REFA BRIEF

Renewable Energy Farmers of America

Addressing Concerns About Renewable Energy Reliability

Across rural America, many farmers and ranchers are asking: *"Can we really count on wind and solar to keep the lights on?"*

It's a fair question. We all depend on reliable electricity for our homes, barns, and businesses. While renewables have real advantages, they also have limits. The truth is, no energy source — whether coal, gas, wind, or solar — is perfectly reliable on its own. Grid reliability depends on how all sources work together.

Where Renewables Help

- **Resilience during outages.** When natural gas plants failed during the 2021 Texas storm, wind and solar kept producing some power, providing a lifeline (ERCOT, 2021). Similar stories came out of North Carolina after Hurricane Florence.
- **Affordable power.** Because wind and sunlight are free, the electricity they generate is often cheaper than new fossil plants (Lazard, 2023). That helps stabilize long-term energy prices.
- **Storage is improving.** Batteries are growing quickly, allowing excess renewable power to be stored and used when needed. U.S. grid-scale storage grew more than 80% in 2023 (EIA).

Where Renewables Fall Short

- **Intermittency.** Solar only works when the sun shines, and wind turbines need steady wind. Without storage or backup from other sources, renewables can't always deliver on demand.
- **Dependence on weather.** Extreme cold can reduce wind output. Cloudy stretches can cut solar production. Farmers know weather is unpredictable — and so is renewable generation.
- **Storage is not yet enough.** While batteries are advancing, today's storage can cover hours, not days or weeks. During long cold snaps or extended storms, that's a limitation.
- **Grid integration.** Adding renewables requires new transmission lines and grid upgrades. These projects can be costly, slow, and controversial in rural areas.

The Big Picture

Renewables are part of the solution — but they're not a silver bullet. Gas, coal, nuclear, hydropower, wind, and solar all have strengths and weaknesses. A diverse mix, paired with investments in modern transmission and storage, is what makes the grid dependable.

800 Roosevelt Rd., Suite 312-C
Glen Ellyn, IL 60137
630-299-8615

For rural communities, the key questions are:

- How do wind and solar projects affect local reliability, not just the national picture?
- Will storage and grid improvements arrive in time to back up renewables during extreme events?
- How do we balance cost savings and tax revenue from renewables with the need for steady power?

The Bottom Line

Renewable energy can strengthen reliability in some cases — but it can also fall short without the right planning. Farmers and ranchers deserve honest information about both sides of the issue.

REFA is a farmer-led organization. Our members are farmer and rancher landowners who have not only navigated the development of renewable energy on their land but also have decades of experience seeing how these projects have impacted their land, their families and their communities. Get to know the farmers and ranchers behind REFA who can help you make informed decisions as a landowner.

800 Roosevelt Rd., Suite 312-C
Glen Ellyn, IL 60137
630-299-8615