Kansas Corporation Commission

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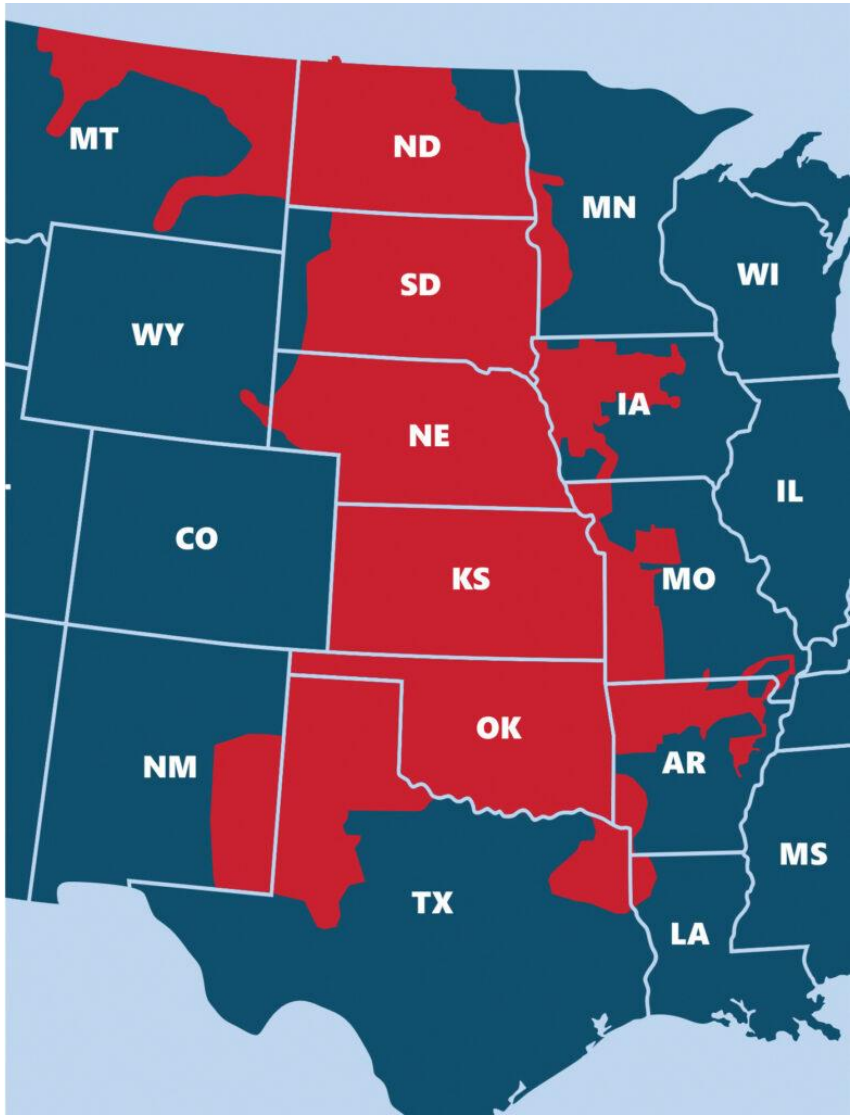
America's Power

- We advocate on behalf of the nation's coal fleet and its supply chain.
- Our members include electricity generators, coal producers, coal transporters, and equipment suppliers.
- Our outreach includes Congress, utility commissioners, other state officials, FERC, NERC, grid operators, the media, consumer groups, and other stakeholders.
- We support an all-the-above strategy because each electricity resource has its advantages.
- Coal will be needed for the foreseeable future as part of an all-the-above strategy.
- We (and others) have become increasingly concerned about resource adequacy and the loss of reliability attributes.
- We support a gradual grid transition as the best way to avoid resource adequacy and reliability problems.

Kansas Facts

• KS generating capacity	18,500 MW
• KS coal fleet in 2023	5,200 MW
• Past KS coal retirements	450 MW
• KS electricity mix in 2023	47% wind, 28% coal, 18% nuclear, 8% gas
• KS announced coal retirements 2024-2030	1,900 MW
• SPP announced coal retirements 2024-2030	4,900 MW (one-fourth of SPP's coal fleet)
• MISO announced coal retirements 2024-2030	22,000 MW (half of MISO's coal fleet)

Southwest Power Pool



Key Points

- Polling shows that reliability and affordability are far more important to electricity consumers than “clean energy.”
- The grid transition must be gradual to prevent electricity shortages and maintain affordable electricity rates.
- Coal is needed because of its high “capacity value” (a measure of dependability) and its reliability attributes (for example, fuel security).
- Replacement sources of electricity, mostly renewables, are less dependable than coal.
- Coal retirements are happening faster than most people realize, especially over the next 5 years. Utilities have announced the retirement of 60,000 MW of coal (one-third of the remaining coal fleet) during 2024-2028.
- EPA regulations will cause even more retirements and increase the chance for reliability problems.

Warnings about reliability

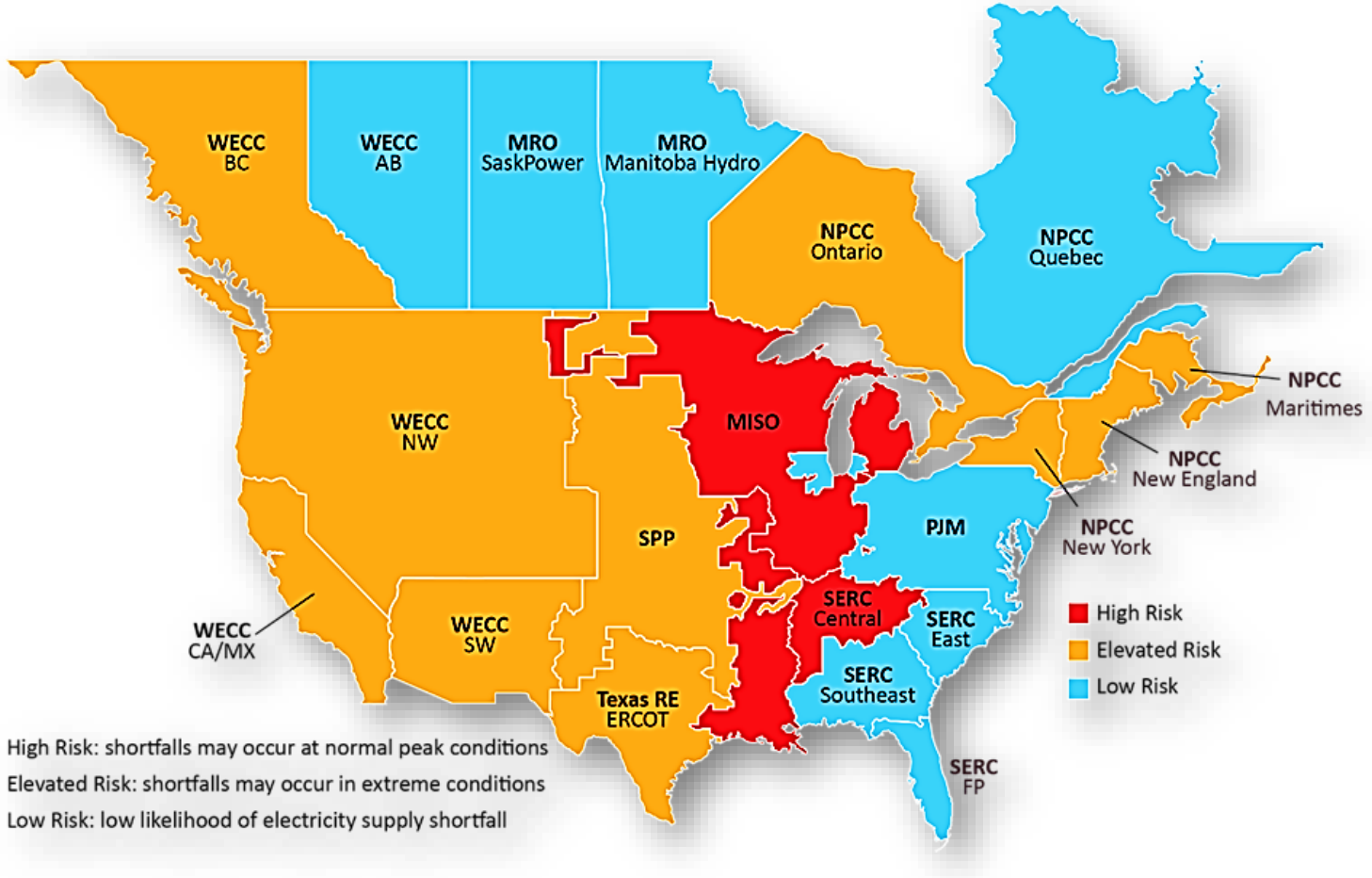
"If the EPA's new power plant rule survives court challenge, it will force the retirements of nearly all remaining coal generation plants and will prevent the construction of vitally needed new combined-cycle baseload gas generation. This loss of vitally needed dispatchable generation resources will be catastrophic." **Mark Christie, FERC Commissioner**

"As we pull any of these individual plants out, we've got to be mindful that we've got to replace not just the energy … but also the reliability benefits that they provide to the grid. And that's why we get concerned about the loss of traditional generation." **Jim Robb, NERC President and CEO**

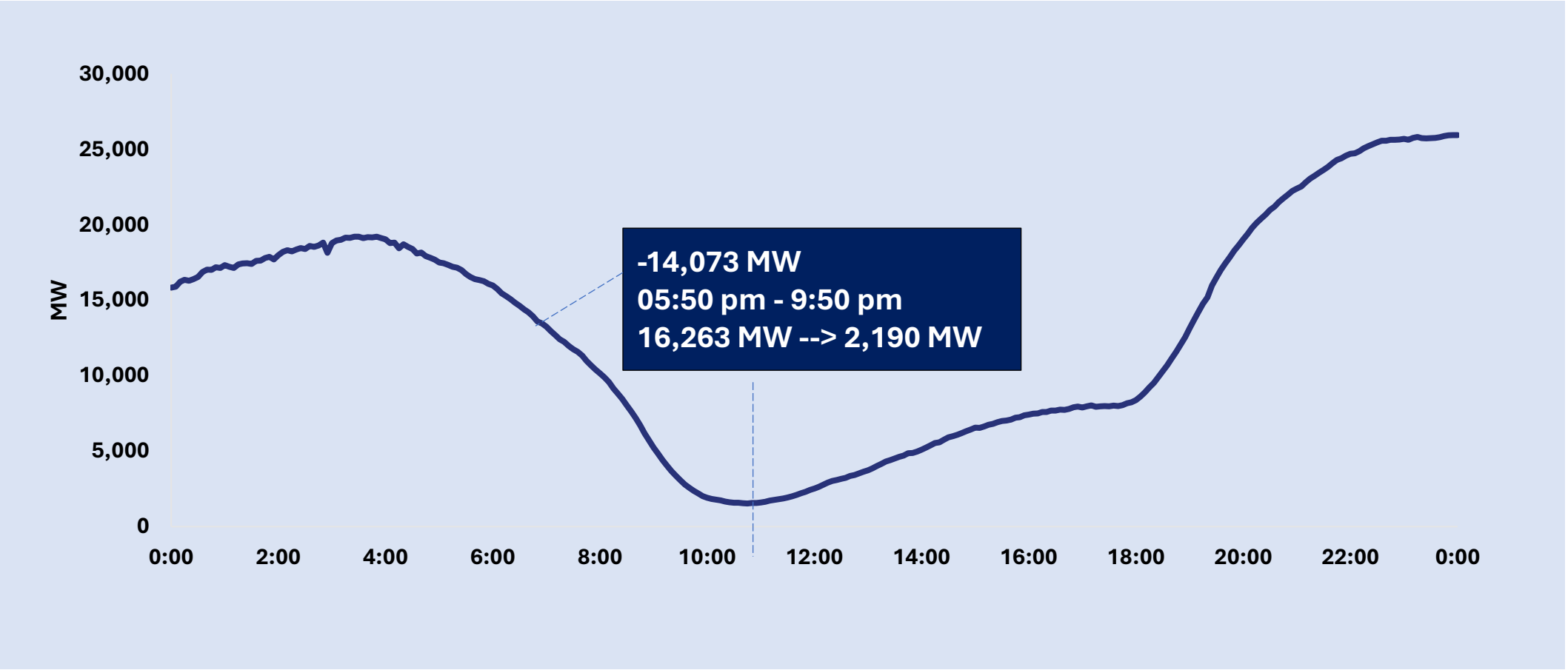
"Demand is growing in many areas at a rapid pace with the adoption of electric vehicles and construction of new data centers, straining some parts of the system." **Mark Olson, NERC Manager of Reliability Assessments**

"If EPA's [greenhouse gas] standards drive dispatchable coal and natural gas resources to retire before enough replacement capacity is built with the attributes the system needs, reliability will be compromised." **MISO Spokesperson**

Two-thirds of the U.S. is at risk of electricity shortages over the next 10 years (NERC, Dec. 2023)



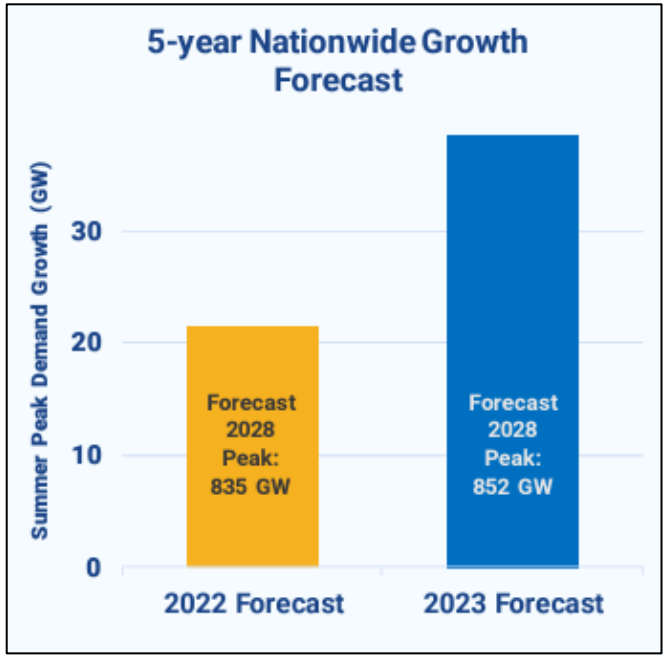
SPP's wind capacity fell 14,000 MW over four hours (2/18/24)



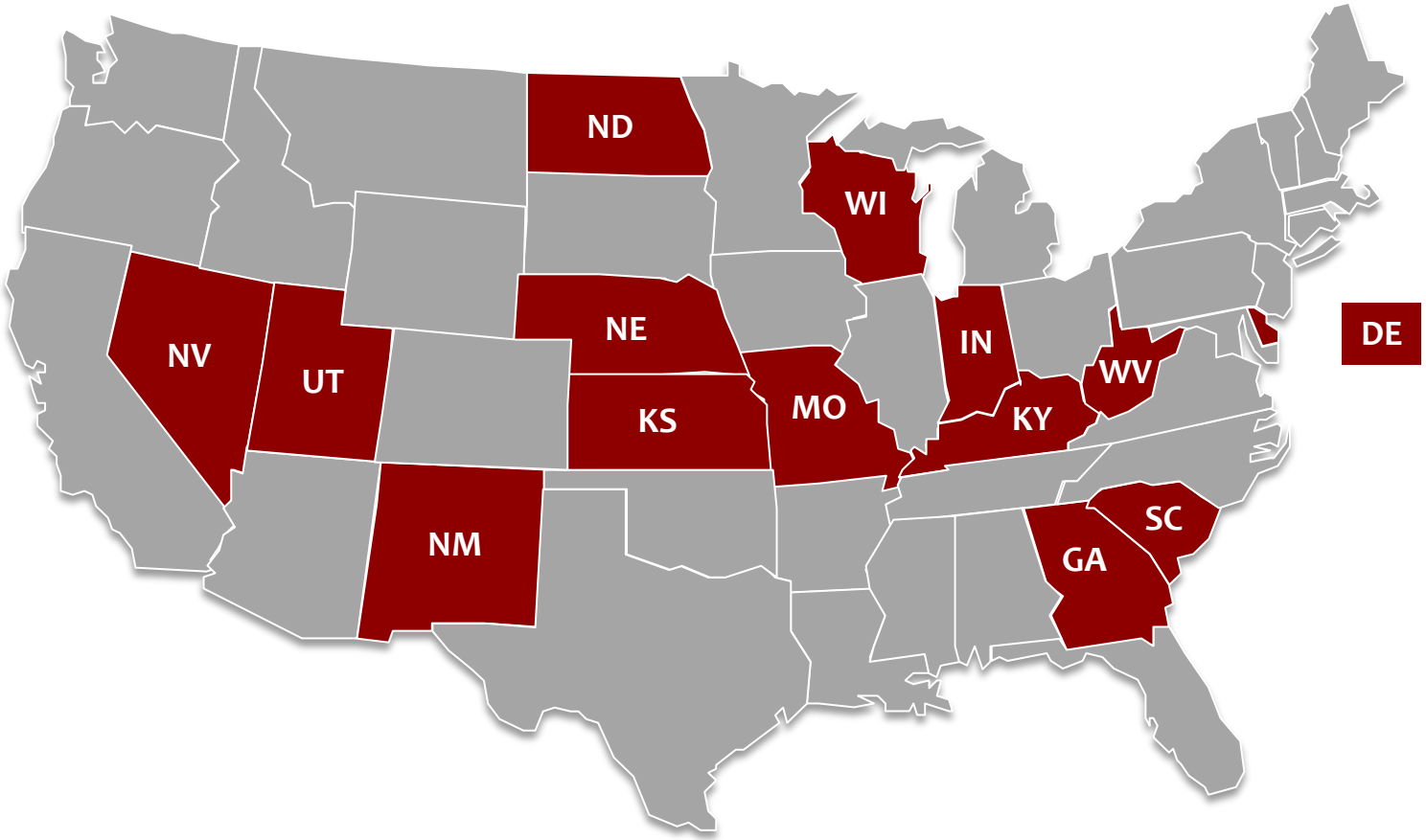
Source: SPP

Electricity demand is increasing dramatically

- Electricity demand had been flat for more than a decade.
- The nationwide 5-year forecast of electricity demand growth has almost doubled because of data centers, EVs, new manufacturing facilities, etc.
- The grid is not prepared for huge increases in electricity demand.
- One independent analysis says that at least 38,000 MW of new electric generating capacity is needed through 2028, although this figure is probably low.
- NERC estimates that 91,000 MW of new capacity will be needed because of load growth.



Utilities in 14 states (red) have reversed or delayed over 14,000 MW of coal retirements because of reliability concerns or load growth

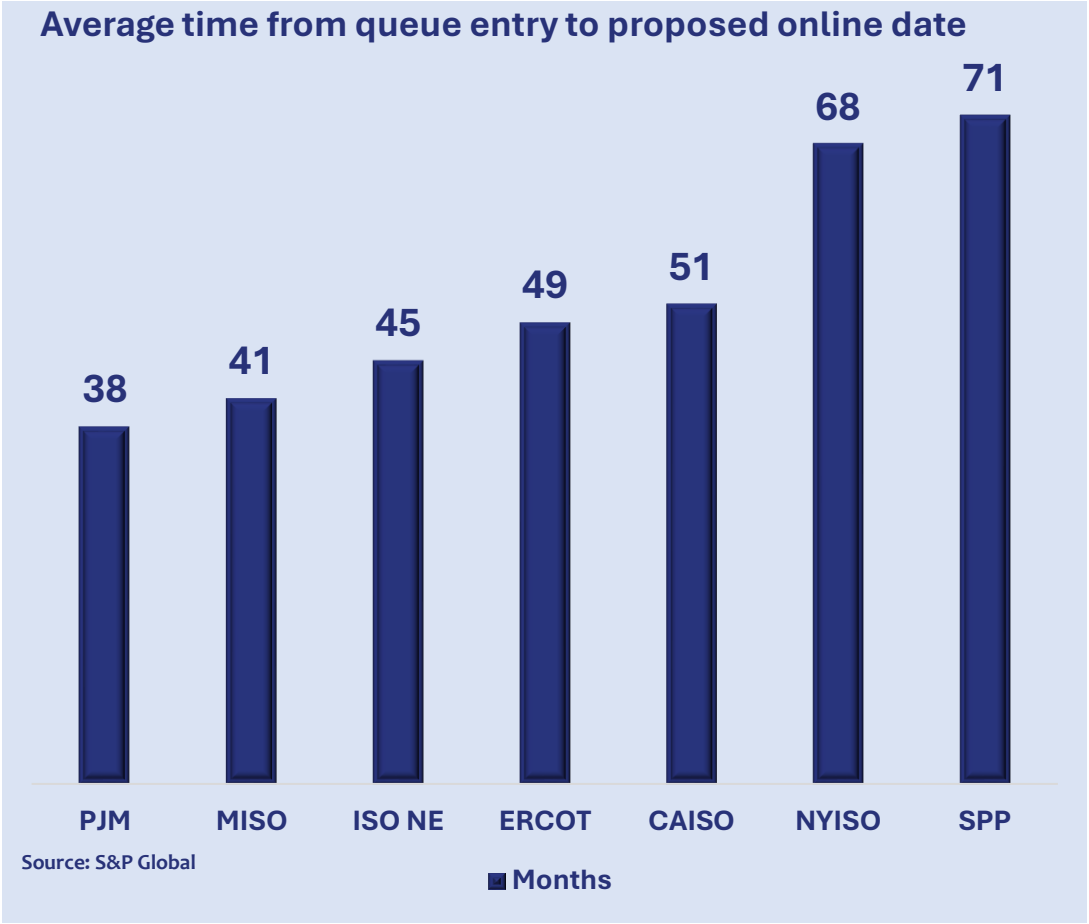


Data center electricity demand could double by 2030

- Data centers could consume 9% of the United States' electricity generation by 2030, according to EPRI.
- EPRI projects that data center electricity consumption in Kansas could grow by up to 165% by 2030.
- This year, data center load is expected to be 21 GW. By 2030, that could be over 80 GW, according to McKinsey projections.
- AI is driving this growth. An AI query uses 10 times the electricity of a typical Google search.
- At least 29 states have some form of data center incentives.
- About 80% of U.S. data center load last year was concentrated in 15 states, led by Virginia and Texas.

Clogged interconnection queues won't solve resource adequacy problems

- Interconnection queues nationwide totaled 2.6 million MW of projects at the end of 2023.
- 97% of these projects are renewables and storage.
- SPP had 145,000 MW in its queue at the end of last year. 95% were renewable or storage projects.
- Historically, only 14% of the capacity that enters the queues eventually comes online.
- Interconnection wait times have increased to over 5 years on average.
- Grid experts believe that recent reforms are not enough to address reliability concerns over the next 5 years to 10 years.



Six EPA rules will cause more coal retirements unless overturned in court, rejected by Congress, or withdrawn and rewritten by a new President

• Carbon Rule	Being litigated
• Mercury and Air Toxics Standards	Being litigated
• Effluent Limitations Guidelines	Being litigated
• Ozone Transport Rule	Being litigated; stayed by SCOTUS
• Coal Combustion Residuals	Being implemented
• Regional Haze	Being implemented

PJM, MISO, SPP and ERCOT oppose harmful Carbon Rule

The four grid operators "… request that the Court remand the Final Rule back to EPA, with instructions for it to adequately consider the … grid adequacy and reliability issues [grid operators] previously raised ….."

"The Joint ISOs/RTOs are concerned that premature retirements of generating units that provide critical reliability attributes can have significant, negative consequences on reliability."

The four grid operators "… are also concerned about the chilling impact these collective rules will have on the investment required to retain and maintain existing units that are needed to provide key reliability attributes and grid services before the Final Rule's compliance date."

"In the Final Rule, EPA did not adequately consider or address potential impacts of the Rule on wholesale electricity markets or generation owners' decisions to continue or cease operations."

Five measures to avoid a reliability crisis

1. Dispatchable generating capacity should not retire until replacement capacity is in operation.

2. The replacement capacity should have at least the same accredited capacity and other reliability attributes as the retiring capacity.

3. Any electric transmission that is needed because of the replacement capacity should be built, not simply planned or under construction. (Also, the cost of any new transmission should be considered in deciding whether it is economical to retire existing capacity.)

4. Grid operators should identify and value all attributes that are necessary to maintain grid reliability.

5. EPA should design its rules to ensure they will not undermine reliability.

DEPENDABLE POWER FIRST

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