TCEC TRI-COUNTY ELECTRIC COOPERATIVE, INC.
Your Touchstone Energy® Cooperative

September 2025

TRICOUNTYCOOP.COM

HI-LITES

Behind the Switch: Frequently Asked Questions

A member recently sent us a thoughtful letter after our annual meeting—and it gave us a great idea for a newsletter series! They raised important questions about the current energy landscape, and we figured if one person was wondering, others probably are too.

Q: Why does Illinois have to rely on power from other states?

Over the past several years, Illinois has shut down several reliable, always-available ("baseload") power plants, including coal and nuclear facilities. While the state still generates power, it's not enough to meet peak demands, especially during extreme heat or cold.

This means we rely heavily on power imported from other states. When demand outpaces supply, prices soar. Power that used to cost $30–$50 per megawatt-hour (MWh) can now spike to $200–$1,200/MWh during critical times.

Q: Can wind and solar actually draw electricity from the grid?

Yes, and this surprises a lot of people. Solar panels and wind turbines don't always produce power—like at night or on calm, cloudy days. When that happens, they draw electricity from the grid to keep operating systems and equipment running. For example, solar inverters, tracking systems, or maintenance heaters/ac still need a power source.

This is part of why solar and wind need to be backed up by other generation sources—often natural gas or coal—to ensure reliability when the sun isn't shining or the wind isn't blowing.

Q: What's the solution—how do we make the power supply more reliable and affordable?

The answer lies in balanced diversification. We're strong supporters

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Luke Johnson
General Manager

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of an "all-of-the-above" energy strategy—investing in a mix of natural gas, coal, wind, solar, and nuclear.Each resource plays an important role, but none is perfect on its own:

- **Natural gas** is flexible and quick to ramp up, but as demand for it increases, prices rise—especially in extreme weather.
- **Coal** offers fuel security and around-the-clock generation, but regulatory pressures have led to many plant closures.
- **Wind and solar** are renewable and clean, but unpredictable, requiring backup power when conditions aren't ideal.
- **Nuclear** provides reliable, zero-emission energy, but it's expensive and can take decades to build.

When we rely too heavily on just one or two sources, we risk higher prices and less reliability. That's why a diverse energy mix is critical to keeping the lights on and rates as stable as possible.

Q: Why would some solar panels be installed facing east instead of south?

Great observation! While most solar panels are typically angled south to capture the most sunlight throughout the day, some are designed as tracking panels. These start the day facing east to catch the morning sun and gradually tilt west as the sun moves across the sky. This tracking system allows them to follow the sun's path, increasing efficiency and energy production compared to fixed-position panels. By adjusting their angle to match the sun's movement, these panels can produce more consistent and higher overall output. It's a smart way to maximize available sunlight, especially in large-scale solar installations.

Q: How long do wind and solar systems last, and what happens when they're used up?

Most wind turbines are designed to last around 20–25 years. Solar panels generally last 25–30 years, though their efficiency declines over time. Inverters and other system components may need to be replaced sooner.

At the end of their life, the question becomes: *What happens next?* While large-scale recycling of wind turbine blades and solar panels still faces significant challenges and is less developed than conventional recycling, some infrastructure and initiatives do exist. However, these efforts are not yet widespread or universally accessible, which limits the overall impact.Many materials—like fiberglass wind blades or certain photovoltaic components—can't easily be recycled.

So, in many cases, wind blades are cut up and sent to landfills. Solar panels may be stockpiled, exported, or landfilled if recycling is not cost-effective. This creates environmental and logistical challenges that the industry is still working to address.

Have a question for your Cooperative?
Email us at editor@tricountycoop.com — your question might be featured in the Hi-Lites!

Recognizing a Legacy of Service

In loving memory of Brad Hails, retired Jefferson County Serviceman (right), pictured with General Manager Luke Johnson (left) on the day he retired after 31 years of service. We are forever grateful for his dedication, hard work, and the kindness he showed to everyone. His legacy of service and friendship will always be remembered.

Kevin Cummings, retired Superintendent of Operations (right), with General Manager Luke Johnson (left) as he celebrated his retirement after 35 years of service. We thank Kevin for his steady leadership, dedication, and the many years he devoted to supporting our crews and serving our members with excellence.

ATTENTION, TEACHERS AND ADMINISTRATORS!

Touchstone Energy®

Have a project you'd like funded?
$4,000 available through Touchstone Energy Classroom Empowerment Grants

ABOUT CLASSROOM EMPOWERMENT GRANTS

Touchstone Energy Classroom Empowerment Grants totaling $4,000 (8 grants at $500 each) are being funded by Tri-County Electric Cooperative, Inc. (TCEC) for the 2025/2026 school year.

TCEC TRI-COUNTY ELECTRIC COOPERATIVE, INC.
Your Touchstone Energy® Cooperative

HOW TO APPLY

- Option 1: Fill out the attached application and return using the information below.
- Option 2: Apply online at www.tricountycoop.com/classgrant

Deadline: November 7th, 2025

ELIGIBILITY

- School located in TCEC Service Area
- Teachers & Administrators of K-12 public or private schools may apply.
- Projects must be completed by the time school is out for the summer.
- Recipients must provide written proof of completion detailing how grant funds were used within 6 months of project completion.

RETURN BY MAIL OR EMAIL

lhutchison@tricountycoop.com
Tri-County Electric Cooperative
3906 Broadway St.
Mt. Vernon, IL 62864

MORE INFORMATION

www.tricountycoop.com/classgrant

Tri-County Electric Cooperative, Inc. & Touchstone Energy Classroom Empowerment Grant Application

TRI-COUNTY ELECTRIC COOPERATIVE, INC.
Your Touchstone Energy® Cooperative
www.tricountycoop.com

Applicant Name **Title**

School Name

School Address

City/State/Zip

Daytime Phone Number

Email

Electric Cooperative Territory: Tri-County Electric Cooperative, inc.

To apply for grant, send a double-spaced typed request (not to exceed 3 pages) that includes the following:

1. A description of the project and what it will accomplish
2. The estimated cost of the project
3. An explanation of why outside funds are necessary to complete the project
4. Whether funding options have been pursued, and if so, how
5. When the project will be completed
6. The number of people affected by the project
7. If the project's goals are measurable, and how
8. How the project ties in Touchstone Energy's four core values of integrity, accountability, innovation, and commitment to community

Photos supporting data are optional. Applications will be evaluated by an impartial panel of judges. Awards will be announced mid-December.
Deadline: Grant applications must be received by November 7, 2025.
Email or mail application to: lhutchison@tricountycoop.com
Tri-County Electric Cooperative, 3906 Broadway St, Mt. Vernon, IL 62864

Acknowledgement

Touchstone Energy and Tri-County Electric Cooperative reserves the right to photograph grant winners and use photos for publication purposes. Projects must be completed by the time school is out for summer. Recipients must provide written proof of completion detailing how the grant funds were used within six months of the project's completion. Grant recipient agrees to follow all completion requirements.

Signature Date