

NOVEMBER 2024

# iowa

ELECTRIC COOPERATIVE LIVING

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# THE DIFFERENCE BETWEEN BASELOAD AND INTERMITTENT POWER

BY GARRETT THOMPSON



If you've been enjoying our "all-the-above" energy series for the last six months, then you're well-versed in the major generation assets

available to electric utilities (if you missed any articles, they are available on our website). This month, I would like to build upon that knowledge and

dive deeper into how they all work together to provide the safe, affordable and dependable electricity you are accustomed to receiving from Franklin REC.

Imagine it's one of those excruciating days when the hot air becomes unbearable. The first thing you do when you get home is turn the thermostat down a couple of degrees.

Thousands of other people are responding the same way throughout your area and the entire region. Every air conditioner and fan starts working at full speed to keep everyone cool and comfortable. The end of the workday creates a massive surge in the amount of electricity needed to meet the demand, and it's up to the people who oversee the operation of North America's power grid to ensure there's an adequate amount to keep you comfortable.

It's a challenging task because the amount of electricity that's needed varies throughout each day. While you and your neighbors are asleep, the demand is lower, but as everyone wakes up, turns on the shower and starts the coffee maker, the demand for power climbs quickly.

Our electric grid gathers and distributes power from many sources, including coal, natural gas, nuclear and renewable energy sources, such as wind, solar and hydro. The electricity

supplied from these sources is categorized as baseload, peaking or intermediate power.

## Power of baseload

Baseload power accounts for most of the electricity we use. Always-available baseload power sources are designed to constantly generate large amounts of power, so you and everyone else are assured of a reliable supply of electricity whenever you need it. The most familiar examples of baseload sources are nuclear, coal and natural gas, along with some hydroelectric facilities.

## Intermittency of renewables

Renewable power sources, such as solar and wind, are increasingly used to supply electricity. Both sources provide intermittent power since the amount of electricity generated and the time at which electricity is generated depend upon cooperation from nature. Solar panels can only generate electricity when there's enough sunlight, and large wind turbines generally only produce power once the wind speed reaches at least 7 miles per hour.

Because intermittent power sources like wind and solar depend on unpredictable weather conditions, they can't be relied upon to deliver predictable and constant baseload power. This is why changes in electricity demand are usually met with intermediate or peaking generation powered by more traditional sources like natural gas.

## OFFICE CLOSURE

The Franklin REC office will be closed Thursday, Nov. 28, and Friday, Nov. 29, for the Thanksgiving holiday.

If you experience an interruption in service, please contact the office at 641-456-2557. To make a payment, call 855-940-3953.



### Office

1560 Highway 65 • P.O. Box 437  
Hampton, IA 50441

### Office Hours

M-F 7 a.m.-3:30 p.m.  
Closed Saturdays, Sundays and holidays

### Telephone Number

641-456-2557  
Calls answered 24/7

### Secure Pay-by-Phone Number

1-855-940-3953

### Website

[www.franklinrec.coop](http://www.franklinrec.coop)

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Electric co-op members who are concerned about climate change may wonder why power suppliers aren't rushing to replace fuels such as coal and natural gas with alternatives like wind and solar. If co-ops and other electric utilities switched completely to intermittent sources, they wouldn't be able to meet consumers' needs for reliable power.

One promising technology involves the development of energy storage devices such as batteries that can store excess power generated by wind and solar so it's available even when the weather isn't cooperating. While that technology is advancing, it's still evolving, and large-scale use of such batteries is many years away. Batteries also require large amounts of elements, such as lithium, which must be mined, creating additional environmental concerns.

In my May column, I discussed nuclear power plants and the development of small modular reactors. This new and exciting technology would be highly beneficial to electric utilities because they could be built as a baseload or peaking generation plant. They can also be custom-built to supply the needed energy within a smaller landscape than traditional baseload generation units.

Maintaining a diverse mix of energy sources and fuels is essential to balancing the delivery of safe, reliable, affordable and environmentally responsible power.

*Garrett Thompson is the general manager/CEO of Franklin REC.*

# POWERING LIVES, EMPOWERING COMMUNITIES: THE IMPACT OF IOWA'S ELECTRIC COOPERATIVES

Iowa's electric cooperatives are proud to be owned by the members we serve. For more than 85 years, we've been committed to providing safe, reliable, affordable and sustainable power.

Electric cooperatives cover more than two-thirds of the state's land mass and maintain enough power lines to wrap around the equator two and a half times – that's close to 62,000 miles! Electric co-ops serve almost 240,000 households, farms and businesses throughout the state, which means we power the lives of approximately 650,000 Iowans throughout all 99 counties.

We serve primarily rural areas of the state, and we're mission-driven to improve the quality of life for our member-owners. We adhere to the following seven core principles that guide all cooperatives.

- ➔ **Voluntary and open membership.** The co-op is open to any persons who are able and willing to join, accept responsibility as a part of the organization and can use the organization's services.
- ➔ **Democratic member control.** Cooperatives are democratic organizations controlled by their members, who actively participate in setting policies and making decisions.
- ➔ **Members' economic participation.** Members contribute equitably to, and democratically control, the capital of their cooperative.
- ➔ **Autonomy and independence.** The members of the co-op determine everything it does, which allows the co-op to function independently.
- ➔ **Education, training and information.** Cooperatives provide education and training for their members, elected representatives, managers and employees so they can contribute effectively to the development of their cooperatives.
- ➔ **Cooperation among cooperatives.** Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures.
- ➔ **Concern for community.** While focusing on member needs, cooperatives work for the sustainable development of their communities.

**Our mission: Franklin REC is a rural community-focused organization who works to efficiently deliver reliable and safe energy to our members.**





## FRANKLIN REC PRESENTS: LIGHT UP THE NIGHT 2024 — A SWEET CHRISTMAS STORY

Prepare to be dazzled as Franklin REC's Light Up the Night 2024: A Sweet Christmas Story takes over downtown Hampton on Saturday, Nov. 30! This magical, all-day event is packed with fun, holiday cheer and community spirit – guaranteeing an unforgettable experience for all ages.

### A sneak peek at the day's festive lineup

Head over to the fireman's free-will donation lunch at the Hampton Firehouse, where you can enjoy a delicious meal while supporting local firefighters. Nothing says community quite like sharing a hearty lunch for a great cause!

After fueling up at the firehouse, let your day begin with holiday crafts for kids. Whether decorating ornaments or creating festive keepsakes, your little ones can express their creativity while soaking up the Christmas magic. To make your way around town, hop on the free trolley ride that will travel through downtown. Remember to stop at Peace Plaza for free photos with Santa and

Mrs. Claus and a cup of hot cocoa. Plus, the kiddos can write a wish list to St. Nick! Need an afternoon break? The Windsor Theatre has you covered with a free afternoon movie matinee, where families can cozy up with a bag of popcorn and get ready for some heartwarming entertainment.

Whether you're exploring crafts, lunching with friends or heading to Peace Plaza for free Santa photos, your afternoon is sure to be full of festivities.

And just when you think the day can't get any better, it's time for the grand

finale: the beloved lighted parade leading to the park lighting. Watch as brightly lit floats parade through the streets of downtown Hampton, casting a festive glow over the entire town. This magical display of lights, music and holiday spirit is the perfect way to wrap up the day.

Then, stroll over to Band Shell Park, where the holiday season truly comes to life. The park will be transformed into a sparkling wonderland, with thousands of lights illuminating the trees and pathways, making it the perfect place to kick off the season. Capture the magic with free Santa photos right in the heart of this enchanting scene, and take a peaceful stroll through the park to enjoy a delightful, interactive activity: A Sweet Christmas Story. As you walk, you'll read along with charming displays telling a story that will bring a smile to all.

With the lights twinkling in Band Shell Park for the whole season and a day packed with holiday joy, Light Up the Night 2024 will truly be A Sweet Christmas Story to remember. Whether it's your first time attending or a cherished annual tradition, this event promises festive fun, community warmth and holiday memories that will last a lifetime.

Mark your calendar and join us in downtown Hampton on Saturday, Nov. 30! Enjoy a magical day filled with wonder, joy and the true spirit of the holidays.

Follow along with the event on Franklin REC's Facebook page by scanning the QR code.



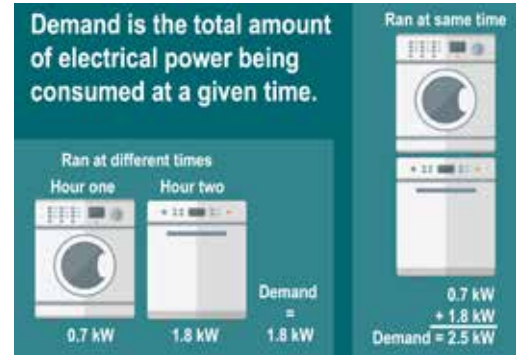
# WHAT IS DEMAND?

Electric demand is the rate at which electricity is used at a given time and is measured in kilowatts (kW). To put this into context, both your dishwasher and washing machine use electricity. The amount of electricity they use is the same regardless of when you use them. However, if you use them at the same time, you demand more electricity at that time.

Let's see how the math works. If your washing machine runs for an hour and uses 0.7 kilowatt-hours (kWh) and then your dishwasher runs for an hour and uses 1.8 kWh, you used 2.5 kWh of

electricity. Your demand over those two hours is 1.8 kW, which is the most you used at one time. If you ran them both for the same hour, your demand would be 2.5 kW.

There are certain times of day when energy usage is at peak demand. This is typically during the evening when families return home from work or school to make dinner and do chores. Using electricity during this time costs more to both our cooperative and members because it requires the system to provide more electricity in less time. The best way to reduce



demand is by spreading your electric usage throughout the day and night.

If you have questions about your electric bill or more questions about demand, please contact us at 641-456-2557.

## 'TIS THE SEASON TO GIVE

Join Franklin REC at our winter blood drive on Tuesday, Dec. 3.



Call the office at 641-456-2557 or scan the QR code with your phone to set up an appointment.



# FRANKLIN REC ALTERNATIVE ENERGY FUND

Franklin REC's voluntary Alternative Energy Program (AEP) allows members to support the development of renewable energy projects with contributions to the fund. The funding for the program, provided by our members, supports the development of alternative energy production facilities in Iowa. These contributions provide the opportunity for alternative energy to be purchased and assist in the development of nontraditional generation in Iowa.

This is a one-time contribution or a monthly pledge automatically added to monthly bills in \$1 increments. To enroll in the AEP, complete the form below.



## FROM YOUR BOARD ROOM

During the September meeting, Franklin REC directors:

- Approved work orders and special equipment capitalization of \$825,551.90
- Approved 2025 board meeting dates
- Approved date for 2025 Franklin REC Annual Meeting
- Approved 2025 workers' compensation insurance as presented
- Approved estate patronage retirements as presented

### Alternative Energy Fund Authorization Form

One-time contribution \$ \_\_\_\_\_  
 Payments made payable to Franklin REC.

Monthly contribution \$ \_\_\_\_\_  
 This amount will be automatically applied to your monthly electric bill.  
 You may opt in or out of the program at any time.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State \_\_\_\_\_ Zip Code: \_\_\_\_\_

Billing Account Number: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Clip this form and return it to Franklin REC, PO Box 437, Hampton, IA 50441 or email the information to franklin@franklinrec.coop.





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Iowa's electric  
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Visit our website at [www.franklinrec.coop](http://www.franklinrec.coop)



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