

The US Electricity Crisis: Blackouts and High Prices

10

0

Save



In an aerial view, high voltage power lines run along the electrical power grid in West Palm Beach, Fla., on May 16, 2024. Joe Raedle/Getty Images



By Anders Corr

1/9/2025 Updated: 1/9/2025

Print

Commentary

The total demand for electricity in the United States is projected to increase by nearly **16 percent** over the next five years, which will increase prices and put greater demands on the grid. For the United States to stay competitive and avoid billions of dollars in damages related to blackouts, brownouts, and power fluctuations, new power plants and stronger grids must be built to meet the new demand and keep prices down.

At 5:30 a.m. on New Year's Eve, the power went off across most of **Puerto Rico**; 90 percent of users, including hospitals, water, and sewage plants, were affected. The outage reminded Puerto Ricans of Hurricane Maria, which turned off the lights for hundreds of thousands of people in 2017.

On Jan. 1, 500 customers lost electricity in **Bakersfield**, California.

Minnesota's power grid is another of the most at-risk, with relatively low reliability and a higher risk of electricity shortages.

Aging power generation and distribution grids are the cause of the problems. Consequently, blackouts, brownouts, and fluctuations in power delivery could cause billions of dollars worth of damage in the near future. Fluctuations damage electronics, and blackouts shut down refrigerators and gas heaters that rely on electricity. The result is frozen pipes and spoiled groceries.

Meanwhile, the cost of electricity continues to rise, partly because of up-front costs from the shift to utility-scale **solar and wind**. These renewable energy sources are often cheaper than coal, gas, and nuclear. They can augment existing systems inexpensively—but only when considering the price at the power plant if the sun is shining or the wind is blowing. When these optimal conditions stop, the energy they produce stops as well.

During downtimes, renewable energy requires backup coal, gas, or nuclear plants. The cost of renewable energy's reliance on these legacy power sources is usually not included in price comparisons that make solar and wind look cheap. **Longer transmission lines** and energy storage in the form of massive batteries are also required to store and

transport renewable energy from utility-scale hydro, wind, and solar plants to large cities that use most of their power. Coal, gas, and nuclear plants can more easily be located closer to their end users and adapt their output according to the time of day or season.

The focus on renewables may explain some of the [higher electricity costs](#) across America since 2020. In [California](#), America's [greenest](#) state, retail electricity costs have risen 73 percent since 2020. Vermont is the country's second-greenest state. Its retail electric prices rose by 17 percent over the same period. New York, which takes third place, saw its prices rise by 43 percent. The three least green states, however, have cheaper energy, and their prices generally rose less. West Virginia's prices rose just by 7 percent, Louisiana's price fell by 4 percent, and Alabama's price rose by 21 percent to just \$0.15 per kWh in October 2024. Compare that to Vermont's \$0.19 per kWh or California's \$0.28 per kWh.

The meteoric rise of energy-hungry forms of artificial intelligence (AI) is another reason that U.S. electric grids are not supplying consistent, inexpensive power to our homes and businesses. New AI data centers near places like Washington, D.C., Chicago, and Dallas are being built quickly and will increase their electricity demand by [160 percent](#) by 2030.

Asking ChatGPT a question, for example, requires approximately [10 times](#) the electricity of a normal web search. One AI image requires the electricity necessary to charge a smartphone from zero to 100 percent. Each AI data center typically requires its own dedicated transformer and substation and can pull the same amount of electricity as 10,000 homes. They tend to pull the power in a manner that fluctuates, which causes damaging disturbances to the power supply of homes and small businesses. The increasing electrification of America, including electric vehicles and cryptocurrency mining, compounds the problem.

In power transmission, irregularities in the delivery of electricity, known as "bad harmonics," could cause blackouts and brownouts. Even when the power appears to be working, bad harmonics can cause billions of dollars worth of damage to old power equipment and

home appliances. The threat is highest for the 3.7 million Americans who live in areas within about 20 miles of AI data centers, according to a recent Bloomberg analysis.

Regulators should approve upgrades and new power generation more efficiently and quickly. To prove that they are doing so, utility companies should be required to provide more granular data on power quality to U.S. regulators and the public.

New nuclear power generation technologies are safer than the older ones and more reliable than solar and wind. So nuclear will likely be an important part of America's future energy mix.

Coal and gas-fired plants are the cheapest to build and run when considering their reliability and low infrastructure costs. Yes, they cause more emissions. But, until China and India lower their own emissions, the United States cannot fix this problem alone.

Older power plants should be maintained until new generation sources are established at rates that do not bankrupt our homes and businesses. American competitiveness—and pocketbooks—hang in the balance.

Views expressed in this article are opinions of the author and do not necessarily reflect the views of The Epoch Times.

Sign up for the News Alerts newsletter. You'll get the biggest developing stories so you can stay ahead of the game. [Sign up with 1-click >>](#)



Anders Corr

Author

Anders Corr has a bachelor's/master's in political science from Yale University (2001) and a doctorate in government from Harvard University (2008). He is a principal at Corr Analytics Inc., publisher of the Journal of Political Risk, and has conducted extensive research in North America, Europe, and Asia. His latest books are "The Concentration of Power: Institutionalization, Hierarchy, and Hegemony" (2021) and "Great Powers, Grand Strategies: the New Game in the South China Sea" (2018).



Author's Selected Articles

America Is Stronger With the Right Kind of Immigrants

Jan 04, 2025



CCP Bludgeons China's Financial Sector Again: This Time to the Tune of \$100 Billion

Dec 31, 2024



Target China's Economy to Prevent an Invasion of Taiwan

Dec 27, 2024



China Drone Swarms and US Lasers: The Coming Revolutions in Warfare

Dec 21, 2024

