

The new electric grid

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 lump 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.

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 grid more deeply, here are some ways it's adapting to the world's new realities.

- **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.

By knowing how weather will affect power equipment, an electric co-op can stage crews to quickly respond to outages and redirect the flow of electricity to minimize the duration of a power outage.

- **Strengthening cyber safety**

Cybersecurity measures have become standard operating



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.

procedure for utilities to protect against cyber attacks. Electric co-ops and other utilities work closely with the U.S. Department of Homeland Security to monitor and strengthen defenses.

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.

- **Utilities keeping up with the change**

Large fields of wind turbine farms and solar power arrays require building transmission lines to new locations, and 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.

We will continue to work to make sure we have a secure and reliable electric grid. It is because of investment in the grid that we can fulfill our mission of providing reliable electricity to you, safely and affordably.



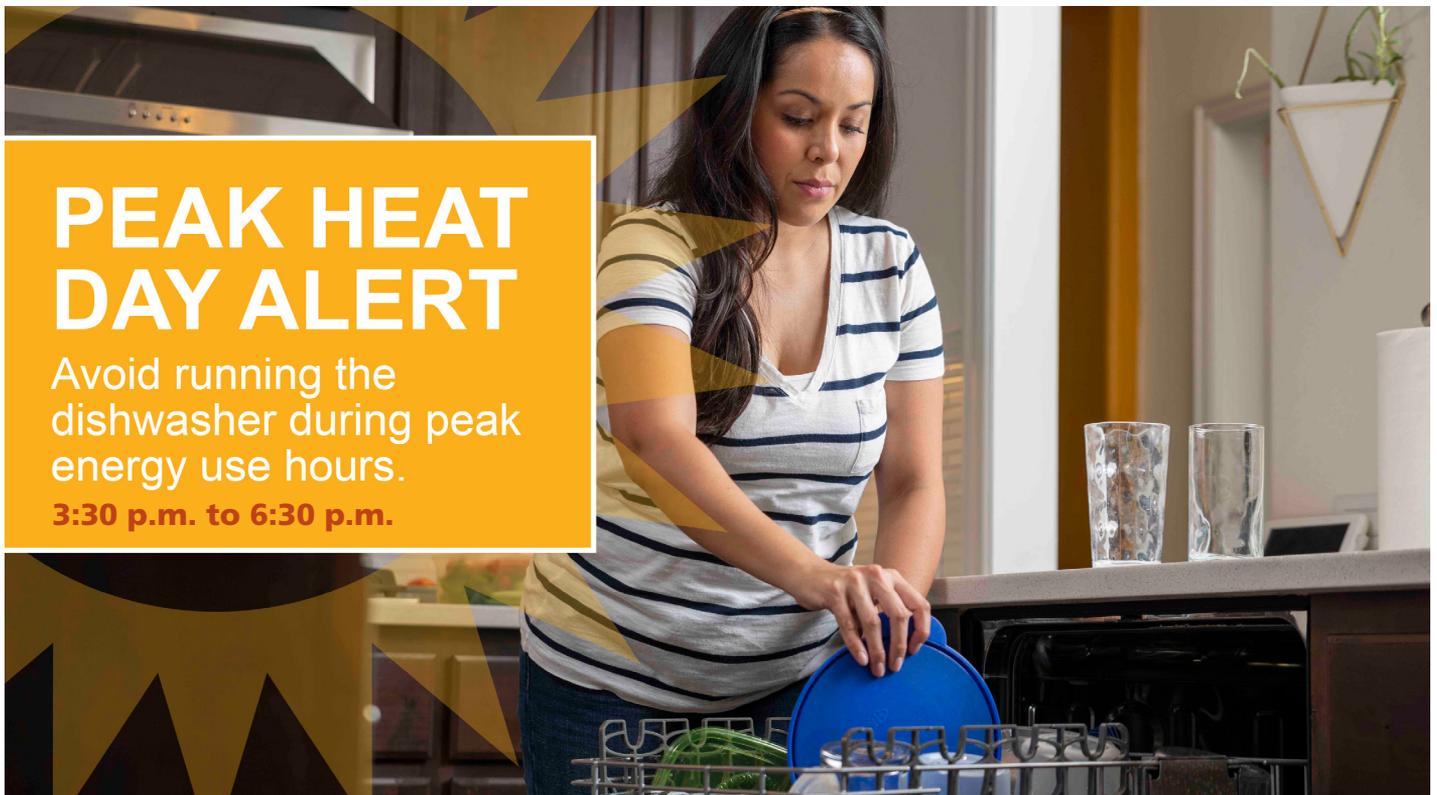
Happy 4th of July

The offices of C&L Electric will be closed Monday, July 5th, in observance of Independence Day.

Have a safe and happy holiday with friends and family!

Bill Payment Options to Fit Any Lifestyle

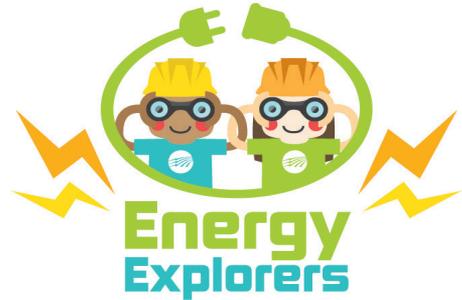
- **Pay by mail** - Please include your bill stub and write your C & L account number(s) on your check or money order.
- **Pay in person during regular business hours** - Please bring your payment and entire bill to either our Star City or Sheridan offices any weekday between the hours of 8 a.m. and 5 p.m.
- **Use our night deposit after regular business hours** - Drop your payment in the night deposit at our Star City or Sheridan office after hours. Please include your bill stub and write your account number on your check or money order. NO CASH
- **Pay at a bank** - C & L payments are accepted at the following banks: Fordyce – Fordyce Bank & Trust including branches in Watson Chapel & White Hall, Monticello – Commercial & Union, Pine Bluff – all Simmons branches including Watson Chapel & White Hall, Rison – Fordyce Bank & Trust, Warren – 1st State, Warren Bank & Trust, & Union. Payments made at a bank are then mailed to C & L's main office and are not posted to your account until received by mail.
- **Pay by phone** - Dial (870) 628-5522 or (870) 628-5492 and follow the automated instructions. Payment must be made using a Visa, Mastercard or Discover brand credit or debit card. There is a \$4.25 transaction fee per C & L account for this service. Payments by phone are posted to your C & L account immediately.
- **Pay online** - You may go to <http://www.clelectric.com> using a Visa, Mastercard or Discover brand credit or debit card. You may pay all C & L accounts with the same member number for one \$4.25 transaction fee. Online payments are posted immediately to your C & L account.
- **Pay using Kiosk station** - Customers in the Dumas area can pay their C&L electric bill using the Kiosk station located inside Meador Pharmacy at 101 West Waterman, Dumas, AR 71639. Star City has a Kiosk station located in the C&L office at 900 Church Street, Star City, AR. The Kiosk station will take cash, checks, credit or debit Visa, Mastercard or Discover. You MUST use your C&L account number when using the Kiosk station.
- **Pay using Bank Draft** - You may go to <http://www.clelectric.com> under Account Services to find the Bank Draft Authorization Form. The Bank Draft Authorization Form may be completed online and submitted to our office, or you may print the form and mail it to the Star City office at PO Box 9, Star City, AR 71667. If you prefer, you can request a form to be mailed to you by calling our Star City office at 870-628-4221 or the Sheridan office at 870-942-2732.



COOPERATIVE WORD SEARCH

As a member of an electric cooperative, you're part of something special!

Read the facts below to learn how co-ops are unique, then find and circle the **BOLDED** words in the puzzle.



WORD BANK:

- **COOPERATIVES** are local organizations and businesses, so they understand the communities they serve.
- Co-ops don't have customers; instead, they have **MEMBERS**.
- All co-ops are guided by the same set of cooperative **PRINCIPLES**.
- "Concern for **COMMUNITY**" is the seventh cooperative principle.
- Co-ops are led by the members they **SERVE**.
- You're a member of an **ELECTRIC** cooperative, but there are also housing, grocery and other types of co-ops.