



EXECUTIVE SUMMARY

The Commodity summary

- Crude Oil Brent prices trading lower by 12% YTD and Crude Oil WTI prices are trading lower by 11% YTD.
- Coal prices are trading higher by 4% WTD
- Steel HRC (N. America) prices are trading higher by 40% YTD
- Iron ore prices are trading higher by 44% YTD
- Natural Gas prices are trading lower by 11% MTD

The Currency summary

- Euro is stronger by 5% YTD to USD
- The US Dollar to CNY exchange rate differential is 1% YTD

The Rig count summary

- The Rig counts in UAE have gone up by 15% 3MTD and in Europe have gone up by 6% MTD.

Project summary

- Adnoc exploring acquisition of European energy giant priced at over \$11 billion
- EGA Breaks Ground for Construction of UAE’s Largest Aluminum Recycling Plant
- Adnoc starts bid battle for two multibillion-dollar oilfield developments in latest expansion drive
- Contruction begins for \$3 B green steel project in Duqm
- Saudia Arabia announces the Preferred Bidder for Juranah ISWR Project
- Indonesia launches first carbon storage project in West Papua
- Sri Lanka to OK Sinopec's \$4.5B refinery proposal on Monday
- Libyan National Oil Corporation seeks \$17B investment to boost production
- Tanzania Ports Authority to Construct Two Tanzania Oil Storage Tanks
- New low-carbon hydrogen facility planned on Haropa Port land in France
- Eni and Saipem Sign Agreement to Develop New Biorefineries
- Brazil's Petrobras plans to 'revitalize' company with \$102B investment
- Saipem awarded \$1.9 billion offshore contracts

COMMODITY UPDATES

COMMODITY	UOM	LATEST PRICE	WTD %	MTD %	3MTD %	6MTD %	YTD %
Chromium	USD/MT	9,262.24	-1.59	1.58	3.73	-5.18	-4.22
Coal	USD/MT	140.49	4.34	-9.06	-12.73	-22.25	-63.30
Cobalt	USD/MT	32,033.17	-2.35	-2.88	-8.19	2.67	-36.34

Copper	USD/MT	8,464.50	0.70	5.70	0.83	1.65	5.72
Crude Oil	USD/BBL	79.13	-0.31	-9.93	-4.76	7.03	-11.26
Crude Oil Brent	USD/BBL	81.66	-0.09	-8.62	-3.89	7.55	-11.85
Crude Oil WTI	USD/BBL	76.60	-0.55	-11.30	-5.68	6.47	-10.62
Iron Ore	USD/MT	130.40	0.66	9.83	22.42	23.32	44.07
Molybdenum	USD/MT	38,322.90	0.70	-18.12	-29.69	-17.28	-7.94
Natural Gas	USD/MCF	2.81	-4.68	-11.27	1.85	18.88	-57.02
Nickel	USD/MT	17,000.00	1.34	-8.22	-17.97	-23.90	-32.29
Steel HRC (FOB China)	USD/MT	547.00	0.27	1.90	-1.87	-4.79	3.99
Steel HRC (N. America)	USD/MT	1,023.49	-0.02	27.73	16.13	-17.23	40.46
Steel Rebar	USD/MT	601.55	-0.96	9.57	7.62	6.25	7.31
Steel Scrap	USD/MT	397.50	0.63	8.08	6.99	5.19	14.84

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	1.0976	0.66	3.42	0.48	2.27	5.26
USDCNY	1 USD to CNY	China	CNY	7.1256	0.32	2.71	2.38	-0.49	-1.15

Source- Trading Economics

CRUDE OIL STOCK								
Region		Unit	Latest Count	WTD %	MTD %	3MTD %	6MTD %	YTD %
US Stocks of Crude Oil & Petroleum Products		Thousand Barrels	16,22,622.00	0.20	0.54	1.14	1.52	1.39

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	25.04	USD	3.39	16.57	-6.43	-2.19	-7.43
Chiyoda Corporation	353.00	JPY	-1.40	1.73	-4.85	-1.40	-6.12
Glencore PLC	443.95	GBP	-1.30	-1.56	2.68	6.51	-21.22
HD Hyundai Heavy Industries Co. Ltd.	1,22,900.00	KRW	0.57	13.38	-7.73	5.95	3.71
JGC Holdings Corporation	1,663.50	JPY	-3.31	-9.79	-14.30	-3.06	-12.12
McDermott International Ltd.	0.18	USD	5.88	-5.26	12.50	-43.75	-60.00

National Marine Dredging	27.40	AED	-1.93	33.14	25.23	37.14	3.71
NYSE American Steel Index	2,023.36	Index	0.73	10.13	1.54	21.44	13.20
Rio Tinto PLC	5,400.00	GBP	-1.85	3.07	11.29	11.58	-3.31
Technip Energies NV	20.97	EUR	2.24	3.81	-1.27	42.94	38.97
TechnipFMC PLC	20.23	USD	-3.30	-5.47	6.47	45.43	63.15
Tenaris SA	33.72	USD	0.51	6.54	1.54	31.72	-2.18
Tubacex SA	3.31	EUR	5.57	22.55	15.71	32.07	64.11
Woodside Energy Group	30.94	AUD	-1.78	-9.82	-19.49	-11.85	-17.03

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	814	0.49	-0.37	-0.37	2.52	-16.60
Total	1,740	*	0.93	0.17	2.35	-6.30

Source- Baker Hughes

(*) No weekly data available for those particular regions

NEWS OF THE WEEK

GULF COOPERATION COUNCIL (GCC)

UAE

- Adnoc exploring acquisition of European energy giant priced at over \$11 billion**

Abu Dhabi National Oil Company (Adnoc) is exploring the potential acquisition of European energy giant Wintershall Dea, as the Emirati state giant continues to pursue international expansion opportunities, Bloomberg has reported. Germany's Wintershall Dea, backed by chemicals giant BASF, is likely to be valued at more than €10 billion (\$11 billion), once a final deal is reached, the report claimed. **22^{4th}November 2023**

- EGA Breaks Ground for Construction of UAE's Largest Aluminum Recycling Plant**

EGA Breaks Ground for Construction of UAE's Largest Aluminum Recycling Plant. Emirates Global Aluminum (EGA) breaks ground for the construction of UAE's largest Aluminum Recycling Plant. The company is the largest industrial company excluding the oil and gas sector. It has initiated the construction of the largest aluminum recycling plant in the country. On its current production, the company has a processing capacity of 170,000 tonnes. The recycling plant is being built next to EGA's existing smelter in Al Taweelah. The plant is expected to supply to both local and global markets once construction is completed in the next three years. The plant will convert post-consumer aluminum

	<p>scrap. This includes used window frames into low-carbon aluminum billets. This is done so as to facilitate its processing which is costly and time-consuming. The Aluminum recycling plant is expected to contribute to the global increase of recycled aluminum. Aluminum is widely used to build wind turbines and solar panels. These technologies are driving decarbonization efforts across the globe. The Aluminum Recycling plant will enable the drive in these efforts. 23rd November 2023</p> <ul style="list-style-type: none"> <u>Adnoc eyes LNG investments with China in three major energy nations</u> Leaked documents reveal Emirati giant is working with Chinese players on projects in Mozambique, Australia and Canada. Abu Dhabi National Oil Company (Adnoc) is exploring the possibility of investing jointly with Chinese corporations in liquefied natural gas opportunities in Mozambique, Australia and Canada, according to reports. Documents leaked to the BBC and Centre for Climate Reporting state that the state-owned Emirati giant “is willing to jointly evaluate (with China) international LNG opportunities” in the three countries. The document stated that “Chinese companies are among our most strategic partners. 27th November 2023 <u>Adnoc starts bid battle for two multibillion-dollar oilfield developments in latest expansion drive</u> Two projects are part of P5 production enhancement plan aimed at increasing Abu Dhabi’s crude output to 5 million bpd by 2027. Abu Dhabi National Oil Company (Adnoc) has started the bid battle for two huge engineering, procurement, construction and management contracts that are a key element of its strategy to significantly boost the emirate’s oil production capacity in the next few years. The state giant’s P5 production enhancement plan is aimed at increasing Abu Dhabi’s crude production to 5 million barrels per day by 2027, with the operator expected to spend up to \$150 billion over the next four years. 29th November 2023
OMAN	<ul style="list-style-type: none"> <u>Oman considers carbon capture projects to reduce CO2 emissions</u> To mitigate CO2 emissions resulting from major industrial projects and boost its decarbonisation efforts, Oman is focusing on the development of the carbon capture, utilisation and storage (CCUS) field in the country. CCUS is a rapidly growing global technology for capturing large volumes of CO2, aimed at reducing greenhouse gas emissions, especially in sectors with significant CO2 emissions that are challenging to decarbonise. According to the Ministry of Energy and Minerals (MEM), CCUS technology presents promising solutions to reduce carbon emissions and achieve net-zero emissions, particularly in Oman’s oil and gas production sector, industries and fossil fuel-based power generation plants. Oman’s National Strategy for Orderly Transition to Net Zero has outlined CCUS will contribute to a substantial (approximately 15%) reduction in domestic emissions, thus facilitating the sultanate’s journey towards net zero by 2050. On Wednesday, MEM signed a Memorandum of Cooperation (MoC) in the field of CCUS and blue hydrogen development in Oman with Petroleum Development Oman (PDO), Oman Shell, OQGN, and Occidental of Oman (Oxy). The signing ceremony was held under the patronage of H E Mohsin bin Hamed al Hadhrami, MEM Undersecretary. 9th November 2023 <u>Galfar’s order book rises to RO589mn on new projects</u> Galfar Engineering and Contracting Company, Oman’s largest construction firm, announced that its order book has increased to RO589mn, driven by new contracts awarded this year. For the first nine months of 2023, Galfar received new project awards worth RO393mn, according to the company’s quarterly financial report submitted to the Muscat Stock Exchange on Tuesday. ‘For the [nine months] period ending September 30, 2023, the company achieved a higher turnover compared to the same period last year, driven by the increase in the company’s order book and new projects. The company’s financial position continues to be positive, supported by a strengthening order book,’ Galfar said in the report. The company’s consolidated net profit increased to RO1.528mn for the first nine months of 2023, compared to a consolidated net profit of RO110,000 reported for the same period last year. However, Galfar’s operating profit margins were affected by higher operating costs, mainly driven by ‘geopolitical challenges, escalation in material prices, resource availability due to increased regional

	<p>demands, and extended stays in some projects'.The company expects to maintain a solid project pipeline in excess of RO500mn in the future, with a significant number of tenders under evaluation across a diverse array of sectors and clients. 14th November 2023</p> <ul style="list-style-type: none"> <p><u>Contruction begins for \$3bn green steel project in Duqm</u></p> <p>Vulcan Green Steel, a part of Jindal Steel Group, is set to make history in the global steel industry by building the world's largest green hydrogen ready steel plant in the Special Economic Zone at Duqm (SEZAD) with an investment exceeding \$3bn. The groundbreaking ceremony for the project, combined with a symbolic planting of an 'Eternal Green Tree', took place in Duqm on Monday, in the presence of H E Dr Ali bin Masoud al Sunaidy, Chairman of the Public Authority for Special Economic Zones and Free Zones (OPAZ), Naveen Jindal, Chairman of Jindal Group and Venkatesh Jindal, Vice Chairman of Vulcan Green Steel. The event was attended by numerous dignitaries representatives from the government institutions, leaders from the private sector, and an executive team from both Vulcan Green Steel and the Jindal Group in Oman. The Direct Reduction Iron (DRI) Plant for which the foundation is laid in the ceremony on Monday, is going to be a green steel plant with the flexibility of transition from 100% natural gas to 100% green hydrogen, with a unique combination of hot DRI and hot briquetting system. It is going to be the largest single module plant (2.5 MTPA) in the world. 27th November 2023</p> <p><u>PDO announces project utilising CO2 for EOR</u></p> <p>Petroleum Development Oman (PDO) has launched a pioneering pilot project for enhanced oil recovery (EOR) using CO2 in northern Oman, marking a significant step towards sustainable oil and gas production in alignment with the sultanate's goal of net-zero carbon emissions by 2050. PDO is committed to building a sustainable and low-carbon future, aiming to ensure the company's long term success by continuing to generate significant oil and gas revenue in a cost-effective and carbon-efficient manner, thereby maximising value for the sultanate, a press release stated. 'This project marks a key milestone in PDO's dedication to increasing oil and gas production sustainably, decarbonising its operations, and working towards achieving the net-zero carbon emissions goal by 2050 in alignment with Oman Vision 2040.' The goal of the pilot project is to de-risk and therefore expedite the full-field EOR development. Steve Phimister, Managing Director of PDO, conveyed the company's pride in announcing the milestone in its journey towards a net-zero CO2 emissions future. "This project is not just a technological achievement but a demonstration of our unwavering commitment to both cost and carbon competitiveness. We are determined to safely, efficiently and sustainably grow our core oil and gas business while minimising emissions from our operations. 29th November 2023</p>
QATAR	<ul style="list-style-type: none"> <p><u>Expansion of world's largest gas field progressing impressively.</u></p> <p>Qatar's massive expansion of its North Field liquefied natural gas production capacity is progressing "impressively" with LNG capacity set to ramp up to 126 million tonnes per annum, according to Khalid bin Khalifa al-Thani, the chief executive of QatarEnergy LNG (formerly Qatargas). Al Thani noted while speaking at the company's annual town hall in Doha that the company remains "focused on the North Field Expansion and sustainability projects". 27th November 2023</p>

SAUDI ARABIA

- Saudia Arabia announces the Preferred Bidder for Juranah ISWR Project**
 Saudi Water Partnership Company S.M.L.L.C (SWPC) announce the evaluation completion of the received proposals from the Bidders for the Juranah Independent Strategic Water Reservoir Project in Makkah city which is considered the first of its kind in the Kingdom of Saudia Arabia under the BOOT model. The project will enhance the water supply chains and it is intended to serve the residents and visitors of Makkah city in addition to Hajj & Umrah pilgrims. The capacity of the strategic tanks is 2,000,000 m³ while the project will develop also operational tanks with a capacity of 500,000 m³ to support the potable water distribution system. SWPC announces the names of both Preferred Bidder and Reserved Bidder in addition to their Levelized Water Storage Charges, as follows: **Preferred Bidder** – Consortium of Vision International Investment Company and Gulf Investment Corporation G.S.C and TAQA – Levelized Cost – 18.11137 Halalas/m³/day **Reserved Bidder** – Consortium of Abdul Aziz Al Ajlan Sons Co. for Commercial & Real Estate Investment and Orascom Construction – 24.07696 Halalas/m³/day As per notification, SWPC announces that it intends to conduct a competitive tender process to select a private sector developer (which may be a developer consortium) for the development, financing, procurement, implementation, operation, maintenance and transfer (BOOT) of the Project. The expected PCOD for the project is in the first quarter 2027. **23rd November 2023**.
- Huge Aramco CCS project race puts trio in frame for prize**
 Engineering, procurement and construction contract is valued at up to \$1 billion. At least three international contracting giants are set to compete for a sizeable Saudi Aramco carbon capture and storage (CCS) project at some of the largest onshore gas plants in the country. The state-owned oil giant is aiming to develop one of the largest CCS hubs in the world. Saudi Arabia Energy Minister Prince Abdulaziz bin Salman said the CCS “centre in Jubail Industrial City will start operating by 2027 and be able to extract and store 9 million tonnes per annum” of carbon dioxide in its first phase, supporting the country’s goal to extract, use and store 44 million tpa of CO₂ by 2035. **27th November 2023**
- Alkhorayef awarded SAR 87m O&M Contract in Buraidah**
 Alkhorayef Water and Power Technologies Co., Saudi Arabia Announces the awarding of Contract for Operating and maintaining water and sewage networks and their accessories in Buraidah. The Value of the contract is SAR 87,189,100. As part of the Project, the Company will perform the works related to the Contract for Operation & Maintenance Sewage & Water Network in Buraidah region. The duration of the Project is 36 months. **27th November 2023**

ASIA EXCLUDING GULF COOPERATION COUNCIL (GCC)

CHINA

- Ineos Styrolution and Sinopec start up joint ABS plant in China**
 INEOS Styrolution announced the official opening of a new world-scale ABS (acrylonitrile butadiene styrene) facility located in Ningbo, China, together with its joint venture partner SINOPEC. The facility has a nameplate capacity of 600,000 metric tons per year (m.t./yr). The completion of our new ABS facility in Ningbo using our world class Terluran ABS technology is an important milestone, as we embark on a new stage in this exciting journey with SINOPEC to further strengthen our position in the Chinese ABS market.” Rob Buntinx, President APAC at INEOS Styrolution, said: “The facility inauguration today represents another important step in our ongoing commitment to our customers and partners in the Chinese market. We are strategically located closely to our customers, enabling us to respond to local demands more quickly and efficiently, while significantly reducing the delivery times. The construction of this ABS facility in Ningbo started in end 2020. Spanning across 26.7 hectares, with more than 360 employees and contractors, this facility will produce high-end ABS materials that advance the design and functionality of many applications across numerous industry sectors including automotive, electronics, household, healthcare and toys/sports/leisure. **24th November 2023**
- Clariant’s SynDane catalyst chosen for Shenghong’s new biodegradable plastics project**

	<p>The new plant in Lianyungang, Jiangsu province, China will have an annual capacity of 200,000 tons of Maleic anhydride. Clariant, a sustainability-focused specialty chemical company, announced that it has been awarded a major contract by Jiangsu Shenghong Petrochemical Co., Ltd, to use Clariant's SynDane 3142 LA catalyst for its new maleic anhydride (MA) production plant in Lianyungang, Jiangsu province, China. With a production capacity of 200,000 tons per year, the new plant slated for start of production in 2025, will be one of the largest production plants for MA worldwide. The plant in Lianyungang will produce maleic anhydride as an intermediate product for polybutylene adipate terephthalate (PBAT), which in turn will function as a base product for biodegradable plastic. Using the SynDane catalyst, Shenghong Petrochemical will be able to improve production efficiency and reduce power consumption, leading to annual energy savings of up to 24 million CNY. With its unique shape design, SynDane 3142 LA reduces the pressure drop by 30%-35% and thereby significantly lowers compressor energy consumption. China aims to cut non-degradable single-use plastic significantly over the next two years, leading to a demand for biodegradable plastics of as much as 2.5 million metric tons by 20251. 23rd November 2023</p>
INDIA	<ul style="list-style-type: none"> <p><u>Front runner emerges in Indian giant's race for two key offshore contracts</u></p> <p>Cluster-9 project and the fifth revamp phase of Mumbai High field aim to boost output from India's west coast. A leading contracting giant has emerged as the potential front runner for two engineering, procurement, construction and installation (EPCI) jobs from India's state-controlled Oil & Natural Gas Corporation (ONGC) for work off the nation's west coast. India's domestic crude production has been dwindling in recent years and ONGC is under increasing pressure from the government to boost its oil output and reverse the decline. 23rd November 2023</p> <p><u>ONGC's Krishna-Godavari Basin Project To Boost India's Crude Oil Production, Annual Savings Of Rs 10,600 Crore Anticipated</u></p> <p>In a major development, the state-owned Oil and Natural Gas Corporation (ONGC) is gearing up to commence crude oil production from its flagship deep-water project in the Krishna-Godavari (KG) basin next week. This strategic move is poised to significantly contribute to India's self-sufficiency in oil, potentially saving the country nearly Rs 11,000 crore annually, reported NDTV. Currently, India imports 85 per cent of its crude oil and half of its natural gas requirements. ONGC's capital expenditure plan, of Rs 1 lakh crore for petrochemical projects by 2028-2030, adds another dimension to its ambitious growth strategy. At a Brent Crude price of \$77.4, the anticipated daily savings from this output alone would be Rs 29 crore (at Rs 83.29 to \$1), translating to a staggering Rs 10,600 crore annually. ONGC plans to employ 75 rigs for drilling, aiming to produce from three to four wells initially, with peak oil production projected at 45,000 barrels per day by FY 24-25. The commencement of production from this deep-water project is seen as a crucial step to reduce India's dependence on oil imports, contributing approximately 7 per cent of the country's output at peak production. 22nd November 2023</p> <p><u>Indian Oil to double Ennore LNG terminal's capacity to 10 mln tpy</u></p> <p>Indian Oil Corp (IOC.NS), the country's top refiner, aims to double the capacity of its liquefied natural gas (LNG) import terminal at Ennore in southern India, Sandeep Jain, the company's executive director for gas business, said on Friday. The company plans to expand capacity to 10 million metric ton per year (tpy) amid the growing demand for gas in the country, Jain told reporters at an industry event. He did not elaborate the details. India wants to raise the share of gas in its energy mix to 15% by 2030, up from the current 6.2%, as part of an effort to cut emissions. Jain said IOC hopes to boost local sales of gas to 20 million tpy by 2030, a substantial increase from the current 6.3 million tpy. Aside from the Ennore terminal, IOC has leased capacity in at least two local projects operated by other companies to import gas. Jain said India needs to sign more long-term LNG import contracts to ensure price stability. IOC recently signed two agreements for 14-year LNG import contracts worth \$11 billion, he said. 24th November 2023.</p> <p><u>Asian player kicks off FPSO services contract for strategic deep-water project</u></p>

	<p>FPSO Ruby is currently deployed at the MJ Field off the east coast of India. Mumbai-based OCS Services has kicked off a key operations & maintenance (O&M) contract for the Ruby floating production storage and offloading (FPSO) vessel, deployed at Reliance Industries and UK supermajor BP's MJ deep-water gas field in the Krishna Godavari basin offshore India's east coast. OCS confirmed the commencement of the O&M contract on Monday for the strategic deep-water project. In addition to providing O&M services, OCS noted that "the company will also be responsible for the operation of subsea production system using topside subsea control system equipment installed on the FPSO. 28th November 2023.</p> <ul style="list-style-type: none"> <u>Adani Total Gas launches green hydrogen blending pilot project at Ahmedabad</u> The project is expected to be commissioned by Q1 FY24-25 and the percentage of green hydrogen will be gradually increased in the blend to upto 8% or more. Adani Total Gas Ltd. (ATGL) announces the initiation of a pioneering 'Green Hydrogen Production and Blending Pilot Project'. As part of the project, ATGL will employ the latest technologies to blend Green Hydrogen (GH2) with natural gas for over 4,000 residential and commercial customers at Ahmedabad, Gujarat. GH2 is produced using electrolysis of water with electricity generated by renewable energy. Hydrogen blending is less carbon intensive than burning gas but has the same heating capabilities. The project is expected to be commissioned by Q1 FY24-25 and the percentage of green hydrogen will be gradually increased in the blend to upto 8% or more, depending on regulatory approvals. After successfully completing the pilot, hydrogen blended fuel will be supplied stepwise to larger parts of the city and other license areas of AGTL. As per studies, an upto 8% hydrogen blend can reduce emission by upto 4%. 29th November 2023.
IRAQ	<ul style="list-style-type: none"> <u>Iraq's cabinet greenlights key natural gas sector development with Nahr Bin Omar Field project</u> Iraqi cabinet approves development of Nahr Bin Omar field, targeting significant natural gas output and carbon emissions reduction. The Iraqi cabinet has recently given its nod to a consequential development aimed at enhancing the nation's natural gas sector. At the heart of this development is the Nahr Bin Omar oil and gas field, which is set to undergo an extensive project that marks a considerable advancement in Iraq's approach to energy. 24th November 2023.
INDONESIA	<ul style="list-style-type: none"> <u>Indonesia launches first carbon storage project in West Papua</u> Indonesia's President Joko Widodo on Friday launched construction of a carbon capture, utilisation and storage (CCUS) project in West Papua province operated by BP Plc (BP.L), the country's first carbon storage project. The CCUS project has the potential to store up to 1.8 gigatonnes of carbon dioxide, energy minister Arifin Tasrif said in a statement on Friday. In September, an energy ministry official said BP will invest \$2.6 billion in the project, with the first carbon injection expected in 2026. BP did not give an investment figure. The new project follows the completion of BP's \$4.83 billion Tangguh Train 3 liquefied natural gas (LNG) project in West Papua which was completed last month. Indonesia is keen to develop CCUS and carbon capture and storage (CCS). It has an estimated carbon storage capacity of 8 gigatonnes in depleted oil and gas reservoirs and 400 gigatonnes in saline aquifers. Energy ministry data shows there are currently 15 CCS and CCUS projects in various stages of preparation in the country with a combined investment of nearly \$8 billion, including BP's project. During the same trip to West Papua, Jokowi, as the president is known, also launched construction of a fertiliser plant in Fakfak which is designed to produce 1.15 million metric tonnes of urea fertiliser and 825,000 metric tonnes of ammonia fertiliser. The investment for the plant is estimated at 30 trillion rupiah (\$1.94 billion) and construction is expected to be concluded in 2038, according to a statement from the presidential palace late on Thursday. 24th November 2023 <u>Toyo awarded licensing and equipment supply contract for urea fertilizer plant in Indonesia</u> TOYO will provide its urea license and the process design package as a Urea Licensor as well as the proprietary equipment, and associated technical services for this project. Toyo Engineering Corp. TOYO

	<p>has constructed more than 100 urea plants all over the world up to now. TOYO constructed and revamped Pusri's seven urea plants since the 1970s. In 2015 TOYO as Urea Licensor jointly with Wuhuan implemented a fertilizer plant project for PT Petrokimia Gresik (PKG) in Indonesia. And as a result, TOYO was recognized for its know-how and achievements in the plant construction in Indonesia, which lead to award of this project as well. The demand for fertilizers is expected to continue growing in the future so to ensure increased food production in line with population growth, and therefore many fertilizer plants are currently planned to be constructed around the world. As a licensor of the advanced urea technology TOYO will strive to meet the increased demand for fertilizers in countries around the world while at the same time considering the global environment by building fertilizer plants with application of its latest and most advanced technologies. This technology that reduces energy consumption (by 3-5% for steam and electricity) due to further reduction of raw material pressure and improving process efficiency as compared to ACES21. Implementing this new technology to new plants with dedicated design for ACES21-LP can also reduce the weight of synthesis equipment, which reduces cost of the equipment (by 5-10%). The technology is applicable to both new and existing plants. LP stands for low-pressure. 24th November 2023</p>
MALAYSIA	<ul style="list-style-type: none"> <u>Samsung Engineering kicks off FEED for flagship Asian project</u> Commercial production of green hydrogen targeted by 2028. South Korea's Samsung Engineering has started the front-end engineering and design (FEED) for the Sarawak H2biscus green hydrogen and ammonia project in Malaysia. Samsung will execute the FEED for the green hydrogen plant with annual capacity of 150,000 tonnes and a green ammonia conversion plant with a capacity of 850,000 tonnes in Sarawak, Malaysia. The study work is expected to be completed in 2024. The contractor plans to derive a hydrogen production method optimised in terms of efficiency and economic feasibility by applying both polymer electrolyte membrane (PEM) water electrolysis and alkaline water electrolysis (AEC) technologies, which are representative water electrolysis technologies during the FEED stage. This H2biscus project, intended to produce clean hydrogen based on renewable energy in Sarawak, Malaysia and introduce it to Korea, was launched in early 2022. The project is on track, having later last year signed a renewable power memorandum of understanding with the Sarawak Electricity Authority. The final investment decision is targeted for end-2024. Once FID is taken, engineering, procurement and construction work is expected to begin immediately after, and commercial production of hydrogen is expected by early 2028. 24th November 2023.
PAKISTAN	<ul style="list-style-type: none"> <u>Pakistan aims for higher Russian energy imports with revived pipeline plans</u> Country started Russian oil purchases this year and welcomes Moscow's participation in long-discussed TAPI pipeline. Pakistan will seek higher imports of Russian natural gas and crude oil at a discount on the global market price to help answer its rising energy demand, according to its recently appointed ambassador to Moscow. In his first interview since taking the diplomatic post, Muhammad Khalid Jamali told Russian state-run news agency Tass that Pakistan will initially aim to meet 10% of the country's energy demand with Russian supplies of oil and gas. In the future, the volume [of Russian hydrocarbon imports] may rise to 30% of the total consumption", Jamali said. "It is not in Pakistan's economic interest to join anti-Russian sanctions as our bilateral trade is growing. Pakistan's imports from Russia have increased by 154% this year compared to the previous year, which is a remarkable figure", he said. In June this year, Pakistan imported a first cargo of Russian oil of about 733,000 barrels that was sent to a processing plant operated by Pakistan Refinery Limited after being unloaded in the port of Karachi. Turkmenistan is reportedly seeking the partial relaxation of US sanctions on Afghanistan to allow the Taliban government to raise the necessary financing to build the country's segment of TAPI. Authorities in Ashgabat repeatedly said that they already built their own 200-kilometre segment of the TAPI pipeline to the country's border with Afghanistan using large-diameter pipes manufactured in Russia 22nd November 2023

SRI LANKA	<ul style="list-style-type: none"> <u>Sri Lanka to OK Sinopec's \$4.5 bln refinery proposal on Monday</u> Sri Lanka will likely approve on Monday a proposal from Chinese state refiner Sinopec to build a \$4.5-billion-dollar refinery, the South Asian island nation's energy minister said on Saturday. "It's on the agenda for Monday. Once the cabinet gives approval, we will invite them to sign the agreement," Power and Energy Minister Kanchana Wijesekera told Reuters. Sri Lanka, trying to recover from its worst economic crisis in more than 70 years, is hungry for new investment and local fuel supplies. Sinopec's investment of at least \$4.5 billion "will go up in value as and when they do additions, but they must first come and sign the agreement for us to give any more details," Wijesekera said. For Sinopec, the world's top refinery by capacity and one of the largest petrochemical makers, the investment would mark a breakthrough in a long effort to expand beyond China's borders. It owns refinery assets in Saudi Arabia and petrochemicals production in Russia. The refinery may target markets beyond Sri Lanka, where local fuel consumption is low, and use its partnership with China Merchants Port to expand bunker fuel supply at Hambantota, a deep-sea port near busy shipping lanes between Europe and Asia, analysts say. Sinopec's fuel oil division, which runs the retail business there, began in 2019 supplying marine bunker fuel at Hambantota, another Sinopec official said. Sri Lanka's refinery at Sapugaskanda, commissioned in 1969, can process 38,000 barrels of oil a day. 25th November 2023.
AFRICA	
ALGERIA	<ul style="list-style-type: none"> <u>Reggane Nord Onshore Natural Gas Project, Algeria</u> Project Type : Onshore natural gas project Location : Algeria Production : 8 million cubic metres/day of gas Estimated Investment : \$3bn Start of Production : December 2017 Owners : Sonatrach (40%), Repsol (36%), and Wintershall Dea (24%) Operator : Groupement Reggane Nord Reggane Nord is an operational onshore natural gas project located in Algeria, around 1,500km from the capital of Algiers. The project is operated by the Groupement Reggane Nord (GRN), a consortium comprising Algeria's national state-owned oil company Sonatrach (40%), Repsol (36%), and Wintershall Dea (24%). The total development cost for the onshore <u>gas project</u> is estimated to be approximately \$3bn. Construction works began in 2014 and first gas from the Reggane Nord gas field was achieved in December 2017. PROJECT GALLERY In the first 12 years, production from Reggane Nord is expected to stabilise at 8 million cubic metres/day of gas. As of October 2023, around 13 billion cubic metres of gas have been produced in the consortium. The project is expected to be in production at least until 2041. Petrofac's scope of work included engineering, procurement, construction, commissioning and start-up (EPCCS) of the gas treatment plant, gathering system and export pipeline for the project. Salticom won a contract for the design, engineering, supply and commissioning of the RPS (Radio Propagation Study) for a 09-site Tetra system to cover 120km pipelines, engineering and supply of an access control system (ACS). Lead, an industrial construction company, carried out construction and pre-commissioning work including civil, mechanical, piping, pipeline, electrical, instrumentation and telecom works for the Reggane Nord project. 27th November 2023
ANGOLA	<ul style="list-style-type: none"> <u>Angola's latest oil and gas tenders net 53 bids</u> Angola received 53 bids in a tender round for the exploitation of oil and gas deposits at 12 blocks in the Lower Congo and Kwanza Basins, according to reports. The National Oil, Gas and Biofuels Agency (ANPG) reported 31 bids for blocks in the Kwanza Basin, including 22 for the conduct of petroleum

	<p>operations. Two blocks in the north and the most inland block received no interest. The Congo Basin received 22 bids, with one block alone receiving 10 bids. Angola's oil and gas secretary, José Barroso, praised the bidding as "another safe step in the process of exploration and production of hydrocarbons in the onshore areas of the Lower Congo and Kwanza basins, attracting companies with proven experience and accumulated knowledge in basins with recognized geological complexity. Early exploration efforts have gone some way to identifying Angola's onshore hydrocarbon deposits, with extensive geological data available. That, along with proximity to refineries and government incentives, is encouraging investors in the Lower Congo and Kwanza Basin. Evaluation of bids will be finalised by 31 December, with results announced by mid-January 2024, the government says. Negotiations with the winning bidders are expected to conclude by March 2024, wrapping up the fourth onshore round since the creation of ANPG in February 2019. 24th November 2023</p>
LIBYA	<ul style="list-style-type: none"> <u>Libyan National Oil Corporation seeks \$17B investment to boost production</u> The primary challenge isn't operational but financial—the corporation is significantly underfunded for the ambitious goal it has set. The Libyan National Oil Corporation (NOC) is seeking a substantial investment of \$17 billion to enhance the country's oil production capabilities. The NOC's chairman, Farhat Bengdara, announced in a recent interview with Alwasat TV that with the proposed budget, Libya aims to elevate its oil output to 2 million barrels per day within the next three to five years. According to Bengdara, the primary challenge isn't operational but financial—the corporation is significantly underfunded for the ambitious goal it has set. 28th November 2023
	<ul style="list-style-type: none"> <u>Chevron joins Namibian hydrocarbon hunt with epic drilling campaign</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>TotalEnergies' latest Namibia exploration probe targets two reservoirs</u> Mangetti-1X well also appraising huge Venus discovery, with further probes and 3D seismic on radar. TotalEnergies' Mangetti-1X exploration well in Namibia's prolific Orange basin will also appraise the supermajor's Venus oil discovery in Block 2913B, confirming an earlier report by Upstream. Once this well has been completed, the supermajor might target a prospect further north before turning its attention to the southern part of the block where a 3D seismic shoot is due to kick off early next year. 24th November 2023
SOUTH AFRICA	<ul style="list-style-type: none"> <u>Three majors in last-minute dash to enter race for slice of Orange basin hotspot</u> Coveted South African exploration tract attracts more big suitors. A last-minute burst of interest by multiple supermajors in a sought-after exploration block in South Africa's sector of the prolific Orange basin will delay the conclusion of a farm-out process. Block 3B/4B an asset that could host 4 billion barrels of recoverable resources — is operated by Stockholm-listed independent Africa Oil, which together with its two partners are keen to farm out a combined 55% stake in the deep-water acreage. 27th November 2023
TANZANIA	<ul style="list-style-type: none"> <u>Tanzania Ports Authority to Construct Two Tanzania Oil Storage Tanks</u> Tanzania Ports Authority to Construct Two Tanzania Oil Storage Tanks. The Tanzania Ports Authority is set to construct Tanzania Oil Storage Tanks that will be utilized for the storage of oil. These two tanks will be put up at the Dar es Salaam so as to hasten the offloading of oil tankers. Tanzania Oil Storage

	<p>Tanks Capacity These Tanzania Oil Storage Tanks will possess a capacity of 362,000 tonnes. The government of Tanzania has made a big investment by setting up a Single Point Mooring (SPM) that is situated in the Kisinda Mjimwema area in the Indian Ocean that will allow huge oil tankers with a capacity of 50,000-100,000 to offload diesel other than the Kurasini Oil Jetty (KOJ) that usually handles refined products intended for the smaller oil tankers. The Single Pont Mooring (SPM) is a floating jetty which is located offshore that allows the handling of liquid cargo such as products of petroleum. This handling can be done for both crude and refined oil. 23rd November 2023</p> <ul style="list-style-type: none"> • <u>East African Crude Oil Pipeline (EACOP) Above Ground Installations Commence</u> The major contractor of the 900-mile East African Crude Oil Pipeline (EACOP) which runs all the way from Hoima in the western part of Uganda to the Port of Tanga in Tanzania has just recently kicked off the civil works, which entail the installation of the above ground installations in the two countries of Uganda and Tanzania. This move has just come after this project has entered its last crucial 2 years. The building of this pipeline shall cost a total of approximately \$5 billion. During the previous week, Pearl Engineering Ltd which is a subcontractor for the early civil works and ground preparation, handed over one of its own sites in order to be utilized in the accommodation of the main pipe yard of the project and the pump station one that is located in Hoima District of Uganda to the main contractor of the East African Crude Oil Pipeline which is China Petroleum Pipeline Engineering Ltd (CPP). 23rd November 2023
AUSTRALIA	
AUSTRALIA	<ul style="list-style-type: none"> • <u>Saipem selects thyssenkrupp Uhde to license a urea granulation unit in Australia</u> Efficient and low-emission urea production by means of thyssenkrupp Fertilizer Technology's UFT fluid-bed urea granulation technology. thyssenkrupp Fertilizer Technology of thyssenkrupp Uhde has signed a contract with the Italian Group Saipem, a global leader in the engineering and construction of major projects for the energy and infrastructure sectors, to license a urea granulation unit in Karratha, Western Australia. The project in Karratha is being realized and built for Perdaman Chemicals and Fertilisers by a joint venture (50/50) comprising the Western Australian company Clough and the Italian company Saipem. Perdaman Chemicals and Fertilisers is a multinational company headquartered in Western Australia. Besides investing in fertilizer production, it specializes in supporting farmers with harvesting and food production. 23rd November 2023
EUROPE	
CROATIA	<ul style="list-style-type: none"> • <u>Chinese yard to build module for major Croatia LNG expansion project</u> The new module will significantly boost terminal's gas handling capacity. Chinese yard Nantong CIMC Sinopacific Offshore Engineering (CIMC SOE) has inked a deal with Wartsila Gas Solutions to undertake the engineering, procurement, and construction of a re-gasification module for the LNG Croatia project. This collaboration follows a prior agreement between Wartsila and LNG Hrvatska in September, aligning with efforts to enhance the liquefied natural gas offerings and expand the regasification capabilities of the LNG Croatia floating storage and regasification unit (FSRU) vessel. 30th November 2023
DENMARK	<ul style="list-style-type: none"> • <u>Sir Jim Ratcliffe's Ineos brings in Aquaterra for carbon capture project</u> Offshore engineering services provider Aquaterra Energy will carry out work to repurpose a disused platform for the injection of carbon dioxide in a depleted gas field in the Danish North Sea. The company has been picked by Ineos following a tender to progress the Greensand carbon capture and storage project, currently under development offshore Denmark. Aquaterra's work will support the repurposing of the Nini platform to inject CO₂, through platform structural analysis, brownfield engineering and asset life extension evaluation. By 2025, Greensand supported by a consortium of

	<p>companies led by Ineos and Wintershall Dea aims to achieve storage capacity to 1.5 million tonnes per annum of CO₂ and expand this to up to 8 million tpa by 2030. The carbon will be injected for permanent storage in the depleted Nini West sandstone reservoir in the Danish North Sea, where Ineos owns several platform infrastructures. 28th November 2023</p>
FRANCE	<ul style="list-style-type: none"> <u>New low-carbon hydrogen facility planned on Haropa Port land in France</u> Haropa Port and Verso Energy have signed an agreement for the installation of a plant to produce low-carbon hydrogen and synthetic fuels on Haropa Port land in Grand-Quevilly, France. Specifically, this production plant will be set up on an area of land belonging to Haropa Port/Rouen in the town of Grand-Quevilly at the administrative boundary with Petit-Couronne. It is projected to come on stream by 2029. Dominique Ritz, Deputy CEO of Haropa Port, and Antoine Huard, CEO of Verso Energy, signed the site occupancy agreement at the local regional offices of Haropa Port/Rouen on November 22. According to the parties, the project is slated to produce hydrogen by water electrolysis and will be capable of providing a capacity of 350 MW, corresponding to an annual volume of more than 50,000 tons of hydrogen, in return for an investment of around €500 million. To remind, in July 2023, Haropa Port awarded Engie 24 hectares (ha) of land for the development of a benchmark platform for alternative new industrial fuels embodied by the Salamandre and France KerEAUzen projects. According to Engie, the two projects are set to contribute to the energy transition in France and to the decarbonization of heavy mobility in Europe, and the Haropa Port award is an essential step in the development of the projects as well as the low-carbon transition of the industrial port zone. 24th November 2023
ITALY	<ul style="list-style-type: none"> <u>Eni and Saipem Sign Agreement to Develop New Biorefineries</u> Eni and Saipem have signed an agreement for the development of biorefining. It was signed today by Giuseppe Ricci, Chief Operating Officer for Energy Evolution at Eni, and Alessandro Puliti, Chief Executive Officer at Saipem, to support the transformation path of traditional refineries and the development of new Eni biorefineries. The agreement is in line with the decarbonization goals of Eni and Saipem, and it focuses on the study for and subsequent potential construction of plants for the production of biojet, a sustainable aviation fuel, and of the biofuel HVO diesel, produced from 100% renewable raw materials (pursuant to EU Directive 2018/2001 "REDII"). HVO diesel is on sale at Enilive service stations under the name HVOLution and can be used across road, naval and rail transport. The agreement involves the application of Eni's proprietary Ecofining™ technology for both the development of new biorefineries and the conversion of traditional refineries, combining Eni's extensive technological and operational experience with Saipem's distinctive expertise in the design and construction of this type of plants. <u>Saipem</u> provided support on both projects. Eni plans to expand its biorefining capacity from the current 1.65 million tons/year to over 5 million tons/year by 2030. 7th November 2023
LITHUANIA	<ul style="list-style-type: none"> <u>Lithuania eyes North Sea carbon storage sites</u> Proposal to capture and export CO₂ deemed European 'project of common interest'. European authorities have approved a plan by Lithuanian liquefied natural gas import terminal operator Klaipėdos Nafta and its partners to proceed with a proposal to build the Baltic region's first liquefied carbon dioxide capture and transportation project in Lithuania and Latvia. Klaipėdos Nafta said the European Commission has granted "project of common interest" (PCI) status to its plan, raising the likelihood that the project, which aims to use future offshore storage sites in the North Sea, will receive partial financial assistance for its start-up and completion. The proposal is now is recognised as "a cross-border project of great importance which will significantly contribute to the implementation of the energy policy and climate goals of the European Union", Klaipėdos Nafta (KN) said. The project aims to create a carbon capture and storage value chain in Lithuania and its neighbour Latvia and will include the capture and transportation of CO₂ generated in the industrial sector by land and sea

	<p>transport to permanent storage sites, potentially in the North Sea. The PCI status allows the partners to continue detailed studies before they submit an application for European Union funding. It is expected that the project will require total investment of between €1.1 billion (\$1.2 billion) and €1.2 billion. KN expects the project to be approved by the end of 2026 so that CO₂ capture and export operations may start in 2030. 28th November 2023</p>
NORWAY	<ul style="list-style-type: none"> <p><u>Largest oil and gas discovery in Norway during past decade sounding sweet for owners</u> The operator of potentially the largest oil and gas discovery in Norway in the past decade is progressing the field through its early development gates while keeping its exploration eye on nearby undrilled potential. The Carmen discovery and a successful sidetrack appraisal were revealed in July by one of the partners in the high-powered joint venture as Norway's largest discovery since 2013 based on a mid-point gross recoverable resource of 175 million barrels of oil equivalent. 27th November 2023</p> <p><u>Equinor receives PSA approval for using Askepott rig on Martin Linge field</u> The Cat J rig has been permitted by the Norwegian authority to carry out production drilling, completion, plugging and abandonment, as well as intervention activities. Equinor has secured the consent of the Petroleum Safety Authority Norway (PSA) for the use of the Askepott jackup rig on the Martin Linge field in the Norwegian North Sea. The Cat J rig has been allowed to carry out production drilling, completion, plugging and abandonment, as well as intervention activities. Martin Linge is situated in the northern part of the North Sea, near the border to the British sector. The oil and gas field is in a water depth of 115m and is located 42km west of the Equinor-operated Oseberg field. Discovered in 1978, the field's plan for development and operations (PDO) was granted approval in 2012. Its development concept involves the installation of a fully integrated fixed production platform and a floating, storage and offloading unit (FSO) for the storage of oil. Production from the offshore oil and gas field <u>began in June 2021</u>. Equinor has an operating stake of 51% in Martin Linge. Its partners in the field include Petoro (30%) and Sval Energi (19%). 27th November 2023</p>
SWEDEN	<ul style="list-style-type: none"> <p><u>Preem to convert Lysekil refinery to renewable diesel, SAF</u> Swedish fuel company Preem on Nov. 27 announced it will invest SEK 5.5 billion (\$532.82 million) to convert its refinery in Lysekil, Sweden, to produce renewable diesel and sustainable aviation fuel (SAF). According to Preem, the investment decision involves reconstruction of the refinery's so-called IsoCracker plant (ICR) to produce renewables rather than fossil diesel. Reconstruction activities are scheduled to begin in 2024 and be complete in 2027. The environmental permit process is ongoing, the company said, with the Land and Environment Court expected to make a decision in late spring 2024. The refinery currently has the capacity to produce 530,000 cubic meters per year. Following the planned reconstruction, the Lysekil facility is expected to have the capacity to produce 1.2 million cubic meters of renewable fuels. 29th November 2023.</p>
UKRAINE	<ul style="list-style-type: none"> <p><u>Norway and European bank step up gas support for Ukraine</u> Country urged to secure gas supplies ahead of winter and amid fears of stepped-up Russian attacks. Naftogaz Ukrainy has secured a €200 million (\$220 million) loan from the European Bank for Reconstruction & Development (EBRD) to help the state-run gas producer and distributor build up strategic natural gas reserves for the winter season, the second since Russian invaded the country in early 2022. The financing follows a disbursement of €300 million to Naftogaz last year for the same purpose and is part of a package of €500 million in donor support, including a grant from Norway. "The people of Ukraine are facing another cold winter under Russian attack," Norway's Foreign Affairs minister Espen Barth Eide said. "Norway will continue our support to Ukraine to maintain critically important energy security and meet the needs for heating for homes, businesses and public institutions. We are proud to support these efforts by EBRD with a €54 million grant. This past weekend, Russia launched its biggest drone attack on Kyiv since the start of the invasion, according to</p>

	<p>the city’s mayor, Vitaliy Klitschko. Officials said Russia sent more than 75 Iranian-made Shahed drones to the capital, all but one of which were shot down. However, the attack damaged local power transmission networks and led to outages lasting for several hours in parts of the city. 27th November 2023.</p>
UK	<ul style="list-style-type: none">• <u>Apollo secures FEED contract from NEO Energy for FPSO modifications</u> The FEED study, which covers asset repairs and modifications for the FPSO, along with late-life extension procedures, from a process and marine perspective, will support NEO Energy’s plans for the Greater Buchan Alpha Redevelopment project. UK-based Apollo has secured a significant contract from NEO Energy for a Front-End Engineering Design (FEED) study for the redevelopment project in the Greater Buchan Area. The FEED study will support NEO Energy’s plans to repurpose and redeploy an existing FPSO vessel, currently in the North Sea, for the Greater Buchan Alpha Redevelopment project. Apollo’s FEED study, which supports up to 40 staff, covers asset repairs and modifications for the FPSO, along with late-life extension procedures, from a process and marine perspective. In addition, the engineering company will integrate complex electrical infrastructure into the vessel, making it electrification-ready by accepting power from renewable sources. The transaction is expected to be completed in early 2024, subject to regulatory, partner and interested party approvals. Once complete, Serica Energy (UK) and JOG will hold 30% and 20% stakes in the GBA, respectively, and its operator NEO Energy will continue to hold 50% interest. 27th November 2023.• <u>Harbour Energy's application for Viking CCS onshore CO2 transportation pipeline gets green light</u> The 55-kilometre onshore pipeline will transport captured CO2 from the Immingham industrial area to the former Theddlethorpe Gas Terminal site on the Lincolnshire coast. Harbour Energy, operator of the Humber-based Viking CCS CO2 transportation and storage network, is pleased to announce that the Planning Inspectorate has accepted for examination its application to build the Viking CCS onshore CO2 transportation pipeline. This is the next stage in the process to acquiring a Development Consent Order (DCO) for the pipeline, a Nationally Significant Infrastructure Project (NSIP), and follows a comprehensive programme of consultation and engagement with stakeholders and local communities. The 55-kilometre onshore pipeline will transport captured CO2 from the Immingham industrial area to the former Theddlethorpe Gas Terminal site on the Lincolnshire coast. From Theddlethorpe, the CO2 will be transported 140km to the depleted Viking gas fields, 2.7 km beneath the seabed, for secure permanent storage. The Viking CCS onshore pipeline is a key component in the infrastructure needed to decarbonise and rejuvenate the industries of the Humber, which is expected to make a material contribution to the UK’s net zero emissions targets. Viking CCS Project Director Graeme Davies said: “This is another critical step forward towards delivering our Viking CCS project, which will create thousands of jobs in the Humber region and is targeting 10 million tonnes per annum of CO2 emissions reduction by 2030, vital for the UK to deliver its climate ambitions. 27th November 2023.• <u>Kemira to invest in water treatment chemicals production in UK</u> Kemira produces currently over 350 000 tons of water treatment. Kemira, a global leader in sustainable chemical solutions for water-intensive industries, announces a significant capacity extension of its ferric sulfate water treatment chemicals production line in Goole, UK. The additional 70 000 tons capacity investment helps meet the growing demand for coagulants due to the new and stricter Asset Management Plan 7 and 8 regulation on phosphorus and other nutrient discharge from wastewater treatment set out in the Water Industry National Environment Programme in the UK. The new capacity is planned to be in operation in Q3 2025. We are well placed to meet the growing future needs of the UK water treatment industry,” says Wido Waelpuut, Senior Vice President, Commercial, EMEA & APAC, Industry & Water segment at Kemira. Kemira produces currently over 350 000 tons of water treatment and other chemicals annually at its four UK manufacturing sites in Goole, Ellesmere Port, Teesport and Bradford. Kemira has invested significantly in the Goole site in recent years. The latest expansion program was completed in 2021. 27th November 2023.

NORTH & SOUTH AMERICA

BRAZIL	<ul style="list-style-type: none"> <u>Brazil's Petrobras plans to 'revitalize' company with \$102 bln investment</u> Brazil's state-run oil company Petrobras laid out its 2024-2028 strategic plan on Friday, seeking to "revitalize" the firm and start the process of energy transition, CEO Jean Paul Prates said. The company plans to invest around \$102 billion during the period, which Prates called one of the largest investment plans in the company's history and a reversal in direction for Petrobras, now under Luiz Inacio Lula da Silva's presidency. "Previously you saw a company with no future, not investing and paying exorbitant dividends," said Prates. "Now we are with our eyes and mind on the future. Prates said Petrobras has a duty to expand its role in Brazil and become an energy company, and pointed to new investments into fertilizers and renewable energy. By the end of 2024, Petrobras will resume operations at one fertilizer plant and by 2028 is set to complete construction on a second one, marking its return to the sector. The firm also said it will invest \$5.2 billion in solar and wind power with an initial focus on onshore plants, while researching the development of offshore wind in Brazil. When asked whether Petrobras was studying buying back part of the Mataripe refinery, formerly known as Rlam and sold to Abu Dhabi's Mubadala under previous management, Prates said it was a possibility. 25th November 2023.
CANADA	<ul style="list-style-type: none"> <u>Cedar LNG Project, Kitimat District, British Columbia, Canada</u> Project Type : Floating LNG Facility Location : British Columbia, Canada Expected Final Investment Decision : Q4 2023 or Early 2024 Start of Commercial Operations : 2027 Capacity : 3 million tonnes per annum (mtpa) of LNG Partners : The Haisla Nation and Pembina Pipeline The Cedar LNG Project is a Floating Liquefied Natural Gas (FLNG) processing facility and marine export terminal facility planned to be developed in Kitimat District, British Columbia, Canada. The project will be developed by The Haisla Nation, the band government of the Haisla people, and energy transportation and midstream service provider Pembina Pipeline. In February 2022, an Environmental Assessment Certificate (EAC) application for the project was submitted to the British Columbia Environmental Assessment Office. The EAC was received in March 2023. Cedar LNG has also received a positive Decision Statement from the federal government and secured major environmental approvals. PROJECT GALLERY A Final Investment Decision (FID) on the project is expected by the end of 2023 or early 2024. The commercial operations may begin in 2027. The project will also have up to 250,000m3 (approximately 108,000 tonnes) of LNG storage capacity. It will receive electricity via an up to 8.5 km long, up to 287kV, power transmission line between BC Hydro's Minette Substation and the substation within the Facility Area. Cedar LNG will have an operational lifespan of at least 25 years, with the possibility of extending the export licence to 40 years. Liquefaction Services Agreement In March 2023, Cedar LNG signed a memorandum of understanding (MoU) for 20-year long-term liquefaction services agreement with ARC Resources. Both the entities will finalise a definitive agreement for 1.5 million tonnes of LNG per year, which is nearly half of the project's production. 27th November 2023.
USA	<ul style="list-style-type: none"> <u>McDermott lands second contract for Shell gas field project</u> Sanctioning of Manatee development was nearing, Shell said earlier this year. US contractor McDermott has won a contract to carry out engineering and construction work at the Manatee gas field project that Shell is looking to develop in Trinidad & Tobago. McDermott has been awarded a limited notice to proceed related to a contract for the engineering, procurement, construction and installation (EPCI) of infrastructure at Manatee. The scope of work comprises of design, procurement, fabrication, transportation, installation and commissioning of a wellhead platform, offshore and

onshore gas pipelines. Shell told Upstream earlier this summer that a final investment decision to develop Manatee in which holds a 100% stake was approaching. The European supermajor had approved the necessary financing, the Trinidad & Tobago government said in September. The contract award is the second for the US company, after it won an earlier contract. **28th November 2023.**

- **SMRR partners with Topsoe, Chemex Global for Texas biorefinery**

Santa Maria Renewable Resources, a vertically integrated renewable energy, and biobased production developer, is pleased to announce it has selected Topsoe, as its technology provider, and has executed license and engineering agreements with the leader in the renewable fuels market. These licenses encompass the state-of-the-art Hydroflex and H2bridge technologies. Topsoe's HydroFlex process layout combined with the H2bridge concept offers unprecedented greenhouse gas emission savings and lower carbon intensity of renewable fuels. The process and concept are both pivotal components for a biofuels and sustainable agriculture project currently in development by SMRR in East Texas. The facility will provide 600 to 700 construction jobs and 300-plus permanent operating employment positions. A daily output of up to 3,000 barrels per stream per day is expected, encompassing both renewable diesel (RD) and sustainable aviation fuel (SAF). The demand for RD and SAF is significantly on the rise as the aviation industry makes strides to reach net zero carbon emissions by 2050. SMRR's project is a central step towards supporting the aviation industry in their green initiatives. **29th November 2023.**

- **Saipem awarded \$1.9 billion offshore contracts**

Saipem has been awarded two offshore contracts, one in Guyana and the other in Brazil, worth approximately 1.9 billion USD. The first contract has been awarded by ExxonMobil's subsidiary ExxonMobil Guyana Limited for the proposed Whiptail oilfield development located in the Stabroek block offshore Guyana, at a water depth of approximately 2,000 meters. Saipem's scope of work includes the design, fabrication and installation of subsea structures, risers, flowlines, and umbilicals for a large subsea production facility. Saipem will perform operations using its state-of-the-art vessels FDS2, Constellation, and Castorone, and will deploy as key fabrication site for its execution model Saipem's Guyana Offshore Construction Facility located at the Port of Georgetown, enhancing a sustainable steady growth in the country. Subject to the necessary government approvals, the project sanction by ExxonMobil Guyana Limited and its Stabroek block coventurers and an authorization to proceed with the final phase, the award will allow Saipem to begin some limited activities, namely detailed engineering, and procurement. Saipem will deploy its state-of-the-art pipelaying vessel Castorone for the installation works. **29th November 2023.**

- **Mexico Pacific awards EPC contract for Sierra Madre pipeline to GDI Sicim and Bonatti**

Mexico Pacific has awarded the engineering, procurement, and construction (EPC) contract for the 805km long Sierra Madre pipeline project between the US and Mexico to GDI Sicim Pipelines and Bonatti. The pipeline will serve as the main natural gas supply path to transport up to 2.8 billion cubic feet per day (Bcf/d) of natural gas from the US border to the first phase of Mexico Pacific's \$14bn Saguaro Energia LNG project. The liquefied natural gas (LNG) project is being developed in Puerto Libertad in Sonora state. It is designed to produce 15 million tonnes per annum (mtpa) of LNG. Mexico Pacific CEO Ivan Van der Walt said: "We are pleased to be partnering with GDI Sicim Pipelines and Bonatti. A team of best-in-class international pipeline contractors with proven track records of pipeline execution and delivery in Mexico. This support extends to areas such as logistics, construction, technology, security, and community engagement. In July this year, Mexico Pacific secured the backing of the Sonora government for its three-train LNG project. As part of this, the Sonora government has committed to facilitate a streamlined process for starting construction of the Saguaro Energia LNG project. **28th November 2023.**

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