

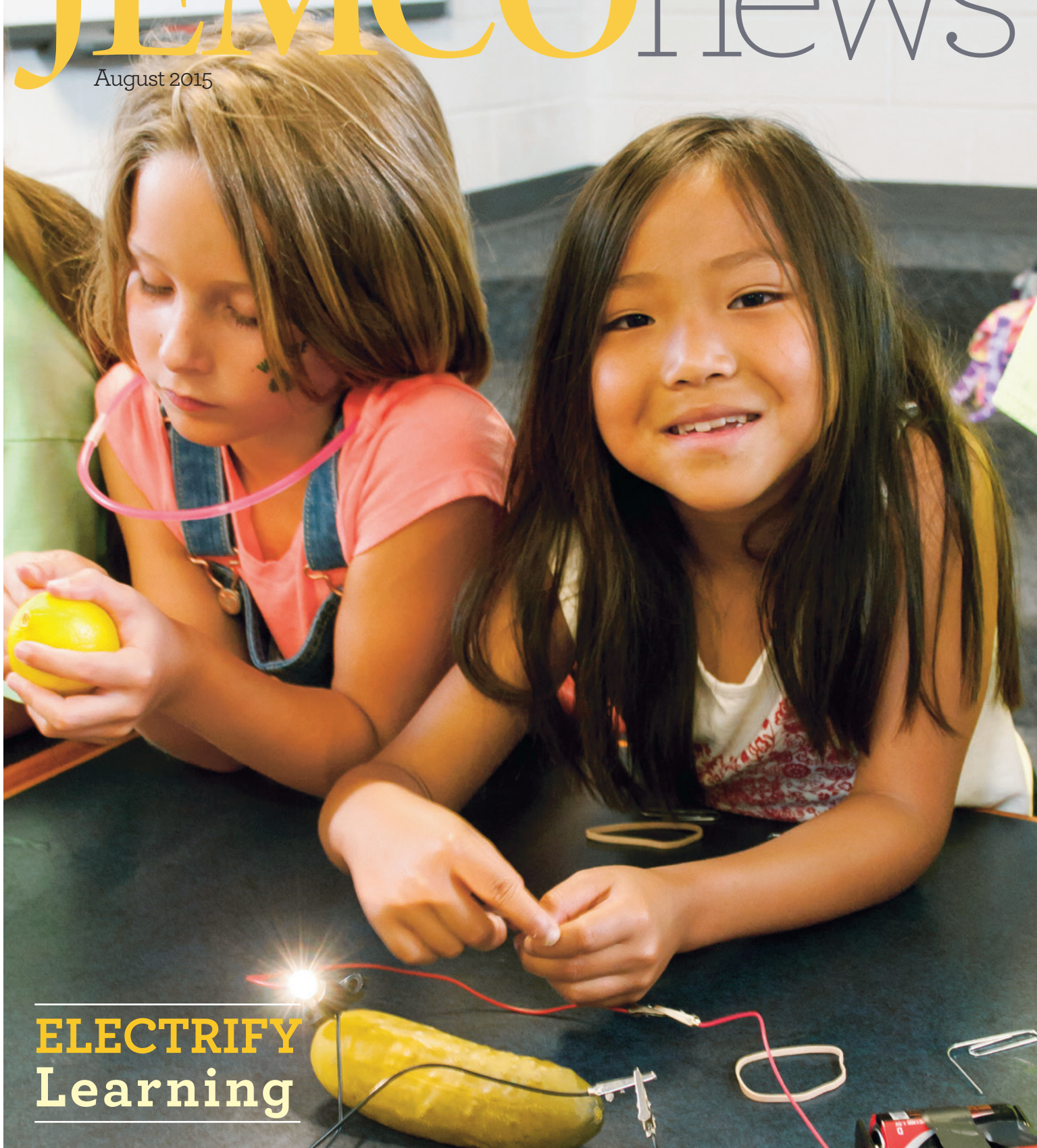
LED Light Bulb
Shopping Guide

Save the Date:
Annual Meeting Sept. 17

JEMICOnews

A PUBLICATION FOR JACKSON EMC MEMBERS

August 2015



ELECTRIFY
Learning



President/CEO
Chip Jakins

A Spark

Recently, a couple of Jackson EMC employees brought a box of wires, light bulbs and batteries to a local elementary school to watch kids build circuits and experiment with conductors and insulators. I heard how the students learned through trial and error, and how their faces lit up with excitement when the bulbs burned. It reminded me of when I was a kid experimenting with stuff I found in an old junk pile at my great Uncle Doc's.

Uncle Doc married my grandfather's sister, affectionately known as Aunt "Tump." Doc served in the U.S. Air Force nearly 30 years before retiring as a Senior Master Sgt. His specialty was electronics. When he retired, he worked on old vacuum tube televisions and transistor radios. He had an old storage shed behind the house filled with every imaginable gizmo, gadget, piece and part that you would ever need to fix a radio or TV. I had never seen anything like it. Uncle Doc had his own personal Radio Shack.

When he opened the door to that old shed, it looked like some strange combination of science lab and electronics scrapyards. That sight could've easily been a fleeting memory for a young kid, but then Uncle Doc did something really special; he showed us the "junk pile" and told me and my cousin Kenny we could use that stuff to make anything we wanted. Now, Kenny had been in on the junk pile before and was a pro at extracting the knobs, buttons, antennas and other components needed to assemble everything from a make-believe metal detector to a cosmic ray gun and even a miniature space robot. My imagination soared. We built. I felt like an eight-year-old mad scientist full of discovery.

Uncle Doc's old storage shed was such an exciting and fascinating place that it created quite a spark in me. I'm pretty sure it's that same spark that keeps me excited today about the future of Jackson EMC. It shouldn't surprise you that Uncle Doc went on to teach and run an electric wiring program at the local junior college. I think he was always a teacher at heart. He certainly taught me a great lesson about the power of discovery and innovation.

Curiosity and discovery can lead to amazing innovation. At Jackson EMC, we strive to be innovative and forward-thinking. Years ago, our engineers saw that if we could monitor and manage the flow of electricity at our substations from our system control center, we could restore power for our members faster. We were among the first to operate SCADA, Supervisory Control and Data Acquisition.

We use this technology to raise and lower voltage at the substations, open and close lines to isolate outages and ultimately improve reliability for our members.

Sometimes, it's an individual that looks at a task and finds a better way. John Kesting is a Journeyman Lineman with Jackson EMC who created the EZ Fuse Cutout, a product he patented and distributes through Newell Porcelain Company. John found a way to make replacing fuses easier and safer for linemen.

Today we source energy when we harvest it as natural gas produced at landfills and capture it in photocells from the sun. The power industry evolved the insulators we use from glass to porcelain, and now we use a plastic that is lighter and easier for our crews to install and more reliable for our members. Members have gone from recording their own energy use on postcards they mailed to our offices with payments to paying their bills on a mobile application that connects to the smart meter on their home. I wonder where that next spark of innovation will come from and what it will bring.

Reach out to your CEO; send Chip an email at chip@jacksonemc.com.

JEMCO news

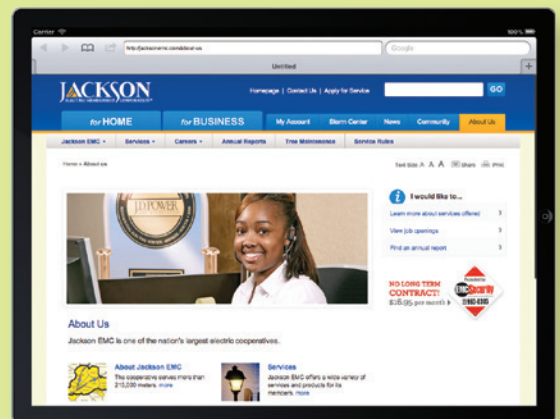
VOL. 64, NO. 8, AUGUST 2015
(ISSN 1061-5601), IS PUBLISHED
MONTHLY BY THE MEMBER
SERVICES DEPT. OF JACKSON
ELECTRIC MEMBERSHIP CORP.,
461 SWANSON DRIVE,
LAWRENCEVILLE, GA 30043.
SUBSCRIPTION \$3.50 PER YEAR
AS PART OF YEARLY MEMBERSHIP.
PERIODICALS POSTAGE PAID
AT LAWRENCEVILLE, GA AND
ADDITIONAL MAILING OFFICES.

April Sorrow, Editor.

POSTMASTER:
Send address changes to
Jemco News
461 Swanson Drive
Lawrenceville, GA 30043

onlinef@cts

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co-op and about the business today at
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LED Light Bulbs

LED bulbs are different. When shopping for light-emitting diode bulbs, you need to keep an eye on lumens and the Kelvin scale. Don't know what I'm talking about? Give me five.

1. What fitting do you need?

Before you head to the store, make sure you know the size of the base you need and the voltage. I have two different bases to shop for, the candelabra E12 and medium E26. The "E" stands for Edison, who invented the screw base light bulb. It seems simple, but it would be frustrating if you bought the wrong bulb.

2. What shape bulb are you looking for?

This question is really about the direction of the light. LED bulbs produce directional light, which is different from CFL and incandescent bulbs that throw light in all directions. LED bulbs with an ENERGY STAR® rating are designed to light similarly to traditional bulbs, so look for this certification if you want to mirror the direction of the lighting you currently have.


3. How bright does it need to be?

Lumens is the new watt. For example, if you are replacing a 60W bulb and want a similar amount of light, then you need to get at least 800 lumens in order to match the brightness of the old bulb. Consult the chart here to find the lumen matching the wattage you currently enjoy.

4. Are you looking for cold or warm light?





This is where LEDs have amazing range. The temperature of light is measured in terms of kelvin. Very orange light has a low number of kelvin, a candle is about 1,500K. Daylight is much colder, often above 5,000K. For household light bulbs, most people prefer "warm white," which is the warm, slightly yellow glow of an old incandescent or halogen bulb. These bulbs are 2,700K. Kitchens and bathrooms can usually have less yellow light, and bulbs that are natural white (3,000K) or cool white (4,000K).

5. Where should you begin?

LEDs have energy saving advantages over incandescent and CFL bulbs, but they still cost upward of \$10 each. You will get the greatest return on investment by replacing the bulbs you use most frequently or those that are difficult to replace. LED bulbs last for 15 years or longer. A \$12 LED bulb that meets ENERGY STAR requirements and is left on for three hours a day will pay for itself in roughly two years. To ensure you are buying the best quality bulb, only purchase those with ENERGY STAR certification. These bulbs have a three-year guarantee and meet important performance standards. 

Color Temperature in Degrees Kelvin

Candlelight	1500°K
Soft White	2700°K
Bright White/ Natural White	3000°K
Cool White	4100°K
Daylight	5000°K
	6500°K

How Many Lumens Do You Need? (120V)	BRIGHTNESS = LUMENS				
	250+	450+	800+	1100+	1600+
 Standard	25W	40W	60W	75W	100W
 Halogen	18W	29W	43W	53W	72W
 CFL	6W	10W	13W	18W	23W
 LED	4W	5W	10W	15W	20W

INSULATOR? or CONDUCTOR?



Use this experiment to learn about electrical circuits.

In Georgia, all 5th grade students learn how to build an electrical circuit and investigate if objects are conductors that allow electricity to flow through, or if they are insulators that stop the flow of energy.

Teachers know this is Content Standard S5P3, or Science Grade 5 Physical Science Standard #3. (Don't worry, there won't be a test on that.)

Try this in your classroom at school, or at home just for fun.

In order for electricity to travel where we want it to go, there must be a complete circuit connecting the starting point (power plant) to what we want to power (our homes and businesses) and then back to the original source (power plant). In the industry, power lines create the circuit. In this experiment, we use a battery as the original power source and connect a light bulb to the circuit to demonstrate the flow of electricity.

MATERIALS:

THREE, 6-INCH PIECES OF INSULATED SOLID-STRAND, 22-GAUGE COPPER WIRE WITH 1 INCH OF INSULATION STRIPPED ON EACH END

MASKING TAPE

D-CELL BATTERY

1.2-VOLT LIGHT BULB WITH MATCHING BASE (ORDER THESE ONLINE AT AMAZON OR FIND THEM AT HOME DEPOT)

BANANA, RUBBER BAND, TOOTHPICK, PAPER CLIPS, PLASTIC FORK, PICKLE, LEMON, POTATO

Directions and Observations:

1. Use masking tape to connect one end of two pieces of wire to the light bulb base.
2. Tape the other ends of the wire to each end of the battery.


What happened?

Consider what might happen if you add 10 more light bulbs to the circuit. Try it.

What about 24 more lights? What adjustments need to be made to be sure all the bulbs light up?

3. Disconnect one wire from the bulb.
4. Add the third wire to the light bulb base. Now you have two wire ends where you can test conductors and insulators.
5. Connect the two free ends of wire to your test objects.

Which items do you suspect will be insulators (no light) or conductors (light)? Add a banana between the two sections of 4-inch wire with the other ends connecting to the battery and light bulb base.

This experiment is one of many educational resources available for teachers, parents and students on Jackson EMC's kids pages, www.jacksonemc.com/kids. 



SHOCKING ANIMALS

THAT CAN GENERATE & DETECT ELECTRICITY!

Platypuses

A platypus' bill is covered in nearly 40,000 electricity sensors - or electroreceptors - arranged in a series of stripes, which helps them localize prey. All animals produce electric fields due to the activity of their nerves and muscles. So when the platypus digs in the bottom of streams with its bill, its electroreceptors detect these tiny currents, allowing it to tell living prey from inanimate objects.

Bees

A flower's bright petals and fragrance aren't the only things that attract bees. Flowers often experience a change in electric charge after they've been visited, so by sensing electric fields, bees can decide whether a flower is worth investigating (or if someone got there before them).

Electric Rays

Electric rays have kidney-shaped organs capable of generating electric shocks. These fish use electricity to zap predators and catch prey. These rays can actually control the intensity of their electric shocks, sending out relatively low doses to serve as a warning to curious predators and high doses to stun their lunch.

Geckos

Have you ever wondered how geckos are able to climb smooth surfaces? The gecko's climbing abilities are due in part to the electrostatic forces on the gecko's toe pads. The difference in charge between his feet and the surface he's climbing help the little guy stay anchored to the wall.

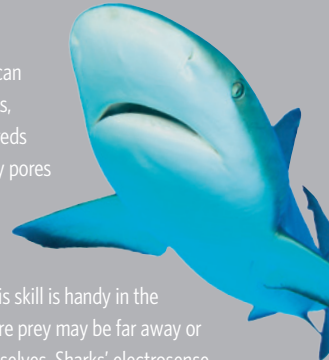


Oriental Hornets

These insects are solar-powered: their striped exoskeleton is capable of transforming energy from the sun into electricity. Oriental Hornets have pigments in yellow tissues that trap light, while brown tissues generate electricity - and they are the only known animal that can convert sunlight into energy. Scientists aren't sure how they use the electricity, but they may use it to cool or warm their bodies. Or, the electricity might give their wing muscles an energy boost, like a charged battery.

Sharks

All sharks and rays can detect electric fields, thanks to the hundreds to thousands of tiny pores on their heads that are filled with an electrically conductive jelly. This skill is handy in the deep blue sea, where prey may be far away or camouflaging themselves. Sharks' electrosense appears to be the most sensitive in the animal kingdom, capable of detecting voltage gradients as small as one billionth of a volt.



Electric Eels

Despite its name and serpentine appearance, the electric eel is not an eel at all, but rather a type of electric fish. Like other electric fish, they're nearly always producing low-voltage pulses to sense their environment. But they are more infamous for their ability to generate extremely high-voltage shocks to stun or kill prey and defend themselves. Electric eels can grow to over eight feet long and weigh nearly 50 pounds. An eel this size can emit a burst of over 600 volts, five times the voltage of a standard U.S. wall socket. (Source: National Geographic)

Good Samaritan Health Center of Gwinnett



An average of 80 people a day walk into Good Samaritan Health Center of Gwinnett, a primary care practice serving uninsured residents of Hall and Gwinnett counties.

"We are both a medical home for those we serve and, through our relationships with healthcare teaching institutions, a clinical training site for medical students, physician assistants, nurse practitioners and medical assistants," said Executive Director Greg Lang.

In 2014, the center provided services to 1,115 diabetics. Every three months, these patients need blood testing to measure glucose markers. "It can be very dangerous if a diabetic does not monitor glucose levels – because without that information, insulin cannot be regulated," he said.

The test costs \$16, which many patients cannot afford.


At its June meeting, the Jackson EMC Foundation awarded \$15,000 to the organization for

its Open Door Lab. While the funding is available to all patients needing testing, the Jackson EMC grant could pay for 937 glucose tests.

"This grant has created a source for funding for people who cannot afford their blood work," Lang said.

The funding will be used for diagnostic laboratory and pathology services for patients with chronic diseases. Lab tests vary in cost from \$12 to \$170 per patient.

"JEMC has been a tremendous supporter of numerous projects over the years," Lang said about support from the Jackson EMC Foundation since 2006. "We have 26 computers now; for a nonprofit, that is huge. The funding has also helped us provide evening hours so we can see the working poor, who can't afford to take a day off."

For more information about Good Samaritan Health Center, see <http://goodsamgwinnett.org/>. 

operationroundup

Jackson EMC Foundation awards \$80,550 in grants

The Jackson EMC Foundation board of directors awarded a total of \$80,550 in grants to organizations during its June meeting, including \$72,500 to organizations and \$8,050 to individuals.

Organizational Grant Recipients:

\$15,000 to **Eagle Ranch**, a Chestnut Mountain home for boys and girls in crisis serving all of Northeast Georgia, to install two security gates at key entry points that would control campus access, increasing the level of security and ensuring the safety of the children entrusted to its care.

\$15,000 to the **Fragile Kids Foundation** to help fund the purchase and installation of critical medical equipment not covered by insurance, such as electronic wheelchair van lifts, for special needs children in all the counties that Jackson EMC serves.

\$15,000 to **Good Samaritan Health Center of Gwinnett**, a faith-based nonprofit

committed to caring for the indigent, homeless and working poor in Gwinnett and Hall counties who do not have health insurance, to help provide diagnostic laboratory and pathology services to patients with chronic diseases.

\$10,000 to the **Georgia Children's Chorus**, an organization that provides vocal and choral training to young people who wish to pursue that field, to help 20 students from low-income families participate in the training program and concerts.

\$7,500 to **New Beginnings Ministries** of Lawrenceville, a nonprofit that offers low-cost, professional-level counseling in Gwinnett, Hall and Barrow

counties, to provide counselors who provide single women and single mothers with free, five-session crisis counseling sessions with a stipend for their time and gas.

\$5,000 to the **Athens Community Council on Aging** for the Grandparents Raising Grandchildren program, supporting grandparents who are primary caregivers for their grandchildren by providing caregiver and child support groups, emergency food and personal care supplies, and Active Parenting workshops.

\$5,000 to the **Place of Seven Springs**, a Snellville nonprofit that provides food and emergency assistance to Gwinnett County residents in

need, to provide funds for emergency housing, water bills, gas cards, food and non-narcotic prescription medicine.

Individual Grant Recipients:

\$3,500 to replace the HVAC system for a **senior citizen suffering from lung cancer**.

\$3,500 to help purchase a van that would be converted to handicapped accessible to transport a **10-year-old girl with cerebral palsy**.

\$1,050 to replace a water heater and repair the home of a **senior citizen**.

For more information about the Jackson EMC Foundation, or to apply for a grant, visit www.jacksonemc.com/jemcfoundation.

ANNUAL MEETING NOTICE TO MEMBERS

Dear Member:

Notice is hereby given that the 2015 meeting of the members of Jackson Electric Membership Corporation will be held at the headquarters in Jefferson, Georgia, Thursday, September 17, 2015.

Registration will begin at approximately 5:30 p.m. The meeting will be called to order at approximately 7:20 p.m. by the chairperson.

The purpose of the meeting is to:

- (1) receive reports of officers, directors and committees;
- (2) elect three directors;
- (3) vote on Bylaws changes, and
- (4) handle all other business which may properly come before the meeting or any adjournment thereof.

Prizes, entertainment, a box supper, important business and other special programs will be featured at this meeting. You are requested to be present.

Jackson EMC Board of Directors recommends Bylaws amendments

Jackson EMC's board of directors has adopted a resolution supporting changes to several provisions of the cooperative's Bylaws (specifically, Article II, Sections 1, 3, 4, 5 and 7; and Article III, Section 4). If approved by the members, these Bylaw amendments would:

1. Allow members to vote in contested director elections during an "early voting" period of at least five days during the 14 days prior to the Annual Meeting. Voting locations during the early voting period would be established by the Credentials and Elections Committee, and voting would still be permitted at the Annual Meeting.
 - *The Board believes these proposals will create a cost-effective way to expand member participation in director elections and make voting more convenient, without reducing the security or the integrity of the election process.*
2. To permit the notice of the Annual Meeting to be provided by any "reasonable means" between five (5) to ninety (90) days prior to the Annual Meeting. The Bylaws currently require printed notice to be delivered ten (10) to sixty (60) days before the Annual Meeting.
 - *Member communication preferences have changed dramatically over the last ten years, and may continue to evolve. This revision reflects what is permitted by Georgia law, and the Board believes the Cooperative should have maximum flexibility to provide notice of Annual Meetings in a manner, and at a time, which may be more convenient and accessible to members.*
3. To provide earlier notice to members of upcoming elections, the Cooperative's election process, and related deadlines.
 - *Earlier notice of election-related information will better equip members to participate in the election process, will provide adequate time for the Cooperative to verify and communicate director-related information to members prior to the election, and to accommodate voting during the "early voting period."*
4. To require the Nominating Committee to publish its nominations for director election at least 180 days prior to the Annual Meeting (the current deadline is 30 days prior to the Annual Meeting), and to require that nominating petitions be submitted to the Cooperative between 200 to 150 days prior to the Annual Meeting (the current deadline is 15 days prior to the Annual Meeting).
 - *The Board believes that earlier deadlines on all nominations will help ensure that there is adequate time for candidate information to be verified and communicated to the membership, to provide time for members to evaluate the candidates, and to vote during the early voting period or at the Annual Meeting.*
5. To increase the required number of member signatures on a nominating petition from 15 to 50.
 - *The Cooperative has grown from 90 members to more than 180,000 members, and the petition requirement has never been increased. Given the expense associated with a contested election, the Board believes an increased petition requirement is appropriate to demonstrate that a nominee has invested appropriate time and energy to campaigning among members.*
6. To clearly set forth the requirements of a valid nominating petition (which will include the following requirements: (i) the petitioner's name and the incumbent director's name must appear on each page, (ii) all signatures must be obtained within 90 days, and (iii) the petition must be submitted within 120 days of obtaining all signatures).
 - *The Board believes clearly communicating to members the basic requirements of a petition will help avoid future disputes.*

Members will be asked to vote on the recommended amendments during the cooperative's 2015 Annual Meeting. The full text of the board resolution and recommended Bylaw amendments may be found on the cooperative's website at www.jacksonemc.com/bylawsamend or at any of the cooperative's local offices upon request. Questions regarding these changes can be emailed to info@jacksonemc.com or by calling (706) 367-6114.

Sincerely,
Rodney Chandler, Secretary
 Board of Directors

Jackson EMC Offices

1000 Dawsonville Highway
Gainesville, GA
(770) 536-2415

85 Spratlin Mill Road
Hull, GA
(706) 548-5362

850 Commerce Road
Jefferson, GA
(706) 367-5281

461 Swanson Drive
Lawrenceville, GA
(770) 963-6166

EMC Security
55 Satellite Blvd., NW
Suwanee, GA
(770) 963-0305 or
(706) 543-4009

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WHAT'S COOKIN'?

"This is a great dish to take on a picnic or to a potluck supper since it is equally delicious cold or at room temperature."

- Jean McCorlew - Gainesville, GA

Black Bean Corn Salad

Ingredients:

- 1 15-ounce can black beans, rinsed and drained
- 1 15-ounce can whole kernel corn, drained
- ½ bell pepper, diced
- ½ sweet yellow onion, diced
- 3 Roma tomatoes, seeded and diced
- 3 Tbsp. lime juice
- 1-2 Tbsp. Extra Spicy Mrs. Dash
- ½ cruet Italian salad dressing (I use Good Seasons.)
- 2 Tbsp. sugar or 2 packets Splenda
- Salt and pepper to taste



Instructions:

Mix all ingredients together well and refrigerate for at least one hour. Tastes great with corn chips or eaten as a side. The salad will keep at least a week – if it lasts that long!

Submit
Recipes to:

Cooperative Cooking
Jackson EMC
P.O. Box 38
Jefferson, GA 30549