17 February 2025

New tech could turn wind turbines into stealth military eyes, blind fighter jets

Wind farms could be a great asset to the military as the cutting-edge technology could soon make turbines 'disappear' and become the eyes and ears of a country's forces, according to a report. Recently, Sweden rejected 13 planned offshore wind projects due to their potential impact on military radar systems. The projects were aimed at generating power amounting to 30GW. However, their cancellation over military concerns is currently reverberating around Europe. A recent report claims that AI and nanotech could make wind farms 'disappear' from the radar.

Stealth technology similar to that used in aircraft could soon be used to reduce the clutter that wind turbines cause military radar systems. Nanotechnology, artificial intelligence and mesh sensor networks could help scrub wind turbines from radar sensors and even turn them into military assets, reported Recharge News.

Made of radar-absorbing materials, stealth wind turbines have poor radar signatures and these can be part of wind farms that coexist with airfields and military bases. Such systems could also help avoid interference with radar stations.

However, the stealthy turbines could increase the cost of wind farms. It's also claimed that stealth turbines, which will be made using the same radar-absorbing materials that are used in aircraft, could affect the aerodynamic performance of the blades. An effective stealthy wind turbine that uses less expensive material could be a great fit for wind farms that may coexist with airfields. "Based on the Armed Forces' documentation, the government makes the assessment that it would lead to unacceptable consequences for Sweden's military defence to build the projects in question," said Sweden Defence Minister Pål Jonson in November 2024.

Regardless of fossil-free electricity production and proposed precautionary measures, Sweden rejected projects due to their impact on national defense interests. These projects are Arkona, Aurora, Baltic Offshore Beta, Baltic Offshore Delta North, Cirrus, Erik Segersäll, Neptune, Pleione, the Skåne offshore wind park, Ski Blades, Southern Victoria, Swell and Triton. However, stealthy turbines could help the military instead of posing a challenge to the armed forces.

Back in 2016, QinetiQ developed lightweight, radar-absorbing materials that could integrate with the turbines supplied by Vestas. The company had revealed that its innovative solution was a first of its kind, and demonstrated excellent enhancement and application of what was originally defence technology. "Radar impact assessment modelling, prototype manufacturing and testing using our multiband portable radar confirmed that our stealth solution could be integrated into the turbines without significantly altering their physical characteristics or manufacturing process," revealed QinetiQ at that time. The application of QinetiQ's stealth technology to these turbines achieved a reduction of up to 99% of radar interference. As a result, the Ensemble Eolien Catalan wind farm was able to be installed near Perpignan in June 2016 – within the coordination area of the Opoul weather radar – with minimal impact.

Interesting Engineering
http://interestingengineering.com/

17 February 2025

Chinese consortium building 1.2 GWh compressed air energy storage project

Astate-led consortium is developing a 300 MW/1200 MWh compressed air energy storage (CAES) project in Xinyang, Henan province, featuring an entirely artificial underground cavern—China's first of its kind.

The CNY 2.15 billion ($300 million) project, backed by local state-owned enterprise Xinyang Construction Investment Group, CAES technology specialist China Energy Storage National Engineering Research Center (China Energy Storage), and two other state investment firms, is set for completion by the end of 2026. Unlike traditional CAES facilities that utilize natural underground formations or salt caverns, this project will excavate a dedicated storage chamber beneath a mountain over two years. The cavern, measuring 15 meters in diameter and 1,800 meters in length, will have a total air storage capacity of 318,000 cubic meters. Construction involves precision blasting, structural reinforcement, concrete lining, and a sealed steel layer to withstand an operating pressure of 14MPa.

The project is led by China Energy Storage's Henan subsidiary, which has previously developed multiple CAES facilities, including 100 MW, 150 MW, and 300 MW installations. As of December 2024, approximately 400 meters of the transport tunnel had been completed, nearing 80% of target progress, with excavation of the storage cavern already underway. Once operational, the facility is expected to achieve a conversion efficiency of 72.1% and generate 420 million kWh annually—enough to power 350,000 households. The system incorporates China Energy Storage's latest 300 MW CAES technology, featuring multi-stage compressors, high-load turbines, and advanced supercritical heat exchangers.

This design improves efficiency by 2% over its 100MW predecessor while reducing unit costs by 30%. By replacing conventional CAES combustion chambers with high-efficiency heat exchangers, the system eliminates reliance on fossil fuels, ensuring zero emissions and environmental sustainability. Designated as a pilot project under China's National Energy Administration's new energy storage initiative, the Xinyang facility pioneers an innovative air-sealing approach for artificial underground storage, offering a significant boost to the commercialization of CAES technology in China.

ESS News
http://www.ess-news.com

17 February 2025

IEA: Renewables cover almost the entire increase in global electricity demand

In its new report "Electricity 2025 – Analysis and forecast to 2027", the International Energy Agency (IEA) assumes that low-emission sources – i.e. nuclear energy and renewable energies – will cover the entire additional global demand for electricity over the next three years. Renewable energies will have a share of around 95 percent, half of which will be photovoltaics. The IEA expects renewable energies to more than compensate for the growth in demand in the advanced economies and push back electricity generation from fossil fuels.

According to the IEA, global demand for electricity will rise by 4.3% in 2024 and is expected to increase by 4% per year until 2027. In concrete terms, this means an increase of around 3,500 terawatt hours (TWh) over the next three years, of which around 1,800 TWh is expected to come from new photovoltaic systems. By comparison, around 2,000 TWh of solar power was generated last year, which corresponds to a seven percent share of global electricity generation. In 2023, photovoltaics had a share of five percent.

Policy Commons
http://policycommons.net/

18 February 2025

Iraq, GCC fast-track power grid connection project

Iraqi Electricity Minister Ziad Ali Fadhil met with officials from the GCC Interconnection Authority, on Tuesday, to accelerate the completion of a power connection project linking Iraq with Gulf Cooperation Council (GCC) countries.

According to the ministry's statement, Fadhil hosted a GCC delegation led by the Interconnection Authority's CEO, Ahmed Ali Al-Ebrahim, to review progress on the project, which aims to supply Iraq with electricity through two transmission lines from Kuwait's Al-Wafra station to Al-Faw station in Basra. "The transmission line would extend 77 kilometers from the Safwan border crossing to Al-Faw."

"Tower installations have been completed along the 22-kilometer section from Safwan to the Shatt al-Basra crossing, while survey work and clearance of war remnants have been finalized across 50 kilometers of the remaining stretch," the statement read.

The ministry is coordinating with the defense ministry to clear the last four kilometers before civil works begin. "Minister Fadhil emphasized the need for round-the-clock construction in three shifts to expedite the project, in line with directives from Prime Minister Mohammed Shia al-Sudani," the statement noted, adding that "biweekly progress reports will be compiled to monitor advancements."

Notably, Iraq has long faced chronic electricity shortages, especially during the scorching summer months when temperatures reach 50°C. Decades of wars, sanctions, and mismanagement have severely damaged the national power grid, leading to widespread blackouts. For now, Iraq heavily depends on Iran for power supply. The Gulf interconnection is expected to add 500 megawatts to Basra, while a separate deal with Saudi Arabia is set to initially supply 1,000 megawatts.

Shafaq
http://shafaq.com/

18 February 2025

Sri Lanka's CEB explains measures to counter 'Sunny Sunday' blackouts

Sri Lanka's state-run Ceylon Electricity Board has made a statement on the recent cascading failure of the grid, which was triggered by incident involving an electrocuted monkey.

"Due to the high penetration of non-synchronous solar PV generation, the grid had a low system inertia, making it vulnerable to faults," the CEB said in a statement. "The disturbance resulted in an imbalance between generation and demand, leading to cascading disconnections and a total power failure." Inertia is the ability of rotating generators to adjust to voltage fluctuations that is absent in rooftop solar.

Hydro plants are among the best for the job. They can also slowdown fast and run at a variety of speeds.CEB said Norocholai coal plants also tripped. Coal is generated over a long process, where steam is already generated. Published CEB load curves show that they were already running on de-loaded mode. On the blackout Sunday there appears to be less hydro and relatively more coal in the system. The CEB said it is doing remedial measures including battery energy systems (BESS). Immediate corrective measures including maintaining "more synchronous generators at minimum generation and operating selected gas turbines in synchronous condenser mode at key locations to enhance grid stability and voltage support."

Curtailing ground-mounted solar PV generation (only when necessary) during low-demand periods to mitigate instability risks. Rooftop solar is usually not visible to system control of an electricity grid, which is shown by what is called a 'duck curve'. The CEB had already borrowed 200 million US dollars from the Asian Development Bank to make system corrections.

CEB's procurement process however is slow as the actual process is outside the agency's control unlike a private company, and is with the cabinet appointed committee. Depending on the level of rooftop solar, grids with battery storage can also become vulnerable.

In Australia where there was fast growth of solar rooftop backed by cheap Chinese panels, stability warnings were issued by the system operator recently. Solutions include requirement to allow rooftops to be shut off remotely in emergencies. Ceylon Electricity Board Implements Immediate and Long-Term Measures to Strengthen Grid Stability following the Nationwide Power Failure on February 9, 2025

Colombo, Sri Lanka – February 18, 2025 – The Ceylon Electricity Board (CEB) acknowledges the nationwide power failure that occurred on February 9, 2025, at 11:13 AM and assures the public that immediate and longterm corrective actions are underway to prevent future occurrences.

A system-wide failure was triggered by a disturbance at the 33kV Panadura Grid Substation, leading to a sudden voltage drop across the network. At the time of the incident, over 50% of national electricity demand was met by 800 MW of solar photovoltaic (PV) generation, with additional supply from Lakvijaya Power Plant at Norochcholai (470 MW) and hydropower plants (130 MW). Due to the high penetration of non-synchronous solar PV generation, the grid had a low system inertia, making it vulnerable to faults. The disturbance resulted in an imbalance between generation and demand, leading to cascading disconnections and a total power failure.

Key Factors Contributing to the Outage:

• The High Solar PV Penetration & Low Inertia: A lack of synchronous generation made the grid more

vulnerable to voltage and frequency disturbances.

• Solar PV Disconnection: A sharp voltage drop caused multiple solar PV systems to disconnect, worsening the imbalance and further destabilizing the grid.

• The Norochcholai Power Plant Tripping: This was an automatic protective response by this plant to the system instability, not due to an internal plant failure. The measure prevented catastrophic damage to the power plant and prolonged outages.

Additionally, the outage was influenced by the “Sunny Sunday” effect—a condition where low weekend demand combined with high generation from solar PV creates grid instability. With most industrial and commercial customers offline, the grid was operating with reduced demand and reduced inertia, making it more susceptible to sudden disturbances.

CEB has implemented urgent measures to stabilize the national grid and prevent similar failures, including:

• Maintaining more synchronous generators at minimum generation and operating selected gas turbines in synchronous condenser mode at key locations to enhance grid stability and voltage support.

• Curtailing ground-mounted solar PV generation (only when necessary) during low-demand periods to mitigate instability risks.

To further strengthen grid reliability, CEB was in the process of implementing the following measures, which will be accelerated:

• Adjusting rooftop solar PV inverter settings to prevent unnecessary disconnections during minor disturbances/faults, ensuring grid resilience.

• Introducing special industrial tariffs for weekends and holidays to encourage industries to shift operations to low-demand periods, thereby assisting grid stability.

• Promoting solar installations with appropriate BESS capacities over solar PV installations without BESS and to introduce a tariff for the Solar PV customers with Battery Energy Storage Systems (BESS) and the relevant hardware

Long-Term Grid Stability Solutions

CEB is committed to long-term investments to modernize the national power grid to integrate more renewable energy while maintaining stability. These include:

• Deploying grid-forming inverters with BESS to provide synthetic inertia and frequency stabilization.

• Installing emergency backup generators at Norochcholai Power Plant to ensure rapid reconnection and continued operation of critical systems in case of future disconnections.

• Accelerating the Maha Oya Pumped Hydro Project (Water Battery) – a 600 MW storage facility that will enhance grid flexibility and energy security.

• Advancing Smart Grid investments to improve real-time monitoring and control of renewable energy integration.

CEB's Commitment to a Reliable Power Supply

CEB acknowledges the inconvenience caused to the public and remains fully committed to ensuring a resilient, reliable, and future-ready electricity grid. As Sri Lanka continues to transition towards a renewable energydriven power system, CEB is proactively implementing both immediate and long-term solutions to strengthen grid stability.

We appreciate the understanding and cooperation of the public, renewable energy service providers and investors, as we work towards a more stable, secure, and sustainable national power grid.

Economy Next
http://economynext.com/

18 February 2025

US Council set up to advise President Trump on energy dominance

According to an executive order signed by President Donald Trump on 14 February, the Council, which is to be chaired by Secretary of the Interior Doug Burgum with Secretary of Energy Chris Wright serving as its vice-chair, will, among other things, advise the president on "how best to exercise his authority to produce more energy to make America energy dominant …improving the processes for permitting, production, generation, distribution, regulation, transportation, and export of all forms of American energy, including critical minerals … provide to the President a recommended National Energy Dominance Strategy to produce more energy".

The council's members will also include some fifteen high-level representatives including the Secretary of State, the Secretary of the Treasury, the Secretary of Defense, the Attorney General, the Secretary of Agriculture, the Secretary of Commerce and the Secretary of Transportation. It will also include "the heads of such other executive departments and agencies (agencies) as the President may, from time to time, designate".

Its remit also includes "facilitating the reopening of closed power plants; and bringing Small Modular Nuclear Reactors online".

Nixing Net Zero

US Energy Secretary Chris Wright said on X that delivering on commitments to "unleash US energy dominance and reduce inflation" would require action across the government: "Looking forward to working with the National Energy Dominance Council to cut red tape, increase energy production and lower costs for all Americans."

Speaking to a conference held by the Alliance for Responsible Citizenship on 17 February, Wright said he had a nine-point plan to achieve that, in which nothing is off the table - but called for energy access for all and described the pursuit of net zero ambitions as a "colossal failure". The world "simply runs on hydrocarbons - and for most of their uses, we don't have replacements", he said.

"We're going to focus on energy addition, not energy subtraction," he said, citing the USA's resumption of LNG exports. The focus will be on how to "stir the growth of energy production across the board", he said, adding that "maybe the biggest focus" will be on

nuclear, which he described as "an energy-dense, reliable technology that's just been stifled the last several decades".

He then criticised countries that are pursuing net zero goals, calling it a "terrible" goal "unachievable by any practical means".

"And electricity is just one sector of energy. The most important and largest use of energy is manufacturing … Today, the biggest source of energy within that sector is high temperature process heat," he said, adding that such heat could be provided by nuclear.

Wright is the former CEO of Colorado-headquartered Liberty Energy, recognised as a technology leader in the fracking industry, which he founded in 2011. He also sat on the Board of Directors of next-generation small modular nuclear reactor company Oklo Inc, but stepped down from both those positions on his confirmation as Secretary of Energy.

World Nuclear News
http://www.world-nuclear-news.org/

20 February 2025

India mandates co-locating energy storage with solar projects

India‘s Ministry of Power has mandated all renewable energy implementing agencies and state utilities must incorporate a minimum of two-hour co-located energy storage systems (ESS), equivalent to 10% of the installed solar project capacity, in future solar tenders. The ministry said this requirement will help mitigate intermittency issues and provide critical support during peak demand periods. It added that distribution licensees could also consider mandating two-hour storage with rooftop solar installations.

With implementation of the proposed storage under this clause, the government expects around 14 GW/28 GWh of storage to be installed by 2030. India's current installed ESS capacity, as of Dec. 31, 2024, stands at 4.86 GW, consisting 4.75 GW of pumped storage (PSP) and 0.11 GW of battery energy storage system (BESS) projects.

India is targeting non-fossil fuel capacity of 500 GW by 2030. To achieve this goal, the capacity of variable renewable energy sources such as solar and wind needs to be enhanced significantly. This can pose significant challenges to grid stability, as these variable renewable energy sources are intermittent. In this context, energy storage systems (ESS) would be essential to ensure grid stability, reliability, and optimal energy utilization. ESS can help address the intermittency challenges of renewable energy projects, by storing excess energy for use during low generation hours, thus ensuring a more reliable and stable grid.

In order to integrate the 364 GW of solar and 121 GW of wind capacity by 2031-32 outlined in the Central Electricity Authority's National Electricity Plan, India would require 73.93 GW/411.4 GWh of storage capacity (26.69 GW/175.18 GWh from PSP and 47.24 GW/236.22 GWh from BESS).

Pv-magazine
http://www.pv-magazine.com/

21 February 2025

Essential reforms to pave the way for clean power by 2030

Building on the success of last year’s AR6 round, which delivered a record-breaking 128 projects with 9.6 GW of capacity – enough to power around 11 million homes – the government is today (Friday 21 February) consulting on proposals to provide greater certainty to investors and a better deal for consumers, including:

- relaxing the eligibility criteria on planning consent for fixed-bottom offshore wind, helping to speed up new offshore wind farms coming

- changing how offshore wind budgets are set and published, enabling funding to be invested more efficiently
- increasing the Contracts for Difference contract term beyond the current 15 years, making renewables contracts more cost effective

The UK is already home to the 3 largest operational offshore wind farm projects in the world, but the UK must secure even more to deliver clean power by 2030. Today's reforms set out plans to secure the additional offshore wind the UK needs at a good price, delivering value for money to UK bill-payers.

Electricity generated by renewables will be the backbone of the clean power system by 2030, and the Contracts for Difference scheme is vital to deploying enough renewables that will deliver the capacity targets set out in the Clean Power 2030 Action Plan. This will get the UK off the rollercoaster of global fossil fuel markets while creating good jobs and driving economic growth.

The UK already has 30.7 GW of offshore wind either installed or committed, with a further 7.2 GW of capacity consented, against a target capacity range of 43 to 50 GW needed for clean power by 2030. These reforms will enable the UK to go further and faster to secure its position as a clean energy superpower.

Energy Secretary Ed Miliband said: "Last year, we celebrated delivering the most successful auction round in history – now we want to go even further. British families and businesses are bearing the cost of the reliance on petrostates and dictators who set the price of gas on the global market. Our bold new reforms will give developers the certainty they need to build clean energy in the UK, supporting our mission to become a clean energy superpower and bring down bills for good."

Neil McDermott, Chief Executive Officer of LCCC, said:

"The CfD scheme has been instrumental in delivering low-carbon electricity to date. As we move towards the government's 2030 Clean Power target, the CfD will play an even more significant role, maintaining GB's position as a global leader in renewable energy.

The proposed changes outlined in the consultation published today include the repowering of existing onshore wind sites, enable floating offshore wind to scale up through phased CfDs and increasing the CfD contract term beyond the current 15 years.

Maintaining investor confidence is crucial to delivering Clean Power by 2030 and LCCC remains committed to ensuring any changes are implemented smoothly, helping to unlock further private investment in the sector."

These proposals are the latest actions taken by the government to deliver clean power by 2030 and support growth. The government announced the launch of the Clean Industry Bonus, incentivising offshore wind developers to invest in cleaner supply chains and create jobs in industrial communities.

The consultation on reforms to the Contracts for Difference scheme is open for 4 weeks until 21 March, with a government response expected ahead of the AR7 round.

GOV.UK
http://www.gov.uk/

25 February 2025

Dubai issues tender for 7th phase of giant solar park

DEWA has launched a tender for the construction of the seventh phase of the Mohammed bin Rashid Al Maktoum Solar Park. The tendered PV facility will have a capacity ranging from 1.6 GW to 2 GW and will be connected to 1 GW of battery capacity, which would be enough to provide six hours of storage.

DEWA said the project will be developed on an independent power project (IPP) basis. The selected developer will secure a long-term power purchase agreement.

Developers have until March 25 to express their interest. DEWA is now in the process of selecting the winners of the sixth phase of the project. The fifth phase of the 5 GW Mohammed bin Rashid Al Maktoum Solar Park has a capacity of 900 MW and is currently under construction.

By October 2022, the Rashid Al Maktoum Solar Park had 1.83 GW of operational PV capacity. This included the 13 MW first phase, 200 MW second stage, the 800 MW third phase. Parts of the fourth and fifth phases are still under development.

Pv-magazine
http://www.pv-magazine.com/

25 February 2025

BPA Markets+ Phase 2 Bill Could Reach $27M — or More

The Bonneville Power Administration will be on the hook for nearly $27 million in funding for the next phase of SPP's Markets+ — and potentially more depending on the market's final footprint, according to a document the RTO filed with FERC on Feb. 21 (ER25-1372).

BPA's funding obligation — and that of other Markets+ funders — appears in a table appended to the end of the Markets+ Phase 2 Funding Agreement, which SPP submitted to FERC to gain approval for its plan to obtain third-party financing to cover the $150 million needed for the Phase 2 implementation process for Markets+.

The agreement details the purpose, terms and timelines of the financing and outlines how Markets+ funders will collateralize the loan up front and then ultimately fund its repayment through future market transactions. Funders who back out before the market goes live would still be liable for paying their share.

The agreement contains a few provisions that seem specifically tailored for BPA. For instance, BPA's status as a federal agency prohibits it from posting collateral, so the SPP will instead require BPA to submit a "letter of assurances" committing the agency to cover its obligation.

Another apparent accommodation for BPA is the carve-out Feb. 13 to Aug. 12 as "Stage 1" of Phase 2. During that stage, Markets+ funders will only be obligated to commit to two-thirds of the total spending for Phase 2 — or $100 million. That will allow a funding entity to withdraw from Phase 2 before incurring full charges, a potentially important option for BPA, given that it has committed to funding the market before issuing an official decision on whether to actually join it.

But regardless of whether BPA will ultimately be liable for its full share of Phase 2 or only a portion, the Markets+ agreement indicates the agency will likely be obligated to cover more than the $25 million that BPA staff had previously estimated. The table at the end of the agreement lists the eight entities that have so far publicly committed to funding Phase 2, including BPA, Powerex, Arizona Public Service, Tacoma Power, Grant County Public Utility District (PUD), Chelan County PUD, Salt River Project and Tucson Electric Power.

Absent from the table are two investor-owned utilities known to be leaning in favor of Markets+ — Puget Sound Energy (PSE) and Xcel Energy's Public Service Company of Colorado (PSCo), as well as El Paso Electric (EPE), which last month committed to join the SPP market despite not having participated in its Phase 1 development process. (See El Paso Electric to Join SPP's Markets+ in 2028.)

The table shows BPA's "Stage 1" obligation comes to about $26.8 million in a market footprint consisting of the eight committed funders, slightly above — but in line with — BPA's previous estimate for its Phase 2 implementation costs. But another column for full "Phase 2" obligations, which are calculated off the $150 million Phase 2 total, shows BPA's share increasing to nearly $40.2 million, a figure agency staff did not broach during funding

discussions at its most recent day-ahead market stakeholder workshop in late January. (See BPA Considers Impact of Fees in Day-ahead Market Choice.)

Industry sources have told RTO Insider that the $40.2 million figure is likely an outlier and that its Phase 2 funding exposure should decline once entities such as PSE, PSCo and EPE commit to funding, although those commitments are not guaranteed and the agency's final obligation isn't clear. BPA expressed confidence that its funding obligation will decrease as other parties sign on to Markets+. "The $40.19 million represents BPA's total share of the Phase 2 development costs based on the current list of funding participants," agency spokesperson Nick Quinata said in an email. "BPA believes, based on discussions with other Phase 1 participants, that other entities will commit to Phase 2 funding, which will lower each entity's liability." "Each entity's pro rata share will be recalculated to account for any additional entities that execute funding agreements once their internal and/or regulatory processes are complete," SPP COO Antoine Lucas said.

Michael Linn, director of market analytics at the Public Power Council (PPC), which represents the publicly owned utilities comprising BPA's "preference customers," said his group isn't concerned about the $40 million figure. "PPC expects additional entities will announce their intention to fund Phase 2 over the coming months and BPA's costs will be close to the original anticipated costs," said Linn, whose group has advocated for the agency to choose Markets+ over CAISO's competing Extended Day-Ahead Market (EDAM). (BPA staff have estimated EDAM will require lower startup costs than Markets+ but potentially higher annual costs.)

At least one of those announcements appears to be pending. Earlier in February, PSCo filed with the Colorado Public Utilities Commission for permission to join Markets+. The Colorado utility is expected to pay about $20 million to help fund Phase 2.

Both Linn and Quinata said the staged funding approach outlined in the Markets+ funding agreement should work to BPA's advantage. Linn said it would contain the agency's costs as uncommitted entities "work through their internal processes prior to executing the agreement," while Quinata noted it "limits each party's liability should Phase 2 discontinue for any reason." But Fred Heutte — senior policy associate with the Northwest Energy Coalition, which has urged BPA to join EDAM — cautioned that the timelines established in the agreement effectively bind the agency to joining Markets+ before it issues its draft market decision in early March and its final "letter to the region" on the choice in May.

Speaking with RTO Insider, Heutte pointed out that timelines in the agreement require BPA to provide its "letter of assurances" committing to Phase 2 funding by Feb. 28, a week before it issues the draft letter March 6. "So the timing on this is what's really interesting, because by the time that Bonneville issues the draft letter to the region, they'll already have put the financial commitment on the table. It's not just something they're considering — they're already in the game," making them liable for their full obligation if they pull out after Stage 1, he said.

Heutte laid out a potentially complex scenario in which SPP begins investing in and staffing up for Phase 2 after securing financing this spring, creating an "immediate contingent liability" for the RTO and Markets+ funders such as BPA. Launch of the market in the first half of 2027 would create yet another contingent liability for BPA as it works through its next rate case, because it would then be obligated to begin repaying its portion of the loan whether or not it chooses to participate in the market.

"This is a mousetrap situation. Bonneville's going to say, 'Well, you know, we did what we were asked to do, and now we're kind of in, so we have to stay in,'" he said. "And I have a feeling that, while they are still under a tremendous amount of pressure to have a letter [to the region] say, 'Well, we're not going to decide right now; we're just not going to make a

market choice,' which is what we [NWEC] strongly prefer. The financial hook on this letter of assurances is a pretty big one."

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

26 February 2025

Spanish nuclear industry calls for rethink of phase-out policy

Spain's seven operating nuclear power reactors - Almaraz I and II, Ascó I and II, Cofrentes, Trillo and Vandellós II - generate about 20% of its electricity. Under the country's nuclear phase-out plans, agreed in 2019, four reactors are scheduled to close by the end of 2030, while the remaining three reactors will shut by 2035.

The manifesto - signed by 32 companies, including Empresarios Agrupados-GHESA (EAG), Framatome, GDES, GE Vernova, IDOM and Westinghouse - says: "We urge the initiation of a dialogue and renegotiation of the 2019 agreement on the phased shutdown of nuclear power plants. This agreement was made under an industrial, geopolitical, social and economic context that is vastly different from today's reality.

"Our industrial network must not see its competitiveness reduced due to the decision to shut down nuclear power plants starting in 2027, beginning with the Almaraz nuclear power plant, without first securing a viable alternative involving all CO2-free energy sources." The signatories call on the Spanish government and relevant authorities to revise the National Integrated Energy and Climate Plan to incorporate measures ensuring the continuity of nuclear energy. "This energy source must be recognised as reliable, efficient and competitive, with low carbon emissions, and should receive fair treatment to encourage investment," they say.

The companies say that extending the operation of Spain's nuclear power plants "would ensure the sustainability of our increasingly demanding energy system without jeopardising security of supply or the expansion of renewable infrastructures. Additionally, it would reinforce geostrategic independence from other nations".

However, the manifesto notes that to achieve this "it is crucial to ensure the economic viability of nuclear power plants, with a special emphasis on the excessive tax burden imposed on the sector". Spanish nuclear power plants, it says, have been modernised and are capable of operating for many more years, "up to 60 or even 80, in line with global trends".

The document notes the auxiliary industry that supports Spain's nuclear sector generates nearly 20,000 stable, highly-skilled jobs including engineering firms, component manufacturers and support services. "The premature dismantling of these infrastructures would deal an irreparable economic and social blow to the regions where they operate," it says. "The early closure of nuclear power plants will entail a high environmental and economic cost, affecting citizens and destroying thousands of jobs in the industry and associated sectors. Additionally, it will cause an irreparable loss of technological resources and human capital, weakening the country's ability to maintain a competitive and sustainable energy infrastructure."

Earlier this month, the Plenary Session of the Spanish Congress approved a proposal calling for the government to implement a series of measures that would reverse the country's decision to phase out nuclear power. The proposal, presented by the right-wing People's Party, was passed on 12 February, with 171 votes in favour, 164 against and 14 abstentions.

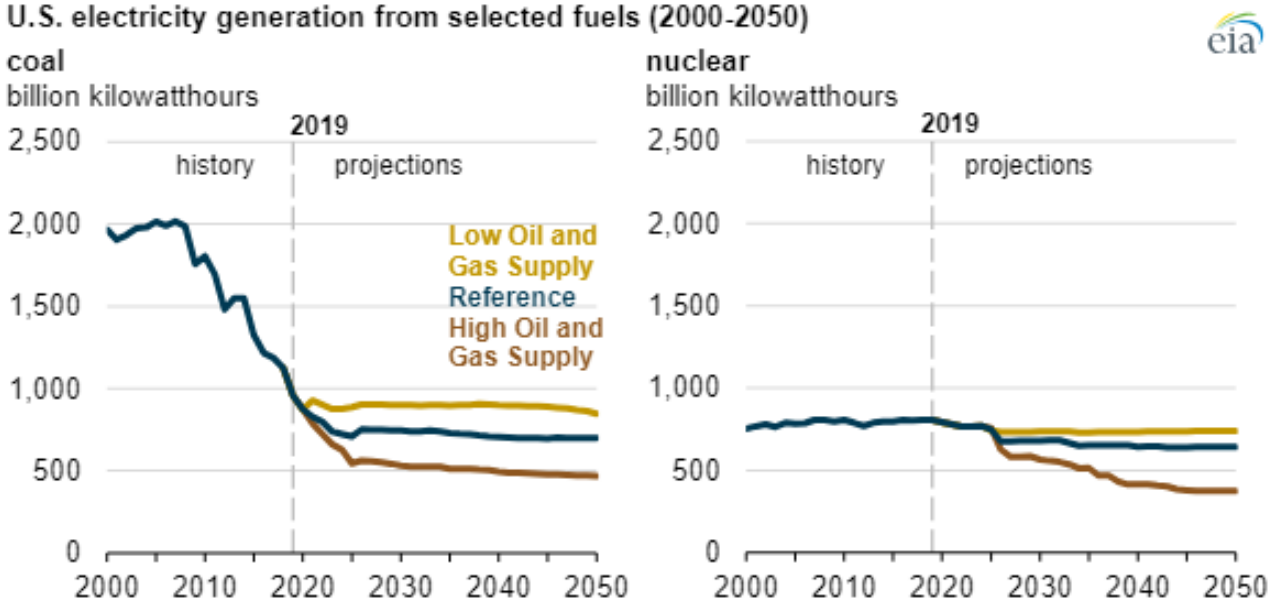
World Nuclear News
http://www.world-nuclear-news.org/

26 February 2025

Planned US coal-fired power retirements to double in 2025, EIA says

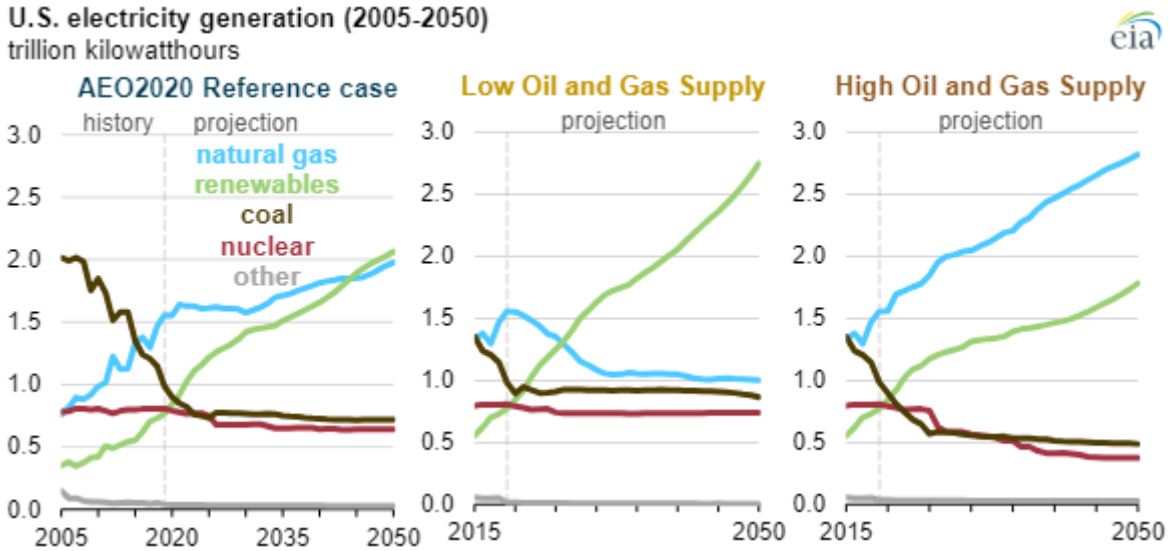
U.S. power generators plan to remove about 8.1 gigawatts (GW) of coal-fired power generation capacity this year, which would roughly double the amount that was retired in 2024, the Energy Information Administration said on Tuesday.

Coal retirements slowed last year to 4 GW, a sharp decrease from the 9.8 GW retired annually over the past decade, the EIA said in its analysis.



The country's electricity supply from coal, which was once the primary source of U.S. electricity, has dropped to about 16%, giving way to the rise of cheaper natural gas operations and renewable energy. Climate-driven government goals have accelerated the decline of coal-fired power, which produces significantly more carbon dioxide when burned than most other electricity sources.

However, in the U.S., home to a third of world data centers, utilities have delayed the retirement of fossil-fuel power plants as a slew of sprawling new data centers plug into the grid. In 2025, some of the country's biggest coal power plants are expected to be taken offline, including the 1.8-GW Intermountain Power Project in Utah, and the J H Campbell in Michigan and Brandon Shores in Maryland, which both have about 1.3 GW of capacity, the EIA said.



More than 12.3 GW of total power capacity is planned for retirement this year, which would be a 65% increase from 2024. Coal makes up 66% of those planned retirements and natural gas takes up 21%. Most of the expected natural gas power plant retirements use single-turbines, which are less efficient than combined-cycle plants. As fossil-fired plants retire, the EIA said it expects the addition of 63 gigawatts of new utility-scale power generating capacity in 2025. Solar power is expected to make up the largest share of those new additions, followed by battery storage, wind and natural gas, the EIA said. The additions would amount to a nearly 30% increase from 2024, which saw the biggest capacity installation in a single year since 2002, the agency said.

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