COUNTONCOAL

Powering the AI Moment

September 3, 2025

Big tech's scramble to deploy ever-larger data centers—each with the electricity needs of entire cities or states—to serve AI is rapidly transforming electricity markets and our electricity grid.

As *The Wall Street Journal* recently observed, utilities are receiving requests for extraordinary amounts of power: "Take American Electric Power, a big utility that serves 11 states, and Sempra's Texas utility Oncor. Combined, they have received requests to connect projects, many of them data centers, to the grid requiring almost 400 gigawatts of electricity. That is an astronomical amount that represents more than half the peak electricity demand in the Lower 48 states on two hot days in July."

Whether all this potential demand turns into firm commitments remains to be seen but the demand growth already locked in requires not just building new generating capacity but getting more power from the dispatchable capacity already on the grid.

The Trump administration's recently released AI Action Plan includes as its leading energy policy recommendation to "prevent the premature decommissioning of critical power generation resources and explore innovative ways to harness existing capacity." The coal fleet is the critical infrastructure with excess capacity able to meet the moment—it's gigawatts of additional capacity hiding in plain sight.

Watch our new video on the AI power demand challenge and the role the coal fleet should play in meeting it.

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China's Abundance Agenda

August 27, 2025

China continues to chart its own energy path, positioning the industrial giant remarkably well for the age of electrification and the voracious energy appetite of AI.

While the West was tearing down baseload generation in favor of the promise of renewable energy – leading to mounting reliability concerns and a European energy crisis following Russia's invasion of Ukraine – China has pursued a policy of energy addition.

President Xi Jinping, hedging his bets against the challenges of integrating renewable energy, in 2022 laid out how China's energy strategy would differ from the West. China, he said, would follow "the principle of building the new before discarding the old." And build – both renewable power and coal generation – China has.

China's abundance agenda has it both lapping the world in the deployment of renewable energy and rapidly expanding – not just maintaining – the world's largest coal fleet.

In just the first half of this year, China added 268 gigawatts (GW) of new solar and wind power, an extraordinary amount nearly equal to all of the wind and solar the United States has ever built. By one calculation, China is installing solar at such a pace it's equivalent to adding 100 solar panels every second.

This renewable surge is coming on the shoulders of the rapid expansion of the world's largest coal fleet.
China commissioned 21 GW of coal power in the first half of the year with projections for the full year exceeding 80 GW.

This year's expansion of the coal fleet comes on top of a surge in coal permitting during 2022-2023 when China was permitting more than two new

coal plants per week. Notably, these coal additions are not replacing existing coal plants. Just 1 GW of coal capacity has been retired this year. Coal is the foundation of China's industrial and economic might and that shows no signs of changing. China now uses nearly 40% more coal than the rest of the world combined.

China's remarkable growth strategy has turned it into an electricity behemoth. As recently as 2010, China and the U.S. generated the same amount of electricity. No longer. Last year, China generated more electricity than the combined output of the U.S., E.U. and India—the world's next three largest producers.

Coal as Bridge Fuel Away from Oil

If there is any energy transition to be found in China, it's not away from coal, it's away from oil.

As Clyde Russell, the Asia commodities editor for Reuters, observed, the rapid electrification of the Chinese economy appears to be a strategy to break Beijing's reliance on oil imports. "Instead of pushing out coal, it appears that the fuel being most targeted by renewables in China is crude oil," says Russell.

Despite auto sales in China jumping 11.4% in the first half of 2025 to 15.65 million vehicles, Chinese oil demand is barely budging. Sales of battery electric and plug-in hybrid vehicles has surged 43% in the same period to 6.94 million vehicles. EVs are beginning to significantly impact Chinese oil demand. In fact, last year China's crude oil imports fell 1.9%.

China – now the world's first electro-power – is at, or very near, peak oil demand. As Russell concluded, "in some weird way, coal is turning out to be China's transition fuel from crude oil to renewables."

In the coal and renewables combination, China has found a pathway to energy security and the vehicle on which to drive its economy. For China, energy security propelled by energy abundance has always come first. As we try to catch up in the new industrial arms races of the 21st century, that's a lesson we would be wise to learn.

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Natural Gas Prices are Rising. Can Coal Soften the Blow?

August 20, 2025

America's natural gas abundance – an economic and industrial boon – has also now become a deeply concerning consumer vulnerability. Gas is the leading fuel for electricity generation, heating and manufacturing, and the U.S. has now also become the world's largest liquified natural gas (LNG) exporter with U.S. LNG export capacity set to double by 2028.

The surge in LNG export capacity is likely to make the U.S. gas market increasingly sensitive to global gas prices. With energy trade a centerpiece of the Trump administration's trade negotiations, overseas demand for U.S. gas is only growing.

America's LNG export boom is also now converging with soaring demand for natural gas from the nation's electricity hungry data centers whose power demand is expected to triple by 2028.

While gas reserves remain abundant, expanding pipeline capacity to accommodate so much new demand is not keeping up. In large parts of the

country, gas pipeline capacity is already fully subscribed with supply contracts simply unavailable.

Pressure is building on both natural gas prices and – because of gas' importance to electricity generation – on power prices. Energy affordability hangs in the balance.

Accelerating Energy-Driven Inflation?

Since 2022, electricity prices have risen faster than inflation. In the past year, electricity costs have jumped 4.5%, fully double the rate of inflation. Rising electricity demand, tightening power supply margins and rising spending on the nation's aging energy grid are all to blame but so is a significant rise in natural gas prices.

A year ago, the Henry Hub price for natural gas was just $2.07 per million BTU. Today it's now $3.20 per MMBtu and forecasted to rise significantly higher. The U.S. Energy Information Administration (EIA) expects the Henry Hub spot price to average $3.60 per MMBtu in the second half of 2025 and $4.30 per MMBtu in 2026.

For many Americans, there's no escaping a natural gas price squeeze. For every dollar increase in natural gas, U.S. consumers pay on average $34 billion more for gas and $20 billion more for electricity, or $54 billion annually. Natural gas prices have already jumped more than $1 in a year. Another $1 jump, as the EIA is forecasting, would put the total annual rise in natural gas-driven consumer costs at over $100 billion.

Price Shock Absorber

The U.S. coal fleet provides an irreplaceable hedge against a sharp rise in gas prices. The fleet, which underpins U.S dispatchable fuel diversity, is the nation's electricity prices shock absorber.

As gas prices rise the coal fleet can pick up market share, relieving pressure on gas prices, and holding down electricity prices in markets with significant coal capacity. Through the first quarter of the year, U.S. coal consumption was up 18% year-over-year. The EIA expects U.S. coal generation to jump 6% for the year. It's currently on pace for an even higher rise. If gas prices continue to climb, you can count on it.

With power and natural gas demand soaring, and immense challenges facing renewable capacity and energy infrastructure additions, the coal fleet will be invaluable in tempering mounting energy costs.

It's startling to imagine just how dire both our reliability and energy affordability trajectory would be if the prior administration's agenda remained in place.

Fortunately, the Trump administration has made preserving the U.S. coal fleet and expanding U.S. coal production a priority in its energy abundance agenda. Not only does the administration see the fleet's remarkable value in shoring up the nation's shaky grid reliability, particularly during periods of peak power demand, but the administration also recognizes the critical importance of dispatchable fuel diversity. That optionality is going to prove essential in the months ahead.

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Planned Coal Plant Retirements Crash into Energy Reality

August 13, 2025

Utilities are grappling with an unshakeable reality: they can't meet soaring power demand without the existing coal capacity they have.

One after another, utilities are dropping plans to close plants or are kicking retirements far down the road. Deliberately removing dispatchable capacity from grids at the same time they are facing record breaking—and growing—electricity demands, would be an own goal that defies logic.

Just this summer, three more utilities have joined the ranks of those pumping the breaks on plant retirements.

New Mexico's 1,500 Megawatt (MW) Four Corners coal power plant, which had been scheduled for retirement in 2031, will now operate until 2038. Arizona Public Service (APS), the majority owner of the plant, said "in short, coal is an important part of our balanced energy mix today, and we will not exit it any earlier than is in the best interests of our customers to ensure reliable service at the lowest cost possible."

APS had committed to the early retirement of the plant just two years ago – even exploring ways to close the plant earlier than 2031 – but an unprecedented surge in demand has changed APS' plans. APS now forecasts it will have to add 60% more generating capacity by 2038 to meet projected peak demand. Just last week, APS set a new peak demand record—the third time this summer that has happened.

The story is much the same in Kentucky where Louisville Gas & Electric and Kentucky Utilities announced on July 29 their plans to extend the life of the Mill Creek coal power plant, citing "record-breaking economic development needs," notably from data centers. The utilities now expect up to a 45% jump in demand in less than a decade.

The planners at the Tennessee Valley Authority are following the trend. TVA

had been planning to close all its coal power plants by the year 2035 but that timeline is now out the window. TVA is seeing "explosive growth across our region." And you guessed it, rapid AI data center development is a leading driver. TVA sees 11 GW of new demand on the horizon, the equivalent of the power needed to for 6 million homes, roughly one-third of TVA's entire power grid.

These three recent announcements add to a list of at least 40 other coal-fired power plants that have delayed closures in just the past three years.

Coal Demand is Up

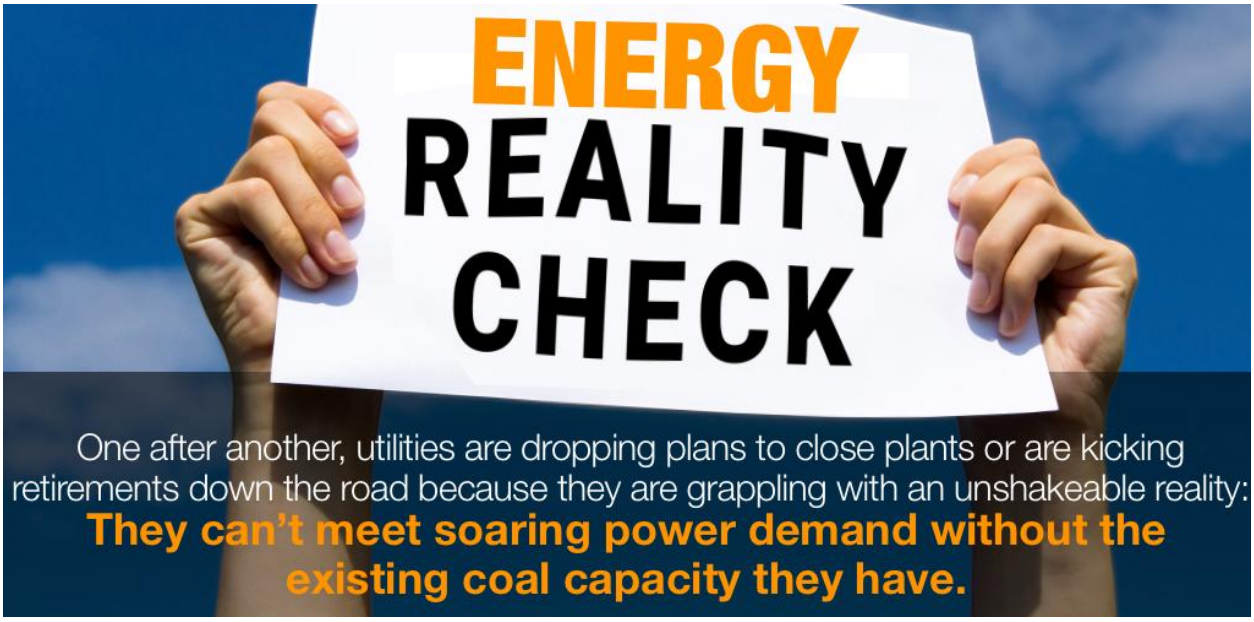
Rising power demand is already being met by coal. The U.S. Energy Information Administration recently projected a 6% increase in U.S. coal consumption for 2025. On some grids, the rise is far more pronounced.

On the Midcontinent Independent System Operator grid, which stretches up the Midwest from Louisiana to Minnesota, coal generation has eclipsed year prior totals for eight straight months. In July, it was 17% higher from a year earlier.

On the PJM grid next door, the nation's largest, coal demand is also up, and a recent capacity auction confirmed what the grid operator has been warning for years: the grid simply can't meet soaring demand if it loses any more coal capacity.

After jumping 800% a year prior, capacity prices across PJM hit a newly installed price cap this summer—a clear signal to bring new capacity to market but an even clearer signal not to retire any existing capacity. PJM's newly updated demand forecast sees 32 GW of new demand by 2030, with 30 of it coming from data centers.

As Mark Christie, the outgoing Chairman of the Federal Energy Regulatory Commission, told *The Washington Post* earlier this year, "coal is going to be around for longer than people thought. Because coal is a key component of keeping our lights on and our heat pumps running." He added, "We're going to need all these resources. We're going to need uprated nuclear, we're going to need more combined-cycle gas, and we're going to need to keep the existing coal plants running."



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J.H. Campbell Comes to the Rescue in MISO

August 6, 2025

When Secretary of Energy Chris Wright used emergency authority to extend the life of the J.H Campbell coal plant in Michigan at the end of May, the decision was met with a broadside of a criticism. To the anti-coal crowd, the move was a bail out, a solution in search of a problem and a ratepayer boondoggle.

But two months on, there's quite of bit of crow to be had and it's not the Secretary of Energy who will be doing the eating.

The decision to extend the life of the plant was made to bolster grid reliability on the Midcontinent Independent System Operator (MISO) grid which has seen its reserve margins erode into dangerous territory. And bolster the grid is exactly what J.H. Campbell has done.

While the Secretary's order ensured the plant must be available during the summer, whether it dispatched power would be based entirely on need and economics. With data starting to come in for plant operations through June,

we now have our answer.

Not only was J.H. Campbell needed, it was all but irreplaceable in helping MISO navigate an oppressive heatwave that forced operators to initiate a maximum generation event, calling upon every megawatt of power available to keep the lights on and ACs running.

During the heatwave, the 20th through the 24th of June, the largest unit at J.H. Campbell – which can generate nearly 800 megawatts of power – was running full out. In total, the plant was pumping more than a gigawatt of power onto the MISO grid as operators scrambled for generation.

The plant wasn't just needed during the heatwave. During the full month, J.H. Campbell ran at a capacity factor of 66%.

Saving the Grid and Ratepayers Money

While critics were adamant the plant wouldn't be needed this summer and that it would be a financial burden, just the opposite is true.

Not only has the plant buttressed MISO's razor-thin supply of power, but publicly available data shows the plant has in fact saved ratepayers money.

Consumers Energy, the plant owner, reported that its cost to operate the plant for five weeks, from the last week of May through the end of June, was $29 million. Journalists and NGOs alike scrambled to write variations of headlines suggesting that the Trump administration's action was fleecing the average ratepayer. But the real math tells a different story. The energy revenue from plant for the same period, however, was about $33.7 million. The operation of the plant is more than paying for itself.

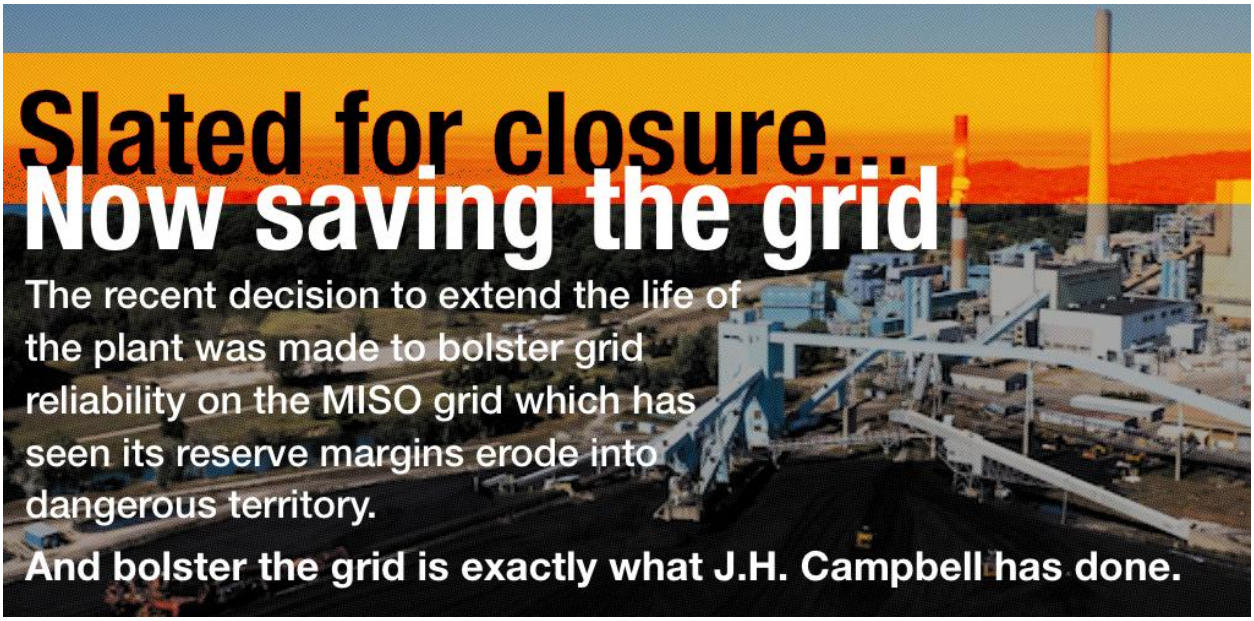
MISO ratepayers will have likely realized a savings of at least $4.7 million, and perhaps far more. Power prices in the region would have been far higher if not for 1,000 megawatts of capacity provided by J.H. Campbell.

The cost savings afforded by J.H. Campbell are icing on the cake. The plant was ordered to stay online to support reliability and backstop the region's power supply. The cost – and danger – of rolling blackouts if the plant wasn't available is the metric that truly matters.

While J.H. Campbell has more than risen to the occasion, the same cannot be said for other sources of generation on the MISO grid. At times this summer, J.H. Campbell alone, producing more than a gigawatt of power, has rivaled the output of MISO's entire 30 GWs of nameplate wind capacity.

J.H. Campbell and MISO's coal fleet have met the moment during soaring summer demand. "This is an incredible case study for the value of existing capacity," said Rich Nolan, president and CEO of the National Mining Association. "The nation's power supply is being stretched to its very limit and the resources the anti-coal movement said could shoulder the load simply aren't up to the challenge. The facts are simple: demand is soaring, grids are strained, and we have existing coal plants ready to ramp up," he added.

The Department of Energy has stepped up to the plate and responded to the urgent warnings of the nation's reliability regulators and grid operators. Secretary Wright's decision to keep J.H. Campbell running has been nothing short of a triumphant success.



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"It is actually here now"

July 30, 2025

"The reliability threat is not on the future horizon," Federal Energy Regulatory Commission Chairman (FERC) Mark Christie said last week. "It is actually here now."

Christie, who was overseeing his last FERC meeting before departing the commission, was responding to results from PJM's recent capacity auction—an auction that for the first time came up short in securing enough capacity to hit its reliability target. PJM operates the nation's largest regional grid, serving 67 million households stretching from Chicago to D.C.

Capacity prices in PJM's auction jumped 22% this year, hitting a newly implemented price cap, after jumping 800% the year before. *Politico* reported that this year's capacity price was poised to reach as much as $500 per megawatt (MW)-day if not for the $329 cap. For comparison, before last year's surge in prices, the capacity price had not exceeded $50 per MW-day in the three previous auctions.

While soaring prices are encouraging new capacity to come online – the auction fetched an additional 2,669 megawatts of power supply – the additions represent only about half the amount of new power demand PJM expects over the period the auction covers.

And this summer has made it crystal clear PJM – and the nation's other electricity markets – desperately need more power, and they need it immediately.

Nine Alerts and Counting

Since June, PJM has issued nine level 1 energy emergency alerts, signaling deep concern over meeting rising demand. All last summer, PJM issued one such alert.

Power supplies for much of the country are being pushed to the limit. On

both the PJM and Midcontinent Independent System Operator grids (MISO) – with MISO's territory stretching from Louisiana up through Michigan – demand this week has surged past what planners projected as peaks for this summer.

On Tuesday, demand was projected to hit 160 GW on PJM, and would have if not for mandated demand response orders from the grid operator. In May, planners assumed the summer peak would hit 154 GW. On MISO, demand eclipsed 126 GW after planners assumed a summer peak of 123 GW. Demand is also approaching near record levels in Texas and emergency actions have also been instituted in the Southwest Power Pool which covers a 14-state territory stretching up and down the plain states.

Tight operating conditions across so much of the country have underscored the false promise of using transmission as some kind of silver bullet to address the nation's eroding grid reliability and collapsing power supply reserve margins. While neighboring grids often export power to support one another, they can only come to the rescue if power is available to transmit. Today's reality is that many of these grids don't have as much as a flashlight to lend their neighbors.

The reliability challenge is only growing. Electrification of the economy, reindustrialization and the rapid addition of enormous data centers powering AI is sending power demand soaring.

Unlike its predecessor, the Trump administration recognizes the challenge at hand and is working to not only prioritize getting new dispatchable capacity into the marketplace but also keep the essential baseload capacity already on the grid operating. It's frightening to imagine where we would be without it.

During peak demand this week, coal plants met 65 GW of demand across the PJM and MISO grids. These are the very plants the Biden administration was determined to close. As for the renewable capacity the Biden administration trumpeted as a solution, MISO's 30 GW of installed wind capacity produced just 1 GW of power during peak demand Tuesday afternoon.

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The AI Power Surge is Here and Coal is Essential to Meeting It

July 24, 2025

Big tech's scramble to deploy ever-larger data centers to serve AI has become the electricity elephant in the room. Across the country, power demand is soaring, and data centers with the energy needs of entire cities – and even states – are driving the surge.

Meeting this new demand will require new generation but also getting more power from the capacity already on the grid. Electricity markets are sending unmistakable signals that the era of early coal plant retirements is now long gone.

The Scale of the Challenge

At a recent Federal Energy Regulatory Commission conference on grid reliability, Manu Asthana, PJM's CEO, said, "AI is going to change our world. In our forecast between 2024 and 2030, currently we have a 32-gigawatt (GW) increase in demand, of which 30 is from data centers." That increase is equivalent to adding 20 million new homes to the grid in the next five years.

ICF International, a leading energy consultancy, expects national power demand to jump a stunning 25% by 2030 and nearly 80% by 2050. If that seems farfetched, consider Meta's newly announced data centers.

Mark Zuckerberg, Meta's CEO, says the company will construct multiple data centers nearly the size of Manhattan. The first, called Prometheus, is expected to come online in 2026. These data centers are going to be able to scale up to 5 GW. As Jesse Jenkins, a leading energy researcher at Princeton, observed, a data center of that scale will use the same amount of power as the entire state of Nevada or Kansas.

Demand so large coming so fast underscores the incredible challenge now facing the nation's grid operators and energy policymakers. As leading data center developers have underscored time and again, the AI industry is power constrained. Whether or not the AI revolution happens here – and can happen without placing an untenable burden on average ratepayers – will come down to the availability of affordable, reliable power to serve it.

A Plan to Prioritize the Coal Fleet

The Trump administration, for its part, is determined to meet the moment, and the U.S. coal fleet appears to be a centerpiece of the effort.

In a new AI Action Plan released this week, the administration outlines a series of actions to win the AI race, which includes building and maintaining the infrastructure needed to support it. The plan's leading energy policy recommendation is to "stabilize the grid of today as much as possible." The authors elaborate: "This initial phase acknowledges the need to safeguard existing assets and ensures an uninterrupted and affordable supply of power."

Specifically, the administration calls for the U.S. to, "prevent the premature decommissioning of critical power generation resources and explore innovative ways to harness existing capacity, such as leveraging extant backup power sources to bolster grid reliability during peak demand." The plan also calls for reforming power markets to better prioritize grid reliability.

Rich Nolan, the National Mining Association's president and CEO, said of the

plan, “the administration’s recognition of the importance of existing power plants and prioritization of safeguarding them is clear acknowledgement that the coal fleet is essential to U.S. AI leadership.” He added, “prioritizing the ongoing operation of essential coal plants – with the capacity to meet increased demand – combined with reforming our power markets around the goal of grid stability articulated in this action plan puts us firmly on the path for success.”