

# **WORLD POWER SYSTEMS REVIEW**

**1 November 2025**

**15 October 2025**

## **Keppel, MET Group JV starts up 10-MWp agri-PV plant in Italy**

Switzerland-based energy company MET Group said on Wednesday that its 10-MWp Ferrera Erbognone solar agrivoltaic (agri-PV) installation in northern Italy started commercial operation. The facility, located in a traditional rice-growing region, is expected to generate about 15 GWh of electricity annually, enough to supply around 6,000 Italian households. Construction began in July 2024, with around 16,000 panels installed on 16 hectares (39.5 acres) of industrial land, MET Group said.

The project was built by CMC Europe Italy SRL under an engineering, procurement and construction contract. The electricity output will be sold to MET Energia Italia. Ferrera Erbognone is owned by Keppel MET Renewables, a 50/50 joint venture between MET Group and Singapore-based Keppel's Infrastructure Division.

Keppel Infrastructure CEO Cindy Lim said the project marked the joint venture's first grid-scale agri-PV facility in Western Europe, adding it demonstrated the partners' "asset-light, capital-efficient model" for expansion across the continent. MET's Green Assets Division operates 424 MW of solar and wind farms across Europe, has more than 500 MW of renewables under development in Italy and a total pipeline exceeding 1 GW.

*Renewables Now*

<http://renewablesnow.com/>

**15 October 2025**

## **RWE Unleashes Autonomous, Heavy Payload Drones at German Offshore Wind Farms**

RWE said on 15 October it had completed more than 80 successful cargo drone flights to offshore wind turbines in Germany, marking what it described as a milestone for the offshore wind industry. The company said the tests demonstrated the technical feasibility of using drones to deliver tools and spare parts directly to wind turbines at sea.

In a multi-phase pilot project, RWE tested both a long-distance autonomous drone and a short-range multirotor drone at its Arkona offshore wind farm in the Baltic Sea and Nordsee Ost offshore wind farm in the North Sea.

In September, a Skyways Version 2 cargo drone flew an autonomous route of more than 40 kilometres from Mukran Port to the Arkona wind farm. The drone carried a load of up to 10 kilogrammes, approached the target turbine, locked onto the nacelle, performed an automated cargo drop, and returned to its base without manual intervention. Each flight took less than 30 minutes each way, compared with at least one hour by boat. The tests were conducted beyond the visual line of sight (BVLOS), using a predefined flight path independent of mobile network coverage.

Earlier this year, RWE tested short-range multirotor drones at Nordsee Ost. In these operations, drones delivered loads of up to 30 kilogrammes from a service operation vessel directly to wind turbines. The company said these drones are now capable of carrying up to 100 kilogrammes. According to RWE, the short-range flights demonstrated potential time savings of at least 1.5 hours per turbine visit, while also reducing fuel use and technician workload.

During these short-range drone flight trials, supported by Ampelmann Operations, a medical emergency scenario was also simulated, in which a drone successfully delivered supplies to a turbine nacelle. RWE said the cargo drone project is part of its wider efforts to integrate new logistics technologies into offshore operations to improve safety, cut costs, reduce carbon emissions, and increase turbine availability. The company plans to expand the trials and move toward scaling up the operations.

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The 295 MW Nordsee Ost offshore wind farm, operational since May 2015, is located some 35 kilometres north of Helgoland. The wind farm comprises 48 Senvion 6 MW wind turbines. Arkona is located 35 kilometres northeast of the island of Rügen. The offshore wind farm, which was commissioned in 2019, features 60 Siemens SWT 6.0-154 turbines.

*Offshore Wind*  
<http://www.offshorewind.biz/>

**16 October 2025**

## **Energy Department Closes Loan Guarantee to Strengthen U.S. Grid Reliability**

U.S. Secretary of Energy Chris Wright today announced the Department of Energy's (DOE) Loan Programs Office (LPO) closed a loan guarantee to strengthen grid reliability and ensure lower electricity costs across the midwestern region of the United States.

In accordance with President Trump's Executive Order, Strengthening the Reliability and Security of the United States Electric Grid, the \$1.6 billion loan guarantee to a subsidiary of American Electric Power (AEP) will reconductor and rebuild around 5,000 miles of transmission lines across Indiana, Michigan, Ohio, Oklahoma, and West Virginia. The project will create over 1,000 construction jobs and enhance grid reliability and capacity in rapidly growing areas.

"Thanks to President Trump and the Working Families Tax Cut, the Energy Department is ensuring the American people will have access to affordable, reliable and secure energy for decades to come," said U.S. Secretary Wright. "The President has been clear: America must reverse course from the energy subtraction agenda of past administrations and strengthen our electrical grid. This loan guarantee will not only help modernize the grid and expand transmission capacity but will help position the United States to win the AI race and grow our manufacturing base."

The loan guarantee, which was carefully evaluated under the new LPO guidance directed by Secretary Wright, delivers on the Trump administration's promise to responsibly steward taxpayer dollars and unleash American energy dominance.

The AEP financial close is also the first closed loan guarantee under the Energy Dominance Financing (EDF) Program created by the Working Families Tax Cut, also known as the One Big Beautiful Bill Act. President Trump signed the legislation into law earlier this year. All electric utilities receiving an EDF loan must provide assurance to DOE that financial benefits from the financing will be passed on to the customers of that utility.

DOE remains committed to using all tools at its disposal, including the LPO, to deliver affordable, reliable and secure energy for the American people.

*DOE*  
<http://www.energy.gov/>

**21 October 2025**

## **EU's fuel import dependency to be halved by 2040**

The EU's reliance on fossil-fuel imports could be reduced by 50% by 2040, with electrification being the primary contributing factor, [reports](#) analysts Ember. The growth of wind and solar energy has already saved the region €59bn (\$68.79bn) in fossil imports between 2019 and 2024, with electricity production being increasingly homegrown.

Despite this progress, 82% of fossil fuels are still used outside the power sector, especially in the transport, heating, and industry sectors. Electrifying these sectors will provide a straightforward path to achieving energy independence.

During the 2021-24 energy crisis, the EU paid an additional €930 bn for fossil-fuel imports, as mentioned in Ember's report, 'Shockproof: how electrification can strengthen EU energy security'. Ember senior energy analyst Chris Rosslowe said: "Imported fossil fuels

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are no basis for a secure and affordable energy system [while] the full potential of Europe's homegrown power supply is being wasted by a lack of urgency to electrify. Unblocking electrification is the game-changing move that can shield the continent from over-reliance on volatile fossil-fuel suppliers." Currently, imported fossil fuels account for 58% of the EU's energy needs, more than other major economies such as China with 24% and India with 37%.

Although the EU has decreased its dependence on Russian supplies, new risks have surfaced, and the overall share of fossil-fuel imports remains unchanged. The USA is the top supplier of oil and liquefied natural gas (LNG), with the top four gas providers controlling 81% of imports, raising concerns about potential manipulation, says Ember. The EU's fifth-largest gas supplier, Qatar, recently issued a warning that it would reduce its LNG supply unless environmental and labour regulations are relaxed.

Meanwhile, the US has been leveraging energy in trade discussions. The report states that only 22% of EU energy is electrified, in comparison to 28% in China. Countries such as Norway (47%) and Sweden (33%) demonstrate the progress that is possible.

*Modern Power Systems*

<http://www.modernpowersystems.com/>

**21 October 2025**

## **Spain's power plants are burning more gas since blackout, sending gas demand up**

Spain keeps burning more gas to produce electricity and help keep its power grids stable after a major blackout on April 28, gas grid operator Enagas, opens new tab said on Tuesday, boosting the country's overall gas demand.

Conventional power plants like gas-fired combined cycle plants provide more stability to the grid's voltage than renewable sources such as wind farms and photovoltaic panels.

Gas demand to generate electricity soared almost 37% in the first nine months of the year. In addition, Spain exported more natural gas, in particular to neighbouring France, which needed more gas to fill its underground storages and maintain its regasification terminals, the company said. Overall, Spain's gas demand rose 6.6% from the same period last year, reaching the equivalent of 267.6 terawatt-hours.

*Reuters*

<http://www.reuters.com/>

**21 October 2025**

## **BP JV quits US offshore wind: 'no viable path' under Trump**

JERA Nex BP is ending activities in the US after concluding there "is no viable path for development" of its Beacon Wind offshore project.

The decision to shutter its American operations ends an adventure that began when oil giant BP entered the US offshore wind market to great fanfare in 2020 but has now been stopped in its tracks by Donald Trump's hostile policies.

JERA Nex BP's entire US team will leave the company in the next few months as it ends its operational presence there, said the company, the 50/50 offshore wind joint venture formed last year by BP and Japanese power group JERA.

"The US is a market with significant long-term potential for offshore wind, which we still believe can play a key role in the country's energy transition. Unfortunately, in the present environment we see no viable path to the development of our Beacon wind project and have concluded that we cannot continue our investment in the market," said the company. Beacon Wind was previously under development off New York and Massachusetts by BP and Equinor, the Norwegian oil group that was BP's original partner

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in US offshore wind. Beacon passed to BP and later JERA Nex BP when the two oil giants split their US offshore wind interests.

BP's original entry to the US market came at the high point of renewables expansion undertaken by former BP CEO Bernard Looney, a trajectory since reversed by his successor Murray Auchincloss BP's American offshore wind journey was bumpy even before Donald Trump returned to the presidency.

New York state energy regulator NYSERDA awarded Beacon Wind 1 a power offtake contract for 1.2GW in the state's Round 2 in 2019, although that deal was later cancelled after inflation rendered it unviable. BP in 2023 booked a \$540m impairment against its US offshore wind interests.

JERA Nex BP said it will retain the 2.5GW, 128,000-acre lease area south of Nantucket and east of Long Island "and wait for a more favourable moment to resume project development". Like most other US offshore wind projects – only the most advanced have even a fighting chance of completion – Beacon Wind now faces a lengthy wait to see if the skies for offshore wind lighten in a post-Trump era.

*Recharge News*

<http://www.rechargenews.com/>

**21 October 2025**

## **China completes world's first wind-powered underwater data center**

China on Tuesday completed construction of the world's first wind-powered underwater data center (UDC) project in east China's Shanghai Municipality, setting a benchmark in terms of the green development of computing infrastructure.

Located in the Lin-gang Special Area of China (Shanghai) Pilot Free Trade Zone, this UDC project received an investment of 1.6 billion yuan (about 226 million U.S. dollars) and has a total power capacity of 24 megawatts, according to the administrative committee of the Lin-gang Special Area.

The administrative committee said the completion of this initiative marks a breakthrough in the integrated development of UDC projects and offshore renewable energy. It provides a concrete example of green and low-carbon development of computing infrastructure and local consumption of offshore wind power on a demonstration scale.

Compared to traditional land-based data centers, the underwater project is designed to use over 95 percent green electricity -- reducing power consumption by 22.8 percent, and water and land use by 100 percent and more than 90 percent, respectively, said Su Yang, general manager of Shanghai Hicloud Technology, which is one of the project contractors. Su also noted that energy consumption for cooling in conventional data centers accounts for roughly 40 to 50 percent of total energy consumption. By leveraging seawater as a natural cooling system -- this UDC can reduce the proportion to below 10 percent.

The entire project will be constructed in two phases. Phase one, now completed, was designed to achieve a power usage effectiveness (PUE) of no higher than 1.15, which represents an advanced industry level. PUE is a measure of how efficiently a data center uses its power. The lower the PUE, the greener the data center. Based on a green development policy for data centers issued by the Chinese government in 2024 -- all new or retrofitted large and mega data centers should achieve PUE below 1.25 by the end of 2025. For data center projects in national hub nodes, the PUE standard is no higher than 1.2.

Wu Xiaohua, deputy secretary of the Party committee of the Lin-gang Special Area, said the completion of the data center is a milestone for Lin-gang in integrating the digital economy, new energy and the marine economy. It also represents a major initiative by Shanghai in serving national strategies and building a global hub for sci-tech innovation.

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As an economic hub in east China's coastal region, Shanghai is developing its intelligent computing industry. According to measures released by the Shanghai municipal government in March 2025, the city aims to grow its intelligent computing cloud industry scale to over 200 billion yuan by 2027 -- with a targeted computing capacity of 200 EFLOPS.

These measures also outlined plans to deploy intelligent computing capacity and expand cluster scales in key areas such as Lin-gang. Huang Dinan, chairman of Shenergy Group, another project contractor, said the East China Sea provides Shanghai with unique offshore wind power resources, as annual utilization hours exceed 3,000 hours -- thus supplying stable and green electricity for the city's economy and residents.

This innovation integrates offshore wind power with subsea computing systems -- achieving efficient resource coordination across power generation, grid and load, while matching the data center's requirements for green electricity, Huang said. On Tuesday, Shanghai Hicloud Technology, Shenergy Group, the Shanghai branch of China Telecom, INESA and China Communications Construction Company's Third Harbor Engineering Co., Ltd. all signed an agreement to cooperate in launching a 500-megawatt offshore wind-powered UDC project.

"Construction of UDCs is still in its initial stage. To achieve the transition from demonstration projects to large-scale application, progress is still required in terms of technological maturity and cost optimization," said Wang Shifeng, chairman of Third Harbor Engineering Co., Ltd. He added that the company will focus on breakthroughs in core technologies for far-shore computing infrastructure, optimization of operation and maintenance, and green low-carbon upgrades. Building green computing facilities near the east China economic hub is an innovative move and provides a valuable addition to the country's national computing network.

China in 2022 launched a mega data project to accelerate the development of an integrated national computing network. Dubbed the "East Data, West Computing" initiative, it is designed to see less-developed inland regions storing and processing data transmitted from the country's economically vibrant eastern areas.

*Xinhua*

<http://english.news.cn>

**22 October 2025**

## **South Africa's Integrated Energy Resource Plan: A marked shift towards wind power**

The Integrated Energy Resource Plan 2025 which envisages some R2.2 trillion of new investment into the energy sector, will see wind power increase from 8% of installed generation capacity to 24%, or 34 000MW by 2039, while coal will remain the chief source of power at 27% of South Africa's capacity.

This indication that the government wishes for substantially higher investment in the wind energy sector in the next few years was contained in the address by Electricity and Energy Minister Kgosientsho Ramokgopa, who spoke at the opening of the Windaba conference in Cape Town on Wednesday. Currently, 58% of South Africa's installed capacity is generated by coal, and coal accounts for 93% of electricity production. Solar makes up 10% of current installed capacity.

Ramokgopa said it was a waste of energy trying to advocate one source of power over another, as "we are all on the same team working towards the same goal; we are just different players." He stated that South Africa's energy transition programme was "irreversible," and the country aims to meet its carbon emission targets. He said that there had already been over R100 billion invested in wind power generation in South Africa to date, with 40 projects in operation or construction, and 3 614MW of capacity online. However, he mentioned that it takes up to nine years for wind power projects to become

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operational, and ways needed to be found, also from the government's regulatory and policy framework point of view, to allow these projects to get off the ground more quickly.

This point was pertinent given that Seriti Green CEO Peter Venn pointed out at the conference that currently no wind power projects are under construction in terms of the government's Renewable Energy Independent Producer Power Programme (REIPPP), and the last time wind energy was included in this programme was in Bid Window 3, which closed in 2013. There have been five bid windows since then. Reiterating a theme at the conference of needing to deal with the limited capacity of the electricity grid, in Bid Window 6 in 2023, none of the wind projects were selected out of bids for an allocation of 3 200MW, due to grid-related constraints. Ramokgopa said the IRP 2025, which was announced publicly on Sunday for the first time, provides a long-term guide and stability on energy policy and targets, but it is also flexible enough to include other or new technologies that may become more cost-effective over the period of the IRP 2025, such as hydrogen power sources.

He said that by 2030, the IRP 2025 envisages that gas will comprise 6 000MW of installed capacity, some 7 300MW will be wind capacity, while battery storage capacity would amount to 3 100MW. By 2039, it is envisaged that solar electricity power capacity would amount to 18% of the country's total capacity, gas 11%, while nuclear is estimated to contribute 7 060MW.

Riveshen Govender, CEO of the South African Wind Energy Association, stated that "we must break the shackles of the electricity grid constraints." He said there were over 5 300MW of wind projects in development, which is up nearly 60% since 2023, making it the second largest contributor to the renewable energy mix, signaling growing investor confidence in the sector.

He said that the National Transmission Company of South Africa (NTSA) is still in the process of transitioning to become an independent power transmission company, but the grid capacity expansion has since been elevated to a national priority by the government. Subesh Pillay, acting director-general of the Department of Electricity and Energy, said the government has started defining the grid access and connection rules and regulations, and is codifying these for the National Energy Regulator of South Africa (Nersa), so that these will eventually become license conditions for grid access by independent power producers.

*Business Reprt*

<http://businessreport.co.za/>

**23 October 2025**

## **UK gives green light to record-breaking Lincolnshire solar farm**

Unit 1 of the Tihange nuclear power plant has been taken offline for the final time after 50 years of operation and disconnected from the grid. Its closure is in line with Belgium's nuclear phase-out policy, under which three other reactors have already been shut down.

Operator Electrabel, the Belgian subsidiary of France's Engie, said the 962 MWe (net) pressurised water reactor was shut down at 23:21 local time on 30 September. It entered commercial operation on 1 October 1975.

Belgium's federal law of 31 January 2003 required the phase-out of all seven nuclear electricity generation in the country. Under that policy, Doel 1 was originally set to be taken out of service on its 40th anniversary – 15 February 2015. However, the law was amended in 2013 and 2015 to provide for Doel 1 to remain operational for an additional ten years and it was retired in February this year. Doel 3 was closed in September 2022 and Tihange 2 at the end of January 2023. Unit 2 of the Doel plant is set to shut in November.

In June of this year, Mr Miliband detailed his "solar roadmap" that calls for an increase in solar energy production in the United Kingdom. The UK currently has 18 gigawatts (GW)

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of solar capacity and the energy secretary wants to increase this to 57GW within just five years. The 500MW Tillbridge Solar power plant will strengthen the UK's energy portfolio diversification

According to Tribus and Recurrent, the Tillbridge Solar power plant, located east of Gainsborough in Lincolnshire, will not only provide essential energy for the region but will also support 1,250 jobs in the solar sector, strengthening the UK's employment market, which has seen better days. A planning application for the record-breaking solar plant in Lincolnshire was submitted to the Planning Inspectorate on 9 May 2024, and the quick and swift approval has been lauded by industry insiders.

"Solar farms are the cheapest source of electricity in the UK. The larger they are, the more they benefit from economies of scale. Critically, they produce home-grown clean energy, displacing expensive and polluting natural gas from the grid." – Chris Hewett, chief executive of trade body Solar Energy UK. The project will generate enough renewable electricity to power up to 300,000 homes when the sun is shining in the UK, which in all fairness is not that often. The solar power sector in Europe has been growing as France has now launched the largest solar cluster on the continent.

The number of large-scale solar schemes entering planning continues to rise

Industry experts have noted that the number of large-scale solar projects entering the planning phase after receiving approval from the relevant regulatory bodies in the UK is on the rise. Solar Media Market Research has noted that in July of this year, solar power recorded the highest capacity submitted in history, with just over 3GWp. Spain has also seen new solar projects being permitted this year, pointing to an exodus of European nations from the conventional gas and coal sectors. "Solar offers huge potential to boost our energy independence, bring down bills and tackle the climate crisis. Since this Government came to office my department has consented almost three gigawatts of solar projects – nearly three times as much as the previous 14 years combined – but we know we need to go further to deliver our goals for clean power by 2030 and beyond." – UK Energy Secretary Ed Miliband.

*Energies Media*

<http://energiesmedia.com>

**24 October 2025**

## **ERCOT increasingly meets rising demand with solar, wind, and batteries**

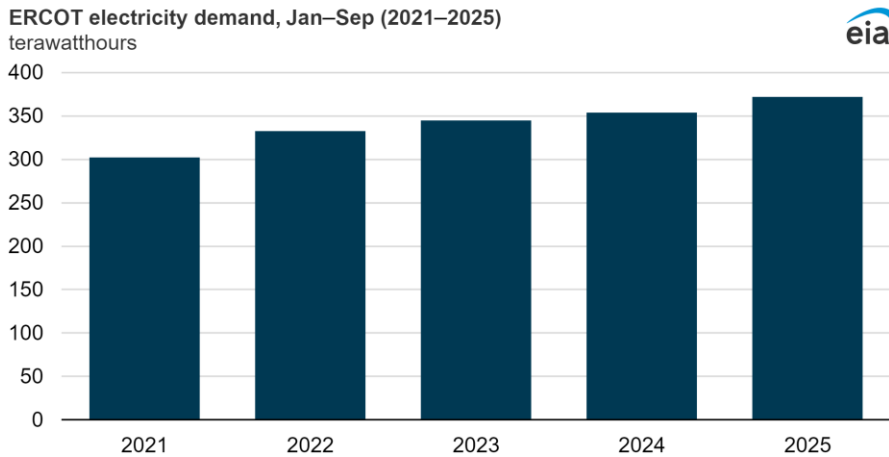
Since 2021, electricity demand within the Texas electricity grid operated by the Electric Reliability Council of Texas (ERCOT) has steadily increased. In the first nine months of 2025, electricity demand in ERCOT, which manages about 90% of the state's load, reached a record high compared with the same period in previous years. Over those same months, ERCOT had the fastest electricity demand growth among U.S. electricity grids between 2024 and 2025. From January through September 2025, demand for electric power in ERCOT increased 5% compared with the same period in 2024 to 372 terawatt-hours (TWh), 23% more than the same months in 2021. Since 2023, wind and solar generation, especially utility-scale solar, have been the fastest-growing sources of electricity in ERCOT and are increasingly meeting rising demand.

Utility-scale solar generated 45 TWh of electricity in the first nine months of 2025, 50% more than the same period in 2024 and nearly four times more than the same period in 2021, when utility-scale solar only produced 11 TWh. Wind generation through the first nine months of this year totaled 87 TWh, up 4% compared with the same period in 2024 and 36% since the same period in 2021. Together, wind and solar generation met 36% of ERCOT's electricity demand in the first nine months of 2025.

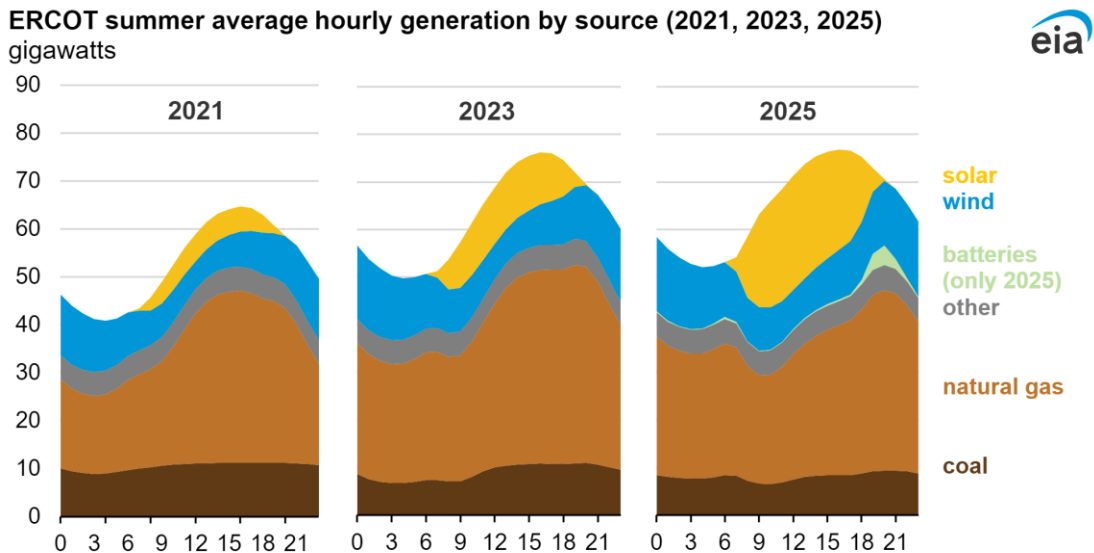
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Natural gas-fired generation also increased after 2021 but flattened more recently. Natural gas-fired generation between January and September increased to 161 TWh in 2023, 24% more than the same period in 2021. Since 2023, natural gas-fired generation remained relatively flat, totaling 158 TWh between January and September 2025. Although it is still the largest source of electricity for ERCOT, natural gas-fired generation averaged 43% in the first nine months of 2025, compared with 47% in the first nine months of 2023 and 2024.



The types of energy sources used for electricity generation can vary on an hourly basis, especially during the summer. Solar output is highest during midday hours, and the increased availability of solar generation in ERCOT in recent years has reduced the need for natural gas-fired generation during that time of the day. Solar generators in ERCOT produced an average of 24 gigawatts (GW) between noon and 1:00 p.m. during the summer months of June through September compared with an average of 12 GW of solar generation at noon in the summer months of 2023. Over the same period, the share of natural gas-fired generation at midday fell from 50% in 2023 to 37% in 2025.



Batteries store electricity during daytime when generation from wind and solar is the highest, and they supply electricity when generation from wind and solar is declining. Beginning in October 2024, ERCOT began reporting battery output separately in its hourly grid data. In the summer months of 2025, batteries helped supply electricity in the evening as solar output declined, supplying an average of 4 GW in the 8:00 p.m. hour.

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ERCOT's electricity demand is forecast to grow faster than that of any other grid operator in the United States through at least 2026. In our October Short-Term Energy Outlook, we forecast demand will rise another 14% in the first nine months of 2026 compared with the same period this year, reaching 425 TWh.

**EIA**

<http://www.eia.gov/>

**24 October 2025**

## **UAE Breaks Ground on World's First Gigascale Round-the-Clock Renewable Energy Project, Setting a New Global Standard For Clean Energy**

His Highness Sheikh Theyab bin Mohamed bin Zayed Al Nahyan, Deputy Chairman of the Presidential Court for Development and Fallen Heroes' Affairs, has witnessed the groundbreaking of the world's largest combined solar power and battery storage project, capable of delivering 1 gigawatt (GW) of baseload renewable energy around the clock.

In line with the vision of His Highness Sheikh Mohamed bin Zayed Al Nahyan, President of the United Arab Emirates, this world-first project, developed by Abu Dhabi Future Energy Company PJSC – Masdar and Emirates Water and Electricity Company (EWEC), reimagines the potential of renewable energy by overcoming the barrier of intermittency. By producing gigascale baseload energy at a globally competitive tariff for the first time, the project sets a new international benchmark and reaffirms the UAE's leadership position in renewable energy development.

The project will integrate a 5.2GW solar photovoltaic (PV) plant with a 19 gigawatt-hours (GWh) battery energy storage system (BESS), the largest and most technologically advanced system of its kind in the world. The design features cutting-edge technologies, including AI-enhanced forecasting and intelligent dispatch, and AI-ready infrastructure for predictive analytics and system optimization. Once operational, the project will act as a blueprint that can be replicated internationally to meet the growing demand for clean, secure, round-the-clock power.

His Excellency Dr Sultan Al Jaber, Minister of Industry and Advanced Technology and Chairman of Masdar, said: "Masdar and EWEC are breaking ground on the future, here in Abu Dhabi. With the unwavering support of His Highness Sheikh Mohamed bin Zayed Al Nahyan, President of the UAE, and His Highness Sheikh Khaled bin Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Chairman of the Abu Dhabi Executive Council, and in the presence of His Highness Sheikh Theyab bin Mohamed bin Zayed Al Nahyan, this gigascale project is a step towards redefining the role of renewable energy for the information age. This breakthrough is the culmination of Masdar's two decades of excellence in renewables and is testament to the power of collaboration in Abu Dhabi's energy ecosystem. As the world looks for secure, sustainable and affordable energy, the UAE is proud to offer a new vision for technologically enabled growth."

Mohamed Jameel Al Ramahi, Chief Executive Officer at Masdar, said: "This groundbreaking is a proud occasion for Masdar and the UAE, and represents a pivotal moment in clean energy transformation. This world-first project, the largest and most ambitious in Masdar's history, is a blueprint for the world, demonstrating that renewable energy can be dispatched around the clock. By overcoming the challenge of intermittency, we can provide sustainable power to meet fast-growing demand from advancements in artificial intelligence and other technologies. We look forward to working closely with EWEC and our partners to deliver this landmark project, which will set the global standard for renewable energy development and support other nations in delivering on their clean energy objectives."

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Once complete, the project will deliver 1GW of continuous, clean baseload power 24/7 at a globally competitive tariff, avoiding approximately 5.7 million tonnes of carbon emissions annually and supporting the UAE's ongoing efforts to diversify its energy mix. The facility is scheduled to be operational by 2027.

Ahmed Ali Alshamsi, Chief Executive Officer at Emirates Water and Electricity Company, said: "This landmark project is a testament to the vision of President His Highness Sheikh Mohamed bin Zayed Al Nahyan, and the unwavering commitment of EWEC and our partners in commissioning and developing transformative innovations that support national objectives. Abu Dhabi and the UAE are a global hub for artificial intelligence research, innovation, and adoption, and this project will ensure that the energy needs of this key sector are met sustainably, powering the next generation of economic growth. We are proud to have strategically collaborated with Masdar on this iconic project, and to break ground on a new era of energy in the UAE."

The project represents capital investment in excess of US\$6 billion. Its development will create over 10,000 jobs and new manufacturing and service facilities, reflecting the UAE's vision and commitment to drive socioeconomic growth. The project will provide affordable, reliable, clean power to meet increasing energy demand from artificial intelligence (AI) and the digital economy. The UAE is positioning AI as a cornerstone of its economic diversification and is targeting being a global leader in the sector under its 2031 national strategy, the first of its kind in the world, by investing in the people and industries that are key to the UAE's success.

Masdar has established a strong presence in battery storage with investments in the United States, the United Kingdom and elsewhere, including the world's first storage system connected to a floating offshore wind farm, and has projects in operation and development in a number of countries. Masdar is targeting an overall project portfolio capacity across clean energy technologies of 100GW by 2030.

*PR Newswire*

<http://www.prnewswire.com/>

**25 October 2025**

## **Germany demolishes 160-meter-tall nuclear power plant towers**

It only lasted a few seconds, then history was finally made - the two 160-meter-high cooling towers of the nuclear power plant in Gundremmingen, Germany. Before the eyes of thousands of spectators, both towers were blown up at 12:00. The action lasted only 15 seconds, then the cooling towers of the Gundremmingen nuclear power plant became history. The two towers, 160 meters high, collapsed as planned, disappearing in a huge cloud of dust. Of the two reinforced concrete colossi, only a huge pile of rubble remained.

The weather also helped the eruption experts. "With this bad weather, only a good eruption can come out," eruption expert Gerd Vogel said earlier. Fog was absent, providing clear views of the eruption. Meanwhile, rain kept the dust cloud limited. Next week, the foundation stone for one of the largest battery energy storage facilities in Germany will be laid there.

There are also plans to build a gas-fired power plant, and the network of solar panels will be expanded around Gundremmingen. Even the material from the two cooling towers will find a new use: the rubble will be recycled and, among other things, used in road construction. However, the final end of nuclear power in Gundremmingen has not yet fully come. On the territory of the plant, old nuclear fuel rods are still stored in a temporary storage facility – until a final place for their disposal is found.

*Telegrafi*

<http://telegrafi.com/>

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***1 November 2025***

**29 October 2025**

## **India's coal power no longer viable beyond NEP 2032 targets**

India's power sector is experiencing a major transformation as renewable energy sources and storage technologies gain an increased share in the country's energy mix, according to think tank Ember.

With the evolving generation mix, coal is expected to transition from being the cornerstone and baseload provider of the domestic power system to serving as a flexible balancing resource that complements the increasing presence of variable renewable energy.

According to the National Electricity Plan (NEP) 2032, India is largely progressing towards achieving its generation mix targets for solar, coal, and hydro power. However, there is need for growth in other technologies such as pumped-storage hydropower and battery energy storage systems. Nuclear energy is the only technology projected to fall short of its target, the report said. This change is making coal-based power increasingly uneconomical compared to renewable options.

The changing role of coal in the country has profound cost implications. By fiscal year 2031-32 (FY31-32), the cost of coal-based electricity is expected to be approximately 25% higher than in FY24-25. This projection is based on a chronological, least-cost operations model of the Indian power sector, which compares coal fleet operations between the two fiscal years within the NEP scenario.

The analysis reveals that by 2031-32, the demand for coal plants during daytime hours is expected to decrease due to higher solar penetration, thereby compelling coal plants to operate nearer to their minimum technical thresholds. India's coal fleet fluctuates between 70GW and 80GW from morning to midday, with a margin of about 7GW above its technical minimum, leading to increased flexibility requirements of coal-based electricity. Consequently, plant load factors are anticipated to fall up to 55%, causing fixed costs to be spread over fewer units of generation, thereby increasing the actual cost of coal power.

On the other hand, firm and dispatchable renewable energy solutions such as renewable energy paired with battery storage are becoming more competitive. They offer tariffs ranging from Rs4.3 to Rs5.8 (\$0.04 to \$0.06) per kilowatt-hour and have showcased their ability to fulfil availability and performance obligations. India is now in a position to attain reliability and flexibility in its power sector without the need for constructing new coal plants.

The report says that India's upcoming phase of power sector planning should prioritise enhancing system flexibility through the incorporation of storage solutions, implementing operational reforms, and undertaking selective retrofits, rather than increasing coal capacity.

This approach reportedly aligns with the goals of NEP 2032 and assures a more economically efficient, resilient, and sustainable power system.

*Power Technology*

<http://www.power-technology.com/>

**29 October 2025**

## **Explore the TYNDP 2026 draft project portfolio: 178 transmission and 49 storage projects now published**

On 17 October 2025, ENTSO-E publishes the draft list of electricity infrastructure projects to be assessed in the next edition of the Ten-Year Network Development Plan (TYNDP). The [TYNDP 2026 draft project portfolio](#) consists of 178 transmission projects and 49 storage projects. These projects were proposed by project promoters during the first submission window in April-May 2025. ENTSO-E has verified the compliance of all

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applications with the TYNDP 2026 admission criteria set out in the TYNDP 2026 Guidance for Applicants.

Stakeholders and interested parties can explore the projects through the TYNDP 2026 project map.

As next steps, a second submission window was open from 15 September to 15 October 2025, targeting projects in the ideation phase. All submitted projects will go through administrative and technical checks in November 2025. Over the course of 2026, all projects in the TYNDP 2026 portfolio will have their benefits assessed through a cost-benefit analysis. The results will be released with the draft TYNDP 2026 in late 2026.

**ENTSO-E**

<http://www.entsoe.eu/>

**30 October 2025**

## **US firm's 3D solar towers beat panels, make 50% more energy with sun tracking**

Texas-based Janta Power company is developing three-dimensional solar towers that generate roughly 50 percent more energy than standard flat-panel systems. This tower-like design maximizes the use of space, fitting a far greater number of panels into a much smaller footprint.

Recently, the company closed a \$5.5 million seed round to accelerate the commercialization and scale-up of the company's patented 3D photovoltaic tower technology. These solar towers could be placed across high-demand sectors, including data centers, EV charging hubs, telecom towers, universities, and industrial facilities.

The technology solves key challenges faced by conventional solar farms: limited land availability and low energy output per square foot. The vertical solar towers are developed to deliver 50% more energy. Interestingly, the tech achieves this performance while utilizing only one-third of the land area required by standard arrays.



Plus, the tower's patented design maximizes space, achieving three times the solar surface area exposure within the same amount of land. A core innovation of the system is its generation profile. The vertical stacking of the panels allows the towers to capture low-angle light throughout the day. Reportedly, to ensure maximum light capture, the solar towers are responsive, automatically moving to follow the sun's path.

Due to their slanted, upright design, the tech can effectively utilize the sharp angles of early morning and late-day sunlight, an ability missing in flat panels. The extended exposure throughout the day results in a longer, more even flow of electricity, avoiding the

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concentrated midday spike typical of other solar arrays. Moreover, this generation profile is useful for grid stability, as it better aligns with real energy demand and reduces ramp stress on the grid. “Typical installations achieve a capacity factor of ~32%, compared to ~22% for flat panels, thanks to active shading optimization and control software,” the press release noted.

Janta Power’s reliability and space-saving design have already garnered interest from infrastructure operators. Pilot programs are currently underway with major global aviation partners, including Dallas–Fort Worth International Airport (DFW), Munich International Airport, and Aena (operator of over 70 airports worldwide). These deployments are part of the Airports for Innovation (A4I) initiative, highlighting the technology’s suitability for land-constrained and high-security environments.

The structural integrity of each solar tower is a key design element to ensure durability and resilience. It is built using steel with modular helical or pier foundations. This construction method allows each tower to withstand high winds, certified to survive speeds of at least 110 mph and up to 170 mph, making them suitable for deployment in various environments prone to severe weather. The newly secured funding, led by MaC Venture Capital, will allow Janta Power to finalize its manufacturing scale-up.

As per the press release, the tower solution also demonstrates a competitive economic advantage in the energy sector, offering a remarkably low Levelized Cost of Energy (LCOE) of just \$0.05/kWh.

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