Touchstone Energy® Cooperatives of Iowa

JANUARY 2025

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ELECTRIC COOPERATIVE LIVING

How electricity demand impacts co-ops

Understanding utility-scale and residential battery storage

Recipes: Bread winners

Win a stainless steel bread machine ▶ See Page 3

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ON THE COVER Special thanks to Cindi Miller, a Guthrie County REC member-consumer, for supplying this month's cover image. Submit high-resolution photos for consideration to editor@ieclmagazine.com. You could receive $100!

A GRATEFUL FAREWELL: REFLECTING ON MY STATEWIDE SERVICE

BY KENNY VANDENBERG

Last month, the Iowa Association of Electric Cooperatives (IAEC) held its 2024 Annual Meeting in West Des Moines, with the theme of "Powering Lives, Empowering Communities."

With a statewide leadership transition in 2024, it was a year of new beginnings at IAEC. But amidst change, we remain steadfast in our cooperative mission to help Iowa's electric cooperatives power lives and empower communities every day.

The annual meeting was a bittersweet time for me as it signaled the end of my six-year tenure on the IAEC board, where I most recently served as board president. It has been an honor to represent the electric cooperatives of District 1 on the statewide board, and I found myself reflecting on the many things that our statewide trade association has accomplished in the past six years, including:

- Keeping safety as our top priority, with fiscal responsibility also a priority.
- Seeing great participation in IAEC's educational and safety training opportunities for co-op staff and directors.
- Witnessing cooperation among cooperatives and restoring power in the wake of two derechos.
- Meeting the COVID pandemic challenges head on and creating more ways to connect with Iowa's electric cooperatives virtually and digitally.
- Launching our first statewide Shine the Light contest in 2021 to celebrate our cooperative commitment to community.
- Introducing our Cooperative Leadership in Iowa Program in 2023 to equip emerging leaders at Iowa's electric cooperatives.
- Sending two crews of volunteer linemen to rural Guatemala (in 2019 and 2024) to bring the advantages of electricity to underserved areas.
- Maintaining a credible reputation while defending local co-op governance with legislators and regulators.
- Welcoming Leslie Kaufman as IAEC's new executive vice president and general manager in July 2024.

None of these accomplishments would have happened without the foresight of the IAEC board along with support from Iowa's electric co-ops and the statewide staff.

The power in stepping outside of one's comfort zone

I want to thank the current board members as well as past board members who have helped me along the way over the past six years. There are not enough words to thank the IAEC staff for their help, knowledge and willingness to go above and beyond.

Serving on the IAEC board was the furthest thing from my mind all those years ago, but a few individuals challenged me to step out of my comfort zone and expand my knowledge of the electric industry. If it weren't for their encouragement, I wouldn't be here looking back on what was accomplished. I owe these folks a huge thank you for believing in me and giving me a little push.

So, as I pass the baton to new statewide directors at the start of a new year, I challenge each of you to step out of your comfort zone, try new things and get involved in your community. You will be amazed at what you will learn and the lifelong friendships that will develop.

I wish you and your family a blessed year!

Kenny VandenBerg is the outgoing board president for the Iowa Association of Electric Cooperatives and currently serves as board president of Chariton Valley Electric Cooperative.

EDITOR'S CHOICE CONTEST

WIN A STAINLESS STEEL BREAD MACHINE!

ENTER ONLINE BY JAN. 31!

The KBS stainless steel smart bread machine has 17 settings for making bread, jam, yogurt, cake, pizza dough and more! Plus, it features an automatic fruit and nut dispenser. It bakes up to a 2-pound loaf, with three crust settings in light, medium and dark. An ultra-quiet 710-watt motor makes kneading quick and even, strong and durable, so the dough is soft and elastic. A unique ceramic bread pan uses safe nanotechnology to achieve a nonstick effect.

Visit our website and win!

Enter this month's contest by visiting www.ieclmagazine.com no later than Jan. 31. You must be a member of one of Iowa's electric cooperatives to win. There's no obligation associated with entering, we don't share entrant information with anyone and multiple entries from the same account will be disqualified.

The winner of the iRobot Roomba from the November issue was **Edward Mosbach**, a **Prairie Energy Cooperative** member-consumer.

STATEWIDE ANNUAL MEETING CELEBRATES 2024 ACHIEVEMENTS AND INTRODUCES NEW LEADERSHIP

The Iowa Association of Electric Cooperatives (IAEC), the trade association for Iowa's electric cooperatives, conducted its 2024 Annual Meeting in West Des Moines Dec. 5-6 with more than 350 registered attendees. Board directors and employees from Iowa's locally owned electric co-ops received informative updates from statewide directors and staff in addition to learning about industry trends and best practices from invited speakers.

"Our theme of Powering Lives, Empowering Communities was all about our electric cooperative mission," says outgoing IAEC Board President Kenny VandenBerg. "We remain laser-focused on helping our member co-ops carry out this mission."

IAEC Executive Vice President and General Manager Leslie Kaufman covered several topics during her first executive report to the members, including a summary of activities from her initial 130 days at IAEC and a preview by department of deliverables to expect in the year ahead. Kaufman was hired in July, bringing vast leadership and cooperative experience from her time at Kansas Electric Cooperatives and the Kansas Cooperative Council.

During the business meeting portion of the annual meeting, four directors were elected to the IAEC board:

- **District 1:** Travis Harris of Southern Iowa Electric Cooperative was elected to a three-year term
- **District 2:** Tony Lem of Consumers Energy was reelected to another three-year term
- **District 4:** Steve Inskeep of Pella Cooperative Electric Association was elected to fill a vacancy (One-year term)
- **District 5:** Jim Miller of Calhoun County Electric Cooperative Association was reelected to another three-year term

A complete list of directors and their roles is listed on Page 2 of this issue.

The IAEC board would like to thank outgoing director and Board President Kenny VandenBerg of Chariton Valley Electric Cooperative for his leadership and service to Iowa's electric cooperatives during his six-year tenure. Managers' Representative Kevin Wheeler of Access Energy Cooperative was also recognized for his two-year term as an ex officio director on the IAEC board.

In upcoming issues of this magazine, we'll cover some of the industry trends and issues discussed during the annual meeting.

IAEC Executive Vice President and General Manager Leslie Kaufman addresses annual meeting attendees in December.

COOPERATIVE LEADERSHIP IN IOWA PROGRAM

Congratulations to the 17 graduates of the 2024 Cooperative Leadership in Iowa Program for emerging leaders who were recognized during the Iowa Association of Electric Cooperative's annual meeting in December. Participants committed to a yearlong calendar of in-person, virtual and on-demand training sessions. Additionally, these individuals developed their leadership skills, gained insights on various professional roles within electric cooperatives and attended statewide events to better understand important issues facing Iowa's electric cooperatives.

Colton Stephens
Access Energy Cooperative

Sam Honold
Central Iowa Power Cooperative

Anna See
Chariton Valley Electric Cooperative, Inc.

Cori Smith
Clarke Electric Cooperative, Inc.

Molly Cook
East-Central Iowa Rural Electric Cooperative

Katie Stadheim
East-Central Iowa Rural Electric Cooperative

Sabrina Moody
Iowa Association of Electric Cooperatives

Breanna Jacobs
Linn County Rural Electric Cooperative

Bryan Herum
Lyon Rural Electric Cooperative

Jeff Geistkemper
Maquoketa Valley Electric Cooperative

Brian Killeen
Midland Power Cooperative

Amber Hall
Pella Cooperative Electric Association

Scott Muhlenbruch
Prairie Energy Cooperative

Justin Murphy
Southwest Iowa Rural Electric Cooperative

Jason Guthrie
United Electric Cooperative

Adam Weldon
United Electric Cooperative

JD Parks
Western Iowa Power Cooperative

CO-OPS OUTLINE PRIORITIES FOR NEW ADMINISTRATION

On Dec. 4, Jim Matheson, CEO of the National Rural Electric Cooperative Association (NRECA), sent a letter to President-elect Donald Trump outlining the challenges electric co-ops face and urging the incoming administration to help co-ops deliver affordable, reliable and safe electricity to their members.

Matheson listed seven key actions that Trump can take to address these challenges:

1. Repeal the Environmental Protection Agency's (EPA) greenhouse gas rule for existing coal-fired and new natural gas plants, as well as other EPA regulations threatening electric reliability.

2. Streamline and accelerate federal permitting reviews of energy projects.

3. Roll back public lands and species conservation rules that inhibit operation and maintenance of power lines on federal lands and hurt wildfire mitigation efforts.

4. Reverse plans that imperil hydroelectric output from the Lower Snake River dams in the Pacific Northwest.

5. Effectively use remaining funds from the Infrastructure Investment and Jobs Act to improve electric infrastructure and enhance grid resilience and reliability.

6. Ensure access to important federal programs used by electric co-ops to benefit rural communities, including grant programs at the U.S. Department of Agriculture, the Department of Energy and for broadband deployment.

7. Support the Treasury Department in administering crucial direct-pay tax credits that co-ops can use to invest in energy technologies.

> **"Locally, co-ops are focused on powering and empowering their communities. Nationally, electric co-ops are focused on advocating for smart energy policies that keep the lights on. This includes supporting a diverse supply of always available energy resources and pressing for solutions to meet skyrocketing electricity demands at a cost local families and businesses can afford."**
>
> *- NRECA CEO Jim Matheson*

ENTER TO WIN

SEND US YOUR RURAL IOWA PHOTOS

We're always looking for stunning images for the cover of *Iowa Electric Cooperative Living* magazine. If we select your photo for a cover, we'll award you $100. The photos must be clear, of an Iowa place served by an electric cooperative and in high resolution. To be considered, email photos to editor@ieclmagazine.com with "Cover Submission" in the subject line. Please also include the name of the electric cooperative that serves you.

RECEIVE $100 FOR A PUBLISHED PHOTO

IOWA CO-OPS RECOGNIZED FOR SAFETY ACHIEVEMENTS

During the Iowa Association of Electric Cooperatives' (IAEC) annual meeting in December, several Iowa electric cooperatives were congratulated for completing the Rural Electric Safety Achievement Program (RESAP) in 2024. The cooperatives included:

- Access Energy Cooperative
- Allamakee-Clayton Electric Cooperative
- Calhoun County Electric Cooperative Association
- Chariton Valley Electric Cooperative, Inc.
- East-Central Iowa Rural Electric Cooperative
- Farmers Electric Cooperative (Kalona)
- Heartland Power Cooperative
- Iowa Lakes Electric Cooperative
- Midland Power Cooperative
- MiEnergy Cooperative
- Prairie Energy Cooperative
- Raccoon Valley Electric Cooperative
- Southern Iowa Electric Cooperative

RESAP is a service of the National Rural Electric Cooperative Association (NRECA) and strives to promote the highest standards of safety among electric cooperatives.

IAEC fully supports the RESAP program and works with electric cooperative members in their safety achievements. The rigorous program requires annual reporting to NRECA of Occupational Safety and Health Administration Data and updates to the cooperative's safety improvement plan. Every three years, additional data must be submitted to NRECA, as well as participation in an onsite safety observation by NRECA at the cooperative.

THE EVER-CHANGING, FAST-GROWING DEMAND FOR ELECTRICITY

BY SCOTT FLOOD

When rural electric cooperatives first strung power lines from farm to farm less than a century ago, most members had but a handful of light bulbs to power. With time, they added appliances like refrigerators, but we're sure they couldn't begin to imagine the number and variety of electrical devices in today's homes and garages.

Across the U.S., people use a growing amount of electricity at work, home, and with the growth of electric vehicles (EVs), even on the road.

The demand for electricity increased by 2.5% in 2024 and is expected to grow by 3.2% this year. That was after co-ops saw a 4.8% increase in 2022. Through 2029, the nation's peak demand is projected to grow by 38 gigawatts. That would be like adding another California-sized state to our nation's power grid.

Factors driving demand

The rapid growth of artificial intelligence (AI) is driving the development of massive data center facilities, often placed in electric co-op service territories to take advantage of inexpensive land and fewer neighbors to complain. By 2022, these facilities accounted for 2.5% of the nation's consumption of electricity – and by 2030, they'll use 7.5% of all electric power.

Data centers and facilities like warehouses require a large, steady supply of electricity 24 hours a day. That means the electric co-ops supplying them can't rely on intermittent sources of electricity, such as solar or wind energy, to handle the additional load. Instead, they need more of what's known as baseload or always-available power, much of which is currently generated by burning fossil fuels. The more we depend on technology, the more we'll need reliable baseload generation.

Baseload power is essential

Yet that's a problem because at the same time Americans are using more

electricity, power providers are being forced to shut down reliable sources of baseload power such as coal and nuclear power plants. Many large coal plants have been converted to use cleaner-burning natural gas, but others have been deemed too costly to convert and are prematurely being shut down. More than 110 gigawatts of always-available generation – enough to power about 35 million homes – is forecast to retire by 2033.

The U.S. Energy Information Administration's forecast expects coal-fired generation to drop to half of today's levels by 2030. Renewable energy will capture a growing share of the supply, but as noted, much renewable energy is not reliable enough to provide baseload power.

Demand will steadily increase

As electricity powers a growing share of life's tools and conveniences, overall demand is expected to continue its steady growth through 2050. A great example is the efficiency of electric heat pumps. Federal and other subsidies and tax advantages are powering significant growth in their share of the home heating market.

In other words, at the same time everyone is using more electricity than ever, the supply of the most reliable source is drying up. Add in the uncertainty created by public policy debates around energy and climate change, and you can begin to understand why 19 states face a high risk of rolling blackouts between now and 2028.

The energy industry studies demand closely because construction of all types of generation is costly and lengthy – often taking more than a decade from groundbreaking to entering service.

As renewables become more efficient and cheaper to produce, their share of the power mix will only continue to grow. Someday soon, battery technology may reach the point where large-scale storage of renewable generation becomes possible, but until then, we'll need more of those always-available power sources.

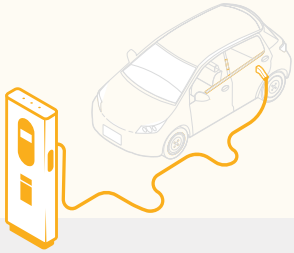
Scott Flood writes on a variety of energy-related topics for the National Rural Electric Cooperative Association.

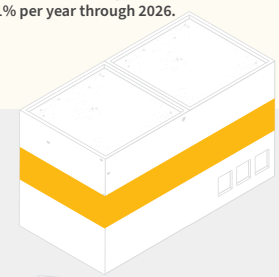
Soaring Demand

After decades of flat or declining electricity demand, the U.S. is in the midst of a boom in power use. Recent government data shows that power consumption nationwide is set to increase by at least 38 gigawatts (GW) between now and 2028. This trend would ordinarily be great news for the power industry. But government policies aimed at shutting down fossil-fuel-based generation and years-long delays in permitting and siting for new transmission lines are turning this power boon into a capacity crisis. Here are the primary demand drivers:

Electrification

Electric vehicle adoption, electrification of home heating and industrial electrification are expected to increase overall U.S. energy consumption by 1% per year through 2026.





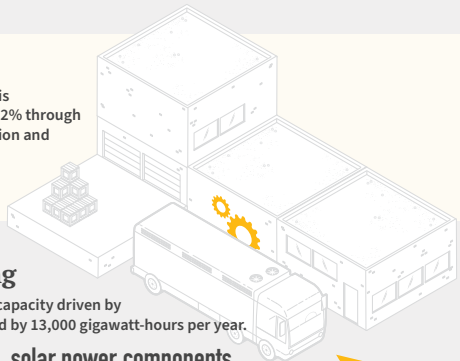
65%

Data Centers

Driven by explosions in artificial intelligence, cryptocurrency and cloud computing, total U.S. data center load is projected to increase by 65% by 2050.

Economic Growth

Residential power consumption is expected to increase by 14% to 22% through 2050 due to increases in population and steady economic growth.



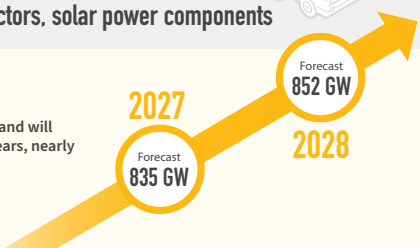
Manufacturing Growth/Onshoring

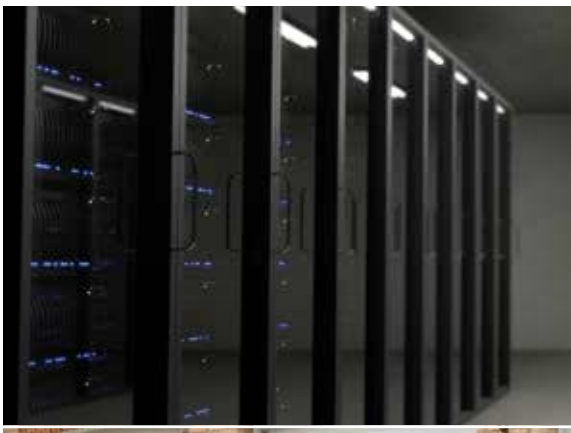
New, expanding and "onshored/reshored" manufacturing capacity driven by federal incentives is expected to increase industrial demand by 13,000 gigawatt-hours per year.

Key products: EVs, batteries, semiconductors, solar power components

Total Demand

Analysts predicted in 2023 that U.S. peak demand will increase by at least 38 GW over the next five years, nearly double the growth rate predicted in 2022.





BREAD WINNERS

ORANGE BREAD

- 1 tablespoon orange zest
- juice from 1 orange
- water
- 2 tablespoons shortening
- 1 cup sugar
- 1 teaspoon vanilla
- 1 egg
- 2 cups flour
- ¼ teaspoon salt
- 1 teaspoon baking powder
- ½ teaspoon baking soda
- 1 cup raisins
- ½ cup chopped walnuts, optional

Scrape orange rind to make zest, and squeeze juice from orange adding enough water to make 1 cup of liquid. Cream shortening, sugar, vanilla and egg. Add juice and remaining ingredients. Mix thoroughly. Bake in greased and floured loaf pan at 350 degrees F for 1 hour. *Yields 12 slices*

Carol Reeves • Sheldon
North West Rural Electric Cooperative

QUICK CARAMEL ROLLS

- 2 8-ounce cans refrigerated crescent rolls
- ½ cup butter
- 1 cup brown sugar
- 2 tablespoons water

Leaving crescent rolls in a roll, cut each can into 12 pieces. Place four across and six down in a greased 9x13-inch pan. Mix butter, brown sugar and water. Cook in microwave until it reaches a boil, stirring every minute – do not overcook! Pour mixture over crescent rolls. Bake at 350 degrees F for 15-20 minutes or until golden brown and the edges are bubbly. Invert onto a serving platter.

Steph Messner • Rock Rapids
Lyon Rural Electric Cooperative

QUICK YEAST BREAD

- 1¼ cups warm milk
- ½ cup butter, melted
- 1 egg
- 2 tablespoons sugar
- 2 tablespoons honey
- 4 cups flour
- ¼ teaspoon salt
- 1 tablespoon quick yeast

Mix milk, butter, egg, sugar and honey. In a separate bowl, mix flour, salt and yeast. Mix dry ingredients together with liquid ingredients. Knead and then place in a warm place until doubled in size. Knead again for 5 minutes. Divide into two and place in greased small loaf pans to rise for 1 hour. Bake at 350 degrees F for 30 minutes, until brown. *Serves 4-6*

Alice Draper • Eldora
Grundy County Rural Electric Cooperative

PISTACHIO BREAD

- 1 yellow cake mix
- 1 3-ounce box instant pistachio pudding
- 1 cup sour cream
- ¼ cup oil
- ¼ cup water
- 4 eggs, beaten
- ¼ cup sugar
- ½ cup nuts
- 1 teaspoon cinnamon

Mix cake mix, pudding, sour cream, oil, water and eggs until smooth. Pour half of batter into two greased bread pans. Mix sugar, nuts and cinnamon. Pour mixture on top of batter. Cover with remaining batter. Bake at 350 degrees F for 45 minutes.

Kim Swanson • Lockridge
Access Energy Cooperative

CHALLAH

- **1 cup warm water**
- **2¼ teaspoons active dry yeast**
- **1 teaspoon granulated white sugar**
- **2 large eggs**
- **½ cup honey**
- **6 tablespoons grapeseed oil**
- **4½ cups all-purpose flour**
- **½ teaspoon salt**
- **2 large egg yolks**
- **1 teaspoon water**

In a large bowl, whisk together the warm water, yeast and granulated sugar. Set aside for 5-10 minutes, or until foamy. Add the eggs, honey and oil. Whisk well. Add mixture to a stand mixer fitted with a dough hook. Add the flour ½ cup at a time and the salt while mixing on a medium-high speed. Mix for 5-7 minutes, or until a very smooth dough forms. If using a hand mixer fitted with a dough hook, combine the ingredients until a shaggy dough forms, about 2 minutes on medium-low speed, then remove from mixing bowl and knead by hand for about 10 minutes. Grease another large bowl with oil. Place the dough inside the bowl, cover with plastic wrap. Proof for about 1 hour. Lightly flour a clean surface and rolling pin. Place the dough on the surface and punch it down four times with your hands. Cut the dough into six equal dough balls. Using a rolling pin, roll out six long pieces, then roll them into strands with your hands. Use three strands to make each braided loaf. Place the loaves on a baking sheet lined with parchment paper, cover with plastic wrap and proof for one hour. In a small bowl, combine the egg yolks and water with a fork. Remove the plastic wrap from the loaves and brush them with egg wash. Bake at 325 degrees F for 15 minutes. Raise oven temperature to 425 degrees F and bake for 5 minutes. Remove from oven and cool on a wire rack. *Yields 2 loaves*

Addilyne Switzer • Beaman
Grundy County Rural Electric Cooperative

KILLARNEY IRISH BROWN BREAD

- **3¼ cups wheat flour**
- **¾ cup white flour**
- **2 teaspoons baking soda**
- **2 teaspoons salt**
- **2½ cups buttermilk**
- **1 tablespoon golden syrup (or honey)**
- **4 teaspoons butter, melted**

Mix the flours, soda and salt into a bowl. Make a well in the center and add the buttermilk, golden syrup and butter. Use a large spoon to mix gently, just until dry ingredients are incorporated. Shape into a round on a baking sheet that has been lined with waxed paper. Cut a cross in the top with a sharp knife. Bake at 400 degrees F for 40 minutes, until the top is slightly cracked and crusty. To check if done, tip the loaf and tap the base – it should sound hollow. Cool on a wire rack. *Serves 12*

Chris Daniels • Casey
Guthrie County Rural Electric Cooperative Association

Visit www.ieclmagazine.com and search our online archive of hundreds of recipes in various categories.

CRANBERRY BRAN BREAD

- **1½ cups bran flakes**
- **2 cups flour***
- **1½ teaspoons baking powder**
- **½ teaspoon soda**
- **½ teaspoon salt**
- **1 cup sugar**
- **½ cup nuts, chopped**
- **1 egg**
- **2 tablespoons vegetable oil**
- **1 cup plus 2 teaspoons orange juice, divided**
- **1 cup cranberries, halved**
- **2 cups powdered sugar**

Mix bran flakes, flour, baking powder, soda, salt, sugar, nuts, egg, vegetable oil, 1 cup orange juice and cranberries. You can substitute cranberries for ½ cup cranberries and ½ cup pomegranates. Bake in a greased loaf pan at 250 degrees F for 1 hour or until done. Mix 2 teaspoons orange juice with powdered sugar and drizzle over baked loaf.
An alternative to 2 cups white flour would be ¼ cup brown rice flour, ½ cup milled flax seed, ½ cup almond flour, ¼ cup soy flour and ½ cup Nestrum Honey and Wheat cereal.

Betty Sorden • Webster
T.I.P. Rural Electric Cooperative

WANTED:

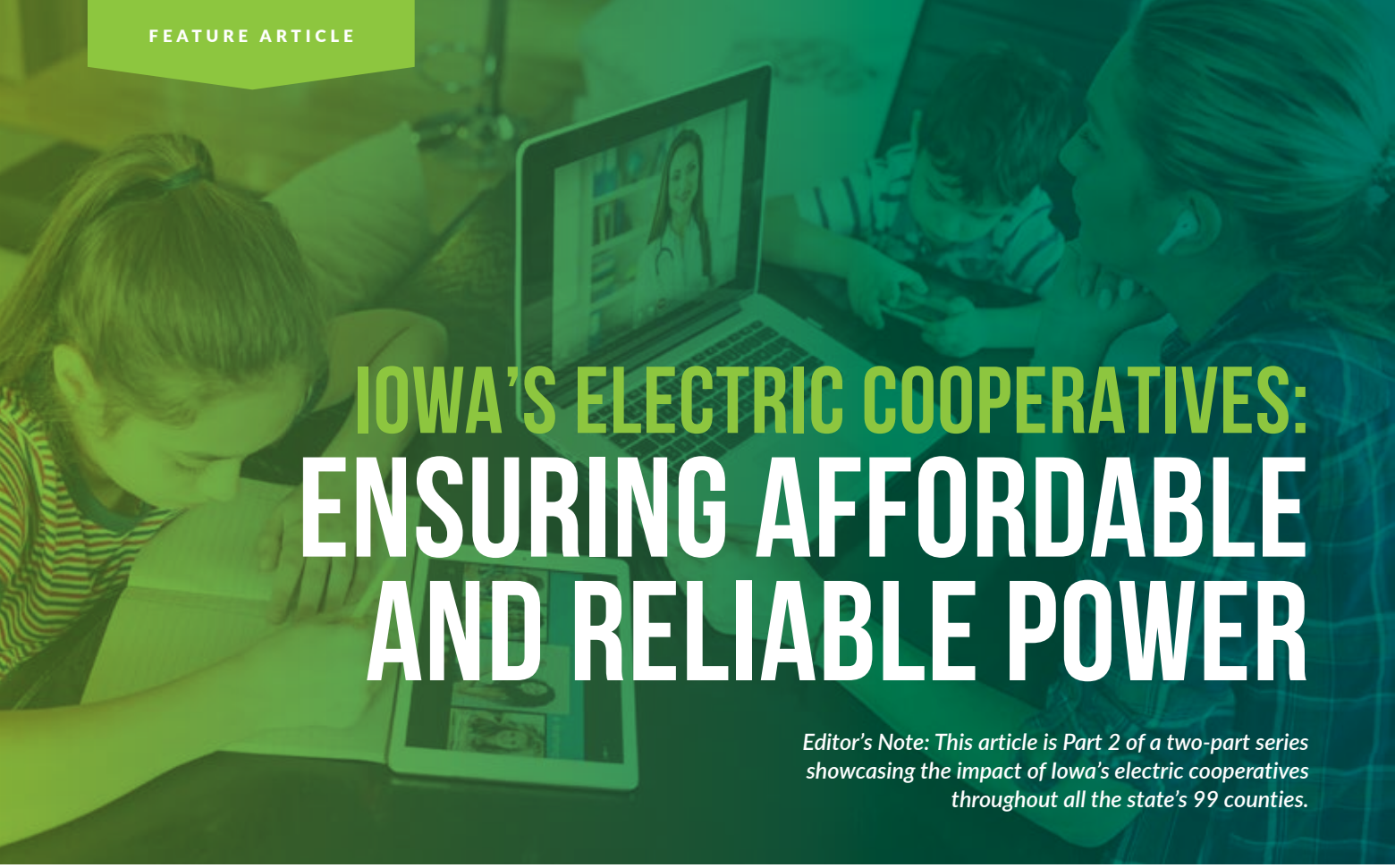
SPRING-INSPIRED RECIPES

THE REWARD:
$25 FOR EVERY ONE WE PUBLISH!

Deadline is Jan. 31
Submit recipes that use **fresh, seasonal ingredients** such as asparagus, spring greens, rhubarb and more! Please include your name, address, telephone number, co-op name, recipe category and number of servings on all submissions.

EMAIL: recipes@ieclmagazine.com
(Attach your recipe as a Word document or PDF to your email message.)

MAIL: Recipes
Iowa Electric Cooperative Living magazine
8525 Douglas Ave., Suite 48
Des Moines, IA 50322



IOWA'S ELECTRIC COOPERATIVES: ENSURING AFFORDABLE AND RELIABLE POWER

Editor's Note: This article is Part 2 of a two-part series showcasing the impact of Iowa's electric cooperatives throughout all the state's 99 counties.

Iowa's electric cooperatives have a rich history of local ownership and member-driven governance, playing a pivotal role in bringing electricity to rural communities.

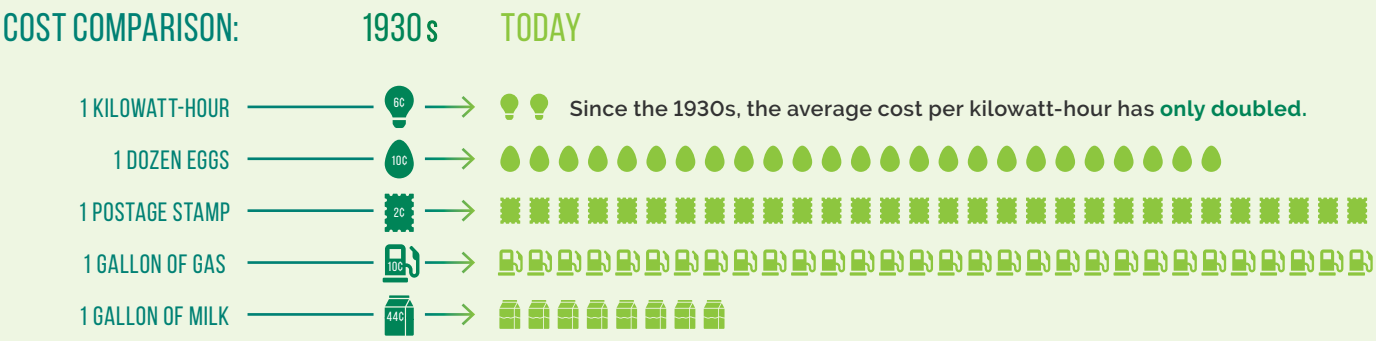
In the 1920s, while urban areas had widespread access to electricity, approximately 90% of rural residents lived without it. This lack of electrification made farm life arduous, with no indoor plumbing, reliable refrigeration, or safe lighting and heating. Investor-owned utilities at the time deemed it unprofitable to extend power lines to sparsely populated rural areas.

Recognizing this disparity, President Franklin D. Roosevelt established the Rural Electrification Administration (REA) in 1935 through Executive Order 7037 as part of his New Deal initiatives. The following year, Congress passed the Rural Electrification Act of 1936, providing federal loans to support the installation of electrical distribution systems in rural regions.

These efforts enabled rural communities to form not-for-profit electric cooperatives, facilitating access to affordable and reliable electricity. By 1950, 80% of American farms had electricity, and by 1960, this figure rose to 99%.

Doing more with less

Serving predominantly rural areas, Iowa's electric cooperatives manage extensive infrastructure with fewer customers per mile compared to investor-owned utilities. To address this challenge, co-ops structure rates to recover costs and collaborate with organizations like the Hawkeye Insurance Association and the Iowa Association of Electric Cooperatives to achieve economies of scale in supplies, insurance and technology solutions. This collaborative approach helps maintain affordability for members.



In Iowa, the average household served by electric cooperatives spends about

$5.25 PER DAY FOR ELECTRICITY

THAT'S CHEAPER THAN BUYING A SANDWICH OR SPECIALTY COFFEE DRINK!

The average household served by Iowa's electric cooperatives spends about $5.25 per day on electricity, highlighting the cost-effectiveness of their services. Co-ops also offer energy efficiency programs, audits, rebates, and incentives to help members use energy wisely and reduce expenses. As member-owned entities, co-ops prioritize cost-based rates over profits, ensuring that financial decisions align with members' best interests.

Commitment to reliability

Ensuring reliable electricity is a top priority for Iowa's electric cooperatives. They conduct regular maintenance, infrastructure inspections and adhere to proactive vegetation management plans to minimize outages.

During the past 10 years, Iowa's electric cooperatives have kept the lights on 99.96% of the time despite blizzards, ice storms, derechos, tornadoes or other extreme weather events. The average member served by an Iowa electric co-op experiences one outage per year, lasting approximately 138 minutes.

If a co-op does experience extensive outages, they work with neighboring co-ops for mutual aid to restore power to members as quickly and safely as possible.

During the past 10 years, Iowa's electric cooperatives have kept the lights on

99.96% OF THE TIME

DESPITE BLIZZARDS, ICE STORMS, TORNADOES, DERECHOS OR OTHER EXTREME WEATHER EVENTS.

Advocating for a balanced energy approach

A recent threat to reliability comes from misguided federal energy policy, which prioritizes intermittent sources of power like solar and wind over dispatchable sources like coal and natural gas.

Iowa's electric cooperatives believe in a diverse power generation strategy to ensure reliability. Our "all-of-the-above" generation portfolios include dispatchable sources of power because we can control the output and ramp up generation when needed to match sudden increases in electric demand.

Learn more about this issue at **www.IAruralpower.org.**

The average Iowa electric co-op member-owner experiences

1 OUTAGE

lasting an average of **138 MINUTES** PER YEAR

A legacy of service

From their inception, Iowa's electric cooperatives have been instrumental in transforming rural life by providing essential electric services. Their commitment to member-owners, focus on affordability, reliability and community collaboration continue to drive their mission, ensuring that the needs of rural Iowans are met with dedication and innovation.

MUNICIPALITIES	INVESTOR-OWNED	ELECTRIC CO-OPS
58 Average meters served per mile of line	**28** Average meters served per mile of line	**4** Average meters served per mile of line
$131,000 Revenue generated per one mile of line	**$85,000** Revenue generated per one mile of line	**$10,800** Revenue generated per one mile of line

WEATHERING A WINTER STORM

When ice and heavy snow bring down limbs and power lines, safety is a priority indoors and out. Make sure you know how to weather the storm. When outside, stay away from downed power lines. Here are a few important safety reminders to keep in mind this winter:

- A power line need not be sparking or arcing to be energized. Equipment near power lines can also be energized and dangerous.
- Lines that appear "dead" can become energized as crews work to restore power or sometimes from improper use of emergency generators. Assume all low and downed lines are energized and dangerous. If you see a downed or sagging line, contact your utility.
- If you are in an auto accident involving a downed power line, your vehicle is usually the safest place (unless it is on fire). If it is safe to do so, stay in your car, call 911, and wait for electric utility personnel to arrive to deenergize the power. If you step out of the vehicle and the ground is energized, you could become the electrical current's path to the ground, and you could be electrocuted. If your vehicle is on fire or you see smoke, make a solid, clean jump from your vehicle and hop away with your feet together as far away as possible. If you run or walk away, you could get electrocuted.
- Motorists should never drive over a downed line, as snagging a line could pull down a pole or other equipment and cause other hazards.
- Be careful approaching intersections where traffic or crossing lights may be out.
- If you plan to use a generator, know how to operate it safely.

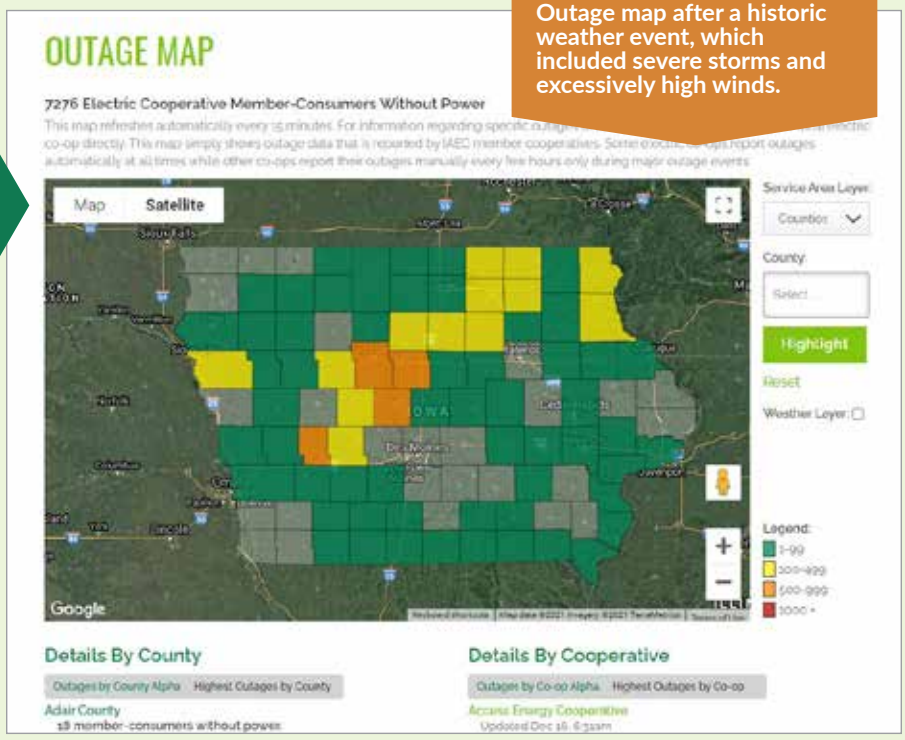
DID YOU KNOW?

STATEWIDE OUTAGE MAP

www.iowarec.org/outages

The Iowa Association of Electric Cooperatives (IAEC) maintains a statewide outage map. The map refreshes automatically every 15 minutes and shows outage data that is reported by IAEC member cooperatives. Most electric co-ops report outages automatically while other co-ops report outages manually every few hours only during major outage events.

For information regarding specific outages or to report your outage, always contact your local electric co-op directly. It's also important that your local co-op is notified if your phone number or other contact information changes.



Outage map after a historic weather event, which included severe storms and excessively high winds.

If you see downed power lines, always stay away from the lines and poles. Always assume the lines are energized and report any damage to your local electric cooperative.

6 WAYS TO UNCOVER SAVINGS WITH A DO-IT-YOURSELF ENERGY AUDIT

BY MIRANDA BOUTELLE

A home energy audit may sound daunting, but it can be as easy as creating a checklist of improvements based on what you see around your home.

Here's what you'll need to find opportunities to save energy and money: a flashlight, dust mask, tape measure and cooking thermometer. As you progress through these six steps of an audit, take notes on your phone or a notepad.

When inspecting your heating and cooling equipment, check the filter and replace it. A dirty furnace filter can cause your system to work harder than necessary, decreasing efficiency and shortening the system's life.

LEDs come in a range of color temperatures. For a warm glow similar to incandescent bulbs, buy bulbs with a color temperature around 2700 Kelvin.

1 Check the heating and cooling equipment. Determine the age and efficiency of the equipment by looking up the model number on the nameplate. The average lifespan of HVAC equipment is 10 to 30 years, depending on the type of equipment and how well it's maintained. If your equipment is older, it may be time to budget for an upgrade. Check the filter and replace it if needed.

2 Check the envelope of your home, which separates the heated or cooled areas from the exterior, for drafts and air leakage. Feel around windows and trim for any drafts. Pay special attention to spots where different building materials come together. Check under sinks for gaps around pipes. Seal with weatherstripping, caulk or expanding foam as needed.

3 Replace incandescent or compact fluorescent bulbs with LEDs. LEDs use significantly less energy and last longer than traditional incandescent bulbs.

4 Inspect faucets for leaks and make sure aerators and showerheads are high-efficiency models in good condition. The gallons-per-minute (GPM) ratings should be etched onto them. To reduce wasted energy from using more hot water than needed, aerators should be 0.5 to 1.5 GPM, and showerheads should be no more than 2 GPM.

5 Look in the attic, while wearing a dust mask, to make sure it's insulated. You may be able to see enough from the access area using a cellphone with the flash on to take pictures. Use the tape measure to check the depth of the insulation. In Iowa, you should have insulation rated at R49-R60 in your attic.

Insulation can become compacted over time. It should be evenly distributed throughout the attic. Loose fill or blown-in insulation should be fluffy and evenly dispersed. Rolled batt insulation should fit tightly together without gaps.

Also, exterior walls should be insulated. If your home is older than the 1960s, the walls are probably not insulated. Homes from the 1960s or 1970s likely need more insulation. Sometimes you can see wall insulation by removing an outlet cover or switch plate and using a flashlight to look for insulation inside the wall cavity. Turn off the power at the electrical panel to avoid the risk of electric shock. Wall insulation can be blown in from the inside or the outside of the home. This is a job for a professional.

Unfinished basements should have insulation on the rim joists, at minimum. This is the area between the top of the foundation and the underside of the home's first-story floor. Use closed-cell spray foam or a combination of rigid foam and spray foam to insulate rim joists. Crawl spaces should have insulation on the underside of the floor between the floor joists. Insulation should be properly supported in contact with the floor with no air gaps. Water pipes and ductwork should also be insulated.

6 Check the temperature of your water by running it for three minutes at the faucet closest to your water heater. Then fill a cup and measure with a cooking thermometer. Hot water should be between 120 and 140 degrees F. You can reduce the temperature on your water heater to reduce energy waste and prevent scalding.

Once your home energy audit is finished, review your findings and start prioritizing home energy efficiency projects. For step-by-step instructions, visit www.energy.gov/save.

Miranda Boutelle writes on energy efficiency topics for the National Rural Electric Cooperative Association.

UTILITY-SCALE VS. RESIDENTIAL BATTERY STORAGE

BY JENNAH DENNEY

In an ever-changing energy landscape, electric cooperatives are on the cutting edge of delivering reliable, resilient power to the local communities they serve. Co-ops utilize a variety of generation and grid technologies to provide power, including battery energy storage – but not all battery storage systems are the same, and understanding the key differences between each is important. It's also important to recognize that the technology and cost-effectiveness of battery storage options are still being developed.

Often paired with residential solar panels, residential battery storage systems allow homeowners to store excess energy generated during the day for use later at night or during power outages. *Photo Source: LG*

Utility-scale battery systems are designed for large-scale energy storage to support the electric grid, requiring high initial investments but offering significant long-term savings and benefits. *Photo Source: Trico*

Utility-scale battery systems are designed for large-scale energy storage to support the electric grid, requiring high initial investments but offering significant long-term savings and benefits. In contrast, residential battery systems cater to individual homes, providing more energy independence and savings while still representing a significant investment.

Utility-scale battery storage

Utility-scale storage systems are large installations designed to store vast amounts of electricity. Typically connected to the grid, these systems can store power generated from both baseload and renewable energy sources, with capacities ranging from several megawatt-hours (MWh) to gigawatt-hours (GWh).

While most battery storage system projects are developed with a primary application in mind, they can also be optimized for multiple applications, which adds significant additional value.

Utility-scale storage systems could play a crucial role in grid stabilization by absorbing excess energy during periods of low electricity demand and releasing it during peak demand, which is particularly beneficial in rural areas where demand can fluctuate significantly.

Electric cooperatives can also deploy utility-scale storage systems at electric substations to enhance grid resilience and ensure a steady supply of electricity as needed. In the event of a power outage, utility-scale storage systems can provide backup power to critical infrastructure, such as hospitals and emergency services.

Residential battery storage

Residential battery storage systems are compact installations designed for individual homes, typically ranging from a few kilowatt-hours (kWh) to tens of kWh in capacity. Often paired with residential solar panels, these smaller systems allow homeowners to store excess energy generated during the day for use later at night or during power outages, providing a level of energy independence.

By utilizing stored energy, homeowners can reduce their energy bills and ensure a steady supply of power, even during grid disruptions and outages, enhancing the resilience of rural households. However, the initial cost of purchasing and installing a residential storage system can be expensive, which may deter some homeowners.

Electric co-ops are increasingly recognizing the benefits of residential battery storage. These systems not only support grid stability and resilience but also help reduce costs for co-ops and their members. Some co-ops offer energy storage programs and rates, which means homeowners can contribute to a more efficient and reliable energy system. This benefits the entire community.

As electric co-ops navigate the complexities of modern energy supply and battery storage continues to evolve, the strategic deployment of both utility-scale and residential battery energy storage systems can potentially play a transformative role.

By understanding the unique advantages and challenges of each type of system, co-ops and their members can make informed decisions that enhance grid reliability, reduce costs and improve resilience for their communities.

Jennah Denney writes on consumer and cooperative affairs for the National Rural Electric Cooperative Association.

FINDING BEAUTY IN THE BROKEN

BY DARCY DOUGHERTY MAULSBY

Time is a funny thing, isn't it? We spend time. We kill time. We lose track of time. We invest time. And yet time keeps passing – something we're keenly aware of at the start of each new year.

Now's the time when many people resolve to start fresh, leaving the past behind. Just think of all the New Year's resolutions that abound. I'm going to eat healthier! I'm going to exercise more! I'm going to spend less time on social media! I'm going to save more money! (Do any of these sound familiar?)

Yet how many of these big goals become big accomplishments? It depends on who you ask. According to the Baylor College of Medicine, 88% of people who set New Year's resolutions fail them within the first two weeks. (Been there, done that.) Psychology articles in magazines like *TIME* and *Forbes* state that only 8% of people stick with their resolutions the entire year.

Maybe we need a different perspective to make the most of the year ahead. Perhaps we all could use fewer resolutions and a little more kintsugi. What's that, you ask? This remarkable Japanese art form finds beauty in the broken. While it dates back hundreds of years, it's a compelling metaphor for modern life.

Kintsugi is built on the idea that in embracing flaws and imperfections, you can create an even stronger, more exquisite piece of art. In kintsugi, the artist fixes broken pottery with gold. Instead of repairing the item like new, this technique highlights the "scars" as a part of the design.

From broken bowls to books

This concept captured my attention during a "Come to the Quiet" retreat at the Woodlawn Christian Church in Lake City in March 2024. Lorene Knobbe, a Lake City native who lives in Davenport, displayed a gorgeous kintsugi bowl to help us visualize one of the lessons.

Lorene, a retired elementary school teacher, now provides spiritual direction through her ties to the Benet House Retreat Center at St. Mary Monastery in Rock Island, Illinois. She serves as a facilitator for church retreats and similar events.

As she held her kintsugi bowl on that cold winter afternoon in Lake City, she encouraged everyone to think of your life as a book with chapters and stories. Some of your chapters are filled with fun, exciting stories. Other chapters are dark and painful. None of the chapters can ever be erased, though. All of them will always be part of you – just like the cracks in the kintsugi bowl.

That isn't necessarily comforting, especially if you're struggling to reach New Year's resolutions, or you're overwhelmed by a trauma-shattered life.

The good news? You don't need to try to hide the cracks as you put the pieces back together. Instead, highlight those repaired seams, which add strength, beauty and immeasurable value.

Reframing life's experiences

Kintsugi isn't just for broken pottery or shattered ceramics. Kintsugi can be found in people whose bodies are injured or failing. While these folks can't do what they once did, their spirit can become more beautiful, helping the rest of us see the divine more clearly.

Kintsugi is also reflected in people who have learned to "rewire" their brain to focus on the positive instead of the negative. These amazing souls routinely express gratitude, knowing that there's always something to be thankful for.

The chapters of these authentic life stories are filled with resilience and hope. They can also inspire the most practical resolution for the year ahead – embrace the principles of kintsugi. What a powerful way to reframe life's experiences and write new chapters in our story, all by finding beauty in the broken.

Darcy Dougherty Maulsby lives near her family's Century Farm northwest of Lake City. Visit her at www.darcymaulsby.com.

A kintsugi bowl that was shared during the "Come to the Quiet" retreat in Lake City.

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