living with energy IN IOWA

Guthrie County REC
A Touchstone Energy® Cooperative

JULY 2021

Guthrie County REC provides power supply update ▶ See Pages 4-5

Visit our website at www.guthrie-rec.coop

5 ways to ensure safe grilling this summer

Iowa's electric co-ops embrace diverse generation

Sweet corn recipes

Iowa Association of Electric Cooperatives
A Touchstone Energy® Cooperative

Volume 74 • Issue 7

Living with Energy in Iowa magazine (ISSN: 1935-7176) is published monthly by the Iowa Association of Electric Cooperatives, a not-for-profit organization representing Iowa's member-owned local electric cooperatives. Association address: 8525 Douglas Ave., Suite 48, Des Moines, IA 50322-2992. The phrase **Living with Energy in Iowa** is a mark registered within the state of Iowa to the Iowa Association of Electric Cooperatives. The magazine does not accept advertising.

Editorial Office: 8525 Douglas Ave., Suite 48, Des Moines, IA 50322-2992. Telephone: 515-276-5350. E-mail address: editor@livingwithenergyiniowa.com. *Living with Energy in Iowa* magazine does not assume responsibility for unsolicited items.

Website: www.livingwithenergyiniowa.com

Postmaster: Send address changes to *Living with Energy in Iowa* magazine, 8525 Douglas Ave., Suite 48, Des Moines, IA 50322-2992. Periodicals Postage Paid at Des Moines, Iowa, and at additional mailing offices.

Change of Address: Every local electric cooperative maintains an independent mailing list of its members, so please send your change of address directly to your local electric cooperative's office. *Living with Energy in Iowa* magazine cannot make an address change for you.

living with energy IN IOWA

Touchstone Energy® Cooperatives of Iowa
www.touchstoneenergy.coop

CONTENTS JULY 2021

Features

Favorites

Electric cooperatives disappointed with legislative session

BY KEVIN CONDON

As lawmakers and Gov. Kim Reynolds tout the 2021 Iowa legislative session's legitimate advances in public policy that benefit rural Iowans, one area where progress will go unclaimed is in the interests of Iowa's electric cooperatives.

Although the session went three weeks into overtime, absent from debate was the opportunity to have worthy and robust discussions on two key priorities for Iowa's electric co-ops and their member-consumers. Establishing or changing laws isn't easy and can take time. With that said, we're disappointed that policies pertaining to vegetation management and the sales tax code inequities co-ops face are not new issues being raised by rural electric cooperatives (RECs).

Lack of vegetation management standards

In the January edition of this column, I detailed the issue surrounding vegetation management distances and how the August 2020 derecho exposed part of our concerns. We hoped that lawmakers would have recent and ample evidence of the need to set a statewide safety and reliability standard for distances that electric co-ops could perform tree trimming and other management practices.

Unfortunately, despite our best efforts, the same opposition groups that prevented the legislation from becoming law a few years ago were able to keep this renewed effort from reaching the House and Senate for a full debate. Sadly, misinformation and scare tactics about the proposal won the day, and the state will continue to lack a standard that provides greater safety for co-op members and linemen while increasing reliability of electric service to rural Iowa.

Sales tax code inequities continue

Further, RECs were disappointed when provisions to resolve a sales tax inequity impacting electric co-ops included in a proposal put forward by the House were stripped out of the final legislation by Senate negotiators. In what appears to be an oversight from legislation passed in 2018, not-for-profit utilities like RECs have been subject to a tax on digital goods and services that for-profit, investor-owned utilities (IOUs) are exempt from. It is estimated that rural electric member-consumers are paying $250,000 more in sales taxes through their electric bills than ratepayers served by IOUs.

We believe resolving the inequity was certainly worthy of inclusion in a tax proposal that included tax provisions for Iowa's non-profit food banks and casinos, both of which will have General Fund impacts, just as the REC proposal would. We congratulate both of those entities for securing a place in the legislation. We also caution those who might claim the potential for a "slippery slope" in resolving this sales tax inequity issue.

To be clear, the electric co-ops appreciate the role of the Legislature and are grateful to those lawmakers who are willing to put their name on a ballot and serve. In our estimation, they continue to deserve our respect; but when it comes to our concerns this session, RECs are not taking any victory laps.

We look forward to developing our policy goals for the 2022 Iowa legislative session and will enjoy planning for our traditional and effective in-person events with lawmakers. We hope they are prepared to answer friendly but direct questions about the lack of progress on these issues. We hope our electric cooperative advocacy on behalf of the 650,000 Iowans we serve throughout all 99 counties will result in more favorable outcomes next year.

Kevin Condon is the director of government relations for the Iowa Association of Electric Cooperatives.

EDITOR'S CHOICE CONTEST

Win a $100 home improvement gift card!

Home improvement projects can boost the curb appeal, resale value and energy efficiency of your home. We'll award one lucky winner with a $100 gift card from a local business or retailer of your choice for a home improvement project!

Visit our website and win!

Enter this month's contest by visiting www.livingwithenergyiniowa.com no later than July 31, 2021. 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 Arbor Day tree packages from the May issue were:

- Gregg Hoins, Allamakee-Clayton Electric Cooperative
- Lavern Hoeper, Butler County REC
- Rose Lennie, Chariton Valley Electric Cooperative
- Gary L Payton, Franklin REC
- Timothy Colburn, Grundy County REC
- Mark Schwartz, North West REC
- Kennon Goedken, Osceola Electric Cooperative
- Emily Mikesh, Prairie Energy Cooperative
- Kyle Leonard, Southwest Iowa REC
- Jeff Gropper, T.I.P. REC

LOCAL PERSPECTIVE

2020 Central Iowa Power Cooperative power

BY STEVE BIRELINE

The year 2020 will long be remembered as the year of the coronavirus – a pandemic that became the center of our world. We watched its effects unfold country by country, then coast to coast in the U.S. We wondered when and how it would affect our members, employees, families and friends.

Despite the pandemic, Central Iowa Power Cooperative (CIPCO) had an ambitious year, including the continued repowering of the Summit Lake plant, CIPCO's largest construction project in the history of the cooperative. Wapello Solar, LLC was under construction by Clēnera with an anticipated early 2021 completion date. With the planned closure of the Duane Arnold Energy Center (DAEC), CIPCO worked to identify the right, cost-effective generation resources through power purchase agreements and market buys to fill anticipated gaps in the resource plan.

The massive derecho that swept across the state in August with hurricane-force winds not only tested our systems but also demonstrated the power of cooperation. CIPCO received overwhelming support from Dairyland Power Cooperative, Northwest Iowa Power Cooperative, Northeast Missouri Electric Power Cooperative and Corn Belt Power Cooperative with exhaustive restoration activities for critical transmission lines. Unfortunately, the derecho brought an additional casualty: the early closure of DAEC due to catastrophic storm damage.

Despite unexpected challenges, such as derecho costs topping $5 million and lower energy sales, CIPCO's financial results reflect another year of stability and competitive rates. The year represents the fifth consecutive year of declining rates and is the lowest rate in more than 10 years. And, we successfully executed the long-term strategy of re-investing in the system to maintain and improve reliability. Capital expenditures for the year were more than $93 million, one of the largest capital additions in CIPCO's history. This included significant work on Summit Lake.

Guthrie County REC and CIPCO strive to provide safe, affordable and reliable power to our member-consumers. Despite the attention given to high-profile issues and events in 2020, other projects were crucial to the successful operation of the CIPCO system. A number of substation projects were completed, and CIPCO finalized work on more than 32 miles of line. CIPCO's commitment to reliability led to a system-wide outage rate of 0.34 hours per consumer without the derecho and 23.19 with the derecho included. Without the derecho, this would be the ninth consecutive year in which CIPCO's average outage total was below the target of 1.00 hours per consumer. In 2020, Guthrie County REC's outage rate was 0.28 per consumer without the derecho; and 1.11 including the derecho.

Returning patronage capital is a fundamental component of

Guthrie County REC
A Touchstone Energy® Cooperative

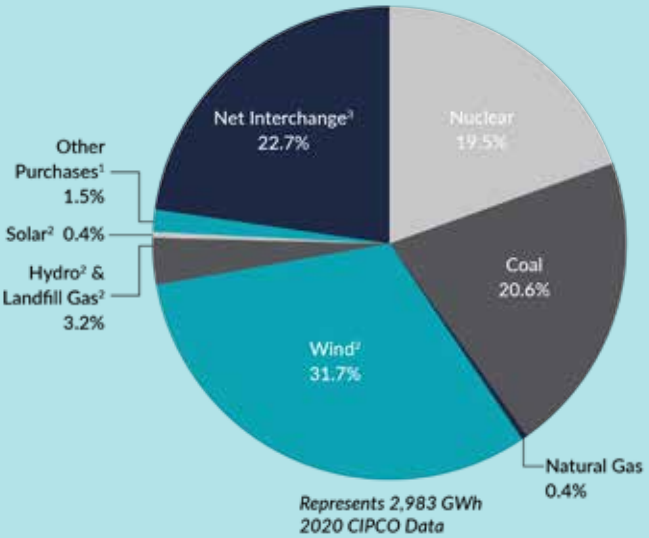
Office
1406 State Street • P.O. Box 7
Guthrie Center, IA 50115-0007

Office Hours
Monday through Friday, 8 a.m. - 4:30 p.m.

Telephone Number
641-747-2206 or 888-747-2206
Calls answered 24 hours a day, 7 days a week

Website
www.guthrie-rec.coop

A balanced portfolio of energy sources



1 CIPCO's purchase power agreement for Wapello Solar LLC locks in stable, long-term pricing and avoids the risks associated with rising fuel costs. Renewable energy credits (RECs) are not included in this agreement.

2 CIPCO invests in the development of renewable energy projects in several ways. We operate six small-scale solar arrays near communities we serve and retain the renewable energy credits associated with each. We also contract with energy producers for the electricity output from wind, hydro, and methane gas from a landfill (converted into electricity). CIPCO cannot claim these resources as renewable within

supply report

the cooperative business model. CIPCO remains dedicated to sound financial practices that allow margins to be returned to its members in the form of patronage. During 2020, CIPCO returned patronage totaling $599,442 to Guthrie County REC.

I'm proud of the actions taken in 2020 to sustain and grow our connections within the rural electric industry during a tumultuous year. Our actions have strengthened CIPCO's mission to provide member-owners with wholesale power and services in a safe, reliable and cost-effective manner. Thank you for the opportunity to serve as your representative on both the local board of directors and the CIPCO board of directors. I am proud to say, as a result of decisions made and actions taken in 2020, Guthrie County REC's member-owners, as well as the entire CIPCO system, are well-served now and into the future.

Steve Bireline is Guthrie County REC's representative on the CIPCO board of directors. CIPCO generates and transmits power to Guthrie County REC.

our supply portfolio as we have either sold to third parties or do not receive the renewable attributes associated with the electricity produced from these renewable power sources. By selling these attributes (RECs), we not only support other organizations in meeting their renewable energy goals, but we also generate revenue to help us lower our wholesale power rate to our 12 member-owner distribution cooperatives and 15 municipalities.

3 A percentage of market purchases exist within the portfolio to meet additional supply needs not covered by existing contracts or CIPCO-produced generation. Weather volatility and unplanned operational events at power plants may also impact market purchases.

Note: Interchange reflects the difference between the total energy required to serve CIPCO member-owners and the amount provided by secured resources. The percentage was larger in 2020 due to the closure of Duane Arnold Energy Center in August while new resources were still under construction or being contracted.

When danger lurks – backyard pool safety and electric shock

The rise in popularity of backyard above-ground pools can mean a summer of refreshing, cool fun for children and adults alike. And just like anything else around the home, electricity in the vicinity of a water source – like a backyard pool – should be considered dangerous and taken seriously.

Getting zapped or feeling a tingling sensation while swimming in a pool is not often looked at for what it is: a warning. A swimmer may detect a stray electrical charge as an odd tightening of the muscles or even a strange tingling and not realize or understand the threat.

Electric Shock Drowning (ESD) occurs when a typically low level of AC current "escapes" and is transported through the body with sufficient enough force to induce muscular paralysis, rendering the victim unable to help himself/herself, while immersed in fresh water, eventually resulting in drowning. The Centers for Disease Control and Prevention (CDC) has no statistics specifically on electric-shock drownings, but it does track unintentional drownings and estimates about 10 deaths a day are attributed to it. From 2005-2014, there were roughly 3,536 unintentional drownings annually that were not related to boating. Overall, about 1 in 5 victims of drowning are children 14 and younger.

How to avoid ESD with a backyard pool

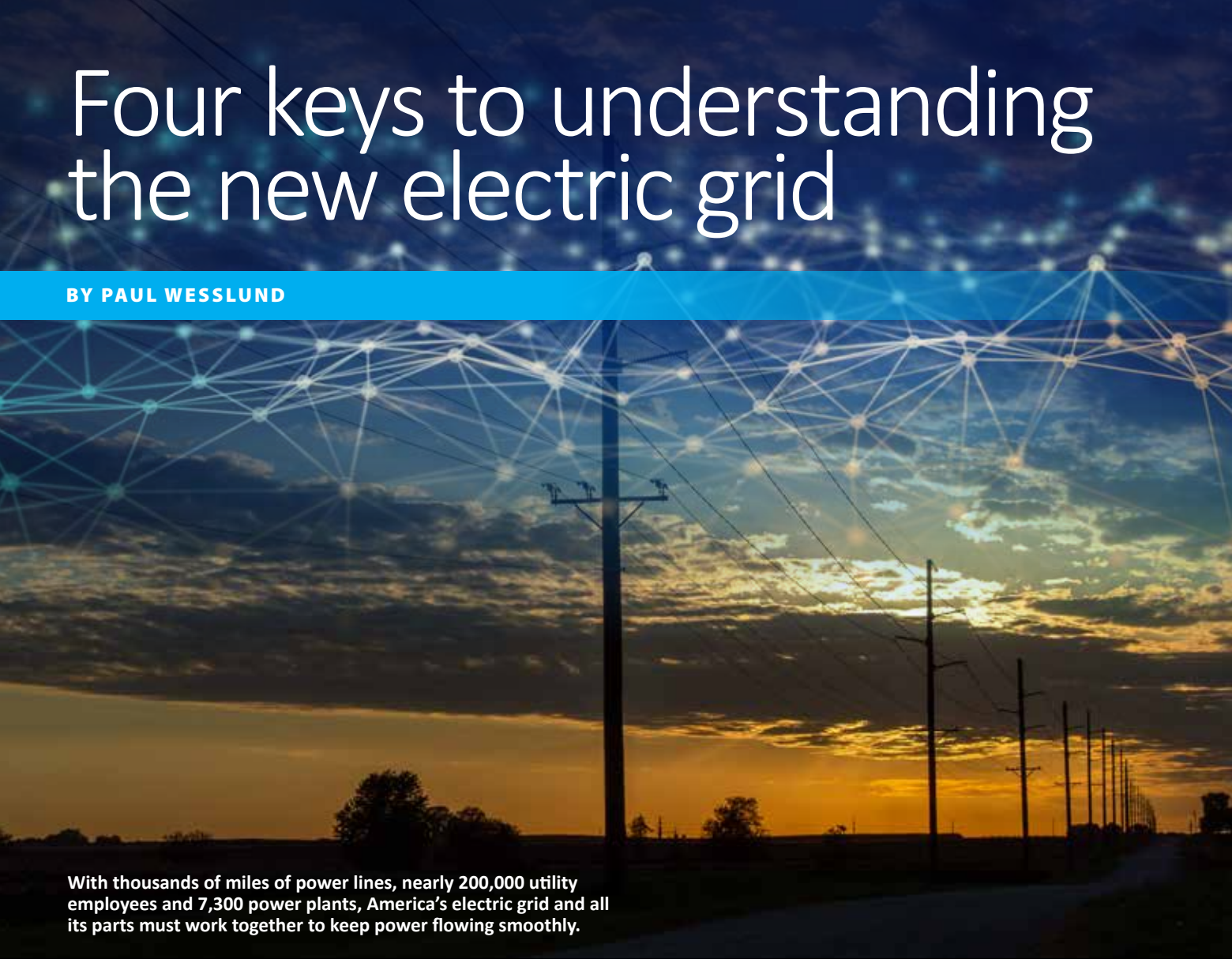
- Never allow young children to swim without supervision, and teach all children who use the pool about ESD;
- In your home's breaker box, locate and label all power switches in the vicinity of the pool;
- Make sure pools are placed at least 25 feet from power lines;
- DO NOT string party lights over the pool;
- Have a qualified electrician inspect your pool area annually; and

- Install GFCIs, which can prevent electrocution, on all receptacles within 20 feet of water's edge.

If you think someone might be experiencing ESD, do not enter the water. Turn off any sources of power to the area and call 9-1-1. Use an insulated, non-metal device, such as a fiberglass rescue crook to attempt to remove the victim from the water.

Four keys to understanding the new electric grid

BY PAUL WESSLUND



With thousands of miles of power lines, nearly 200,000 utility employees and 7,300 power plants, America's electric grid and all its parts must work together to keep power flowing smoothly.

America's electric grid is often called the most complex machine in the world. That's not a stretch when you think about what it does: it runs your refrigerator and charges your phone, all from a ray of sunshine, a pile of coal, falling water or a prairie breeze.

In between those starting and ending points are 160,000 miles of high-voltage transmission lines, millions of miles of low-voltage power lines, 7,300 power plants, nearly 200,000 electric utility employees, thousands of electrical substations and transformers that adjust voltage for the cross-country trip along transmission lines, then back down before it enters your house – and all these parts must work together to keep power flowing safely. In addition, this complex network is adapting to weather patterns, increasing cybersecurity threats, consumer expectations and additional decentralized power sources like rooftop solar panels.

Those are big changes for such a vast and intricate system. "But the silver lining is that technology is available to help address the changes," says Venkat Banunarayanan, vice president of Integrated Grid Business & Technology Strategies with the National Rural Electric Cooperative Association (NRECA).

For all its complexity, the electric grid can be described in three major parts: a power source (like a natural gas plant or wind turbine); the wires and equipment that deliver power; and a home or business that receives the power.

To understand the modern grid more deeply, here are four ways it's adapting to the world's new realities.

1 Resilience in the face of more severe weather

Last year was the busiest recorded hurricane season along the Atlantic Coast. Wildfires are increasingly intense, especially in the West, and ice storms and cold weather surprised the South this winter.

These changes call for new ways to make sure the lights stay on.

Electric utilities are increasing grid resilience by integrating weather forecasting with other smart technologies that monitor electric current and analyze how to respond. NRECA's Banunarayanan calls this "predictive technology."

By knowing how weather will affect power equipment, he says, "an electric co-op can preposition work crews so they can quickly

respond to the outage, and they can redirect the flow of electricity to take an alternate route to minimize the duration of a power outage."

2 Strengthening cybersafety

Cybersecurity measures have become standard operating procedure for utilities to protect against cyberattacks. Electric co-ops and other utilities work closely with the U.S. Department of Homeland Security to monitor and strengthen defenses.

"Utilities are constantly improving to make sure they are more cyber-resilient," says Banunarayanan.

Electric co-ops also urge consumer-members at home to protect themselves from hackers. When devices like printers and smart TVs connect to the internet, that actually makes them part of the electric grid.

3 More power to consumers

Many utilities have voluntary programs that manage electric loads by turning off water heaters or air conditioners for short periods of time. Those programs add another layer of coordination. Additionally, homeowners are installing solar panels on their roofs or in their backyards, with some even selling excess electricity back to the utility – over the electric grid.

4 Utilities keeping up with the change

Large fields of wind turbine farms and solar power arrays require building transmission lines to new locations. They also involve planning for a kind of power that might only operate when the sun shines or the wind blows. These changes are necessary and helpful, but they are also expensive.

Annual spending on the U.S. transmission system has increased from $9 billion a year in 2002, to $40 billion in 2019.

But that spending is paying off.

In 2017, Americans experienced about eight hours of power interruptions, according to the Energy Information Administration. By 2019, that was down to five hours.

"Power outages have been going down because there's investment being made to increase the robustness of the grid," says Banunarayanan. "I expect the reliability of the grid to increase."

Paul Wesslund writes on consumer and cooperative affairs for the National Rural Electric Cooperative Association, the national trade association representing more than 900 local electric cooperatives. From growing suburbs to remote farming communities, electric co-ops serve as engines of economic development for 42 million Americans across 56% of the nation's landscape.

Last year was the busiest recorded hurricane season along the Atlantic Coast. Wildfires are increasingly intense, especially in the West, and ice storms and cold weather surprised the South this winter. These changing weather patterns call for new ways to make sure the lights stay on.

The electric grid is constantly adapting to changing weather patterns, increasing cybersecurity threats, consumer expectations and additional decentralized power sources like rooftop solar panels.

Corn Kernels Source: Iowa Corn Growers Association, Iowa State University Extension and Outreach

Corn and Black Bean Salsa

- 2 cups sweet corn, cooked
- 1 can black beans, rinsed and drained
- 1 scallion, sliced
- ½ cup tomatoes, diced
- ½ red bell pepper, diced
- 1 lime, zested and juiced
- 2 tablespoons canola oil
- ¼ teaspoon seasoned salt
- ¼ teaspoon black pepper
- ¼ teaspoon chili powder
- sprinkle cayenne
- sprinkle garlic powder

Mix all ingredients together, adjust seasonings to taste and serve. This recipe is great as a salsa with tortilla chips or on tacos or burritos. It is also a great stand-alone side salad or served on greens.

Chris Daniels • Casey
Guthrie County Rural Electric Cooperative Association

CORN KERNELS

KERNELS AND ROWS

The number of kernels per ear can vary from about 500 to 1,200. A typical ear of corn has 800 kernels in 16 rows. There is one silk for every kernel that grows in an ear of corn.

Curried Creamy Corn

- 3 teaspoons butter
- 2 cups fresh sweet corn
- 2 tablespoons green peppers, chopped
- 2 tablespoons onions, chopped
- ½ teaspoon curry powder
- ¼ teaspoon salt
- dash of pepper
- 3 ounces cream cheese
- ⅓ cup milk

In a saucepan, melt butter then add corn, peppers, onions, curry powder, salt and pepper. Cover and cook over medium heat for 8-10 minutes or until corn is tender. Add cream cheese and milk, stir over low heat until combined. *Serves 4*

Gina Lloyd • Linden
Guthrie County Rural Electric Cooperative Association

Cheesy Creamed Corn

- 2 quarts frozen sweet corn
- 4 ounces cream cheese, cubed
- 2 tablespoons butter or margarine
- 2 tablespoons milk
- 1 tablespoon sugar
- 4 slices American cheese
- 1½ teaspoons salt

Cook and drain corn. Stir in remaining ingredients. Cook and stir over medium-low heat until butter and cheese are melted. *Serves 8*

Emily Rassi • Rock Rapids
Lyon Rural Electric Cooperative

Garden Fresh Sweet Corn Salsa

- 1 cob sweet corn
- ¼ cup cilantro, diced
- 3 garlic cloves, diced
- 1 jalapeno, diced
- juice of ½ lime
- ¾ cup yellow or red onion, diced
- 2 cups fresh tomatoes, chopped
- ¼ teaspoon salt
- tortilla chips

Cut cooked corn off the cob. Toss all ingredients except for chips in a bowl. Serve fresh with tortilla chips. Store refrigerated up to 3 days. *Yield: 4 cups*

Susan Harrison • Le Mars
North West Rural Electric Cooperative

Sweet Corn Dip

- **4 cups corn cut fresh off the cob or frozen**
- **1 14.5-ounce can diced tomatoes, drained**
- **½ cup sour cream**
- **½ cup mayonnaise**
- **tortilla chips**

Cook, drain and cool corn. Mix corn with drained tomatoes, sour cream and mayonnaise then chill. Serve with tortilla chips. For a spicier dip, use a can of diced tomatoes with green chilies. *Serves 12*

Donna Johnson • Kanawha
Prairie Energy Cooperative

BBQ Chicken & Corn Pizza

- **1 tablespoon oil**
- **1 onion, chopped**
- **2 garlic cloves**
- **1½ cups chicken, cooked and chopped**
- **¼ teaspoon salt**
- **¼ teaspoon pepper**
- **1½ cups barbeque sauce, divided**
- **1 15-inch pizza crust, unbaked**
- **6 ounces cheddar cheese, shredded**
- **1 cup fresh corn**
- **4 ounces gouda cheese, shredded**
- **¼ cup cilantro**

Sauté onion in oil for 5 minutes. Add garlic and cook for 1 more minute. Mix in the chicken, salt, pepper and ½ cup barbeque sauce. Turn off the heat. Spread 1 cup barbeque sauce on the pizza crust, then top with cheddar cheese, chicken mixture, corn and gouda cheese. Bake at 375 degrees F for 30-35 minutes. Remove and top with cilantro. Cool 10 minutes before slicing. *Serves 6*

Lauren Zollinger • Rock Rapids
Lyon Rural Electric Cooperative

Fried Sweet Corn

- **8 ears sweet corn**
- **2 tablespoons butter**
- **3 tablespoons red pepper, diced**
- **⅓ cup heavy cream**
- **1 tablespoon fresh parsley, chopped**
- **salt**

Husk corn and remove silks. With a sharp knife, cut the kernels from the cob. Add butter to a large sauté pan then add corn and pepper, stirring for several minutes. Add cream and cook for 3 minutes over high heat. Stir in parsley and season with salt.

Barb Walter • Alton
North West Rural Electric Cooperative

Easy Corn Fritters

- **3 cups sweet corn kernels, 4 ears of corn**
- **½ cup all-purpose flour**
- **2 tablespoons cilantro, chopped**
- **1 teaspoon coarse kosher salt**
- **1 teaspoon black pepper**
- **2 large eggs, beaten**
- **vegetable or canola oil for frying**

In a medium bowl, mix corn, flour, cilantro, salt and pepper until well combined. Add eggs and mix well. Heat a large skillet over medium-high heat. Add oil to cover the bottom of the pan and heat until hot. Use about ¼ cup of corn mixture for each fritter, drop about 6 fritters into the hot skillet and flatten out a bit. Cook fritters until golden brown, about 2 minutes. Using a spatula, flip and cook another 2 minutes or until golden brown. Repeat with the remaining mixture and serve immediately. Fritters can be kept warm in a 200 degrees F oven if not served immediately. *Yield: 12 large fritters*

Tamara Kramer • Le Mars
North West Rural Electric Cooperative

Wanted: Soup and Stew Recipes
The Reward: $25 for every one we publish!

Nothing comforts the heart and warms the soul quite like a hearty bowl of soup! With crisp and cool fall days in mind, we want your favorite soup or stew recipe. If we run your recipe in the magazine, we'll send a $25 credit for your electric co-op to apply to your power bill. Recipes submitted also may be archived on our website at www.livingwithenergyiniowa.com.

The deadline is July 31, 2021. Please include your name, address, telephone number, co-op name and the recipe category on all submissions. **Also provide the number of servings per recipe.**

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

MAIL:
Recipes
Living with Energy in Iowa magazine
8525 Douglas Ave., Suite 48
Urbandale, Iowa 50322

SWEET VS. FIELD CORN
Only 1% of corn planted Iowa is sweet corn; the other 99% is field corn.

CORN KERNELS

STORING CORN
Refrigerate sweet corn in tightly wrapped plastic for 1-2 days if the husk is removed. If the husk is still on, store uncovered in a refrigerator for 1-2 days.

CORN KERNELS

BRIGHT GREEN MEANS RIPE
Sweet corn is ripe when husks are bright green and moist. After peeling the husk back, the kernels should be evenly spaced and plump.

CORN KERNELS

MORE THAN DELICIOUS
Sweet corn is undoubtedly an Iowa favorite, but it's more than just delicious. It's also a good source of vitamin C, lutein and fiber.

CORN KERNELS

Technology and cost drive a diverse energy portfolio

BY ANN THELEN

Electric cooperatives serving Iowans showcase new projects

Corn Belt Power Cooperative brought Wisdom Station's new 150-killowatt solar facility online in 2020. The project features two different photovoltaic panel arrangements, a fixed-tilt array and an array of single-axis tracking panels. The 600 total panels now occupy space once used for the plant's coal pile. Wisdom Station converted to an all-natural gas burning facility in 2014.

Editor's Note: This is the first of a two-part series on how electric cooperatives serving Iowa member-consumers are integrating new energy sources into their energy portfolios. Part two will also feature cooperatives serving the northeastern and southeastern parts of the state.

Solar shines as a cost-effective resource

As Central Iowa Power Cooperative (CIPCO) works to close the gap left by the early closure of Duane Arnold Energy Center, it is focused on finding additional power purchase agreements with developers of wind and solar resources to fortify its power supply portfolio. CIPCO is a generation and transmission electric cooperative and, through its 13 members, serves over 300,000 Iowans in 58 Iowa counties.

"Energy from solar and wind resources are, relatively speaking, low-cost alternatives to other means of generation," says Bill Cherrier, CIPCO executive vice president and CEO. "We give great thought to the value these assets bring to the power supply portfolio, analyzing the costs and the potential benefits and drawbacks of every decision.

"The solar option has been outstanding for us and really over the last eight years, it's become much more competitive. Compared to nuclear and coal plants, it is very economical and at times more competitive than those. The issue is you don't always have it when you need it," Cherrier continues. "Therefore, coal and natural gas play a very important part in our portfolio and will for some time to come."

CIPCO's involvement in solar projects has been in the spotlight in recent months.

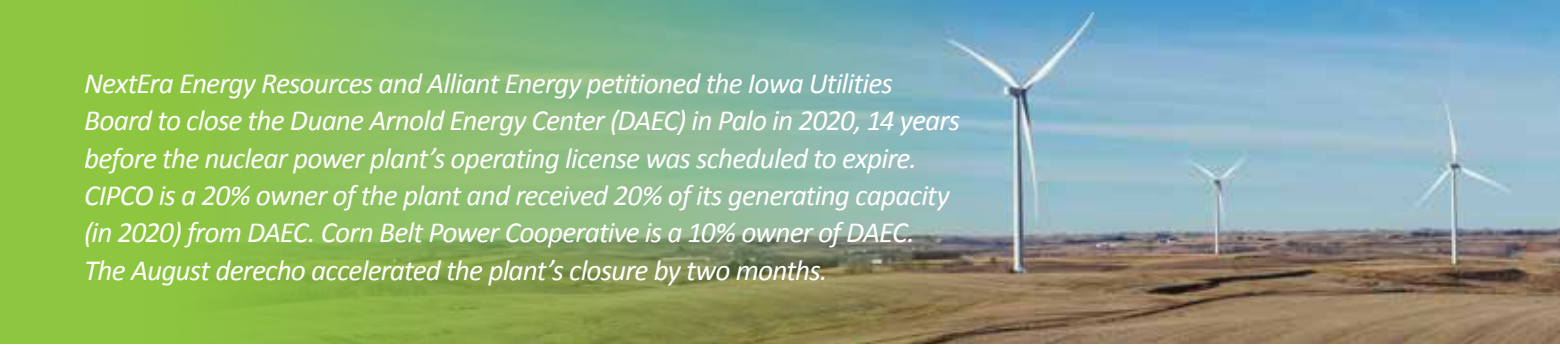
Wapello Solar comes online

Earlier this year, Wapello Solar, LLC came online. CIPCO has a power purchase agreement (PPA) to purchase 100% of the power from the 100-MW_{AC} Wapello Solar for 25 years. Clēnera LLC partnered with Renewable Energy Systems (RES) to construct Wapello Solar in six months, creating approximately 250 jobs at peak construction. Despite beginning construction during the COVID-19 pandemic, Wapello Solar progressed with little to no delays and entered commercial operation in early 2021.

Clēnera acquires, develops, builds and manages utility-scale solar projects and energy storage facilities throughout the U.S.

Located on nearly 800 acres, Wapello Solar features 318,000 bi-facial solar panels on single-axis tracker tables. When siting the projects, it's important to locate and construct at the lowest cost possible, while having necessary access to the transmission system. To check all these boxes, the projects are typically located on land that is rural, and in these instances, landowners are often pleased with the projects because developers work with landowners, and the opportunity creates diversity for their income.

On the heels of the completion of the Wapello Solar in southeast Iowa, CIPCO and Clēnera Renewable Energy announced the execution of a PPA for Coggon Solar, LLC, a 100-MW_{AC} solar project in eastern Iowa.



NextEra Energy Resources and Alliant Energy petitioned the Iowa Utilities Board to close the Duane Arnold Energy Center (DAEC) in Palo in 2020, 14 years before the nuclear power plant's operating license was scheduled to expire. CIPCO is a 20% owner of the plant and received 20% of its generating capacity (in 2020) from DAEC. Corn Belt Power Cooperative is a 10% owner of DAEC. The August derecho accelerated the plant's closure by two months.

Coggon Solar will bring significant economic benefits to the local area. According to Clēnera, the project will contribute several million dollars in property tax revenue to Linn County over the life of the generating facility. Clēnera also estimates that the project will create approximately 350 jobs during peak construction, many of which will be from local labor.

Coggon Solar is anticipated to begin commercial operations in 2022.

"Our electric cooperative members count on reliability more than anything. It's imperative to their lives and livelihood. Our job is to deliver the best balance in a diverse energy portfolio," Cherrier adds.

Solar array occupies the former site of coal pile for power plant

In 2020, Corn Belt Power Cooperative brought Wisdom Station's new 150-kilowatt solar facility online. The project features two different photovoltaic panel arrangements, a fixed-tilt array and an array of single-axis tracking panels. The panels take up space once occupied by the plant's coal pile. Wisdom Station converted to an all-natural gas burning facility in 2014.

Corn Belt Power supplies electricity to nine member cooperatives and one municipal cooperative that serve farms, rural residences, small towns, businesses and industries in 41 counties in northern Iowa. There are 600 total panels at Corn Belt Power's Wisdom Station with 75 kilowatts of generation on each of the fixed-tilt and single-axis tracking arrays.

A fixed-tilt array is an array in which the panels never move and are pointed in one direction at all times. The single-axis tracking panels will move with the sun to maximize energy generation.

"We hope to learn more about the true costs and benefits of the two technologies – fixed-tilt versus single-axis tracking," says Jacob Olberding, vice president, power supply, Corn Belt Power. "We tried to set up as much of an "apples to apples" comparison as we could. The two arrays are located right next to each other. Each array has the same size model, quantity of solar panels and inverters. We are monitoring and documenting the performance and costs associated with the two arrays so that our members can make informed decisions when considering the two technologies."

Iowa Choice Renewables, a company established and run by a group of electric cooperatives in rural Iowa, installed the system. The array interconnects to Iowa Lakes Electric Cooperative's distribution system at Wisdom Station.

Ann Thelen is the editor of *Living with Energy in Iowa.*

Solar panels at Wapello Solar LLC are bi-facial, meaning they have a back layer of transparent glass to give them the ability to utilize the sunlight reflected onto the rear side of the panel as well as onto the traditional front panels.

Photo Credit: RES

The official ribbon cutting for Wapello Solar, LLC, took place in April. From left: Jeremy Teresinski, RES; Tim Jordan, RES; Ken Johnston, FTC Solar; Bill Cherrier, CIPCO; Michael Gallego, Clēnera; Iowa Lt. Gov. Adam Gregg; Sen. Joni Ernst; Rep. Mariannette Miller-Meeks; and Tammi Sevy, Clēnera.

SAFETY MATTERS

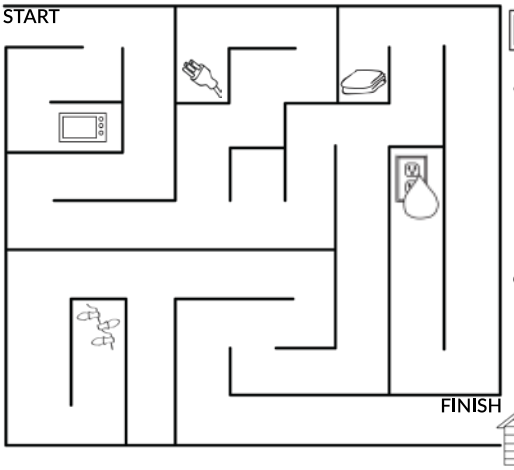
5 ways to ensure safe grilling

It's grilling season and as the country emerges from the pandemic, more and more people are planning gatherings around the barbecue. Here are a few quick tips to remember as you enjoy your cookout:

1. While a traditional gas grill is easy to use, they are also easy to *misuse*. In fact, about 84% of grill fires annually can be attributed to gas grills. Before you start grilling, familiarize yourself with how your grill works by reading the manual or watching any online instruction videos.
2. If you use an electric grill, make sure the electrical cord and plug aren't damaged or worn. Keep liquids away from the vicinity of the grill and plug them into a ground fault interrupter (GFI) outlet.
3. Any grill that operates with an open flame should be given plenty of room around it – at least 10 feet away from structures or large plants/vegetation.
4. Keep the grill grates clean to reduce the chances for rust and to keep them heating evenly.
5. Use a meat thermometer to ensure the food is cooked thoroughly. Use a different meat thermometer for different meats – one for beef, one for chicken, etc. to avoid cross-contamination.

Sparky Needs Your Help to Stay Safe!

Sparky is sniffing around the house to see what's interesting before he takes a nap. Lead him safely to his favorite resting spot by keeping him away from electrical hazards.

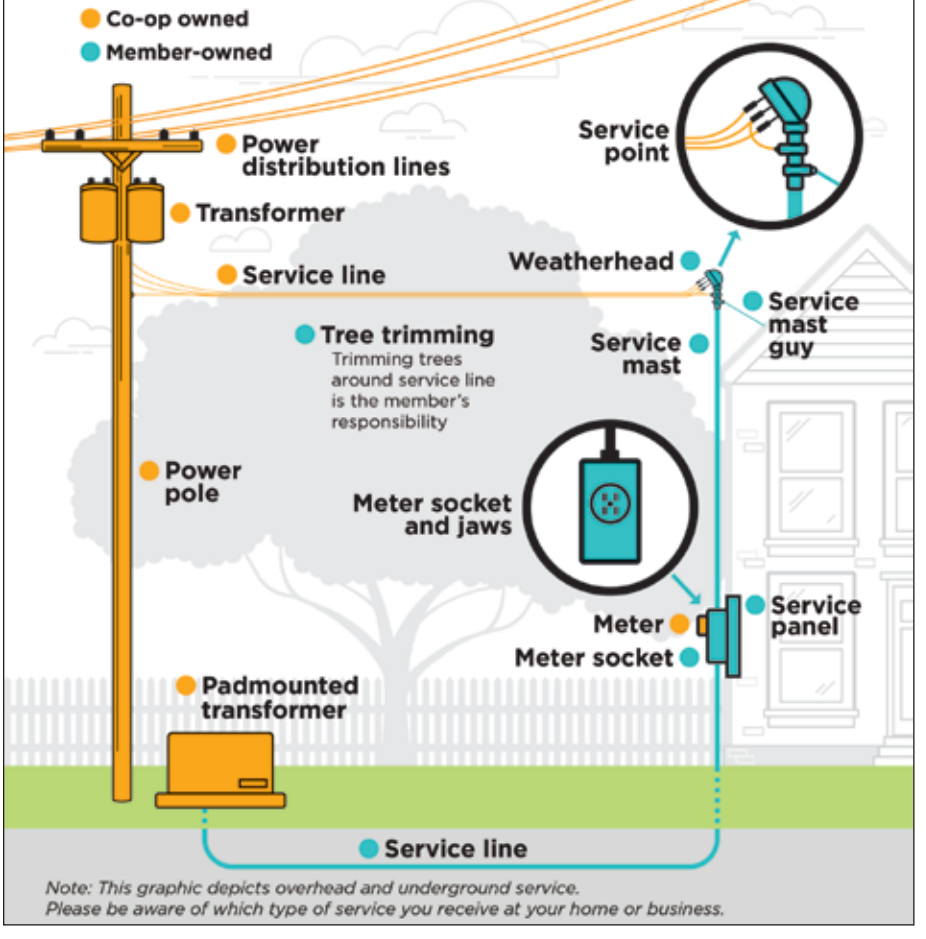


- DON'T let pets find a cozy spot near electronics to stay warm.
- Tell your parents to move electric cords where they cannot be chewed.
- Keep electronics away from sinks, bathtubs and pools so playful pets can't knock them in.
- Never let a pet sleep on an electric blanket.
- Do you have outdoor lights around your deck or yard? Your pets may confuse lights and decorations for new toys!

Who Owns What?

Electric Co-op Owned Equipment vs Member-Owned Equipment

This graphic depicts equipment owned by the co-op (in gold) and the member (in blue). If a storm damages any equipment owned by the co-op, we are responsible for repairs. If a storm damages any member-owned equipment, the member is responsible for repairs. Members should hire a licensed electrician when making any repairs to member-owned equipment.



Note: This graphic depicts overhead and underground service. Please be aware of which type of service you receive at your home or business.

Top-performing electric vehicles

BY MARIA KANEVSKY

As electric vehicles gain popularity nationwide, many car manufacturers are creating new electric models to appeal to consumers. Electric vehicles may have higher sticker prices than traditional gas-powered vehicles, however, their lifetime costs can end up being less due to lower maintenance and fuel costs.

Since electric vehicle technology is constantly improving and prices keep decreasing, consumers are starting to consider electric vehicles for their next purchase. There's an electric model out there for everyone, depending on your priorities and preferences.

2020 Nissan Leaf

Photo Credit: Nissan

Hyundai Ioniq Electric

Photo Credit: Hyundai

Affordability matters

For many, affordability is most important when purchasing a new vehicle. There are several budget-friendly options for those who want an electric vehicle but don't want to break the bank. One of the most popular and affordable electric options is the Nissan Leaf. The 2020 Nissan Leaf has a Manufactured Suggested Retail Price (MSRP) of $31,600, according to *U.S. News & World Report*, and an older Nissan Leaf can be purchased for an even cheaper price. As with conventional vehicles, used (or older) electric models will typically cost less than the newest model.

Another affordable electric vehicle is the 2020 Hyundai Ioniq Electric with an MSRP at about $33,000. The Hyundai Ioniq Electric has one of the highest MPGe ratings compared to other electric vehicles, at 133 MPGe, meaning it uses electric power very efficiently, thus needing fewer charging sessions. Additional benefits of the Hyundai Ioniq Electric include high safety scores and a long warranty.

Luxury on a budget

For those interested in a luxury vehicle while still keeping it relatively budget-friendly, the 2020 Tesla Model 3 could be an option to consider. With a starting MSRP of $35,400, the car provides a sophisticated interior while delivering great efficiency and 220 miles of range.

Mileage range is a priority

Some consumers may instead prioritize a greater mileage range on their electric vehicle to eliminate range anxiety. Several new electric vehicle models have an especially large range. The 2020 Tesla Model S Long Range Plus has the largest range currently available on the market at 402 miles of maximum range. Using a Tesla Supercharger for only 15 minutes can get you about 130 miles of range on the 2020 Tesla Model S, but this car comes with the hefty MSRP price tag of about $80,000. Another option that's a little more affordable but still provides a modestly long driving range is the 2021 Chevrolet Bolt, with a maximum range of 259 miles and an MSRP of roughly $36,600. The Chevrolet Bolt is a strong competitor among many electric vehicles, making it a solid choice as an everyday car.

Before purchasing any new vehicle, be sure to appropriately research which model will work best for you and your family.

Having a plan for charging your new vehicle will also be critical, either at home or at public charging stations. Once you purchase an electric vehicle, let your local electric cooperative know. Many electric co-ops offer one-time rebates or special rate plans for electric vehicle owners that can help you save additional money over time when charging your new car.

Maria Kanevsky writes on consumer and cooperative affairs for the National Rural Electric Cooperative Association.

Stop by and see us at the Iowa State Fair!

The Touchstone Energy Cooperatives of Iowa are pleased to once again sponsor the Bruce Rastetter 4-H Exhibits Building at the Iowa State Fair. As Touchstone Energy members, we're part of a nationwide network of locally owned co-ops that provides resources and leverages partnerships to help member-consumers use energy wisely.

If you're planning a visit to the Iowa State Fair this summer, make sure to stop by and see us in the newly renovated 4-H Exhibits Building on the southwest corner of the fairgrounds. Come into the air-conditioned facility for a break from the heat and look for us near the new concession area.

Electric co-op staff from across Iowa will hand out plastic hard hats for the kids while supplies last. They can also try on some lineworker safety gear and take fun photos in our co-op safety selfie station!

Electric co-op members who take a quick survey on our iPads will automatically be entered into our fair contest. After the fair, three lucky winners will be randomly selected to choose one of three prize options:

- Roomba 614 Robot Vacuum
- DEWALT 20V MAX XR Blower
- Breville Smart Oven Pro

We will also announce the winners from our new Shine the Light contest during the fair. Iowa electric co-op member-consumers and employees had an opportunity to nominate local community volunteers for the contest in June. Three deserving volunteers will each receive a $1,500 donation for their charity as we celebrate our cooperative commitment to community.

We look forward to connecting with our co-op members at the Iowa State Fair this summer. Please stop by our booth and say hello!

See you there!

IowaStateFair
OFFICIAL SPONSOR
AUG 12-22 2021

County fair rides leave a lasting memory

BY VALERIE VAN KOOTEN

Eleven months of the year, a certain tract of land in county seats sits quietly, barns empty, buildings vacant. But come July and August, it fills with 4-H kids, entertainment seekers and the greasy foods we all love, as the county fair kicks into high gear.

Any fair worth its salt has a midway. As a kid, this was the biggest draw. My friends and I loved the stomach-roiling, brain-churning mechanical monsters that threw us against each other and then up along the metal frame.

Whirly rides are a no go

But I've learned my lesson on the "whirly" rides. While I can stomach a roller coaster or a ride that goes straight forward, anything that turns in circles will make me sick the rest of the day. This lesson was imprinted on a muggy July evening at a county fair in central Iowa in the 1980s.

In this party was my mom, her friend Maxine, Maxine's two grandkids aged 9 and 6, and me. I was in my early 20s and found myself delegated to ride the Octopus from Hades with the two smaller kids. This was one of those entertainments that not only turns, but also has a car on the end of each spoke that whirls as well. I was game to ride along with the kids who were begging to go.

The first clue that this might not be so pleasant was the ride attendant, a teenaged boy with hair in his eyes, and a T-shirt with a vulgar saying on it. He grunted at us as we climbed into the Car of Death and latched us in. The second clue that this was going to be the Ride of Horrors was when said attendant started the ride by withdrawing a screwdriver from his back pocket and jamming it into the starting apparatus.

The ride lurched into motion, and I quickly realized that I had not figured the seating chart correctly. The largest person should be on the outside so that the smaller ones don't get smashed in centrifugal motion. I was in the middle, so the little boy with me was getting the brunt of both his sister and me. I clung to the back of the seat, trying to pull myself away from him, which got more and more difficult the faster we went.

"Grandma" to the rescue

After two minutes of grim determination on our part to hang on, the 6-year-old wanted out. I tried to motion the adolescent attendant, only to find him flirting with a girl in line. It was obvious he was going to be of little aid. As we whirled past my mom and her friend, I tried to get their attention.

"Tell them to STOOOOPPPP…." I yelled, the Doppler Effect kicking in and carrying my voice away. She and Maxine were chatting away, totally ignoring us. In the meantime, the 6-year-old was crying, and the 9-year-old looked pale. I was in real danger of getting hurled upon.

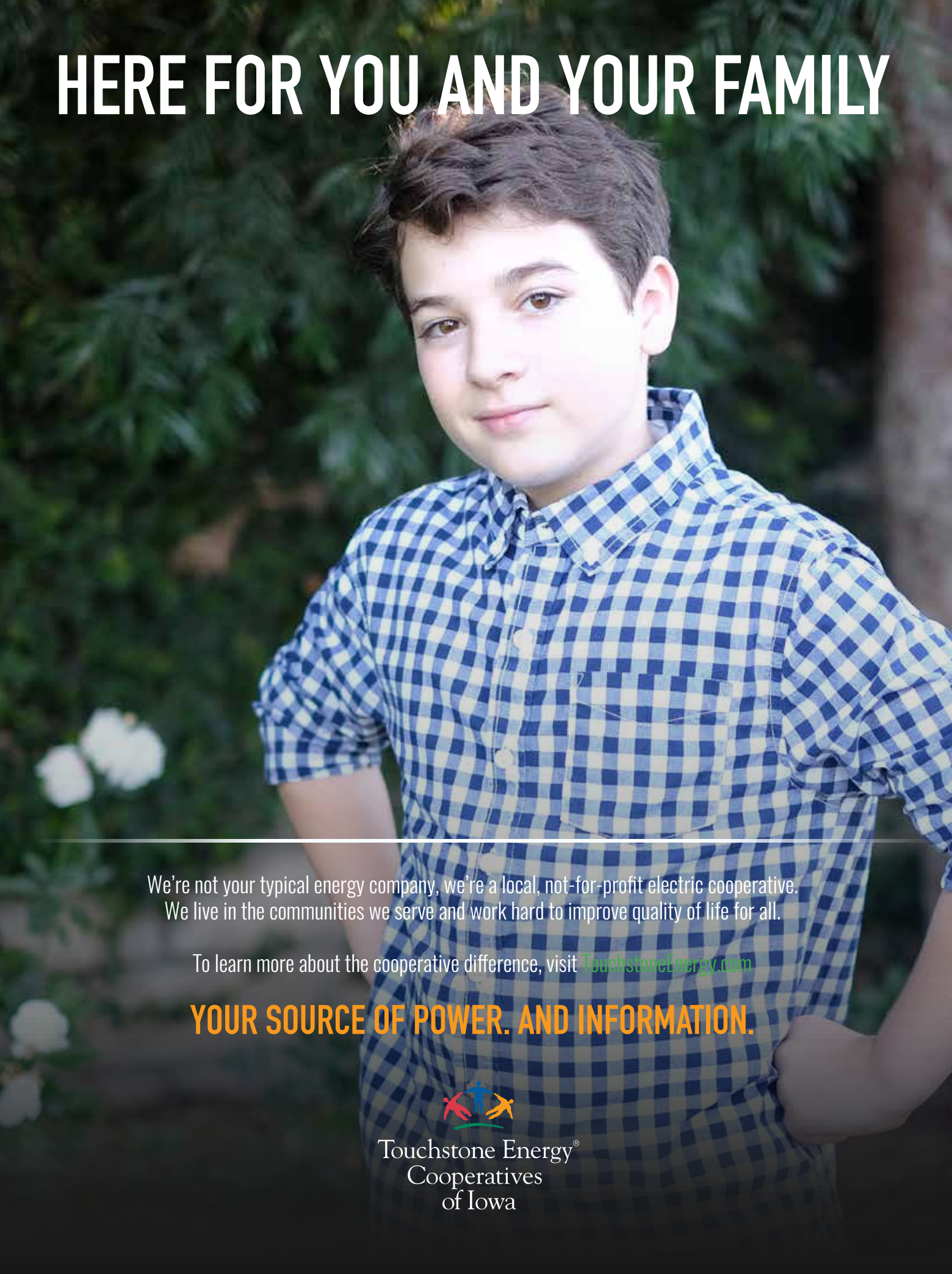
"MOOOOOMMMMMM!" I whirled a rotation. "TELL HIM TO STOOPPPPPP…!" Second rotation.

The 6-year-old finally broke through. "GRANDMA! I WANT TO GET OFFFFF!" The two women finally saw us gesturing and screaming and alerted Flirting Attendant, who pulled the screwdriver out of the works and brought us to a grinding halt.

We staggered off the ride, wobbly, sick and angry. Teen Attendant grunted at us as we left. Mom and Maxine found the whole thing somewhat hilarious.

Just in case you're wondering, I've never ridden the Octopus from Hades again.

Valerie Van Kooten is a writer from Pella who loves living in the country and telling its stories. She and her husband Kent have three married sons, two incredibly adorable grandsons and a lovely granddaughter.


HERE FOR YOU AND YOUR FAMILY
We're not your typical energy company, we're a local, not-for-profit electric cooperative.
We live in the communities we serve and work hard to improve quality of life for all.
To learn more about the cooperative difference, visit TouchstoneEnergy.com
YOUR SOURCE OF POWER. AND INFORMATION.
Touchstone Energy®
Cooperatives
of Iowa