Cumberland Electric Membership Corporation

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Mission Statement
Cumberland Electric Membership Corporation is committed to providing dependable, affordable electric service through the expertise and dedication of competent leadership and a well-trained and responsive workforce.

CEMC is looking for the next generation of leaders

What do 1,500 high school students, our nation's capital and electric cooperatives have in common? The Electric Cooperative Youth Tour, of course!

Jim Coode, General Manager, Cumberland Electric Membership Corporation

The Washington Youth Tour Writing Contest was established with one thought in mind: to inspire our next generation of leaders. Since the 1960s, more than 50,000 high school juniors from across the country — including more than 6,000 students from Tennessee — have taken advantage of this special opportunity offered by their electric cooperatives. It all takes place in June when hundreds of electric co-ops throughout the nation send participants to Washington, D.C., to learn about the cooperative business model and experience a full week of sightseeing.

While there, they meet with their elected officials and discuss the issues that are important back home. Without a doubt, Youth Tour has grown into an invaluable program that gives young Americans an experience that will stay with them for the rest of their lives.

Youth Tour is so much more than a sightseeing trip. Students have repeatedly shared that this experience has helped them grow into successful professionals. It has also benefited our local communities. Youth Tour participants return home with a deeper understanding of what it takes to be leaders and skillset to achieve leadership roles, and as a result, they put these skills to use right here in our community.

This spring, CEMC will select 12 local students to attend the 2016 Youth Tour. Each delegate will be selected based on his or her performance in the writing contest. To enter, students must write original short stories describing how local electric cooperatives power everyday life across their service areas.

If you are a high school junior interested in traveling to Washington, D.C., to experience the trip of a lifetime or if you know of an exceptional student who would be a great candidate for the program, turn to page 22 of this magazine for additional details.

Help us find the next generation of leaders by sharing the Youth Tour experience with a promising student. For more information about CEMC's Youth Tour program, call 800-987-2362 or visit www.cemc.org.

Sen. Bob Corker welcomes Tennessee's 2015 Youth Tour group to the U.S. Capitol.

Senior Scholarships available

High school seniors living in Cumberland Electric Membership Corporation's service area looking for money to help pay for college will want to find out more about CEMC's Senior Scholarship Program.

The program is designed for students who will be graduating from high school this spring. Twelve students will be chosen to receive one-time awards of $1,000 to be used toward their freshman year expenses such as tuition, textbooks, lab fees or other required classroom materials. The program is coordinated through each school's senior guidance counselor.

To be eligible, applicants must meet these requirements:

- Must be a graduating high school senior whose parents or guardians are members of CEMC and receive electric service from CEMC at his or her primary residence;
- Must have attained a minimum 3.0 cumulative grade point average;
- Must enroll or plan to enroll as a full-time student at an accredited Tennessee college, university or trade school by fall 2015 (Murray State and Western Kentucky universities are included);
- Must submit a completed application, including two letters of reference: one from a teacher or other school official and one from a community leader;
- Must write an original essay of at least 300 words explaining what the student most looks forward to about attending college and how a scholarship, in terms of financial assistance, will help in completing his or her education. All essays will be judged on the basis of content, composition, grammar and neatness.

Applications are available through the senior guidance counselors at each school and can be found on CEMC's website: www.cemc.org. Deadline for scholarship entry is Wednesday, Feb. 24. Children of CEMC, Tennessee Electric Cooperative Association or Tennessee Valley Authority employees, directors or attorneys are not eligible to apply.

Student art sought for calendar contest

Attention, young artists: Cumberland Electric Membership Corporation's calendar art contest has officially begun, and CEMC wants your artwork! The contest is open to all students — grades kindergarten through 12 — who live within CEMC's five-county service area. Winning entries will receive cash prizes and be featured in CEMC's 2017 calendar, which will be displayed in homes, schools and businesses across our service area.

The artwork of Jo Byrns High School student Luke Heatherly is featured on one of CEMC's 2016 pocket calendars.

Entries will be accepted through participating schools and are due by Wednesday, Feb. 24. Each grade (for which the student is currently enrolled) has been assigned a calendar month to illustrate as follows: January, sixth grade; February, seventh; March, eighth; April, ninth; May, 10th; June, 11th; July, kindergarten; August, first; September, second; October, third; November, fourth; and December, fifth.

Seniors will illustrate the cover. While there is no specific theme for the cover, rural scenes, barns, wildlife and items that illustrate CEMC's service (bucket trucks, utility poles, etc.) are a few suggestions.

Artwork will be judged on artistic merit, creativity and how well the assigned month is depicted. All elements of the artwork must be the work of the student submitting the entry. Artwork must be on white or light-colored, unruled paper no larger than 11 by 14 inches and no smaller than 8.5 by 11 inches.

Complete contest details and instructions are available at www.cemc.org or by contacting CEMC Community Relations Coordinator Stephanie Lobdell at 800-987-2362, ext 1143, or slobdell@cemc.org.

2016 Washington Youth Tour contest officially underway

Representatives from Cumberland Electric Membership Corporation are visiting area schools to tell high school juniors how they can win a weeklong, expense-paid trip to Washington, D.C., by entering the Washington Youth Tour Writing Contest. CEMC will award 12 students with spots on this unforgettable trip as a reward for writing winning short stories.

To enter, students are required to write a short story titled "Electric Cooperatives: Powering Everyday Life," describing how electric co-ops strengthen their rural communities and improve lives across their service areas while providing safe, reliable and affordable energy. Stories must not exceed 900 words, including articles ("a," "an" and "the"), and the exact word count must be included on the cover page. Entries must be typewritten and double-spaced and will be judged on appropriate treatment of theme and knowledge of the subject, originality and creativity and grammar and composition.

The contest deadline is Wednesday, Feb. 24, and winners will be announced in April. The top 12 entries in CEMC's service area will join another 180-plus delegates from Tennessee and more than 1,400 representatives from across the country for the 2016 Washington Youth Tour June 12-18.

During the trip, attendees will tour Washington, D.C., and its landmarks, memorials and museums. Stops will include the Smithsonian Institution, U.S. Capitol, Mount Vernon, Monticello and Arlington National Cemetery.

CEMC delegates will also have the opportunity to compete for Tennessee's spot on the Youth Leadership Council to represent the state at the 2017 National Rural Electric Cooperative Association Annual Meeting in San Diego, California.

Additionally, the Tennessee Electric Cooperative Association will award scholarships of $3,000, $2,000 and $1,000 for the state's top short stories. Winners of the TECA scholarships will be announced during the 2016 Washington Youth Tour.

Complete details about the 2016 Washington Youth Tour Writing Contest can be found at **www.cemc.org/youthprograms.asp** or **youthtour.tnelectric.org**. Contact CEMC Community Relations Coordinator Stephanie Lobdell at 800-987-2362, ext. 1143, or slobdell@cemc.org for more information.

CEMC's 2015 Washington Youth Tour delegates make their own shade during their tour of Arlington National Cemetery.

Students demonstrate cooperative spirit

During the month of October, Cumberland Electric Membership Corporation partnered with local elementary schools to host its annual community food drive. Thanks to the efforts of the students, parents, teachers and communities involved, CEMC was able to donate thousands of non-perishable food items to help put food on the tables of families in need this holiday season. All items collected were distributed through local food banks.

"Thank you to everyone who had a hand in supporting our food drive," says Stephanie Lobdell, CEMC community relations coordinator. "These students truly demonstrated the cooperative spirit in action by providing food to those less fortunate."

Participating elementary schools were East Robertson, West Cheatham, Pleasantview, Clyde Riggs, Watt Hardison, Cumberland Heights, Sango and North Stewart.

Clyde Riggs Elementary

East Robertson Elementary

North Stewart Elementary

Sango Elementary

West Cheatham Elementary

Be prepared for winter storms

By Abby Berry

When winter temperatures drop and storms hit, it can be challenging to stay safe and warm. Winter storm severity varies depending on where you live, but nearly all Americans are affected by extreme winter storms at some point. Cumberland Electric Membership Corporation cares about your safety, and we want you to be prepared.

Heavy snow and ice can lead to downed power lines, leaving co-op members without power. During extremely cold temperatures, this can be dangerous. During a power outage, our crews will continue to work as quickly and safely as possible to restore power. Here are a few things you can do to prepare yourself:

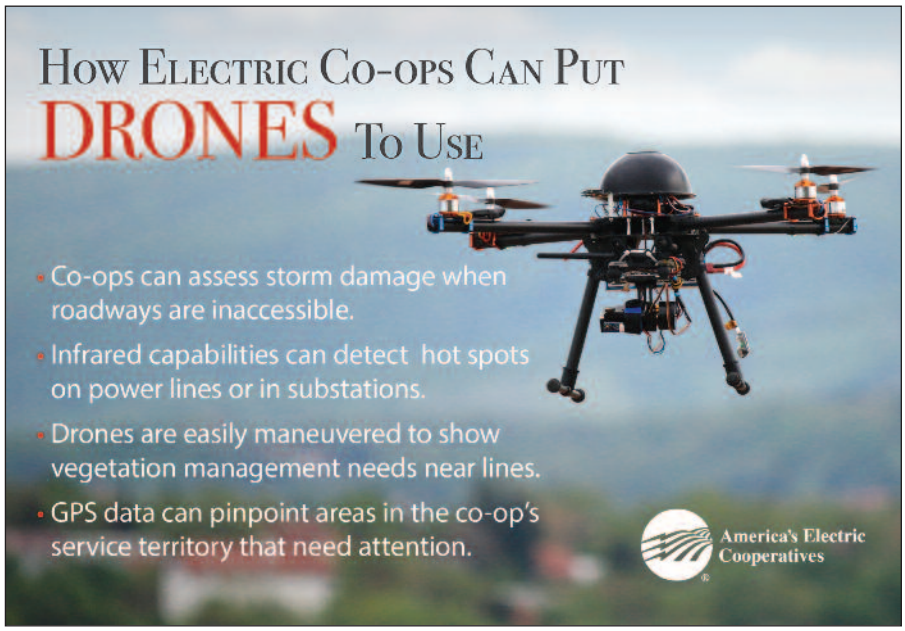
- **Stay warm** — Plan to use a safe alternate heating source such as a fireplace or wood-burning stove during a power outage. These are great options to keep you and your loved ones warm, but exercise caution, and never leave the heating source unattended. If you depend on gasoline-, propane- or natural gas-burning devices to stay warm, never use them indoors. Remember that fuel- and wood-burning sources of heat must always be properly ventilated. Always read the manufacturer's directions before using.
- **Stay fed** — The Centers for Disease Control and Prevention recommends having handy several days' worth of food that does not need to be cooked. Crackers, cereal, canned goods and bread are good options. Keep 5 gallons of water per person available in the event of an extended power outage.
- **Stay safe** — When an outage occurs, it usually means power lines are down. It is best not to travel during winter storms, but if you must, bring a survival kit along, and do not travel alone. If you encounter downed lines, always assume they are live. Stay as far away from the downed lines as possible, and report the situation to CEMC dispatchers by calling 1-800-987-2362.

Because winter weather can be unpredictable and dangerous, planning ahead can often be the difference between life and death. CEMC is ready for what Mother Nature has in store, and we want you to be ready, too. For more winter safety tips, visit www.ready.gov/winter-weather.

Abby Berry writes on consumer and cooperative affairs for the National Rural Electric Cooperative Association, the Arlington, Va.-based service arm of the nation's 900-plus consumer-owned, not-for-profit electric cooperatives.

Drones give co-ops eyes from the sky

By Tom Tate



Drones are in the news — a lot. Apart from military uses, commercial applications are growing. Amazon wants to use drones to deliver your packages. There is a rumor of a northern Minnesota retailer wanting to use them to deliver beer to ice fishermen. Farmers are testing them for crop management – and so on. So, will drones someday find a home working for your co-op? It's likely. But first, a little history.

The first recorded use of drones for warfare occurred on Aug. 22, 1849, when Austria attacked Venice, Italy, using unmanned explosive-laden balloons. Since then, military applications have driven most of the advances. Drones are a perfect solution when you need to access information about areas that are either hard to reach or dangerous.

Drones are more properly known as unmanned aerial vehicles, or UAVs, and are either autonomous or remotely piloted (RPV). Autonomous models follow a preprogrammed flight plan, whereas a licensed pilot flies an RPV from a remote location. This remote location can be half a world away in military applications. For commercial use, significantly shorter distances are involved. Regardless of operation type, modern drones are either fixed-wing or rotary models.

But how can your co-op use a drone? Assessing storm damage springs to mind. A helicopter or airplane can be used instead, but these options suffer from two issues. First, they are likely to be grounded for some time following the storm for pilot and crew safety; co-op crews are in the field as soon as possible, often in the midst of the storm. Second, these alternative aircraft are very expensive to operate.

So, with ground access frequently blocked by debris or flooding, getting a comprehensive assessment of damage is both time-consuming and dangerous. Flying a drone over the area can capture detailed images of the situation and help the co-op dispatch the right crews with the right materials to the right location. This kind of intelligence gets members' lights back on faster.

Drones have significant potential in preventive maintenance. Programmed to fly over far-flung transmission and distribution lines using the co-op's mapping data, a drone can video the route and return with an assessment of potential tree or vegetation problems. By integrating GPS data, the exact areas needing attention are pinpointed, and crews are then dispatched to correct the issues. This eliminates a lot of time and expense patrolling lengthy rights of way.

Anticipating privacy concerns, drones will be programmed to fly specific routes as mentioned above. They won't be looking at meters or the service wires from the pole to homes and businesses. Most video and other photographic data will never be seen by a human operator. It is simply too time-consuming, especially when the co-op is restoring an outage. Software will analyze the imagery and identify potential problem areas for additional human interpretation.

Further applications include equipping the drone with an infrared (IR) camera to search for hot spots on power lines or inside substations. Many co-ops use handheld IR devices for just such purposes today. With a drone, they could cover far more area at a much lower cost. Problems could be solved before causing an interruption to your service.

The use of 3D imaging to assess the condition of poles and towers in hard-to-reach areas is a possibility. Likewise, the impact of construction on wildlife could also be monitored if required by government agencies. Once in widespread use, you can be sure many more

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Drones

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applications will develop. Delivering light materials to field crews? Pizza?

However, getting a drone in the air is not a trivial matter. Since recreational use of drones has created some issues, the Federal Aviation Administration (FAA) is regulating their use for commercial activities. The co-op needs to get approval from the FAA to operate a drone, and the pilot has to be FAA-licensed, backed by dedicated and certified ground support. This will keep drones out of regular airspaces and away from sensitive areas. While the FAA has been directed to streamline and expedite approvals for commercial drone use (the latest approval took exactly 90 days), getting ready to apply takes a lot of time and effort. Finally, drones capable of utility tasks can be expensive, ranging from a few thousand to half a million dollars.

As with all technology Cumberland Electric Membership Corporation investigates and deploys, drones will be used to reduce operating costs and increase reliability. These amazing craft have significant potential to do both.

Tom Tate writes on cooperative issues for the National Rural Electric Cooperative Association, the Arlington, Va.-based service arm of the nation's 900-plus consumer-owned, not-for-profit electric cooperatives.

Members benefit from annual meeting survey

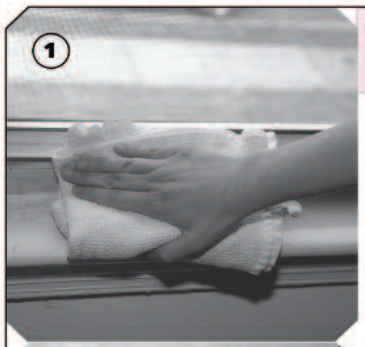
Six members who attended the annual meeting of Cumberland Electric Membership Corporation in September and completed surveys regarding their experiences were randomly selected to receive electric bill credits as a token of the co-op's appreciation for their input.

Congratulations to Charles Shultz of White House, Wayne Lowe of Cedar Hill, A.E. Gillam of Portland, C.L. Plummer of Hendersonville, Eileen Frazier of Big Rock and Virginia McCarty of Palmyra. Each member received a $50 electric bill credit.

Seal Air Leaks with Caulk

Did you know heating and cooling accounts for roughly **HALF OF YOUR HOME'S ENERGY USE?** Caulking cracks and gaps around windows, doors and spaces around wires (telephone, electrical, cable and gas lines), water spigots and dryer vents can pay off with **BIG ENERGY SAVINGS**.

**Approximate cost: $5-$30 *Energy savings: Approx. 5-10 percent - Source: U.S. Dept. of Energy*



MATERIALS YOU WILL NEED

• Caulk • Caulk gun • Knife or tool to cut • Rags • Water

1. PREP Clean the area where you will be applying the caulk. Remove any dirt, loose paint or old, cracked caulk.

Be sure the area is dry before applying new caulk appropriate for your application.

2. LOAD You will need to pull the plunger all the way back to load the tube of caulk into the barrel of the caulking gun.

Next, squeeze the trigger a few times until the plunger makes contact with the tube. Squeeze once or twice more to fill the tip with caulk.

3. APPLY To figure out the right amount of caulk needed, experiment with an out-of-the-way section. You may find that you need less caulk than you thought.

Hold the gun at a slight angle. Apply steady pressure on the trigger to create a solid stream from the tip, which should be placed 1/2 inch or less from the intended destination of the material.

Use just enough caulk to do the job. Use your finger to gently press the caulk into the corner, crack or space.

4. RELEASE Once the trigger is fully depressed, allow it to spring back and depress it again. Keep the gun moving while caulk is still coming out of the tip.

5. CLEAN Use a damp cloth or rag to clean off most of the excess caulk. Use a dry cloth to clean off the rest.