COUNTONCOAL

Global Context Matters

June 18, 2025

When it comes to energy, coal production and use, China is in a league of its own.

China generated over 10,000 terawatt hours of electricity in 2024. That's more than the combined output of the U.S., E.U. and India—the next three biggest producers.

China's electricity production has skyrocketed. Remarkably, as recently as 2010, the U.S. and China produced roughly the same amount of electricity. Now they all but don't fit on the same chart.

From traditional industries to those at the leading edge, the scale of Chinese production and consumption is extraordinary.

China produces more than half of the world's steel and cement. It also produces 70% of the world's electric vehicles (EVs). Of the 17 million EVs sold globally in 2024, more than 11 million were sold in China.

Powering China's industrial engine is coal. China not only produces more coal than the rest of the world combined, but it in fact also now consumes nearly 40% more coal than the rest of the world combined. That's not a typo.

Renewable energy is growing rapidly in China, but coal remains China's electricity workhorse, supplying more than 60% of the nation's power. And Beijing is only doubling down.

China began building 94.5 gigawatts (GW) of new coal-power capacity and resumed 3.3 GW of suspended projects in 2024, the highest level of construction in the past decade. China also isn't replacing or closing any of its existing coal capacity. Coal plant retirements dropped to just 2.5 GW last year. In other words, China remains firmly in an era of coal addition.

China's coal generating fleet is now approaching 1200 GW. The U.S. coal fleet, for comparison, stands at about 175 GW.

India too is only deepening its reliance on coal to power its economy and tackle its ongoing fight with energy poverty. Already the world's second largest coal consumer, India saw demand jump another 5.5% in 2024.

Coal now provides 74% of India's electricity and state-run Coal India is working on further boosting domestic production, recently announcing plans to reopen 32 closed mines and launch five new greenfield mining projects this year.

As Asia goes, so does coal. Asia now accounts for more than 80% of global coal demand and underpins coal's position as the world's leading fuel for electricity generation.

Global coal demand reached a new high in 2024 and is likely to continue its ascent. Irreplaceable to energy security, affordability and for meeting rapidly rising energy demand, coal is a cornerstone the world is building upon. This is energy addition, not transition. It's context worth remembering.

COUNTONCOAL

Aligning Energy and Regulatory Policy With the AI Movement

June 11, 2025

It has become hard to overstate the impact AI and data centers are having on the power sector. This is an industrial revolution on an extraordinary scale.

At a Federal Energy Regulatory Commission (FERC) conference on grid reliability last week, regulators and grid operators once again sounded the alarm over the challenges they collectively face in affordably and reliably meeting the extraordinary demand they know is coming.

"AI is going to change our world," said Manu Asthana, CEO of the PJM Interconnection, the nation's largest grid serving 67 million customers. "In our forecast between 2024 and 2030, currently we have a 32-gigawatt increase in demand, of which 30 is from data centers," he said. That increase is equivalent to adding 20 million new homes to the grid in the next five years.

Lanny Nickell, CEO of the Southwest Power Pool, the grid operator for the Great Plains states, said "we are now projecting our peak demand to be as much as 75 percent higher 10 years from now, and that's largely driven by electrification and data center growth."

This surge in demand is colliding with rapidly eroding grid reliability. Across the country, grids are already struggling to meet peak demand and forecasting shortfalls in needed capacity by the end of the decade.

Not even accounting for the latest demand projections, the North American Electric Reliability Corp. (NERC), the nation's reliability watchdog, warned in December that more than half the nation faces the threat of blackouts over the next decade as demand overwhelms reliable supply. NERC specifically warned that new generating capacity and infrastructure is simply not being built fast enough. That remains truer today than ever.

"Stop Digging the Hole"

Data centers are "an accelerant to almost every sort of resource adequacy issue that we have, and if you combine that pace with the sort of growing schedule to build and complexity in building fossil generation, or thermal generation, dispatchable … we don't have time to waste," Adam Keech, PJM vice president of market design and economics, told the FERC conference.

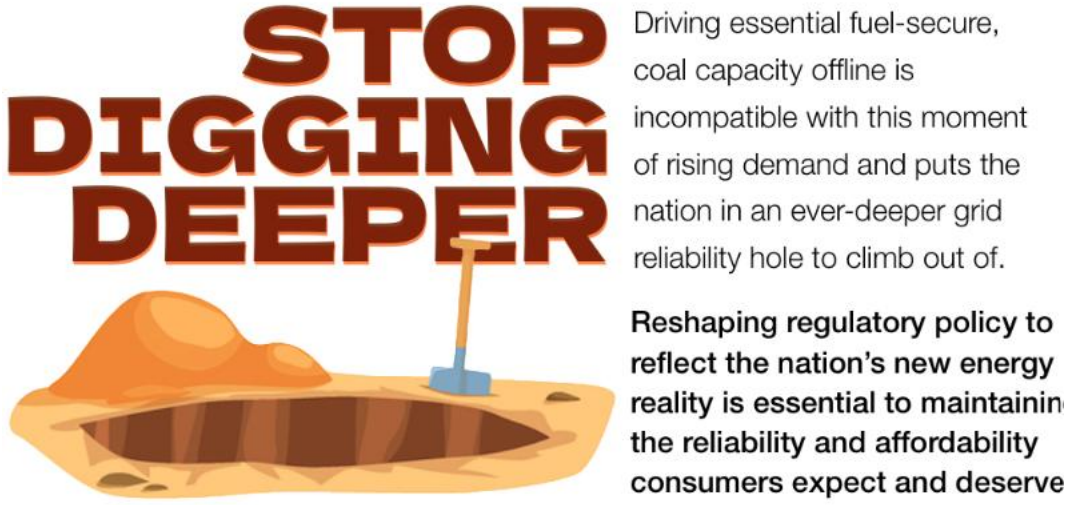
Keech then zeroed in on the critical answer to keeping the lights on and maintaining reliability: "So if we want to keep the resources we have, that's an option… If we lose the resources we have, the hole gets even deeper to dig out of," he added.

Secretary of Energy Chris Wright offered the exact same message this spring: "we've got to not only grow new production, but we've got to stop digging the hole, which means stop shutting down existing, viable, economic plants."

The dispatchable resources already on the grid are more valuable than ever. Surging capacity prices in PJM and the Midcontinent Independent System Operator (MISO) have confirmed as much.

As Mark Christie, Chairman of FERC recently observed, "One thing we know with no need for further proof: This country, including MISO, is heading for a reliability crisis caused by early retirements of dispatchable resources coupled with the failure to construct sufficient equivalent capacity, all while demand rises at an unprecedented pace largely driven by data center growth."

Driving essential fuel-secure, coal capacity offline is incompatible with this moment. Reshaping regulatory policy – at both the federal and state levels – to reflect the nation's new energy reality is essential to threading the needle of enabling the AI revolution and electrification while also maintaining the reliability and affordability consumers expect and deserve.



COUNTONCOAL

Racing to Cover Capacity Shortfalls

June 4, 2025

Need more evidence we're in a power supply emergency? Look no further than how the nation's grid operators are scrambling to fast-track interconnection of new dispatchable resources that can shore up eroding reliability.

From the Great Plains to New York, operators are frantically trying to revise interconnection processes to get new generation added to grids faster and prioritize resources that can bolster rapidly dwindling reserve margins. There is an urgency – bordering on panic – to meet rising demand and get more dispatchable power onto grids.

The Southwest Power Pool (SPP), with a grid stretching from eastern New Mexico up through North Dakota, was the latest grid operator to ask the Federal Energy Regulatory Commission (FERC) to approve its Expedited Resource Adequacy Study process, which would fast-track connection agreements for power plants.

In petitioning FERC, SPP officials were direct on the need, saying their grid is "on the precipice of a resource adequacy crisis." SPP highlighted a study showing that by 2027 available generating capacity is projected to dip below required reserve margins, leaving the grid vulnerable to demand spikes and power plant failures that threaten to overwhelm supply.

The situation is so dire SPP projects it will have insufficient capacity to meet peak demand in 2030, instead facing a 17-gigawatt shortfall, equivalent to the power needed for 12 million homes. Remarkably, SPP warns that even if every power project included in the fast-track study comes online by 2030, it won't be enough.

Across the country, New York Independent System Operator (NYISO) is also warning about eroding reserve margins.

"We must consider all options for investing in the grid to provide for reliability and certainty at the most efficient cost," wrote NYISO President and CEO Rich Dewey. "The addition of new dispatchable generation needs to

be considered in the near term to mitigate the dual risks of accelerated load growth and aging infrastructure," he added.

"No need for further proof"

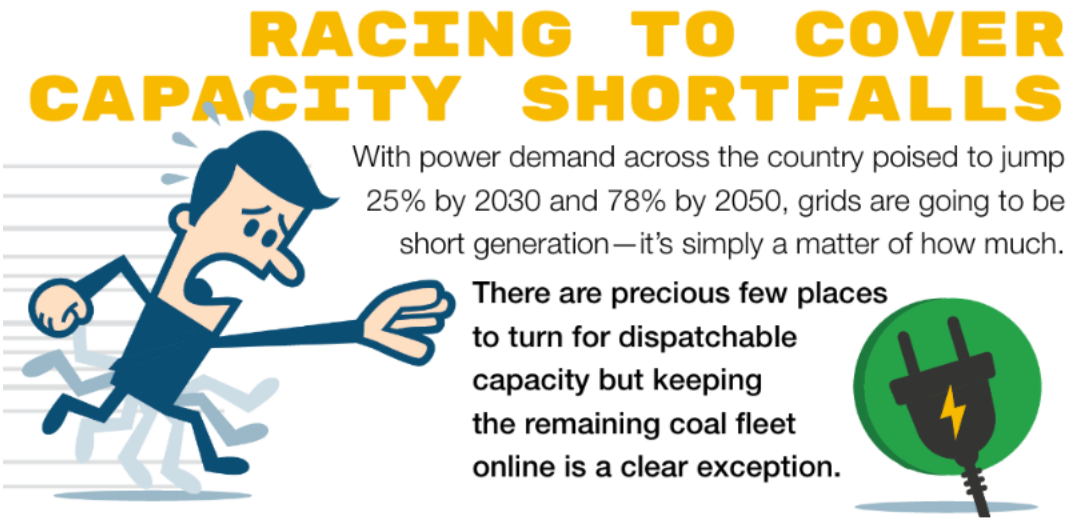
The Midcontinent Independent System Operator (MISO), which manages the grid covering much of the Midwest, is already facing razor-thin reserve margins and a potential 14 GW capacity deficit by 2029. Its attempt to reform its interconnection process and quickly get more dispatchable capacity online was voted down by FERC in May for being insufficient to address teetering reliability.

Even as FERC asked MISO to rework its proposal, FERC's Chairman Mark Christie wrote, "One thing we know with no need for further proof: This country, including MISO, is heading for a reliability crisis caused by early retirements of dispatchable resources coupled with the failure to construct sufficient equivalent capacity, all while demand rises at an unprecedented pace largely driven by data center growth."

While FERC has approved a fast-track process for PJM, the nation's largest grid and wholesale market, it remains unclear if the interconnection reforms will deliver the desired results for reliability. PJM has selected 51 projects for fast-track review representing 11.8 GW of capacity, the majority natural gas generation. But even in PJM, which overlaps the prolific Marcellus shale gas field, existing gas power plants are pipeline constrained and have faced fuel delivery challenges during winter storms.

There's simply no guarantee that any of this, on any grid, will make the kind of impact operators need. With power demand across the country poised to jump 25% by 2030 and 78% by 2050, according to recent analysis from ICF International, grids are going to be short generation. It's simply a matter of how much.

There are precious few places to turn for dispatchable capacity but keeping the remaining coal fleet online is a clear exception. Doing so may well be the key difference between managing our mounting reliability crisis or watching it overwhelm an overstretched and under-supplied grid.



COUNTONCOAL

A Grid Emergency in Miso

May 28, 2025

Well, that didn't take long. Before the boiling heat of summer has even officially arrived, the lights went out in the Midcontinent Independent System Operator (MISO) region.

More than 100,000 customers in and around New Orleans went without power for most of the day on Sunday when MISO was forced to order rotating outages in Louisiana to preserve the stability of the grid when power demand eclipsed supply.

Just two days before, Secretary of Energy Chris Wright issued an emergency order to keep the 1,560 MW J.H. Campbell power plant in West Olive, Michigan running through the summer to bolster the MISO grid. While that power plant couldn't come to the rescue of folks in New Orleans 1,000 miles south, preserving it may save hundreds-of-thousands from a similar fate this summer.

In issuing the emergency order, the Department of Energy (DOE) cited a North American Electric Reliability Corp. summer reliability assessment that found MISO – along with several other grids – faces an elevated risk of

power outages during stressed periods of peak demand. DOE also cited MISO's recent capacity auction which saw prices jump 2,100% from a year earlier—an unmistakable indication of tight operating conditions and the need for more capacity.

Following the auction, MISO reported surplus capacity on the grid fell to about 2.6 gigawatts (GW), down from 4.6 GW last year, a razor-thin margin. "The results reinforce the need to increase capacity, as demand is expected to grow with new large load additions," MISO said.

Yet, the J.H. Campbell plant was slated for closure this month not because the capacity isn't needed – the market was screaming otherwise – but because of a regulatory push to eliminate coal from Michigan's grid. DOE stepped in because the math is simple: grids across the country need more dispatchable capacity, not less. Tearing down existing, well operating power plants amid a supply crisis is nonsensical.

A Grid Pushed to the Limit Just Last Summer

The anti-coal crowd has unsurprisingly blasted DOE's emergency order, claiming Michigan and the MISO territory the plant serves are sufficiently supplied. But to rebut that claim all one need to do is rewind to last summer to see how essential every MW of dispatchable capacity remains to the MISO grid.

On August 26 of 2024, amidst broiling heat across the Midwest, MISO issued a maximum generation event with power demand soaring to 122 gigawatts (GW). MISO was so short of generation it even needed to import 8 GW of power from PJM, enough to meet the demand of six million homes. And now, facing its own tightening supplies, surplus power from PJM is unlikely to be available for long. PJM expects to be short of capacity during periods of peak demand by 2030, if not sooner.

Following that maximum generation event last summer, Federal Energy Regulatory Commission Chairman Mark Christie took to Twitter with analysis of the generating sources that shouldered the load and kept the lights on.

In MISO, coal and natural gas supplied roughly 70% of demand during the heatwave's most intense hours. Together with nuclear power, these dispatchable resources met 90% of demand when it was needed most. On the PJM grid next door, where demand reached 148.3 GW, dispatchable

resources also met 90% of demand.

Christie observed, highlighting the importance of dispatchable capacity, "MISO and PJM expect substantial retirements of dispatchables in coming years… Two lessons: 1. Loss of dispatchables threatens reliability. 2. Interregional transmission supports reliability IF there is surplus power to transmit, but if neighboring grid operators lean on each other for imports, both fall down when neither has surplus power to export."

A 14 GW Capacity Deficit

If grids across the country are stumbling towards capacity shortfalls, which appears to be exactly what is happening according to recent analysis from ICF International, there will be no surplus to share.

Just last summer MISO warned that without delays of power plant retirements it could face a deficit of 14 GW in capacity by 2029—a deficit equivalent to the power needed for 10 million homes. MISO CEO John Bear plainly warned, "we've got a lot of work to do to slow down the retirements and speed up the additions coming onto the system."

Let's cross our fingers that another rolling blackout like the one in Louisiana doesn't hit MISO again this summer. But if the J.H. Campbell plant does help bail out a grid pushed to its limits this summer, let's hope the very folks criticizing Secretary Wright thoroughly enjoy their air conditioning.

COUNTONCOAL

A Demand and Price Shock

May 24, 2025

As electricity prices continue to rise and grid reliability warnings proliferate, electricity demand projections are only growing more aggressive.

A new report from consulting group ICF International sees U.S. electricity demand jumping 25% by 2030 and 78% by 2050 compared to 2023. That surge in demand will have huge impacts on already teetering reliability and could send retail electricity prices skyward if energy policy doesn't meet the moment.

According to the report, generating capacity reserve margins could fall into alarming territory as soon as 2030. If challenges persist in getting new capacity to the marketplace, and retirements of existing dispatchable capacity aren't checked, much of the country wouldn't be able to meet peak electricity demand as soon as 2028.

This rapid rise in demand could also push up electricity prices 15% to 40% in the next five years depending on the market response. By 2050, retail rates could double.

That startling increase in electricity prices would come on the shoulders of an existing jump already weighing on consumers.

Outpacing Inflation

According to recent analysis from the U.S. Energy Information Administration (EIA), retail electricity prices have increased faster than the rate of inflation since 2022, jumping 13%. In some parts of the country, the jump has been far steeper. In California, for example, electricity prices jumped 82% over the past 10 years.

Driving much of the rise in cost has been increased capital spending on new infrastructure to integrate wind and solar resources. EIA says utility spending on electricity distribution has in fact surpassed spending on electricity production—a timely reminder of the system costs of increased reliance on variable power.

Of course, also driving up costs are surging prices in key capacity markets. Capacity payments – an insurance premium paid to generators to ensure their availability during peak demand – jumped 800% in the PJM market last year and 2,100% in the MISO market this spring.

Facing the erosion of their reserve margins, electricity markets are trying to send signals to add more dispatchable generating capacity and keep the capacity already on the grid operating—a sharp rebuke to the Biden administration's efforts to force well operating coal capacity into early retirement.

The nation's energy regulators recognize we're facing a power supply crisis, and that misguided policy is largely to blame. The U.S. is "losing dispatchable generation at a pace that is not sustainable and we are not adding sufficient equivalent generation capacity," Federal Energy Regulatory Commission Chairman Mark Christie recently observed.

As ICF and others grapple with the demand challenge now on the horizon, calls for an all-of-the-above approach are a common refrain. What must be a centerpiece of that effort – what the Trump administration clearly recognizes – is the criticality of keeping existing coal generating capacity available.

The nation's coal fleet is the single largest source of dispatchable capacity, unconstrained by pipeline or fuel availability, able to immediately meet rising demand.

In other words, these plants are our reliability – and affordability – backstop. We'd be wise to prioritize keeping them around.