

WORLD POWER SYSTEMS REVIEW

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Malaysia PM Says \$10 Bln Committed to National Grid Upgrade

At the Energy Asia conference held on Monday, Malaysian Prime Minister Anwar Ibrahim announced that Tenaga Nasional, the state utility company, has allocated 43 billion ringgit (approximately \$10.1 billion) for upgrading the national power grid. This infrastructure development is aimed at supporting the country's growing needs in artificial intelligence (AI) and battery energy storage systems.

During his speech, Anwar also highlighted several initiatives by the national energy firm, Petronas. The company plans to establish three carbon capture and storage facilities in offshore areas of Malaysia. These facilities are designed to support not only the oil and gas sector but also a range of other industries.

Malaysia's CCS strategy includes collaborations with over ten international partners, primarily from Japan and South Korea. Key global energy firms such as TotalEnergies and Shell are also involved in the effort. Petronas is further partnering with Eneos, Mitsubishi, and JX Nippon to explore the transport and storage of carbon dioxide from Tokyo Bay to Malaysia.

Anwar stated: "This positions CCS not only as a vital decarbonisation tool but also as a promising new revenue stream for the region." In addition, Petronas CEO Tengku Muhammad Taufik Tengku Aziz noted that the company is responding to increasing demand driven by AI and the expansion of data centres. Malaysia is emerging as a significant regional centre for such infrastructure in Southeast Asia.

International technology companies such as Microsoft, Google, Amazon, Nvidia, and Oracle have all made investments in Malaysia. These are primarily focused on cloud services and the development of data centres, contributing to the country's growing prominence in the AI and digital economy sectors.

Reuters

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

17 June 2025

El Gobierno acusa a REE y a las eléctricas por no haber controlado la sobretensión que llevó al apagón

La vicepresidenta tercera y ministra para la Transición Ecológica, Sara Aagesen, ha dicho este martes que el apagón del 28 de abril se produjo por un problema "multifactorial" que implica episodios de sobretensión, oscilaciones y desconexiones de centrales, y ya ha avanzado que la próxima semana aprobará un decreto ley para supervisar mejor el sistema para un episodio similar no se vuelva a producir.

Es la principal conclusión a la que ha llegado el informe realizado por el Comité para el análisis de las circunstancias que concurrieron en el cero energético del 28 de abril, y cuyas principales conclusiones ha presentado Sara Aagesen en la rueda de prensa posterior al Consejo de Ministros este martes. La vicepresidenta tercera ha remarcado en su intervención que se ha descartado por completo que el apagón sucediese por un ciberataque, y ha apuntado a un conjunto de factores que se desarrollaron en cadena y provocaron finalmente que la península ibérica se quedara sin luz el 28 de abril.

"El mensaje más importante que hoy queremos transmitir es que el apagón del pasado 28, tuvo un origen multifactorial, es decir, confluyó una combinación de factores. La causa del cero fue un fenómeno de sobretensiones, una reacción en cadena, desconexiones de generación que a su vez provocaron nuevas desconexiones", ha señalado. El informe estructura la causa del cero energético en tres grandes factores, el

primero de los cuales es que el sistema no disponía de suficiente capacidad de control de tensión dinámica, según ha relatado.

Aagesen ha explicado que el primero de los factores es que el sistema no disponía de suficiente capacidad de control de tensión dinámica. Así, por una parte, ha detallado que el programa final del operador del sistema para ese día con grupos de capacidad de control de tensión fue el menor desde que empezó 2025, a lo que se sumó que los grupos de generación que tenían que haber controlado la tensión, y que además muchos de los cuales estaban retribuidos económicamente para ello, no absorbieron toda la energía reactiva que se esperaba.

"Con lo cual, faltaban capacidades de controlar tensión", pese a que "había parque de generación disponible suficiente para responder". En este punto, ha detallado que de las diez centrales seleccionadas ese día para el control de la tensión, REE estimó que una térmica no era necesaria, mientras que el resto tenían "algún grado de incumplimiento".

La empresa presidida por Beatriz Corredor hizo sus cálculos para las necesidades del sistema para el 28 de abril y determinó que con tener operativas nueve de las diez centrales era suficiente para controlar la tensión del sistema. Sin embargo, esas nueve centrales e manos de las empresas privados reaccionaron como tocaba a la hora de aportar potencia reactiva o amortiguar la sobretensión. En cuanto a la segunda causa, ha resaltado que las oscilaciones condicionaron el sistema, sobre todo dos, una de ellas más atípica, y aunque el operador aplicó las medidas protocolizadas para contenerlas, estas medidas situaban a su vez al sistema en una situación de mayores tensiones.

La tercera causa, según la vicepresidenta, es que ocurrieron desconexiones de generación cuando empezó a haber picos de sobretensión, de las cuales algunas fueron "aparentemente indebidas", es decir, se desconectaron antes de lo previsto en la normativa. Esto contribuyó a seguir escalando la tensión. "Por lo tanto, ¿por qué no pudo contenerse? Yo creo que llegamos a un punto de no retorno, de reacción en cadena. Una marea imparable una vez iniciada, salvo si hubiera habido antes, con anticipación, capacidad de absorber energía reactiva y controlar masivamente la tensión", ha incidido.

Respecto a los instrumentos con los que cuenta el sistema para responder de forma automática a la pérdida de generación, los llamados 'cortafuegos', ha dicho que "realmente lo que estarían atacando son los síntomas, pero no la causa". "Se pierde generación y se puede aislar demanda para que estén acompasados, pero la causa era que no había suficiente capacidad regular de tensión", ha indicado. Respecto a la reposición del sistema eléctrico, que se consiguió al 50% esa misma noche y prácticamente al 100% a las 7 de la mañana del día 29, lo ha calificado como "un éxito", donde Todos los operadores "trabajaron con agilidad" para permitir que todas las subestaciones de la red de transporte estuvieran operativas.

Aagesen señaló que el Gobierno ha aprovechado este ejercicio del Comité para detectar disfunciones que redundaron en distintos aspectos que podrían mejorarse, por lo que el informe también incorpora medidas para el apagón no vuelva a repetirse. Sin embargo, el Gobierno incide en que el informe que ha elaborado no es un examen judicial de lo sucedido, por lo que será la justicia y la Comisión Nacional de los Mercados y la Competencia (CNMC) quienes determinan quien paga las indemnizaciones a empresas y hogares afectados.

En este escenario, ha anunciado que en el próximo Consejo de Ministros se aprobará un Real Decreto Ley con un paquete de medidas para actuar ante lo acontecido el pasado 28. Además, la ministra comparecerá en la Comisión de secretos oficiales del Congreso para hablar sobre los elementos que se han anonimizado en el informe por cuestiones de Seguridad Nacional o porque las empresas lo han pedido expresamente. El Real Decreto

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establece ocho bloques de actuación desde el punto de vista de la operación del sistema y tres bloques de actuación desde el punto de vista de ciberseguridad y sistemas digitales.

La primera medida es el refuerzo de la supervisión y la verificación del cumplimiento de todas y cada una de las obligaciones por parte de todos y cada uno de los agentes. "Entendemos que es fundamental que tengamos un régimen jurídico también de las infraestructuras comunes de evacuación y otras cuestiones como acelerar la puesta en marcha de la Comisión Nacional de la Energía (CNE)", ha afirmado. En segundo lugar, conscientes de que el problema ha sido la sobretensión, se reforzarán los recursos que pueden controlar la tensión y proteger al sistema ante oscilaciones, habida cuenta de que al ser España un país periférico está más expuesto a las oscilaciones.

Se impulsará la puesta en marcha del servicio de control de tensión, de modo que la tensión dinámica pueda ser regulada no sólo por los equipos síncronos (hidroeléctricas, ciclos combinados de gas, centrales nucleares) sino también por las instalaciones de generación renovable, además de incorporar compensadores síncronos y mejorar los servicios de ajuste. También se actualizará el procedimiento de operación de reposición del suministro. El impulso al incremento de la demanda eléctrica y el incremento de la firmeza y flexibilidad del sistema eléctrico son otras de las medidas, acelerar la planificación de la red de transporte Horizonte 2030, apostar por el almacenamiento e impulsar las interconexiones son otras de las medidas, esta última "una demanda histórica que lleva años de incumplimiento".

Por último, el Gobierno buscará acelerar la transposición de la Directiva de Ciberseguridad y Entidades Críticas para proteger a las redes de posibles ataques cibernéticos, además de impulsar la aplicación de controles y segmentación de redes e implementación de sistemas de detección y correlación de eventos. "Tenemos un relato de hechos que es sólido, una explicación contrastada que nos permite a todos reflexionar, pero también actuar", ha concluido.

Periodico Energia

<https://elperiodicodelaenergia.com/>

17 June 2025

IEA launches observatory to monitor AI and data centre energy demand

The new IEA energy and AI observatory is proposed to monitor and analyse the energy consumption and linkages between AI and energy.

Underlying its formation is the growing energy consumption of data centres and AI data centres in particular and the limited data on this consumption. It follows the release in April by the IEA of its first comprehensive report on the impact of AI in the energy sector, which found that electricity demand from AI-optimised data centres could more than quadruple by 2030. However, at the same time, AI is already being deployed in the energy industry, unlocking opportunities to cut costs, enhance competitiveness and reduce emissions.

Fatih Birol, IEA Executive Director, commented that AI is quickly emerging as one of the most important technologies of our time. "Building on our recent major report on this subject, this new energy and AI observatory underscores our commitment to supporting decision makers around the world as they plan for the future. Reliable data and analysis are the cornerstone of navigating this fast-moving space." The energy and AI observatory, which is publicly accessible, includes comprehensive datasets with accompanying interactive tools to explore data centre electricity consumption and digital infrastructure by region and the aim is for these to be updated regularly.

It also features 20 case studies to show how AI is being deployed in a wide range of applications across the energy sector, following a public call for submissions that showcase

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current best practices. The report estimated current data centre energy consumption at around 1.5% of the world's electricity consumption and that it is set to more than double by 2030.

While this is still small at the global level, individual countries face challenges as data centres tend to cluster, as is apparent in the AI observatory mapping. AI data centres in particular are also a concern due to their scale necessary to train and run AI models, which has resulted in the emergence of gigawatt-scale clusters in numerous regions across the US and for example in the Frankfurt, London, Amsterdam, Paris, and Dublin hubs in Europe. Other useful data in the mapping is that the data centres can be seen alongside the associated power and digital infrastructure.

IEA

<http://www.iea.org/>

17 June 2025

EU Investment Bank pledges €1.6bn for Bay of Biscay power link connecting Spain & France

The European Investment Bank (EIB) has announced a funding package of 1.6 billion euros to support a major electricity interconnection project linking France and Spain – an initiative that responds to Madrid's calls for enhanced infrastructure following the massive blackout in April.

Experts argue that the widespread power outage, which crippled the entire Iberian Peninsula on 28 April and is considered one of the most significant in Europe's recent history, might have been less severe if more interconnections had existed between the two countries. The EIB said it would extend loans to the national grid operators of Spain and France – Red Eléctrica and RTE – for the Bay of Biscay interconnection, which is expected to nearly double the power exchange capacity from 2,800 to 5,000 megawatts. According to the bank's statement, the interconnection is currently under construction and scheduled to be operational in 2028. The project spans more than 400 kilometres, with around 300 kilometres running beneath the Atlantic Ocean. The initial 1.2 billion euros in funding was formalised at a signing ceremony at the EIB's Luxembourg headquarters on Monday. The event was attended by EIB President Nadia Calviño (Spain's former economy minister), EU Energy Commissioner Dan Jørgensen, and officials from both France and Spain.

The European Union has established a target requiring member states to have interconnections amounting to at least 15% of their installed electricity generation capacity by 2030, as part of its efforts to bolster the bloc's energy security. The April blackout highlighted the Iberian Peninsula's limited energy interconnections. Assistance from France and Morocco was vital in helping to restore electricity across Spain and Portugal.

In response, the two countries recently sent a joint letter to the European Commission urging enhanced interconnection infrastructure to prevent future blackouts. The EIB's commitment to the Bay of Biscay project 'will be key to ensuring that the Iberian Peninsula is no longer an energy island', said Calviño. She also noted that increased energy integration is 'an important area for EU competitiveness and strategic autonomy'.

Spain in English

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

18 June 2025

UK's Crown Estate to invest £400m in offshore wind supply chain

The UK's Crown Estate has announced plans to invest up to £400m (\$462m) to bolster the country's offshore wind supply chain.

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The strategic investment aims to address current capacity constraints to accelerate clean energy deployment nationwide while creating growth opportunities within local communities. The funds are earmarked for developing infrastructure such as ports, supply chain manufacturing and research, and testing sites essential for expanding offshore wind capabilities. Leveraging the new investment powers granted by the Crown Estate Act 2025, which received Royal Assent in March, the organisation will allocate its capital through two targeted programmes, both of which are now operational.

A newly established £350m supply chain investment programme will concentrate on constructing port and related infrastructure, aimed at accelerating the delivery of offshore wind projects in the UK. The Crown Estate intends to coordinate efforts with private and public entities such as Great British Energy and the National Wealth Fund to maximise impact and efficiency.

The Crown Estate head of investment Ben Brinded stated: “We will not unlock the full economic, social and environmental benefits of offshore wind without collaboration and investment into the UK supply chain. Building out enabling infrastructure is critical if we are to accelerate deployment off our coasts, derisk projects for investors and create local economic opportunities. “The Crown Estate’s proposal to invest up to £400m in the offshore wind supply chain through two targeted programmes is recognition of offshore wind’s vital role in the UK’s clean energy transition and the many wider benefits it creates.”

The Crown Estate will also invest £50m through the supply chain accelerator programme focused on early-stage project support. Almost £5m was allocated across 13 organisations in December 2024. The ongoing second funding round is seeking proposals until 27 June 2025, with up to £15m available for allocation. This round extends eligibility to include UK ports and associated infrastructures.

Juergen Maier, the chair of Great British Energy, stated: “The UK is a leader in offshore wind, which we know creates jobs, growth and innovation. Only by working with our partners will we be able to find the scale to unlock the benefits for the UK and reach our goal of clean power by 2030.” In May 2025, the Crown Estate announced its intention to progress with the capacity enhancement initiative, which seeks to maximise the potential of existing offshore wind lease areas.

Power Technology

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

19 June 2025

AcegasApsAmga taps Siemens for digital twin of Trieste energy grid

Italian DSO AcegasApsAmga will use Siemens’ software to develop a digital twin of its medium and low voltage grid in Trieste.

By developing a digital twin of Trieste’s power grid, AcegasApsAmga aims to proactively manage congestion challenges arising from the growing integration of distributed energy resources (DERs), and the substantial energy demands of port operations. Siemens Smart Infrastructure’s Gridscale X software will support the DSO in ensuring a stable and efficient power supply for docked ships.

By simulating grid conditions, the software can identify congestion points and calculate the energy required to address them. It will enable full situational awareness of the power grid of the municipality of Trieste, advancing the city’s broader electrification strategy, primarily designed to mitigate pollution levels stemming from the Port of Trieste, one of Europe’s most bustling ports. The port currently handles over 70 million tons of cargo annually, making it a critical hub with significant energy needs.

Commenting in a release was Sabine Erlinghagen, CEO of Siemens Grid Software:

“As the power grid increases in complexity, we need to embrace digitalisation to optimise its performance and resilience. “Collaborating with the Italian DSO, AcegasApsAmga, presents a key opportunity for the utility to leverage Siemens’ digital twin technology to simulate, monitor, and manage energy flows in real time, ensuring efficient operations and supporting sustainability goals.”

Said Carlo Andriolo, CEO of AcegasApsAmga: “Working together with Siemens, we aim to gain critical visibility over the grid to proactively identify potential congestion points and calculate the energy needed to mitigate issues. Using Gridscale X, we can do this in an efficient and reliable manner, ensuring there are no disruptions to Trieste’s port operations.”

Siemens’ Gridscale X platform uses data from smart meters to detect outages, visualise grid congestion, and deliver insights through advanced analytics. The software is part of Siemens Xcelerator, the company’s open digital business platform. Siemens and AcegasApsAmga have a long-standing relationship spanning more than 100 years, with the Italian DSO leveraging Siemens’ SCADA system and evolving ADMS functionalities to optimize grid operations.

Smart Energy

<http://www.smart-energy.com/>

20 June 2025

Ireland shuts last coal plant, becomes 15th coal-free country in Europe

Ireland today became the 15th coal-free country in Europe, having ended coal power generation at its 915 MW Moneypoint coal plant in County Clare. Initially commissioned in the mid-1980s by ESB, Moneypoint was intended to help Ireland offset the impact of the oil crises in the 1970s by providing a dependable source of energy.

But with Ireland now generating a lot more renewable energy nowadays, coal burning is no longer such an urgent need. Energy think tank Ember data states Ireland generated 37% (11.4 TWh) of its electricity from wind in 2024. Solar is not near wind levels of generation, (0.97 TWh in 2024) but it has been continuously breaking generation records in recent months and local stakeholders are confident this positive trend will continue.

Following the closure, the Moneypoint plant will continue to serve a limited backup role, burning heavy fuel oil under emergency instruction from Ireland’s transmission system operator EirGrid until 2029. This strategy is in line with previous plans made by EirGrid and ESB to exit coal-fired generation by the end of 2025, which stipulated that Moneypoint would no longer be active in the wholesale electricity market.

“Ireland has quietly rewritten its energy story, replacing toxic coal with homegrown renewable power,” said Alexandru Mustață, campaigner on coal and gas at Europe’s Beyond Fossil Fuels. “But this isn’t ‘job done’. The government’s priority now must be building a power system for a renewable future; one with the storage, flexibility, and grid infrastructure needed to run fully on clean, domestic renewable electricity,” Mustață warned.

Jerry Mac Evilly, Campaigns Director at Friends of the Earth Ireland, appealed to the government to ensure oil backup at Moneypoint is kept to an absolute minimum and ultimately decommissioned. He also appealed for the government to prevent further development of data centers, which he said are increasing Ireland’s reliance on fossil gas. “We also can’t ignore that the government is targeting the installation of at least 2 GW of gas power plants with no strategy to reduce Ireland’s dangerous gas dependency,” he added.

On a broader level, Ireland’s step to close coal power generation at Moneypoint sets a precedent for further European countries’ coal exits to come, says Beyond Fossil Fuels. The group tracks European countries’ progress on their commitments to switching from fossil fuels to renewable energy. So far, 23 European countries have committed to coal phase-outs. Italy is expected to complete its mainland coal phase-out this summer with the

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upcoming closure of its last two big coal power plants, while mainland Spain is also expecting to declare itself coal-free this summer.

Pv-magazine

<http://www.pv-magazine.com/>

21 June 2025

Great British Energy's £8.3bn Budget Reallocated for SMRs

Great British Energy (GB Energy), the United Kingdom's newly established publicly owned energy company, has experienced a reallocation of its original £8.3 billion (\$11.27 billion) budget. This budget, initially designated to support clean energy initiatives including wind and solar power, has now been partially redirected toward nuclear energy development.

As outlined in Chancellor of the Exchequer Rachel Reeves' June 2025 spending review, £2.5 billion from the original GB Energy funding will be allocated to the development of small modular reactors (SMRs). This programme is being led by Rolls-Royce in collaboration with Great British Nuclear (GBN), a government agency responsible for advancing the UK's nuclear capabilities.

The SMR programme, which began in 2023 under the previous Conservative administration, was integrated into GB Energy's remit following a rebranding move. Just one day prior to the announcement of the spending review, Great British Nuclear was quietly renamed Great British Energy – Nuclear, allowing it to access GB Energy's funds. Despite this renaming, both GB Energy and GBN continue to function as separate organisations.

As a result of this reallocation, GB Energy is now left with under £6 billion to invest directly in renewable energy projects. While two government officials have maintained that the decision should not be viewed as a cut to GB Energy's budget, they pointed to the strategic alignment between the goals of GBN and the founding mission of GB Energy. However, a third official noted that the reallocation decision was made just prior to the publication of Reeves' financial review, suggesting a lack of advance planning.

In response to these developments, Scottish National Party Member of the Scottish Parliament Bill Kidd commented via The National: "The fact Labour is raiding its promised funding for GB energy to spend on nuclear is shocking but not surprising."

Further constraints on GB Energy's operations were also revealed in the review documents. Of the remaining budget, £4 billion has been designated as financial transaction funding, meaning it cannot be used for direct ownership or operation of energy projects. Instead, these funds are limited to grant distribution or minority equity investments in clean energy initiatives.

A government official added that these restrictions reduce GB Energy's operational independence and are indicative of the Treasury's intention to maintain oversight over the new public energy body. The UK Treasury has not issued any public comment regarding the changes.

Power Technology

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

22 June 2025

FERC Accepts Revisions to SPP's WEIS Market

FERC accepted SPP's tariff revisions for its Western Energy Imbalance Service (WEIS) market that allow the grid operator to begin a market hold for reliability-based concerns when requested by a balancing authority (ER25-1137).

In its June 20 order, the commission found the proposed tariff revisions to be just and reasonable and accepted them effective April 5, 2025. It said the changes will help facilitate

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the WEIS market's operation by specifying that SPP will suspend the calculation of dispatch instructions for certain resources and treat them as self-dispatched if a participating BA asks for a market hold.

FERC said the changes allow the WEIS market's relevant entities — the participating BAs, the SPP West Reliability Coordinator and SPP as the market operator — “to coordinate and timely respond to reliability-based events while avoiding significant disruptions to the operation of the WEIS market and providing clarity regarding settlements for the time period of those events.”

It noted that “importantly,” the BAs and SPP West RC “retain their NERC-mandated reliability responsibilities in the WEIS market.”

SPP's Market Monitoring Unit protested the tariff revisions, saying they were not clarifying in nature. The MMU said a market hold initiated by a BA for reliability-based concerns is instead a new condition that would suspend the market dispatch.

The Monitor said that while a BA should be able to initiate the hold, a lack of detail in two key areas rendered the proposed revisions unjust and unreasonable. It argued they have neither clear guidelines for the types of reliability concerns that would trigger a market hold nor an explanation of the actions that should be taken leading up to and after the market hold. It also asserted that the proposals lack transparent communication to market participants.

FERC disagreed, finding that a “reliability-based concern” is appropriate because the BAs are the entities ultimately responsible for initiating market holds in their respective areas. It noted that SPP said a market operator does not have authority to dictate what BAs can and cannot do for reliability reasons, pointing to a list of examples of reliability-based concerns that could warrant a market hold.

“These examples illustrate that there are myriad operational issues that could pose a risk to reliability,” the commission said. “We recognize a balancing authority's responsibility to maintain reliability in the face of a wide range of potential operational issues and the necessary flexibility required to adequately do so.”

The commissioners were also “unpersuaded” by the MMU's contention that the revisions are unjust and unreasonable because they fail to set forth an expectation that the BAs will exhaust alternative solutions before implementing a market hold. FERC found that the tariff doesn't need to “set forth such an expectation in order to be just and reasonable because the tariff does not govern balancing authorities' responsibilities to ensure reliability.” Those responsibilities are governed by the applicable reliability standards, it said.

SPP has administered the WEIS market on a contract basis since February 2021, balancing generation and load for 12 participants, primarily in the Rocky Mountain region. The RTO has said the market participants will eventually transition to either its Western RTO expansion or its Markets+ program.

RTO Insider

<https://www.rtoinsider.com/>

22 June 2025

Germany Deploys 1.1 GW of PV in May

Germany's Federal Network Agency (Bundesnetzagentur) reported that 1.1128 GW of new net photovoltaic (PV) capacity was installed in May 2025. This figure is lower than the 1.223 GW added in May 2024 but higher than the 945 MW recorded in April 2025.

From January to May 2025, Germany added a total of 5.97 GW of PV capacity, slightly below the 6.16 GW installed during the same period in 2024. The new capacity in 2025 includes 2.4971 GW from ground-mounted systems, 213.2 MW from balcony solar devices, and 74.1 MW from other solar system types, according to Bundesnetzagentur data.

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By the end of May 2025, Germany's total operational PV capacity reached approximately 106.3 GW. Data from the Marktstammdatenregister, the federal registry for energy market data, indicates that demand for rooftop PV systems remained subdued through May. The agency recorded 476.7 MW of new rooftop capacity in May, only 1.3 MW more than in March, which was the lowest month for rooftop installations in 2025. Approximately 30,000 new rooftop systems were commissioned during May.

The growth in PV capacity reflects Germany's ongoing commitment to expanding renewable energy sources. Ground-mounted systems continue to dominate new installations, while balcony solar devices and other system categories contribute to diversifying the solar energy landscape. Despite the slight year-on-year decline in cumulative installations, the steady addition of capacity supports Germany's efforts to strengthen its renewable energy infrastructure.

Pv-magazine

<http://www.pv-magazine.com/>

23 June 2025

China hits 1 TW solar milestone

China's cumulative installed solar capacity has surpassed 1 TW, according to the National Energy Administration (NEA). By the end of May 2025, solar capacity had reached 1.08 TW (1,080 GW), up 56.9% year on year.

NEA data show total power generation capacity stood at 3.61 TW at the end of May, an 18.8% increase from a year earlier. Solar was the fastest-growing segment, driven by record installations in the first five months of 2025. From January to May, new solar installations totaled 197.85 GW, up 388.03% from the same period last year. In May alone, China added 92.92 GW of new capacity, a 105.48% increase from April and the highest monthly figure on record.

Analysts attribute the surge to favorable government policies, including support for distributed solar and mechanisms allowing renewable energy to participate in electricity market trading. These measures triggered a rush to complete installations ahead of expected policy changes in the second half of the year. China reached its first 1 GW of installed solar in 2010 under the Golden Sun Program, which launched the country's distributed solar segment. After trade tensions with the United States and Europe in 2011–12, Beijing shifted toward domestic support, spurring utility-scale projects in the northwest and pushing cumulative capacity to 10 GW by mid-2013.

The top-runner program later boosted deployment by promoting technological innovation and efficiency. By June 2017, total installed capacity exceeded 100 GW – a tenfold increase in four years. Eight years later, China has reached 1 TW of installed solar –an unmatched global milestone. However, analysts warn that demand could slow in the second half of 2025 as the policy-driven surge eases. Several market research firms have issued cautious forecasts, citing a likely drop in installation momentum.

PV-magazine

<http://www.pv-magazine.com/>

23 June 2025

Powering Britain's future: Electricity bills to be slashed for over 7,000 businesses in major industry shake-up

More than 7,000 British businesses are set to see their electricity bills slashed by up to 25% from 2027, as the Government unveils its bold new Industrial Strategy.

The modern Industrial Strategy sets out a ten-year plan to boost investment, create good skilled jobs and make Britain the best place to do business by tackling two of the

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biggest barriers facing UK industry – high electricity prices and long waits for grid connections. British manufacturers currently pay some of the highest electricity prices in the developed world while businesses looking to expand or modernise have faced delays when it comes to connecting to the grid.

For too long these challenges have held back growth and made it harder for British firms to compete. Today's announcement marks a decisive shift — with government stepping in to support industry and unlock the UK's economic potential. From 2027, the new British Industrial Competitiveness Scheme will reduce electricity costs by up to £40 per megawatt hour for over 7,000 electricity-intensive businesses in manufacturing sectors like automotive, aerospace and chemicals.

These firms, which support over 300,000 skilled jobs, will be exempt from paying levies such as the Renewables Obligation, Feed-in Tariffs and the Capacity Market — helping level the playing field and make them more internationally competitive. Eligibility and further details on the exemptions will be determined following consultation, which will be launched shortly.

The government is also increasing support for the most energy-intensive firms — like steel, chemicals, and glass — by covering more of the electricity network charges they normally have to pay through the British Industry Supercharger. These businesses currently get a 60% discount on those charges, but from 2026, that will increase to 90%. This means their electricity bills will go down, helping them stay competitive, protect jobs, and invest in the future.

This will help around 500 eligible businesses in sectors such as steel, ceramics and glass reduce their costs and protect jobs in industries that are the backbone of our economy and will be delivered at no additional cost to the taxpayer. These reforms complement the government's long-term mission for clean power, which is the only way to bring down bills for good by ending the UK's dependency on volatile fossil fuel markets.

To ensure businesses can grow and hire without delay, the government will also deliver a new Connections Accelerator Service to streamline grid access for major investment projects — including prioritising those that create high-quality jobs and deliver significant economic benefits. We will work closely with the energy sector, local authorities, Welsh and Scottish Governments, trade unions, and industry to design this service, which we expect to begin operating at the end of 2025. New powers in the Planning and Infrastructure Bill, currently before parliament, could also allow the Government to reserve grid capacity for strategically important projects, cutting waiting times and unlocking growth in key sectors.

The Industrial Strategy is a 10-year plan to promote business investment and growth and make it quicker, easier and cheaper to do business in the UK, giving businesses the confidence to invest and create 1.1 million good, well-paid jobs in thriving industries – delivering on this government's Plan for Change.

GOV.UK

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

25 June 2025

Offshore wind installed capacity reaches 83 GW as new report finds 2024 a record year for construction and auctions

The Global Wind Energy Council's flagship Global Offshore Wind Report, released today, shows that the offshore wind industry added another 8GW of capacity in 2024, making it the fourth highest year ever. This brings total installed offshore wind capacity globally to 83 GW – enough to power 73 million households.

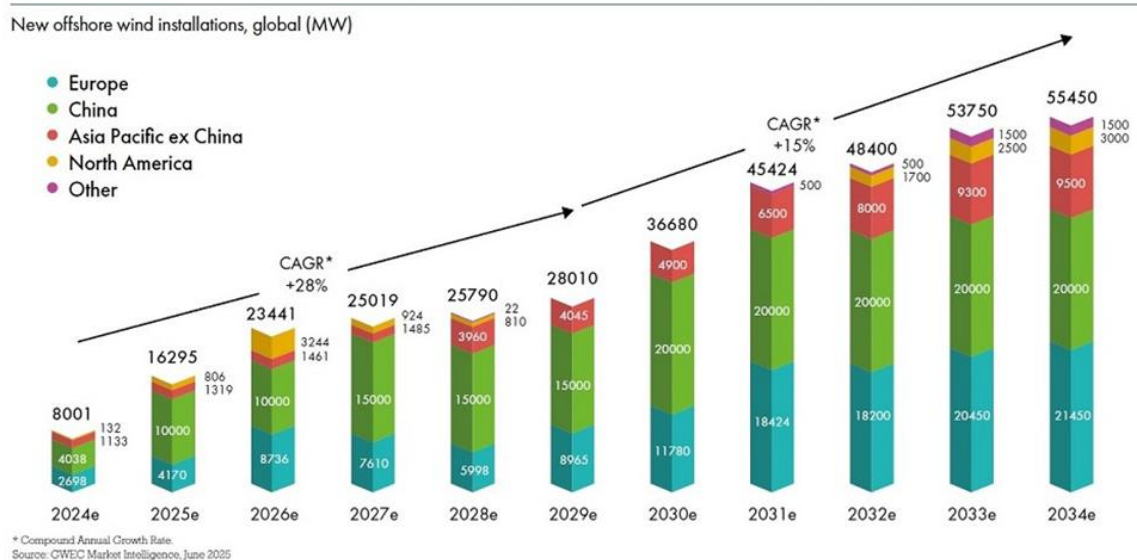
WORLD POWER SYSTEMS REVIEW

1 July 2025

Government auctions awarded 56 GW of new capacity globally last year, a record figure, while the industry is already constructing another 48 GW of offshore wind worldwide, also a record figure. The report highlights the significant policy and regulatory breakthroughs that are forming the next stage of offshore wind markets in countries including Japan, South Korea and the Philippines.

However, despite the strong pipeline, the report shows that macroeconomic headwinds, failed auctions, supply chain constraints and increasing policy instability, particularly in the US, have contributed to a downgrading of GWEC's short term outlook.

The report warns that, whilst the fundamental case for offshore wind has never been stronger, the sector is facing an inflection point. GWEC recommends that industry and governments now need to urgently work together to redesign auction processes to focus on delivery and better risk sharing so that offshore wind can fulfil its vital role in providing large scale and secure clean power. The report also finds that the fundamentals of offshore wind have not changed, and the mid-term outlook remains strong.



GWEC's Global Offshore Wind Report shows there is now 83GW of offshore wind capacity across the world, enough to power 73 million households. GWEC's Market Intelligence team forecasts annual offshore wind capacity installations to grow from 8GW in 2024 to 34GW in 2030. However, GWEC's short-term outlook is 24% lower than the previous year's forecast due to a negative policy environment in the US and auction failures in the UK and Denmark. Adding to these challenges are transmission delays in Europe and slower commissioning in the APAC region, meaning that, while growth continues, it is happening at a slower pace.

Annual growth rates are expected to be 28% until 2029, and 15% up to 2034, which, in capacity-terms, means the industry will still sail past the milestones of 30GW annually in 2030 and 50 GW by 2033. While near-term growth is concentrated in the already established markets in Europe and China, GWEC reports offshore wind pushing into new regions such as Asia-Pacific and Latin America. In Japan, South Korea, Philippines, Vietnam, Australia, Brazil and Colombia, government is working with the industry to establish policies and regulations to fast-track offshore wind. This signals policymaker commitment and sets the stage for the sector's next wave of market expansion.

The Key Data

- In 2024, 8 GW of new offshore wind capacity was grid-connected worldwide. New additions were 26% lower than the previous year, making 2024 the fourth-highest year in offshore wind history.

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- The global offshore market grew on average by 10% each year in the past decade, bringing total installations to 83.2 GW, which accounted for 7.3% of total global wind capacity as of the end of 2024.

- China led the world in new offshore wind installations for the seventh year in a row, followed by United Kingdom, Taiwan (China), Germany and France. The top five markets made up 94% of the new additions in 2024.

- China is the absolute market leader for cumulative offshore wind installations, accounting for half of the global market share, followed by the UK. Germany, the Netherlands and Taiwan (China) complete the top five. Offshore wind pioneer Denmark dropped out of the top five for the first time.

- At the end of 2024, a total of 278 MW net floating wind was installed globally, of which 101 MW in Norway, 78 MW is in the UK, 40MW in China, 27MW in France, 25 MW in Portugal, 5 MW in Japan and 2 MW in Spain.

GWEC

<http://www.gwec.net/>

25 June 2025

Extreme Heat Triggers Capacity Deficiency in New England

ISO-NE declared a capacity deficiency, implemented a Power Caution and took extra actions to maintain grid reliability during what may have been the highest peak load since 2013, driven by extreme heat and humidity, on the evening of June 24. ISO-NE entered the day with a slim reserve margin and declared a Power Caution in the early evening “after the unexpected loss of generation left the region short of the resources needed to meet both consumer demand and required operating reserves.”

A Power Caution indicates that the RTO can no longer maintain its reserves through “normal measures.” ISO-NE lifted it at 9 p.m., after the evening peak had subsided, but maintained a precautionary alert of abnormal system conditions, which was instituted June 23 because of the heat.

Demand peaked at 26,024 MW around 7 p.m. June 24, according to preliminary data from the RTO. This would be the highest peak demand in the region since 2013 and about 200 MW higher than the forecast peak for the day.

Heading into the summer season, ISO-NE projected a 24,803-MW seasonal peak in typical weather conditions and a 25,886-MW seasonal peak with above-average temperatures.

The sudden generation loss that triggered the Power Caution may have come from a gas resource; just before ISO-NE issued the power caution, gas generation in the region declined rapidly by about 1,000 MW, according to RTO data. During the peak-load period, natural gas accounted for about 45% of the region’s fuel mix, followed by nuclear at 12%, oil at 12%, net imports at 11% and renewables at about 5%.

Behind-the-meter solar also contributed to a significant peak reduction. ISO-NE estimates demand would have peaked at over 28,400 MW without its contributions. BTM solar pushed the peak multiple hours later in the day, from midafternoon to midevening. At 6:50 p.m., with solar production on the decline, BTM solar still contributed to an over-600-MW reduction in the peak.

Locational marginal prices spiked during the capacity deficiency, with the hourly Hub LMP reaching \$1,110/MWh between 6 and 7 p.m., more than doubling the day-ahead price Hub price of \$475/MWh for the same hour.

The extreme temperatures affected most of the country and caused tight system conditions throughout the Northeast on June 24. NYISO issued an Energy Warning late in the day, while PJM issued a Maximum Generation Alert and MISO remained under a Max

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Generation Warning. (See related stories, NYISO Issues Energy Warning as Heat Wave Boils New York and MISO Declares Max Gen Emergency in Heat Wave.)

Across New England, thousands of distribution customers faced power outages amid the heat wave, which brought temperatures as high as 102 degrees Fahrenheit in Boston, marking the fourth-hottest day on record in the city.

RTO Insider

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

26 June 2025

PJM Exceeds Forecast Summer Peak Load During June Heat Wave

PJM experienced a preliminary peak load over 160 GW on the afternoon of June 23, surpassing the RTO's summer forecast of 154 GW and requiring the deployment of pre-emergency DR.



The heat wave blanketing much of the region brought temperatures of around 100 degrees Fahrenheit, leading to an RTO-wide hot weather alert being issued between June 22 and 25, which was extended to include the 26th as well. Several pre-emergency load management reduction actions were taken June 24 across the RTO, while DR also was called for the Mid-Atlantic and Dominion regions June 23 and 25.

Two maximum generation/load management alerts were issued on June 24 and 25, a notification instructing resource owners to be prepared to operate above their economic parameters if emergency actions are taken. The alert also put PJM into NERC's Energy Emergency Alert (EEA) 1 status for their duration.

Lockwood said the June 23 and 24 peaks are the highest PJM has seen since 2011 and both place in the top five for all-time peak demand.

PJM also reported that it has dispatched Eddystone Units 3 and 4 throughout the heat wave. The generator is being operated past its requested deactivation date of May 31 under a Department of Energy emergency order expiring Aug. 28. Eddystone Unit 3 ran for 16 hours on June 23 and all day on the 24th, while Unit 4 operated 14 hours on the 23rd and

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20 hours the following day. Both units ran all day on June 25. (See DOE Orders PJM, Constellation to Keep 760-MW Eddystone Generators Online.)

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27 June 2025

Polish parliament approves liberalisation of wind farm rules

The Polish parliament approved new legislation to simplify regulations for constructing onshore wind farms. The government views this as a vital measure to increase renewable energy production and reduce electricity costs for consumers. The new law reduces the required distance between planned wind farm installations and residential areas. However, it maintains stricter permitting processes for projects located near protected natural environments to ensure ecological balance.

Additionally, the legislation includes provisions to support households and local communities. A key clause freezes household energy prices until the end of 2025, providing financial relief. The bill also offers incentives for municipalities and homeowners in areas near new wind farm developments to encourage local support.

Climate Minister Paulina Hennig-Kloska addressed Parliament on Wednesday, stating: "This is a step towards lower power prices for Poles and for the economy, an idea we all share. The more power we have from renewable sources, the lower electricity prices will be."

Expanding renewable energy has been a central commitment of the current government, following years of limited progress in onshore wind development under the previous administration. The new rules aim to accelerate the growth of clean energy sources, which accounted for nearly 30% of Poland's electricity production in 2024. The country currently has 11 gigawatts of installed wind capacity. The legislation now awaits approval from the Senate and the president. Outgoing President Andrzej Duda and president-elect Karol Nawrocki have expressed reservations about easing wind farm permitting requirements. Duda noted on Wednesday that the inclusion of the energy price freeze amendment appeared designed to pressure him into signing the bill.

Poland's energy mix is gradually shifting, with renewable sources gaining ground while coal-fired power, which remains dominant, sees a decline. The government anticipates that the new law will further strengthen the renewable energy sector, contributing to both economic and environmental goals.

Reuters

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