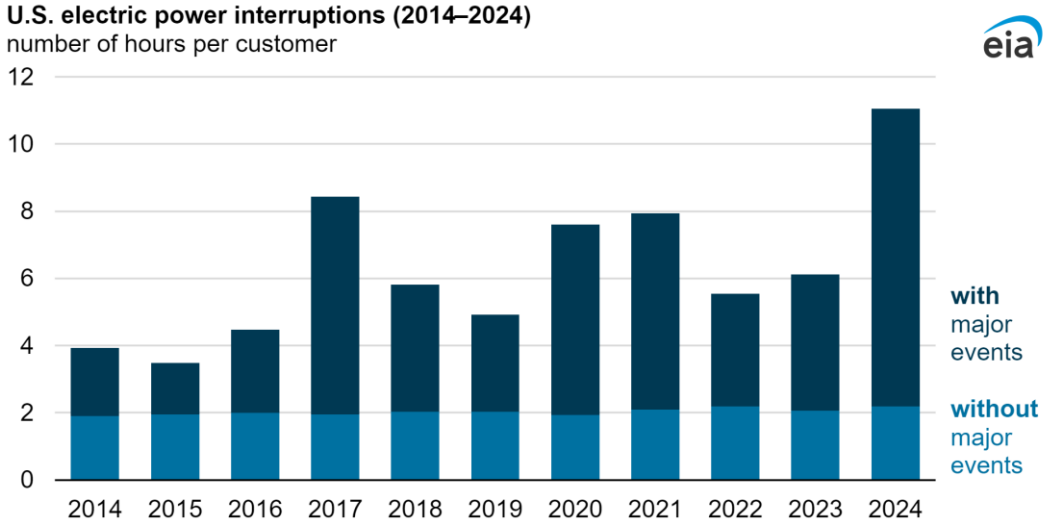
WORLD POWER SYSTEMS REVIEW

15 December 2025

1 December 2025

Hurricanes in 2024 led to the most hours without power in the United States in 10 years

U.S. electricity customers experienced an average of 11 hours of electricity interruptions in 2024, or nearly twice as many as the annual average experienced in the decade before, according to our Electric Power Annual 2024 report. Major events such as Hurricanes Beryl, Helene, and Milton accounted for 80% of the hours without electricity in 2024.

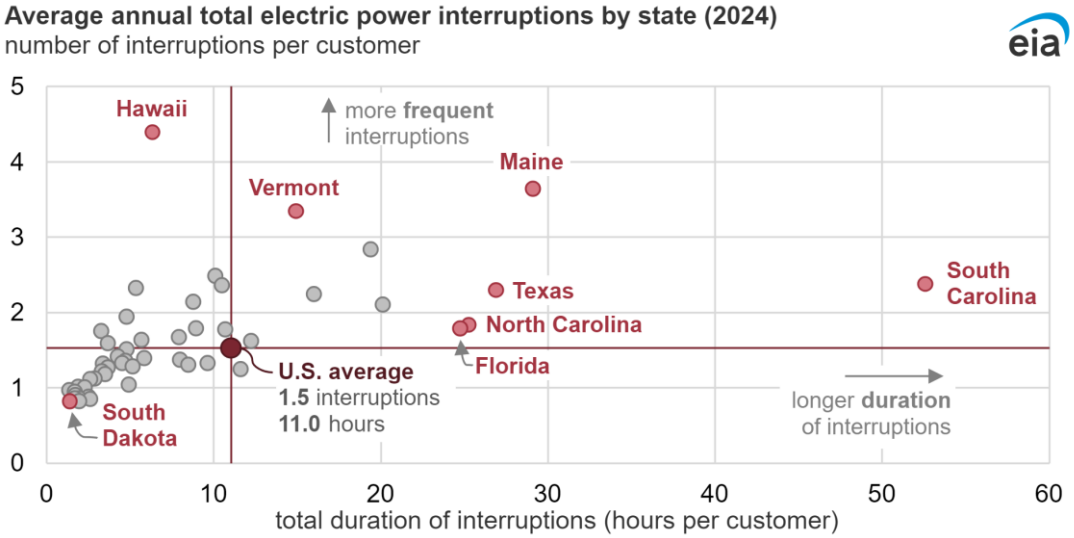


Utilities categorize interruptions depending on if they are attributed to major events such as hurricanes or other storms, interference from vegetation near power lines, or atypical utility operations. When comparing outages across years, most of the differences in total time without service are attributed to major events.

Interruptions attributed to major events averaged nearly nine hours in 2024, compared with an average of nearly four hours per year in 2014 through 2023. Service interruptions that aren't triggered by major events routinely average about two hours per year.

Annual outages are characterized by two industry metrics:

- The System Average Interruption Duration Index (SAIDI) measures the total duration an average customer experiences non-momentary power interruptions in a one-year period.
- The System Average Interruption Frequency Index (SAIFI) measures the number of interruptions in a year.



States with the most time without power dealt with major weather events in 2024. In July, Hurricane Beryl left 2.6 million customers without power in Texas. In September, Hurricane Helene left 5.9 million customers without power across 10 states; at least 1.2 million of those customers were in South Carolina.

Customers in South Carolina experienced longer service interruptions than in any other state, at nearly 53 hours in 2024. South Carolina, North Carolina, and Florida dealt with strong winds and flooding from Hurricane Helene that affected transmission and distribution power lines as well as substations leading to prolonged power outages. The next month, Hurricane Milton left 3.4 million customers in Florida without power.

In contrast, customers in states such as Arizona, South Dakota, North Dakota, and Massachusetts experienced, on average, less than two hours of service interruptions in 2024.

Some states experienced outages more frequently than the U.S. average (1.5 instances) in 2024. For example, Hawaii electricity customers experienced 4.4 electricity interruptions in 2024, the most of all states. The more frequent interruptions in Hawaii are mainly due to adverse weather, volcanic activity, unexpected outages at oil-fired plants, and issues connecting new generating capacity.

States such as Maine and Vermont also tend to have more frequent outages, often attributed to storm-related damage to trees that affects power lines. In contrast, states such as South Dakota, Maryland, Illinois, and Massachusetts experienced, on average, less than one power interruption last year.

IEA
http://www.eia.gov/

1 December 2025

AEMO publishes system security plan

Australian Energy Market Operator (AEMO) has today released its 2025 Transition Plan for System Security, a plan to meet system security needs in the National Electricity Market (NEM) over the next decade to support Australia's energy transition.

Developed with industry, the expanded report provides the most comprehensive view of transition points, required investments, and the collaborative actions needed from transmission network service providers, market participants, governments and AEMO.

AEMO CEO Daniel Westerman said the report provided technical information to guide the sector through the next 10 years of the transition to meet system security requirements and consumer needs, noting actions already underway.

"The Transition Plan for System Security aims to help guide the sector through the next phase of the energy transition, focusing on the key transition points and actions needed to keep Australia's main power system stable and secure," Mr Westerman said. "The report outlines the steps required to replace the system security services provided by coal plants that are retiring and unlock the growing potential of renewable energy, including rooftop solar, to help deliver a smooth transition for consumers," he said.

The coal-fired generation that has powered Australia for decades is retiring and renewable energy, firmed with storage and backed up by gas, presents the lowest-cost pathway to meet consumer needs as well as government energy and emission policies through to 2050. Consumers also continue to be a driving force in Australia's energy transition through their investments in rooftop solar, and more recently, the growing investment in home batteries and electric vehicles.

AEMO's transition planning framework will help navigate transition points that require investment or material changes in power system operations. This includes managing system strength requirements in New South Wales, first identified by AEMO in 2021, as well as

minimum system load risks in Queensland and other states from 2026 onwards. “New investments and reforms are needed to maintain system security in advance of these transition points, with opportunities to co-optimise both reliability and system security investments to help keep costs as low as possible,” Mr Westerman said.

“Industry and governments have actions underway to manage the identified transition points. AEMO will continue to work collaboratively to signal and support the required investments and reforms needed to maintain system security,” he said. The report also includes AEMO’s annual assessment of system security for each NEM region and identifies investments for transmission network service providers related to inertia, system strength and network support and control ancillary services.

In parallel with the report, AEMO commenced trials for system security services from new technologies or new applications of existing technologies. “The outcomes of these trials will help inform operational practices and market frameworks to ensure the NEM can continue to operate securely and reliably,” Mr Westerman said.

Updated annually, next year’s Transition Plan for System Security will incorporate reporting of AEMO’s Engineering Roadmap program and include greater detail on future system restart requirements, grid-forming inverter capability, and integration of consumer energy resources.

AEMO
http://www.aemo.com.au/

1 December 2025

A word of warning before Eraring and Yallourn closures

The Australian Energy Market Operator (AEMO) has provided words of wisdom as Australia transitions to a new-look energy grid. In releasing its 2025 Transition Plan for System Security, AEMO said it’s not a matter of energy access but energy security that will define a grid powered increasingly by renewables.

The market operator has detailed three key technologies that require investment ahead of the closure of baseload coal plants such as Eraring and Yallourn in the years to come. AEMO suggests synchronous condensers fitted with flywheels will play a critical role, providing both “system strength and inertia”. Synchronous condensers mimic the grid-stabilising role of coal generators, either absorbing or supplying reactive power to regulate voltage.

The market operator also encourages investment in gas turbines fitted with clutches, enabling them to act as synchronous condensers, while grid-forming BESS (battery energy storage systems) will be increasingly important, providing “frequency control, voltage stability and some aspects of system strength”. System strength and inertia solutions must be delivered in tandem, AEMO said, and investments are necessary sooner rather than later for various reasons.

“Many assets capable of providing system security services are progressing but have long lead times (five or more years) for approvals, procurement and installation,” the market operator said. “Readiness is required for when coal generators commercially implement more flexible operating profiles such as going offline during the middle of the day or seasonally, which may occur many years before retirement.”

AEMO said the market must ultimately “decouple” reliance on coal generators for system security to ensure a sustainable grid for years to come.

Energy Magazine
http://www.energymagazine.com.au/

1 December 2025

Commission boosts energy interconnectivity across Europe and beyond by supporting 235 cross-border projects

Today, the Commission has granted 235 cross-border energy projects the status of Projects of Common Interest (PCIs) and Projects of Mutual Interest (PMIs) – the second such list since its launch in 2023. The selected projects will be eligible to apply for EU financing from the Connecting Europe Facility and will benefit from expedited permitting and regulatory processes for swift execution and delivery.

These cross-projects will strengthen energy connectivity across the continent, bringing nearer the completion of the Energy Union. By allowing vital interconnections across the EU and with neighbouring countries, these projects can play a strategic role in increasing EU's competitiveness, decarbonisation, and enhancing Europe's energy security and independence.

According to a recent Commission study, investment needs in European energy infrastructure - electricity, hydrogen, and CO2 networks - will near €1.5 trillion from 2024 to 2040. This project lineup and the related expected investments volumes will contribute to reaching the needs identified for 2040.

The list of selected PCIs and PMIs includes:

- 113 electricity, offshore and smart electricity grid projects that will be essential for integrating the growing share of renewables.
- 100 hydrogen and electrolyser projects which will play a major role in integrating and decarbonising the EU's energy system.
- 17 carbon transport infrastructure projects that will advance the development of the market for carbon capture and storage.
- 3 smart gas grids projects to digitalise and modernise the natural gas network.

the continued inclusion of 2 long-standing projects linking Malta and Cyprus to the mainland European gas network.

The Commission will support the implementation of these projects through stepped-up political coordination with the Member States concerned, drawing on the Energy Union Task Force and the regional High-Level Groups designed to support energy infrastructure development in key regions, including with partner countries.

As highlighted in the Commission's Affordable Energy Action Plan, an efficient energy network is crucial for enabling the clean energy transition and ensuring energy is accessible and affordable for both industries and households across Europe.

Ensuring a well-integrated and optimised European energy grid is equally crucial to accelerating a cost-efficient and clean energy transition. The Commission will soon present the European Grids Package to further accelerate the development of the necessary energy infrastructure in Europe. It will also elaborate on the Energy Highways initiative, launched by President von der Leyen in her latest State of the European Union address, which will urgently tackle cross-border energy infrastructure bottlenecks, and increase the overall resilience of the EU's energy system.

Following today's adoption, the PCI and PMI list will be submitted to the European Parliament and the Council in the form of a Delegated Act for scrutiny, as mandated under the TEN-E Regulation. Both co-legislators have two months to either accept or reject the list in full but may not amend it. This process can be extended by two months, if requested by the co-legislators. Once the list is adopted, the Commission will further reinforce its work with project promoters and Member States to help ensure that the selected projects are implemented as smoothly and as rapidly as possible.

This week the European Commission is hosting the PCI Energy Days, which are dedicated to the practical implementation of PCIs and PMIs. Commissioner for Energy and Housing Dan Jørgensen will participate in the event.

EU
http://ec.europa.eu/

4 December 2025

Ofgem unlocks £28 billion investment to maintain a safe, secure and resilient energy grid and to upgrade and expand capacity to meet growing demands

Energy network companies have been given the green light for multi-billion-pound funding to strengthen the stability, security and resilience of our energy networks. This investment will upgrade power and gas grids, creating a future-ready system that better shields customers from volatile energy bills.

Most of the funding (£17.8 billion) announced today will go towards maintaining Britain's gas networks, keeping them among the safest, most secure and resilient in the world.

This essential investment ensures a safe and reliable energy system for years to come. The remaining initial investment (£10.3 billion) will strengthen our electricity transmission network, improve reliability and expand capacity to support the electrification of the economy and drive growth. Together this £28 billion commitment will rise to an estimated £90 billion by 2031 across both gas and electricity networks. Investing now to maintain world class resilience and expand grid capacity is the most cost-effective way to harness clean power, support economic growth and protect the country from gas price shocks like the one seen in 2022.

As investment for ongoing operations, asset replacement and maintenance filters through to bills more quickly than investment in network expansion, these costs will add more to bills despite representing a smaller share of the overall £90 billion investment programme. In total £108 will be added to bills by 2031. £48 for gas and £60 for electricity. Alongside maintaining grid resilience this investment will deliver significant savings of around £80 compared to not expanding the grid.

Electricity grid expansion alone is expected to reduce bills by £50 by 2031, thanks to lower reliance on imported gas and the halting of constraint costs ensuring power flows efficiently from where it's generated to where it's needed, even at peak demand. In short, investing now is cheaper for consumers than delaying, and electricity grid investment more than pays for itself. Overall the net increase in bills to cover all costs by 2031 will be around £30 or less than £3 per month with costs expected to fall further over time.

Ofgem
http://www.ofgem.gov.uk/

4 December 2025

Taiwan clears path to restart nuclear reactors

Taiwan's Ministry of Economic Affairs (MOEA) has approved the current status assessment report of Taiwan Power (Taipower), which found it is feasible to restart the Kuosheng nuclear power plant (NPP) in New Taipei and the Maanshan NPP in Pingtung County (known, respectively, as the second and third NPPs). However, the report concluded that restarting the Chinshan (First) NPP was not feasible.

Taipower is expected to submit a plan for restarting the two plants to the Nuclear Safety Commission by March 2026, the MOEA said. It will also launch safety inspections including assessments of how badly the plants' equipment has aged and its seismic

resilience. The three NPPs, which generated around 15% of Taiwan's electricity, were closed after Taiwan's Democratic Progressive Party was elected to government in 2016 with a policy of creating a "nuclear-free" Taiwan by 2025. The six reactors (two at each NPP) were to be decommissioned as their 40-year operating licences expired.

The Maanshan plant comprised two 936MW-electrical (MWe) pressurised water reactors. Maanshan 2 was the last unit to be closed on 17 May. Maanshan 1 was closed in July 2024. Kuosheng's two 985MWe boiling water reactors (BWRs) were shut down in July 2021 and March 2023. Chinshan's two 604MWe Mark-1 BWRs closed in 2018 and 2019.

In addition, work was stopped on two 1.35TWe advanced boiling water reactors under construction at the Lungmen (Fourth) NPP in New Taipei City. Lungmen 1 was completed but mothballed in 2015, and construction of Lungmen 2 was suspended in 2014. However, in May this year, Taiwan's Legislative Yuan revised the Nuclear Reactor Facilities Regulation Act, effectively opening the door for a restart of NPPs by allowing operators to renew or extend licences for up to 20 years; however, it was too late for the Maanshan plant.

In a referendum in August on continued operation of Maanshan, 4,341,432 people (73.5%) voted yes. However, the referendum still failed to pass, as it did not meet the required threshold of 5,000,523 affirmative votes, or 25% of eligible voters. Voter turnout was only 29.53%. Nevertheless, President Lai Ching-te told reporters that, while the referendum had failed, he understood "society's expectations for diverse energy options".

Nuclear power advocates had long argued that the NPPs should be restarted and that Lungmen should be completed to provide a baseload source of low-emission electricity.

Taipower's current status assessment of Chinshan, Kuosheng and Maanshan included an inventory and analysis of seven major aspects: dry fuel storage, current status of safety inspections and preparations, geological seismic resistance, manpower allocation, power supply efficiency, service life extension of similar units and unit equipment.

With respect to Chinshan, the MOEA said: "The equipment is seriously ageing. Most of the important power generation equipment has been dismantled and most of the electrical components need to be replaced and upgraded. Moreover, the units are the same as those of the Fukushima nuclear disaster in Japan [Mark-1 BWRs]. The same type of units in Japan have also been decommissioned, so the First Nuclear Power Plant is no longer feasible to operate."

As to Kuosheng, the MOEA noted: "The safety and support system… is still regularly overhauled and was maintained during operation. However, the power generation system has been down for more than two years and needs to be overhauled and a recovery control plan needs to be implemented to restore the control plan. Its functionality needs to be reconfirmed. The initial judgment is that there are still conditions for re-operation."

Equipment at Maanshan has not yet been dismantled. "It has been regularly overhauled and maintained according to operating standards," the MOEA said. "The reactor has been emptied [of fuel] and the fuel pool still has space. The initial judgment also shows conditions for re-operation. Some equipment has original patents and assistance from the original supplier will be needed.

The MOEA stated that "independent safety inspections and reoperation plans will be initiated simultaneously". These inspections will include ageing and seismic resistance assessments. The independent safety inspection for Maanshan, which requires peer review and assistance from the original plant supplier, is expected to take around 1.5–2 years. The process will be longer than for the Kuosheng plant because the used fuel in the reactors of the plant still needs to be removed. Used nuclear fuel can only be removed after the on-site dry storage facilities are operational, and this is facing delays. The reactor core must be emptied before reactor-related safety inspections can be conducted.

The MOEA concluded that the restart procedure for the two plants must adhere to "two musts", and regarding nuclear energy issues, "three principles". Taipower will be required to conduct related work with the utmost rigour to ensure nuclear safety meets international standards, it said. "Subsequent reviews by international professional technical institutions and peers will be required, and the process will proceed according to the Nuclear Safety Council's review results. Further social consensus is also necessary."

Power Technology
http://www.power-technology.com/

4 December 2025

US added 2 GW of solar in September, putting 2025 ahead of 2024 for new solar generation

The United States added 2 GW of utility-scale solar to the grid in September, bringing total solar installed this year to 21 GW — slightly above the 20 GW installed over the same period last year, according to the Federal Energy Regulatory Commission's latest monthly infrastructure update.

Solar accounted for 75% of the 28 GW of new generation installed in 2025 so far, followed by wind at 13% and gas at 11%.

Natural gas is still the largest single generation resource in the U.S. electric power system, comprising 42% of total installed generating capacity. Wind, solar and hydro together make up 31% of the capacity mix.

The results of FERC's latest infrastructure report show that solar continues to dominate new generation coming online as the country experiences rising demand for the first time in about two decades. The report does not include energy storage or rooftop solar.

Enverus Intelligence Research recently released its long-term U.S. power capacity expansion outlook, which projected a 57% increase in installed capacity by 2050 driven largely by solar and nuclear. EIR analysts said they expect solar additions to peak in 2028, "but remain competitive, supported by ongoing demand for power purchase agreements (PPAs) and low costs."

"Our analysis shows the U.S. grid is entering a transformative period, with solar installations surging in the near term and nuclear power taking a leading role in the decades ahead," Juan Arteaga, principal analyst at EIR, said in a statement. EIR's relatively positive outlook for solar comes despite attacks on renewable energy by the Trump administration, whose officials have derided solar and wind as unreliable and expensive. In July, President Donald Trump signed the One Big Beautiful Bill Act sunsetting renewable energy tax credits early, and his administration has also sought to revoke permits for some renewable energy projects and subject others to additional scrutiny that has slowed deployment.

But the administration's preferred alternatives — nuclear, gas and coal — face myriad obstacles to replacing solar as the dominant new generation source. The EIR report said nuclear will not achieve steady expansion until around 2040, while gas will continue to displace coal, which it expects to be fully phased out around the same time.

Of the 136 GW of "high probability" additions FERC expects to see energized by September 2028, solar accounts for 91 GW — about 67%. Wind makes up 23 GW, or 17% of high probability additions; gas accounts for 20 GW, or about 15%; and nuclear is expected to provide just 335 MW — 0.2%. "FERC's latest data show that no amount of rhetorical manipulation can change the fact that solar, wind, and other renewables continue on the path to eventual domination of the energy market," said Ken Bossong, the executive director of the pro-solar Sun Day Campaign, in a statement.

Utility Dive
http://www.utilitydive.com

8 December 2025

Melbourne launches new $1.1bn renewable energy hub

Melbourne will be home to one of Australia's largest grid-scale BESS (battery energy storage systems) as part of a new renewable energy hub in the city's west. Delivered by Equis Australia and government-owned SEC, the $1.1 billion hub will be a cornerstone of Victoria's renewable energy infrastructure, with the 600MW BESS capable of powering 200,000 homes during evening peak demand.

All three battery systems comprising the hub's BESS are good to go, having been successfully registered with the grid in parallel. The hub is located where Victoria's critical transmission routes join, meaning it can support Melbourne's metropolitan load as well as three Victorian renewable energy zones. "Melbourne Renewable Energy Hub is our first project to go live in Australia and the Equis team have delivered a world-leading project on schedule and on budget," Equis managing director David Russell said.

"Our engineers designed a world-first underground 500kV cable connecting a BESS into existing gas-insulated grid infrastructure, (while) our investment team secured a landmark $400m debt package. "It has been impressive to watch the project take shape from Notice to Proceed in December 2023, (and the) installation of 444 Tesla megapacks and three Toshiba 500kV high-voltage transformers."

Russell said the introduction of the Melbourne Renewable Energy Hub demonstrated what can come from collaboration. "Today's milestone shows that when industry and government work together, we can deliver complex, large-scale infrastructure that strengthens the grid, creates jobs, and helps reduce power prices for consumers," he said.

More than 1200 people worked on the build of the renewable energy hub, including more than 70 trainees and apprentices. This enabled the project to be finished on schedule after construction commenced last year.

Energy Magazine
http://www.energymagazine.com.au/

9 December 2025

Judge Tosses Trump's Halt on Wind Projects

A federal judge ruled that President Donald Trump's executive order halting onshore and offshore wind power leasing and permitting was unlawful, finding that it violated the Administrative Procedure Act.

Judge Patti B. Saris, of the U.S. District Court for Massachusetts, found that both Trump and the executive agencies charged with carrying out the order failed to provide a reasoned explanation for the change, as required by the APA. "Even assuming … that the [order] itself could be characterized as the [agencies'] own explanation for their manner of implementing it, the [order] does not provide adequate explanation: It merely includes a single sentence citing 'various alleged legal deficiencies underlying' wind permitting, 'potential inadequacies in various environmental reviews' and the possibility that these vaguely defined issues 'may lead to grave harm,'" Saris wrote in a ruling issued Dec. 8.

"Whatever level of explanation is required when deviating from longstanding agency practice, this is not it." In ruling against the administration, Saris sided with 18 Democratic state attorneys general who challenged the order in May. Along with the halt, Trump had ordered a review of the government's permitting processes for both types of wind resources. The states argued this also violated the APA, as the president did not set a deadline for the review, and there was no indication that the relevant agencies were even working on it. Saris agreed.

"More than 10 months after the wind order instituted a 'temporary' pause on the issuance of wind energy authorizations, no end to the comprehensive assessment appears to be in sight," she wrote. "The agency defendants neither included a timeline for that assessment in the administrative record nor provided an anticipated end date during the course of this litigation." Trump's order effectively halted development of the U.S. offshore wind industry: Multiple projects were canceled, and international companies such as Ørsted have shifted their focus to building in more favorable regulatory environments

"Overturning the unlawful blanket halt to offshore wind permitting activities is needed to achieve our nation's energy and economic priorities of bringing more power online quickly, improving grid reliability, and driving billions of new American steel manufacturing and shipbuilding investments," Oceantic Network CEO Liz Burdock said in a statement. But while stocks for Ørsted and other energy companies with offshore wind holdings rose on news of the ruling, ClearView Energy Partners said it was skeptical new offshore wind projects would proceed, at least while Trump is still in office.

"We view the ruling as positive for offshore wind proponents, but we are not convinced the decision sufficiently supplants the actions the Trump administration has taken to constrain offshore wind," ClearView said in a note Dec. 9. "We are skeptical that this loss in court can inspire the administration to change its oppositional posture. The court expresses no view on whether the agency defendants should issue or withhold any particular permit," Saris wrote. "But, while a president may direct a reappraisal of permitting practices after a change of administration, the agency defendants may not, as they have done here, decline to adjudicate applications altogether, for an unspecified time, pending the completion of a wide-ranging assessment with no anticipated end date."

Saris' ruling, if upheld, may be a boon to projects that have already been approved. In a filing with the U.S. District Court for D.C. on Dec. 2, the Bureau of Ocean Energy Management asked for a voluntary remand of its approval of New England Wind, off the coast of Massachusetts. It cited Trump's executive order and its ongoing "re-evaluation" of its permitting process.

While the administration had issued stop-work orders on two projects, they were later lifted. Five projects are still under construction in the U.S.: Vineyard Wind 1, off Massachusetts; Revolution Wind, off Rhode Island; Coastal Virginia Offshore Wind, off Virginia; and Sunrise Wind and Empire Wind 1, off New York.

RTO Insider
http://www.rtoinsider.com/

10 December 2025

EU Clears State Aid for Poland's First Nuclear Plant, PM Tusk Says

The European Commission has approved state aid from Poland for the construction of the country's first nuclear power plant, Prime Minister Donald Tusk announced on Tuesday. The Commission confirmed its decision in an official statement the same day.

Poland selected U.S.-based Westinghouse Electric Company to build the facility on the Baltic Sea coast. The project schedule targets the start of construction for the first reactor in 2028, with commercial operation planned for 2036.

"We will soon have official confirmation that the European Commission agrees to state aid for the construction of a nuclear power plant in Poland," Tusk said during a public address. He added that financing is fully secured, with total public support amounting to 60 billion zlotys (approximately $16.51 billion). "In December, meaning this year, the first 4.6 billion zlotys in treasury securities will reach the interested entity," the Prime Minister stated.

The European Commission's approval was a required step to move the Polish nuclear programme forward. "We will indeed be able to begin construction with sufficient momentum, so that electricity from the first nuclear power plant in Poland can flow as quickly as possible," Tusk emphasized. Polish government officials highlighted the strategic importance of the project for energy security and affordability as the country transitions away from coal-based generation.

"The power plant will supply electricity to Polish consumers and Polish industry, and it will do so at a relatively low price... and will be able to generate energy for free for the next 40 years," Deputy Energy Minister Wojciech Wrochna said at a separate press conference. "In my opinion, this operation will allow us to achieve some of the most competitive energy prices in the world," he added.

The nuclear plant is expected to deliver stable, low-carbon electricity and contribute to Poland's long-term energy independence. With financing and regulatory clearance now in place, preparatory work can accelerate toward the 2028 construction start. The project represents a major milestone in Poland's efforts to modernize its power sector and meet growing electricity demand with clean, reliable sources.

Reuters
http://www.reuters.com/

10 December 2025

EIA cuts 2026 power generation forecast by more than a percentage point

The Energy Information Administration cut its 2026 electricity generation growth forecast by 1.3% from last month “based on how much large load electricity demand has come online so far this year,” particularly in Texas, “and its implications for near-term growth,” according to its most recent Short-Term Energy Outlook released Tuesday.

EIA now projects generation to grow 2.4% this year and 1.7% next year. The agency expects the United States will generate 4,327 billion kWh in 2026, down from a 4,382 billion kWh estimate issued last month.

Just last month, the EIA said it expected U.S. electricity generation to grow by 3% in 2026, more than a percentage point higher. Much of the projected load growth is in the grids managed by the PJM Interconnection and the Electricity Reliability Council of Texas, and the total downward revision appears to be driven by changes in ERCOT’s projected demand growth.

The EIA said it had revised its forecast of ERCOT growth rates since last month, shrinking its projections from 6% to 5% growth in 2025 and 15.7% to 9.6% growth in 2026. The report said the EIA expects electricity demand in PJM to grow by 3.3% in both 2025 and 2026. Even given the lower forecast, the expected increase is “in contrast to relatively flat generation from 2010 to 2020 and is primarily driven by increasing demand from large customers, including data centers, concentrated in regions managed by” ERCOT and PJM, the agency said.

EIA also said it anticipated changes in the mix of energy sources used for generation in these two regions, while anticipating both regions’ largest generation source of natural gas will grow by 2% in both between 2024 and 2026. “We expect most of the growing electricity demand in the PJM region will be met by growing generation from coal and solar, up 23% and 63%, respectively, between 2024 and 2026,” the agency said. “In ERCOT, the fastest growing energy source is solar, which we forecast will grow by 92% between 2024 and 2026.”

Utility Dive
http://www.utilitydive.com

12 December 2025

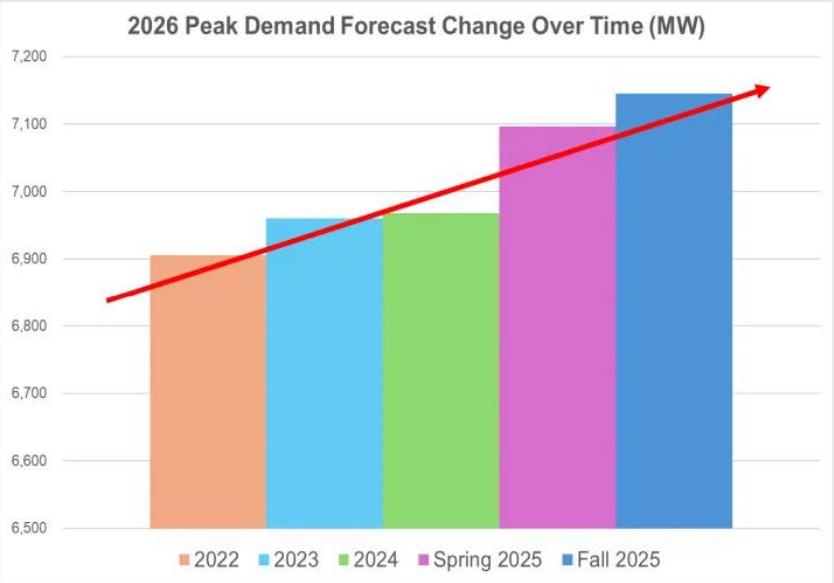
Colorado regulators approve extending life of Comanche 2 coal unit

The Colorado Public Utilities Commission announced on Dec. 3 that it had approved a variance to extend the retirement date for the coal-fired Comanche Unit 2 to the end of 2026. The commission found that an unplanned outage at Comanche Unit 3 was the "sole justification" for delaying Unit 2's retirement, and it ordered "substantial monthly reporting and operational limitations" consistent with the proposals from environmental and consumer advocates.

Xcel Energy, the Colorado Energy Office, Colorado Public Utilities Commission staff and the Colorado Office of the Utility Consumer Advocate have asked state regulators to approve a one-year operating extension for the coal-fired Comanche Unit 2, which is slated to close at the end of this year. Rising peak demand, an unplanned outage at Comanche Unit 3 and several other factors are driving the need, the parties said Monday. Comanche 2 has a nameplate capacity of 335 MW and an accredited capacity of 296 MW. The 750-MW Comanche 3 is not expected to resume operations until June at the earliest, according to the petition to the Colorado Public Utilities Commission. Operating Unit 2 in its stead is a "cost effective, nearterm solution," the parties concluded.

Comanche 3 is the largest coal unit in Colorado and it's been "an albatross around the neck of Xcel ratepayers," Erin Overturf, clean energy director at Western Resources Advocates, said in a statement. The troubled unit has been offline for part or all of 138 days for the two years beginning in early August 2023, according to WRA.

Figure 1: Peak Demand Forecast Over Time (2022-2025) for Year 2026



"This request to delay the long-planned retirement of Comanche 2 will lead to increased costs for utility customers at a time when people are already economically struggling," Overturf said. And keeping Comanche 2 online without a requirement to limit operations, even if Comanche 3 resumes generating electricity, creates additional pollution risks, the group said. "WRA will be reviewing this petition carefully, with a focus on reducing the potential environmental and economic harm" said Overturf. Xcel has been planning to retire Comanche 2 since 2018, but in its petition the utility and parties said "the ensuing years have brought numerous changes in state policy, federal policy, resource planning, and power procurement."

Over that timeframe “we have seen increasing peak load growth, requiring incremental resources to serve this demand,” they said. “Most recently, supply chain challenges, tariff uncertainties, and changes to federal law have led to delayed inservicing of resources that could have helped.”

Xcel also said that work it has done to modernize the utility’s resource accreditation process “revealed additional energy and capacity needs” compared to prior modeling approaches. “As such, the Company’s need for resources — including in 2026 and 2027 — identified through electric resource planning processes has increased over the coming years,” the utility and parties told the PUC. The utility told regulators it will provide a report by March, to update them on the repair and return to service status of Comanche Unit 3, “including forecasted cost of repairs [and] any resource options identified in collaborative work with the joint petitioners for potential near-term resource adequacy benefits.”

Colorado Rep. Jeff Hurd, a Republican, reached out to President Donald Trump on Oct. 30 requesting the U.S. Department of Energy keep the Comanche plant online. “Colorado’s grid is losing firm, dispatchable generation faster than replacement capacity can be brought online, while demand continues to grow,” Hurd wrote. DOE has been using its powers to keep dispatchable plants from retiring under President Trump. Those efforts could cost ratepayers about $3.1 billion a year in 2028, according to an August analysis published by Earthjustice, the Environmental Defense Fund, the Natural Resources Defense Council and the Sierra Club.

RTO Insider
http://www.rtoinsider.com/