

GERAB

BULLETIN

Weekly News



EXECUTIVE SUMMARY

The Commodity summary

- Crude Oil Brent prices trading higher by 6% WTD and Crude Oil WTI prices are trading lower by 5% WTD.
- Coal prices are trading lower by 64% YTD
- Steel HRC (N. America) prices are trading higher by 65% than a year ago prices
- Iron ore prices are trading higher by 23% YTD
- Natural Gas prices are trading higher by 8% WTD

The Currency summary

- Euro is stronger by 3% YTD to USD
- The US Dollar to CNY exchange rate differential is 2% YTD

The Rig count summary

- The Rig counts in UAE have gone up by 20% YTD and in Africa have gone up by 28% 6MTD.

Project summary

- ADNOC signs long-term LNG Heads of Agreement with ENN LNG, Singapore
- Marafiq to invest in heavy industry areas in SEZAD
- Hyundai E&C and Hyundai Engineering Signs \$2.3 Billion Jafurah Phase 2 Contract
- KSA's New Phosphate Project to make it the World's 3rd Largest Producer
- BPCL To Build Polypropylene Unit At Kochi Refinery For Rs 5,044 Crore
- \$8.5 Billion Nibras Petrochemical Project Advances as Iraq Approves Construction Site
- Saudi's ACWA Power, Egypt Ink \$4B Green Hydrogen Deal
- \$6 billion: Pouyanne tells Nigeria President about major's investment plans
- Multibillion-dollar Australian gas megaproject getting back on track
- Suburban Connect confirmed for \$3.6bn Suburban Rail Loop contract
- Italian construction site opens for Mont Cenis tunnel
- OMV Petrom awards contracts for Neptun Deep natural gas project
- Petrofac Agrees Brownfield EPC Framework with TotalEnergies

COMMODITY UPDATES

COMMODITY	UOM	LATEST PRICE	WTD %	MTD %	3MTD %	6MTD %	YTD %
Chromium	USD/MT	9,359.75	0.74	0.63	4.24	1.75	-7.38
Coal	USD/MT	160.11	-0.17	18.10	-8.81	11.37	-63.77
Cobalt	USD/MT	28,792.37	-2.10	-15.27	-6.73	-0.94	-34.69
Copper	USD/MT	8,594.50	1.84	3.92	3.00	2.91	2.80

Crude Oil	USD/BBL	76.28	5.72	-4.85	-14.79	4.70	-3.56
Crude Oil Brent	USD/BBL	79.13	6.07	-4.05	-13.26	5.29	-2.74
Crude Oil WTI	USD/BBL	73.44	5.35	-5.70	-16.38	4.07	-4.42
Iron Ore	USD/MT	134.65	-0.28	5.29	12.40	20.97	22.95
Molybdenum	USD/MT	41,409.90	6.95	6.49	-22.79	-15.35	-22.29
Natural Gas	USD/MCF	2.66	8.49	-17.32	-3.25	5.74	-56.32
Nickel	USD/MT	16,710.00	0.18	-3.92	-17.25	-21.52	-42.39
Steel HRC (FOB China)	USD/MT	561.00	-1.41	2.28	2.57	2.32	-1.31
Steel HRC (N. America)	USD/MT	1,200.99	0.00	22.25	47.37	14.75	65.47
Steel Rebar	USD/MT	595.08	-2.73	0.34	5.48	4.35	-2.22
Steel Scrap	USD/MT	414.00	-0.24	4.03	9.44	9.42	8.44

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	1.0950	-0.37	0.37	2.74	-0.31	3.27
USDCNY	1 USD to CNY	China	CNY	7.1462	-0.31	-0.05	2.29	0.42	-2.30

Source- Trading Economics

CRUDE OIL STOCK

Region	Unit	Latest Count	WTD %	MTD %	3MTD %	6MTD %	YTD %
US Stocks of Crude Oil & Petroleum Products	Thousand Barrels	16,14,562.00	0.21	-0.50	-0.52	0.39	2.34

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	28.30	USD	3.89	18.61	13.93	4.08	7.08
Chiyoda Corporation	332.00	JPY	-2.35	-7.78	-14.87	-9.04	-9.29
Glencore PLC	469.15	GBP	3.39	2.66	3.78	3.79	-16.34
HD Hyundai Heavy Industries Co. Ltd.	1,20,600.00	KRW	-1.31	2.29	-3.67	3.97	-0.33
JGC Holdings Corporation	1,589.50	JPY	1.21	-6.09	-27.40	-14.22	-5.10
McDermott International Ltd.	0.10	USD	2.00	-40.00	-59.20	-68.13	-73.16
National Marine Dredging	27.04	AED	-1.60	6.04	14.09	44.44	13.61

NYSE American Steel Index	2,120.28	Index	2.53	5.04	11.02	14.71	20.55
Rio Tinto PLC	5,783.00	GBP	2.30	4.54	12.51	13.28	0.02
Technip Energies NV	22.02	EUR	10.04	3.04	-6.81	50.10	42.89
TechnipFMC PLC	20.18	USD	1.46	-4.18	-1.18	33.11	67.33
Tenaris SA	34.57	USD	0.32	1.65	11.09	22.42	-0.63
Tubacex SA	3.60	EUR	7.61	22.62	22.41	26.49	80.25
Woodside Energy Group	30.91	AUD	2.49	-3.26	-14.23	-13.27	-14.78

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	61	*	1.67	7.02	5.17	19.61
GCC	234	*	1.74	4.93	2.18	4.93
Middle East	339	*	1.80	4.31	1.50	3.67
Africa	111	*	8.82	11.00	27.59	33.73
Asia-Pacific	202	*	0.00	-1.46	-6.48	7.45
Europe	112	*	-1.75	-0.88	13.13	17.89
Latin America	175	*	0.00	1.16	-7.89	-5.41
North America	805	-1.35	-1.11	-0.49	-3.71	-6.50
Total	1,744	*	0.23	1.10	-1.02	0.29

Source- Baker Hughes

(*) No weekly data available for those particular regions

NEWS OF THE WEEK

GULF COOPERATION COUNCIL (GCC)

UAE	<ul style="list-style-type: none"> <u>ADNOC close to OMV deal to merge petrochemical businesses</u> The new petrochemical business is expected to carry a value of more than \$30bn. Abu Dhabi National Oil Co (ADNOC) is close to signing a deal with Austrian energy company OMV to merge their petrochemical businesses, reported Reuters, citing two people with knowledge of the talks. The two companies commenced talks in July 2023 to merge Abu Dhabi Securities Exchange-listed Borouge and Vienna-based Borealis to create a new chemicals entity that could have a value of more than \$30bn. OMV owns a 75% stake in Borealis, which is engaged in providing polyolefins solutions and recycling. ADNOC owns the remaining 25% stake. Petrochemical company Borouge is a JV between ADNOC (54%) and Borealis (36%). Earlier, OMV said Borealis and Borouge are expected to become “equal partners under a jointly controlled, listed platform for potential growth acquisitions to create a global polyolefin company. The new company is expected to have combined annual sales of more than \$20bn. 15th December 2023 <u>ADNOC signs long-term LNG Heads of Agreement with ENN LNG, Singapore</u> ADNOC announced the signing of a 15-year Heads of Agreement (LNG agreement) with ENN LNG (Singapore) Pte. Ltd., a wholly-owned subsidiary of ENN Natural Gas Co. Ltd. (ENN Natural Gas), for the delivery of at least 1 million metric tons per annum (mmtpa) of liquefied natural gas (LNG). The LNG will primarily be sourced from ADNOC’s low-carbon Ruwais LNG project, currently being developed in AI
-----	---

	<p>Ruwais Industrial City, Abu Dhabi. The Ruwais LNG project is set to be the first LNG export facility in the Middle East and North Africa (MENA) region to run on clean power, making it one of the lowest-carbon intensity LNG plants in the world, supporting ADNOC’s accelerated Net Zero by 2045 ambition. When completed, the project, which consists of two 4.8 mmtpa LNG liquefaction trains with a total capacity of 9.6 mmtpa, will more than double ADNOC’s LNG production capacity to help meet the increased global demand for natural gas. 20th December 2023</p> <ul style="list-style-type: none"> • <u>Front runner emerges for prized Adnoc expansion on UAE's largest offshore oilfield</u> Upper Zakum oil output capacity stands at more than 1 million bpd, with the operator eyeing further boost. A leading Middle East-based contracting player has emerged as the potential front runner for a coveted offshore deal from Abu Dhabi National Oil Company (Adnoc) involving the expansion of Upper Zakum, the largest offshore oilfield in the United Arab Emirates. The Emirati state giant is expanding the capacity of some of its largest offshore oilfields as a part of its P5 programme aimed at ramping up oil production to 5 million barrels per day capacity by 2027, up from the existing 4 million bpd. 21st December 2023
OMAN	<ul style="list-style-type: none"> • <u>Oman's Target LLC awarded Sultan Haitham City Water Supply Project</u> Nama Water Services Company, Oman signed an agreement with Target LLC to implement works related to the project of water supply for Sultan Haitham City. The project includes the construction of concrete tanks with a capacity of 105,000 cubic meters, a station for pumping water from Al Khoudh water tanks, water transmission pipes and connection systems for control and monitoring, as well as other civil and electromechanical works related to the operation of the project. The project aims to achieve the goals of activating basic services and service projects in an integrative manner, and to implement smart cities projects in order for Sultan Haitham City to reach sustainability. 15th December 2023 • <u>Marafiq to invest in heavy industry areas in SEZAD</u> Marafiq, a joint venture by OQ (a subsidiary of Oman Investment Authority) that has a total investment of \$600 million in Duqm, has expressed its interest to increase its spending efficiency by investing in a number of heavy industry areas in the Sultanate of Oman after its successful operations in the Special Economic Zone at Duqm (SEZAD). The company, which has ambitious plans to increase its revenues through new projects and to maximise the economic value of existing projects, is developing a sustainability plan and building the company's strategy for the renewable energy sector while implementing training programmes to hone the skills of Omani youth and prepare them for the stages of commercial operation of its projects. The project also contributes to reducing carbon dioxide emissions. 21st December 2023
QATAR	<ul style="list-style-type: none"> • <u>QatarEnergy expands offshore operations with new Suriname contracts</u> QatarEnergy signs contracts for Suriname offshore Blocks 64 and 65, partnering with TotalEnergies, Petronas, and Shell for exploration. QatarEnergy, a leading energy company, has recently expanded its international portfolio by securing two key offshore blocks in Suriname. In a competitive bid round held in June 2023, the company successfully acquired interests in Blocks 64 and 65, marking a significant move in its global strategy. 18th December 2023

SAUDI ARABIA

- **Hyundai E&C and Hyundai Engineering Signs \$2.3 Billion Jafurah Phase 2 Contract**
Hyundai E&C and Hyundai Engineering, South Korea announced the award of a contract for the Phase 2 expansion project of the Jafurah Gas Field in Saudi Arabia. The Project was awarded by Saudi Aramco. The contract value is 1.5345 trillion won (US\$1.18 billion) for each company. The project duration is set for 41 months from the commencement date. The Phase 2 project of the Jafurah Gas Treatment Facility involves constructing additional facilities to process gas produced from the Jafura Gas Field, including sulfur recovery units. This project will be built adjacent to the site of the Phase 1 Jafurah Gas Treatment Facility, awarded earlier to Hyundai Engineering and Hyundai E&C in 2021. Hyundai Engineering, the lead contractor, alongside Hyundai E&C, will be responsible for the sulfur recovery unit package and the creation of utility infrastructure. **19th December 2023**
- **Synergy Consulting Advises NWC for Package 6 O&M Contract**
Synergy Consulting, Inc. announced in a statement that it was honored to support the National Water Company (NWC) of the Kingdom of Saudi Arabia in the execution of Package 6 of Long-Term Operation and Maintenance (LTOM) contract. The contract was related to the rehabilitation, operation, and maintenance of sewage treatment plants (STPs) in Heet and Al Haer, Riyadh, which was awarded to Alkhorayef Water and Power Technologies Company (AWPT) as part of NWC's ongoing Long Term O&M Contracts procurement program for Sewage Treatment Plants across KSA via multiple tender packages. The contract was signed on 10th Dec 23, between Eng. Nemer Mohammed Alshebl, NWC CEO, and CEO of AWPT. The package consists of four STPs (three in Heet and one in Al Haer region of Riyadh) with a total treatment capacity of 870,000 m³/ day. In addition to the two LTOM Packages already closed and the two packages executed, NWC is currently working on 4 other packages, which are in different stages of the tender process, with Synergy Consulting as the Financial Advisor. **19th December 2023**
- **KSA's New Phosphate Project to make it the World's 3rd Largest Producer**
The Minister of Investment Khaled Al-Falih said that the Ministry is working on a new phosphate project, costing \$8.8bn billion, which will double the Kingdom's capacity of the product to become the third largest phosphate producer in the world. Addressing the first ministerial session at the Northern Borders Investment Forum 2023 in Arar late last month, the minister said that the Kingdom will not only convert phosphate into fertilizers, but will also convert it into advanced chemical products, Al-Falih said. The Northern Borders Region includes 25 percent of the Kingdom's mineral wealth, with a total value of \$0.32 trillion. The Northern Border Region contains about 7 percent of the global phosphate reserve, and the volume of investment in it amounts to about \$22.6 billion in two stages. **20th December 2023**

ASIA EXCLUDING GULF COOPERATION COUNCIL (GCC)

CHINA

- **Philippines Wants to Start New Energy Exploration Projects in South China Sea**
Philippine President Ferdinand Marcos Jr said his country is working to resolve "exploration issues" in the South China Sea so it could start new energy exploration projects in the resource-rich waterway to meet his nation's energy needs. Marcos, in an interview with Japanese media on Saturday, said tensions in the South China Sea have "increased rather than diminished" in recent months, warning that a "more assertive China" posed a "real challenge" to its Asian neighbours. The Philippines and China have resumed discussions about jointly exploring oil and gas resources in the South China Sea, where the two nations have sparred for decades over sovereign rights to develop natural resources in the strategic waterway. In addition to the Philippines, ASEAN members Vietnam, Indonesia, Malaysia and Brunei claim parts of the South China Sea disputed by China, which claims almost all of the sea, a conduit for more than \$3 trillion of annual ship-borne commerce. The Permanent Court of Arbitration in 2016 said China's claims had no legal basis, a ruling the United States supports but Beijing rejects. **18^h December 2023**

INDIA

- **Cambay Onshore Field, Gujarat, India**

Synergia Energy plans to farm out 50% interest in the field and begin field development in Q1 2024.

Project Type

Oil and condensate field

Location

Cambay Basin, Gujarat

Owner

Synergia Energy

Reserves

206bcf of gas and eight million barrels of condensate

Development Start

Q1 2024

The Cambay onshore gas and condensate field is located in Gujarat, India, within the Cambay Basin, which is one of the most significant hydrocarbon-producing regions in India. Synergia Energy (formerly Oilex), a gas production company based in Australia, is developing the field. The field was previously operated by Synergia Energy (45%) and Gujarat State Petroleum (GSPC, 55%), a state-owned oil and gas production company. Synergia Energy acquired GSPC's share and gained 100% ownership of the field in June 2021. Synergia Energy plans to farm out 50% interest in the field and commence full field development in the first quarter (Q1) of 2024. Contractors involved Netherland Sewell & Associates, a petroleum property analysis company, conducted an independent assessment of the field in 2011 to identify contingent and prospective resources. Baker Hughes, an energy technology company, was responsible for undertaking an integrated geological and engineering evaluation of the field's Eocene tight reservoir. **14^h December 2023**

- **Essar announces investment of Rs 30,000 crore to develop 1 gigawatt green hydrogen plant in Gujarat**

Signs three MoUs worth Rs 55,000 crore with Gujarat Govt. Essar signed three Memorandums of Understanding (MOUs) with the Government of Gujarat for a total investment of Rs 55,000 crore ahead of the Vibrant Gujarat Global Summit 2024. Essar is in a renewed phase of making strategic investments in the field of Energy Transition, Power and Port sectors in the state. This initiative aims to create over 10,000 job opportunities. Over the last four decades, Essar has invested more than Rs 1 lakh crore in the Energy, Metals & Mining and Infrastructure sectors in Gujarat. Gujarat has played a crucial role in Essar's growth story. The company's investments in core industrial projects have enhanced the state's industrial landscape, serving as a case-study for the state's potential as an investment destination. On the signing of the MoU, Prashant Ruia, Director at Essar Capital, commented, "Gujarat has consistently been at the forefront of Essar's strategic investments. We are delighted to further contribute to the state's economic progress with an additional investment of Rs 55,000 crore in the Energy & Infrastructure sectors. **17^h December 2023**

- **Vipul Organics to start construction of new pigment plant at Sayakha**

The plant, once completed, shall produce Pigments & Pigment Intermediaries along with High Performance Colours. Vipul Organics Limited, leading Specialty Chemicals company in the pigments and dyes segment, announced the commencement of construction of its new plant at Sayakha, Gujarat through the Bhoomi Poojan, slated for the 14 of December, 2023. Environmental clearance for the project has already been received while the necessary permissions and approvals for manufacturing at the plant are in process. The new Plant will be spread over a total area of 25,000 square meters and will be state-of-the-art with the latest machinery and technology. The plant, once completed, shall produce Pigments & Pigment Intermediaries along with High Performance Colours. This shall result in very strong Backward and Forward Integration. **11^h December 2023**

- **BPCL To Build Polypropylene Unit At Kochi Refinery For Rs 5,044 Crore**

The company will finance the project at a debt-equity ratio of 65:35. Bharat Petroleum Corp. will set up a polypropylene production unit at its Kochi refinery at a project cost of Rs 5,044 crore. The unit will have a production capacity of 400 kilo tonne per annum of polypropylene—a thermoplastic polymer. The company will finance the project at a debt-equity ratio of 65:35, according to an exchange filing on Tuesday. Polypropylene has wide applications in downstream industries, such as packaging films, sheet,

	<p>boxes, containers, bags, homeware, home care, personal care and articles of day-to-day usage. BPCCL said robust growth due to expanding market demand of the petrochemical segment in India and availability of propylene feedstock will provide its Kochi plant the opportunity to produce the plastic compound. The Kochi refinery in Kerala is one of three presently having a crude oil refining capacity of 15.5 million metric tonne per annum. 19^h December 2023</p>
IRAQ	<ul style="list-style-type: none"> <p><u>\$8.5 Billion Nibras Petrochemical Project Advances as Iraq Approves Construction Site</u> The Iraqi government has approved the construction site that is slated for the Nibras petrochemical project. The government has allocated 11 square kilometers of land for the construction of the project. Once completed, the project is set to be the world’s fourth-largest petrochemical complex based on the net production income it will generate. The site was approved in the Southern Oil hub by Basra Governor, Asaad Al-Idani. This shows that the Iraqi government is pushing ahead with its plans to build the petrochemical complex. The Nibras petrochemical project is expected to produce 1.8 million tonnes of petrochemicals annually. There has been a significant delay in the Nibras Petrochemicals project manifestation after plans were announced earlier in 2015. The Iraq government aims to generate numerous projects in Basra that will significantly contribute in a lot. This includes a contribution to Iraq’s economy when the project opens doors to start operations. 19th December 2023</p>
INDONESIA	<ul style="list-style-type: none"> <p><u>Pertamina inks MoU with JERA to explore potential collaboration</u> The MoU aims to create business opportunities for infrastructure investment in LNG and hydrogen/ammonia. JERA, one of the largest power companies in the world, and PT Pertamina (Persero) announce the signing of a Memorandum of Understanding (MoU) to collaborate on Business Opportunity Discussion and Potential Collaboration. The signing took place under the banner of the ASEAN-JAPAN Economic Co-Creation Forum as a related event of the Asia Zero Emission Community (AZEC) Leaders Meeting. A. Salyadi Saputra, Director of Strategy, Portfolio & New Ventures of Pertamina and Steven Winn, Senior Managing Executive Officer and Chief of Global Strategist of JERA formalized the agreement. The MoU set out information sharing and discussions to enhance the value of the fuel value chain and to create business opportunities for infrastructure investment in LNG and hydrogen/ammonia, which are low-carbon fuels. Furthermore, he also mentioned that the development of CCUS is a promising collaboration, given Pertamina’s substantial portfolio of at least 8 CCS/CCUS projects in Indonesia. 18th December 2023</p> <p><u>Mubadala Energy’s deep dive yields massive gas discovery in Indonesia</u> Mubadala Energy discovers significant gas in South Andaman, Indonesia, marking a major milestone for regional energy security and company growth. Mubadala Energy, the international energy firm based in Abu Dhabi, has today revealed a substantial gas discovery in the South Andaman region, approximately 100 kilometres offshore North Sumatra, Indonesia. The discovery was made at the Layaran-1 Exploration well, marking a major achievement for the company. 19th December 2023</p>
NETHERLAND	<ul style="list-style-type: none"> <p><u>Consulting team begins FEED for Neptune Energy’s L10CCS carbon storage project in the Netherlands</u> The FEED, awarded to us by Neptune Energy, is for its L10 Operation facilities a carbon storage infrastructure development that will connect to the Netherlands’ flagship Carbon Capture, Transportation and Storage (CCS) project, Aramis. The L10 Operation is being developed by Neptune Energy, alongside its partners EBN, Tenaz Energy and ExxonMobil, and seeks to store up to five million tonnes of carbon dioxide (CO2) annually, which will be captured from industrial emitters in the region. Our scope covers the first two phases of the project, L10 South (1A) and L10 North (1B) and is being executed by our consulting team, based in Woking, UK: Phase 1A: L10-South - installation of an L10 hub/injection platform in the L10 south storage complex and installation of a spur line from the Aramis DHUB (distribution hub) platform to the L10 hub platform Phase 1B: L10-North - The installation</p>

	of an injection platform (L10-Y) in the L10 north storage complex (L10-BE) and the installation of an inter-field pipeline between the L10 hub and injection platform. 13th December 2023
SINGAPORE	<ul style="list-style-type: none"> <u>TWRP Pipeline-C1 Tunnel breaks through in Singapore</u> November 22nd saw Shanghai Tunnel Engineering Co (Singapore) breakthrough successfully on the S\$116M contract price TWRP Pipeline-C1 Tunnel in Singapore. Using a CRCHI (China Railway Construction Heavy Industry Corporation Limited) “Channel Express” slurry TBM to bore the tunnel, the breakthrough marks the successful completion of the 1.6km, 6m i.d. subsea water transmission tunnel, adding another important water transmission trunk line to Singapore. The slurry TBM was launched on February 1st, with the machine achieving a highest daily advance of 17.6m, and a highest monthly advance of 289.6m through rock ground conditions. The tunnel crosses the seabed for a considerable length under high water pressures, passing through mudstone, siltstone and sandstone with high rock strengths. There are also fractured zones along the tunnel alignment, making excavation challenging. PUB TWRP Contract 1 comprises of a construction of the 1.6km, 6m i.d tunnel from the proposed Tuas Water Reclamation Plant (TWRP)/Tuas NEWater Factory to existing network in Jurong Island, construction of tunnel launching and receiving shafts and the installation of twin 2200mm and 1200mm diameter pipelines within the tunnel, pipelaying by cut and cover method, installation of pipeline appurtenances and construction of associated chambers. It is one of the key infrastructure projects for Singapore’s National Water Agency, PUB. 13th December 2023
TURKEY	<ul style="list-style-type: none"> <u>Trillion Energy's SASB gas field show promising results</u> Trillion Energy International Inc. (Trillion) has recently updated stakeholders on the substantial progress in its SASB gas field. The company’s three-well perforation programme, initially announced on 25 September, is successfully underway with two of the three wells already yielding impressive results. 19th December 2023
THAILAND	<ul style="list-style-type: none"> <u>PTTGC, MHI to explore technologies to re-design existing assets into carbon neutral petrochemical complex in Thailand</u> The collaboration will involve the study of solutions that use low carbon fuels such as hydrogen and ammonia, as well as Carbon Capture and Storage technologies. PTT Global Chemical Public Company Limited (GC) signed a Memorandum of Understanding (MOU) with Mitsubishi Heavy Industries Asia Pacific Pte. Ltd. (MHI-AP) to jointly study the technologies required to develop a large-scale petrochemical complex that aims to support Thailand’s Carbon Neutrality by 2050. This collaboration between GC and MHI-AP will involve the study of solutions that use low carbon fuels such as hydrogen and ammonia, as well as Carbon Capture and Storage technologies. The MoU covers a total duration of 4 years and includes two main objectives to assess the feasibility of applying decarbonization technologies to GC’s assets. The first is to conduct research to compare the feasibility of using hydrogen and ammonia as fuels for gas turbines, as well as CCS technologies to reduce carbon dioxide emissions from power generators. This collaboration is aligned with Thailand’s announcement to achieve carbon neutrality by 2050 and with GC’s operational strategies for robust and sustainable business growth alongside partners under the concept “Together to Net Zero”, which aims to reduce greenhouse gas emissions by 20% by 2030 and achieve net zero greenhouse gas emissions by 2050. 12th December 2023
AFRICA	
EGYPT	<ul style="list-style-type: none"> <u>Saudi's ACWA Power, Egypt Ink \$4B Green Hydrogen Deal</u> Saudi Arabia-based ACWA Power and Egypt inked Wednesday a \$4 billion deal to develop a green hydrogen project in the Suez Canal Economic Zone (SCZONE), aligning with the North African country's

	<p>ambition to emerge as a leading global clean energy producer. Green hydrogen project The project aims for a capacity of 600,000 tonnes of green ammonia annually, utilizing wind and solar power, with plans to scale up to 2 million tonnes in the second phase. The initial memorandum of understanding was signed on December 7. The deal was signed by the Sovereign Fund of Egypt (TSFE), the Suez Canal Authority (SCA), the Egyptian Electricity Transmission Company (EETC), the state-run New and Renewable Energy Authority (NREA), and the Saudi company ACWA Power. Egypt's Prime Minister Mostafa Madbouly witnessed the signing ceremony of the agreement alongside other ministers, according to a statement by Egypt's Cabinet. We commend our partners for their bold step into producing the fuel for the future, for which there will be great demand in Europe and the rest of the world," said Marco Archelli, CEO of ACWA Power, in the statement. The Garuda Hidrogen Hijau (GH2) Project in Indonesia, valued at \$1 billion and signed earlier this month, is scheduled to begin operations in 2026, with a capacity to produce 150,000 tonnes of green ammonia per year. 20th December 2023</p>
<p>NIGERIA</p>	<ul style="list-style-type: none"> • <u>\$6 billion: Pouyanne tells Nigeria President about major's investment plans</u> TotalEnergies boss meets Nigeria's president as Tinubu issues warning to state oil company's new board. TotalEnergies chief executive Patrick Pouyanne met Nigeria's President Bola Tinubu in Abuja today, and underlined the supermajor's commitment to a country in which it may invest \$6 billion over the coming years. The meeting took place just ahead of the president inaugurating a new board at state oil company NNPC and issuing a warning that their tenure will be short lived if they do not perform as he expects. 18th December 2023 • <u>Billionaire businesswoman bags swathe of frontier oil and gas acreage in Africa</u> Nigerian independent Famfa Oil, the upstream vehicle of billionaire businesswoman Folorunso Alakija, has been awarded a swathe of prospective exploration acreage offshore Sierra Leone. The West African government has been drumming up interest in the nation's offshore acreage since May last year as part of a fifth licensing round. Supported by UK-based Africa Energy Partners, the round closed in late September and after a period of negotiations, the Petroleum Directorate of Sierra Leone (PDSL) has decided to award six blocks to Famfa under a single petroleum licensing agreement. 20th December 2023
<p>NAMIBIA</p>	<ul style="list-style-type: none"> • <u>TotalEnergies extends drilling rig contract for Namibia work</u> French supermajor TotalEnergies has extended the contract for a deep-water rig that has been carrying out crucial test appraisal work offshore Namibia. Rig owner Northern Ocean said on Thursday that a TotalEnergies subsidiary has exercised its option to extend the validity of the contract for the semi-submersible drilling rig Deepwater Mira. 21st December 2023
<p>SOUTH AFRICA</p>	<ul style="list-style-type: none"> • <u>ACWA Power Signs PPA for hybrid dispatchable renewable Energy Project in South Africa</u> Saudi-listed ACWA Power, the world's largest private water desalination company and a leader in energy transition and first mover into green hydrogen; lead shareholder and developer in the "ACWA Power Project DAO", a 150MW dispatchable renewable hybrid plant, signed the project Power Purchase Agreement. The Minister of Mineral Resources and Energy, the Honourable Gwede Mantashe, signed the Implementation Agreement and Mr. Segomoco Scheppers from Eskom signed the Power Purchase Agreement with ACWA Power Project DAO signatory Mr. Ashley Singh. Project DAO was declared as one of the preferred bidders in the Risk Mitigation IPP Procurement Program in 2021 with the lowest tariff. Located in the Northern Cape Province of South Africa, the plant will be equipped with the largest solar PV installation in the country of 442 MW, with about 1,200 MWh of battery storage which will be one of the largest in the world. The project will not only deliver efficient clean energy to the national grid but will also reinforce the socio-economic framework in South Africa by offering job opportunities and utilizing local supply chains. The project will reach around 50% local content in procurement during the construction period, and create more than 1,000 construction jobs at peak – with about 25% from the local community. 19th December 2023

ZIMBABWE

- **Invictus makes second gas discovery at Mukuyu-2 well in Zimbabwe**

Invictus recovered a total of 11 hydrocarbon samples to the surface from Upper and Lower Angwa reservoirs using the wireline formation testing tool, after the Mukuyu-2 sidetrack well reached a Total Depth (TD) of 3,360m above the interval. Australia-based oil and gas company Invictus Energy has made a second gas discovery in the Mukuyu-2 well at its 80% owned and operated Cabora Bassa project in Zimbabwe. Recently, Invictus made an initial gas discovery at the Mukuyu-2 well, with four hydrocarbon samples in the Upper Angwa, and two water samples from the Basal Pebbly Arkose formation. The Mukuyu-2 well, located 6.8km northeast of the Mukuyu-1 well, was drilled using the Exalo Rig 202. When the Mukuyu-2 sidetrack well reached a Total Depth (TD) of 3,360m above the interval, over-pressured gas was encountered in the original Mukuyu-2 wellbore. Invictus recovered a total of 11 hydrocarbon samples to the surface from Upper and Lower Angwa reservoirs using the wireline formation testing tool. The Mukuyu-2 discoveries were drilled 7km away and 450m updip of the Mukuyu-1 discovery well which, confirms the incredible potential of the Mukuyu field, which has a structural closure of over 200km². **15th December 2023**

AUSTRALIA

AUSTRALIA

- **Multibillion-dollar Australian gas megaproject getting back on track**

Offshore regulator green lights Santos' Barossa development drilling. Santos' US\$3.6 billion giant Barossa gas field development offshore Australia has received a fillip from offshore regulator, the National Offshore Petroleum Safety and Environmental Management Authority (Nopsema), which on Friday (re)approved the project's development drilling campaign. The development drilling had been suspended midway through the second of a six-well campaign following a legal challenge, which had the potential to derail Barossa's targeted start-up in the first half of 2025. "The Barossa development drilling and completions Environment Plan [EP] was accepted by the regulator... on Friday 15 December," Santos confirmed in a statement. Following the Federal Court in September 2022 setting aside the offshore regulator's March 2022 original approval of the EP, Santos said it had conducted further extensive consultation with Tiwi Island people and other relevant persons consistent with the applicable regulations, the offshore regulator's guidelines and guidance provided by the decision of the Full Federal Court. The crux of the court case was that Santos had failed to consult with the Tiwi Islanders the Barossa gas pipeline will pass near to their islands. **18th December 2023**

- **NOPSEMA accepts Barossa development drilling and completions EP**

Santos is proceeding with applications for all remaining approvals for the Barossa Gas Project. The Barossa Development Drilling and Completions Environment Plan (EP) was accepted by the regulator, the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) on Friday 15 December 2023. Following the setting aside of NOPSEMA's March 2022 approval of the EP in September 2022, Santos has conducted further extensive consultation with Tiwi Island people and other relevant persons consistent with the applicable regulations, NOPSEMA's guidelines, and guidance provided by the decision of the Full Federal Court in the Tipakalippa proceedings. Santos is proceeding with applications for all remaining approvals for the Barossa Gas Project. **18th December'2023**

- **Sydney Metro West double breakthrough makes history**

Two TBMs have broken through to the Five Dock Metro Station site, making Sydney Metro West the first project in the southern hemisphere to achieve a double TBM breakthrough. They are the first two TBM breakthroughs on the project's twin 24km tunnels. TBM Daphne broke through first, followed closely by TBM Beatrice, after building the 4.3km section of metro tunnel from The Bays to Five Dock for around seven months.

So far, the TBMs have each excavated 437,463 tonnes of material. Sydney Metro West will double rail capacity between Greater Parramatta and the Sydney CBD, making it easier and faster to travel around western Sydney.?? NSW premier Chris Minns said the TBM breakthroughs were an important milestone

for the project. We're building this major public transport project at the same time as we're turbocharging the creation of new housing in our state," he said. This project won't just change the way people move around our city; it will now also provide the well-located homes for future generations to live in. Transport minister Jo Haylen said the two breakthroughs offered "a snapshot at the sheer scale and ambitious nature of Sydney Metro West, that will completely transform this great city". Beatrice and Daphne are double-shield, hard rock TBMs, designed to excavate through the sandstone and shale ground conditions. **18th December**

- **Tunnelling Restarts On Snowy Hydro At Tantangara**

Tunnelling of the Snowy 2.0 headrace adit at Tantangara has restarted following NSW government approval for the project's planning modification. Tunnel boring machine (TBM) Florence's initial advance commenced last week. Tunnelling is being conducted in closed (slurry) mode and progress is slow and steady. The project has engaged specialist experienced personnel to manage this process. Snowy Hydro CEO Dennis Barnes welcomed the milestone, which comes after a delay caused by soft ground conditions and the emergence of a sinkhole above TBM Florence. We were very pleased to receive the green light for tunnelling at Tantangara to recommence and to allow remediation of the subsidence area," Mr Barnes said. The conditions of approval were developed through the extensive review, public consultation and determination process, and will be strictly adhered to as we get back underway with excavation of the tunnel. At Talbingo, the Snowy 2.0 project continues to make good progress with excavation of the tailrace tunnel. TBM Lady Eileen Hudson has excavated approximately 1,000 metres since its relaunch in July. **13th December**

- **Suburban Connect confirmed for \$3.6bn Suburban Rail Loop contract**

Suburban Connect consortium comprising Ghella/CPB Contractors/Acciona has officially signed the \$3.6bn contract with the Victorian Government to deliver the first major tunnelling package on the Suburban Rail Loop (SRL) East project in Melbourne Australia. The package will construct a 16km section of the project's 26-kilometre twin tunnels, including tunnelling between Cheltenham and Glen Waverley, two new underground station boxes and construction works at the Southern Stabling Yard, the critical first step in the city's public transport network transformation. Tunnelling is set to begin in 2026, with four tunnel boring machines (TBMs) to be used to carve out the 16km twin tunnels for this stage of the tunnelling. Ghella's Australian Managing Director, Marco Fontana, said "This milestone holds great significance for Ghella as it signifies our inaugural venture into the state of Victoria. With our extensive global experience, we are excited to join forces with our long-standing partners, CPB and Acciona, on this project that promises to bring a profound and positive impact to the residents of Melbourne through critical transport connections. **12th December**

- **Procurement begins for \$174.7m Bundaberg East Levee project**

Procurement has commenced for an engineering consultant that will help finalise the design for the \$174.7 million Bundaberg East Levee project in Queensland. In addition, project commencement approvals are also in place for the multi-million-dollar development that will better protect parts of Bundaberg from severe flooding events. "It's very pleasing that this major project is moving ahead with a clear objective to protect homes and businesses in areas of the city that are vulnerable to heavy rainfall and flooding. "We know disruptions caused by natural hazards can have devastating economic effects and takes a toll on people's lives and wellbeing, which is why we are making a real difference through this project. In June of this year, the Australian and Queensland Governments reached an agreement to build a 1.7-kilometre concrete levee parallel to the southern bank of the Burnett River to help mitigate damage when flooding occurs within Bundaberg East, Bundaberg South as well as the CBD without increasing flooding in other areas of Bundaberg. **18th December'2023**

- **First major tunnelling contract for Suburban Rail Loop has been awarded**

Major tunnelling works can begin in 2026 on the Suburban Rail Loop (SRL) following the award of the first tunnelling contract for SRL East. This milestone is another big step towards the transformation of Victoria's public transport network. The \$3.6 billion Tunnels South contract has been awarded to a

consortium comprised of global tunnelling experts. The consortium includes CPB Contractors, Ghella and ACCIONA Construction. “Our business has been successfully developing, delivering, constructing, and maintaining major complex projects for over 100 years in Australia. With the first major tunnelling contract awarded, the two remaining bidders will now compete for the second tunnelling package that will deliver the section of twin tunnels between Glen Waverley and Box Hill. The second tunnelling contract is due to be awarded in 2024. In a separate package of works, two consortia have been shortlisted to deliver the high-tech SRL train fleet, signalling system as well as operation and maintenance of the SRL East network. The Linewide Alliance contract is expected to be awarded in 2025. **14th December’2023**

EUROPE

FINLAND

- Circa Signs MoU with Vataset Teollisuus in Finland**
 The plant would manufacture platform chemical levoglucosenone, biochar and bio-based solvent Cyrene from sustainable biomass feedstocks. Circa Group AS, Vataset Teollisuus Oy and Kemijarvi Biorefinery Ltd. have signed a Memorandum of Understanding (MoU) to evaluate the establishment of a Circa Furacell production facility on the Kemijarvi Biopark in Northern Finland. The plant would manufacture platform chemical levoglucosenone (LGO), biochar and bio-based solvent Cyrene from sustainable biomass feedstocks. Vataset is developing the Kemijarvi site as a comprehensive biopark for renewable materials, fuel and chemicals based on circular economy principles and strong environmental values. Kemijarvi Biorefinery specialises in biomass processing and the companies are seeking partners to effectively utilise all side streams. Harri Vatanen, CEO, Vataset, said, “Technology like Circa’s is essential for making the transition to renewable and more environmentally-friendly materials. Our activities and Circa’s have clear synergistic advantages. At Kemijarvi Biopark, we look forward to exploring the potential of a Circa renewable chemicals plant on our site. **10th December 2023**

GERMANY

- Evonik expands HTPB production capacities in Germany**
 Specialty chemicals company Evonik has begun work to expand its Polyvest HT plant in Marl, Germany. The Coating & Adhesive Resins business line expects the additional production capacity for its hydroxyl-terminated polybutadienes (HTPB) marketed under the brand name Polyvest to be ready as early as the second quarter of 2024 following the double-digit million-euro investment. By expanding our operations, we will continue to provide reliable service to our global customers,” says Dr. Stefan Pfaffenbach, Head of the Business Line. In a highly competitive market, we are strengthening our position as a cost and innovation leader. Polyvest HT is a liquid, hydroxyl-terminated polybutadiene produced by free-radical polymerization. The polymer has a highly hydrophobic polybutadiene backbone and primary hydroxyl groups that are accessible for precise chemical modification. **17th December 2023**
- LyondellBasell recycling project gets €40 million grant from EU Innovation Fund**
 The Innovation Fund is one of the world's largest funding programs for the demonstration and commercialization of innovative low-carbon technologies. LyondellBasell (LYB) has been selected to receive a €40 million grant from the European Union (EU) Innovation Fund. The grant will support the fully-electrified, industrial-scale advanced recycling demonstration plant the company plans to build at its Wesseling, Germany site. The company’s MoReTec plant is one of the 41 projects selected in the EU Innovation Fund ‘Third Call for Large Scale Projects’. The EU is committing EUR 3.6 billion as part of its efforts to fund innovative clean-tech projects to support decarbonization. We are delighted with the EU Innovation Fund support for the development of our MoReTec technology,” said Jim Seward, EVP and Chief Innovation Officer. “Investing in our first industrial-scale advanced recycling demonstration plant will provide us with valuable operating experience and additional technological know-how needed to scale-up and fully commercialize our MoReTec technology. The company’s MoReTec technology demonstrates a high level of innovation in the recycling of polyolefin waste to produce pyrolysis oil and pyrolysis gas. Pyrolysis oil is a substitute for fossil-based materials used in polymer production. Typically, pyrolysis gas streams are consumed as a fuel, however, the MoReTec technology enables the pyrolysis

gas to be recovered as well, contributing to the production of polymer and displacing fossil-based feedstocks, which reduces CO2 emissions. **13th December 2023**

ITALY

- **MAIRE's NextChem bags engineering design study contract for first green synthetic fuels pilot plant in Italy**
The study is related to the development of a pilot plant for the production of green synthetic fuels from low carbon hydrogen and CO2 in the Sarroch's refinery (Sardinia). MAIRE announces that NextChem (Sustainable Technology Solutions BU), through its subsidiary NextChem Tech, has signed an agreement with Saras S.p.A for an engineering design study to accelerate the path towards decarbonization of Saras' refinery in Sarroch, Sardinia. The study relates to the development of a pilot plant for the production of green synthetic fuels from low carbon hydrogen and CO2 in the refinery with the potential for scaling-up to an industrial facility. This project will be among the first initiatives in the EU to demonstrate the viability of producing synthetic fuels for the aviation sector. NextChem Tech will leverage on its proprietary NX CPO technology, an advanced innovative process to produce synthesis gas via a controlled partial oxidation, through a very fast reaction. **16th December 2023**
- **Italian construction site opens for Mont Cenis tunnel**
Work on the Italian section of the Mont Cenis base tunnel has officially started. On Monday, Italian minister for infrastructure and deputy prime minister Matteo Salvini officially marked the start of operations at a ceremony where UXT, the consortium of Itinera, Ghella and Spie Batignolle, signed the Lyon-Turin Business integrity and sustainability pact and the Mission-S Charter for workplace safety. The two contracts govern the way TELT, the company commissioned by the Italian and French governments to manage the construction of the Lyon-Turin railway line, binds the supply chain to respect the fundamental principles of sustainable development set out by the UN Global Compact. UXT was awarded the €1bn (US\$1.08bn) works in August. The contract – the final tunnelling package for the project covers the 28.5km of tunnelling works between Maddalena di Chiomonte and Susa. Two dual-mode TBMs will be employed on the 91-month contract which, as well as the two tubes of the base tunnel, includes the Maddalena 2 tunnel, where the TBMs will be launched, connecting tunnels and a cut-and-cover tunnel at the eastern entrance to Susa. The 57.5km-long Mont Cenis base tunnel – one of the world's longest rail tunnels – is already under construction on the French side, starting from the entrance at Saint-Julien-Mont-Denis. It will stretch for 45km in France and 12.5km in Italy. **19th December 2023**

NORWAY

- **Wintershall Dea completes appraisal well on Bergknapp discovery in Norway**
The Bergknapp discovery, part of the PL836S licence, is situated in a strategic area for Wintershall Dea in Norway, 8 kilometres west of the operated Maria field and 200 kilometres north of Kristiansund on Norway's west coast. Wintershall Dea, in collaboration with its partners DNO Norge and Equinor, has successfully completed the drilling of an appraisal well at the Bergknapp discovery in the Norwegian Sea. The team is now assessing potential field development options. The Bergknapp discovery, part of the PL836S licence, is situated in a strategic area for Wintershall Dea in Norway, 8 kilometres west of the operated Maria field and 200 kilometres north of Kristiansund on Norway's west coast. It is in close proximity to several other producing fields. "In recent years, we have had achieved significant success with our strategy of exploring areas where we have in-depth subsurface knowledge and access to existing infrastructure. The focused exploration strategy maximises our chances of making commercial discoveries and also shortens the time required for their development," said Michael Zechner, Managing Director of Wintershall Dea Norge. The Transocean Norge rig, under a long-term contract for Wintershall Dea and OMV, will now move to the nearby Wintershall Dea operated PL211 CS licence, where it will drill another appraisal well on the Adriana and Sabina discoveries. Wintershall Dea is the operator of the PL836S Bergknapp licence with a 40 per cent share, while partners Equinor and DNO Norge each hold 30 per cent. **14th December 2023**
- **Aker BP Extends Odfjell Drilling's Deepsea Nordkapp**

Offshore drilling contractor Odfjell Drilling announced it has signed an amendment with Aker BP ASA which extends the firm contract for the Deepsea Nordkapp until the end of 2026. The Deepsea Nordkapp a sixth generation dynamically positioned harsh environment and winterized semi-submersible of Moss enhanced CS 60E design has been working with our alliance partner Aker BP since its delivery in 2019. The extended term shall commence on January 1, 2025 in direct continuation of the current firm contract period and run for a fixed duration of two years. The two additional years are compensated on a market-based rate mechanism, Odfjell Drilling said. As previously agreed in 2022, the contract value for 2025 has a floor and ceiling day rate, resulting in a contract value of \$124 million to \$146 million, where the ceiling of the day rate range shall be adjusted annually based on an inflation formula. The contract value for 2026 is approximately \$179 million which shall also be adjusted annually based on an inflation formula. In addition to the market based day rates, Aker BP shall pay performance and fuel savings incentive bonuses. **15th December 2023**

- **Third TBM ready to start on Oslo water project**

AF Ghella JV will soon start tunnelling on Oslo’s New Water Supply project. The 1350-tonne Herrenknecht TBM has been assembled in a mountain hall in Stubberud in the Norwegian capital and was named Laila in a ceremony last week. It is named after Laila Schou Nilsen, one of Norway’s most prominent and versatile athletes. Nilsen, who lived from 1919-1998, was a world-class speed skater, participated in car racing and was Norwegian champion in alpine skiing, tennis, and handball. She participated in the Rally Monte Carlo four times and won five unofficial Norwegian Championships in driving skills. AF Ghella JV will build an 11km tunnel to the water treatment plant at Huseby. The E6 contract also includes the construction of four large rock caverns, two clean water basins, a pumping station and a ventilation station. This will be the main artery for the distribution of reserve water to Oslo. The new facility is scheduled to be ready for use on January 1, 2028. In April, Skanska Norway, which has the E5 contract, launched two 5.2m diameter Herrenknecht TBMs to dig the 19km tunnel from Holsfjord to the new underground water treatment plant at Huseby. **18th December 2023**

ROMANIA

- **OMV Petrom awards contracts for Neptun Deep natural gas project**

European energy company OMV Petrom has awarded drilling and services contracts for its Neptun Deep natural gas project offshore Romania in the Black Sea. The company has signed an estimated €325m (\$377.38m) agreement for the Transocean Barents semi-submersible drilling rig for at least one and a half years. Halliburton Romania was awarded another €140m contract for integrated drilling services. OMV Petrom said the agreement for Transocean’s drilling rig comprises personnel as well as related goods, services and supplies. Drilling operations for a total of ten wells are expected to begin in 2025, with the mobilisation of Transocean Barents to the Black Sea likely to begin by the end of 2024. Integrated drilling services such as cementing, directional drilling and well completions will be offered by Newpark Drilling Fluids Eastern Europe and Halliburton Energy Services. In June this year, OMV Petrom and its partner Romgaz announced the final investment decision for the Neptun Deep project, with plans to invest €4bn. As the operator, OMV Petrom owns a 50% stake, and the remaining 50% stake is controlled by Romgaz. The project, which is scheduled for commissioning in 2027, is expected to produce a maximum of eight billion cubic metres of natural gas per year for nearly a decade. The companies aim to develop two fields – Domino and Pelican South – as part of the project. **13th December 2023**

UK

- **UK and Belgium to cooperate on decarbonising gas infrastructure**

The Interconnector between the two nations will be used to transport hydrogen. National Gas and Fluxys Belgium, the British and Belgian gas transmission networks, respectively, have entered a cross-border collaboration agreement focusing on decarbonising gas infrastructure, carbon capture and storage (CCS) and the utilisation of North Sea energy resources. At the UK embassy in Brussels, UK Energy Minister Andrew Bowie signed a memorandum of understanding with the Belgian Minister for Energy Tinne Van der Straeten to increase cooperation on decarbonisation infrastructure, marking 25 years of operation of the gas Interconnector, which runs from Norfolk to Zeebrugge. The agreement looks to advance the

exchange of hydrogen energy between the two nations. Fluxys Belgium is developing large-scale hydrogen and National Gas has launched Project Union to connect hydrogen infrastructure. Hydrogen has been a recent focus for policymakers. **15th December 2023**

- **Petrofac Agrees Brownfield EPC Framework with TotalEnergies**

Oilfield services company Petrofac has signed an engineering, procurement, construction and commissioning (EPCC) framework agreement with TotalEnergies for its assets in the North Sea. Under the three-year framework, Petrofac will have the opportunity to deliver brownfield EPCC solutions across TotalEnergies' UKCS assets. Nick Shorten, Chief Operating Officer of Petrofac's Asset Solutions business, said: "In a mature basin like the UKCS where enhanced recovery, field life extension and decarbonization are key - this framework recognizes our ability to combine our extensive engineering and construction expertise and offshore operations experience to support TotalEnergies. **18th December 2023**

- **DNV to support UK national gas transmission with world first hydrogen pipeline research facility**

DNV, the independent energy expert and assurance provider, is the lead partner for National Gas Transmission (NGT) in further expanding a world first hydrogen pipeline research facility FutureGrid. NGT was awarded two Strategic Innovation Funded (SIF) projects by OFGEM to research the suitability of existing assets to transport hydrogen in the current National Transmission System (NTS) as part of its FutureGrid project. In 2021 DNV began construction of a high-pressure hydrogen test facility at its Spadeadam Research and Test Facility in Cumbria, Northern England, repurposing existing transmission assets, to demonstrate the NTS could transport hydrogen safely and reliably. The project, FutureGrid Phase 1, was commissioned in September 2023 and achieved a landmark of operating with 2% hydrogen blended with natural gas. The work continues with the aim of blending 100% hydrogen by the end of January 2024. FutureGrid Phase 2 - Compression, Deblending and Purification, is part of a strategic initiative for NGT and the first of many steps towards converting the existing NTS to transport hydrogen. For Phase 2, DNV, along with other partners, is supporting NGT by developing a compression and pipeline test facility at Spadeadam. The facility will enable offline testing of the full compression system and provide evidence for a safe and cost-effective transition to hydrogen. This project aligns with DNV's recent research in its 2022 Hydrogen Forecast to 2050 which highlights that cost considerations will lead to more than 50% of hydrogen pipelines globally being repurposed from natural gas pipelines. Repurposing pipelines can offer significant cost savings, with costs in the range of 10-35% of new pipelines. **15th December 2023**

- **HS2 positions second Bromford Tunnel TBM**

Assembly has been completed of HS2's Herrenknecht TBM that will start digging the second bore of the 5.6km Bromford Tunnel into Birmingham next year. In an assembly operation to move sections of the machine into a 12m deep launch pit, two 600 tonne cranes lifted the 125 tonne cutterhead into place at the front of the 125 m long machine in the pit bottom. The first TBM, 'Mary Ann' started digging the first bore from the east portal site near Water Orton in August this year. It has already built more than 500 tunnel rings, which is nearly 1km of the 5.6km long tunnel between North Warwickshire and Washwood Heath in Birmingham. The name of the second TBM will be revealed before it launches in Spring next year. 'Mary Ann' is set to break through at the end of 2024, with the second TBM planned to complete its journey in the middle of 2025. Both TBMs will remove 1.87M tonnes of excavated material, which will be sifted at the on-site slurry treatment plant and reused on HS2's nearby sites at Delta Junction, where a complex network of nine viaducts is being built. The segments are being produced at Balfour Beatty VINCI's pre-cast factory at Avonmouth near Bristol. In the concrete mix used at the factory 40% of the cement is replaced with Ground Granulated Blast-furnace Slag (GGBS) which has a much lower carbon footprint than traditional cement. 3D scanning is used in the production process of the segments to guarantee accuracy. **12th December 2023**

- **Bouygues Travaux Publics Murphy JV wins LTC Tunnels and Approached contract**

National Highways has today announced that it has awarded Bouygues Travaux Publics – Murphy Joint Venture the Lower Thames Crossing Tunnels and Approaches contract. At 4.2km length each, and with a

16m+ diameter, the twin tubes under the River Thames connecting Kent and Essex will be the UK's largest bored tunnels. The award of the Tunnels and Approaches contract completes the assembly of the Lower Thames Crossing delivery team, with BMJV joining Balfour Beatty who will build the roads north of the Thames, and Skanska who will build the roads in Kent. A National Highways statement says, "The delivery team is now getting construction ready by using their extensive experience in delivering major projects around the globe to improve the design and exploring ways to maximise the benefits of the project. **7th December 2023**

NORTH & SOUTH AMERICA

BRAZIL

- **Petrobras targets maintenance wave at nearly two dozen platforms**
 Brazil's Petrobras is poised to receive commercial proposals next week in a major tender to contract maintenance services for a series of ageing production platforms working in the country's prolific Campos basin. Petrobras has been revitalising operations in Campos by getting rid of old infrastructure and, in some cases, replacing it with new floating production, storage and offloading vessels. According to bidding documents seen by Upstream, Petrobras invited contractors to submit offers on 19 December to carry out a wide range of maintenance and refurbishment work. **14th December 2023**
- **Elysian and Petrobras acquire 151 blocks in Brazil's latest auction**
 Brazilian state-owned oil and gas company Petrobras secured 29 blocks. Oil and gas companies including Elysian, Petrobras and Chevron secured most of the oil blocks offered in Brazil's latest auction. Out of more than 600 available E&P regions, 192 were awarded by Brazil's energy regulator, the National Agency of Petroleum, Natural Gas and Biofuels (ANP). According to Reuters, Elysian won 122 blocks. Elysian was founded in August 2023 to participate in the auction and has its base in the Brazilian state of Minas Gerais. Its winning bids covered the Potiguar, Espirito Santo and Sergipe Alagoas offshore basins. Brazilian state-owned oil and gas company Petrobras secured 29 blocks, all as operator, in the Pelotas Basin. **14th December 2023**
- **Petronas spuds maiden exploration well offshore Brazil**
 Campaign will target hydrocarbons in far eastern section of Campos basin. Petronas has started drilling the first of two planned back-to-back exploration wells in search of hydrocarbons in the prolific Campos basin in the Malaysian company's debut as an operator offshore Brazil. Petronas on 13 December initiated drilling of the Mola wildcat in Block C-M-661 with the Valaris drillship DS-15, according to updated information from Brazilian market regulator ANP. The programme in water depths of 3027 metres is expected to last between three and four months. **19th December 2023**

CANADA

- **C-NLOPB approves development plan amendment for Hebron field**
 The C-NLOPB staff also carried out a reassessment of the most likely recoverable oil and contingent gas estimates for the Jeanne d'Arc Formation. The Development Plan Amendment (DPA) for the Hebron Field, along with an addendum presented by ExxonMobil Canada Properties (ExxonMobil), has received approval from the Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB). The federal and Newfoundland and Labrador governments have ratified the Board's Fundamental Decision. This ratification empowers ExxonMobil and its partners to proceed with the development of sands within the Jeanne d'Arc Formation, which were not addressed in the initial Hebron Development Plan. The approval is contingent upon the conditions outlined in Decision Report 2023.01. During the approval process, the Board took into account guidance from the C-NLOPB Development Plan Staff Analysis, as well as feedback received during the public consultation period. The new development will utilise the existing Hebron workforce and facilities, staying within the current drilling and production capacity limits of the Hebron field. **18th December 2023**

MEXICO	<ul style="list-style-type: none"> <u>Atlantis Deepwater Oil and Gas Platform, Gulf of Mexico</u> BP's plans to increase its production in the Gulf of Mexico to 400,000boepd, by mid-2025. Future projects are expected to further strengthen the company's operations in the Gulf of Mexico. These include phase four and five of the Atlantis field and expansion and tiebacks at the Thunder Horse, Mad Dog, and Na Kika fields. A total of 12 additional producing wells and six additional water-injection wells utilising existing infrastructure are also planned to be developed as part of future infill campaigns at Atlantis. In October 2011, EMAS AMC was contracted to install and replace subsea systems, including manifolds, pipeline end manifolds, jumpers, and associated equipment at the Atlantis field. TechnipFMC, an oil and gas technology provider, was awarded an engineering, procurement, construction, and installation contract for the Atlantis phase three project in January 2019. 18th December 2023
SURINAME	<ul style="list-style-type: none"> <u>TotalEnergies, Shell and Petronas win new exploration blocks offshore Suriname</u> European supermajors TotalEnergies and Shell, and Malaysia's Petronas have expanded their footprint offshore Suriname by being awarded new production sharing contracts in the South American nation. Suriname state-owned oil company and market regulator Staatsolie in June received bids for three of the six blocks it put up for grabs 63, 64, 65, 66, 67 and 68 in water depths ranging from 400 to 3500 metres in the under-explored Demerara area. 15th December 2023
USA	<ul style="list-style-type: none"> <u>Cumberland Project, Dickson, Tennessee, The USA</u> Project Type : Natural Gas Pipeline Project Location : Tennessee, US Expected Start of Construction : August 2024 Expected Start of Operations : September 2025 Transportation capacity : 245,040 dekatherms per day Developer : Tennessee Gas Pipeline Company The Cumberland Project is a proposed pipeline project in the US state of Tennessee to be developed by Tennessee Gas Pipeline Company (TGP), a company of Kinder Morgan. The project will be developed with a transportation capacity of 245,040 dekatherms of additional firm natural gas per day (Dth/d) to the Cumberland Natural Gas Combined Life Cycle Power Plant of the Tennessee Valley Authority (TVA). TGP applied to the Federal Energy Regulatory Commission (FERC) in July 2022. FERC, the lead certification agency, certified the application and prepared a Final Environmental Impact Assessment for the project in June 2023. 18th December 2023 <u>Maire's Nextchem bags process design contract from DG Fuels for a bio-waste to SAF facility</u> First step towards implementing a facility that would process up to 500 million liters per year of Sustainable Aviation Fuel (SAF) in Louisiana, due to be operational in 2028. MAIRE announces that NEXTCHEM, through its subsidiary MyRechemical, leading the waste-to-chemical segment, has been selected by DG Fuels Louisiana to provide the Process Design Package in relation to a Sustainable Aviation Fuel (SAF) facility under development in St. James Parish, Louisiana (USA). The plant, expected to be operational in 2028, will produce 350,000 tons per year of SAF derived from biomasses and waste resources. MyRechemical has been selected as technology licensor in relation to a gasification unit and a gas treatment unit able to process 1,000,000 tons per year of bagasse and sugar cane trash and pulp, representing the first step for the SAF production. The gasification technology and the know-how to transform synthetic gas into valuable products play a pivotal role within NEXTCHEM's technology portfolio, making MAIRE a key player to enable the decarbonization of the world's industries through the circular economy. 12th December 2023 <u>Shell, Equinor reach FID on Sparta development in US Gulf of Mexico</u> Expected to commence production in 2028, the Sparta project, which is located 275km off the coast of Louisiana, will involve the drilling of eight production wells that will be subsequently tied back to a semi-

	<p>submersible production host in water depth of over 1,400m. Shell and Equinor have taken the final investment decision (FID) on their Sparta deepwater development in the US Gulf of Mexico with an aim to unlock an estimated, discovered recoverable resource volume of 244 million barrels of oil equivalent (boe). Spread over four outer continental shelf (OCS) blocks in the Garden Banks area, Sparta will involve the installation of a semi-submersible production host in water depth of over 1,400m. As per the development plan, eight production wells will be drilled and subsequently tied back to the floating production unit. The Sparta platform will replicate the Shell-operated Vito and Whale projects. It will mirror nearly 95% of Whale's hull and 85% of the topsides of the Whale project. Sparta's peak production is expected to be around 90,000 barrels of oil equivalent per day (boe/d). The deepwater field is anticipated to commence production in 2028. 20th December 2023</p>
--	---

Mailing address is:

info@gerabgroup.com

Gerab National Enterprises L.L.C.

PO Box 17719, Jebel Ali Free Zone

Dubai, United Arab Emirates

Disclaimer: Notice to any user of this Report. "Gerab National Enterprises LLC shall have no liability for the accuracy of the information and cannot be held liable for any third-party claims or losses of any damages. The user shall have the right to view the information and usage for the purpose for which it is intended and disclosed. The information contained in this Report does not constitute the solicitation of an offer to buy any product or service; and should not be relied upon in connection with any investment decision".