



Weekly News

19 September 2025

Soaring construction costs jeopardise US gas power projects

The price of building new gas-fired power plants in the US has risen to \$2,200–\$2,500 per kilowatt of capacity, raising doubt about projects economics and freeing up more feedgas for LNG exports. At the Energy Finance Conference in San Diego, panellists warned that building a modern combined-cycle gas power plant now requires hundreds of millions in upfront investment – notably \$25 million deposits to secure key equipment.

LNG terminals and power stations compete for the same pool of domestic gas, driving up prices at Henry Hub and potentially causing supply bottlenecks. Yet, long lead-times for gas generation capacity and high construction costs work in favour of LNG. Development costs for US gas power plants are expected to rise 5% annually with little sign of easing.

Turbine shortage

Long lead-times for equipment delay gas-fuelled generating projects, and gives more pricing power to the three large equipment makers: GE Vernova, Siemens Energy and Mitsubishi Power.

Manufacturing of advanced gas turbines is capped at roughly 120–130 units a year globally, creating a supply bottleneck for turbines capable of producing 450 MW apiece.

"Technologies change. Supply is scarce. If you are willing to take F-class turbines, which were the technology of the early 2000s, you could secure some of those for delivery in 2028 or 2029. Those are used mainly for simple-cycle peaking applications," said Joel Link,



View into PSM gas turbine repair facility in Jupiter, Florida

president of development at Tenaska.

Beyond equipment, developers face escalating 'balance-of-plant' expenses. Labour shortages, scarce EPC contractors and costly transformers and steam turbines often add years to schedules and push the cost for gas-fired power projects in the US far above international benchmarks. One panellist estimated non-turbine inputs cost to be three times more in America than abroad.

Electricity from new gas-fired capacity is unlikely to clear the market at less than \$100/MWh, once capital recovery and fuel charges are factored in. "That is a stark shift from the days when gas was the cheapest new generation option, panellist at the Energy Finance Conference commented.

continued on page 2

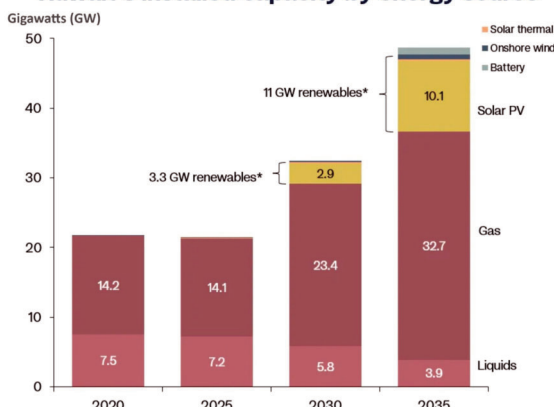
Kuwait's RES target "unrealistic," needs dispatchable backup capacity

Kuwait envisages a 15-fold rise in renewables energy sources (RES) in just four years, albeit from very low levels. Analysts reckon "this target could be out of reach," considering the lack up grid access and dispatchable backup capacity. Four large gas-fired power projects will not start operations before 2027.

According to RystadEnergy's latest projections, renewable capacity will only reach 3.3 gigawatts (GW) by 2030, just 7% of Kuwait's power generation, with a renewables share of 15% by 2035. This would be "a more realistic target," analysts noted, rather than the government's far-flung plans to boost renewables from 1% to 15% of Kuwait's total electricity generation by 2030, in little more than four years' time.

Reliability is a pressing issue for grid operators in Kuwait. Of the Emirate's 21 GW installed capacity only about 17 GW is reliably available during peak months – due to planned maintenance and the age of its plants.

Kuwait's installed capacity by energy source



continued on page

AGENDA

DEMAND

Power generation drives global gas demand; IGU finds

2

ENERGY MIX

Germany could scale back renewables build-out in pivot to gas

3

Developing nations need "all of the above," including fossil fuels

3

PROJECTS

H2-to-power trial succeeds at Centrica's Brigg gas peaking plant

5

LNG-fuelled projects restart in central Vietnam

5

Continued from page 1, top story

AI escalates electricity demand

The AI industry is consuming rampant volumes of electricity, whereby 40% of data center demand is met by gas-fired power plant. "Three and four years ago, developers were talking about 50-MW to 100-MW data center facilities. Today the big guys are

talking about 500-MW data centers. These facilities are coming up in 2026, 2027 and 2028," explained Michael Panteloganis, co-CEO of Apterra Infrastructure.

"Tenaska can't get a gas turbine until 2030," he noted. "How are we going to meet all of this demand in Georgia?"

Industry leaders call for federal and state support to streamline project permitting, expand supply chains and rein in construction costs. Without intervention, the economics of gas-fired generation could quickly undermine its comeback, leaving utilities and customers exposed to higher power prices. ■

Power generation drives global gas demand; IGU finds

Gas-burn for power generation remains the dominant driver of gas demand worldwide and shapes the market's trajectory. According to the International Gas Union (IGU), global natural gas demand in 2024 reached 4,122 billion cubic meters (bcm), up 78 bcm or 1.9% from the previous year.

The power sector gas demand

amounted to 1,427 Bcm – one third of global demand in 2024. It also recorded the highest growth, increasing by 39 Bcm, or 2.8% year-on-year amid seasonal heatwaves in China, India and the US.

Transport is yet another sector with notable growth, rising 15 Bcm, or 14.8%, driven by the rise of LNG fuel-trucking

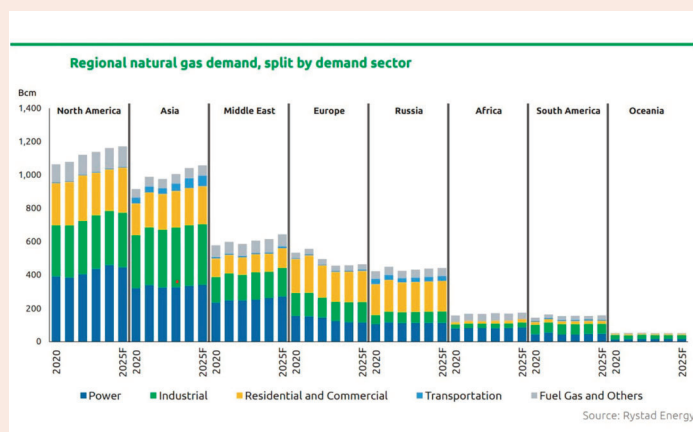
in China. The industry sector's gas demand was up 7 Bcm, or 0.6%, with strong demand observed in Canada and China.

Looking ahead, the IGU projects global natural gas demand to grow by another 71 bcm in 2025 – again driven by the power sec-

tor. this year. Grids operators, however, face rising pressure from both climate-driven heatwaves and the rapid rise of electricity-intensive technologies such as AI-driven data centers.

These dynamics underscore the importance of reliable, flexible power generation, "qualities that gas-fired plants provide more effectively than most alternatives," IGU analysts find.

Challenges lie in aligning future supply with this rising demand. Uncertainty around the timing of new LNG export projects raises the risk of supply shortfalls later in the decade. In the short run, markets are long in supply given that around 270 bcm of new liquefaction capacity is approved or under construction, expected to come on-line by 2030. "If this materializes, it could help balance the system and sustain gas-fired power generation's central role in the global energy mix," analysts concluded. ■



Continued from page 1

Blackouts highlight grid constraints

With temperatures reaching 50 degrees Celsius and demand peaking at 17.7 GW in

July, scheduled power cuts began two months earlier in 2025 than the previous year. Unplanned outages added further strain, creating shortages of more than 1.5 GW during peak demand in May.

The Kuwaiti government supports plans to invest heavily in solar PV, for instance, benefiting from the country's natural advantage of more than 3,300 hours of sunlight each year. "This abundant sunlight supports PV output of 4.6 to 4.9 kilowatt-hours (kWh) per kilowatt-peak per day, helping to meet peak afternoon demand when electricity use is highest," Rystad analyst Nishant Kumar explained.

Gas generation as vital backup

Dispatchable generation is paramount to balance the intermittent electricity supply from solar PV and wind farms. Five large-scale gas-fired power plants are planned to add 18 GW of capacity, lifting total gas power capacity to more than 32 GW by

2035, up from 14 GW today.

The Nuwaiseeb II project will add 3,600 MW of dual-fuel (gas & HFO) capacity in the Al-Amadi region, with construction scheduled to start in 2027 for a commercial start by 2028. The Al Khairan Phase I IWPP will add 1,800 MW of LNG-fuelled power generating capacity starting from mid-2027. In addition, the Az Zour North II & III IWPP and the Sabiya Expansion will add 2,700 MW and 900 MW, respectively, of fast ramp combined-cycle capacity.

Come 2030, the contribution of gas-fired power gen is expected to increase by 17% to 77 terawatt-hours (TWh) by 2030. As a result, Rystad expects Kuwait's gas production will rise by 38%, while overall gas demand increasing by 30% in the next five years.

LNG and domestic gas are both in high demand: Kuwait Petroleum Corporation (KPC) hence signed a 15-year LNG sale and purchase agreement with QatarEnergy, securing up to 3 mtpa of supply. ■

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Germany could scale back renewables build-out in pivot to gas

German Chancellor Friedrich Merz has indicated the country will slow the pace of its renewable build-out due to grid access constraints which raises the role of gas generation. The mandatory H2-ready requirement for new gas power plant as been dropped as part of the government's revised power plant strategy.

Merz said that Germany might "do a little less in terms of clean energy expansion," to curb the surge in system costs for grid expansion while relying more on fossil power sources. The 'Energiewende' has not been scrapped, but slowed down in scale and speed, he indicated peaking ahead of a forthcoming monitoring report on the energy transition.

The Conservative-led German coalition government wants to slow the planned expansion of wind and solar power, arguing that the costs of grid expansion, storage, and renewable deployment are rising fast and need to be brought under control.

Instead, the focus shifts to gas. Germany still plans to build about 20 gigawatts (GW) of gas-fired power capacity to provide backup during dark doldrums, when there is low output from renewable energy sources.

To make investors forthcoming, the government scrapped its previous requirement that all new gas-fired power plants must be "hydrogen-ready" from the start. Instead,

the plants will be built to run on gas, with the option to convert to hydrogen later – if and when the economics and infrastructure allow.

Scrapping H2-ready mandate speeds up CCGT build-out

Dropping the hydrogen-ready mandate is intended to reduce upfront investment requirements and lower the cost of building new flexible combined cycle power plants. The more lenient regulation meant to make Germany's big power producers come forward and build more capacity.

Essen-based RWE does indeed plan to build two CCGT plants of around 800 MW each: one at the Weisweiler site and another at Gersteinwerk in Werne. The company stated it targets 3 GW of hydrogen-ready gas power plant capacity by 2030. E.ON is still hesitant with CEO Leonhard Birnbaum calling on the government to proceed with tenders for "the first 5 GW" of new gas-to-power capacity, before it makes a move.

Industry welcomes the H2-ready roll-



back, but warns the requirement to later convert plants should not be forgotten. "Nobody is going to build a gas plant that is no longer economically viable in 20 years' time," BDEW head Kerstin Andreae commented.

Steelmakers had for long cried out against hydrogen obligations. Thomas Bünger, CEO of ArcelorMittal Germany called for loosening rigid deadlines and fuel-switching mandates, suggesting they risk making German steel uncompetitive.

Katherina Reiche, the German Economy and Energy Minister, acknowledged that sufficient quantities of hydrogen will probably not be available by 2030 to immediately fuel or co-fire all new gas generating capacity. In the meantime, purely gas-fired power plant view as necessary for keeping the lights on. ■

Developing nations need "all of the above," including fossil fuels

When it comes to rival energy sources, developing nations need an "all of the above" strategy – including oil and gas. ExxonMobil CEO Darren Woods sees "a lot of growth in new energy sources, [but] they are starting from a small base in an enormous system. So while it's growing quickly, it's got a long way to go."

The ExxonMobil CEO supports looking into the substitutes or retrofits to fossil-

fired energy source but is sceptical if they can make a real impact: "On carbon capture and storage, the cost of that has to come down pretty significantly before it will be, I think, viable across a very large platform," Wood said at a symposium of the Kay Bailey Hutchison Energy Center at the University of Texas in Austin.

The clean energy transition is happening, though at a different pace and scale

region by region, and by country by country due to different energy systems, infrastructure constraint and regulatory environments. By 2050, ExxonMobil anticipates oil and gas together to cover 55% of global energy supply – only slightly less than current levels.

ExxonMobil's 2025 energy outlook to 2050 anticipates oil and gas together to supply over half of the world's energy needs, with natural gas demand rising more than 20% compared to 2024 as it displaces coal in industrial use and as LNG displaces coal in the Asian power generation sector.

Oil demand peaks around 2030 and then plateaus at 100 million barrel per day while gas demand rises 20% over the forecast period. Coal maintains a 14% share in the global fuel mix – despite its high carbon emission footprint – as it provides cheap baseload power and can be domestically sourced in many developing nations, ExxonMobil forecast. Renewables build-out is expected to soar, albeit from a comparatively small base. ■

Exxon Sees Fossil Fuels Still Dominating in 2050

Percent of global energy mix

	2024	2050 - Exxon	2050 - IEA	2050 - IPCC
Oil & Natural gas	56	55	45	38
Coal	25	14	13	5
Nuclear	4	6	7	10
Bioenergy	9	10	11	17
Other renewables	6	15	24	30

Source: Exxon

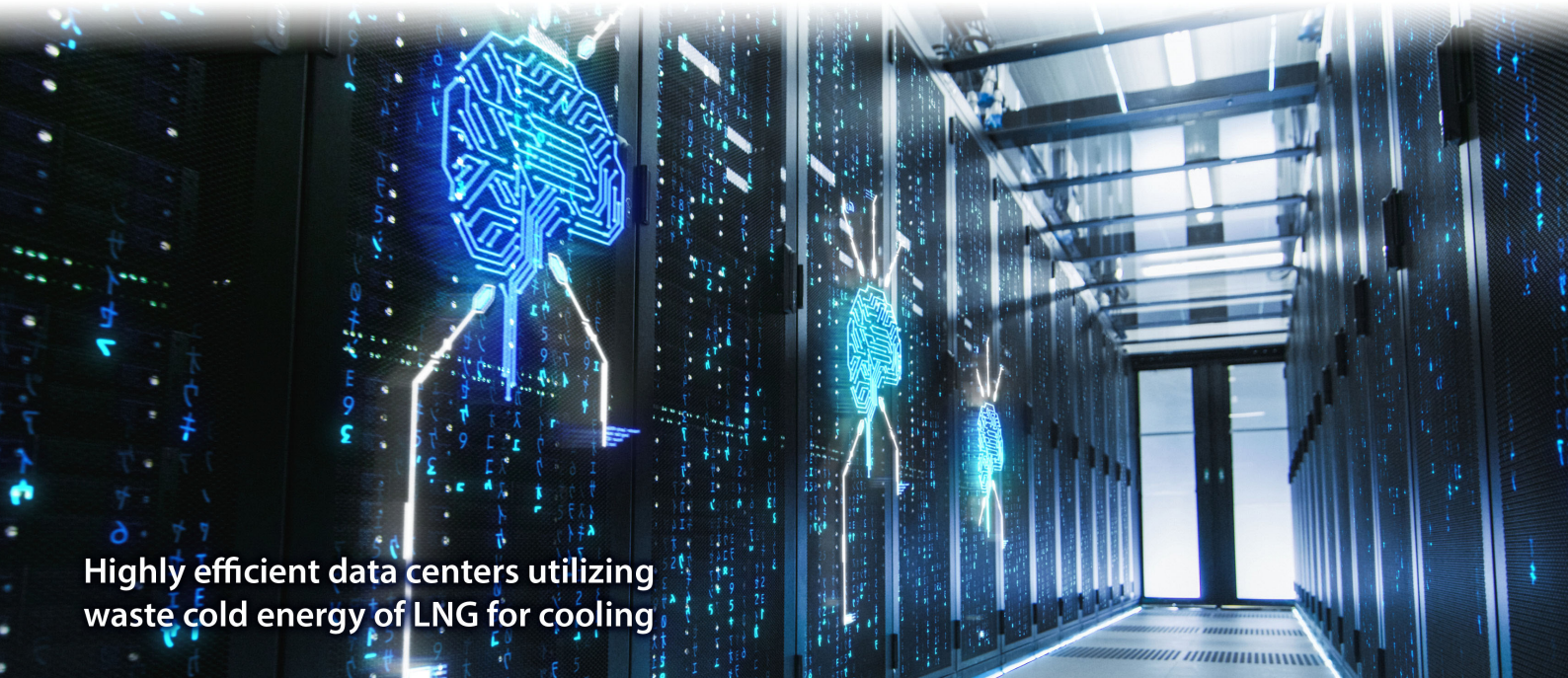
Note: IEA forecast under STEPS scenario; IPCC is C3: "Likely Below 2C"; Other renewables includes solar, wind, hydro and geothermal



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H2-to-power trial succeeds at Centrica's Brigg gas

Injecting hydrogen into a gas-fired peak power plant has been demonstrated successfully by HiiROC at Centrica's Brigg Energy Park, North Lincolnshire. Hydrogen, produced on site through thermal plasma electrolysis, was blended at a 3% ratio during the one-hour trial – marking a UK first in using H2 to decarbonise peakload power.

The trial is a quantum leap forward in Centrica's efforts to decarbonise its gas-fired generating assets, and demonstrates that existing gas pipelines can run on a hydrogen blend. More broadly, the trial shows "a route for delivering for delivering on decarbonisation readiness obligations for peaker generation," Centrica noted in a hint to policy makers.

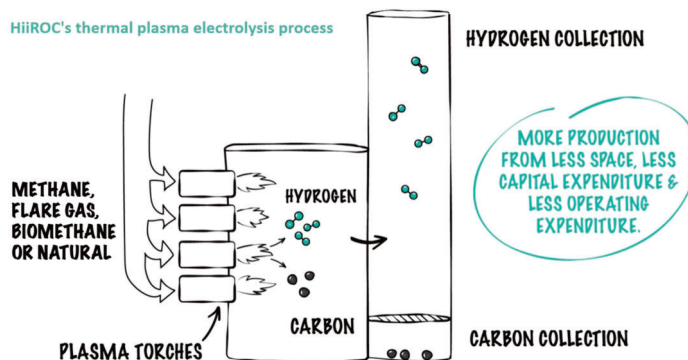
"The success of this trial demonstrates the potential hydrogen has to reduce emissions and future proof flexible power generation," Martin Scargill, managing director, at Centrica Energy Storage said, referring to the British government's Clean Power 2030 targets.

Thermal plasma electrolysis, a technology developed by HiiROC, produces emissions-free hydrogen which makes the fuel compliant with the UK's Low Carbon Hydrogen Standard. The

TPE process produces hydrogen using just one-fifth of the electricity needed for water electrolysis, compared with rival technologies.

By blending the produced hydrogen into the existing natural gas grid, and co-locating the electrolyzers where the clean fuel is needed, operators can decarbonise without costly new infrastructure.

Success of the H2-injection trial at Brigg "brings us one step closer to delivering affordable, clean hydrogen," HiiROC chief executive Tim Davis stressed. Founded in 2019, HiiROC has over 100 employees across development facilities in Hull, commercial offices in the south of England, and a research lab in Europe. ■



LNG-fuelled projects restart in central Vietnam

Two LNG-fuelled power projects in central Vietnam have been rekindled after a period of suspension. The Nghi Son LNG power project (1,500 MW) just reached financial close after JERA reaffirmed its commitment, along with an adjacent LNG regas terminal with a capacity of 1.2 mtpa per year. Similarly, works have restarted at Cong Thanh, where a Doosan-led consortium aims to realise a 4,500 MW LNG power projects.

Vietnam has experienced a substantial rise in electricity demand, with projected annual increases at 10-13% this year rising to nearly 15% by 2030. Investors race to build new power gen assets, with installed power capacity is expected to reach approximately 185 GW, up from just over 80 GW two years ago.

Currently, eight gas and LNG-fuelled power plants are operational, with several more in planning or under construction. T&T Group of Vietnam, for is tackling legal hurdles to get the Hai Lang LNG-to-power project built and commissioned by mid-2029. With revised capital costs of more than \$2.3 billion, the integrated LNG regas and power gen project can count on backing from the Korean trio Hanwha Energy, KOGAS and KOSPO.

State-owned PetroVietnam begun construction of the VND27.7 trillion (\$1.05 billion) O Mon IV power plant. Situated in Can Tho, Mekong Delta, the 1,155-MW plant is central to the Block B-O Mon gas-to-power chain and will be fuelled by 5-6 bcm/y of natural gas from the Malay-Tho Chu basin.



Nghi Son LNG-fuelled power plant in central Vietnam

PetroVietnam is also preparing to start up the Nhon Trach 3 power plant in the third quarter of 2025, while Nhon Trach 4 is scheduled to start commercial operations by the end of this year. Capital expenditure (CAPEX) for developing the two LNG-fuelled power plants comes to US\$ 1.4 billion, financed under a 75:25 debt vs equity ratio. Nhon Trach 3 has been generating some electricity since early February, when its commissioning process started. Now, the plant is in the middle of its trial phase before entering full commercial operations in the third quarter. Start-up is scheduled for early November 2025. ■

ABB powers Singapore's first FLNG terminal

ABB has secured a contract from Hanwha Ocean to supply the electric power and propulsion system for Singapore's first floating liquefied natural gas (FLNG) terminal. Once in service, the terminal will increase Singapore's LNG import capacity by 50% and add flexibility to the nation's gas grid.

The FSRU, owned by Mitsui O.S.K. Lines (MOL) and chartered long-term by Singapore LNG Corporation (SLNG), is scheduled for delivery in 2027. Moored at Jurong Port, the FSRU will have a capacity of 200,000 cubic meters which will add flexibility of gas delivery for the island nation.

SLNG has already committed to process 5 mtpa of LNG through the floating facility. Singapore, along with most fast-developing nations in Asia Pacific accounted for two-thirds of global LNG demand in 2024, and demand is bound to rise further as electrification of industry and transport progresses.

Hanwha Ocean has converted the FSRU in Singapore and is about to ship it to Jurong Port. The South Korean shipbuilder has delivered 23.4% of the global gas fleet and recently completed its 200th LNG carrier.

The electric power propulsion order, handed to ABB, comprises a medium-voltage generator, 6.6kV switchboards for cargo and regasification systems, and a propulsion setup comprising motors, transformers, and drives. The system features remote control and diagnostics, along with power protection – technologies designed to improve efficiency, extend equipment lifetime and reduce fuel consumption. ■

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