

GERAB BULLETIN

Weekly News



EXECUTIVE SUMMARY

The Commodity summary

- Crude Oil Brent prices trading lower by 9% MTD and Crude Oil WTI prices are trading lower by 11% MTD.
- Coal prices are trading lower by 13% MTD
- Steel HRC (N. America) prices are trading higher by 40% YTD
- Iron ore prices are trading higher by 43% YTD
- Natural Gas prices are trading lower by 10% WTD

The Currency summary

- Euro is stronger by 5% YTD to USD
- The US Dollar to CNY exchange rate is equivalent to what it was a year ago

The Rig count summary

- The Rig counts in UAE have gone up by 15% YTD and in Europe have gone up by 13% YTD.

Project summary

- L&T awarded Another Mega Order in Middle East
- UAE's NPCC awarded \$1.82 billion Contracts from Aramco
- India's ONGC reveals plans to invest \$12bn in two petrochemical projects
- Italian Firm Secures \$619 Million Contract for Gas Project in Iraq's West Qurna-2 Field
- ExxonMobil and Pertamina advance \$2 billion-plus offshore CCS hub
- OceanMight selected for Petronas' Kasawari CCS project
- Nigeria, Germany Seal \$500M Gas, Renewable Energy Deal
- Fortescue takes final investment decision on first two hydrogen production projects worth a combined \$700m
- Lhyfe to construct 15-MW green hydrogen plant in Spain
- UK North Sea decommissioning work could be worth US\$25 billion, says new report
- Karoon Energy splashes \$720 million to enter US oil and gas market
- Capital Power acquires two natgas-fired power plants in U.S. for \$1.1 bln

COMMODITY UPDATES

COMMODITY	UOM	LATEST PRICE	WTD %	MTD %	3MTD %	6MTD %	YTD %
Chromium	USD/MT	9,428.01	0.97	3.40	5.58	-3.48	-2.51
Coal	USD/MT	134.81	-0.65	-12.74	-16.25	-25.39	-64.78
Cobalt	USD/MT	32,804.78	-3.44	-0.55	-5.98	5.14	-34.81
Copper	USD/MT	8,406.00	2.05	4.97	0.13	0.95	4.99
Crude Oil	USD/BBL	79.38	1.36	-9.66	-4.47	7.36	-10.98

Crude Oil Brent	USD/BBL	81.73	1.46	-8.54	-3.80	7.65	-11.78
Crude Oil WTI	USD/BBL	77.02	1.25	-10.81	-5.16	7.06	-10.13
Iron Ore	USD/MT	129.55	0.23	9.12	21.63	22.51	43.13
Molybdenum	USD/MT	38,058.30	-0.17	-18.69	-30.18	-17.85	-8.57
Natural Gas	USD/MCF	2.94	-10.47	-6.91	6.86	24.72	-54.90
Nickel	USD/MT	16,775.00	-3.09	-9.43	-19.06	-24.91	-33.19
Steel HRC (FOB China)	USD/MT	545.50	-0.55	1.62	-2.14	-5.05	3.70
Steel HRC (N. America)	USD/MT	1,023.65	0.00	27.75	16.15	-17.22	40.48
Steel Rebar	USD/MT	616.60	2.43	12.31	10.31	8.91	10.00
Steel Scrap	USD/MT	395.00	-3.19	7.40	6.32	4.53	14.12

Source: Investing.com / Trading Economics / London Metal Exchange / MarketIndex.com.au / OilPrice.com

CURRENCY EXCHANGE RATE									
Code	Description	Country	Units	Latest Exchange Rates	WTD%	MTD%	3MTD%	6MTD%	YTD%
EURUSD	1 EUR to USD	Euro Area	USD	1.0904	0.50	2.22	0.42	1.27	4.72
USDCNY	1 USD to CNY	China	CNY	7.1509	1.30	2.17	1.86	-1.21	0.02

Source- Trading Economics

CRUDE OIL STOCK								
Region		Unit	Latest Count	WTD %	MTD %	3MTD %	6MTD %	YTD %
US Stocks of Crude Oil & Petroleum Products		Thousand Barrels	16,19,403.00	0.28	0.34	0.94	1.32	1.19

Source: US Energy Information Authority

SELECTIVE COMMODITY TRADERS AND PIPE MANUFACTURERS STOCK PRICES

STOCK PRICES							
Name	Latest Value	Units	WTD%	MTD%	3MTD%	6MTD%	YTD%
ArcelorMittal SA	24.22	USD	3.46	11.10	-7.87	-7.35	-8.15
Chiyoda Corporation	358.00	JPY	3.77	0.56	-5.04	-1.65	-4.79
Glencore PLC	448.95	GBP	-1.90	4.71	3.65	4.94	-15.34
HD Hyundai Heavy Industries Co. Ltd.	1,22,200.00	KRW	9.69	11.09	1.50	5.34	6.72
JGC Holdings Corporation	1,720.50	JPY	7.67	-6.47	-11.38	0.15	-10.85
McDermott International Ltd.	0.17	USD	0.00	-10.53	6.25	-46.88	-66.00
National Marine Dredging	27.92	AED	13.22	41.58	34.88	41.30	9.49
NYSE American Steel Index	2,008.64	Index	1.44	13.88	3.13	16.25	16.06

Rio Tinto PLC	5,509.00	GBP	2.06	12.65	15.74	12.54	2.44
Technip Energies NV	20.51	EUR	-2.93	0.05	-2.93	39.81	32.49
TechnipFMC PLC	20.92	USD	3.87	1.31	13.70	48.69	72.46
Tenaris SA	33.55	USD	0.00	2.95	2.10	26.60	-1.38
Tubacex SA	3.02	EUR	5.22	5.95	4.49	19.09	47.56
Woodside Energy Group	31.70	AUD	-1.35	-9.93	-15.70	-8.74	-18.27

Source- Trading Economics / Wall Street Journal / CNBC

INTERNATIONAL RIG COUNTS

ACTIVE RIG COUNTS BY REGION

Region	Latest Count	WTD %	MTD %	3MTD %	6MTD %	YTD %
United Arab Emirates	60	*	1.69	15.38	5.26	15.38
GCC	230	*	4.07	2.22	0.88	3.60
Middle East	333	*	3.10	0.91	0.30	2.78
Africa	102	*	6.25	9.68	21.43	32.47
Asia-Pacific	202	*	-1.46	-1.46	-0.49	5.21
Europe	114	*	5.56	-0.87	4.59	12.87
Latin America	175	*	0.00	-1.13	-1.69	-6.42
North America	810	-0.12	-0.86	-0.86	2.02	-17.01
Total	1,736	*	0.70	-0.06	2.12	-6.52

Source- Baker Hughes

(*) No weekly data available for those particular regions

NEWS OF THE WEEK

GULF COOPERATION COUNCIL (GCC)

UAE

- ADNOC and Santos forge alliance to spearhead Asia-Pacific decarbonization**
ADNOC and Santos partner to potentially develop a carbon management platform, enhancing CCS technologies for Asia-Pacific decarbonisation efforts. The Abu Dhabi National Oil Company (ADNOC) and Australian energy company Santos have united in a strategic collaboration to potentially establish a global carbon management platform, underpinning decarbonisation initiatives across the Asia-Pacific region. This agreement paves the way for advancements in carbon capture and storage (CCS) technologies, deemed essential for the global industrial decarbonisation effort. **22nd November 2023**

MIDDLE EAST	<ul style="list-style-type: none"> <u>L&T awarded Another Mega Order in Middle East</u> The Hydrocarbon business (L&T Energy Hydrocarbon – LTEH) of Larsen & Toubro (L&T) announced in a statement that it has received a Letter of Intent for mega Offshore order from a prestigious client in the Middle East. The scope of work comprises engineering, procurement, construction and installation of a new large offshore platform and brownfield work of integration with existing facilities. Commenting on the award, Mr Subramanian Sarma, Whole-time Director and Senior Executive Vice President (Energy), L&T said, “This mega order from a new customer reaffirms global acknowledgment of our capabilities and marks a key milestone for our offshore business. Our focus continues to be on enhancing competencies and leveraging opportunities arising from our core markets.” The Hydrocarbon Business is executing several domestic and international offshore projects and is committed to expanding its regional presence across adjacent and business-conducive geographies. Organised under Offshore, Onshore EPC, Modular Fabrication, Advanced Value Engineering & Technology (AdVENT) and Offshore Wind Farm Business Groups, LTEH offers integrated design-to-build solutions across the hydrocarbon sector to domestic and international customers. With over three decades of rich experience, LTEH has been setting global benchmarks in all aspects of project management, corporate governance, quality, health safety environment (HSE) and operational excellence. 20th November 2023
OMAN	<ul style="list-style-type: none"> <u>Oman LNG, BP Signs Sale and Purchase Agreement</u> Oman LNG announced the signing of Sale and Purchase Agreement (SPA) to deliver a total of 1 million Metric Tonnes Per Annum (MTPA) of LNG from Oman LNG to BP. The agreement strengthens the robust relationship between Oman LNG and BP, with which the company has previously signed Sale and Purchase Agreements to supply reliable energy from the Sultanate of Oman. Spanning over 9 years, the agreement is Free-on-Board (FOB) and starts in 2026. Commenting on this agreement, Hamed Al Naamany, CEO of Oman LNG said: “The Sale and Purchase Agreement with BP unlocks new opportunities to leverage Oman’s presence in the global energy trade. The expected revenues will not only support the national economy but also support other the energy transition, pragmatically”. Oman LNG is in a shape shifting position that sustains energy systems, fosters economic growth, and secures our position as a reliable energy supplier. The agreement’s terms are strengthened by the company’s worldwide reputation as a reliable and trusted LNG supplier, where it intends that LNG contributes to global energy security and adds value to the local economy. 21st November 2023
SAUDI ARABIA	<ul style="list-style-type: none"> <u>UAE's NPCC awarded \$1.82 billion Contracts from Aramco</u> National Petroleum Construction Company (NPCC) (NMDC Energy) wholly owned by National Marine Dredging Company, UAE announced in a statement that it has received a letter of award from Saudi Aramco for two Projects (CRPO # 136 & 137) which are part of Arab Medium (AM) facilities upgrade scheme. The scope of the two projects comprises, of fabrication and installation of 11 slipover Production Decks Modules and fabrication and installation of nine structural jackets in addition to installation of eight subsea pipelines with approximate length of 23 kms and 22 Nos 15 kV subsea cables with a total approximate length 115 kms The total value of these awards is approx.USD 1.3 billion.In another statement, the company announces that it has received a letter of award from Saudi Aramco for (CRPO # 128). The scope of the project includes the replacement of the offshore subsea trunkline for a total approximate length 67kms. The total value of this award is approx. USD520 Million. 15th November 2023. <u>Aramco discovers two major natural gas fields in the Empty Quarter</u> Aramco discovers two significant natural gas fields in the Empty Quarter, yielding substantial reserves for Saudi Arabia's energy security. In a significant development for the energy sector, Aramco has announced the discovery of two substantial natural gas fields in the vast expanse of the Empty Quarter, reaffirming the Kingdom of Saudi Arabia’s position as a global energy powerhouse. The first of these

	<p>discoveries is the Al-Hiran natural gas field, whose presence has been confirmed following successful exploration efforts. 20th November 2023.</p> <ul style="list-style-type: none"> <u>Saudi's Keir International Signs \$65.8m Contract with SEC</u> Keir International, Saudi Arabia announces the signing of a contract with the National Grid Company-NG, a subsidiary of Saudi Electricity Company (SEC). The Project is related to connection of Al-Nazim Bulk Supply Point (BSP) with 132 KV Network in Riyadh. The value of the Project is SAR 246.9 million. The Contract details is a High voltage underground cables 132KV network expansion, Gas Insulated Switchgear (GIS) Substation Extension, Protection, Telecommunication, and Substation Automation for remote ends. The Contract Duration will be Twenty months. In another statement, Keir International announces the receipt of the award letter from SEC, to implement the high-voltage Inter-tie project in the city of Al Khobar. Inter-tie Between two stations west of al Khobar in the Eastern Province will be carried out by installing 115- KV underground cables, with a total value of SAR 26.4millions. 21st November 2023
ASIA EXCLUDING GULF COOPERATION COUNCIL (GCC)	
CHINA	<ul style="list-style-type: none"> <u>COOEC hits milestone for South China Sea fields redevelopment</u> Asia's largest jacket, weighing 37,000 tonnes, will support Liuhua 11-1 platform. China's Offshore Oil engineering Company (COOEC) has achieved a significant milestone in the revitalisation of the Liuhua oil complex in the South China Sea's Pearl River Mouth basin. The COOEC-Fluor joint venture yard, based in Zhuhai city, has completed construction of what is being hailed as Asia's largest jacket, weighing 37,000 tonnes. This colossal structure is destined to provide essential support to the Liuhua 11-1 platform, which will be linked with a circular floating production, storage and offloading vessel, also under construction by COOEC. Discovered in 1987, the Liuhua 11-1 field initially held 1.47 billion barrels of proven oil reserves, with peak crude production reaching 50,000 barrels per day in recent years. Thanks to new discoveries, has been extended by an additional 30 years. The redevelopment initiative also involves the construction of two subsea pipelines, a cable and an umbilical. The Liuhua 11-1 platform is set to drive development of the Liuhua 11-1 field, while the existing subsea production system will be utilised for the Liuhua 4-1 oilfield. The Liuhua 11-1 platform will be equipped with a production separator, essential for processing the liquid outputs from both the Liuhua 11-1 and Liuhua 4-1 fields. Oil will be produced from 32 horizontal wells — six existing wells that will continue in use and 26 new wells. 23rd November 2023
INDIA	<ul style="list-style-type: none"> <u>Gensol Secures EPC Contract for Green Hydrogen-Based Mobility Station in Ladakh</u> Engineering and consulting firm Gensol Engineering has won an engineering, procurement, and commissioning (EPC) contract from NHPC to set up a pilot project for a green hydrogen-based mobility station in Kargil, Ladakh. The project aims to power two hydrogen fuel cell buses within the region. The tender was floated in June. Gensol secured this project with Matrix Gas and Renewables, a natural gas aggregator and hydrogen infrastructure developer, which will oversee the EPC of dual electrolyzers. The project entails the installation of two units, each with a capacity of 30 Nm³/hour. The estimated daily hydrogen production target is 40 kg, ensuring a minimum purity level of 99.97%. Modules must be warranted for ten years, and the output peak watt capacity should be at least 90% at the end of 10 years and 80% at the end of 25 years. Recently, Gensol secured a ₹3.02 billion (~\$36.3 million) contract to construct a solar power project from Maharashtra State Power Generation Company. Gensol will undertake the EPC of a 62 MW grid-connected solar project. 17th November 2023. <u>India's ONGC reveals plans to invest \$12bn in two petrochemical projects</u> ONGC's executive director and joint ventures and business development chief D Adhikari conveyed the company's intention to invest in two projects spanning two states by 2028 or 2030 with an intention to grow its petrochemical capacity to 8.5-9 million tonnes by the end of this decade. India's state-

	<p>owned energy firm Oil and Natural Gas Corporation (ONGC) has unveiled plans to invest more than INR1 trillion (\$12bn) in developing two petrochemical projects in the country by 2030. The plants will be designed to directly convert crude oil into high-value chemical products, in line with ONGC's strategic preparations for energy transition. In August this year, it was reported that the company is planning to spend over \$24bn in clean energy projects with an aim to fulfill its objectives of achieving net-zero carbon emissions by 2038. ONGC's latest investment plan was disclosed during an investor call on its second-quarter earnings of the fiscal year 2023-2024 (Q2 FY'24). Its executive director and joint ventures and business development chief D Adhikari conveyed the company's intention to invest in two projects spanning two states by 2028 or 2030. Adhikari revealed that the company's intends to grow its petrochemical capacity to 8.5-9 million tonnes by the end of this decade. For Q2 FY'24, ONGC reported net profit of INR165.53bn (\$2bn), which is an increase of 142.4% compared to INR68.3bn (\$820m) in Q2 FY'23. ONGC's gross revenue during the reported quarter was INR14,687.4bn (\$176.45bn), which is a 13% decline compared to INR16,865.6bn (\$202.6bn) in the same quarter of the previous fiscal year. 17th November 2023.</p>
IRAQ	<ul style="list-style-type: none">• <u>IDC Completes New Wells at Zubair and Fakka</u> The Iraqi Drilling Company (IDC) has successfully completed the drilling of two oil wells in the Zubair and Fakka [Jabal Fauqi] oil fields. The ZB-608 oil well in the Zubair oil field reached a depth of 3,598 meters using the 1,500-horsepower IDC 38 drilling rig. This is part of the contract with the Italian company ENI to drill 37 oil wells at Zubair, in Basra province. The company also completed the drilling of the FQCN-96 oil well in the Fakka oil field in Maysan province, reaching a depth of 3,167 meters. This well is part of a project to drill 22 oil wells in Maysan fields for the China National Offshore Oil Corporation (CNOOC). This drilling was done using the 2,000-horsepower IDC-55 drilling. 23rd November 2023.• <u>Italian Firm Secures \$619 Million Contract for Gas Project in Iraq's West Qurna-2 Field</u> Oil & Gas Middle East Iraq awards Sicim SPA a \$619 million contract to build gas facilities in West Qurna-2 to reduce gas flaring. In a significant move to enhance its energy infrastructure, Iraq has awarded a \$619 million contract to Sicim SPA, an Italian engineering and construction company. Announced on Tuesday by the Iraqi cabinet, the deal focuses on the development of critical gas facilities within the southern West Qurna-2 oilfield. Under the 33-month agreement, Sicim SPA is tasked with the rehabilitation of an existing gas processing plant and the construction of additional gas infrastructure. This initiative is part of Iraq's broader strategy to upgrade its gas processing capabilities. The West Qurna-2 field, which is operated by the Russian energy giant Lukoil, will see substantial infrastructure improvements aimed at boosting its processing capacity. 23rd November 2023.
INDONESIA	<ul style="list-style-type: none">• <u>ExxonMobil and Pertamina advance \$2 billion-plus offshore CCS hub</u> Amended of agreement signed for project that could store up to 3 gigatonnes of CO₂. US supermajor ExxonMobil and Indonesia's state oil and gas company Pertamina are advancing their plans for a \$2 billion-plus carbon capture and storage hub in the Java Sea offshore Indonesia with capacity of up to 3 gigatonnes (3 billion tonnes) of CO₂. The companies last week agreed to continue their collaborative evaluation of the western part of the Java Sea, specifically in the Asri and Sunda basins. The CCS hub in this location is expected to offer significant geological storage for captured CO₂ from carbon-intensive domestic and regional industries. The in-place heads of agreement defines the next steps for the proposed project including concept selection, pre-front end engineering and design, and a subsurface work programme. ExxonMobil earlier noted that this international collaboration supports Indonesia's 2060 net-zero ambition. Jack P Williams, senior vice president, ExxonMobil, said: "We are proud to collaborate with Pertamina and the Indonesian government on these transformative projects. Together, we could reduce emissions and drive economic growth in Indonesia and the entire region." 18th November 2023.

	<ul style="list-style-type: none">• <u>Indonesian junior advances reactivation of mature onshore oilfield</u> Operator reactivated shut-in oilfields. Indonesian junior MGA Utama Energi is advancing its reactivation of the mature onshore Sepanjang oilfield in East Java, Indonesia. MGA recently performed surface production tests on two wells with the SED #4 well flowing at a record rate of 4500 barrels per day and the SED #3 well achieving a none too shabby 3800 bpd of oil, said operation manager Nurdi Irianto. The Sepanjang oilfield reactivation programme was started in mid-2022. The project includes the reinstallation of separator production facilities, the maintenance and repair of a Christmas tree wellhead, and the repair of pipelines. MGA operates the Sepanjang and Pagerungan Utara block in Sumenep, Madura in East Java province with a 100% working interest. The asset contains two oilfields Sepanjang and Pagerungan Utara Offshore (PUO). The block was first operated by ARBNI, which had success in 1990 with the Sepanjang Island 1 exploration well that flowed up to 2800 bpd of oil during drill stem testing, then Kangean Energy Indonesia (KEI) took over until 2018. KEI was responsible for the Sepanjang oilfield development, the Plan of Development (POD) for which was approved in 2005. However, the field was subsequently shut in by late December 2011 after producing a total of 1.59 million barrels from three horizontal wells exploiting the Ngimbang Carbonate reservoir SED-1A, SED-3 and SED-4, noted MGA. 15th November 2023.
MALAYSIA	<ul style="list-style-type: none">• <u>Petronas Carigali going for hat trick offshore Malaysia</u> Operator aiming to make it three discoveries in a row on Sarawak block. Malaysia’s national upstream company, Petronas Carigali, this week is due to spud its latest wildcat on Block SK 301B offshore Sarawak, East Malaysia, where the operator has already delivered two known successes. The Besah-1 exploration well is to be drilled by Japan Drilling Company’s semi-submersible rig Hakuryu 5, in a programme that is expected to take about 105 days. The drilling campaign is being supported by three vessels the large anchor handling tug supply vessels Setia Hijrah and Hai Duong 06, and the platform supply vessel Executive Balance, marine traffic tracking company VesselsValue confirmed. Block SK 301B also hosts Petronas Carigali’s Machinchang and Pangkin discoveries, the latter of which is understood to have also been drilled by the Hakuryu 5 and supported by the same three vessels. Parent Petronas has attributed these two discoveries to Petronas Carigali’s innovative “clustered exploration” approach, which it hailed as “a unique style of prospecting suited for highly matured geological provinces”. “These discoveries are the result of our exploration teams’ willingness to challenge norms and defy long-standing dogmas. We are highly encouraged by our early success and will continue enhancing our efforts,” Petronas vice president of exploration Mohd Redhani Abdul-Rahman earlier said. 17th November 2023.• <u>PTTEP accelerating development of largest gas discovery in its history</u> Thailand’s PTTEP is stepping on the accelerator to develop the largest gas discovery in its history, the Lang Lebah offshore field in Malaysia, with tendering under way for the major offshore construction contracts. Lang Lebah is a significant growth asset for Bangkok-headquartered PTTEP, and Malaysia will be a key contributor to the company’s future revenue streams due to PTTEP’s strong portfolio of exploration discoveries and potential development projects. 16th November 2023.• <u>Shell refines exploration targets offshore Malaysia</u> UK supermajor Shell is ramping up its exploration activities offshore Malaysia where the country veteran is still discovering and exploiting new fields to this day. Shell is performing a geotechnical investigation over several potential prospects located on its MLNG and SK 437 production sharing contracts offshore Sarawak, East Malaysia. The operator has chartered Trinity Offshore’s Kiribati-flagged small anchor handling tug supply vessel Geo Sovereign for this investigative work, which is targeted five structures Selasih B24, Latok, Lemang, Habanero and J3. The survey work is envisaged to complete around year-end. Upstream reported on 10 August that Shell had its eye on a raft of potential new exploration targets and development opportunities on its MLNG, SK 439 and SK 440 PSCs off the coast of Sarawak, namely: Berembun, Pechu, Teja, Pepulut, Nonsoom, Misai Kuching, Roselle, Mengkedu and Habanero. The energy giant has been active in Malaysia’s E&P scene since 1891 and

	<p>last year it added Sarawak shallow-water blocks SK 439 and SK 440 plus the SB 412, 2W and X blocks offshore Sabah to its upstream portfolio. 21st November 2023.</p> <ul style="list-style-type: none"> <u>OceanMight selected for Petronas' Kasawari CCS project</u> Malaysian contractor further boosts order book with Brunei award. Malaysia's OceanMight, a subsidiary KKB Engineering, has been brought on board the engineering, procurement, construction, installation and commissioning (EPCIC) alliance for Petronas' Kasawari carbon capture and storage project offshore Malaysia. OceanMight confirmed it has received a service order from EPCIC main contractor Malaysia Marine and Heavy Engineering (MMHE) for the Kasawari phase two project. Kasawari phase two will have a fixed platform — with a 15,000-tonne eight-leg jacket and topsides weighing 14,000 tonnes that will be bridge-linked to the Kasawari main central processing platform. The completion date of this project is July 2025. The two new orders are worth approximately 27 million ringgit (\$5.78 million) combined. Risk factors affecting these orders include execution risks, availability of skilled manpower and materials, changes in pricing, weather conditions and/or political, economic and regulatory conditions, noted KKB. 22nd November 2023
PAKISTAN	<ul style="list-style-type: none"> <u>PPL makes significant gas condensate discovery</u> Pakistan Petroleum Limited (PPL) has made a gas condensate discovery with its Jhim East X-1 exploration well on Block 2467-16 (Shah Bandar), located in Sujawal district in Pakistan's Sindh province. This is the second discovery in the onshore Shah Bandar block. The successful Jhim East X-1 wildcat was drilled to a depth of 2545 metres to test the hydrocarbon potential of the Upper Sand of the Lower Goru formation. Based on the drilling results and acquired wireline logs, potential hydrocarbon-bearing zones were identified. During testing of Lower Goru Upper Sand (A Sand), the well flowed at 13.69 million cubic feet per day of gas and 236 barrels per day of condensate at a wellhead flowing pressure of 2668 psig (gauge pressure) via a 32/64-inch choke. The well is being further evaluated to get the necessary information about its performance. The Block 2467-16 exploration licence is operated by PPL with a 63% working interest on behalf of partners Mari Petroleum on 32%, and Sindh Energy Holding Company and Government Holdings Private with 2.5% apiece. 21st November 2023.
VIETNAM	<ul style="list-style-type: none"> <u>SK Earthon discovers crude oil at exploration Block 16-2 offshore Vietnam</u> SK Earthon has conducted a Drill Stem Test (DST) at the first reservoir section (crude oil or natural gas accumulated underground) which showed a maximum daily production of 4,700 barrels of crude oil and 7.4MMscf per day of natural gas. SK Earthon, an exploration and production (E&P) unit of South Korean energy company SK Innovation, has discovered crude oil at an exploration block offshore Vietnam. The company discovered an oil layer through exploratory drilling in Block 16-2, located in the Cuu Long Basin, off the south-eastern coast of Vietnam. SK Earthon has conducted a Drill Stem Test (DST) at the first reservoir section, a layer where crude oil or natural gas is accumulated underground. The DST showed a maximum daily production of 4,700 barrels of crude oil and 7.4 million standard cubic feet (MMscf) per day of natural gas. The company is currently conducting an assessment for the second reservoir to discover additional crude oil and gas. SK Earthon official said: "Vietnam is a promising region for resource development in Southeast Asia as it holds production (Block 15-1), development (Block 15-1/05), and exploration (Block 16-2 and Block 15-2/17) blocks. "With the successful discovery of crude oil in Block 16-2, we will strive to continuously create outcomes based on the competitiveness of our E&P business. 17th November 2023 <u>Invictus Energy announces hydrocarbon gas recovery and evaluation programme forward plan</u> The completion of the sidetrack will also allow for the well to be suspended for future flow testing through running the 7-inch liner over this interval and retain the ability to drill, evaluate and test the remaining portion of the Lower Angwa in 6-inch hole in future operations. Invictus Energy Limited

	<p>("Invictus" or "the Company") is pleased to provide an update of drilling the Mukuyu-2 well at its 80% owned and operated Cabora Bassa Project in Zimbabwe. Comments from Managing Director Scott Macmillan: "Further evaluation results continues to reaffirm the presence of moveable hydrocarbons at Mukuyu-2, evidenced by the recovery of natural gas from the Pebbly Arkose formation and further wireline logging data interpretations obtained from the Upper and Lower Angwa reservoirs. Due to compounding sampling challenges, borehole conditions and well control measures the Company, in conjunction with our service providers, have determined a simple vertical sidetrack will provide the strongest opportunity to achieve our remaining Upper and Lower Angwa evaluation objectives. "The Company is currently funded to conduct and evaluate the planned sidetrack operations, with the completion allowing the well to be suspended for future flow testing. The completion of the sidetrack will also allow for the well to be suspended for future flow testing through running the 7-inch liner over this interval and retain the ability to drill, evaluate and test the remaining portion of the Lower Angwa in 6-inch hole in future operations. Following the conclusion of the drilling the 8 ½ inch hole section, the well will be logged including wireline formation testing and final results provided. 20th November 2023</p>
AFRICA	
ANGOLA	<ul style="list-style-type: none"> <u>Licence round attracts over 50 bids as Angola drives to boost oil production</u> Mix of overseas and indigenous companies chase onshore blocks. Twenty-two overseas and indigenous players submitted 53 bids for acreage in Angola's latest onshore licensing round, offering hope for a further resurgence in land-based E & P activities in the long neglected Lower Congo and Kwanza basins. The round is the latest in a number of planned acreage offerings by Luanda as the government strives to maintain and hopefully boost oil production, while also encouraging local participation in the upstream sector. 20th November 2023
EGYPT	<ul style="list-style-type: none"> <u>Apex International Energy hits production milestone in Egypt</u> Apex International Energy boosts Western Desert oil production by 62% after acquiring six concessions, now among Egypt's top producers. Apex International Energy has announced progress in its operations across six concessions in the Western Desert of Egypt, an area known for its oil production. These concessions were acquired from IEOC Production B.V., a division of Eni S.p.A., earlier in 2023. With the completion of the acquisition process for the West Abu Gharadig concession in June, Apex has been in full control of the operations since July 1. The company's independently developed production in Southeast Meleiha (SEM) stood at 7,100 barrels per day, and the production from the acquired assets added an additional 2,900 barrels per day. This strategic expansion brought Apex's total working interest production in the region to 10,000 barrels per day. 20th November 2023 <u>Shell makes gas discovery in Egypt's offshore North East El-Amriya block</u> More analysis of the collected data is necessary as per the company to assess the magnitude and recoverable potential of the discovery. Shell Egypt, a subsidiary of Royal Dutch Shell, has announced making a hydrocarbon discovery in the North East El-Amriya block (also called Block 3) within the Egyptian sector of the Mediterranean Sea. The gas discovery was made through the drilling of the Mina West well. According to Shell Egypt, Mina West is the first of the three wells to be drilled as part of an exploration campaign. The exploratory drilling occurred at approximately 250m below sea level in the offshore Nile Delta, revealing initial data that confirms the existence of a gas-bearing reservoir. Additional analysis of the collected data is necessary as per the company to assess the magnitude and recoverable potential of the discovery. The company had engaged the Stena Forth rig, a mobile offshore drilling unit (MODU), for the drilling campaign under a contract awarded to Stena Drilling in January 2023. Under the agreement, KUFPEC will take a 40% stake in the North East El-Amriya block, while Shell will keep the remaining stake of 60%, of the partner's share with Egyptian Natural Gas (EGAS). In May 2022, BG International signed a FOA with ExxonMobil Egypt (Upstream) to acquire a 100% stake in the North East El-Amriya block from the latter. 22nd November 2023

IVORY COAST	<ul style="list-style-type: none"> <u>Ivory Coast to construct a US \$186m waste water treatment plant</u> Ivory Coast to construct a US \$186m waste water treatment plant. Fluence along with sub contractor Lavisio have made substantial progress on the building of a water treatment plant that will treat 150,000 m³/d water from the Aghien lagoon, producing drinking water for 1.5 million people in Abidjan. The project's genesis was in 2019 when the Federal Government of Ivory Coast set out to construct a waste treatment plant at cost of US \$186m that will treat water from Lagune Aghien, the largest freshwater reserve near Abidjan, to help meet the fresh water needs of the country's largest city. Fluence Managing Director and CEO Henry Charrabé confirmed at the time that the company had won the contract to develop the waste treatment plant. He pointed out that the scope of work includes water intake, water treatment, bulk water piping, water towers and infrastructure. Water treatment plant project. The facility will be completed within two years from the date of commencement of construction. Additionally, Fluence has also been invited to bid for an operating and maintenance contract, which could provide further recurring revenue. Subject to financial close and project commencement, Fluence expects the contract to contribute revenues of up to US \$20m in 2019, US \$80m in 2020 and the balance in 2021. 21st November 2023
LIBYA	<ul style="list-style-type: none"> <u>Libya unveils first licencing round in two decades</u> Libya announces its first oil licensing round since 2005 to increase production and attract investment in Sirte, Murzuq, and Ghadames. In a pivotal step towards revitalizing its hydrocarbon industry, Libya's National Oil Corporation (NOC) has laid the groundwork for a 2024 licencing round, the first in almost twenty years. The announcement, made by NOC Chairman Farhat Omar Bengdara, signals a renewed focus on attracting foreign investment and bolstering the country's energy sector growth, with a particular emphasis on fields within the Sirte, Murzuq, and Ghadames basins. 19th November 2023 <u>Eni targets platform upgrade in revised tender for huge Libya project</u> Platform upgrade needed as part of huge Structures A&E project. Eni and Libya's National Oil Corporation (NOC) have hit the market with a revised tender covering modification work on the Sabratha platform, as part of their huge Structures A&E oil, condensate, natural gas and carbon dioxide sequestration project. Structures A&E involves two huge new platforms feeding liquids, gas and CO₂ to markets and storage facilities via existing infrastructure, including Sabratha. 20th November 2023
NAMIBIA	<ul style="list-style-type: none"> <u>Galp starts drilling probe on huge prospect in Namibia's prolific Orange basin</u> Exploration well is targeting 10 billion-barrel Mopane structure. Galp Energia has spudded an exploration well in Namibia's prolific Orange basin, targeting a huge structure that could hold as much as 10 billion barrels of oil in place. This closely-watched probe is being drilled in Petroleum Exploration Licence 83, immediately north of acreage where Shell has made four big discoveries to date, and just west of BW Energy's 1.3 21st November 2023 <u>Chevron eyes potential 10-well drilling campaign in red-hot Namibian basin</u> Supermajor may spud first exploration well in October 2024. Chevron is preparing the ground to drill up to 10 exploration and appraisal wells in a highly promising block in Namibia's exciting Orange basin, directly north of TotalEnergies' multibillion-barrel Venus discovery. The US supermajor farmed in to Block 2813AB last year, shortly after Tullow Oil exited and Venus was discovered, eventually acquiring all of the interest held by Australian junior Harmattan Energy and part of the stake held by local player Trago Energy. 22nd November 2023 <u>Ambitious junior ignites Orange basin drill plan in Namibia</u> Rhino Resources, a privately-owned South African player operating promising acreage in Namibia's prolific Orange basin, has got the ball rolling on securing environmental approvals to drill up to 10 wells

	<p>on its untouched block. The company operates Block 2914A, located directly northeast of Shell's acreage where the supermajor has four significant discoveries on its hands and immediately south of BW Energy's long-planned Kudu gas project. 23rd November 2023</p>
NIGERIA	<ul style="list-style-type: none"><p><u>Azikel Petroleum Refinery Secures Debt Funding For Groundbreaking Hydro-skimming Project.</u> Azikel Petroleum Refinery Secures Debt Funding For Groundbreaking Hydro-skimming Project. Azikel Petroleum Refinery, a subsidiary of the Azikel Group in Nigeria, has successfully secured a debt funding agreement with the African Export-Import Bank (Afreximbank) for the ambitious 12,000 barrels per day (bpd) Azikel Hydro-skimming Refinery Project. During the Intra-African Trade Fair 2023 held in Cairo, Egypt, the project formally formalized the financing deal, crucial for its advancement. President of Azikel Group and Chairman of Azikel Petroleum Refinery, Dr. Azibapu G. Eruani, along with Helen Brume, Director of Project and Asset Based Finance at Afreximbank, signed the debt funding agreement. Dignitaries, including the Presidents of Egypt, Zimbabwe, and Malawi, witnessed the signing ceremony. Additionally, former Nigerian President Olusegun Obasanjo and former Vice President Nnamadi Sambo were present. Expressing his commitment to Nigeria's development and broader African progress, Dr. Eruani envisions the country as a hub for refined products and clean energy. The Azikel Hydro-skimming Refinery, the first private facility of its kind in Nigeria and the sole Condensate Feedstock utilizing refinery in Africa, aims to produce refined products of Euro V grade, contributing to cleaner energy and environmental protection. 21st November 2023</p><p><u>Nigeria's Ambitious Refinery Rehabilitation Deal with Saudi Arabia.</u> Nigeria's Ambitious Refinery Rehabilitation Deal with Saudi Arabia. The federal government of Nigeria is actively pursuing a refinery rehabilitation deal with Saudi Arabia, aiming to revive the country's four idle oil refineries. The refineries, located in Rivers, Delta, and Kaduna states, have been non-operational for years, compelling Nigeria to import all its fuel despite being a major oil producer. If successful, the rehabilitation could enable Nigeria to process approximately 450,000 barrels of crude oil daily, significantly reducing its dependence on fuel imports. The recent agreements between Nigeria and Saudi Arabia were forged during the Saudi-Africa summit in Riyadh. President Bola Tinubu's meeting with Saudi Crown Prince Mohammed Bin Salman aimed at attracting investments to reverse Nigeria's economic decline. Proposed Dates For Finalizing Details Of Nigeria's Refinery Rehabilitation Deal With Saudi Arabia. 21st November 2023</p><p><u>Nigeria, Germany Seal \$500M Gas, Renewable Energy Deal</u> Nigerian government and that of Germany have entered into a bilateral agreement that would see both countries exchanging gas and renewable energy resources. Speaking in Berlin, Germany, on Tuesday, at the 10th German-Nigerian Business Forum, President Bola Tinubu said that with a resilient democracy, Nigeria is well primed to attract foreign direct investments. The president witnessed the signing of two Memoranda of Understanding (MoU): one on the supply of gas from Nigeria to Germany and another for \$500 million worth of renewable energy projects in Nigeria. The signing of MoUs was between Riverside LNG of Nigeria and Johannes Schuetze Energy Import AG of Germany on the gas export partnership, while the other signed pact brought together Union Bank of Nigeria and DWS Group on cooperation in renewable energy. CEO of GasInvest, Mr. David Ige, who signed the MoU on gas supply, said the Riverside LNG project aims to supply energy from Nigeria to Germany, extinguishing about 50 million cubic feet per day of flared gas in Nigeria. 22nd November 2023</p><p><u>Seplat to Build a \$250 Million Gas Plant in Sapele, Delta State</u> The Director of New Energy at Seplat PLC, Mr. Effiong Okon has disclosed plans of the company to build a new \$250 million gas in Sapele, Delta state as part of the ongoing investment in the downstream sector of the oil and gas industry. Mr. Effiong disclosed this during Nigeria Oil and Gas Outlook themed Investing in Nigeria's Energy Future held in Lagos. While speaking during a panel discussion on secured energy transition towards gas, Mr. Effiong said, "We are also starting a brand-new plant in Sapele, the Sapele gas plant – another \$250 million investment that will deliver a lot of LPGs to the market" He</p>

explained that the company's JV gas processing facility in Imo will be completed by December and ready for commissioning by January 2024. Speaking further, Mr. Effiong noted that when it comes to investment in the oil and gas sector, the private sector should lead the investment while the government should support policies and ensure a safe environment. 17th November 2023

AUSTRALIA

AUSTRALIA

- **US energy major planning up to six wildcats offshore Australia**

US energy major ConocoPhillips has plans for an extensive exploration campaign in the Otway basin in Commonwealth waters offshore the Australian states of Victoria and Tasmania, which could see as many as six exploration wells drilled. The operator is proposing exploration activities in offshore permits VIC/P79 and T/49P, respectively located 19 kilometres offshore of Victoria and 28 kilometres off the coast of King Island, Tasmania. 20th November 2023

- **BW Offshore not rattled by risks at under-fire Australian gas project**

The legal attempts to stop the large Barossa gas project offshore Australia are not rattling the project's major contract BW Offshore, while the company is in parallel negotiating potential new contracts with clients in Turkey and Brazil. The Norwegian company has a contract worth US\$4.6 billion to supply, lease and operate a large floating production, storage and offloading vessel for Barossa for an initial period of 15 years, with options to extend for up to 10 years. 17th November 2023

- **Fortescue takes final investment decision on first two hydrogen production projects worth a combined \$700m**

Board approves total of three schemes including Phoenix Green Hydrogen hub and a 50MW electrolyser in Gladstone Australia. Fortescue has taken a final investment decision (FID) on its first two hydrogen projects: Phoenix Hydrogen Hub in the US and a 50MW electrolyser project in Gladstone. The Australian mining and energy company has also approved a small green iron project in Pilbara that will use an existing supply of renewable hydrogen. Fortescue will spend \$550m on developing the 80MW Phoenix Hydrogen Hub, a liquid green hydrogen production plant in the US state of Arizona capable of producing 11,000 tonnes of H₂ a year. This includes the \$24m Fortescue spent to buy the project at an early stage, along with yet-undeveloped land, this summer from US zero-emissions truck company Nikola, which was in the midst of streamlining its business to focus solely on getting its vehicles to market. Despite the name, the Phoenix Hydrogen Hub is not a part of the Regional Clean Hydrogen Hubs programme. The Australian company disclosed that the project which is due to start up mid-2026 has already procured 80MW of alkaline electrolyser capacity, although a supplier has not yet been named. Meanwhile, although it is progressing its second Australian project in Gibson Island through front-end engineering design, the mining and energy company admits that the facility faces "structurally high green electricity costs" at present. The Fortescue board has also approved \$50m on a green iron project near its Christmas Creek mine in the Pilbara region of Western Australia, which will process magnetite and hematite ores using hydrogen and renewable electricity. This facility, which will draw on existing H₂ production from a pilot 1.4MW electrolyser sited near the mine, will produce more than 1,500 tonnes of green iron a year, with start-up in 2025. 21st November 2023

- **Santos and APA to transform Moomba into international decarbonisation hub**

Australia's Cooper and Eromanga basins have 'enormous' CCS potential. Australia's Santos will work with energy infrastructure business, APA Group, to collaborate on the potential development of CO₂ infrastructure throughout eastern Australia. The companies have signed a memorandum of understanding whereby they will assess decarbonisation opportunities by working jointly to link heavy CO₂ emitters and/or CO₂ import locations to the Santos-operated carbon capture and storage (CCS) facility in Moomba, South Australia. The collaboration will include an assessment of CCS pipeline transport routes from key emissions sources in Gladstone, Port Bonython and Greater Sydney to the Moomba CCS facility in the Cooper basin. The project is 75% complete and initial injection is on track to commence in the first half of 2024. Santos Energy Solutions executive vice president Alan Stuart-Grant

said working with APA, which is Australia's largest pipeline developer, would put Santos in a leading position to accelerate delivery of large-scale, low-cost CCS services to domestic and international emitters. **22nd November 2023**

- **McDermott takes on decommissioning of Santos platform offshore Australia**

Award is its fourth such prize in Australia in two years. US contractor McDermott has won a contract to carry out decommissioning work at offshore infrastructure owned by Santos offshore Australia. McDermott said the contract was "sizeable", which the company defines as amounting to above \$1 million in value. The work will involve engineering, procurement, removal and disposal of Santos' Campbell platform, part of the Varanus Island Hub infrastructure offshore Western Australia. The contract is the fourth decommissioning project McDermott carried out in Australia in the past two years, it said. The scope of the contract comprises project management and engineering services for the removal and transportation of the Campbell platform's topsides, substructure and associated items to an onshore facility, where it will be dismantled and disposed of. For the project, McDermott will draw from its existing teams in Australia, Indonesia and Malaysia, the company added. **21st November 2023**

- **BP's H2Kwinana Project: A 100 MW Green Hydrogen Endeavor in Australia**

BP's H2Kwinana project is a pioneering initiative that marks a noteworthy development in the harnessing of renewable energy for Australia and beyond. The energy giant, BP, is steering towards a greener horizon with this project, which is a pivotal step in transforming the former Kwinana oil refinery site in Western Australia into a cutting-edge green fuels hub. BP's H2Kwinana project envisions deploying a 100 MW electrolyzer. This is crucial for producing renewable hydrogen. Subsequently, the project received a significant boost. AUD 70 million injection came from the Australian government. At the heart of BP's H2Kwinana project is the setting up of a 100 MW electrolyzer, poised for potential expansion to a colossal 1.5 GW in subsequent phases. Additional features encompass hydrogen storage, compression, and truck-loading facilities, along with enhancements to BP's existing on-site hydrogen pipeline system. BP's H2Kwinana project, upon completion, will produce over 14,000 tons of green hydrogen annually to meet the demands of heavy transport and industrial needs. H2Kwinana's on-site activities are already underway, with full-fledged construction slated to commence in 2026, eyeing delivery by mid-2027. This project aligns with BP's strategy to transform the Kwinana site. After the oil refinery's closure in 2021, it served as an import terminal. Currently, the aim is to evolve it into an energy hub. Consequently, this hub will produce green hydrogen and other renewable fuels. These fuels include renewable diesel and aviation fuel. **21st November 2023**

EUROPE

ITALY

- **Exmar in talks with Chinese yard for Italian FSRU EPC project**

Belgian gas shipping and infrastructure specialist Exmar is currently engaged in high-level discussions with the Chinese shipyard CIMC Raffles, aiming to finalise an engineering, procurement and construction (EPC) contract for a newbuild floating storage and regasification unit (FSRU) intended for deployment offshore Italy. According to multiple industry sources familiar with the matter, Antwerp-based Exmar has exclusively entered into negotiations with CIMC Raffles for construction of the FSRU. **20th November 2023**

NORWAY

- **Aggressive drilling planned in bountiful exploration area offshore Norway**

The bountiful exploration potential of the Troll/Fram area offshore Norway will see an Equinor-led joint venture soon spud the first of two new exploration wells. The Troll/Fram area has in the past few years delivered a significant number of exploration discoveries for Equinor and its various joint-venture partners. Equinor said in August that it has made nine successful discoveries in the area in 12 attempts since 2019. **16th November 2023.**

	<ul style="list-style-type: none">• <u>Symra Development, offshore Norway in North Sea</u> Project Type : Offshore oil and gas development Location : Norway, North Sea Discovery : 2018 Planned Production : Q1 2027 Investment : \$950m Recoverable Resources : 50 million barrels of oil equivalent Operator : Aker BP The Symra Project is an offshore oil and gas field being developed offshore Norway in the central North Sea. Previously known as Lille Prinsen, Symra is in Production Licence (PL) 167, 167B, 167C. The licence partners are Aker BP (operator, 50%), Sval Energi (20%) and Equinor Energy (30%). The offshore field was discovered in 2018 and appraised in 2021. The Plan for Development and Operation (PDO) was submitted to the Ministry of Petroleum and Energy (MPE) of Norway in December 2022. The ministry approved the plan in June 2023. PROJECT GALLERY For the development, the partners will invest approximately \$950m. Symra is planned to enter commercial operations in the first quarter of 2027. It will be developed with Solveig Phase 2 as a joint project with drilling operations slated to begin in the third quarter (Q3) of 2025. The two developments contain estimated recoverable resources of 93 million barrels of oil equivalent. Location of the Symra Discovery Project The Symra Project will be located 5km northeast of the Ivar Aasen Production Platform in the North Sea in PL 167, 167B and 167C. The field is located in Utsirahøyden area at water depth of 110m. 20th November 2023.
NETHERLANDS	<ul style="list-style-type: none">• <u>Eneco Unveils Ambitious Plan: Green Hydrogen Plant in Rotterdam</u> Eneco, a Dutch energy company, has unveiled plans to construct a groundbreaking hydrogen plant in the Rotterdam port area, solely powered by renewable energy. Traditionally, hydrogen plants rely on natural gas, emitting significant amounts of CO2. In contrast, Eneco’s proposed electrolyser plant will utilize electricity to split water into hydrogen and oxygen, contributing to the production of emission-free green hydrogen. The filing of the planning application for the ‘Eneco Electrolyser’ marks a significant step toward the realization of a green hydrogen plant in the Europoort, Rotterdam. The aim is to boost green hydrogen production to 2.5 GW by 2030, aligning with the Dutch government’s target of achieving 4 GW production by the same year. Eneco’s Electrolyser, slated for construction initiation in 2026 and operation in 2029, is set to have a capacity of 800 MW. Eneco’s proposed green hydrogen plant represents a pivotal move toward sustainable energy practices, aligning with national and global goals for reducing carbon emissions and advancing the use of green hydrogen in various industrial applications. 23rd November 2023.
RUSSIA	<ul style="list-style-type: none">• <u>Major Russian ally signs deal to diversify gas pipeline supplies</u> One of Russia’s closest allies in Europe, Serbia has signed a deal that involves diversifying from Russian gas pipeline supplies, despite strong political connections between the two nations and an existing long-term gas purchase agreement with Russian gas giant Gazprom. The new agreement involves the supply of 400 million cubic metres of gas from Azerbaijan next year and was signed by Serbia’s Mining & Energy Minister Dubravka Djedovic Handanovic and Azeri Energy Minister Pyarviz Shakhbazov in Baku on Wednesday. The first supplies are expected when Serbia and Bulgaria commission a pipeline between the two countries sometime next year. Construction started early this year on the 1700-kilometre interconnector pipeline, which will run from Novi Iskar in Bulgaria to Nis in Serbia. The pipeline will have a throughput capacity of 1.8 billion cubic metres per annum of gas, with reverse flow capability enabling imports of gas from Serbia if needed, according to Bulgaria’s transmission operator Bulgartransgaz. As well as imports of Azeri gas through the Southern Gas Corridor trunkline network that links Azerbaijan with Southern Europe, the upcoming connector pipeline is expected to be used to carry gas across Bulgaria to Serbia from liquefied natural gas terminals in Greece and Croatia. 15th November 2023.

SPAIN	<ul style="list-style-type: none"> <u>Lhyfe to construct 15-MW green hydrogen plant in Spain</u> Lhyfe to construct 15-MW green hydrogen plant in Spain. Embarking on a transformative journey towards sustainable energy solutions, Lhyfe, a prominent global innovator in renewable green hydrogen production, has secured a substantial grant, amounting to €14 million, from H2 Pioneros for the establishment of its inaugural green hydrogen plant in Spain. This strategic project, located in Vallmoll, Tarragona, is poised to play a pivotal role in reshaping the renewable energy landscape of the region. Project Overview: Lhyfe's green hydrogen facility in Vallmoll showcases an impressive daily production capacity of up to 5 tons and is scheduled to commence operations in 2026. The financial support, acquired under the auspices of the 'H2 Pioneros' program, will underwrite critical aspects such as design, equipment procurement, and construction, covering an estimated half of the overall investment. 23rd November 2023.
UKRAINE	<ul style="list-style-type: none"> <u>Ukraine breaks 20-year record with gas exploration well success</u> State-run Ukrgezvydobuvannya drilled well in country's legacy Carpathian play. Ukraine is cheering greater than expected success with an exploration well drilled in the west of the country. State-owned gas producer Ukrgezvydobuvannya drilled the well in the country's legacy Carpathian play, where first gas was produced a century ago, and was part of programme to explore for more resources near an existing mature field. The well was one of the few drilled since Russia's invasion of Ukraine early last year, with privately held oil and gas companies also continuing to face government restrictions on production and investments. Ukrgezvydobuvannya said the well was drilled to a depth of 1600 metres by the company's wholly-owned drilling contractor Ukrburgaz, and flowed at a rate of 200,000 cubic metres per day of gas, the strongest result in the area in the past 20 years. 20th November 2023.
UK	<ul style="list-style-type: none"> <u>UK North Sea decommissioning work could be worth US\$25 billion, says new report</u> Decommissioning the UK North Sea's energy installations could present a £20 billion (US\$25 billion) business opportunity over the next 20 years, according to a new report. According to the Decommissioning Insight 2023 report published by Offshore Energies UK (OEUK), 180 out of 283 active oil and gas fields in the North Sea will have ceased production by 2030. The closure of these fields, without ongoing management, will result in a loss of homegrown energy, which provides energy security and adds value to the UK economy, the report said. 22nd November 2023. <u>Oil and gas operator seeks partners to advance oilfield developments to final investment decision</u> Ithaca Energy looking to progress Cambo and Fotla fields development. UK independent Ithaca Energy is actively engaging with potential farm-in partners to progress its Cambo and Fotla fields offshore the UK towards the final investment decision, subject to regulatory and licensing approval processes and market conditions. Ithaca recently completed its acquisition of the remaining 40% stake in Fotla and announced its plan to acquire the remaining 30% interest in Cambo, both at limited near-term cost, providing the company with total control over the project sanction decision and timing. Meanwhile, pre-final investment decision work continues across its greenfield and brownfield development portfolio. This includes the maturation of a front-end engineering and design contract for its Captain electrification project to support a final investment decision, and the execution of a unitisation and unit operating agreement for its Marigold field, with work progressing ahead of submitting the Field Development Plan in 2024. Ithaca in the three months ended 30 September achieved average production of 61,700 barrels of oil equivalent per day 66% oil and 34% gas while its year-to-date output stands at 71,000 boepd, in line with its full-year guidance in the range of 68,000 of 74,000 boepd. Ithaca on Wednesday said that the vessel's operator Bluewater Energy Services is working to resolve issues with the mooring system. 22nd November 2023 <u>Viedekke secures Stockholm tunnel contract</u>

The SEK898m (£68m) contract involves construction of a 4km wastewater tunnel and access tunnel. The access tunnel will be built at Kontrollvägen in northern Solberga, from which the wastewater tunnel will be blasted and drilled in two directions. Construction is scheduled to start in December and the tunnel is due to be operational in 2030. Mässtunneln, commissioned by Stockholm Water, will relieve the city's wastewater system, enable construction that is more residential and reduce flood risk. **15th November 2023.**

NORTH & SOUTH AMERICA

BRAZIL

- **Karoon Energy splashes \$720 million to enter US oil and gas market**

Australian player already eyeing additional potential after acquiring oil and gas producing assets from LLOG. Australia's Karoon Energy is splurging US\$720 million to make its US debut, where it hopes the deep-water Gulf of Mexico fields will offset the production decline at its Bauna asset offshore Brazil. Karoon is to acquire a 30% interest from operator LLOG in its Who Dat and Dome Patrol oil and gas fields, associated infrastructure such as the Who Dat floating production system (FPS), plus an approximate 16% interest in the Abilene field together with varying stakes in adjacent exploration acreage offshore Louisiana. This exploration acreage includes the Who Dat East, Who Dat West and Who Dat South exploration and appraisal opportunities. Karoon's chief executive Julian Fowles said there are significant development and exploration opportunities that, in the company's view, are analogous to Who Dat within the associated acreage. Its purchase, that comes with US\$27 million associated costs, will be funded by US\$171 million cash, US\$274 million debt and a US\$300 million fully underwritten equity raise. The Who Dat assets provide Karoon with both geographical and asset diversification, complementing our existing Brazilian business with a second high quality operation." On completion of the deal, which is subject to customary conditions for "a transaction of this nature", the Who Dat and Dome Patrol partners will be operator LLOG with a 45% interest, Karoon having 30% and Houston, US-based investment firm Westlawn Group holding the remaining 25% stake. **16th November 2023**

- **European Energy and Petrobras evaluate potential opportunities for e-methanol facility in Brazil**

The companies' intention was formalized through a Memorandum of Understanding following the visit of Petrobras senior management, to European Energy's headquarters in Søborg, Denmark. European Energy has agreed to evaluate a potential partnership with Petrobras, a key player in Brazil's energy sector, to explore commercial opportunities for the development of an e-methanol production facility in Brazil. The companies' intention was formalized through a Memorandum of Understanding following the visit of Petrobras senior management, to European Energy's headquarters in Søborg, Denmark. This potential collaborative venture represents a significant stride towards the development of green e-fuels in Brazil. European Energy has been present in Brazil since 2016 with headquarters in Recife, Pernambuco State. The company possesses local in-house expertise across all areas including development, construction, and operation of renewable energy assets. European Energy has connected 187MW of solar and wind energy to the Brazilian national grid and possesses a development pipeline of 1.5GW across the country. European Energy, with a substantial track record in renewable energy projects, brings the expertise obtained from Denmark's first large-scale commercial e-methanol facility to this initiative. **20th November 2023**

- **Subsea7 wins Shell decommissioning work offshore Brazil**

Company will tackle work in the Bijupira-Salema field. Subsea7 has been awarded a "sizeable" contract by European supermajor Shell for the decommissioning of subsea infrastructure associated with a floating production, storage and offloading vessel offshore Brazil. The contract workscope includes the disconnection, recovery and disposal of 10 flexible risers, three umbilicals and nine mooring lines that were linked to the Fluminense FPSO in the Bijupira-Salema field in the Campos basin. According to Subsea7, offshore work is planned to start next month. "Twenty years ago, Subsea7 installed the flexibles and umbilicals for Shell's Bijupira and Salema fields and, two decades later, we are proud to be one of Shell's chosen contractors to take part in the completion of this field's life cycle," Subsea7

	<p>Brazil vice president Yann Cottart said. US-based group Modern American Recycling Services is in charge of decommissioning of the Fluminense FPSO, while Helix Energy Solutions will provide plug and abandonment services on subsea wells. Bijupira-Salema was one of the first offshore fields in Brazil to produce via an international oil company. 20th November 2023</p> <ul style="list-style-type: none">• <u>Petrobras pipelaying support vessels mega-tender attracts multimillion-dollar bids</u> Five contractors have submitted dozens of bids in a highly anticipated Petrobras tender for the charter of several flexible pipelaying support vessels to carry out operations across Brazil's pre-salt province in the Campos and Santos basins. It is unclear how many PLSVs the Brazilian oil giant intends to contract in the new tender, but given average dayrates of about \$300,000 and charter periods of three and four years, each vessel ordered would likely result in a deal worth approximately \$400 million, sources told Upstream. 20th November 2023• <u>Brazil Agency to Rule if Petrobras Can Drill Near Amazon Mouth by Early 2024</u> Brazil's environment protection agency Ibama is expected to decide by early next year if state-run oil company Petrobras (PETR4.SA) can drill near the mouth of the Amazon River, Ibama's president Rodrigo Agostinho said on Wednesday. The area is part of Brazil's Equatorial Margin, which Petrobras considers its most promising new frontier for oil and gas exploration. The decision to drill in the region was controversial, due to its biodiversity and proximity to the Amazon rainforest. Earlier this year Petrobras appealed a decision by Ibama denying a license to drill an exploratory well in the region, near the coast of the state of Amapa. The agency has no deadline to judge the appeal, but Agostinho said that it is treating the matter as a priority. The Equatorial Margin is a roughly 2,200-km (1,370-mile) stretch of deepwater and ultra-deepwater assets along Brazil's northern and northeastern coast. The area Petrobras is looking to drill is located south of where Suriname is exploring for oil and close to Guyana, where Exxon Mobil has discovered major oil reserves. 23rd November 2023
VENEZUELA	<ul style="list-style-type: none">• <u>Venezuela Close to Approving Offshore Gas License With Trinidad, Shell</u> Venezuela is close to approving a license for Shell (SHEL.L) and the National Gas Company of Trinidad and Tobago to develop a promising offshore natural gas field and export its production to the Caribbean country, two people close to the matter said. Trinidad and Tobago's Prime Minister Keith Rowley on Monday confirmed that the parties were negotiating the license and added that Energy Minister Stuart Young was expected to visit Caracas this week. The license could set in motion a long-running effort by Trinidad to boost its gas processing and petrochemical exports, while providing Venezuela with a much-needed extra source of cash. The two countries aim to speed cross-border energy development since the U.S. in January issued a two-year authorization allowing the Dragon field's development. Both nations are discussing a 25-year exploration and production license for the Dragon field, which holds up to 4.2 trillion cubic feet of gas and lies in Venezuelan waters near the maritime border between the two countries. Some terms are still to be settled, but if all goes well a deal could be signed in coming days, the people said. Shell would operate the project with a 70% stake and Trinidad's NGC (NGCTT.UL) would hold the remaining 30% under proposed terms, the people said. The lack of gas has led to the shutting of one of its LNG processing units. The parties have agreed in principle to a price that would land gas across the border at less than \$3 per mcf, the sources said. PDVSA has pushed for a signature bonus of some \$65 million to be paid up front. 21st November 2023
USA	<ul style="list-style-type: none">• <u>Capital Power acquires two natgas-fired power plants in U.S. for \$1.1 bln</u> Canadian energy company Capital Power (CPX.TO) said on Monday it was acquiring two U.S.-based natural gas-fired generation facilities in California and Arizona for a net cost of \$1.1 billion. Capital, like some of its rivals, is aiming to increase its power generation through greenhouse gas emissions-free renewables as well as more stable, but polluting energy sources such as natural gas. This month, Canadian rival TransAlta said it would acquire Heartland Generation, which produces power from

	<p>natural gas. Following the completion of the deal, Capital will become the fifth largest non-regulated gas-powered generator in North America from ninth position. It plans to be net-zero emissions by 2045. The acquisition is expected to generate around \$265 million in core profit for the 2024-28 period, and is estimated to be 8% accretive. The deal is expected to close in the first quarter of 2024. The La Paloma natural gas-fired generation plant in Kern County, California has a capacity of 1,062 megawatts (MW) and is owned by CXA La Paloma. The Harquahala natural gas-fired generation facility in Maricopa County, Arizona has a capacity of 1,092 MW, and is owned by New Harquahala Generation Company, a newly formed and equal-weighted partnership between Capital Power Investments and a fund managed by BlackRock's Diversified Infrastructure business. Alberta-based Capital Power generates power from natural gas, wind, solar and other sources at sites in Canada and the United States. It has 62% of its capacity in Canada and 38% in the U.S. 23rd November 2023</p>
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