WORLD POWER SYSTEMS REVIEW

1 January 2026

17 December 2025

Energy Secretary Ensures Washington Coal Plant Remains Open to Ensure Affordable, Reliable and Secure Power Heading into Winter

U.S. Secretary of Energy Chris Wright today issued an emergency order to ensure Americans in the Northwestern region of the United States have access to affordable, reliable and secure electricity heading into the cold winter months. The order directs TransAlta to keep Unit 2 of the Centralia Generating Station in Centralia, Washington available to operate. Unit 2 of the coal plant was scheduled to shut down at the end of 2025. The reliable supply of power from the Centralia coal plant is essential for grid stability in the Northwest. The order prioritizes minimizing the risk and costs of blackouts.

"The last administration's energy subtraction policies had the United States on track to experience significantly more blackouts in the coming years — thankfully, President Trump won't let that happen," said Energy Secretary Wright. "The Trump administration will continue taking action to keep America's coal plants running so we can stop the price spikes and ensure we don't lose critical generation sources. Americans deserve access to affordable, reliable, and secure energy to heat their homes all the time, regardless of whether the wind is blowing or the sun is shining."

According to DOE's Resource Adequacy Report, blackouts were on track to potentially increase 100 times by 2030 if the U.S. continued to take reliable power offline as it did during the Biden administration.

The North American Electric Reliability Corporation (NERC) determined in its 2025-2026 Winter Reliability Assessment that the WECC Northwest region is at elevated risk during periods of extreme weather, such as prolonged, far-reaching cold snaps. This order is in effect beginning on December 16, 2025, and continuing until March 16, 2026.

DOE
http://www.energy.gov/

17 December 2025

Turing test-inspired tool compares virtual power plants to gas peakers

EnergyHub, which provides software for managing distributed energy assets, has released two tools for virtual power plant developers, operators and users: a testing framework to compare their performance to traditional generators and a five-level "maturity model" to address capability gaps.

Named after an EnergyHub data scientist and inspired by the Turing test for artificial intelligence, the "Huels test" asks whether a grid operator can distinguish a gas peaker plant from a VPP based on their operational characteristics. To pass, the VPP must match the visibility, "schedulability" and availability of the peaker plant, EnergyHub says.

The VPP maturity model spans manually-scheduled demand response events (Level 0) to "grid-adaptive VPPs" (Level 4) that continually and autonomously adjust to meet multiple objectives on transmission and distribution grids. Paul Hines, EnergyHub's vice president of power systems, said in an interview that Level 4 VPPs could be ready for commercial deployment in "years, not decades." Hines said the efficiency provided by VPPs is needed as demand grows from electrification and new large loads, including data centers.

"There is enormous need for new capacity of every sort," particularly in regions favored by data centers, such as the PJM Interconnection, Hines said. Hines said VPPs will play a crucial role by offsetting seasonal and annual peaks more cost-effectively than traditional generators — if they're reliable enough for grid operators to trust.

"If we want VPPs to be a real-world source of grid capacity, they need to act as a replacement for traditional generation," he said.

VPPs have come a long way since the early days of the manual demand response programs EnergyHub classifies as Level 0, and grid operators like PJM already consider “demand resources” more reliable than certain thermal generators during peak demand periods. But Hines said they’re not yet capable of passing the Huels test.

To pass that test and demonstrate parity with gas peakers, EnergyHub said VPPs need to meet three requirements. They must deliver accurate telemetry at intervals under five minutes directly to the utility control room; they must follow complex schedules to meet grid needs by building load before an event, accurately flattening load for the event’s duration and gradually recovering after the event to avoid sudden load surges; they must be available year-round for at least four to six hours at a time. EnergyHub’s maturity model lays out the specific capabilities that enable VPPs to pass the Huels test, such as data accuracy and frequency, seasonal availability, integration with utility operations, locational and system-wide forecasting and dispatch, and degree of automation.

Level 0 and 1 resources are available for no more than 20 events each year, must be manually scheduled an hour or more in advance and require “all-call” participation that reduces their usefulness for dynamic grid management. They deliver \$55/kW to \$65/kW in combined value for grids and customers, EnergyHub estimates. In contrast, Level 2 resources are partially autonomous, capable of integrating into centralized economic dispatch unit commitment systems or self-dispatching based on signals like day-ahead market pricing, EnergyHub said.

It said a “Mid-Atlantic utility” demonstrated Level 2 performance in the real world — and offered “early evidence of passing the Huels test for simpler load profiles” — by maintaining a predictable and sustained load shape for three hours across consecutive dispatches of targeted groups of devices. EnergyHub pegs the value of that VPP at around \$105/kW. Hines said he has used the tool to evaluate EnergyHub’s own VPP platform and found it “pretty close to Level 2.”

“We are using this tool as a way to evaluate ourselves,” he said. “We want the entire industry to use it to be honest about where we are today and where we want to go.” EnergyHub does bring more sophisticated capabilities to bear in managing specific distributed resources, such as advanced charging management for electric vehicles, but they’re not yet present “across the whole stack,” he added.

EnergyHub’s goal is to use its platform to achieve a multi-resource, Level 3 or 4 VPP that easily passes the Huels test and delivers \$160/kW to \$210/kW in combined value for grids and customers. With regulatory tweaks that support utility spending on VPPs — as opposed to more capital-intensive infrastructure investments — and continued hardware and software improvements, Hines said it could come sooner than some expect. “It won’t happen overnight — these things take time — but it’s coming in a small number of years, not decades,” he said.

Utility Dive
http://www.utilitydive.com/

18 December 2025

PJM capacity prices hit record high as grid operator falls short of reliability target

Capacity prices in the PJM Interconnection’s latest capacity auction hit a \$333.44/MW-day price cap across its region, setting a record-high price for the third auction in a row, the grid operator said Wednesday.

PJM procured 145,777 MW in the auction, about 6,625 MW below the grid operator’s 20% installed reserve margin target — an estimate of how much capacity is needed to prevent more than one unexpected power outage every 10 years. PJM estimates that without a temporary price cap that was established in an agreement with Pennsylvania Gov.

Josh Shapiro, D, the capacity price for the 2027-28 delivery year would have been nearly \$530/MW-day, or about 60% higher. Currently, PJM's next capacity auction, set to be held in July, won't include the price cap — but some industry observers expect a price cap will be reinstated.

The auction results were nearly the same as PJM's last auction, which cleared at \$329.17/MW-day. As a result, ratepayers will see little change in their electric bills because of the auction, Stu Bresler, executive vice president for market services and strategy at PJM, said during a media briefing. The cost of the auction climbed to \$16.4 billion from \$16.1 billion in the previous auction, up 1.9%. Capacity costs make up a relatively small part of electric bills.

Gas-fired generation accounted for 43% of the cleared capacity, followed by nuclear at 21%, coal at 20%, demand response at 5%, hydroelectric at 4%, wind at 2%, oil at 2% and solar at 1%, according to PJM. The auction cleared 774 MW of "unforced capacity" — a measure of a resource's accredited value — of new generation and power plant uprates. "It's unsurprising that almost no new capacity showed up because projects in PJM are still struggling to get built," Julia Hoos, head of USA East at Aurora Energy Research, said in an email Thursday.

Some of the backlog is caused by permitting challenges, a difficult financing and regulatory environment, and gas turbine shortages, she said. In part, the latest auction results were driven by a 5,250-MW increase in PJM's demand forecast — almost entirely driven by data centers — and a roughly 370-MW increase in cleared "unforced capacity" compared to the previous auction, Bresler said. While PJM failed to buy enough capacity to meet its installed reliability margin, there are signs the shortfall will shrink by the time the delivery year begins on June 1, 2027, according to Bresler. PJM's demand forecast for the auction was based on an estimate released in January. However, PJM is set to release a new load forecast next month that could be significantly lower, partly based on stricter vetting of potential large loads and a reduced economic outlook, Bresler said.

"We expect it to be appreciable, so it will make a meaningful difference leading into the delivery year," he said.

Also, planned power plant retirements may be delayed and wind generation that was unable to participate in the capacity auction will still be delivering electricity in the winter when the PJM system has the most reliability risk, according to Bresler. PJM could acquire additional capacity if needed in its "incremental auctions" that are held to address supply-demand changes before a capacity year takes effect, Bresler noted. The auction results don't reflect a wave of recent investment announcements because generating projects take years to build and PJM's auction calendar has been compressed over multiple auction cycles, according to the PJM Power Providers Group and the Electric Power Supply Association.

"Arguments in support of dramatic policy reversals," such as permitting utilities to rate base generation, "would do nothing to speed construction and would further exacerbate concerns about affordability," the trade groups said. Reliability backstop procurement?

PJM's rules require it to launch an investigation when it fails to meet its reliability reserve target by more than one percentage point, the grid operator said in its auction report. It missed the 20% target by 5.2 percentage points. That could trigger a procurement process for backstop capacity, according to Jefferies equity analysts. "We increasingly see an accelerated backstop procurement as the 'default' immediate fix with a FERC filing to request this coming from the board in '26," the analysts said. "If PJM proceeds with this, expect a special RFP process to procure capacity-only resources at potentially elevated costs at term (15-years?)."

The auction results increase pressure on state utility regulators to create new tariff structures to ease concerns about shifting costs from data centers to other utility customers, analysts with research firm Capstone said. The analysts doubt PJM's board will propose major changes to the grid operator's rules for adding large loads to its system, the analysts said. PJM's board is developing a proposal based on suggestions made during a fast-track stakeholder process that failed to reach a consensus on large loads. The board aims to file a proposal for review by the Federal Energy Regulatory Commission next month, Bresler said.

"Instead, we expect the upcoming filing to focus on high-consensus items that will receive FERC approval and align with Department of Energy … principles concerning expedited interconnection for generators paired with data centers," the Capstone analysts said.

PJM is "mired in bureaucracy" while other regional grid operators are moving faster to bring new power online, according to the Ohio Manufacturers' Association. "Customers should be paying to bring new generation online, not overpaying the same legacy plants," Ryan Augsburger, OMA president, said in a statement. "If PJM's auctions continue to deliver results like this, the system must be rebuilt from the ground up."

Chicago-based Citizens Utility Board echoed OMA's concerns while calling on PJM to extend the capacity auction's price cap and eliminate the price floor. "Our capacity market is breaking under the weight of data center demand and a dysfunctional interconnection queue," CUB Executive Director Sarah Moskowitz said in a statement. "Even worse, since the auction results fell below the reliability requirement, consumers are getting the worst of all worlds: paying more money for reduced electric reliability, while existing generators get a windfall." Constellation Energy cleared 17,950 MW in the auction, the power producer said in a U.S. Securities and Exchange filing. As a result, it should garner about $2.2 billion in revenue for the 2027/28 capacity year.

Vistra cleared 10,566 MW and Talen Energy cleared 8,745 MW, they said in SEC filings. That will generate $1.3 billion and $1.1 billion in capacity revenue for the companies.

Utility Dive
http://www.utilitydive.com/

20 December 2025

235 cross-border energy projects named in Europe

The second list of projects of common and mutual interest (PCI, PMI) marks a significant increase from the 166 projects of the first list in 2023. In terms of PCIs, i.e. cross-border projects linking the energy systems of EU countries, the list is comprised as follows:

- 97 electricity, offshore and smart electricity grid projects, including 24 storage projects, six smart grids projects and 19 offshore infrastructure projects, that are regarded as essential for integrating the growing share of renewables.
- 96 hydrogen and electrolyser projects, of which 51 are for pipelines, nine for terminals, 18 for storage and 22 for electrolysers, which should play a major role in integrating and decarbonising the EU's energy system.
- 12 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.
- 2 long-standing projects linking Malta and Cyprus to the mainland European gas network.

The list of PMIs, i.e. projects promoted with countries outside the EU, is comprised of 25 projects – 16 electricity, four hydrogen and five carbon networks – with countries including Ukraine, the United Kingdom, Switzerland, Norway, Georgia, the Western Balkans and North African countries including Algeria and Tunisia.

These projects – with the list subject to the final approval of the European parliament and council – will be eligible to apply for the special financing from the Connecting Europe Facility and also will benefit from expedited permitting and regulatory processes. The Commission also has indicated supporting 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 intended to support key energy infrastructure development.

According to the Commission these 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, they can play a strategic role in increasing EU's competitiveness, decarbonisation and enhancing Europe's energy security and independence."

The release of the list preceded by mere days the release of the significant grids package and the energy highways initiative, which is expected to accelerate the development of cross-border projects, including the PCIs in general and those of them selected as energy highways in particular. At the heart of the proposal is a cross-border infrastructure planning approach, with an EU central scenario consistent with energy and climate targets to be developed from which the infrastructure needs can be identified.

Other aspects include proposals to simplify and accelerate permitting and the implementation of measures to ease supply chain pressures and blocks.

The eight energy highways that have been named – most of them with PCI or PMI status – are those cross-border projects considered as the most urgent energy infrastructures and requiring particular additional short-term support and commitment for implementation to address the bottlenecks that hinder progress. The Pyrenean crossing 1 interconnecting Navarra in Spain and Landes in France and Pyrenean crossing 2 interconnecting Spain's Aragón region and Marsillon in France are planned to better integrate the Iberian Peninsula to France across the Pyrenees with a raise of the total interconnection capacity to 8GW by 2040, up from the current 2.5GW. Pyrenean crossing 1 has already received €11.1 million for preparatory studies from the CEF.

The Great Sea interconnector is to connect Cyprus with continental Europe with interconnections between Kofinou in Cyprus and Korakia in Crete and between Kofinou and Hadera in Israel. In May 2025, work was completed on the undersea cable linking the Greek mainland to Crete, a key step towards the full interconnection. The Harmony Link interconnects Lithuania and Poland to strengthen the power links with the Baltic states and to complete the full integration of their electricity markets.

The TransBalkan Pipeline (TBP) reverse flow enables gas to flow from the Balkans via Greece/Turkey north towards central Europe and also improve energy supplies in the Balkan region and eastern neighbouring states. Bornholm Energy Island is planned to turn the Baltic Sea into an offshore interconnector hub with a hybrid offshore interconnection on the island between Denmark and Germany. The main issue to be overcome currently is the cost sharing of offshore facilities in Danish waters. Once complete the approach should serve as a blueprint for future EU offshore initiatives.

The South-eastern Europe electricity interconnections are to address critical infrastructure gaps in the region to improve price stability and energy security, including through storage. The South hydrogen (SoutH2) corridor is interconnecting Tunisia to Germany via Italy and Austria to scale up renewable hydrogen production, infrastructure and markets and to enable decarbonisation of industrial hubs along its route.

The Southwest hydrogen corridor from Portugal to Germany via Spain and France is to transport decarbonised hydrogen from production sites in southwest Europe to industrial demand centres – up to 2Mt/year by 2030 – accelerating the decarbonisation of hard to-abate sectors and enabling efficient integration of renewable energy. These projects will be provided with “targeted short-term actions” by the European Commission to ensure concrete progress and deliverables can be achieved within the next 6-9 months.

Enlit
http://www.enlit.world/

21 December 2025

Major outage leaves more than 130,000 customers in San Francisco without power

PG&E on Sunday said it did not have a timeframe for when power would be fully restored to San Francisco, as 21,000 customers remain without power. Several San Francisco neighborhoods were impacted by a massive power outage on Saturday that left nearly a third of the city without electricity, according to PG&E's website.

The outage map showed The Presidio, Seacliff, Outer and Inner Richmond, Golden Gate Park, the Panhandle, Inner and Outer Sunset, and part of West of Twin Peaks as being affected. Parts of the Western Addition and Downtown were also shown as being part of the power outage. Just before 3 p.m., PG&E's website stated that about 30% of the city was without power. As of late Saturday afternoon, more than 130,000 customers were without service, the utility provider said. PG&E said power was restored to about 100,000 customers by 11 p.m. local time, and they expected to restore power to thousands more overnight.

On Sunday morning, PG&E said about 21,000 customers were still without power, and that it was repairing a substation after a fire caused "significant and extensive" damage.

The first power outage started around 9:40 a.m. At about 3:15 p.m., the San Francisco Fire Department said it was working a one-alarm fire at PG&E's substation located at 8th and Mission streets. Fire crews said they were working to shut down power and extinguish the fire with carbon dioxide. PG&E has not said what may have caused the outages. BART said the Powell Street and the Civic Center stations were closed due to the power outage. Muni said its trains were not getting into the Muni Metro and Central Subway due to the outage.

San Francisco Mayor Daniel Lurie said at about 9 p.m. that the two BART stations were reopening and Muni services were resuming. However, lingering effects of the closure were expected to impact services. "If you don't need to travel tonight, please stay off the roads and stay inside," Lurie said. Lurie added that more officers will be at intersections and corridors to ensure safety. The San Francisco Department of Emergency Management said the outage may be affecting traffic lights, and drivers should treat the intersections as four-way stops. The utility company said there have been no injuries.

CBS News
http://www.cbsnews.com/

22 December 2025

India adds 50GW renewables in 2025 with $22.32bn investment

India has reached a significant milestone in 2025 by adding 50 gigawatts (GW) of renewable energy capacity, supported by nearly Rs2tn ($22.32bn) in investment, reported PTI. This expansion has raised the nation’s total non-fossil fuel capacity to around 262GW, putting India ahead of its climate commitments. Non-fossil fuel sources currently comprise half of India’s installed capacity, meeting the Paris Agreement’s 2030 goal five years ahead of schedule.

The country’s total installed power capacity currently stands at 510GW, including 247GW from fossil fuels and 262GW from non-fossil sources, of which renewables account for 254GW. Union Minister for New and Renewable Energy Pralhad Joshi told PTI that 2025 recorded unprecedented growth, with around 45GW of renewable capacity added from January to November, driven mainly by nearly 35GW of new solar capacity.

He said: “By the end of December, we will reach nearly 48-50GW. The future is sunny and will be powered by renewables,” noting that this momentum is likely to carry into 2026. Despite the progress, hurdles such as land acquisition, right-of-way constraints, and delays in finalising power purchase agreements (PPAs) are still limiting the rollout of new projects.

Industry projections suggest capital costs of roughly Rs 40m per megawatt (MW), implying about Rs2tn for every 50GW of additional capacity. An Indian Renewable Energy Development Agency (IREDA) analysis estimates that India will require around Rs30.54tn in investments from 2023 to 2030 to reach the 500GW non-fossil fuel capacity target.

Since 2014, public sector financial institutions have collectively committed about Rs10.79tn to renewable energy, including approximately Rs2.68tn in the 2024-25 fiscal year alone. Pralhad Joshi stated that between 2014 and 2024–25, public sector banks and institutions, such as IREDA, PFC, REC, IIFCL, SIDBI, and NaBFID, have deployed around Rs10.79tn (excluding private banks) for renewable energy projects, of which about Rs2.68tn was invested in the financial year (FY) 2024-25.

According to Vinay Rustagi, chief business officer of Premier Energies, an integrated solar cell and solar module manufacturing company, 2025 has been an exceptionally active year for the renewable sector. He noted that project commissioning increased by more than 50% compared to the previous year, largely propelled by the PM Surya Ghar Yojana and the PM-KUSUM programme.

Rustagi observed that the rapid scaling of renewable capacity is creating grid imbalances, leading to power curtailment, while delays in adding transmission infrastructure are hindering project timelines, especially in Rajasthan. Hitachi Energy’s MD and CEO for

India and South Asia, N Venu, emphasised the need to reinforce the transmission grid, speeding up the rollout of renewable energy zones, boosting energy storage, and moving from project-centric to programme-driven approaches.

Venu added that with targeted measures in 2026, India can improve its energy security and solidify its standing in the global clean energy arena.

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

22 December 2025

All U.S. Offshore Wind Construction Halted

The Trump administration has ordered work halted on all five offshore wind facilities under construction in U.S. waters. The Dec. 22 announcement by the U.S. Department of Interior said the Department of Defense had identified wind farms as national security risks — claiming that the towers and the spinning blades create a clutter in radar signals that generates false targets and obscures legitimate targets.

Interior said it is pausing the offshore wind leases to give all relevant government agencies time to work with the leaseholders and state governments to mitigate those risks. The move is a sharp escalation of the campaign against offshore wind power President Donald Trump kicked off on the first day of his second term. This has included suspension of leasing, attempts to pull back approvals issued during the Biden administration, the end of tax credits and separate stop-work orders against two offshore wind farms under construction.

Some of the individual actions have fallen flat: A federal judge in September lifted the stop-work order imposed on Revolution Wind, and a different federal judge in December ruled Trump's Day 1 order halting onshore and offshore wind leasing and permitting was unlawful. But taken together, Trump's efforts have created a level of risk and uncertainty that has led multiple developers to shelve or cancel their plans in U.S. waters.

Just two U.S. offshore wind farms are in operation, one small and one tiny. Four large facilities and one very large facility are in various stages of construction. The rest of what had been a very ambitious pipeline formed during the Biden administration and first Trump administration is in tatters, some of that due not to Trump but to cost and logistics problems that beset the nascent U.S. industry in 2022. The five projects affected by the Dec. 22 order are Coastal Virginia Offshore Wind (CVOW), Empire Wind 1, Revolution Wind, Sunrise Wind and Vineyard Wind 1.

The order did not address the two facilities already in operation: the 30-MW Block Island Wind farm in state waters near Rhode Island, and the 132-MW South Fork, which is farther south off the Rhode Island coast and directly adjacent to or near Revolution, Sunrise and Vineyard in a cluster of nine wind energy lease areas.

Interior's announcement Dec. 22 cited the findings of unclassified government reports that turbine towers are highly reflective of radar. This and dozens of spinning blades create radar interference, Interior said; radar operators can change the alarm threshold to reduce false alarms from this clutter, but doing so may cause actual threats to be overlooked.

Interior said recent DOD reports provide further basis for the pausing leases.

The 2.6 GW, 176-turbine CVOW is near the concentration of major military facilities in southeastern Virginia. Its potential to interfere with radar, air and naval operations was flagged early in the federal review process. The Jan. 28, 2024, federal approval of CVOW's construction and operations plan includes a series of conditions, one of which is a radar impact mitigation agreement to be negotiated with the North American Air Defense Command.

Empire, Revolution, Sunrise and Vineyard are near lesser concentrations of military assets, but their environmental impact statements each contain numerous references to radar. Their construction and operations plans — all approved during the Biden administration — also contain directives to address national security concerns. What has changed since then, aside from the energy priorities of the White House, is not immediately clear. The recent DOD reports are classified.

But in the announcement, Interior Secretary Doug Burgum said the threat environment has evolved since the approvals were granted: “Today’s action addresses emerging national security risks, including the rapid evolution of the relevant adversary technologies, and the vulnerabilities created by large-scale offshore wind projects with proximity near our East Coast population centers. The Trump administration will always prioritize the security of the American people.”

Reaction fell along expected lines.

Dominion Energy said: “Stopping CVOW for any length of time will threaten grid reliability for some of the nation’s most important war fighting, AI and civilian assets. It will also lead to energy inflation and threaten thousands of jobs. … The project has been more than 10 years in the works [and] involved close coordination with the military, and [its] two pilot turbines have been operating for five years without causing any impacts to national security.”

U.S. Rep. Jeff Van Drew (R-N.J.) said: “For years, I’ve warned that offshore wind can interfere with military radar and threaten our coastal defenses. This pause is the right move. National security always comes first.”

The Oceantic Network said: “The Trump administration’s construction pause issued today on five U.S. offshore wind projects set to deliver nearly 6 GW of much-needed power is another veiled attempt to hide the fact that the president doesn’t like offshore wind. … The U.S. offshore wind industry has continuously worked with the Department of Defense to address national security concerns, and its own clearinghouse has signed off on every offshore wind lease ahead of construction.”

The Committee for a Constructive Tomorrow said: “Today was a historic victory for the little guy taking on the twin Goliaths of big government and big green energy. The Trump administration’s decision to deliver a lump of coal to five major offshore wind projects by placing a hold on their permits delivers a wonderful Christmas gift to those of us who’ve been fighting in the trenches for years to halt them.”

Vet Voice Foundation said: “This isn’t about national security — it’s a political gift to fossil fuel donors that will raise electricity bills for U.S. households and increase our risk of blackouts this winter.”

U.S. Rep. Andy Harris (R-Md.) said: “Good. National security cannot be sacrificed in pursuit of expensive, untested energy experiments that put both the Eastern Shore and the nation at risk.”

Advanced Energy United said: “PJM just failed to secure enough generation in its latest capacity auction this month, and if these wind projects are delayed, it will make keeping the lights on during an energy crunch even more difficult in the Mid-Atlantic.”

U.S. Rep. Chris Smith (R-N.J.) said: “Empire Wind’s close proximity to major international airports, including Newark Liberty, LaGuardia and JFK, and critical military installations, such as Joint Base McGuire-Dix-Lakehurst and Naval Weapons Station Earle, make the project especially dangerous. It must be halted.”

The American Clean Power Association said: “All the projects suspended today underwent rigorous national security reviews during the first Trump and Biden administrations. Today’s decision creates needless uncertainty for any company that seeks to build an energy project in the United States. In America today, the greatest threat to a reliable energy system is an unreliable political system."

On the Facebook page of Protect Our Coast NJ, users posted "BEST Christmas gift EVER"; "Alleluia"; "Thank YOU Lord Jesus and President Trump"; "Stop onshore wind too"; and "A pause is nice a permanent ban is better. Get it done."

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

24 December 2025

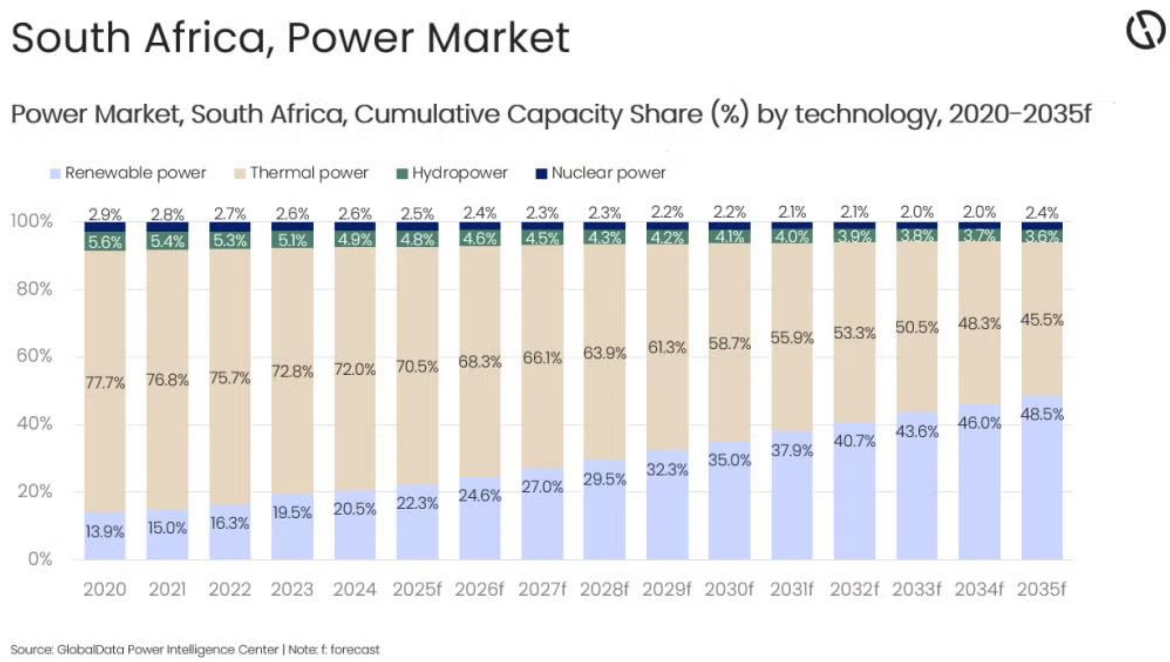
Renewables to dominate South Africa's power capacity by 2035, forecasts GlobalData

GlobalData's latest report, 'South Africa Power Market Trends and Analysis by Capacity, Generation, Transmission, Distribution, Regulations, Key Players and Forecast to 2035', provides detailed insights into South Africa's power sector. The report covers installed capacity (GW), generation (TWh), technology shares, and policy developments across the historical period (2020–2024) and forecast period (2025–2035). It also evaluates market drivers, challenges, investment opportunities, and profiles of leading companies. The analysis draws on GlobalData's proprietary databases, primary and secondary research, and in-house expertise.

South Africa is accelerating its energy transition, supported by government policy, strong solar and onshore wind potential, and sustainability targets. As a result, the share of renewables is estimated to grow more than double in the South African power capacity mix, increasing from 20.5% in 2024 to 48.5% by 2035.

Renewables are projected to account for 31.3% of the country's total power generation by 2035, up from 8.9% in 2024. Thermal power represented 72% of the total capacity share in the country in 2024.

South Africa's 2024 Electricity Regulation Amendment Act signals a decisive shift toward a more competitive, sustainable electricity market. In tandem, the government has fast-tracked new generation capacity, particularly renewables, expanding solar and wind integration to diversify the energy mix and curb dependence on coal.



South Africa has substantial renewable-energy potential, but inadequate investment has limited its development. Progress has been slowed by delayed bid-window rollouts and weak financial, technical, and procurement planning. Even as new generation projects advance, constraints in Eskom's grid infrastructure threaten energy security and reliable supply. Modernising the national electricity system is therefore essential to ensure long-term stability and support economic growth.

South Africa's Integrated Resource Plan (IRP) targets 6,000MW of solar PV and 14,400MW of wind capacity by 2030. To support these renewable energy goals, several policies and initiatives have been introduced, including the South Africa Renewable Energy Masterplan (SAREM), launched in March 2025 as a strategic framework to strengthen the renewable energy sector, and the Green Fund scheme to finance green initiatives that support a transition to a low-carbon economy.

In addition, the Renewable Energy Independent Power Producer Procurement Programme (REIPPP) is highlighted as a key driver of private-sector investment in grid-connected renewables, helping diversify South Africa's energy mix through projects such as solar, wind, and biomass, and positioning the country as a renewable energy leader in Africa.

South Africa's power sector is undergoing a transition towards sustainable energy, balancing coal retirements with renewable build-out and grid upgrades. While the 2030 target remains ambitious, continued policy alignment, accelerated infrastructure delivery, and greater investment in firming and transmission will be critical to sustaining the country's clean energy momentum through 2035 and beyond.

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

24 December 2025

Sweden's Vattenfall Applies for State Aid for New Nuclear Reactors

Swedish utility Vattenfall has submitted an application for state financing to construct new nuclear reactors at its Ringhals facility, marking the first such request under the government's support framework aimed at expanding nuclear power capacity. The application, submitted on December 23, 2025, comes from Videberg Kraft AB, a majority-owned subsidiary of state-owned Vattenfall, backed by several large Swedish industrial corporations through the Industrikraft i Sverige AB consortium.

Videberg Kraft plans to deploy small modular reactors (SMRs) on the Värö Peninsula in south-west Sweden, at the existing Ringhals nuclear site where two reactors remain operational and two have been permanently shut down.

"State support will be critical for the project," Desiree Comstedt, head of new nuclear power at Vattenfall, said in a statement. The government has indicated that the scale and terms of any financing will be determined through negotiations with Videberg Kraft, with final approval required from the European Commission.

The support scheme, enabled by legislation effective from August 1, 2025, includes low-cost loans and price guarantees to share costs and risks for up to approximately 5,000 MW of new capacity, equivalent to about four large-scale reactors. In August 2025, Vattenfall shortlisted Britain's Rolls-Royce SMR and U.S.-based GE Vernova as potential suppliers. The project considers either three Rolls-Royce SMR units or five GE Vernova BWRX-300 reactors, delivering a total capacity of around 1,500 MW. A final supplier selection is expected in 2026, while the overall investment decision is targeted for 2029. "New fossil free electricity production is critical for the electrification of Sweden's transport and industry," Prime Minister Ulf Kristersson said.

Sweden's current six operating reactors, built in the 1970s and 1980s, contribute about 30% of the country's electricity, alongside hydropower (around 40%) and wind (around 20%), resulting in nearly fossil-free production overall.

The government aims for new nuclear capacity equivalent to roughly 10 full-size reactors by 2045 to support growing demand from electrification in industry and transport. Vattenfall has also indicated interest in a subsequent phase to add another 1,000 MW of SMR capacity at the site where Ringhals 1 and 2 are located. This initiative reflects efforts to ensure reliable, low-carbon electricity supply through advanced modular technology, which offers advantages in construction efficiency and site suitability. The Ringhals location benefits from existing grid infrastructure, nuclear expertise, and regional demand, facilitating potential rapid deployment.

Reuters
http://www.reuters.com/

24 December 2025

DOE Orders Two Indiana Coal Plants to Stay Open Through Winter

U.S. Secretary of Energy Chris Wright issued more emergency orders under Section 202 (c) of the Federal Power Act to keep a pair of Indiana coal plants, F.B. Culley and R.M. Schahfer, running past their previously scheduled retirement at year’s end. CenterPoint Energy owns the F.B. Culley generating station in Warrick County, Ind., which is made up of two coal-fired units — the 103.7-MW Unit 2 and the 265.2-MW Unit 3, said the order issued Dec. 23. Unit 2 was poised to retire in December 2025, and the order keeps it open until March 23, 2026.

Northern Indiana Public Service Co. (NIPSCO) owns the Schahfer plant, which is made up of two gas-fired units and two coal-fired units at 423.5 MW apiece, the latter of which were going to retire in December. The order keeps the plant open at least until March 23, 2026. DOE has issued multiple successive orders to keep the Campbell plant in Michigan and the Eddystone plant in Pennsylvania running since this summer. (See State AGs, Enviros Argue Campbell Plant Orders Exceed DOE’s Authority.)

“The Trump administration remains committed to swiftly deploying all available tools and authorities to safeguard the reliability, affordability and security of the nation’s energy system,” Wright said in a statement. “Keeping these coal plants online has the potential to save lives and is just common sense. Americans deserve reliable power regardless of whether the wind is blowing or the sun is shining during extreme winter conditions.”

Both orders cite declining reserve margins in MISO as the reason for keeping the power plants running past their intended retirement dates. The most recent Organization of MISO States and MISO survey of resource adequacy shows a risk of falling short of planned reserve margins later this decade. The orders also note that MISO is trying to address the situation, especially with its Expedited Resource Adequacy Study (ERAS) proposal, which FERC approved this summer.

“The ERAS process should help expedite the construction of needed new capacity,” DOE said in the order. “However, resources studied under the ERAS will have commercial operation dates that are at least three years away and are provided an additional three-year grace period to commence commercial operations.” Earthjustice called the latest two 202 (c) orders a “power grab to override the decisions made in the interest of customers by power companies, grid operators and state utility regulators.”

“The plants at issue here were marked for retirement because coal is expensive and unreliable,” Earthjustice senior attorney Sameer Doshi said in a statement. “These aging power plants emit deadly air pollution, contaminate water with toxic metals, harm our climate and increasingly break down when we need them most — and the Trump administration is now asking ratepayers to pay more to keep burning coal. What’s more, the Federal Power Act should be applied based on its plain text. An event carefully planned for years is not an ‘emergency.’”

Citizens Action Coalition of Indiana Program Director Ben Inskeep said keeping the two coal plants running would add to affordability worries for the state's ratepayers.

"The federal government's order to force extremely expensive and unreliable coal units to stay open will result in higher bills for Hoosiers who are already reeling from record-high rate increases in 2025," Inskeep said in a statement. "We can't afford this costly and unfounded federal overreach."

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

29 December 2025

China Solar Buildout in Nov Is Highest in 6 Months

China added approximately 22 gigawatts of new solar power capacity in November, marking the highest monthly total in six months, according to data released by the National Energy Administration on Friday. This figure represents a strong recovery in installations toward the end of the year.

The November additions, while substantial, remain below the 25 gigawatts installed during the same month last year. The increase aligns with a common industry pattern in which developers accelerate project completion before the calendar year ends to meet construction timelines and targets.

Earlier in 2025, solar installations experienced a significant peak, reaching a record 93 gigawatts in May. This surge occurred in anticipation of upcoming policy adjustments, leading to front-loaded activity. As a result, monthly additions declined noticeably from June through August before beginning to rebound in September. The strong November performance is also attributed to state-owned enterprises working to finalize projects ahead of the conclusion of the nation's 14th Five-Year Plan. Authorities are expected to release details of the next five-year plan in March.

Industry analysis from BloombergNEF indicates an adjustment to expectations for future growth. The organization has revised its forecast for China's 2025 solar installations downward by 9 percent to 372 gigawatts. It also projects a 14 percent decrease in 2026, reflecting the impact of various policy developments that have moderated the pace of demand expansion in the sector. In addition to solar, China installed 12.5 gigawatts of wind power capacity during November, as reported by the National Energy Administration.

The November data highlights the continued momentum in China's renewable energy development, particularly in solar, as the country approaches the transition to its next planning period. The recovery in installations demonstrates the sector's ability to adapt to changing conditions and maintain progress toward long-term energy goals. These figures contribute to China's ongoing efforts to expand clean energy capacity and support the broader shift toward sustainable power generation. The combination of solar and wind additions in November underscores the scale of recent activity in the renewable sector, even as the industry prepares for evolving policy frameworks in the coming years.

Overall, the end-of-year uptick reflects both seasonal factors and strategic project timing by developers and state-owned entities. The data provides a positive note as China continues to strengthen its position as a global leader in renewable energy deployment.

Rigzone
http://www.rigzone.com/