

CVEC awards Operation Round Up[®] funds **>** See Page 12

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Chariton Valley Electric Cooperative seeks board members

Dig into the benefits of geothermal systems

Irish recipes for St. Patrick's Day



Volume 74 • Issue 3

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MARCH 2021

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With geothermal heating and cooling systems, the power of the earth can be harnessed to heat and cool your home renewably and efficiently.

8 Irish recipes

We've assembled a scrumptious collection of Irish-inspired recipes, all from Iowa's co-op cooks. **PLUS:** Find out how you can receive a \$25 credit on your power bill!

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Electric buses are an emerging technology that can help address some of the issues caused by diesel-powered buses while still providing quality transportation.

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Congratulations to Kim Scharfenkamp, a Southwest Iowa Rural Electric Cooperative member, for providing the cover image for this month's issue! She captured this beautiful image of a rainbow in Ringgold County. To have your photo considered for a future cover, email high-quality images (in high resolution) to editor@livingwithenergyiniowa.com. If we select your photo, you'll be awarded with \$100. *\$*

Setting realistic expectations for renewable electric generation

5,000

4,000

3,000

2,000

1,000

0

nationwide.

2010

BY CHUCK SODERBERG

There has been a lot of talk lately about when America will transition to a 100% renewable electric grid. Some utilities, states and cities have announced plans to be fully powered by renewable sources by a specific date. Reducing carbon emissions is also a major focus of the presidential administration. As we talk about a clean energy economy, it's important to set realistic expectations about the timeline.

Iowa's locally owned electric cooperatives have been balancing the need for safe, reliable, affordable and environmentally responsible power for decades. Our state's electric co-ops have long promoted energy efficiency efforts with the belief that the greenest kilowatt-hour is the one you never use. From 2010-2019, Iowa's electric co-ops invested more than \$120 million in energy efficiency measures, saving at least 4.9 billion kilowatt-hours. That's enough energy to power more than 490,000 homes for a full year.

Incorporating more renewable energy

As economic conditions allow, electric co-ops are incorporating more renewable sources of generation into the energy mix. Moving toward

EDITOR'S CHOICE CONTEST

Smart home devices can add comfort and

convenience to your life while helping to save

energy. This smart home starter set features an

all-new Echo Dot smart speaker with clock and

The package is valued at \$115. Learn more about

Alexa, four smart bulbs and four smart plugs.

these technologies on Page 14 of this issue. 🗲

Visit our website and win!

Enter this month's contest by visiting www.livingwithenergyiniowa.com no later than March 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 Fitbit Charge 4 from the January issue was Mary Eller, Consumers Energy.

Win a smart home technology package

renewables will collectively surpass natural gas to be the predominant source of generation in the U.S.

2050

According to the EIA report, the share of natural gas-fired generation in the U.S. will remain relatively constant through 2050, and the contribution from the coal and nuclear fleets will drop by half. Technological advances in battery storage will make intermittent renewable sources like wind and solar more reliable and dependable, which are the top reasons why natural gas and coal have been stalwart baseload generation sources.

Electric cooperatives are making great strides

Because electric cooperatives are owned and governed by the memberconsumers we serve, it's important to keep you informed on how power supply decisions are made and why. Electric cooperatives are making great strides in reducing greenhouse gas emissions and incorporating more renewable energy sources into the generation mix. Like all things, change will take time. Be assured that we are moving in the right direction as we transition to a clean energy economy. 🗲

Chuck Soderberg is the executive vice president and general manager of the Iowa Association of Electric Cooperatives.



renewables

42%

in 2050



U.S. electricity generation from selected fuels AEO2021 Reference case (2010-2050) billion kilowatthours 2020 6,000 history projection

in 2020

2020

higher renewable percentages will take

balancing the needs of safety, reliability

consumers we serve. While renewable

energy continues to grow, it will take

decades before that category outpaces

time as we are also responsible for

and affordability for the member-

natural gas and coal generation

In its Annual Energy Outlook

2021, the U.S. Energy Information

Administration (EIA) projects that

the share of renewables in America's

and solar generation are responsible

for most of that growth. By 2030,

electricity generation mix will increase

from 21% in 2020 to 42% in 2050. Wind

other

renewables

hydro

wind

solar

natural gas

coal

nuclear

2040

2030

Sources: U.S. Energy Information Administration, Annual Energy Outlook 2021 (AEO2021)

Lucky to have your member engagement

BY LEILANI TODD



Chariton Valley Electric Cooperative (CVEC) is lucky to have members like you, who are at the heart of everything we do. Because of your

member engagement, we are able to make our community a better place.

I generally use this space to provide updates on new projects and developments, and report on the progress of ongoing initiatives. CVEC shares these updates so that all our members have a window into our priorities, progress and challenges.

However, I think it is equally important to let you and other members of CVEC know just what an impact you have on our cooperative and the greater community, likely in ways you may not even realize.

Arnold H. Glasow, a famous businessman and author, once said, "Praise does wonders for our sense of hearing." Hearing from you makes a significant difference to each of us at CVEC. I want to thank you for taking time out of your day to tell us how we are doing and to share your



Website www.cvrec.com

This institution is an equal opportunity provider.

thoughts with us. We appreciate the countless acts of kindness our lineworkers and other employees receive when they are working in severe weather and dangerous conditions. And even further, I am thankful for the warm welcome I have received from our members and community in the first few months I have been at CVEC.

Recently, we received cards and notes from many of you regarding CVEC's contributions to the community and the bill credit on the January statement. The following are some of the comments we received:

- Thank you for applying the 60% discount in December! Unexpected but grateful!
- I love your kind and thoughtful acknowledgement of your members in the January bill credit plan.
- What a nice surprise! 60% billing credit is much appreciated! Way to go CVEC!



Thank you to these kindergarten students for sharing notes of appreciation with CVEC.

Chariton Valley Electric Cooperative is a reflection of our local community and its evolving needs. Our resolutions to you this year, and always, are reliable service, safe practices you can rely on and community focus. We are here for YOU, our members! We cannot do it without you. Keep the notes coming, we love hearing from you! *\$*

Leilani Todd is the general manager of Chariton Valley Electric Cooperative.

NEW HIRES

Welcoming new faces at CVEC

Wyatt McCarty and Jonathan Giesken have been hired as 1,000-hour apprentices at Chariton Valley Electric Cooperative. They will work alongside our line crews to gain knowledge and on-the-job experience.

Wyatt and Jonathan recently graduated from North American Lineman Training Center (NALTC) in McEwen, Tennessee, where they logged over 500 physical and classroom hours individually, became certified climbers and learned many rescue and safety procedures.

When asked why they chose a career in this field, Wyatt states, "I picked this trade to be able to work outdoors and help people in times of need." Jonathan





Wyatt McCarty

Jonathan Giesken

says, "It has always been a dream of mine to be a lineman, and after 15 years, I'm finally going after it!"

CVEC is fortunate to be able to hire and help train these young men in the beginning stages of their linework careers. Please join us in extending a warm welcome to Wyatt and Jonathan!

Director announces retirement after 39 years

After serving 13 terms, totaling 39 years, District 1 Director Representative Virgil "Bill" Moore announced his retirement effective January 2021.

Over the past 39 years as a director for CVEC, Moore served nine years on the Iowa Association of Electric Cooperatives board of directors, represented

Chariton Valley Electric Cooperative on the Southern Iowa Services, LLC board and the State Government

Relations Committee. Moore also previously served as board president

and board secretary for CVEC.

When asked to reflect on his committed service to CVEC and the members, Bill says, "I thoroughly enjoyed serving the membership and ensuring that CVEC continued to provide reliable service at a reasonable rate."

"We have very big shoes to fill," Board President Kenny VandenBerg comments. "The cooperative and

the membership have been very fortunate to have a director like Bill who always put the members first. He held a wealth of knowledge pertaining to the cooperative's general practices, Articles of Incorporation, Bylaws and historical facts. I, as well as the rest of the board, were privileged to serve with Bill and hope to continue to use the wisdom he bestowed on us."

CVEC commends and thanks Bill for his dedicated 39 years of service and wishes him well in retirement we sure will miss him! *F*

Vegetation management program ensures reliability

Trees are part of the natural beauty across southern Iowa, but trees and other vegetation are also among the leading causes of power outages for Chariton Valley Electric Cooperative. In order to keep electricity reliable and affordable, we have a responsibility to protect the lines that deliver it to the 6,097 homes and businesses across our service territory. Twelve years ago, CVEC began a dedicated treeclearing program, including vegetation pruning, felling (cutting down) and herbicides to manage vegetation growth along our cooperative electric power lines. This program's results have exceeded expectations, with a notable reduction in power interruptions, duration and blinking lights.

The methods used by our contractors are based on widely accepted standards developed by the tree care industry and approved by the American National Standards Institute for tree care maintenance and operations. CVEC hires qualified, trained tree personnel to inspect and clear vegetation that poses a threat to our power lines.

CVEC's vegetation management plan strives to accomplish three primary goals:

Safety – Your safety is a top priority for CVEC. Trees growing too close to power lines can conduct electricity, creating a potentially deadly hazard for those around them.

- Reliability CVEC prunes and/ or removes trees on our regular maintenance schedule (usually between every four to five years) to ensure reliable electricity. Trees near power lines can cause blinks or power outages with downed lines either through growth or broken branches.
- Affordability When trees grow too close to power lines, the potential for costly repairs also grows. Suddenly, minor restoration efforts become major restoration efforts. As these costs increase, so can electric rates.

CVEC contracts with CR Environmental for vegetation management on our system. CR Environmental started to clear trees within the City of Albia in February 2021. Since distribution lines are on the property of members we serve, we have access to them through our member service agreements. When doing work, CVEC always goes to great lengths to collaborate with our members. However, there are times when a landowner may disagree with CVEC on a specific issue. If that happens, CVEC's goal is to work diligently to resolve the problem and attempt to reach a mutually agreeable solution.

Chariton Valley Electric's goal is to provide safe, reliable and affordable electricity to all members and vegetation management is just one way to achieve this goal.

Please feel free to contact the cooperative if you have any questions or concerns regarding tree clearance within the utility right-of-way at 641-932-7126 or 800-475-1702. *F*

FINANCIAL MATTERS

Winter moratorium ends soon!

Members who qualified for energy assistance during the winter moratorium: Please be advised the moratorium ends April 1, 2021. If your account(s) are past due, you will need to come in or call the office to make arrangements before April 1 to avoid interruption of your electrical service.



Digging into the benefits of

BY ERIN CAMPBELL

Later this spring, we'll see farmers out in the fields digging into the earth to plant crops. The ground beneath us has incredible benefits. In fact, you can also harness the power of the earth to heat and cool your home renewably and efficiently.

Geothermal heating and cooling systems – also referred to as ground source heat pumps – use underground loops to take advantage of the constant temperature below ground to keep you comfortable. In the winter, the loop system removes heat from the ground and transfers it into your living space. In the summer, the loop system transfers warm energy from your home to be absorbed by the cooler ground.

A proven technology

Geothermal technology isn't new; in fact, Iowa's electric cooperatives have been promoting geothermal systems to members since the 1980s. Jim Sayers was one of those co-op employees who worked to educate members about the many benefits of geothermal throughout his 34-year career in communications and energy services at Corn Belt Power Cooperative. Headquartered in Humboldt, Corn Belt Power Cooperative is a generation and transmission electric cooperative owned by its member systems.

Sayers retired from the co-op in 2018 and found an opportunity to continue educating others about geothermal technology's advantages as the cooperative engagement coordinator for the Geothermal Exchange Organization (GEO).

"You retire from a job, but you don't retire from your passion. And my passion includes Iowa's electric cooperatives and geothermal," says Sayers.



Efficient, renewable energy

Geothermal systems are supremely efficient, renewable and will save homeowners substantially on heating and cooling costs, according to Sayers. The average savings of geothermal compared to an aging conventional HVAC system is around \$1,400 annually, accounting for 40%-70% savings. And while the installation cost of a geothermal system is higher than conventional HVAC systems, it is so efficient that it can pay for itself in as little as five to seven years. Rates and incentives are important in determining payback.

"The good news is that there are federal and state tax credits available to help defray the installation costs," says Sayers. "Currently, the federal tax credit for geothermal installation is 26%, and the Iowa tax credit is 20% of the federal credit, for a total tax credit of just over 31% of the geothermal installation cost in 2021."

So why is the installation of a geothermal system higher than installing a conventional HVAC

system? It comes down to the loops. An underground loop system needs to be trenched or drilled in your yard to take advantage of the earth's constant temperature. Once installed, a water-based solution circulates through the loop system to transfer the heat energy. Electricity is needed to operate the heat pump, ground loop pump and distribution fan or pump.

Because it uses the earth, a geothermal system is the most efficient heating and cooling system. In fact, it is 400% more efficient than conventional HVAC systems. Geothermal systems are also known for having low maintenance costs.

Sayers says, "With all the attention on wind and solar these days, we often forget about geothermal as a renewable option. If a homeowner is considering investing in a solar array, I would encourage them to first think about energy efficiency measures and then consider installing a geothermal heating and cooling system because it uses stored, renewable thermal energy all day, every day, year-round."

geothermal systems

Resources for more information

The cost of installing a geothermal system will vary by location, the size of your home, equipment installed and local incentives. GEO, a non-profit trade association that promotes the manufacture, design and installation of geothermal heating and cooling systems, maintains a list of geothermal system professionals you can contact at www.geoexchange.org/directory/.

Learn more about geothermal at GEO's consumer education website at www.geothermalforall.com. In addition to the tax credits, many of Iowa's electric cooperatives offer special geothermal electric rates and incentives to make the system even more affordable. Contact the member services staff at your co-op to learn more. *F*

Erin Campbell is the director of communications for the Iowa Association of Electric Cooperatives.

Ground loop

The earth absorbs and stores almost 50% of the sun's solar energy. Because of this, the temperature four to six feet below ground is consistently between 45-70 degrees F. A geothermal system transfers heat from one place to another using a ground loop field buried in the yard. The loop field circulates a water-based solution through a series of pipes.

Flow center

The flow center resides on your unit or a wall near the geothermal system. It pumps the water-based solution in the ground loop to the house or building unit to disperse heating or cooling.

3 Indoor heat pump

The loop field transfers heat to the home through an indoor geothermal heat pump kept indoors through forced air and radiant heating and cooling.

Forced-air heating and cooling

In a forced-air system, an air-handler disperses the ground's heat to air in a home or building through ductwork and vents. In the cooling mode, the process is simply reversed.

Radiant heating (optional)

Known as the most comfortable type of heating, radiant heating uses a series of pipes under a home or building's floor to circulate warm water, which heats the entire space evenly.

Hot water

A hot water assist, known as a desuperheater, allows the system to capture excess heat to assist a water heater. This cuts hot water costs 25-40%. Geothermal systems can also provide 100% of the hot water needed for a home.





Sausage Coddle

- 1 pound beer-flavored brats or pork sausages, cut into bite-sized slices
- 1/2 pound smoked bacon, cubed
- 2 onions, thinly sliced
- 3 carrots, chopped
- 4 large potatoes, peeled and sliced salt and pepper to taste
- 1 teaspoon parsley, dried
- 1 cup beef stock
- 1¹/₂ cups Guinness beer
- ¹/₂ cup heavy cream

Cook the sausages and bacon in a large skillet on medium heat for 10 minutes until browned on both sides. Spray or butter a 9x13-inch baking dish. Place ¹/₃ of the onions, carrots, potatoes and the meats in the baking dish, sprinkle with salt and pepper, if desired, and ¹/₃ of the parsley. Repeat layers two more times. Warm the beef stock in a medium saucepan over medium heat, add beer and cream. Do not boil. Once warm, pour over the casserole. Bake at 325 degrees F for 1¹/₂ hours until the vegetables are tender. *Serves 6*

> Christine Mimick Keller • Norfolk North West Rural Electric Cooperative

Champ

- 3 pounds potatoes, about 12
- 8 scallions
- 6 tablespoons butter
- salt and pepper to taste
- 6 tablespoons milk

Cut potatoes in chunks, boil in large pot with salted water to cover. Cook until tender, about 25 minutes, drain. Slice scallions, including some of the green tops. Melt butter in the pot used to cook the potatoes. Add the scallions, cook on low heat about 10 minutes. Peel potatoes and mash with salt, pepper and milk. Stir into scallions and heat through. *Serves 8*

Francene Holstein • Persia Harrison County Rural Electric Cooperative

Corned Beef Casserole

- 1 large onion, sliced
- 1 medium/large head cabbage, shredded
- 2 cans corned beef hash
- 2 cans cream of mushroom soup salt and pepper to taste

Spray a deep sided baking dish (can use cast iron Dutch oven) with non-stick spray. Layer all ingredients evenly starting with the onions, then cabbage, corned beef hash, mushroom soup, salt and pepper. This usually makes 2 or 3 layers depending on size of baking dish. Bake covered at 350 degrees F for 45 minutes, uncover and bake another 15 minutes or until cabbage is tender. *Serves 8*

Robin J. Koob • Alexander Franklin Rural Electric Cooperative

2-Cup Stew

- 2 cups stew meat
- 2 cups onion, chopped
- 2 cups potatoes, diced in 1-inch pieces
- 2 cups carrots, sliced in 1-inch pieces
- 2 cups celery, sliced in ½-inch pieces
- 1¹/₂ teaspoons salt
 - 2 cups frozen peas
 - 2 cups frozen whole kernel corn, optional

Bring meat to a boil, lower heat and simmer for 5 minutes. Strain broth; return to pan bringing meat and broth to a simmer. Add onions, potatoes, carrots, celery and salt. Cook until tender. Add peas and corn the last 5 minutes.

Vickie Johnson • Osceola Clarke Electric Cooperative, Inc.

POTATO FAMINE

FAMINE Potatoes transformed the Irish diet when they were introduced from the New World in the late 16th century. Ireland's cheap and plentiful food source was later decimated when potato harvests were hit by blight in the 19th century.

Irish Muffins

- 3 cups flour
- 1 cup raisins
- 1/2 cup plus 2 tablespoons sugar
- 1 tablespoon caraway seeds
- 1 tablespoon baking power
- 1 teaspoon salt
- 1/4 teaspoon baking soda
- 1 egg
- 1³⁄₄ cups buttermilk
- 1/4 cup butter, melted

Mix flour, raisins, sugar, caraway seeds, baking powder, salt and baking soda in large bowl. Beat egg and buttermilk together in a small bowl. Stir into flour mixture. Fold butter in batter. Spoon batter in a muffin tin (with paper liners). Bake at 400 degrees F for 20-30 minutes, until toothpick comes out clean.

> Annalee Buffington • Marshalltown Consumers Energy

Reuben Bake

- 2 tubes crescent rolls
- 1 pound Swiss cheese, sliced
- 11/2 pounds deli corned beef
- 8 ounces sauerkraut
- ²/₃ cup Thousand Island salad dressing
- 1 egg white, lightly beaten
- 3 teaspoons caraway seeds, optional

Unroll one tube of dough, press into greased 9x13-inch pan and bake at 375 degrees F for 8-10 minutes. Layer half of the cheese and all the corned beef. Combine sauerkraut and dressing, spread over corned beef. Top with remaining cheese. Put the second crescent roll over cheese. Brush with egg white. Top with caraway seeds if desired. Bake at 375 degrees F for 12-16 minutes. *Serves* 4-6

> Melissa Schultes • Dedham Raccoon Valley Electric Cooperative

Irish Stew

- 1 cup carrots
- 1 cup potatoes
- 1 cup cabbage
- 1 cup onions
- salt and pepper to taste
- 1 tablespoon sugar 2-inch thick brisket
- 1 cup water

In a large bowl, peel and cut carrots, potatoes, cabbage and onions. Add salt, pepper and sugar. Set aside. In a deep-dish, oven-durable pan place cut brisket, water, salt and pepper (can use cast iron pan). Bake brisket at 400 degrees F for 1 hour making sure water level stays 1 inch or more deep. Add veggies and bake covered at 350 degrees F for another hour. Check liquid level and keep at 1 inch or more at all times or veggies will burn. Can be cooked in a large oval slow cooker, adjusting heat as needed.

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

Blarney Bundt Cake

- 1 yellow cake box mix
- 1 package pistachio instant pudding
- 4 eggs
- 1 cup water
- 1/2 cup vegetable oil
- 1/2 teaspoon almond flavoring
- ¹⁄₄ cup chocolate syrup powdered sugar

Beat cake mix, pudding, eggs, water, oil and almond flavoring together for 2 minutes at medium speed. Pour ³/₃ of the batter into a greased and floured Bundt pan. Add chocolate syrup to the remaining batter. Pour this into the pan and swirl a bit with a knife. Bake at 350 degrees F for 50 minutes, test for doneness. Glaze with a thin frosting or dust with powdered sugar.

Carol DeJong • Sibley • Osceola Electric Cooperative, Inc.

Wanted: Sweet Corn Favorites! The Reward: \$25 for every one we publish!

lowa-grown sweet corn is a summertime favorite! Share your delicious recipes that use sweet corn as an ingredient. If we run yours 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 March 31, 2021. Please include your name, address, telephone number, co-op name and the recipe category on all submissions. **SERVINGS: Please 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 8525 Douglas Ave., Suite 48 Des Moines, IA 50322-2992 stews are popular Irish dishes. A traditional Irish stew is very hearty and filling, with ingredients like potatoes, onions, carrots, diced lamb chops and Canadian bacon.

TRADITIONAL

STEW

BILLIONS OF POUNDS

More than 41.5 billion pounds of beef is produced each year for St. Patrick's Day. About 2.5 billion pounds of cabbage is also produced for the same event.

A F

SODA IS A BREAD

Soda bread is a classic Irish bread, often served with soup. This brown bread is made with whole wheat flour and buttermilk.

INVENTED IN AMERICA

Like St. Patrick's Day, corned beef and cabbage is strictly an American invention. In Ireland, cabbage is often paired with bacon or with lamb.

Electric bus fleets: Saving fuel and helping the

BY MARIA KANEVSKY

Millions of Americans and thousands of Iowans depend on public bus transportation every day. Whether you're an adult on your way to work or a child going to school, you can rely on a bus to take you where you need to go.

But most buses in America are diesel-powered, which produce harmful exhaust fumes when breathed in and greenhouse gas emissions that contribute to climate change.

Electric buses are an emerging technology that can help address some of the issues caused by diesel-powered buses while still providing the same quality of transportation to many Americans.

Applications and technologies for electric buses

There are two main applications for electric bus fleets: school buses and public transit. For each application, there are three types of electric bus technologies that can be used: hybrid electric buses, fuel cell electric buses and battery electric buses.

A hybrid electric bus uses both an electric motor and a gasoline engine to power the bus. Electricity is generated through regenerative braking to charge a battery connected to the electric motor, which lessens the need for gasoline.

Fuel cell electric buses contain hydrogen fuel cells, which need to be refueled with hydrogen to charge the battery that powers the bus.

A battery electric bus is plugged directly into the grid to charge the battery that fully powers the bus.

Pros and cons with each technology

Each of these technologies has pros and cons. Hybrid electric buses are the easiest transition since they are closest to traditional diesel-powered



such as Virginia, Maryland and Minnesota, but California leads the transition with a goal of replacing all of the state's school buses with electric buses by 2040 – a total of 30,000 buses.

buses. However, hybrid electric buses are heavier than traditional buses since they carry both an electric motor and a gasoline engine, which can reduce passenger vehicle capacity. Fuel cell electric buses have no tailpipe emissions and hydrogen is a renewable resource, but the cost is higher than any other electric bus technology type. Battery electric buses have no tailpipe emissions, are the most energy efficient and have low operating costs; however, they have a more limited driving range than other electric bus technology types.

Generally, electric bus fleets provide many benefits, such as fuel cost savings, maintenance cost savings and emissions reductions. Since there are fewer fuel costs and maintenance costs, school districts and transit agencies can save money over time by switching to electric buses. Electric bus fleets have fewer diesel emissions, or none at all, which improves overall public health by making the air cleaner for the surrounding community or school.

That said, there are still several

barriers to overcome before making the full transition to electric bus fleets. For any electric bus technology, the main barrier is cost. For example,

One of the main challenges of transitioning diesel-powered bus fleets to electrified fleets is the current lack of charging infrastructure. New charging infrastructure will be crucial to support increased use of electric buses.



environment



battery electric school buses can cost up to \$200,000 more than a comparably sized diesel school bus. If a school district or transit agency doesn't receive any outside financial support, the purchase can be difficult to justify. Additionally, new charging infrastructure will be necessary to support the electric buses, which will add to the overall cost.

Expanding use of electric bus fleets

Several areas of the country, like Seattle and Los Angeles, are making commitments to electrify their bus transit fleets in the next 20 years or so. Even smaller cities are moving toward electrification of buses. Iowa's first electric buses, a zero-emissions alternative to the current dieselpowered fleet, debuted in the Des Moines metro in October 2020.

Electric school bus programs are in progress in a few states, such as Virginia, Maryland and Minnesota. Still, California leads the transition with a goal of replacing all of the state's school buses with electric buses by 2040 – a total of 30,000 buses.

Many electrified fleet pilot projects show that electric buses can provide cost-effective and clean transportation to Americans, although there will be challenges along the way. While electrified fleets aren't mainstream yet, one thing is clear: partnerships between utilities, transit agencies and school districts will be crucial for success.

The shift toward electric buses will take time, but as progress is made, we can all expect to benefit from cleaner air and a more environmentally friendly future.

Maria Kanevsky is a program analyst for the National Rural Electric Cooperative Association, the national trade association representing more than 900 local electric cooperatives.

Iowa: Expanding the use of alternative fuels

The Clean Cities program coordinated at Iowa Economic Development Authority is a designated member of the U.S. Department of Energy's Clean Cities program. Public and private stakeholders work together to increase adoption of alternative fuels, advanced vehicle technologies and energy-efficient transportation strategies.

Iowa Clean Cities Coalition stakeholders include local governments, metropolitan planning organizations, private fleets, nonprofits, associations, industry representatives, colleges and universities, and businesses committed to sustainable practices. Collaborative efforts include educating fleets, developing infrastructure to support alternative fuel vehicles, disseminating technical information, and raising awareness through meetings, workshops and webinars.

To learn more, visit www.iowaeda. com/iowa-energy-office/clean-cities.





CVEC awards 2020 Q4 Operation Round Up[®] funds

The Chariton Valley Electric Operation Round Up® Foundation board is proud to announce the fourth round of distributed funds to two local organizations with the monthly contributions of CVEC's participating co-op members.

The program, Operation Round Up, rounds up electric bills to the nearest dollar. Each bill is increased anywhere between \$0.01 and \$0.99 for the nearly 80% of CVEC members who participate in the program. The money collected through Operation Round Up is pooled together and administered in a series of grants by the Chariton Valley Electric Operation Round Up Foundation Board.

In January, the Operation Round Up Foundation Board reviewed a total of three applications and was able to award funds to two applicants, totaling \$6,500. The Moravia Ruritan Club was awarded \$1,500 to fund their scholarship program that includes awarding three \$500 scholarships to Moravia

graduates who plan to further their education by attending a college or trade school. The Moravia Ruritan Club normally raises these funds to help ease the

burden and stress associated with college expenses by holding annual fundraisers. However, due to COVID-19, they were unable to do so.

In addition, \$5,000 was awarded to the Moravia Historical Society where it will be used for their Summer Kitchen Project. These funds will go toward making structural repairs and restorations, mainly focusing on the foundation of the Summer Kitchen. Their goal is to ensure the building is

sound and allows visitors a more comfortable tour.

CVEC is grateful our members are donating their small change that is changing lives each month. As this program continues, we hope our membership sees the value and benefit this program brings to the communities we serve.

If you would like your organization to be considered for a grant, please visit our website at www.cvrec.com to complete the application documents by March 31, 2021. *f*

HOW YOUR CO-OP WORKS

Chariton Valley Electric Cooperative seeks board members

The process of recruiting and electing new board members is key to strengthening the cooperative organization that strives to provide unequaled and unparalleled service to its members. Chariton Valley Electric Cooperative (CVEC) board members have a voice in shaping the cooperative's future while working alongside a group of people who share a likeminded commitment to the democratic process. The terms for three directors, representing Districts 1, 3 and 5, will expire at this year's annual meeting in August. District 1 has no incumbent.

Are you interested in serving as a board director for CVEC?

A director's responsibility consists of having the knowledge to set policies and approve strategic plans that are the basis for operating the



cooperative. A director must have the time to attend monthly board meetings, other special sessions and educational seminars. These special sessions and seminars are necessary in order to keep directors informed on the always evolving aspects of the electric utility industry.

How a board manages the nomination process is reflective of its commitment to the cooperative principles. CVEC recently amended its bylaws, changing how the nominating process is handled. This amendment was implemented to make the process easier and more accessible to members interested in seeking a board seat while also being more democratic.

Any interested member who would like to seek election will need to complete the Director Candidate Petition Packet and submit the signatures of at least fifteen (15) members in good standing with the cooperative who reside in the district for which the individual is seeking the nomination.

You may request a packet by visiting our website at www.cvrec.com, calling 641-932-7126 or emailing election@cvrec.com. *\$*

Prospective board candidates must submit the required forms to CVEC no later than June 3, 2021, at 4:30 p.m. CDT.

Rathbun Marina owners create a destination for families

When Doug and Sheila Clemens purchased Rathbun Marina 12 years ago, they had one objective – make Rathbun Lake for families. Their philosophy of "If you build it, they will come" has transformed the lake area and made it a true destination.

Doug is an Air Force veteran and a former Moravia volunteer firefighter. Doug and wife Sheila both work full time in the business and live yearround at the marina. They have been in boating-related businesses for 30 years, including boat dealerships and marine covers and upholstery. Their families have made the lake area their home for decades, and the marina is home, not just a place of business.

Several years ago, longtime Des Moines area businessman Brett Nuckolls joined the Clemens as a co-owner to further develop and improve Rathbun Marina. Lake area improvements have been abundant, solidifying the infrastructure and creating amenities that appeal to families of all ages.

Campgrounds and recreational opportunities

"We just finished a new campground called Parkers Cove," Doug explains. "One of the features is a new shower house with seven family units. Family units are important so that parents can stay with their young kids and not have to send them into their respective male and female showers alone."

In 2021, recreational opportunities will be elevated at the campground with a new frisbee golf course, soccer field and volleyball court, along with additional playgrounds and a shelter house addition.

"Everywhere you look on the property, we want there to be something to do. We have a basketball court, shuffleboards, bocce ball areas and horseshoe pits," Doug says. "We have a pristine, clean lake that covers 11,000 acres, and we appreciate that



people want to enjoy it. We're also focused on creating activities and experiences once families return to the campground."

The Lakeside Inn Hotel, a cozy 12-unit plus one suite motel overlooking the docks at Rathbun Marina, offers an alternative for non-campers.

Louie's Lakeside Bistro & Bar offers casual lakeside dining with waterside and marina views. The menus change with the season, offer a variety of tastes that border on eclectic, but are anchored with a southern barbecue flavor. Marina courtesy docks welcome arrival by boat, and a new outside deck offers a southern latitude environment to the marina.

Ship's Store, docks and a lighthouse

During the winter months, construction has been focused on the Ship's Store addition, which will add 600 square feet of retail space and an inviting northeast-facing entrance with weather protection. The store was also recently remodeled and stocked with boating essentials, food and beverages, and fishing supplies.

In 2019, a major storm ripped through the marina area and severely damaged the docks.

"We had to rebuild the entire electric system," Doug explains. "The silver lining is that we're now probably one of the only marinas in the state with GFCI docks. We're proud to offer that safety feature."

A visual landmark on the property is a precast concrete lighthouse. At 54 feet tall, it's the tallest one of this style in the continental U.S. Serving as an iconic point for visitors to take family pictures or selfies, the attraction has become synonymous with the lake.

"We have designed our marina environment with a strong emphasis on destination-length stays for our visitors and guests," Doug says. "We work hard to ensure our marina is welcoming to everyone so that all family members, from children to seniors, can create lifelong memories of time spent at the lake." *‡*

Smart home tech for your budget

BY MARIA KANEVSKY

Smart home devices can add comfort and convenience to your life, but the price tag for some of these devices can be another story. Since many smart home technologies are new and cuttingedge, the cost of owning these devices can sometimes be a major barrier. Luckily, there are several inexpensive options for smart home devices that won't break the bank while still offering nearly all the same benefits.

1 Smart home speakers. Smart home speakers provide a wide range of features, such as playing music, calling friends or family, or even locating a misplaced smartphone. One of the most useful aspects of smart home speakers is that they act as a smart home hub for your other smart devices. Each smart speaker comes with a voice assistant, like Amazon Alexa or Google Assistant, which can be used to control additional smart devices in your home.

> When choosing a smart home speaker, make sure your other smart devices are compatible with the system. For example,





Photo Source: Abby Berry, NRECA

Google Assistant works best with other Google products, rather than Amazon or Apple products. Several smart home speakers, especially smaller, entry-level types like the Amazon Echo Dot and Google Home Mini, can cost as little as \$30 or less. This makes them more affordable than the larger versions, like Amazon Echo and Google Home, while still offering nearly all the same features.

(2) Smart plugs. This technology works by directly inserting the smart plug into an outlet, then plugging your device into the smart plug. This can make any device "smart" by connecting it to your Wi-Fi through the smart plug. They can also be used with smart home speakers. One of the best features of a smart plug is that it can help you reduce your monthly energy use. This can be done by programming automatic shut-off times to prevent devices from drawing energy when they're not in use. There are plenty of inexpensive and well-performing smart plugs available under \$20.

(3) Smart light bulbs. Smart light bulbs can be controlled through your phone or by voice if connected to your smart home speaker. Some features include the ability to choose different lighting colors and shades, dimness levels and the ability to turn them on or off entirely. There is an extensive market for smart LED bulbs, but some of the less expensive options are the Wyze Bulb, the Lifx Mini and the Ikea Tradfri, with prices ranging from about \$8 to \$20 per bulb. For multi-bulb fixtures, an alternative to buying several smart bulbs is to buy a smart light switch to control the entire fixture.

If you're looking to buy more than one smart home device, make sure the devices are compatible with your smart home hub (Google Home Mini with Google products, or Amazon Echo Dot with Amazon products) to ensure the best performance of all devices. As with any smart home device, access to a secure and stable Wi-Fi connection will be crucial to properly use the technology. *f*

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

Tiny huts on the farm

BY VALERIE VAN KOOTEN

A while back on Facebook, an acquaintance posted a picture of a field with little, peaked buildings dotting its surface. "What are these tiny huts?" she asked. "Are they some kind of tiny houses?"

Those of us who had grown up on farms chimed in immediately – they were A-frames, built for "free range" hogs but used more and more infrequently in the present when most porcine entities are now gathered in large confinement sheds.

A-frames were a huge part of my growing up on a hog farm, where we raised thousands of hogs annually. Each hut held a mama sow and her piglets, which made for strong, healthy pigs growing up in fresh air and able to move where they wanted. However, this also made the care of these hogs much more labor-intensive, as they would escape through the smallest of cracks in fences and gates and needed to have their houses replenished with straw in cold and wet weather.

Early morning chores

Many was the rainy early morning that my sister and I huddled under the blankets, savoring the last few minutes of warmth, fully expecting at any moment my father to yell up the steps: "Get up, girls. We need to bed A-frames."

Depending on the direction that the rain or snow was coming from, bedding up A-frames was a necessity to keep the animals dry and was a process that entailed riding on a cart or wagon behind the tractor with several straw bales on board. At each A-frame, my dad would stop the tractor, and Amber and I would throw a few "paragraphs" of straw into the hut, knowing that the sow would trample it down into a nest for her young.

Bedding A-frames was cold and



wet but relatively safe and easy. Vaccinating the piglets was another story. Dad would spread ground corn out several hundred yards from the A-frames and the sows would, understandably congregate there. As fast as we could, we'd zip from one A-frame to another, catch the piglets by the back leg and hand them to my dad, who would jab them with the syringe and then drop them into a bushel basket so we'd know which had been inoculated.

Protective mothers

The mothers may have been otherwise occupied, but they were Tamworths and Durocs – strong, hearty stock but also fiercesome mothers. One squeal from a piglet and they were headed our way with a "woof" that was intimidating and a bite that could maim. We were equipped with a fence panel to hold up, if needed, to divert the angry assault. For a couple of tweenagers, though, the panel might as well have been a hula hoop. We didn't have the strength to hold it against a raging sow and knowing that made the entire process an exercise in speed and anxiety. We were, in effect, the weakest link.

The age of A-frames may be finished, and though I may wax nostalgic for them, I'll pass on fending off enraged sows, thank you. *F*

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 and two incredibly adorable grandsons.

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