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Commentary: As the heat rises, Texas needs all energy sources[1]

By Judd Messer, For the Express-News

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Temperatures are climbing in Texas; so is electricity demand.

In his report to the ERCOT board of directors in April, CEO Pablo Vegas explained that new estimates predict electricity demand will exceed 150 gigawatts by 2030, nearly double the record set last August.

This growth is driven by significant power needs from data centers, crypto mining, artificial intelligence and industrial electrification. To meet demand, it's imperative Texas leverage all available power generation resources.

Low-cost renewable energy is making significant contributions to reliability while lowering costs to protect consumers from skyrocketing electricity bills. The benefits of renewables and battery energy storage are especially valuable during daytime peak demand when solar power delivers much-needed capacity, during the evening and morning hours when wind power ramps up, and as batteries quickly respond to urgent grid conditions.

This symbiotic relationship has resulted in wind and solar providing about one-third of the state's year-round power needs, including a record 76% on a single day at the end of March.

Battery energy storage also continues to break records when the grid needs it most, such as during the May 8 weather watch issued by ERCOT when a record 3,195 MW of energy from batteries was utilized to fill the gaps brought on by traditional power plant outages that were 33% higher than expected.

As our power needs grow dramatically, we must encourage the growth of a complementary energy mix, focusing less on how resources perform individually and more on how resources most effectively work together. A grid that leverages the strengths of cheap, clean renewable resources, alongside a robust fleet of battery energy storage and traditional power plants, is the best way to achieve maximum reliability for Texans at an affordable cost.

The good news is that many of our policymakers and regulators recognize this and are working hard to protect the competitive and diverse Texas energy market.

The ERCOT queue lists more than 33,000 MW of combined utility-scale wind and solar projects in the advanced stage of development, and some projections expect the capacity of batteries in ERCOT to increase twofold by the end of this year. Additionally, and thanks to the efforts of the Texas Legislature, the new Texas Energy Fund is oversubscribed, demonstrating interest from investors seeking financing for almost 56,000 MW of dispatchable power generation projects.

[1] https://www.expressnews.com/opinion/commentary/article/texas-energy-needs-renewables-19554873.php

This growth should come as welcome news to all Texans seeking electric reliability, as the diversity will ensure competition that leads to lower costs.

Unfortunately, the transmission infrastructure that delivers our power is aging and will require significant upgrades and additions. Today, congestion on the transmission system dramatically raises costs and is increasingly having a material impact on reliability.

According to the Independent Market Monitor, ERCOT's economic watchdog, congestion costs exceeded $5 billion in 2022 and 2023 combined, and ERCOT's most recent energy emergency alert, issued Sept. 6 — the first since the winter freeze in 2021 — was largely due to constrained transmission lines in the South Texas region.

Encouragingly, regulators and policymakers are serious about addressing this issue, too.

Investments under consideration to support electric load growth in the Permian Basin, discussions around other high-voltage investments to strengthen reliability, and the Texas Legislature elevating this issue as a key item to discuss this interim offer significant optimism in the face of these challenges.

Still, since transmission is one of the most cost-effective and efficient tools to ensure Texans have a reliable and resilient power grid, we remain hopeful that greater consideration will be given to robust long-term planning and options to upgrade existing facilities so that gridlocked power can be set free to contribute to reliability.

If Texas wants to perpetuate our economic growth and prosperity, we must maximize the value of every available megawatt by leveraging the strengths of our energy diversity and investing in our infrastructure before it's pushed to the point of crisis. Picking winners and losers among energy resources, or failing to meaningfully improve the system now, will likely result in more costly and frequent reliability issues later.

Judd Messer is the Texas vice president of the Advanced Power Alliance.