



LNG market fundamentals bearish despite Trump's election win

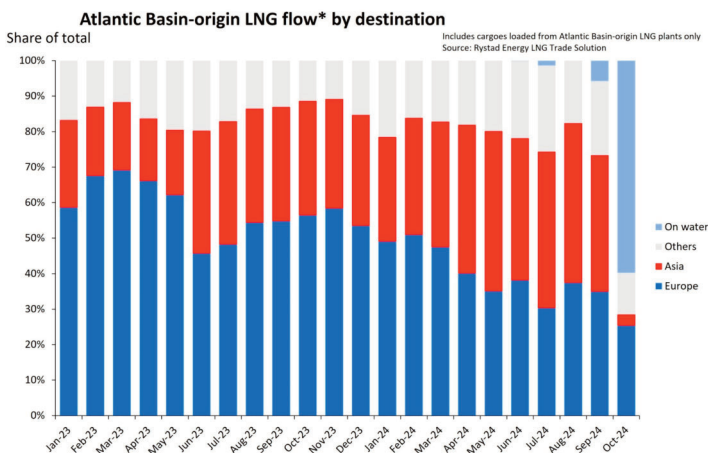
Global LNG markets have been pretty unphased by last week's US election results: near-term demand fundamentals are net bearish as traders await the onset of more severe winter weather, and related energy demand. Looking at Q1-2025, uncertainty abounds with regards to Egypt's LNG demand due to insufficient domestic gas production and escalating tensions in the Middle East.

“Initial market reactions have been muted to Trump's election victory, but in the medium term, he is expected to reinforce the US' role as a leading oil and LNG exporter,” said Kaushal Ramesh, Rystad Energy's vice president. For now, meanwhile, “reactionary weather preparedness” is what drives current market movement which, in his view, “leaves 2025 still up in the air.”

Prices at Henry Hub, the US bellwether gas trading point, have fallen marginally week-on-week to around \$2.7 per MMBtu due to forecasts of mild weather, which could curtail heating demand in November.

Dry gas production in the US is up slightly, having risen 0.5% year-on-year in October to 104.5 billion cubic feet per day (bcf/d). Production flexibility – both for dry and wet gas – has kept Henry Hub prices hovering in the \$2-3 per MMBtu range so far this year. Analysts reckon “further upside is limited until new structural sources of demand – LNG plants – become operational.”

On the demand side, US LNG feedgas intake is largely unchanged,



averaging 13.2 Bcfd on in the first week of November. Looking ahead, traders keep a keen eye on the impact of late-season Hurricane Rafael, which prompted oil majors to pre-emptively evacuate of some platforms in the Gulf of Mexico. Still, the supply impact is minimal given that just 1.6 % of US gas production originates from the Gulf coast.

Healthy supply in the Pacific Basin

Over in Asia Pacific, natural gas and LNG supply is healthy with some near-term upside: Train 1 at the Ichthys LNG facility in Australia is anticipated to return to full production by mid-November. According

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Vietnam's first LNG-to-power plants to grid-connect this week

Nhon Trach 3 & 4, Vietnam's first LNG-fuelled power stations with 1.6 GW capacity, will be grid-synchronized before the end of this week. Dong Nai's Department of Industry and Trade disclosed the 500 kV Nhon Trach 4/Phu My/Nha Be power line – one of four lines built to accommodate electricity from the two plants – will start operating on November 15.

Construction of all 15 bases and overhead wires and cables of the Nhon Trach 4/Phu My/Nha Be link has been completed, hence the line is ready for use.

Built at a total cost of \$1.4 billion, the two plants are meant to generate 9 billion kWh of electricity and feed it into Vietnam's national grid an-

nually. Operation of the two large plants is also hoped to contribute VND18 trillion (\$711.75 million) to the provincial budget annually.

All electricity generated at these plants will be sold by PV Power and EVN Electric Power Trading Company to the state utility Vietnam Electricity (EVN). This PPA accord was instrumental in facilitating the commercial operation of both plants.

Considering there had been “no precedents” regarding LNG-to-power projects in the Vietnam, PV Power stressed “the PPA negotiation was a challenging process.” Sealing the PPA is expected to help PV Power reach a gas sale agreement “soon.” It would fall under the state utility's annual commitment to buy LNG and access loans from international lenders.



Nhon Trach 3 & 4 power plant

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to Rystad analysts, “any delays to its ramp-up would exert bullish pressure on prices given the inventory situation in Japan.”

China’s hunger for energy is back: National Bureau of Statistics’ Purchasing Managers Index (PMI) returned to expansionary territory in October and market sentiment has turned “cautiously optimistic” due to new stimulus measures. But analysts stay cautious, noting: “As before, we will need to see sustained expansions before concluding that this is a bullish signal for gas demand.”

With temperatures in Japan and South Korea above seasonal averages, energy demand stays subdued – though meteorologists warn of “possible cold snaps ahead in China and South Korea.”

Strikingly, Japan’s LNG inventory are lower than last year this time, having ended

October at under 5 million tonnes. In contrast, South Korean LNG stocks are high, while underground gas storage in China is understood to be plentiful and well-stocked.

MENA demand uncertain

LNG trade flows between the Atlantic and Pacific basin hinge on the fragile supply/demand situation in the Middle East, and especially Egypt’s buying patterns for spot cargoes as the country’s domestic production is insufficient to meet demand.

Any escalation of military tension between Israel and the Hamas, let alone an armed conflict with Lebanon and Iran could unravel the oil and gas production in the region, which would have a profound effect on exports and global energy prices.

Moreover, Russian gas supply to Europe

through Ukraine is widely expected to grind to a halt at year-end, as gas transit contracts expire and are unlikely to be renewed. Russian overall gas supplies to Europe fell to around 91 million cubic meters per day (MMcmd), though Rystad analysts caution “this figure is subject to speculation over whether supplies through the Ukraine transit route will continue past 2024.”

“The market has priced in that they will not, and an eventual deal to continue the transit will therefore exert bearish pressure on the TTF,” they noted.

European LNG imports jumped 17% month-on-month – likely for pre-winter restocking, though they are 16% down year-on-year – a sign that strong renewable energy build-out in 2024 has been weakening the need to burn gas for power generation. ■

50 oil & gas companies join Decarbonisation Charter at COP28

This week, 50 oil & gas companies have joined the Oil & Gas Decarbonization Charter (OGDC), following the call of Sultan Al Jaber – CEO of the Saudi oil firm ADNOC and COP28 President – for the industry to align around net zero by or before 2050. Calling the launch “a great first step,” Al Jaber said he knows that “they and others, can and need to do more.”

“We need the entire industry to keep 1.5C within reach and set even stronger ambitions for decarbonization,” Al Jaber told delegates in Baku. Signatory companies of the Charter represent over 40% of global oil production, with National Oil Companies representing over 60% of signatories.

Big commitments made

The abovementioned signatories have committed to net-zero operations by 2050 at the latest, and ending routine flaring by 2030, and near-zero upstream methane emis-

sions. They agreed to towards industry best practices in emission reductions and key actions, namely:

- Investing in the energy system of the future including renewables, low-carbon fuels and negative emissions technologies.
- Increasing transparency, including enhancing measurement, monitoring, reporting and independent verification of greenhouse gas emissions and their performance and progress in reducing emissions.
- Increasing alignment with broader industry best practices to accelerate decarbonization of operations and aspire to implement current best practices by 2030 to collectively reduce emission intensity.
- Reducing energy poverty and providing secure and affordable energy to support the development of all economies.

Everyone is accountable

Climate change is “a collective challenge” that requires strong and focused action from producers and consumers of energy, fundamental changes across society and the energy sector, as well as international collaboration, to advance the energy transition and reduce greenhouse gas emissions from oil and gas, the Gas Decarbonization Charter reads.

Al Jaber urged all signatories to be accountable for their actions and stay true to their pledges: “If we want to accelerate progress across the climate agenda, we



must bring everyone in to be accountable and responsible for climate action.

“We must all focus on reducing emissions and get everyone to take action,” he said, stressing: “We need a clear action plan and I am determined to deliver one.”

Signatories to OGDC include: National oil companies (NOCs): ADNOC, Bapco Energies, Ecopetrol, EGAS, Equinor, GOGC, INPEX Corporation, KazMunaiGas, Mari Petroleum, Namcor, National Oil Company of Libya, Nilepet, NNPC, OGDC, OMV, ONGC, Pakistan Petroleum Limited (PPL), Pertamina, Petro, Petrobras, Petroleum Development Oman, Petronas, PTTEP, Saudi Aramco, SNOC, SOCAR, Sonangol, Uzbekneftegaz, ZhenHua Oil, and YPF.

International oil companies (IOCs): Azule Energy, BP, Cepsa, COSMO Energy, Crescent Petroleum, Dolphin Energy Limited, Energean Oil & Gas, Eni, EQT Corporation, Exxonmobil, ITOCHU, LUKOIL, Mitsui & Co, Oando plc, Occidental Petroleum, Puma Energy (Trafigra), Repsol, Shell, TotalEnergies, and Woodside Energy Group. ■

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Nostradamus AI helps make energy investment more predictable

Hitachi Energy's newly launched artificial intelligence (AI)-powered energy forecasting tool – Nostradamus AI – a cloud-native solution that can deliver energy-specific forecasts, integral for customers to manage their power generation strategy in the face of rising intermittency. According to Andy Howell, global head of Enterprise Software Solutions at Hitachi Energy, “embracing AI in the power sector is not just a choice; it is an imperative.”

“That’s why it’s critical that organizations have a dedicated tool designed specifically for analysing the massive amount of data generated across an evolving power grid.” Nostradamus AI has been built to integrate diverse energy sources and scale up capacity as future forecasting needs grow.

Getting to grips with Big Data

Data volumes have exploded as the grid has evolved. According to the International Energy Agency (IEA) more than 400 billion individual data points are registered annually for new wind turbines alone – and smart meters generate several thousand times more data points than the analog meters they are replacing.

Complexity and data convolution keep growing given that today’s energy market and grid are increasingly volatile as variability from renewable power generation increases. At the same time, electricity demand keeps growing, and stakeholders are hard pressed to ensure energy security and meet decarbonization goals.

Precise forecasts for specific use cases

Collectively these market forces drive stakeholder towards the use of artificial intelligence. AI can process large, disparate data sets to significantly improve accuracy of

forecasts – a move critical for managing rising data complexity in terms of power plant dispatch and fuel choice in the global energy transition.

Nostradamus AI provide utilities, grid operators, power producers, and traders with precise forecasts for common energy-specific use cases. The goal is to optimise investments trading strategies, revenue opportunities and streamline operations and resource planning in a bid to ensure transparency and regulatory compliance.

Capacity to scale

Nostradamus AI is a cloud-native solution that can scale with ease from a single forecast to more than 100,000 forecasts. With users’ future forecasting needs in mind, the AI engine can, for example, generate predictions for the renewable generation of a single wind turbine and solar farm or thousands of different load points.

It is configurable, predictive analytics tool. Users can plug their owned and third-party data and unique parameters into Nostradamus AI’s pre-tuned, off-the-shelf models to generate accurate, customized



forecasts. These so-called pipelines are then used for system load, wind generation, solar generation, market pricing, and more. Regression-style forecasts can also be created to make it easier for users to interpret and explain their forecasts, and take informed business decisions.

“The new solution integrates with customer data through its own AI energy product,” said Maryam Akram, research principal at Chartis Research. “As well as extensive forecasting tools and application design, which support and guide customers’ use of machine learning models (including state-of-the-art techniques), Hitachi Energy’s solution transparently manages each stage of the model lifecycle, combining energy domain expertise with an effective machine learning strategy.” ■

Siemens & NVIDIA drive AI adoption of energy-intensive industry

Siemens Energy has extended its AI offering by launching Industrial Operations X in a bid to help accelerate the digital transformation of energy-intensive industry and power generations. The launch marks another milestone in the strategic partnership between Siemens and California-based NVIDIA, one of the world’s largest

semiconductor and chip companies.

As a result, Siemens can now offer a scalable computing portfolio– from ruggedized Industrial PCs to Industrial Edge Computing. By integrating NVIDIA’s full stack computing platform, Siemens’ industrial PCs can complex AI tasks like robotics, quality inspection, predictive maintenance, and operational optimization.

The use of Siemens’ hardware & software, enhanced by NVIDIA AI and accelerated computing will lower costs and accelerate time-to-market for customers, the two partners said. They estimate the new offering will bring 25-fold acceleration

in AI execution to the shop floor.

“Supercharged by NVIDIA accelerated computing and AI technologies, Siemens’ leading portfolio of industrial automation solutions will enable the world’s manufacturers to reach new heights of digitalization and deliver incredible efficiencies and agility,” said Rev Lebareddian, VP of Omniverse and Simulation Technology at NVIDIA.

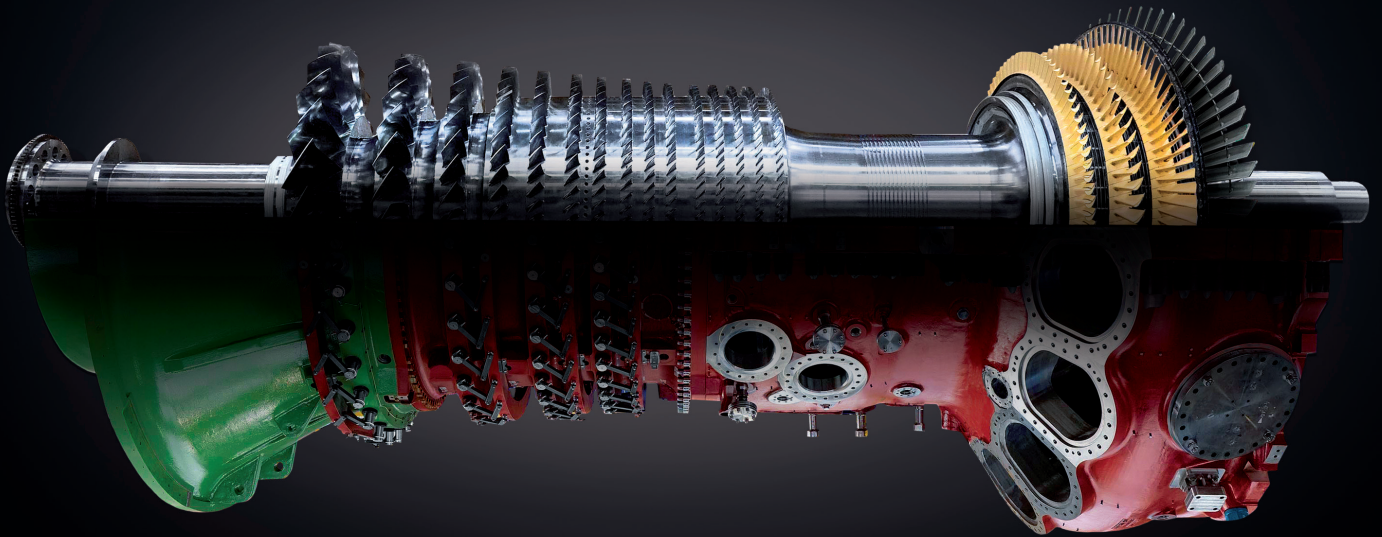
Rainer Brehm, CEO Factory Automation at Siemens agreed, underlining that customers who drive their digital transformation, need high-performance industrial-grade systems. “With Industrial Operations X, we’ve made the latest advances in industrial AI widely accessible to companies of all sizes.” ■



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Danish-German green hydrogen pipeline delayed by three years

Danish TSO Energinet has postponed the commissioning date for the first hydrogen pipeline to Germany by three years to the end of 2031, citing supply risks. Though demand for H₂ export is forecast to exceed 4.2 GW in the years after 2030, about 1.3 GW of Denmark's hydrogen supply hinges on investor interest in tendered offshore wind areas in the North Sea.

As Northern Europe's green powerhouse, Denmark is nearly self-sufficient in hydro, wind and solar power – leaving ample volume available to produce green fuels like hydrogen for export

Energinet initially aspired to get cross-border hydrogen infrastructure between Denmark and Germany built and commissioned in 2028. However, the technology of a land-based hydrogen pipeline is found to be more complex than anticipated, while changes to the capacity bidding process led to delays the planning and permitting. "Therefore, Nedre T can be commissioned at the end of 2031 at the earliest," the Danish TSO stated, "and the connections to Holstebro and LI-Torup in respectively end of 2032 and 2033."

Updated and geographically divided booking requirements are 0.8 GW for

Syvtallet (section 1+3), some 0.9 GW for Nedre and resounding 1.4 GW booking interest for the "Full hydrogen backbone" (stretch 1-5).

If all these projects come to fruition there will be over 4.0 GW of hydrogen produced largely from offshore wind, available for export from Denmark and neighbouring Scandinavian countries. But projects vary significantly in size and especially maturity.

"Immediately, [there] is a transportation need with high maturity of approximately 0.8 GW in 2031, linked to the southernmost part of the pipe (from Esbjerg to the German border). In addition, a total of approx. 1.3 GW in 2031 from projects with a direct connection to the tendered offshore wind areas in the North Sea, which cannot mature further until the offshore wind tenders have been decided," Energinet experts concluded. ■

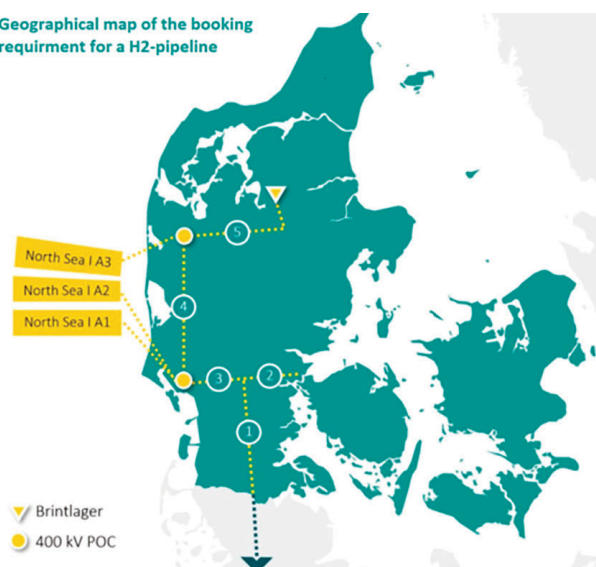
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Nedre T can be commissioned at the end of 2031 at the earliest, and the connections to Holstebro and LI-Torup in respectively end of 2032 and 2033.

”

– Energinet

Geographical map of the booking requirement for a H₂-pipeline



IEA Future of Energy Summit to be held in London in April 2025



Inside Lancaster House

The International Energy Agency (IEA) will convene a summit on the future of energy security in London on the 24th and 25th of April 2025. Hosted by the UK government at Lancaster House, the summit will address risks related to energy security in an era of geopolitical strains, changing climate and technological transformation.

Redefining the world's energy security

The summit will welcome leaders and decision-makers from around the world, giving them an opportunity to review and re-define global energy security. In focus will be changes in energy demand, supply and trade; and the adoption of clean and efficient energy solutions.

Minerals and metals will also be in focus, notably availability of rare earth and other metals and minerals needed to produce and improve clean energy technologies – from wind turbines and solar panels to electric vehicles and battery storage.

Allocation of investment during the transition away from fossil fuels, as well as ways to attract private funding will be another key focus. It is one of the reasons why the IEA chose to hold the event in London, at Lancaster House.

Originally known as York House, the mansion on the Mall in St James's district in London West End is just a few minutes' walk away from the City of London, one of the world's leading financial service hubs. ■

SEC/TAQA consortium wins contracts for 7.2 GW power project

Consortiums led by Saudi Electric Company (SEC) and Abu Dhabi National Energy Company (TAQA) have been awarded contracts for the Rumah I & II and Al Nairyah I & II power projects, with 7.2 GW capacity combined. Saudi Power Procurement Company (SPPC) awarded the contracts, requesting locally-made turbines are used and combustion must be ready for carbon capture.

SECC in January invited bids for four independent power projects (IPPs), requesting developers must operate on gas combined-cycle technology with a provision for carbon capture. The 4x1,800 MW units had to be designed, developed and operated across two existing plants in Saudi Arabia: Two at Rumah and two others at Nairyah.

Aiming for Net Zero by 2060

By insisting on carbon capture-unit readiness, SPPC wanted the projects to be aligned with the Saudi Green Initiative which aims for net-zero greenhouse gasses through a circular carbon economy approach by 2060. To that end, utilities in the Saudi Kingdom are striving to improve electricity generation efficiency at their fossil power stations. They also seek to lower op-

eration costs by shifting their power gen mix towards wind and solar energy.

Policymakers in Riyadh in the long run aim for a 50:50 fuel mix of natural gas and renewables to meet the Kingdom's electricity demand. Gas combustion plants currently make up 45% of installed power gen capacity with about 41 GW, while oil-fired generators still provide the lion's share of the country's electricity at 57% – even though the renewables build-out is progressing.

Legal unbundling

By acting as the principal buyer, SPPC creates a legal separation of actual power generation and electricity distribution in Saudi Arabia – in an effort to enhance competition between IPPs and power plants owned by the state-owned utility.

Last November, SPPC signed power purchase agreements for the 3,600 MW Taiba and 3,600 MW Qassim projects.

Now, it is also seeking to accelerate the expansion of the Rabigh project, within an existing power purchase agreement with the Saudi Electricity Company. At Rabigh, plans are to add a new CCGT unit with a capacity of 1,200 MW. ■



Guandong power grid gets 2.4 GW boost from Ningzhou power plant

Dongguan Ningzhou power plant – one of the largest gas-fired plants in China – has started operation. Owned and operated by Guandong Energy Group, and powered by three 9HA.02 turbines, the plant expected to inject up to 2.4 GW of electricity to the grid – in addition to the 1.34 GW delivered by another HA-powered plant in Huizhou.

China aims to achieve a carbon emissions peak by 2030 and achieve carbon neutrality by 2060, and the government is hence committed to reduce coal's share of its energy mix and expedite the building of combined cycle gas power plants.

The Dongguan Ningzhou CCGT project is also aligned to local government policy reform in the Greater Bay Area focused on the coal-to-gas energy transition. "Dongguan plant plays a significant role in supporting a lower-carbon and more sustainable power generation in the Guangdong province, north of Hong Kong in the Greater Bay Area," said Xu Xin, GE Vernova's Gas Power Services China ITR Leader. ■

AES gets greenlight to repower Petersburg Units 3 & 4

AES Indiana has received regulatory approval to repower Petersburg Units 3 & 4 from coal to natural gas, allowing AES to become Indiana's first investor-owned utility to exit coal by 2026. The fuel switch is estimated to save some \$281 million over the next 20 years and lower carbon intensity by 70% as it reduces hourly CO2 emissions by half.

Switching the fuel at Petersburg Units 3 & 4 aligns with AES Indiana's 2022 Integrated Resource Plan (IRP) and the 2024 IRP updated analysis. These included a third-party reliability analysis confirming that repowering to natural gas is as reliable as coal, AES underlined. The regional utility is also adding 1,300 MW of wind, solar and battery storage to its power gen portfolio through competitive tenders as it seeks to reduce its carbon footprint.

The initial request was filed with the regulator in March this year. Petersburg Units 3 and 4 each have a nameplate capacity of 690 MW and came online in 1977 and 1986,

while the 230 MW Petersburg Unit 1 in May 2021 and the 415 MW Petersburg Unit 2 followed suit in June 2023.

Apart from the Petersburg repowering, AES also plans to spend \$1.1 billion in the Pike County Battery Energy Storage System, which together with the Petersburg Energy Center, will add 250 MW of solar and 180 MW of battery storage to AES Indiana's portfolio.

Construction is meant to start by the end of 2025

with a view to complete the project by the end of 2026 ■



AES' Petersburg Power Station will switch fuel

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