tree for your situation. For information concerning tree selection and care, visit the National Arbor Day Foundation website at www.arborday.org.



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.

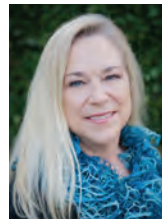
Reality: Clippings don't cause thatch. Thatch is caused by lateral growth of the grass—more specifically, by rhizomes, which are the below-ground lateral growth, and stolons, the above-ground lateral growth. Turf such as creeping bentgrass and Kentucky bluegrass produce rhizomes and stolons. The dominant 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.

Currents

MARLBORO ELECTRIC COOPERATIVE
APRIL 2020

Get Growing

Local garden clubs provide more than hands-on opportunities to learn about gardening. Their members are instrumental in creating beautiful public spaces.

Page 6

ILLUSTRATION BY HANNA

Linemen Stories From the Field

Weather, animals and rough terrain make being a lineman an interesting job

By Danita Cahill

Linemen never know for sure what each day on the job has in store for them. Wind, snow and ice can create unexpected power outages.

Since CPI serves rural areas, some of the outages happen in remote places. Crews still have to get to the outage. If they can't reach the area by truck, they go in on foot, on a six-wheeled all-terrain vehicle, a Sno-Cat, snowmobiles or even snowshoes. Once in a while, the only way to reach the outage area is by boat.

A lineman's day begins early. Arriving at the office at 6:30 a.m., Foremen Brad Jarmain looks over his paperwork for the day and holds a meeting with his crew.

"At 7 a.m., everyone's at the hood of my truck for a tailboard," Brad says. "A tailboard is a conversation we have about the job. Details, hazards we might encounter, PPEs (personal protective equipment) we'll need."

The crews are usually made up of four workers. After the morning tailboard, they pull out of the shop and head into the field.

In the life of a lineman, there's no such thing as a typical day at the office. Brad recalls a few of those days.

One outage took a crew to Eddyville. Billy Terry, CPI's director of operations, was then a lineman, and Brad was an apprentice lineman. The right-of-way under the power lines was thick and brushy.

"Sometimes you don't have a choice and you just take off walking," Brad says.

Billy was up ahead, patrolling on foot, with Brad following. They were looking for a hot tail—a line broken and hanging, still live and not grounded.

"It was dark," Brad says. "All I had was my pistol-grip flashlight. I'm looking up. I'm not looking down."

Suddenly, the brush in front of Brad exploded. He didn't know what had just happened. It took him a moment to figure it out.

"I'd jumped a deer," Brad says. "It was bedded down in front of me. I don't know what my scream sounded like, but I'm sure it was high pitched."

Terry came running to check on Brad. The deer bounded off through the brush, so quick in the dark the linemen couldn't tell if it was a buck or a doe.

"That was 13 years ago," Brad says. "I still get teased."

Brad remembers another day when the outage was in Five Rivers. A line had snapped over the river and was in the water. The crew had to use a flat-bottom johnboat with a 15-horsepower, two-stroke motor.

"The river was running high," Brad says. "We slid the boat down the bank, through the blackberries to the river.

ABOVE: Brad and crews use a derrick digger to set new poles. TOP: Getting to an outage isn't always as simple as driving down the road.

We had the boat full throttle to fight the current upriver. The wire was hung up around logs and rocks."

Lineman Tom Hering got a hold of the line. The boat motor wasn't powerful enough to keep up with the current.

"The line is pulling him out the front of the boat," Brad says. "Tom's stubborn that way. He's not letting go of that No. 6 copper."

Tom had to choose between letting go of the line or taking a swim. He finally let go. The crew wound up using a line-shooting gun.

"It can span a pretty good river," Brad says.

CPI Line Foreman Brad Jarmain has a lot of stories to tell from his time keeping the power flowing for CPI members.

First a lineman shoots across a heavy string, then feeds over flatstrap, or mule tape, which is like flat rope. That's followed with a reel of wire, pulled across to the other side with a block and pulley.

Line work is often dirty work. Brad reminisces about a stormy day working on Highway 20 toward the coast. The crew wore rain gear, but the wet clay they worked in was thick and sticky.

"We were racking cable," Brad says. "We looked like mud monsters, covered head to toe. The traffic was at a crawl. I was standing alongside the road with Brandon Bruneau and a minivan goes by with a dad at the wheel. There's three kids in the van big-eying us out the window."

Brad gestured at his mud-covered self.

"See? Stay in school," Brad said to the kids. "The dad gave me a big thumbs-up."

Another time, there was a freak snowstorm on Mary's Peak. The radio signals from the towers up there were out. CPI and other businesses rent space on those towers for the radios in their trucks. It was important to get the towers working again.

"We took the Sno-Cat up the peak," Brad says. "Billy and Javin Lackey were in the Cat. A couple others were in snowshoes. We were a little concerned about taking this rickety Sno-Cat over the edge."

But over they went. And then they stopped.

"I think a track might have stuck on him," Brad says. "We used ropes and snowmobiles to get that Cat out. It took us all day."

During storm outages, it's all hands on deck.

"It can be pretty hairy," Brad says. "You have to use your best judgement and try to stay out of danger."

When Brad's wife was nine months pregnant with their first child, Brad's crew was patrolling in the Summit area during an ice storm. They found a large limb on a three-phase line and started setting up the truck to take care of it. They heard a loud pop, and the top of a big tree fell directly in front of the truck.

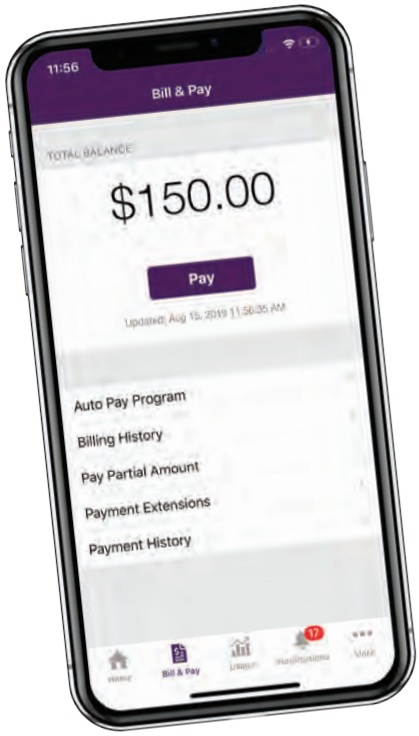
"We jumped in the truck and threw it in reverse," Brad says. "It was a close one."

During the same ice storm, Brad was up a pole when he got the call that his wife was in labor.

"I came down that pole in like 3 seconds," Brad says.

They made it to the hospital with an hour to spare. ■

SmartHub:
Your Account at Your Fingertips



The SmartHub mobile app allows you to make secure payments, check your use and more, all from the palm of your hand.

By Courtney Cobb

Central Electric Cooperative members have access to 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 smartphone.

"SmartHub allows members to easily and securely access their accounts to make payments, make changes to their account, print billing statements, and view and monitor their daily usage," says Ryan Davies, CEC director of customer and energy services. "SmartHub is the perfect option for members who prefer to do online bill pay or might not have the time to call CEC during normal business hours."

Many members choose to switch to paperless billing and use the SmartHub platform. The program sends an email reminder when bills are available, as well as an email receipt when payment is made.

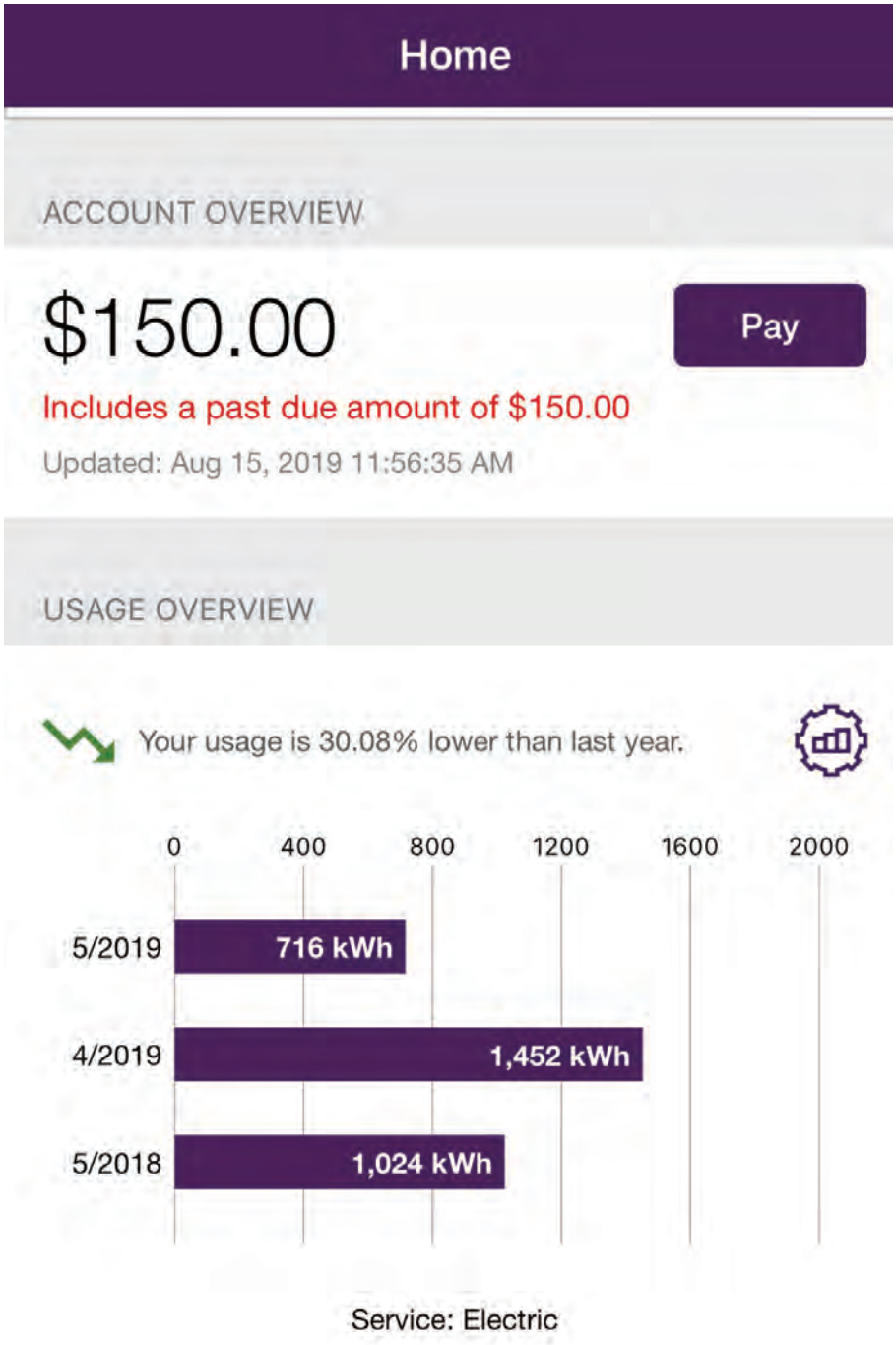
"It's very convenient for our members to use SmartHub to make one-time payments or set up autopay, but they are not required to pay their bills online to use all the features of SmartHub," Ryan says.

Mobile Features

The SmartHub mobile app goes beyond the traditional computer platform. It also connects members to Central Electric's outage website so members can check the latest information about outages and look at the outage map.

The mobile app allows members to connect with CEC's Facebook and Twitter social media platforms. Members can see the latest pictures of line crews, learn valuable energy-efficiency tips and more.

"The SmartHub app allows CEC



SmartHub online includes many features. Registered members may securely update their account information and determine different usage measurements.

members to safely and securely do business with the co-op like they haven't been able to in the past," says Brent ten Pas, CEC director of member and public relations. "With today's smartphone technology, members can access all their information in just the palm of their hand."

How to Sign Up for SmartHub

Members can sign up with their CEC account number and a valid email address. Access SmartHub directly from CEC's website at www.cec.coop, or download the mobile application from the App Store for Apple or Google Play for Android. ■

Want to keep track of your use or make payments from your phone while you are on the go? Download SmartHub mobile.

Sign Up Now

To 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.

To register for SmartHub on the mobile app:

▶ Download SmartHub from the App Store for Apple or Google Play for Andriod.

▶ Find your service provider by either your zip code or by provider name Central Electric Cooperative Inc.

▶ Confirm your provider.

▶ If you don't already 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.

Increased Costs Force Rate Change

After absorbing cost of business increases for four years, CCEC will raise rates an average of 2.23%

Examples of Rate Change (Average Monthly Bill)

Rate Schedule	KWH	Demand	Present Rates	New Rates	Difference
Residential	938	n/a	$115.24	$118.12	$2.88
Small Commercial	10,335	36.0	$1,061.40	$1,087.93	$26.53
Yard Light (100 watts)	n/a	n/a	$17.77	$18.21	44¢

Coos-Curry Electric Cooperative members will see a small increase in rates, averaging 2.23%, on bills issued after May 1, 2020. The increase will be seen in some combination of changes to the Basic Charge, Energy Charge and/or Demand Charge, depending on the rate schedule of the electrical service.

Residential members comprise most of CCEC's services. For these members, the cost of 1 kilowatt-hour will increase from 9.41¢ to 9.56¢. The Residential Basic Charge will increase from $26.94 to $28.38. This represents an increase in the average residential bill from about $115 to about $118. As the increase is a percentage, the actual change will vary from member to member based on the amount of energy used during a billing period.

Since the last rate increase in 2016, CCEC has made every effort to control expenses. Safety is an important value of CCEC, which reduces expensive lost-time accidents and keeps insurance premiums low. CCEC advocates for improvements in operational efficiency at the Bonneville Power Administration, the federal agency responsible for generating the power we use, and the CCEC Board of Directors carefully monitors the budget and seeks opportunities to control operating and personnel expenses.

Despite our best efforts, costs continue to rise. Wholesale power is CCECs largest expense, and BPA has increased our wholesale power rates twice since 2016. Additionally, the cost of tools, equipment, wire and poles regularly increase.

Since safety is such an important value, we take right-of-way clearing and system maintenance seriously. There are less expensive options, but minimizing fire risk and keeping our members safe is more important than saving money in the short term by deferring important system upkeep.

At a time when political, economic and environmental drivers continue to raise the cost of energy nationwide, the co-op way of doing business is an important way to keep costs manageable.

Local control means we are not profit-driven, and we don't have to impress Wall Street every quarter. Rather, we are service-driven and operate at cost. You can bank on the cooperative difference.

Detailed rate information is available at www.ccec.coop under Member Services, then Rates. If you have any questions regarding this change, please contact any of our offices. ■

How Rates Are Set

The responsibility to set financial targets and rates resides with the cooperative's board of directors. Directors are elected by the members to represent the interests of the membership. Setting rates is one of those key responsibilities. This year, CCEC engaged with a consultant to complete a cost-of-service analysis, which reviews the way each rate/class uses power and how meeting that requirement contributes to the utility's incremental costs. Rates are then structured to recoup those costs from members within that rate/class while minimizing cross-subsidization between rates.

What Are the Different Charges on My Bill

Basic Charge. Whether you use 1 kilowatt-hour or 1,000 kilowatt-hours of electricity, CCEC has certain expenses that don't change. These are called fixed costs. They don't vary based on the amount of power used. To make sure CCEC's fixed costs are more evenly recovered from each member, a basic charge is included in lieu of a higher kWh charge.

Kilowatt-hour. A kilowatt-hour is a measure of energy that equals the use of 1,000 watts for one hour. This charge varies depending on the amount of energy you use during a billing period.

Demand. This charge affects large consumers such as commercial, industrial and agricultural accounts. These accounts use more electricity and have higher peak energy requirements, or demand, than smaller consumers. The demand charge is calculated to cover the cost of additional investment needed to meet this higher level of demand.

2672

Coos-Curry Electric Cooperative, Inc.

P.O. BOX 1268 43050 Hwy. 101
PORT ORFORD OREGON 97465
PHONE 541-332-3931

See reverse side for additional information about your bill

SERVICE DATE	ACCOUNT NUMBER	MEMBER NAME	SERVICE ADDRESS	STATEMENT DATE
02/06/20 TO 03/05/20	123450002	MEMBER JOHN A	123 ANY ST.	03/14/20

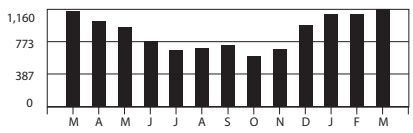
SERVICE DESCRIPTION	METER NUMBER	RATE	METER READINGS PREVIOUS	METER READINGS PRESENT	BILLING DAYS	MULT	KWH USAGE	CODE	CHARGES
BCG2-2R5T	58832	15	552	1712	27	1	1160	0	
ENERGY CALCULATION				1160 KWH X 0.095600 =					110.90
BASIC CHARGE									28.38
SUBTOTAL									139.28
ROUND UP									0.72
PREVIOUS AMOUNT DUE									132.00
THANK YOU FOR YOUR PAYMENT		02/20/20							-132.00
TOTAL AMOUNT DUE									140.00

AVERAGE KWH PER DAY: 42.96 AVERAGE KWH LAST MO: 35.81 AVERAGE THIS MO. LAST YR: 39.17

STATEMENT DATE	03/14/20	TOTAL AMOUNT DUE	$140.00

*CURRENT BILL DELINQUENT IF NOT PAID ON OR BEFORE THIS DATE **04/09/20***

YOUR ELECTRICITY USE OVER THE LAST 13 MONTHS



Don't forget you can pay your bill and manage your account online at www.ccec.coop
Like us on Facebook for updates about your co-op.

Please make any comments or suggestions on the reverse side of the returned section.

All charges are due upon receipt. Past due balances may result in additional fees and/or service disconnection.

PLEASE BRING ENTIRE BILL IF PAYING IN PERSON, PLEASE DETACH AND RETURN BOTTOM PORTION IF PAYING BY MAIL.

PLEASE DETACH AND RETURN THIS PORTION WITH PAYMENT OR04210G

Coos-Curry Electric Cooperative, Inc.
P.O.BOX 1268 * 43050 HWY. 101
PORT ORFORD OREGON 97465-1268
ADDRESS SERVICE REQUESTED

CYCLE 3	
STATEMENT DATE	03/14/20
ACCOUNT NUMBER	123450002
CURRENT BILL AMOUNT	$140.00
PAST DUE/PREVIOUS BALANCE	$0.00
TOTAL AMOUNT DUE	$140.00

CURRENT BILL DELINQUENT IF NOT PAID ON OR BEFORE THIS DATE 04/09/20

MEMBER JOHN A 89 0
123 ANY ST
BROOKINGS OR 97415-8262

COOS-CURRY ELECTRIC COOPERATIVE INC
PO BOX 1268
PORT ORFORD OR 97465-1268

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We Can Help Weatherize Your Home

Blachly-Lane rebates and loans make using less electricity easy

By Craig Reed

Are you feeling a draft coming through a window seal or through the doorjamb? Is your floor cool, or even cold, to your bare or stocking feet?

That uncomfortable feeling can be eased or even eliminated with the help of loan and rebate programs through Blachly-Lane Electric Cooperative.

The cooperative is kicking off a campaign to encourage its residential members to weatherize their homes with the help of loans and rebates. The promotion is specifically aimed at installing new windows and insulated doors and insulating attics, floors and walls.

"Our member surveys show 53% of our consumers live in houses built before 1980," says Pam Spettel, Blachly-Lane's member relations manager, who oversees energy efficiency programs. "Building standards have improved for energy efficiency since then, and windows and insulation in houses even 20 to 30 years old often aren't working like they once did. Broken seals on older double-pane windows make them lose their energy-efficiency properties. Older insulation needs beefing up to keep houses comfortable and lower energy consumption and high bills."

Blachly-Lane members Jeff and Kandra Newell took advantage of the rebate program and replaced the original windows in their log cabin-style home built in 1981. The Newells retired and moved to the house in 2013.

The original windows were wooden framed and single pane. Storm windows were tacked up during the winter.

New double-pane Anderson windows with were installed in 2018.

"If it was 20 F outside, it was 30 F inside even with the storm windows," Jeff says. "Before, we would run our pellet stove all the time. Now we're not using as many pellets, probably 30% less, and there's been a 30% to 40% decrease on our electric bill, especially during the winter months."

Kandra says the new windows hold in heat.

"Before, you never got comfy," she says. "The old windows were so drafty. It used to be when you stepped away from the pellet stove and toward the kitchen, it was 'Ooh, it's cold!' The new windows have reduced the amount of time needed to heat the house and have increased the heat in the house. It's much warmer than it was, and we're happy with that."

The couple received a $1,000 rebate for the window replacement project.

The Newells also replaced the incandescent lightbulbs in their home with LED bulbs through the Direct Install program.

"There's definitely value in comfort," Jeff says.

Longtime Blachly-Lane members Shari Goodin and Steve Losen took advantage of the rebate program and recently installed new insulation under the floor of their 1983 manufactured house. A vapor barrier on the ground was also laid down. There had been no ground barrier previously.

The couple also had double-paned windows and a ductless heating and cooling system installed.

"The rebate offer makes it more financially doable," Shari says. "The house stays at a more even temperature now. The floor is much warmer. If you're barefoot, you can walk around with it not feeling like ice. We got value and comfort out of the changes. Definitely comfort."

This year, the Bonneville Power Administration increased the rebate amounts offered for residential weatherization projects.

"Along with Blachly-Lane's loan program, the BPA support is a great opportunity for our members to replace their leaky windows and doors, and to bring their attic, floor and wall insulation up to standard," Pam says.

Blachly-Lane members can borrow up to $500 with zero interest from the co-op or up to $3,000 at prime plus 2% interest. Members can use their rebate check to pay down their loan, or their loan payments can be added to their monthly bill and be paid off over time.

"This is a real boost to our

How BLEC Can Help

Home and Manufactured Home Insulation Rebates—As much as $2 a square foot

Window Rebates—As much as $8 a square foot

Loans—Borrow up to $500 with no interest; up to $3,000 at prime plus 2%

These are just some of the options available. To learn more, visit blachlylane.coop and look for the Rebate Forms page under the Conservation / Energy Savings tab, or call our energy efficiency department at 888-883-9879.

ABOVE: Kandra and Jeff Newell used a $1,000 Blachly-Lane rebate to replace their drafty home windows with double-pane windows.

LEFT: Shari Goodin shows off her new ductless heat pump that provides heat and air conditioning in her manufactured home.

members so they don't have to make such a big investment up front," Pam says. "We always tell our members that the rebate money is theirs. We want them to come and get it."

Blachly-Lane is a BPA customer and receives a set amount of energy-efficiency funding. Those funds must be used to help consumers afford energy-saving improvements to their homes or businesses. The money is available to members on a first-come, first-served basis.

Members are eligible for free in-home conservation upgrades through the co-op's Direct Install program. The Direct Install program gives members energy recommendations that will help save on future power bills.

Weatherization projects must meet program qualifications and require pre-approval from the Blachly-Lane energy efficiency department before proceeding. After pre-approval and project completion, members must submits completed forms by mail or email.

"The rebates offered are subject to change and are limited to available funding, so we encourage our consumers to look into this right away if they are interested," Pam says. "New windows, doors and insulation pay for themselves quickly by lowering energy bills over time. We think that's really exciting." ■

Spring Electrical Safety

By Joseph Hathaway

If you have trees growing into power lines, call OTEC right away! PHOTO COURTESY OF SAFEELECTRICITY.ORG

Electricity is part of our everyday life. We can't see it, hear it, smell it like gas or always know where it is. One thing we do know is, electricity can be extremely dangerous.

With the right information, you can act safely when confronted with a situation involving electricity. Following are some safety reminders for you and your family.

Dial 811

Spring, summer and fall bring a full list of projects, from planting to building outdoors. OTEC wants to remind member-owners that careless digging poses a deadly threat. Always follow these easy steps:

- Call 811 or make a request online (www. digsafelyoregon.com) two to three days before your work begins. The operator will notify the utilities affected by your project.
- Wait two to three days for the affected utilities to respond. They will send a locator to mark underground utility lines.
- Confirm all affected utilities have responded to your request by comparing the markings to the list of utilities the 811 call center notified.
- Respect the markers provided by the affected utilities. The markers are your guide for the duration of your project. State law in Oregon says you cannot dig within 18 to 24 inches on all sides.
- If you can't avoid digging within the designated distance of the markers, consider moving your project location.
- If digging within 2 feet of markings, you are required to use noninvasive procedures, such as digging by hand.

Locates are required by law. If you do not call, or digging occurs before prescribed timelines, you can be fined and charged for repair costs. You could also be seriously burned or electrocuted.

Tree Trimming

Keeping trees clear of OTEC power lines is vital not only for power reliability but for safety of member-owners and crews.

OTEC works to clear trees and vegetation within rights-of-way throughout its four-county service territory. If trees are kept out of lines, outages are prevented and restored more quickly, crews and the community stay safe and unexpected costs for repairs are reduced. If you have a tree growing into your lines, report it to OTEC right away.

Here are some tree-related tips:

- Do not cut trees or tree limbs that are in contact or could come in contact with overhead power lines. Call OTEC for help.
- If you plan to plant a tree, identify the location of overhead power lines. Research the height and spread of the tree.
- Do not plant large trees within 20 feet of a power pole. Instead, use smaller trees or shrubs.

Downed Lines

From weather events to accidents, power lines can come down. Here's what to do if you see a downed power line:

- Stop and immediately call OTEC (541-523-3616) and/or 911.
- Always assume downed power lines are live and stay back at least 50 feet because the ground can be energized by the downed line.
- If your car contacts a downed line while you are inside it, stay in the car until emergency personnel arrive. Do not touch any part of the car's frame or any other metal. Use your cellphone or honk the horn to call for help. If someone else arrives at the scene, make sure they stay away from the accident scene and wait for rescue personnel.
- If you must leave the car due to a fire, exit the car by jumping or hopping with your feet together from the vehicle to the ground. Do not touch any part of the vehicle or power lines while touching the ground. Once you have exited the vehicle, hop away with your feet together until you're safely away. Keeping your feet together should prevent your body from making a complete circuit in which electric current can flow. ■

For more electrical safety tips, go to www.otec.coop/safety.

OTEC's Director of Engineering Charlie Tracy shows community members how the new charging station at the Chamber of Commerce in Burns functions.

The Future Is Electric

OTEC installs first electric vehicle charging station

By Joseph Hathaway and Susan Parrish

As the mileage range for electric vehicles increases, EVs are becoming more common in the wide-open spaces of Eastern Oregon, both by residents and visitors. To better serve member-owners, Oregon Trail Electric Cooperative installed a fast EV charging station behind Harney County Chamber of Commerce in Burns in February. It's the first of three planned fast EV charging stations OTEC will install this year, with the other two planned for Baker City and John Day.

"As part of OTEC's strategic plan, we've prioritized innovative technology advancements that will help support our member-owners," says Charlie Tracy, OTEC's director of engineering. "Our region is an ideal place to own an EV, as nearly 85% of our power comes from hydroelectric and renewable energy sources. When you drive an EV, you are trading fossil fuels like gas and diesel with energy coming from a clean energy mix while saving money."

The installation of the charging stations is funded by Oregon's Clean Fuels program and has no effect on OTEC member-owners' power rates.

OTEC Adds Faster Charging in Burns

Until recently, the only public EV charger in Harney County was a free but slow EV charging station in front of the Chamber of Commerce that requires travelers to spend four or more hours charging their vehicle.

Lola Johnson, executive director of the Harney County Chamber of Commerce, says during the busier summer months, EV drivers often had to wait for a turn to use the charger. It forced visitors to spend hours waiting, then more hours charging their vehicle before continuing their journey. OTEC's new 62-kilowatt EV charger takes about an hour to charge up 250 miles, depending on the battery capacity.

"With the new, faster charger, we hope people won't have to wait as long," Lola

OTEC hopes its new charging stations will help the environment and promote tourism in Eastern Oregon.

says. "Now people driving through can stop to charge their vehicle while they eat lunch and then continue on their way. I think it will bring more people into our community."

A frequent user of the chamber's slower EV charger, Ramona Hofman drives her Nissan Leaf 20 miles to her job in Burns. Her Leaf gets about 80 miles per charge. In the past, she has plugged into the chamber's slow EV charger while at work. She sees a need for OTEC's new, faster charger.

"The more chargers, the better," Ramona says.

OTEC Closes EV Charging Gaps

In Eastern Oregon, drivers often traverse great expanses lacking services, including EV charging stations. Julie Weikel, who lives 26 miles south of Burns, drives a Hyundai Kona with a 258-mile range. On her long-distance trips, it's been challenging to locate charging stations along her route. On a 240-volt charger, it takes eight or nine hours to fully charge Julie's vehicle. RV parks offer 110-volt chargers for a fee, but those could take longer to charge.

In OTEC's four-county service area, the only fast chargers adaptable for all EVs are the new charger at the chamber of commerce in Burns and a bank of chargers at Walmart in La Grande.

Interstate freeways are well-populated with EV chargers, so OTEC is focusing on installing fast EV chargers on state highways that lack chargers.

Julie is enthusiastic about the fast EV charger in Burns.

"I'm delighted," she says. "Finally! There's so little infrastructure for electric vehicles in Eastern Oregon. We're all going to get there eventually, but we can't get there without infrastructure."

The EV charger OTEC installed in Burns is made by ChargePoint, the largest national network of chargers in the U.S. A mobile phone app allows drivers to access all chargers in the network.

EV Driving Equals Big Savings

Charging with electricity typically costs less than buying gas. The new EV charger in Burns costs $3 per session plus 29 cents per kilowatt-hour, about 29 cents per mile. A full charge of an EV with a 60-kilowatt battery costs $17.40. It's even more economical for OTEC members to charge at home charging stations, where they pay about 7 cents per kW, or only $4.20 to fully charge a 60 kw EV battery.

By bypassing gas pumps, EV drivers reap big savings. Julie estimates she saved $3,700 on fuel last year. Her calculations include the increased electricity cost to charge the car at home.

"I choose to drive an electric vehicle because it's the right thing to do," she says. "But it's also proven to be an economically sound decision. I think if people knew the truth about the savings, there'd be a lot more enthusiasm about it."

Julie's three adult children were so inspired by her positive EV experience that they all bought EVs, too.

OTEC Leads the Way in EV Charging

Not only does OTEC educate people about economic and environmental benefits of EVs, it offers OTEC members rebates for buying EV home-charging units, which are as easy to install as a washer or dryer.

"OTEC is proud to be leading the way in promoting EVs in Eastern Oregon," Charlie says. "While we know EVs aren't for everyone, it's important for our member-owners and visitors to have charging options in our communities. We don't want people to avoid traveling through OTEC's service territory because they can't charge their car.

"Not only will these charging stations help lead our region to a cleaner and brighter future, they'll also help support the local economy by encouraging visitors to stop and explore all the wonders that Eastern Oregon has to offer." ■

OTEC Supports Electric Vehicle Chargers

OTEC's EV webpage: https://otec.coop/electric-vehicles-evs. Learn about benefits of EVs, calculate savings driving an EV versus a gas vehicle, and learn about available state and federal rebates and tax credits.

Find EV charging stations: www.chargepoint.com or www.plugshare.com

Fast EV chargers in OTEC service area:

- ▶ Baker County: Tesla superchargers at Sunridge Inn in Baker City (charge Tesla EVs only)
- ▶ Grant County: Tesla Supercharger at the Grant County Chamber of Commerce in John Day
- ▶ Harney County: Chamber of Commerce in Burns
- ▶ Union County: Walmart in La Grande

OTEC plans to install fast EV chargers in 2020:

- ▶ Harney County: Burns (installed February 2020)
- ▶ Grant County: John Day
- ▶ Baker County: Baker City

Anatomy of an Electric Bill

Take a close look at your monthly electric bill to understand what all the numbers mean

By Jennifer Paton

Songwriters would have you believe the best things in life are free. This maxim is largely true, at least until you pay for one of the greatest luxuries of the modern world: electricity.

Each utility bill contains a lot of information about the service you pay for and receive. And each utility's bill looks different. However, all power bills contain some of the same information, such as the basic or facility charge, and the number of kilowatt-hours used during the month—and at what rate. Some utilities break out the fees to reflect the cost of acquiring the power and delivering it. Others roll those costs into one fee.

Bills also may show charges for legislative or regulatory mandates; member-selected purchase options, such as green power; contributions to a member assistance program; and franchise fees.

Match the numbers on page 7 with the descriptions below to decipher various charges. For more information, contact your utility.

1. Member ID: This is your account number.

2. Bill Date: The date a bill was created and mailed.

3. Due Date: The date the bill must be paid by.

4. Service Date: Shows last month's and this month's meter-reading dates; dates for which electricity use is being billed.

5. Days in Cycle: Number of days for which use is being billed. This number may vary slightly from month to month depending on the number of days in the month and holidays.

6. Account Name: The name the account is listed under. This person is responsible for the bill.

7. Service Address: The physical location where service is provided.

8. Meter Number: The number assigned to the meter the utility placed at a location.

9. Meter Readings: Indicates the meter reading from the previous month compared to the meter reading for the present month.

10. Rate Code: Indicates the rate schedule applied to the service location.

11. Meter Use: The kWh used during a billing period. Use is applied to the rate to determine a monthly bill.

12. Charges: Charges on the current bill.

13. Energy Charge: A charge to help the utility cover the operating expense of delivering energy to members. The demand charge is based on the highest system capacity you required during the given billing period. The energy charge is the number of kWh used during the billing period multiplied by the rate you pay per kWh.

14. Customer Charge: This fixed monthly charge covers costs associated with ensuring electricity is accessible to consumers on demand.

15. Power Cost Equalization Credit: Up to 500 kWh for residential accounts.

16. Fuel Surcharge: Oil prices change with the markets. This charge accounts for cost of the fuel.

17. Previous Balance: Amount on the previous bill.

18. Payments: Payments posted to an account prior to the current bill date.

19. Adjustments: Adjustments made to an account prior to the current bill date.

20. Electricity Use the Past 12 Months: A quick reference that shows the past 12 months of your electric account.

21. Amount Due: Amount owed.

22. Message Center: Your utility uses this section to communicate with consumers. This section often includes important information about your bill, so be sure to check this area every month.

23. Total Amount Due: This is the amount due to the utility by the due date.

24. Write in the amount paid. Detach this portion of the bill and return it with your payment. Your utility may offer additional payment methods.

AVEC
ALASKA VILLAGE ELECTRIC COOPERATIVE, INC.

4831 Eagle Street, Anchorage, AK 99503
1-800-478-1818 or 1-907-561-1818

Account Number	Village Number	Due Date	23 Total Amount Due	24 Amount of Payment Enclosed
2329-001	51	04/01/20	223.75	$

19*1*4345**********ALL FOR AADC 995
JOHN DOE
PO BOX 123
ANYWHERE AK 12345

Member Phone #
555-555-5555

Please write your Account # on your check or money order and make payable to AVEC. Please detach and return this portion with payment. 223750

ALASKA VILLAGE ELECTRIC COOPERATIVE 4831 Eagle Street Anchorage, Alaska 99503-7431 1-800-478-1818 1-907-561-1818

1 Account Number	2 Bill Date	Payments Received Through	3 Due Date	4 Service Dates	Days in Cycle 5
2329-001	02/28/20	02/28/20	04/01/20	From 01/31/20 To 02/28/20	28

6 Customer Name & Village	7 Service Address
John Doe	123 Front St.

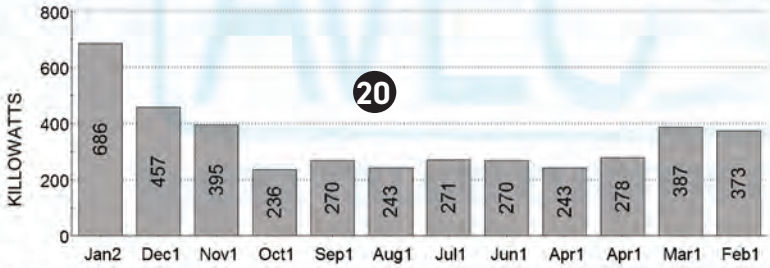
8 Meter Serial #	Previous Reading 9	Current Reading	Rate Code 10	kWh Used 11
10238435	29619	30294	151	675

12 Charge Type	kWh Used X Rate	Charge Amount
CUSTOMER CHARGE		10.00
ENERGY	675 KWH X 00.3000	202.50
FUEL COST	675 KWH X 00.2894	195.35
PCE BLOCK1	500 KWH X 00.3582-	179.10-

13 14 15 16

Billing Description

PRIOR BALANCE DUE	230.23 17
PAYMENT 02/19/20	230.23
ADJUSTMENTS 19	0.00 18
CUSTOMER CHARGE	5.00
ENERGY	202.50
FUEL COST	195.35
PCE BLOCK1	179.10-



21 ENDING BALANCE	223.75

** ACCOUNT STATUS **

Current 1-30	Days	223.75
30-60	Days	0.00
60-90	Days	0.00
90-120	Days	0.00
Over 120	Days	0.00

NOTICE-THE UTILITY WILL BE PAID UNDER THE STATE OF ALASKA PCE PROGRAM (AS 42.45.110) TO ASSIST THE UTILITY AND ITS CUSTOMERS IN REDUCING THE HIGH COST OF GENERATION OF ELECTRIC ENERGY.FOR THE MOST RECENT MONTHLY REPORTING PERIOD, THE FUEL EFFICIENCY FOR EACH AVEC LOCATION PER KILWATT HOURS PER GALLON AND THE FUEL EFFICIENCY STANDARD SET OUT IN THE REGULATIONS FOR THE PCE PROGRAM FOR EACH LOCATION IS PUBLISHED AND SENT TO EVERY MEMBER. THIS INFORMATION IS ALSO POSTED ON OUR WEB SITE WWW.AVEC.ORG

22 Ballots have been mailed - Please vote to fill two Board of Directors seats and make changes to bylaws. Ballots are due by April 7 at 5pm. Newly elected announced at the April 8 Annual Meeting.

4838

Another typical day at the office as this AVEC lineman searches for a rooftop service entrance buried in deep snow.

AVEC recognizes April 13 as

National Lineman Appreciation Day.

To acknowledge all of our field employees, we also recognize April 13 as

Field Employee Appreciation Day.

Pass it along and help us express gratitude to our heroes who work hard in all types of extreme weather conditions to keep the lights on. They work 24/7 in our communities, ready to respond to emergencies at a moment's notice. Our field employees spend weeks at a time in our remote villages carrying hundreds of pounds of gear and food to each stop. We appreciate their efforts and their families who patiently wait at home for their return. Thank you for your dedication!

A Word About Water

Conserve in the Yard and Garden

Water conservation has become an essential practice in all regions, even in areas where water seems abundant.

In addition to saving money on your utility bill, conservation helps prevent water pollution in nearby lakes, rivers and local watersheds.

To conserve water in the yard and garden:

- Plant drought-resistant lawns, shrubs and plants.
- If you plant a new lawn or overseed an existing lawn, use drought-resistant grasses.
- Many beautiful shrubs and plants thrive with far less water than other species. Replace herbaceous perennial borders with native plants, which use less water and are more resistant to local plant diseases.
- Group plants according to their watering needs.
- Plant slopes with varieties that will retain water and help reduce runoff.
- Put a layer of mulch around trees, plants, shrubs, flower beds and lawns. Mulch slows evaporation of moisture while discouraging weed growth. Add 2 to 4 inches of organic material, such as compost or bark mulch, to increase the ability of the soil to retain moisture. Press the mulch down around the dripline of each plant to form a slight depression to minimize water runoff. Areas already planted can be top-dressed with compost or organic matter.
- Don't water the gutter or paved areas. Position your sprinklers so water lands on the lawn or garden.
- Water your lawn only when it needs it. To determine if your lawn needs watering, step on the grass. If it springs back up when you move, it doesn't need water. If it stays flat, the lawn is ready for watering. Let the grass grow taller (to 3 inches) to promote water retention in the soil. Most lawns only need about 1 inch of water each week. During dry spells, you can stop watering altogether and the lawn will go brown and dormant. Once cooler weather arrives, the morning dew and rainfall will bring the lawn back to its usual vigor. This may result in a brown summer lawn, but it saves a lot of water.
- When you do water your lawn, deep soak it. Water long enough for the moisture to soak down to the roots where it will do the most good. A light sprinkling can evaporate quickly and encourages shallow root systems.
- Early morning watering is generally better than dusk since it helps prevent the growth of fungus and provides a defense against slugs and other garden pests. Early and late watering also reduce water loss to evaporation.
- Try not to water when it's windy. Sprinklers will be off target. Wind also speeds evaporation.
- Reduce the amount of water used for shrubs, beds and lawns by strategically placing soaker hoses, installing a rain barrel water-catching system and installing a simple drip-irrigation system. Avoid overwatering plants and shrubs, which diminishes plant health and causes yellowing of the leaves. When hand watering, use a variable spray nozzle for targeted watering.

Water conservation comes naturally when everyone in the family is aware of its importance. Teach children simple water-saving methods that can make a big difference. ■

Keep Water in Mind When Outdoors

When washing your car, don't leave the hose on. Clean the car using a pail of soapy water. Use a hose with a spray nozzle to rinse. This simple practice can save as much as 150 gallons when washing a car.

Use a broom, not a hose, to clean driveways and sidewalks.

Check for leaks in pipes, hoses, faucets and couplings. Leaks outside the house may not seem as bad since they're not as visible, but they can be just as wasteful as indoor leaks. Check frequently to keep them drip-free. Use hose washers at spigots and hose connections to eliminate leaks.

Give your lawn a deep soaking so moisture reaches the roots.

Escambia River Electric Cooperative offices are closed Friday, April 10, for Good Friday. Happy Easter!

Operation Round Up Grants Awarded in 2019

Small change changes lives

Operation Round Up, Peace River Electric Cooperative's charitable foundation, makes grants to needy families and nonprofit organizations and provides college scholarships.

How does it work?
Participating PRECO members allow their monthly electric bills to be rounded up to the next dollar. This small change goes into a special fund for Operation Round Up purposes only.

What needs are considered?
Grants are considered for food, shelter, medical expenses, clothing, the environment and college scholarships.

How much will it cost?
The average contribution in a year is $6. That's less than what you would pay for a combo meal at a fast food restaurant.

How can you help your local community?
Sign up online at **www.preco.coop** or call us at **800-282-3824**.

2019 Grant Recap

Eleven families received grants totaling **$64,271** for food, shelter and medical expenses:

$10,000	Construction costs to add a handicap bedroom/bathroom for a child.
$10,000	Dental and housing expenses for an individual injured in a vehicle accident.
$10,000	Medical expenses for a heart transplant patient.
$8,250	Food, housing and utilities for a family with an extremely ill child.
$6,415	Food, housing, medical expenses and utilities for a disabled person.
$4,446	Housing and utilities for an individual requiring a prosthetic jaw.
$4,000	Housing and utilities for a cancer patient temporarily unable to work.
$3,760	Medical expenses for a person with multiple medical issues.
$3,500	Housing and utilities for a person temporarily out of work due to hand injury.
$3,100	Food, housing, medical expenses and utilities for an individual out of work due to surgery.
$800	Housing for a person temporarily unemployed due to cancer treatments.

One charitable organization received a grant:

$5,000	Peace River Center (Polk County) to help renovate one of their shelter residences.

16 college students were granted 2- or 4-year scholarships for a grand total of **$100,000**.

Since Operation Round Up was founded in 2006:

Families	Scholarships	Organizations	Total
$531,618	$819,000	$696,000	$2,046,618