



Alexandroupolis FSRU to start operations in coming weeks

Gastrade's Alexandroupolis first floating storage and regas unit, the first FSRU in Greece, will be operational in the coming weeks, the operator announced when signing an accord to deliver regasified LNG to Slovakia, Moldova and Ukraine under the Vertical Corridor initiative. A binding market test for capacity allocation will be carried out in July 2024.



Alexandroupolis FSRU

Alexandroupolis FSRU, the former 2010-build LNG tanker GasLog Chelsea, arrived in north-eastern Greece in mid-December following a nearly 10-month conversion at the Seatrion shipyard in Singapore. With a regasification capacity of up to 5.5 bcm per year, the FSRU will supply fuel to a nearby power station which is currently under development and will help deliver gas northbound via Bulgaria and Rumania to Moldova, Ukraine and Slovakia.

The gas transmission operators (TSOs) of Slovakia (EUStream), Moldova (Vestmoldtransgaz) and Ukraine (GTSOU) are eager to participate in the initiative to source LNG via Greece as an alternative to Russian pipeline gas. Full activation of the Vertical Corridor, however, requires appropriate upgrades of gas interconnectors which is hoped to secure funding from the European Commission.

In July, signatories of the initiative will simultaneously carry out a binding market test for capacity allocation at their respective

interconnection points. Based on user interest, they will then identify and size the most appropriate and targeted capacity expansion projects. Prospective expansions include upgrading the Gas Interconnector Greece-Bulgaria (IGB) from 3 to 5 bcm as well as Gastrade's plan for a second FSRU in the Tracean Sea, offshore Alexandropolis.

Works for nearby CCGT in full swing

Construction is proceeding fast for an 840 MW gas-fired power plant in the port city of Alexandroupolis, built by Public Power Corp, DEPA and Copelouzos Group at an estimated cost of €400 million.

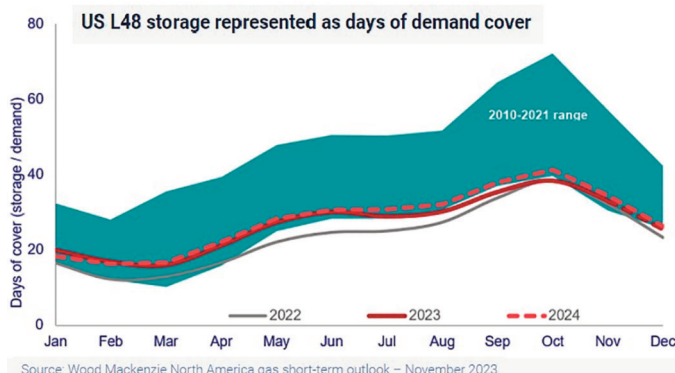
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Gas stays vital for US dispatchable power despite growing LNG exports

Gas-burn in the United States has set new records and will remain the lead source of dispatchable power generation in 2024 in the face of the second wave of LNG export projects. Production surged and bloated inventories, hence there is ample supply for Plaquemines LNG Phase 1 and Corpus Christi Stage 2 to get first feedgas flows this summer.

Both US and Canadian gas production soared in 2023, leaving a significant storage surplus heading into 2024 which made Henry Hub gas prices collapse over \$1/MMBtu from November 2023 highs. Discussions arise whether to expand storage capacity, as inventories entered the New Year near a 10% surplus to five-year averages and analysts this idea to crop back up in the second half of 2024 should turbulent pricing reappear.

"As the size of North America's gas market has ballooned in recent years, storage capacity ex-



pansions have not kept up," said Daniel Myers, Wood Mackenzie's senior research analyst. With current US stocks just providing enough gas for 25

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Works on the combined-cycle plant began in January 2023 and are due completed within 32 months.

Due operational at the end of 2025, the CCGT will help substitute ageing coal-fired capacity in Greece although most electricity is designated for export to neighbouring

Balkan countries. Electricity output from the plant can be fed into the Greek grid at the Nea Santa ultrahigh voltage substation, where the second Bulgaria-Greece power link enables transmission to Martisa East.

EU funding will help boost the line's transmission capacity to 1,400 MW from

Greece to Bulgaria and 1,700 MW vice versa.

The regional power grid operator IPTO reckons, at least three new gas-fired power stations could be required in the region by 2030 to support plans to decommission coal-fired power units, operated by Public Power Corp. ■

European gas prices down 45% on subdued global demand in 2024

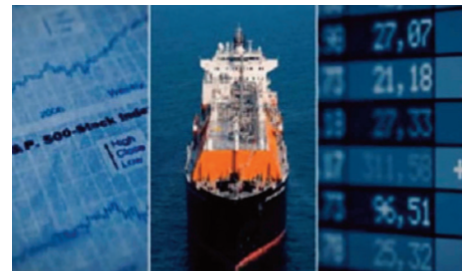
High storage levels and a mild winter have seen European prices fall by 45% to \$10/MMBtu in the past three months and bearish sentiment stretches into 2024. "Global LNG supply growth will remain limited at 14 million tonnes, but with Asian LNG demand still weak, competition for LNG is unlikely to heat up," said Wood Mackenzie's VP gas research Massimo di Odoardo.

European gas demand already fell by 7% in 2023 due to mild weather. With renewable energy supply increasing by more than 100 TWh and nuclear power production in France coming back, analysts expect gas demand in the EU to "remain flat at best."

In contrast, gas demand in Asia is expected growth of 12.5 million tons, or 5% compared to 2023, but 2024 demand will still be almost 3 Mt lower than levels in 2021. End-user activity in Asia is likely to ease with Chinese buyers already signing less contracts after a hectic period in 2021 and 2022 where several deals were struck with sellers in the US and Qatar.

Some buyers might take a more opportunistic approach, di Odoardo reckons, with US independent players leveraging on low Henry Hub prices to seek more exposure to global LNG prices by taking long-term LNG capacity positions, or more activity emerging in price sensitive Asian markets – if contract prices fall further.

But overall contracting activity will soften in 2024, not least because portfolio players and LNG aggregators already signed a record signed 72 mtpa of long-term contracts in 2022 and 2023. With most Qatari equity deals now finalised, portfolio players will likely be more selective in building their portfolio further.



Subdued demand also leaves the global LNG shipping market at risk of oversupply, considering that 60 new carriers with a combined 10.4 mmcm of shipping capacity are due to be commissioned in 2024. Wood Mackenzie sees limited organic LNG supply growth given that "the bulk of US LNG it's still expected to be routed to Europe, rather than Asia, limiting demand for shipping and putting pressure on freight rates." ■

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days of full demand, he warned this "may soon expose the market to even more volatile price fluctuations in the years ahead.

Natural gas demand for power generation will stay resilient, as low prices for the fuel have incentivized continued high, eco-

nomic coal-to-gas switching. Renewables accelerated adoption has altered the role of gas power stations from being dispatched for mid-merit towards a key source of peak-load power.

Materialising LNG export growth

With first feedgas flows to both Plaquemines LNG Phase 1 in eastern Louisiana and the Corpus Christi Stage 3 expansion in Texas set to begin this summer, market participants are anxiously awaiting the onset of a second wave of LNG export projects. And though Golden Pass LNG pushed back the timeline for first exports to the first half of 2025, commissioning flows are still expected for later this year.

Moreover, LNG Canada is racing to begin commissioning and start-up activities this year. "This, and Altamira FLNG's startup in in Mexico in early 2024, provide a reminder that the US will not be the only North American LNG exporter for much longer," Myers commented.

Related gas infrastructure helps underpin future production growth and exports. Completion of the long-contested Mountain Val-

ley Pipeline (MVP), expected in the first half of 2024, may well end the regime of North-east pipeline development that had guided production expansion between 2017 and the early 2020s. Instead, analysts reckon "the market will turn its attention to developing infrastructure through the friendlier regulatory environment of intrastate pipeline projects in Texas and Louisiana."

In 2024 alone, over 4 billion cubic feet per day (bcf/d) of intrastate pipeline developments are targeted to unlock Haynesville supply in Louisiana. In the Permian, the 2.5 bcf/d Matterhorn Express will join Whistler (0.5 bcf/d) and Permian Highway (0.55 bcf/d) compression expansions from late this year to ease pressure on Waha and allow for further associated gas growth out of West Texas.

Investment in renewable natural gas, or biomethane, attracts high interest but produced volume is still relatively small compared to traditional natural gas. If demand-side contracting finally gains momentum, RNG could help decarbonise decentralised power stations and hard-to-abate industries. ■

Gas to Power Journal

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Singapore about to set up single gas buyer for the power sector

Turning away from market liberalisation, Singapore is preparing to set up a single buyer of natural gas and LNG for the power generation sector this year. Trade and industry minister Gan Kim Yong called it a “more deliberate and coordinated” approach after spikes in spot electricity prices had exposed weaknesses in the city state’s market-driven gas procurement process.

A newly-created single entity will aggregate gas demand from Singapore’s power generation companies (gencos) and then import the required gas volumes and sell it onwards to the gencos. Analysts expect the establishment of a single buyer to result in a major change in Singapore’s LNG contracting and competitive landscape.

Energy security concerns, however, are not stalling liberalisation progress everywhere. In Malaysia and South Korea, decisions on regulated pricing and commissioning new independent regas infrastructure will open more opportunities for third-party participation next year.

And more change is on the horizon in Asia:

Japan is expected to release its 7th Strategic Energy Plan in 2024, which may include revisions to the 2030 power mix targets. The existing plan aims to significantly reduce the use of fossil fuel power by 2030 in favour of nuclear, renewable, and hydrogen.

Wood Mackenzie expects Asian LNG demand to rise by 5% to 12 million tons this year, following a 2% growth at 5 million tons in 2023. China – the world’s largest LNG market – is expected to expand 5% at 4 million tons growth in imports, although incremental demand is limited due to competition with



SNLG's regas terminal

Russian pipeline gas and stable coal supplies. Following strong LNG contracting activity in 2023, with 32 mtpa signed by Asian customers, Chinese buyers are understood to be well-supplied and comfortable with very limited spot exposure for 2024. ■

India allows bulk consumers to establish power grid line without licence

India’s Ministry of Power has set new rules that allow consumers with more than a specified load to establish, operate and maintain dedicated transmission lines without licence. Captive generating plants or energy storage systems with a load not less than 25 MW in interstate transmission, and 10 MW if inter-state, can now freely link to the grid.

With this move, the ministry creates a new category of Bulk Consumers for India to benefit from more affordable electricity and enhanced grid reliability. Open Access charges must be reasonable and uniform throughout the country, the ministry pointed out, dismissing “very high charges levied by some state regulators.”

To facilitate industries and consumers getting electricity at “competitive and reasonable rates,” the ministry rationalised the system by prescribing new methodologies for determining various open access charges like wheeling charges, state transmission charges and additional surcharge. “A person who has never been a consumer of the Distribution licensee would not have to pay ad-

ditional surcharge,” the ministry underlined.

“Doing away with the licence requirement for dedicated transmission lines for industry will ease doing business, [... which] along with rationalisation of open access charges will lead to faster adoption of renewables,” said India’s Minister of Power R. K. Singh.

Revising tariffs to avoid revenue gaps

The electricity tariff needs to be cost reflective and to ensure financial sustainability of the power sector, hence “all the prudent costs are allowed.” The minister scolded some state regulators for having created “a large revenue gap” by disallowing distribution companies to charge for various costs incurred including even power purchases costs. Statutory provisions have now been put in place to ensure that there is no such gap.

Releasing the rules, Singh stressed that the steps taken by the government had already brought down the losses of distribution companies from 27% in 2014 to 15.41% in 2022-23. The new rules are meant to further reduce their losses and increase their viability, so that power distributors can provide better services to the consumers. ■



German gas power plant deal imminent

A long-awaited €40 million roadmap for the construction of new gas-fired power plants in Germany is likely to be agreed in the coming days. The government’s plan comes at an estimated cost of €40 billion and caters to RWE, Uniper and EnBW who called for state support to build hydrogen-ready gas power station and operate them economically.

The government’s aim is to use about 24 GW of gas- and hydrogen-fuelled power stations, but plans on how to fund this capacity had clashed with EU regulation. According to the German economy ministry, a “common understanding” with the European Commission which covers state support for three different schemes:

- Tenders for 15 GW of new and existing units which have to be converted from natural gas to hydrogen by 2035. Of the total, 10 GW is set to be auctioned already from 2024-2026, of which up to 6 GW could be reserved for new power plants.
- Tenders to generate power from renewables-based hydrogen in 4.4 GW “hydrogen sprinter power plants” in the years from 2024 to 2028 in regions with early access to the fuel.
- Tenders for 4.4 GW of projects for hybrid plants: This scheme combines wind and solar plant with hydrogen-based electricity storage, creating a “controllable form” of renewable power generation. ■

Onshore wind and solar PV outcompete fossil power on most occasions

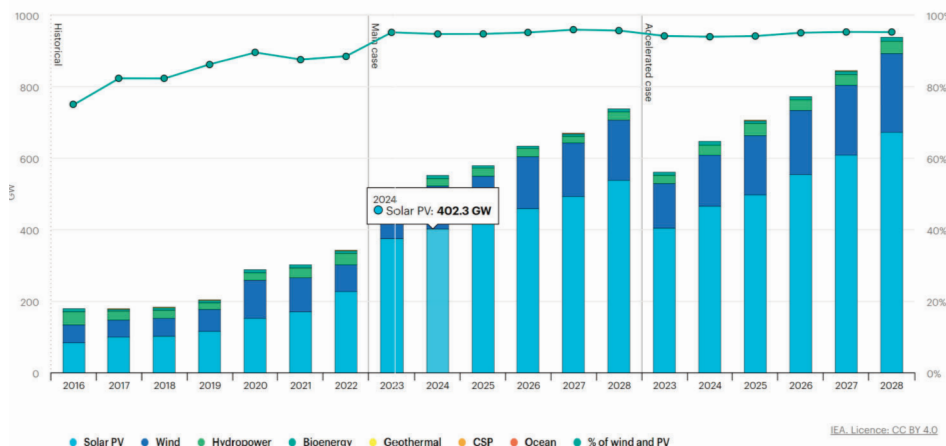
Favourable economics drive renewables build-out which opens the door to tripling global capacity by 2030. "Onshore wind and solar PV are cheaper today than new fossil fuel [power] plants almost everywhere and cheaper than existing fossil fuel plants in most countries," the International Energy Agency (IEA) head Fatih Birol said, stressing the need to scale up financing in developing countries.

Under current policies and market conditions, the world's renewable capacity is already on course to rise 2.5 times by the end of the decade. "It's not enough yet to reach the COP28 goal of tripling renewables, but we're moving closer," Birol said, calling on the international community to rapidly boost financing and deployment of wind and solar power sources in emerging and developing countries, many of which are left behind in the new energy economy.

Falling technology costs drive capital spending: Prices for solar PV modules in 2023 declined by almost 50% year-on-year, and analysts expect cost reductions and fast deployment to continue as PV manufacturing capacity may well reach 1,100 GW by the end of 2025. In contrast, the wind industry – outside China – is bogged down by supply chain disruptions, higher costs and long permitting timelines.

By early 2025, renewables are forecast to overtake coal as the world's largest source for electricity generation. Using renewables to produce green hydrogen is, however, still progressing at a slow place amid limited appetite from off-takers of the clean fuel and higher production costs. Of all the projects announced worldwide to use renewables to produce hydrogen this

Renewable electricity capacity additions by technology and segment, 2016-2028



decade, the IEA expects only 7% of the proposed capacity is expected to come online by 2030.

China in the driving seat

Worldwide acceleration of renewables build-out is mainly driven China staging a staggering 116% growth for solar PV and 66% for wind power. Over the next five years, China's growth in renewables electricity capacity could triple due to improved economics for large-scale wind and solar PV and a turn to distributed power systems, balanced by energy storage.

Over the 2023 to 2028 period, China will

likely deploy almost four times more renewable capacity than the European Union and five times more than the United States. Initiatives are supported by the Chinese government's Net Zero by 2060 target, loads of locally manufactured equipment and low-cost financing.

In India, improved policies are remedying auction participation which is set to lead to a faster renewable power growth through 2028 while supporting policies in the United States and the European Union could make solar PV and onshore wind deployment more than double over the same period.

Apex teams up with Korean energy firms to own storage units in the US

Apex Clean Energy has formed a joint venture with SK Gas and the green energy developer SK D&D to own energy storage facilities in the United States. The JV owns Great Kiskadee, which will deliver 100 MW/200 MWh to the ERCOT grid with a two-hour battery duration, and the next project to be purchased is similar in size.

Great Kiskadee is expected to begin commercial operations in 2024 and will generate approximately 50 jobs during construction and more than \$12.6 million in tax revenue over its lifetime. The JV which owns

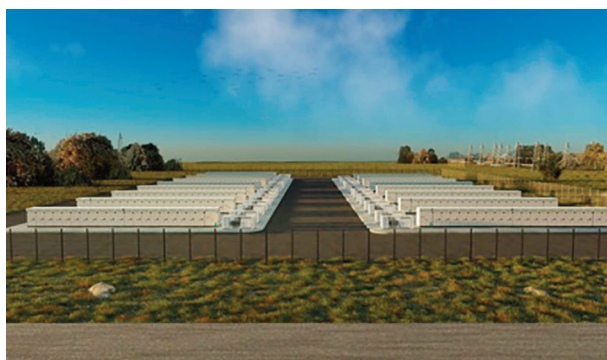
the energy storage project is funded 60% by SK and 40% by Apex, which will manage the construction and subsequent operations and optimization of the facility and any to come.

Ken Young, Apex Clean Energy CEO called Great Kiskadee the "first project in a shared vision," suggesting "the collaboration with SK Gas and SK D&D will enable Apex to accelerate the deployment of its development-stage storage portfolio, comprising more than 13 GW across the United States."

Byung Suk Yoon, CEO of SK Gas signed out energy storage

as indispensable to expanding renewable power generation. "By contributing to power supply stabilization and supporting the growth of renewable energy through energy storage, we aim to realize our vision of becoming a net-zero solution provider," he said. SK Gas is Korea's leading liquefied petroleum gas company but it is diversifying its business portfolio to power generation, LNG, hydrogen and renewables.

SK D&D, the third partner in the joint venture, is Korea's leading peak-cut energy storage system (ESS) provider. It operates a total of 800 MWh of ESS in 29 sites nationwide and also has a 400MW in its fuel cells pipeline including current 69 MW in operation or under construction.



Project shifts help Siemens Energy post forecast-beating Q1 results

Shares in Siemens Energy have staged a 10% rise and are headed for a multi-month high after the company's first quarter results exceeded market expectations. Project shifts and timing effects caused a 12.6% rise in revenue to €7.65 billion as the company tackles shortcomings in its onshore wind power segment to overcome trust issues in an improving market environment.

In the first quarter, Siemens Energy achieved a 23.9% jump in order intake to €1.381 billion as well as a 12.6% rise in revenue to €7,649 million. Profits amounted to €1,878 million, compared with loss of €384 million in the first quarter of 2023, though the company was quick to point out that first quarter 2024 profits include book gains from disposals.

Staying cautious, the German engineering company noted that "project shifts and timing effects which create shifts between quarters are not unusual for plant engineering businesses." Therefore, Siemens Energy maintains its guidance for the current fiscal year, anticipating revenue growth a range of 3% to 7% and a profit margin before special items between minus 2% and plus 1%.

As for the beleaguered wind power business, "it is important that we do our homework quarter by quarter," a spokesperson pointed out. "In the wind business, this

means solving the quality problems in the onshore segment, while for the remaining businesses it means utilizing the growth potential and achieving the targets we set ourselves."

State guarantees

Fourth quarter earnings had been overshadowed by the ailing wind business but CEO Christian Bruch vowed Siemens Energy would return to profit in 2024, having secured €7.5 billion in state guarantees as part of a €15 billion rescue package. That deal – and the sale of its Indian stake to Siemens AG – is essential for the embattled turbine maker which expects up to €1 billion net income in this fiscal year, though its wind business will not break even before 2026.



The coalition government agreed to grant €12 billion in federal guarantee lines and helped negotiate a further €3 billion in guarantee lines from private banks, which are vital for Siemens Energy to sustain its €110 billion orderbook and to win new contracts. "We don't want any cash from the state. It's all about guarantees the whole thing is like reinsurance for the banks," sources close to Siemens Energy commented at the time. ■

GE posts downbeat outlook for final full quarter before breakup

Shares of General Electric (GE) have eased by -0.98% after the electric power and aerospace company's lower than expected profit outlook overshadowed fourth quarter earnings that were marked by GE Vernova achieving double-digit revenue growth and a \$1 billion rise in operating profit. GE Aerospace and GE Vernova will be launched independent public companies in early April.

CEO Lawrence Culp called 2024 a "momentous year" in anticipation of the breakup, with the split companies meant to have an "even sharper focus on their vital, growing industries." Costs for separating the businesses came to \$0.3 billion in the quarter and \$1.0 billion for the year, GE disclosed.

In the fourth quarter of 2023, Renewable Energy and Power together delivered "meaningfully better results," Culp said with

reference to double-digit revenue growth, positive profit and free cash flow for the year. Electric power revenue increased 15% to \$5.79 billion, while renewable-energy revenue jumped 23.4% to \$4.21 billion.

Orders in the power gen segment grew 5.3% to \$5.73 billion and Renewable Energy orders were up 0.8% to \$5.07 billion.

For the first quarter of 2024, GE expects to deliver high-single-digit revenue growth, adjusted earnings per share of \$0.60 to \$0.65, and free cash flow in line with net income growth. For the full year, GE Vernova targets revenue of \$34 billion to \$35 billion; adjusted EBITDA margin of mid-single digits, toward the higher end of the range; and free cash flow* of \$0.7 billion to \$1.1 billion. Analysts had expected a more upbeat outlook, which impacted the share value.

GE Vernova and GE Aerospace will hold Investor Days in New York, on Wednesday, March 6 and Thursday, March 7, 2024. ■



M&A trend moves from upstream oil & gas to clean energy sector

Consolidation activity among the upstream oil and gas industry is starting to cross over into the supply chain. As interest rates stabilise or fall, rising cash flows encourage service providers and clean energy tech companies to opt against organic growth and snap up smaller rivals instead, Rystad Energy's head of supply chain research, Audun Martisen finds.

Cheaper and more accessible debt financing, combined with rising cash flows make energy suppliers and technology firms explore strategic acquisitions as a quick way to grow. According to Martisen, is especially "true for the oilfield services and clean energy markets, where organic capacity expansion may not be the most efficient option, given the peak activity in O&G in 2024 and excess capacity within low-carbon sectors." ■

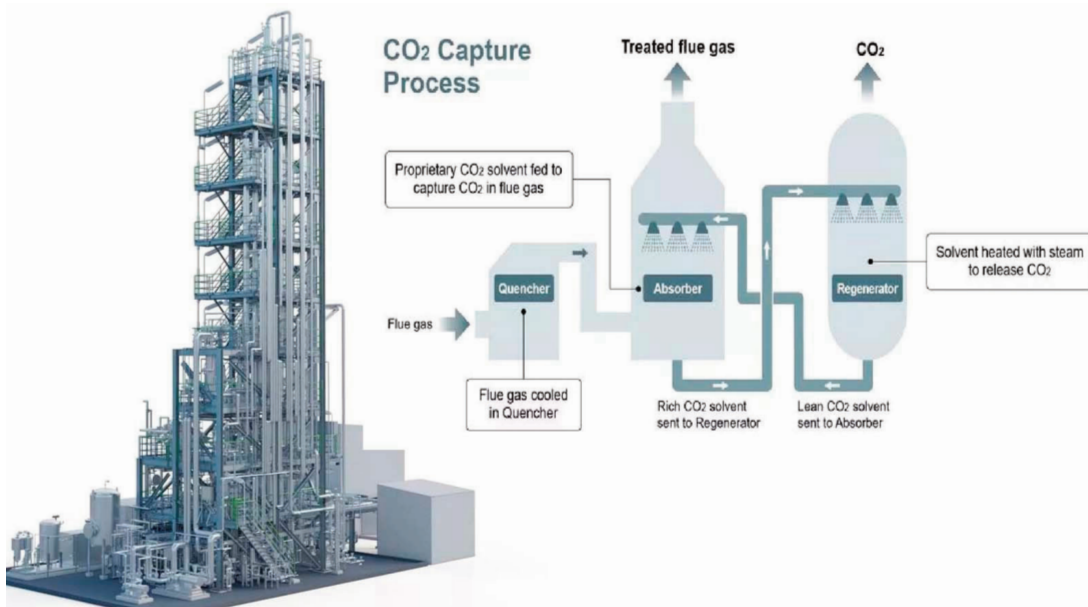
MHI and KEPCO to install carbon capture pilot at Japanese power plant

Mitsubishi Heavy Industries (MHI) has agreed with Kansai Electric Power Co (KEPCO) to install a carbon capture pilot plant at Himeji No.2 power plant in Hyogo, Japan. The pilot plant will use flue gas from the turbine at Himeji power station with a capacity to capture some 5 tons per day, once in operation in fiscal 2025.

By implementing Sigma Synics (ΣSynX), it will be possible to monitor the operation status of the Himeji No.2 power plant at MHI Yokohama Building and other sites, and to automatically start and stop operations by remote control.

The next-generation CO₂ capture technology, employed at the pilot project, has been jointly developed by MHI and ExxonMobil since 2022. The pilot is aimed at accelerating R&D and reduce cost to strengthen the technology's competitiveness. Going forward, ExxonMobil and MHI are considering retrofitting the technology at petrochemical plants they built in Baytown, Corpus Christi and Singapore.

CO₂ solution are vital for MHI Group to achieve carbon neutrality by 2040 and the Japanese manufacturer strives to integrate



diverse sources of carbon emissions with modes for carbon storage and utilization. Together with KEPCO, MHI Group has been KM CDR Process (Kansai Mitsubishi Carbon Dioxide Recovery Process) which has been delivered to 16 plants, and two more are

under construction. The process adopts the KS-21 solvent, which offers superior regeneration efficiency and lower deterioration than the KS-1, and has been verified to reduce operating costs at low amine emissions. ■

CCS technology found not yet market-ready, excessively expensive

Market readiness of carbon capture and storage has been questioned by Oxford University's Smith School of Enterprise and the Environment as most facilities can remove only up to 50% of emissions. Moreover, a CCS-centric pathway to reach net zero by 2050 could cost \$1 trillion a year more than a route based on renewables, energy efficiency and electrification.

Entitled, 'Assessing the relative costs of

high-CCS and low-CCS pathways to 1.5 degrees', the report looks at fossil power generation with carbon capture over the past 40 years. Though oil and gas producing countries put forwards projects to store carbon in depleted fields, researchers found that applying CCS throughout the economy – rather than in just a few hard-to-abate sectors, "makes little sense from a financial perspective."

From 2021 to 2050, taking a low-CCS pathway to net zero emissions will cost at least \$30 trillion less than taking a high-CCS route – saving approximately a trillion dollars per year. Still, carbon capture is still necessary for essential use cases, but not as a means to continue business-as-usual fossil fuel use, espe-

cially in the power generation sector.

Cost of CCS unlikely to fall

Renewables are cheaper than unabated fossil fuels and technological advances will make wind and solar increase their cost advantages even further in the future.

"Relying on high levels of CCS as a blanket solution to facilitate the ongoing use of fossil fuels would be hugely damaging," said Rupert Way, author of the study. "Any hopes that the cost of CCS will decline in a similar way to renewable technologies like solar and batteries appear misplaced."

Finding of Smith School indicate a lack of technological learning in any part of the process – from CO₂ capture to burial – even though all elements of the chain have been used for decades. Moreover, the land use requirements from relying heavily on biomass with CCS could jeopardise biodiversity and further deteriorate the resilience of our ecosystem. ■



CCS retrofits can help clean up coal-fired power stations

Four Karpowerships at risk of cancellation after missing deadline

South Africa's incumbent utility Eskom warns that four Karpowerships will not be integrated into the grid after missing a 31 December 2023 deadline in the government's Risk Mitigation Independent Power Producer Procurement Programme. The programme aimed at procuring 2,000 MW and although 11 preferred bidders were announced, only seven of them reached commercial close and will be built.

The remaining four projects were issued with five budget quotes given that one of the projects consists of two gas and solar PV facilities situated in the Eastern Cape and Northern Cape. However, Eskom stressed that the quotes for the grid integration expired at the end of December and will not be expanded further.

The delayed projects include the Gemsbok PV and Mulilo Coega Gas-to-Power Plant with 200 MW capacity combined, as well as the 320 MW Saldanha Powership in Western Cape, the 450 MW Coega Powership in Eastern Cape and the 450 MW Richards Bay Powership in KwaZulu-Natal.

Eskom stressed it "finds the expiration of the budget quotes regrettable as these projects were aimed at bringing much-needed additional generation capacity to the grid to

alleviate pressure on the power system and minimise the impact of load shedding."

The expired budget quotes had extension for between 20 and 30 months, but from 1 January 2024, the costs, timelines and scopes of work indicated in the budget are no longer valid.

All grid connection capacity that had been provisionally reserved for the above project will fall back to the pool of available capacity for allocation to other projects that are read to connect to the grid and provide



Karpowership Zeynep Sultan

much-needed electricity. Customers affected by the decision, including Karendiz Group, can apply for new budget quotes, Eskom said, though it is questionable that developers will launch yet another attempt to realise the delayed projects. ■

Ansaldo and Samruk Energy agree to collaborate in Kazakhstan

The heads of Ansaldo Energia and the Kazakh state electricity company Samruk Energy, Fabrizio Fabri and Kairat Maksutov, have signed an agreement to implement and launch new combined-cycle power plant projects in Kazakhstan, including the reconstruction of the Almaty CHP-3. Ansaldo also committed to exchange technological skills and train local specialists.

For the reconstruction of the Almaty combined heat and power plant, the Italian manufacturer has been contracted to two AE94.2 gas turbines, two generators and auxiliary components. A reservation agreement signed with KBI Energy Group, the EPC contractor for the project, stipulates an early start of components production.

The reservation agreement makes the customer pre-empt his production lines against payment of an advance on the contract's total amount, Ansaldo specified, adding the actual contract will be signed in

the next months. The deal allows for a swift start of production, the Italian manufacturer said, vowing to deliver the ordered turbines and generators in an "extremely rapid" manner.

Reconstruction and upgrade of the Almaty CHPP-3 will reduce CO2 emissions per kWh produced by more than 50% and almost eliminate emissions of particulate matter and other pollutants. The considerable efficiency increase, compared to the current cogeneration system, will allow the plant operator to produce electricity more sustainably and at a lower cost.

The overall Almaty Electric Station's project portfolio includes the construction of a combined-cycle gas plant with a capacity of 545 MW at the Almaty CHP-3, the modernisation of Almaty CHP-2 and the reconstruction of the ageing Almaty CHP-1 into a 250 MW combined-cycle plant. ■



NEWS NUDGES

PGE switches from coal to gas

The utility PGE Polska has announced it phased out two coal-fired power units at the Rybnik power plant in Upper Silesia region. The decommissioned units will be replaced by an 882 MW gas-fired unit, scheduled for commissioning in December 2026.

Flexitricity's VPP reach over 1GW

Installed capacity of Flexitricity's virtual power plant in the UK has grown to more than 1 GW, having almost doubled in size over the past three years to more than many gas-fired units. The VPP is managed and monitored from a control room in Edinburgh, utilising AI and machine learning.

UK navy orders GE hybrid electric propulsion

Three Fleet Solid Support ships for the UK defence ministry will be equipped by GE's hybrid propulsion technology. The 216-meter-long ships will feature energy-efficient power converters and hybrid electric induction motor-generators and are adaptable to run on low-carbon, non-fossil fuels.

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