

GERAB

BULLETIN

Weekly News



EXECUTIVE SUMMARY

The Commodity summary

- Steel HRC (North America) and steel HRC (FOB China) prices are in downtrend and went down by 6% and 13% WTD respectively.
- Natural gas prices went up by 11% WTD.
- Nickel prices have gone up by 19% WTD.
- Crude Oil Brent prices went up by 6% WTD but Crude Oil WTI prices went down by 6% WTD.

The Currency summary

- Euro gained strength against dollar by 5.35% MTD but still Dollar is stronger by more than 8% YTD
- The US Dollar against CNY is stronger by more than 12% YTD.

The Rig count summary

- The Rig counts in Europe have gone up by 40% 6MTD.

Project summary

- Korean firms bag over AED 385 mn deals at Korean Energy Week from UAE.
- QatarEnergy takes final investment decision on world's largest integrated polymers facility.
- Jakson Green Signs MoU to Develop \$2.8bn Green Ammonia / Hydrogen Project.
- SK Innovation to invest 5 tln won for net-zero project at its flagship Ulsan complex.
- Saudi Aramco affiliate S-OIL to build \$7bn Petrochemical Crackers in South Korea.

COMMODITY UPDATES

COMMODITY	UOM	LATEST PRICE	WTD %	MTD %	3MTD %	6MTD %	YTD %
Chromium	USD/MT	9,550.14	1.00	1.30	-7.49	-13.57	-17.66
Coal	USD/MT	375.89	0.59	-12.69	-16.37	-12.54	119.53
Cobalt	USD/MT	49,251.27	-11.17	-12.53	-7.28	-43.23	-22.36
Copper	USD/MT	8,271.50	6.96	9.45	3.71	-11.62	-13.81
Crude Oil	USD/BBL	92.84	0.36	3.10	-1.82	-16.74	16.70
Crude Oil Brent	USD/BBL	96.37	6.38	3.41	-1.31	-14.32	19.96
Crude Oil WTI	USD/BBL	89.31	-5.60	2.77	-2.37	-19.21	13.96
Iron Ore	USD/MT	88.19	-6.69	-7.50	-17.86	-34.42	-6.60
Molybdenum	USD/MT	41,299.65	-1.37	0.08	26.75	-0.95	-1.63
Natural Gas	USD/MCF	6.46	10.68	1.83	-28.67	-24.64	20.37
Nickel	USD/MT	26,595.00	19.31	20.86	20.02	-4.67	33.95
Steel HRC (FOB China)	USD/MT	514.00	-6.29	-7.43	-16.30	-32.02	-35.58

Steel HRC (N. America)	USD/MT	730.78	-12.77	-13.37	-18.11	-51.57	-63.60
Steel Rebar	USD/MT	588.60	7.75	3.34	-10.18	-26.62	-22.17
Steel Scrap	USD/MT	341.50	-2.15	-4.26	-11.05	-28.18	-28.11

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	1.0372	1.77	5.35	1.92	-1.65	-8.35
USDCNY	1 USD to CNY	China	CNY	7.1350	0.22	1.01	-5.06	-5.95	-11.94

Source- Trading Economics

CRUDE OIL STOCK

Region	Unit	Latest Count	WTD %	MTD %	3MTD %	6MTD %	YTD %
US Stocks of Crude Oil & Petroleum Products	Thousand Barrels	16,08,865.00	-0.66	-0.93	-3.31	-4.31	-11.83

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	25.96	USD	2.85	20.35	4.97	-10.97	-13.87
Glencore PLC	517.30	GBP	3.21	6.16	6.29	3.82	39.08
NYSE American Steel Index	1,699.31	Index	4.20	15.11	5.45	-1.64	13.61
Rio Tinto PLC	5,378.00	GBP	4.47	11.58	10.01	-1.68	20.77
Tenaris SA	34.54	USD	8.96	21.53	32.80	5.18	54.06
Tubacex SA	2.12	EUR	0.00	8.16	-6.61	-9.79	26.95

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	52	*	4.00	8.33	10.64	23.81
GCC	222	*	6.73	8.82	9.90	20.65
Middle East	324	*	5.54	5.54	8.00	17.82
Africa	77	*	4.05	6.94	6.94	5.48
Asia-Pacific	192	*	0.00	3.78	10.34	10.34
Europe	101	*	1.00	27.85	40.28	7.45
Latin America	187	*	4.47	16.88	15.43	23.84
North America	977	0.00	-0.10	1.35	18.00	32.03
Total	1,858	*	1.53	5.15	15.55	23.29

NEWS OF THE WEEK

GULF COOPERATION COUNCIL (GCC)

UAE

- **UAE's ENOC Group and Japan's IHI Corp sign MoU to explore green ammonia production**

As part of Dubai's strategy to become a sustainable global hub for clean energy and green economy, Dubai's ENOC Group, the leading integrated international oil and gas player operating across the energy sector value chain, and Japanese heavy-industry manufacturer IHI Corporation today signed a Memorandum of Understanding (MoU) to explore establishing a low-carbon hydrogen and low-carbon ammonia supply chain in the UAE. The move is aligned with the UAE's overall efforts to diversify its energy sources to transition into a clean energy model for the world to emulate.

The produced fuel will be exported to Japan and supplied within the UAE and across the region for bunkering and other purposes. As part of the agreement, both parties will execute corresponding studies in consecutive phases for green ammonia production in the UAE, including pre-feasibility and feasibility studies for the first-of-its-kind full-scale production plant, pre-FEED (Front End Engineering Design) and FEED studies for the demonstration plant, and pre-FEED and FEED for the full-scale production plant. The agreement was signed by His Excellency Saif Humaid Al Falasi, Group CEO, ENOC, and Jun Kobayashi, Executive Officer, General Manager of Solution & Business Development Headquarters of IHI Corporation. **13th November 2022**

- **Korean firms bag over AED 385mIn deals at Korean Energy Week from UAE**

15 top energy Korean companies at the second edition of the Korean Energy Week in UAE hold over 278 potential partnership meetings and sign 12 MoUs CEPA will catalyse joint ventures, investments in renewables and carbon-neutral initiatives between Korea and the UAE. Korean companies in the second edition of the Korea Energy Week UAE said they have bagged deals worth over AED 385 million during the two days of the expo, and said they are looking at deepening investments and business partnerships in the UAE in sustainable green energy initiatives with a Comprehensive Economic Partnership Agreement (CEPA) between the two countries in the immediate pipeline. In a statement, organisers of the just concluded Korea Energy Week UAE 2022, Verifair Dubai, (www.verifair.org) said a majority of exhibitors at the show represented the renewable energy sector, keen to make inroads into the UAE's sustainable energy market with the increasing focus on circular economy and carbon-neutral alternative energy projects, which will contribute to achieving Net-Zero emissions by 2050 for the UAE. There is a significant number of joint venture projects with the quantum of investments running into billions of dollars taking place in the UAE, Saudi Arabia and other countries in the region, which will mutually benefit both the countries in supporting strategic carbon neutrality in their respective countries," said Mr. Chul Won IM, President, Energy Value Enterprise Development Institute (EVEDI)., adding that such partnerships are crucial to drive renewable energy projects and tackling climate change challenges as well as in reducing greenhouse gas emissions. **11th November 2022**

- **UAE's Masdar led consortium Signed agreement for 2 GW Green Hydrogen Project in Egypt**

Masdar, the UAE's flagship clean energy company, and its consortium partners, Infinity Power Holding and Hassan Allam Utilities, announced that they have signed a framework agreement with leading Egyptian state-backed organisations on the development of a 2 gigawatt (GW) green hydrogen project in the Suez Canal Economic Zone (SCZONE). The Masdar-led consortium signed two Memorandums of Understanding (MoUs) in April with Egyptian entities related to developing two green hydrogen production plants in the country, one in the SCZONE and the other on the Mediterranean. The consortium is targeting an electrolyzer capacity of 4 gigawatts (GW) by 2030 and an output of up to 480,000 tonnes of green hydrogen per year. Yesterday's agreement was signed on the sidelines of the 2022 United Nations Climate Change Conference (COP27) in the presence of Dr Sultan Al Jaber, UAE Minister of Industry and Advanced Technology, Special Envoy for Climate, and Chairman of Masdar, Dr. Mohamed Shaker El-Markabi, Egypt's Minister of Electricity and Renewable Energy and Hala Al-Said, Egypt's Minister of Planning and Economic Development. Dr. Thani Al Zeyoudi, UAE Minister of State for Foreign Trade, and Mariam Al Kaabi, UAE Ambassador to Egypt, were

	<p>also present. In the first phase of the project, the consortium will establish a green hydrogen manufacturing facility in the SCZONE, scheduled to begin operations by 2026. Africa could capture as much as 10 percent of the global green hydrogen market, helping to create up to 3.7 million jobs and adding as much as US\$120 billion to the continent’s gross domestic product (GDP), according to a report issued jointly by Masdar and its Abu Dhabi Sustainability Week (ADSW) platform at COP27 last week. 17th November 2022</p>
KUWAIT	<ul style="list-style-type: none"> <p><u>Kuwait signs consultation contracts with KBR, Worley, Technip</u> The <u>Kuwait Oil Company (KOC)</u> announced in a statement that it has signed three contracts with three international project management consulting companies to provide consultation services in the initial engineering and design works. The first contract was signed with Kellogg Brown & Roots Limited, the second with Worley Europe Limited, and the third with Technip E&C Limited. The signing ceremony was attended by Acting CEO Khalid Nayef Al-Otaibi, DCEO Commercial & Corporate Services Abdul Wahab Al-Mithin, DCEO Gas & Innovation Bader Al-Munaifi, DCEO North Kuwait Ali Al-Kandari, and a number of Group Managers, Team Leaders, and representatives of contracting companies. Al-Otaibi delivered a speech in which he welcomed the attendees, and also congratulated the representatives of the winning companies, considering that the three consultancy contracts provide important services that the Company needs to develop the projects being implemented within the framework of its Strategy. The three contracts, which will provide consultations for the Company’s major projects over a period of five years, were signed. 16th November 2022</p> <p><u>Kuwait’s Burgan Drilling Receives LoA for Drilling Rigs</u> Burgan Company for Well Drilling, Kuwait announced in a statement that it has received official letter of award for drilling rigs from the Kuwait Oil Company. The combined value of the contracts is KWD 20.35 million. According the statement, the project is related to a 550 Horsepower drilling rig worth KWD 10.17 million and another drilling rig worth of KWD 10.17 million. Burgan Company also announced that it has received extension of drilling rig contracts with the Kuwait Oil Company for a period of one year, for a total of approximately KWD 10 million. 16th November 2022</p>
QATAR	<ul style="list-style-type: none"> <p><u>Mitsui and QatarEnergy Sign Long-term Charter Deal for Three Newbuilding LNG Carriers</u> Mitsui O.S.K. Lines, Ltd announced that, through a subsidiary, it signed a long-term charter contract for three newbuilding liquefied natural gas (LNG) carriers with QatarEnergy. The vessels will be built at Hudong-Zhonghua Shipbuilding (Group) Co., Ltd. in China, and are scheduled for delivery in 2027.MOL signed a long-term charter contract with QatarEnergy in April 2022 for four newbuilding LNG carriers, and the relationship between QatarEnergy and MOL will be further expanded by three LNG carriers through the latest contract. QatarEnergy is undertaking the North Field Expansion Project to increase its LNG production capacity to 126 million tons per annum by 2027. MOL, through its further participation in LNG projects in Qatar, will contribute to stable global LNG supply and enhance the maritime transport of the next-generation, environment-friendly energy resources, statement mentioned. 14th November 2022</p> <p><u>QatarEnergy takes final investment decision on world's largest integrated polymers facility</u> QatarEnergy and Chevron Phillips Chemical Company (CPChem) announced they have taken a Final Investment Decision (FID) on the Golden Triangle Polymers Plant, an \$8.5bn world-scale integrated polymers facility in the Texas Gulf Coast area in the US. Located about 180 kilometres east of Houston, the plant will include an ethylene cracker unit with a capacity of 2.08mn tonnes per year, making it the largest in the world, and two high-density polyethylene units with a combined capacity of 2mn tonnes per year, also making them the largest derivatives units of their kind in the world. Construction of the plant will begin immediately, with an expected startup date in 2026. \$8.5bn world-scale integrated polymers facility in Texas Gulf Coast area in USA will be owned by Golden Triangle Polymers Company, a joint venture in which QatarEnergy holds a 49% equity interest with 51% held by Chevron Phillips Chemical Company The plant will be owned by Golden Triangle Polymers Company LLC, a joint venture in which QatarEnergy holds a 49% equity interest with 51% held by CPChem. Commenting on the FID, HE the Minister of State for Energy Affairs, Saad bin Sherida al-</p>

Kaabi, also the President and CEO of QatarEnergy said, “We are excited to announce taking the FID on our largest petrochemical investment ever, highlighting QatarEnergy’s integrated position as a major player in the LNG and international exploration sectors, as well as being a global petrochemicals producer. **17th November 2022**

- **Keppel secures jackup rig charters from ADES Saudi worth up to S\$155m**
Keppel Offshore & Marine Ltd (Keppel O&M) through its wholly-owned subsidiaries, signed bareboat charter contracts with ADES Saudi Limited Company for two jackup rigs to be deployed in Saudi Arabia. This brings the total number of rigs Keppel O&M has on charter with ADES to four. The charters will be for a period of five years, expected to commence in 1H 2023, and projected to generate total revenue of about S\$155 million for Keppel O&M, which includes modification works to prepare the rigs for deployment. These are the fifth and sixth bareboat charters secured by Keppel O&M this year, pointing to the continued demand for more high quality drilling rigs of Keppel’s proven KFELS B Class design. The two rigs to be used for these charters are the Cantarell III and Cantarell IV jackup rigs which were under bareboat charters with subsidiaries of Grupo R[2]. These charters have since been terminated due to unremedied events of default under the bareboat charters by the charterers[3]. The rigs, which will be renamed ADM685 and ADM686, are currently in Mexico and will be transported to Saudi Arabia for modification works before commencing their charters for ADES. Mr Tan Leong Peng, Managing Director (New Builds) of Keppel O&M, said, “We are pleased to receive a repeat contract from ADES for the charter of another two of our jackup rigs. **12th November 2022**
- **USA's Zentech Awarded Engineering Contract by International Maritime Industries (IMI) of Saudi Arabia**
Houston-based marine engineering firm, Zentech Inc. has been awarded a detail design engineering contract, by International Maritime Industries (IMI) of Kingdom of Saudi Arabia, for the construction of IMI-2030 Class of Jack-up drilling rigs. IMI has one of the biggest shipyards in the world to build drilling rigs, Ships, Boats, Barges and various other types of offshore vessels. IMI plans to build 18 of these Class of Jack-up drilling rigs in its Shipyard. Zentech will perform the detailed engineering design of all structures and systems and deliver fabrication drawings to IMI. The detail design will entail all construction details allowing IMI to build the rig(s) in its own shipyard. Structures will include Hull, Quarters, Helideck, Cantilever package, Drill Floor, Legs, and Spud Cans including foundations for all equipment. The detail design will meet the rules and specifications of Saudi Aramco Schedule G, ARO, IMI, ABS and the Basic design basis. Systems will include all Piping, Electrical, Instrumentation, and HVAC systems. **10th November 2022**
- **Saudi Aramco dishes out offshore contract to European player**
Saudi Aramco has awarded another key offshore engineering, procurement, construction and installation (EPCI) contract as it steps up spending on brownfield and offshore maintenance projects. Aramco, which aims to expand its oil production capacity to a sustainable high of 13 million barrels per day by 2027 — is also spending heavily on maintenance contracts aimed at sustaining oil production from some of the largest offshore oilfields in the kingdom. The winner of the most recent EPCI contract awarded by Aramco is Italy's Saipem, and the project in question is understood to be life extension and additional development of the Abu Safah offshore oilfield, according to industry sources consulted by Upstream. **14th November 2022**
- **Ma’aden and Gulf Cryo inks 20-year deal for decarbonisation project in COP27**
The agreement was signed during COP27 in Sharm El Sheikh, Egypt. The deal is considered the biggest carbon project for the merchant market targeting CO₂ utilisation in the region, recovering as much as 300,000 MTPA of CO₂ emissions that will be reutilized in various applications. Robert Wilt, CEO, Ma’aden, said: “The

SAUDI ARABIA

agreement is a testament to our commitment to fulfilling the objectives of the Saudi Green Initiative, in line with our goal to be a role model for sustainable operations in the kingdom. Carbon capture will further strengthen Ma'aden's position as a major global supplier of Blue Ammonia, a low carbon approach to ammonia production." Amer Huneidi, chairman of Gulf Cryo, added: "This agreement is an anchor of our common commitment to decarbonise the region, and to support the kingdom's climate goals and localization objectives by creating a circular carbon economy. CO2 capturing plant Gulf Cryo will construct and operate a mega carbon dioxide capturing plant in Ma'aden integrated phosphate complex in Saudi Arabia. The partnership aims at reducing the carbon emission of the national mining company while providing a clean CO₂ source to be used in industrial gases applications in the kingdom, creating a domestic circular carbon economy which increases the domestic value creation, fully supporting the plan to localise industries as per Saudi Vision 2030. **16th November 2022**

- **Precision Drilling Secures Contracts in Saudi Arabia, Kuwait**

Precision Drilling Corporation announce that it was recently awarded four contracts in Kuwait, each with a five-year term and an optional one-year renewal. The contract awards are for AC Super Triple 3000 HP rigs and increase active rig count in Kuwait from three rigs to five rigs by the middle of 2023. In addition, Precision Drilling recently signed third drilling rig in the Kingdom of Saudi Arabia to a five-year contract extension, following two earlier five-year contract signings in the second quarter of this year. With the three contract extensions in Saudi Arabia and the Kuwait contract awards, Precision will have eight rigs under long-term contracts in the Middle East stretching into 2028 and representing approximately US\$600 million (approximately C\$820 million) in backlog revenue. "Precision's success in earning these contract awards is a result of our team's dedication and commitment to our High Performance, High Value strategy and the outstanding service we have delivered to customers in the Middle East region. Furthermore, the recent contract awards allow us to leverage our scale in the region and generate steady, reliable cash flow, creating value for our shareholders and fulfilling one of Precision's 2022 strategic priorities to maximize our operational leverage. I would like to congratulate our team for securing these contracts and look forward to continuing the excellent service our customers can expect from Precision," commented Kevin Neveu, Precision's President and CEO. **16th November 2022**

- **Weatherford Wins Lump Sum Turnkey Contract with Saudi Aramco**

Weatherford International plc announced it has been awarded a three-year, lump-sum turnkey (LSTK) contract with Saudi Aramco to deliver drilling and intervention services. As part of this contract, the Weatherford Integrated Services and Projects (ISP) team will plan and execute all aspects of the operations, including Weatherford product lines and associated services, to deliver 45 wells per year for the term of the contract. Weatherford ISP has developed a successful track record in well construction, production and plug and abandonment projects over the past several years, and this award presents an opportunity to serve our customers' evolving needs. Girish Saligram, Weatherford President and CEO, commented, "This award showcases the value of Weatherford's comprehensive portfolio of technologies. Our ISP solutions will provide a superior project delivery model to aid Aramco in executing its strategy by elevating the customer experience and results. We are excited to continue this long-term business relationship with Aramco. **14th November 2022**

ASIA EXCLUDING GULF COOPERATION COUNCIL (GCC)

BAHRAIN

- **Bahrain makes new onshore natural gas discoveries**

Bahrain has made two natural gas discoveries in the Al-Jawf and Al-Jubah onshore reservoirs, reported the Bahrain News Agency (BNA). The two reservoirs are located in each of the unconventional Al-Juba and Al-Jawf layers, which are located under the Al-Khuf and Al-Onaiza gas-producing fields. Nogaholding, Bahrain's energy investment and development arm, chairman Shaikh Nasser bin Hamad Al Khalifa provided an update on the gas discoveries to Bahrain King Hamad bin Issa Al Khalifa, without disclosing estimated reserves. According to BNA, the discoveries' initial evaluations were 'encouraging in terms of quantity and production opportunities'. Nasser said the 'significant' discoveries are in tune with country's efforts to increase the natural resources production capacity. The latest discoveries follow the completion of the

	<p>evaluation drilling and tests in the Al-Juba reservoir, as well as the completion of two wells in the Al-Jawf reservoir. 9th November 2022</p>
<p>CHINA</p>	<ul style="list-style-type: none"> <p>• <u>Maire Tecnimont Group selected for licensing and equipment supply in China</u> Stamicarbon, the innovation and license company of Maire Tecnimont Group, has been selected as the licensor for a urea project in China. The plant’s capacity of 3791 metric tons per day (MTD) will make it the largest urea plant to be licensed by Stamicarbon in China. The scope of the contract consists of the license, Process Design Package (PDP), and Proprietary Equipment in Safurex for the urea plant and associated services. The plant will also be coupled with a dual-line melamine plant. Stamicarbon’s knowledge and experience with the coupling of urea and Melamine plants will be of utmost importance for this project. The plant will have a capacity of 1133 MTD as feed for melamine plant coupling, 1560 MTD urea prills, and 1098 MTD urea granules. The plant will be configured to produce urea prills, potentially also urea granules and even diesel exhaust fluid allowing the plant to serve up to three separate but critical industries in China. 11th November 2022</p> <p>• <u>CNOOC, Shell JV chooses LyondellBasell technology PP Plant</u> CNOOC and Shell Petrochemicals announced the establishment of a joint venture and selected LyondellBasell’s Spherizone process technology for their new Polypropylene (PP) plant in Huizhou, Guangdong, China. The Spherizone process technology will be used to produce 500,000 ton/year polypropylene (PP) product. We are very excited to announce that CSPC has again chosen LyondellBasell’s Spherizone process technology for their new polypropylene plant. This represents the second Spherizone line from a total of five polyolefin lines, licensed from LyondellBasell at the Huizhou site,” said Neil Nadalin, director of Global Licensing and Services for LyondellBasell. Spherizone process technology continues to demonstrate the ability to produce differentiated polymer grades in the highly competitive Chinese market, which remains a key requirement for our customers,” Nadalin added. 14th November 2022</p>
<p>INDIA</p>	<ul style="list-style-type: none"> <p>• <u>IH2A, Kerala Government work Green Hydrogen Hub in Kochi, India</u> NEW DELHI/ MUMBAI/ KOCHI, INDIA: India Hydrogen Alliance (IH2A) and the Government of Kerala has announced that it is jointly evaluating to construct a Green Hydrogen (KGH2) Hub in Kochi, Kerala. The Green Hydrogen Hub will have expenditure of \$575 million, to build a 60-tonnes per day (TPD) green hydrogen plant with a 150 MW Electrolyser, storage and infrastructure, which will achieve giga-watt scale and build the hydrogen economy in Kerala. IH2A’s KGH2 Hub plan is modelled after the Hydrogen Valley projects in the European Union, to create production, storage, transmission, and end-use infrastructure for green hydrogen (in compressed gas and liquified form) within a 50-km radius cluster in Kochi. In the first phase, it focusses on the transport use-case for zero-emission transport, to power Hydrogen-ICE retrofitted bus fleets of 60 buses and build the required infrastructure. In the second phase, industrial demand for green hydrogen from refineries, fertilizer and chemical plants is expected to drive capacity expansion and scale-up the KGH2 hub. “The KGH2 Hub plan is a blueprint of how India can build large-scale, commercial green hydrogen infrastructure. Starting with the right scale of project development is important. 14th November 2022</p> <p>• <u>Jakson Green Signs MoU to Develop \$2.8bn Green Ammonia / Hydrogen Project</u> Jakson Green has signed a memorandum of understanding (MoU) with the government of Rajasthan to invest around Rs 22,400 crore to set up a green hydrogen & green ammonia project in phases. The company will set up a 3,65,000 tpa green hydrogen & green ammonia plant along with an integrated hybrid renewable power complex. The project is expected to generate over 32,000 direct and indirect employment opportunities across various phases of the scale up, planned between 2023 and 2028. The state government will facilitate Jakson Green in obtaining necessary registrations, approvals, clearances, and provide incentives, among others. 10th November 2022</p> <p>• <u>India: EAC gives EC to RIL's Hazira Manufacturing Complex Expansion</u></p>

	<p>The Expert Appraisal Committee under the Ministry of Environment, Forests and Climate Change has recommended environmental clearance for Rs 10,000 crore expansion and debottlenecking of Reliance Industries (RIL) Hazira Manufacturing Division (HMD) in Gujarat. The Hazira Manufacturing Division is planning to expand its production capacities of various plants - Cracker Plant, Ethylene (C2), Propylene (C3), C4 products (such as LPG, Butadiene, Butene 1, MTBE/Isobutylene, Butanediol, HIPB), among others. Total employment generation after expansion will be 750 persons as direct and indirect. The project proponent shall ensure 70 percent of the employment to the local people, as per the applicable law besides setting up a skill development centre / provide skill development training to village people. The company shall develop R&D facilities to develop its own technologies for propylene and polypropylene processing. 10th November 2022</p>
INDONESIA	<ul style="list-style-type: none"> <p>• <u>Key deal signed on giant Indonesia carbon capture scheme</u> Project backers form joint venture to develop Aceh gas field as huge carbon dioxide storage facility. A major carbon capture and storage (CCS) project in Indonesia has taken a significant step forwards with the signing of a joint venture agreement by its two key proponents. The foundation of this proposed development is the Aceh gas field located offshore northern Sumatra and its associated infrastructure. Following a tentative agreement earlier this year, Perth-based Carbon Aceh has signed a formal deal with Pembangunan Aceh (Pema) an enterprise owned by the government of Aceh - to form a joint venture company called Pema Aceh Carbon to evaluate and redevelop the depleted Arun gas field as a CCS facility. The joint venture agreement was signed by Pema president-director Ali Mulyagusdin and Carbon Aceh managing director David Lim. Pema Aceh will carry out a study on the development, implementation and operation of the Arun CCS project. 14th November 2022</p> <p>• <u>ExxonMobil and Pertamina Advance Regional CCS Project in Indonesia</u> ExxonMobil and Pertamina, the state-owned energy company for Indonesia, have signed a Heads of Agreement at the G20 Summit in Bali to further progress their previously announced regional carbon capture and storage hub for domestic and international carbon dioxide. The Heads of Agreement builds upon a joint study and memorandum of understanding that was signed at COP26 in Glasgow, Scotland to assess carbon capture and storage technologies, low-carbon hydrogen and geologic data. The agreement defines next steps for the project including concept-select, pre-Front End Engineering Design, and a subsurface work program. The agreement was signed by Pertamina President Director and Chief Executive Officer Nicke Widyawati and Irtiza Sayyed, vice president, ExxonMobil Low Carbon Solutions and president of ExxonMobil Indonesia. The Indonesian government is working to develop supportive CCS regulations and initiating discussions with other governments in the region. This milestone is a solid foundation for Indonesia to systematically work toward our net-zero target by 2060 or sooner. Indonesia is growing, and it is imperative for us to address our carbon footprints for our future generations," informs H.E. Luhut B. Pandjaitan. 16th November 2022</p> <p>• <u>Conrad Asia Energy secures two oil and gas blocks offshore Indonesia</u> For 30-year period, Conrad will have the right to develop existing discoveries and explore additional resources at the blocks. Indonesia has named Conrad Asia Energy as the winning bidder for two oil and gas exploration blocks located off the northern Sumatra coast. The blocks, Offshore North West Aceh (ONWA) and Offshore South West Aceh (OSWA) PSCs, are located offshore the northwest and southwest of the Aceh Province of Indonesia. Covering a total acreage of 9,182km², the ONWA block comprises the Meulaboh-1 and Meulaboh East-1 gas discovery wells. The 10,700km² OSWA block contains the Singkel-1 gas accumulation. Conrad, which is yet to accept the award, will hold a 100% operatorship stake in the two blocks for a period of 30 years. Our best leads are in 1,000 metres of water which, by global standards, is not deep. Conrad has a 100% working interest in these blocks and will be seeking partners to join the exploration efforts in these areas." Conrad will invest \$15m at each of the blocks as part of the work programme, which will also include geological studies for 2023, 500km² of 3D seismic acquisition for 2024, and well drilling in 2025. 10th November 2022</p>

IRAQ

- **New Government Raises Hopes for Iraq's Upstream**

After a year of political turmoil, Iraq has a new government and a new oil minister, Hayan Abd al-Ghani, and foreign investors are awaiting the green light to launch potentially transformative energy projects. TotalEnergies is confident that its Ratawi megaproject, agreed in September 2021, can now move ahead quickly. Abd al-Ghani knows it well, having previously headed the South Gas Co. (SGC) and the Basrah Oil Co. (BOC), the French major's two local partners in the project. Iraq also desperately needs to capture more flared gas, which is a key component of it. Other projects await final approval too, like Sinopec's Mansuriyah gas development, also awarded last year. There's even talk of a gas bid round. But investors still must navigate a difficult operating environment that could yet nix their plans. Iraq's vast potential is not in doubt. Indeed, the oil ministry will soon publish a new and independently certified audit of the country's oil and gas reserves based on 300 prospects and leads identified by the state-run Oil Exploration Co. (OEC), which could raise existing estimates by 70%, says Mohammed Mazeel, the ministry's head of reservoirs and field development. Iraq's gas resources remain in focus. There is thought to be another 20 trillion cubic feet around the 4.5 Tcf Akkas field, Mazeel tells Energy Intelligence. The ministry — which is actively encouraging investors to develop Akkas — is open to discussing any proposals. **10th November 2022**

- **Iraq expands refining capacity to reduce oil product imports**

Many of the refineries in Iraq are outdated and operate below capacity. During a visit to the South Refineries Company Nov. 4, Iraq's new Oil Minister Hayan Abdel Ghani announced that his ministry's policy is to focus on increasing the refining capacity of the company to 350,000 barrels per day. "The southern refineries are today one of the largest Iraqi refineries in terms of production and the large volume of work they do in meeting the needs of citizens and consumers of oil products," Abdel Ghani said. "Despite the challenges and economic and health crises that the country has faced in the past period, the workers in the south refineries were at the level of responsibility through their distinguished efforts to continue working and producing. Currently, half of the quantities produced by Iraq's refineries are fuel oils. Iraq is spending more than \$3 billion on importing oil products annually, including 1.07 million tons of gas oil at a value of \$657 million, 3.46 million tons of gasoline at a value of \$2.5 billion, and 163,000 tons of white oil at a value of \$102 million. **12th November 2022**

KOREA

- **SK Innovation to invest 5 tln won for net-zero project at its flagship Ulsan complex**

SK Innovation Co., South Korea's largest oil refinery, said Tuesday it will invest 5 trillion won (US\$3.54 billion) into its flagship Ulsan industrial complex to transform its fossil fuel energy-oriented business to a green energy and material company by 2027. "After building South Korea's first refinery plant in Ulsan, SK Innovation grew to a comprehensive energy and chemicals company," said Yoo Jae-young, in charge of the Ulsan industrial complex, or Ulsan CLX, the company's flagship refining factory site in the southeastern port city. "We are now changing to become an environment-friendly energy firm through technology innovation and investment," he said. SK Innovation's Ulsan complex was first built off the coast of the southeastern port city of Ulsan in 1964 two years after the Korea Oil Corp., the predecessor of SK Innovation, was founded as part of the country's nationwide economic development policy plan for the stable supply of fuel energy. The petroleum industrial cluster has five in-house refinery plants and 34 oil storage tanks, with a daily capacity of 840,000 barrels of crude. The total length of its oil and gas transmission pipeline is about 600,000 kilometers, equivalent to the round-trip distance between the Earth and moon. **11th November 2022**

- **S-Oil to Invest KRW8tn to Build Petrochemical Production Facilities**

S-Oil is planning to invest more than eight trillion won in Ulsan City. It is the largest investment project in the history of the oil refining and petrochemical industries of South Korea. The purpose of the project is to build manufacturing facilities in order to produce 1.8 million tons of chemical products a year. Ethylene, polyethylene, and the like are likely to be produced there. The company is planning to complete the construction in 2026. According to the company, its petrochemical arm's contribution to its total sales will increase from 17 percent to 25 percent from 2021 to 2030 as a result of the investment. The company's annual sales are expected to increase by US\$1.53 billion as a result of the production activities. Most of the

company's sales have been derived from oil refining, but this lopsidedness is expected to be reduced. Some of the investment is likely to be borrowed. Specifically, the ratio of borrowing is estimated at 20 percent to 50 percent. The company's cashable assets totaled 1.4193 trillion won at the end of September and its operating profit for this year is estimated at 4.2475 trillion won. The financing is unlikely to be a burden given the figures and the fact that the investment is long-term. **15th November 2022**

- **Chevron, Keppel, Pertamina partner green hydrogen, ammonia project in Indonesia**

Pertamina NRE, Keppel Infrastructure, and Chevron have signed a joint study agreement (JSA) to explore the development of green hydrogen and green ammonia project using renewable energy in Sumatra, Indonesia. The agreement will explore the development of a green hydrogen facility, with a production capacity of at least 40,000 tonnes per annum, powered by 250-400 megawatts of geothermal energy in the initial phase. Pertamina, Keppel Infrastructure, and Chevron signed the JSA at the Business 20 (B20) Investment Forum, in Bali. The hydrogen production facility will have the potential to scale up to 80,000-160,000 tonnes per annum, depending on the availability of geothermal energy as well as market demands. **15th November 2022**

- **Saudi Aramco affiliate S-OIL to build \$7bn Petrochemical Crackers in South Korea**

Saudi Aramco announced in a statement that the Company is making its biggest ever investment in South Korea to develop one of the world's largest refinery-integrated petrochemical steam crackers through its S-OIL affiliate, in line with the company's strategy to maximize the crude to chemicals value chain. The \$7 billion Shaheen project aims to convert crude oil into petrochemical feedstock and would represent the first commercialization of Aramco and Lummus Technology's TC2C thermal crude to chemicals technology, which increases chemical yield and reduces operating costs. It follows an earlier \$4 billion investment into the first phase of the petrochemical expansion completed in 2018. Located at S-Oil's existing site in Ulsan, the new plant is planned to have the capacity to produce up to 3.2 million tons of petrochemicals annually and include a facility to produce high-value polymers. The project is expected to start in 2023 and be completed by 2026. The steam cracker is expected to process by-products from crude processing, including naphtha and off-gas, to produce ethylene — a building block petrochemical used to make thousands of everyday items. The plant is also expected to produce propylene, butadiene and other basic chemicals. Aramco President & CEO, Amin H. Nasser, said: "The global petrochemical landscape is rapidly evolving with demand growth anticipated to accelerate, driven in part by rising consumption from Asia's emerging economies. That is why S-Oil's Shaheen is well positioned to meet rising demand for the materials that will be required across the region's key industries. By further integrating refining and chemical processes through the first commercialization of Aramco's thermal crude to chemicals technology, we aim to create a more efficient, competitive and sustainable platform for growth, while paving the way for further downstream expansion. **17th November 2022**

- **Kazakh gas pipeline operator announces new E&P push**

Qazaqgaz warns of urgency of meeting growing demand for natural gas in the country. Kazakhstan's state run gas pipeline operator Qazaqgaz has set out plans to ramp up its own production of natural gas in the country, both from existing assets under its control and through exploration and development of new acreage. Executive board chairman Sanzhar Zharkeshov said in a social network post last week that the company has formed a new business unit, Exploration & Production Qazaqgaz, to consolidate all of its current gas producing assets under a single roof. Talks with the government to obtain exploration and development licences for ten onshore gas acreages are ongoing, Zharkeshov said in October. In his post, Zharkeshov said that the recent company's efforts have allowed Kazakhstan to stave off an expected natural gas on the domestic market to 2024, compared with a recent forecast of 2023. Gas growth According to Qazaqgaz, Kazakhstan's annual gas consumption is forecast to grow to over 20 billion cubic metres this year, compared with 11.5 Bcm in 2015. The annual gas consumption figure is expected to pass 22 Bcm by 2030, applying the company's most conservative base case scenario. In the best case scenario, annual demand for gas in Kazakhstan may grow to a total of 39 Bcm by 2030, according to Qazaqgaz. **7th November 2022**

KAZAKIATAN

	<ul style="list-style-type: none"> <u>Kazakhstan to Start Exporting Oil Via Azerbaijan</u> Kazakhstan will start exporting crude oil via the BP-operated Baku-Tbilisi-Ceyhan (BTC) pipeline that runs from Azerbaijan to Turkey's Mediterranean coast from the start of 2023, Prime Minister Alikhan Smailov told reporters on Thursday. The announcement reflects the country's desire to reduce its current heavy dependence on neighboring Russia as a transit route for its oil. Energy Intelligence estimates that Kazakhstan produced 1.45 million barrels per day of crude oil in October and more than 100,000 b/d of other liquids. Shipments via the BTC pipeline would be limited to around 30,000 b/d next year, Smailov said, but he added that the long-term goal is to increase volumes to around 120,000-130,000 b/d. On top of this, he said, there is scope to ship additional barrels from Georgia's Black Sea port of Batumi and to optimize existing pipeline and rail connections that run East to China and neighboring Uzbekistan. Those routes would also avoid Russia. Kazakhstan's campaign to diversify its oil exports is of particular interest to Chevron, which operates the country's largest producer, the Tengizchevroil (TCO) venture. Chevron has a 50% interest in TCO, alongside Exxon Mobil (25%), Kazmunaigas (20%) and Lukoil (5%). TCO is currently carrying out an expansion of the giant Tengiz field that will increase output by some 25% to 850,000 b/d from 2024. 10th November 2022
LEBANON	<ul style="list-style-type: none"> <u>Israel-Lebanon gas deal proceeds with TotalEnergies, Eni agreement</u> Israel signed an agreement with TotalEnergies and Eni today following its maritime border deal with Lebanon that was signed last month. What happened: The French energy company TotalEnergies and the Italian energy company Eni signed a deal with Israel to begin energy exploration in Block 9, which lies within Lebanon's territorial waters. The exploration "might" extend into Israel's waters, according to a TotalEnergies press release. What it means: Israel and Lebanon signed a US-mediated agreement on their long-disputed maritime border last month. The deal stipulated where each country can conduct energy exploration. Israel can also reportedly claim a percentage of Lebanon's future profits from any gas found in the area. 15th November 2022
MALAYSIA	<ul style="list-style-type: none"> <u>Shell revs up Malaysian sweet gas project</u> UK supermajor Shell is forging ahead with its Timi sweet gas and oil project offshore Sarawak, East Malaysia, with production start-up looking on track for next year. A major offshore campaign is now under way at the deep-water Timi field on Block SK 318, which also hosts the Rosmari-Marjoram sour gas development that Shell and its partners recently sanctioned. Informed sources confirmed Upstream's story of 21 July that Malaysia's Sapura Energy and Switzerland-headquartered Allseas were respective front runners for the transportation and installation (T&I) workscope and pipelay contract; and that both companies have commenced their respective roles. 13th November 2022
THAILAND	<ul style="list-style-type: none"> <u>Thai Joint Venture Awards Feed Contract for Third Regasification Terminal</u> A Thai joint venture has awarded a contract for Thailand's third regasification terminal, an almost 11 million ton capacity project to be located near existing terminals. Thailand, which has operational LNG import capacity of about 19 million tons, has been the largest LNG importer in the rapidly growing Southeast Asian market for the last three years. Updating the Feed Gulf MTP LNG Terminal (GMTP) has awarded a contract to Tokyo Gas Engineering Solutions which would update front-end engineering design (Feed) work and conduct tender management services for its planned regasification terminal in Map Ta Phut in Thailand. GMTP, a joint venture owned 70% by local power producer Gulf Energy Development and 30% by state PTT subsidiary PTT Tank, is a public-private partnership aimed at establishing an LNG value chain. Gulf Energy is an emerging buyer which wants to import the superchilled fuel directly to feed its gas-fired power plants. The firm said earlier that construction of the LNG terminal would take place in 2023-2027, subject to LNG demand. PTT is already the operator of Thailand's existing two import terminals at Map Ta Phut and Nong Fab. 10th November 2022

VIETNAM	<ul style="list-style-type: none"> <u>Japanese Firms Form Joint Venture for Vietnam LNG-to-Power Scheme</u> Japanese firms Tokyo Gas and Marubeni have established a joint venture with state firm Petrovietnam Power and local machinery firm Colavi for a planned LNG-to-power project in Cam Pha district in Quang Ninh province in northern Vietnam (see map). The new firm, Quang Ninh LNG Power, would conduct an economic and technical feasibility study, select an engineering, procurement and construction contractor, and formulate an LNG procurement plan. The target is to start commercial operation of the onshore import terminal and a 1.5 gigawatt LNG-fired power plant in the second half of 2027 after reaching a final investment decision. Details of individual shareholdings were not disclosed. The establishment of the joint-venture firm came shortly after the firms received an investor registration certificate from the Vietnamese government in July. The partners first signed a memorandum of understanding in 2020 when Japan’s former Prime Minister Yoshihide Suga met his Vietnamese counterpart Nguyen Xuan Phuc in Vietnam. 9th November 2022
AFRICA	
ANGOLA	<ul style="list-style-type: none"> <u>ANPG and EXXONMOBIL announce new oil discovery in Angola</u> National Agency of Petroleum, Gas and Biofuels (ANPG), ExxonMobil Angola and Block 15 partners announced last week a new oil discovery in the Bavuca Sul-1 exploration well, located 365 kilometers northwest of Luanda. The well, which is part of the Block 15 redevelopment project, was drilled through a water depth of 1,100 meters (3,608 feet) by the Valaris DS-9 drillship. It was found 30 meters (98 feet) deep, containing hydrocarbons. A press note reached ANGOP states that ExxonMobil, as operator of the Block, is implementing new technologies and a multi-annual drilling programme that foresees to produce around 40,000 barrels of oil per day. The process will contribute to offset the natural declines in production. 9th November 2022
EGYPT	<ul style="list-style-type: none"> <u>Praj & ESII partner to set up ethanol projects to accelerate bioeconomy in Egypt</u> This MoU is seen as one of the important developments at a time when calls for phasing out fossil-based resources and transition to renewable alternatives. Praj Industries Limited (Praj) has announced that they have entered into an MoU with Egyptian Sugar and Integrated In of COP27. As a part of this MoU, both parties will drive sustainable climate actions to combat evils of climate change. India's most accomplished industrial biotech company Praj and Egypt's largest sugar sector company ESII have com ethanol projects in Egypt. Praj and ESII will develop infrastructure, help formulate policy framework, and create aware Sugarcane bagasse and rice straw are envisaged to be feedstock for conceiving Egypt's first 2nd Generation ethanol p Low carbon ethanol produced from these 2G ethanol plants will be supplied as feedstock for production of specialty ch dependency on the chemicals derived from fossil route. 10th November 2022 <u>Egypt signs LNG and hydrogen deals with Germany ahead of COP27</u> The German government has <u>signed</u> two memoranda of understanding with Egypt to strengthen partnerships on liquefied natural gas (LGN) and green hydrogen. The cooperation, which was first <u>announced</u> in July, will see Germany support Egypt in building a sustainable green hydrogen sector and increasing LNG trade. The announcement comes shortly before the the start of the COP27 global climate change conference in Egypt on Sunday (6 November). “We are sending a clear signal ahead of the world climate conference: we support Egypt in putting its own energy supply on new footing and accelerating the switch from fossil to climate-friendly energies,” said economy minister Robert Habeck. He added that in the short term, LNG trade with Egypt can help Germany diversify its energy imports and become less dependent on Russian gas. 4th November 2022 <u>Fertiglobe, Scatec, Orascom, and The Sovereign Fund of Egypt starts Africa's green hydrogen plant</u> OCI N.V. has announced the commissioning of Egypt Green, which is owned, built, and operated by Fertiglobe, Scatec Sovereign Fund of Egypt, for commissioning Africa's first green hydrogen plant. The launch

	<p>of the hydrogen facility comes as world leaders gather for the United Nations COP 27 Climate Change Con seek to accelerate global climate action through emissions reduction. Unless we make sharp reductions in greenhouse warming will exceed the Paris agreement’s goal of limiting temperature rise to 1.5 degrees celsius. In order to secure affordable, accessible and sustainable energy security for future generations an accelerated shift to fuels is required. Green hydrogen, which is produced from water using renewable energy sources, has the potential to abate sectors, such as heavy industries, power and global shipping. 10th November 2022</p> <ul style="list-style-type: none"> • <u>This new project in Egypt will produce 800,000 tonnes of green hydrogen per year</u> AMEA Power and the Government of Egypt signed an agreement at COP27 to deploy a 1,000MW Green Hydrogen Project. AMEA Power, one of the fastest-growing renewable energy companies in the Middle East, has signed a Framework Agreement with the Government of Egypt to develop a 1,000MW green hydrogen project, for the production of green ammonia focused on the export market. Announced on the sidelines of COP27 in Sharm El-Sheikh, the project will support the long-term vision of Egypt to become a hub for green hydrogen production. 16th November 2022
MOROCCO	<ul style="list-style-type: none"> • <u>Morocco: New gas wells discovered in Gharb region – The North Africa Post</u> British SDX Energy Company announced on Monday the discovery of two gas wells in the Gharb region in Morocco, opening up new perspectives for the North African Kingdom to become a producing country. Further well drilling operations are planned in Morocco for 2023 to drive production and revenue growth, said the London-based oil & gas exploration & production company in a press release. Mark Reid, CEO of SDX, said: “We are pleased with the results of both the SAK-1 and KSR-20 wells. In addition to opening a new play fairway with numerous follow-on drillable targets, the wells will contribute immediately to production and revenue growth in an area where demand and gas pricing is robust. 14th November 2022
NIGERIA	<ul style="list-style-type: none"> • <u>Nigeria to build refinery with 100,000 liters per day capacity</u> Nigeria’s Gasoline Integrated International is planning to build a refining capacity of 100,000 liters per day and other petroleum products, for a total investment of 3 billion naira (\$68 million), reports say. The project, according to Ogun State Governor Dapo Abiodun, is expected to produce 400,000 liters per day in the long run. The refinery will be erected on 800 hectares of land that had already been acquired, said Governor’s Chief Press Secretary Kunle Somorin, reports say. The project will be completed in 36 months, powered by Chinese technology. “With this project, Ogun State will have security and guarantee of petroleum products at all times,” the official said. 14th November 2022 • <u>FEED work set to start on Nigeria FLNG project</u> The official launch of front-end engineering and design work on Nigeria's first floating liquefied natural gas project is set to take place in London tomorrow. Nigerian independent UTM Offshore - which aims to exploit gas from the shallow-water Yoho field as feedstock for its project - has contracted Japan's JGC, KBR of the US and Paris-based Technip Energies to handle the FEED work. Having signed an agreement to co-finance the development with Cairo-based Afreximbank earlier this year up to \$5 billion may be forthcoming UTM Offshore’s move into FEED studies signals the project is moving to its implementation phase. 15th November 2022
EUROPE	
DENMARK	<ul style="list-style-type: none"> • <u>Semco Maritime signs 5-year contract with TotalEnergies in Denmark</u> TotalEnergies has awarded Semco Maritime a 5-year contract for the provision of manpower and construction service on offshore installations in the Danish part of the North Sea. The contract covers November 2022 – October 2027 and strengthens the long-standing strategic collaboration with TotalEnergies. The contract builds on years of constructive cooperation including the ongoing re-development of the Tyra field and establishes a framework for extended collaboration in existing projects

	<p>and for the provision of manpower in ad hoc projects. Semco Maritime expects to engage a significant number of skilled onshore and offshore workers under the contract, which will cover more than 1 million workhours. “We are very pleased to strengthen our already close ties with TotalEnergies with the signing of this important contract, which we consider a vote of confidence after years of great cooperation. Ensuring efficient operations and a stable energy supply from the North Sea is of critical importance to TotalEnergies and the Danish people, and we are committed to provide an excellent team with a stellar track-record to get this job done,” says Senior Vice President Oil & Gas, Semco Maritime, Anders Benfeldt. 11th November 2022</p>
ITALY	<ul style="list-style-type: none"> • <u>Snam plans \$3.7bn investment in gas network in Italy</u> Italy’s state-controlled gas grid operator Snam is planning to invest €3.7bn (\$3.76bn) to strengthen the country’s gas network, reported Reuters. The investment is aimed at improving facilities for gas supply from the south to northern Italy and boosting imports from Africa. Snam CEO Stefano Venier was quoted by the news agency as saying that the firm plans to complete the project to build the Adriatic pipeline by 2027. Venier added: “It is an extremely important project.” Following Russia’s military war against Ukraine, the Italian Government has agreed to secure more gas from Egypt and Algeria to replace Russian gas. To increase gas production, Snam has been ordered by the government to acquire two new floating liquefied natural gas (LNG) import terminals. The firm has also been asked to help in filling gas storage tanks in the country. Venier said the company, along with investments to improve gas transport, will develop a project to create new gas storage sites in northern Italy. Snam recently received a permit to build a floating storage and regasification unit (FSRU) in the Tuscan port of Piombino in the spring, and a second FSRU off the coast of Ravenna in 2024. 11th November 2022
NETHERLAND	<ul style="list-style-type: none"> • <u>ENGIE, OCI and EEW announce their partnership on the HyNetherlands project in the Netherlands</u> ENGIE, OCI, Europe’s leading producer of methanol, and EEW, a leading company in the production of electricity and heat from waste-to-energy, announced on May 9, 2022 their collaboration on the HyNetherlands (HyNL) project, in the north of the Netherlands (province of Groningen). A major project for renewable hydrogen in the Netherlands, HyNetherlands aims to develop, build and operate one of the first large-scale industrial value chains in Europe for the production of e-methanol, combining renewable hydrogen and biogenic CO₂. The first phase of the project, which directly involves ENGIE, will see the construction, on the site of the Eems power plant in Eemshaven, of a new 100 MW electrolysis facility, five times larger than the existing plants on the market. Fuelled by renewable electricity production from offshore wind fields in the North Sea, it will produce the renewable hydrogen needed to produce e-methanol and for the local mobility and industrial sectors. The HyNL project also links two other industrial sites: the Delfzijl chemical park in Farmsum (OCI’s BioMCN methanol plant) and the waste-to-energy plant in Farmsum (where EEW’s biogenic carbon capture plant from the flue gases of the production lines will be integrated). 10th November 2022
NORWAY	<ul style="list-style-type: none"> • <u>Wood bags FEED contract for green hydrogen production facility</u> Wood has been awarded the front-end engineering design (FEED) scope for Gen2 Energy’s green hydrogen production Norway. Gen2 Energy is a Norwegian company dedicated to developing, building, owning and operating an integrated value chain having several large-scale production facilities for green hydrogen, making it easy and cost efficient for consumers to a Wood will apply its decades of hydrogen expertise and breadth of project implementation capabilities to develop the new commercial green hydrogen production facility in Norway. Lars Fredrik Bakke, Wood’s Vice President of Norway said, “We are excited to support Gen2 Energy and enable the ac Norway. With our deep domain expertise in hydrogen projects, we are well positioned to support the delivery of large-s role in enabling a transition to a lower carbon energy mix. 12th November 2022 • <u>Wintershall Dea hands in amended plan for Norwegian field</u>

	<p>Operator Wintershall Dea and licensees Petoro and Sval Energi have submitted the amended plan for the development and operation of the Maria field to Norway’s Ministry of Petroleum and Energy. Located at a depth of 300 meters in the Norwegian Sea, the Maria field started production in 2017 from two subsea facilities. The project features two underwater installations (subsea templates) above the Maria reservoir that are connected via a pipeline network to the existing Kristin, Heidrun, and Åsgard B platforms. 15th November 2022</p>
NORTH & SOUTH AMERICA	
BRAZIL	<ul style="list-style-type: none"> • <u>Malaysian contractor to design FPSO for Petrobras Upstream Online</u> Ranhill Worley tasked with detailed design of P-82's topsides, floater destined for Buzios field offshore Brazil. Malaysia’s Ranhill Worley has won a \$27 million contract to provide detailed engineering services for the newbuild P-82 floating production, storage and offloading vessel that Sembcorp Marine is constructing for Petrobras’ Buzios ultra-deepwater field development offshore Brazil. Ranhill Worley has been tasked to provide topsides engineering services for the detailed design and follow-on phases of this floater project. The P-82 FPSO’s topsides will comprise around 20 modules with combined dry weights of 46,600 tonnes and be equipped with facilities including power generation, CO2 removal and compression, oil processing and produced water treatment, utilities, a vapour recovery unit system, flare system, chemical and storage, gas injection, gas lift and water injection. 15th November 2022
CANADA	<ul style="list-style-type: none"> • <u>Indigenous group plans \$451 million biofuel refinery in Canada</u> An Alberta-based Indigenous group and local first nation plan to build a C\$600 million (\$451 million) sustainable aviation fuel refinery to supply Calgary International Airport in an effort by Indigenous communities to capitalize on Canada’s push to reduce emissions. Reconciliation Energy Transition Inc. and the Siksika Nation’s planned refinery would produce 6,500 barrels a day of fuel from canola grown on a million acres of land, much of it Indigenous-owned, Steve Mason, senior managing director of Reconciliation, said by phone. The partnership would own at least 60 per cent of the refinery and is in discussions with outside, mostly agricultural companies to sell most of the remaining stake. The project would be financed with a combination of debt and equity. A final investment decision is expected within six months. The project marks an effort by indigenous communities to gain a foothold in a Canada-wide push by the government and companies to reduce the country’s carbon footprint, among the largest per capita of any industrial country. The refinery announcement happened the same day as Canada’s Minister of Natural Resources Jonathan Wilkinson said the government would grant C\$800 million for approximately 60 projects to cut carbon emissions in fuels. 15th November 2022
GUYANA	<ul style="list-style-type: none"> • <u>EIL bags Integrated NGL and CCGT Power Plant project in Guyana</u> EIL shall provide consultancy services for setting up the Integrated Plant and manage the EPC of the project on behalf of the Government of the Republic of Guyana. Engineers India Limited (EIL) has been entrusted by the Republic of Guyana to render the Project Management Consu Natural Gas Liquids (NGL) Plant and 300 MW CCGT Power Plant project in Guyana with an estimated contract value o As part of this assignment, EIL shall provide consultancy services for setting up the Integrated Plant and manage the E the project on behalf of the Government of the Republic of Guyana. Engineers India Ltd. is a leading global engineering consultancy and EPC company and provides its services ranging f its inception in the year 1965. EIL diversified its operation in the other sectors such as fertilizers, power, water and was storages, infrastructure, green technologies etc. other than its robust Oil & Gas portfolio. The stated project in the Republic of Guyana is another milestone achieved by EIL towards its commitment to go beyon active in providing services in the Middle East, Africa, Central, and South East Asia and this project will further bolsterand this project will further bolster EIL’s presence in the international market. 11th November 2022

USA

- **Stamicarbon signs agreement for a feasibility study for keystone natural gas synthesis project in Pennsylvania**

Stamicarbon, the innovation and license company of Maire Tecnimont Group, has signed an agreement for a feasibility study with KeyState Natural Gas Synthesis, a company located in north-central Pennsylvania in the United States of America, to become its Urea & DEF (Diesel Exhaust Fluid) technology licensor. This project is expected to produce hydrogen, automotive-grade urea, and ammonia, while capturing and permanently storing carbon dioxide (CO₂) emissions associated with hydrogen production. This study is one of Pennsylvania's first developments for producing low-carbon hydrogen and other products like carbon capture and storage (CCS). Using the latest CCS technology, carbon will be removed during the process and sequestered permanently underground. Highlighting the long-term positive effects of this project, Perry Babb, KeyState's CEO had this to say; "This KeyState project aligns with the job creation and economic impact objectives contained in the Inflation Reduction Act, which supports Appalachian communities that can benefit from the energy transition. He said, "Emission reduction and great job creation can happen together and make a tremendous difference in many areas. **11th November 2022**

- **Shell, Equinor Team Up for More US Gulf Exploration**

Shell and Equinor have completed a commercial deal involving five exploration targets and several leases in the US Gulf of Mexico as the companies drill ahead on their first well together in an emerging part of the Walker Ridge area. Both companies confirmed the deal, which involves at least 19 deepwater blocks. Shell said it will operate all the acreage. Shell has acquired a 35% operated interest in four prospects co-owned by Equinor in the Walker Ridge area and Equinor has taken a 25% interest in a Shell-operated prospect also in Walker Ridge," a Shell spokesperson told Energy Intelligence. "As a result of this deal, Shell has simultaneously diluted a working interest position while expanding its overall footprint in prospects across the [US Gulf], where Shell is a leading operator and the largest deepwater leaseholder." The deal highlights the growing relationship between Shell and Equinor in the US Gulf. Earlier this year, Shell took over from Equinor as operator on the Sparta development (formerly North Platte) in Garden Banks. The companies hope to bring that discovery on line later this decade. The two are also partners on some Shell-led projects in Alaminos Canyon. **10th November 2022**

- **Suriname launches offshore oil and gas bid round**

Suriname has launched a bid round for six offshore oil and gas concessions, the national market regulator announced on Tuesday. Staatsolie Maatschappij Suriname has put blocks 63, 64, 65, 66, 67 and 68 on offer. The plays cover an area of around 44,000 square kilometres and sit in water depths of 400 metres to 3,500 metres just east of major discoveries made by TotalEnergies and APA Corporation on Block 58 in 2021. Four wells have been drilled on the offered blocks in the past, including Araku-1 drilled by Tullow Oil in 2017, Anapie-1 drilled by Kosmos Energy in 2018 and Goliathberg Voltzberg North-1 drilled by Tullow Oil in 2021. According to the regulator, the plays hold a resource potential of 41 billion barrels of oil. Data on the acreage will be available on November 28, 2022, and close the following April. Bids must be submitted by May 31, 2023. **11th November 2022**

- **Sempra Infrastructure and Williams announce preliminary agreements for LNG offtake, gas supply, and associated pipeline projects**

Sempra Infrastructure, a subsidiary of Sempra, has announced it has entered into a heads of agreement (HOA) with Williams for the offtake of liquefied natural gas (LNG) and development of associated natural gas pipeline projects to further connect abundant U.S. natural gas supplies in the Gulf Coast region to markets around the world. The HOA contemplates negotiation and finalisation of two 20-year long-term sale and purchase agreements for approximately 3 million tonnes per annum (Mtpa) of LNG in the aggregate from the Port Arthur LNG project under development in Jefferson County, Texas, and the Cameron LNG Phase 2 project under development in Hackberry, Louisiana. The HOA also contemplates the negotiation of a separate natural gas sales agreement for approximately 0.5 billion cubic feet per day (Bcfd) to be delivered in the Gillis, Louisiana area, as feed gas supply for the referenced LNG projects. **16th November 2022**

- **QatarEnergy and Chevron Phillips to build \$8.5bn polymers facility in USA**

QatarEnergy and Chevron Phillips Chemical Company LLC (CPChem) announced that they have taken a Final Investment Decision (FID) on the Golden Triangle Polymers Plant, an \$8.5 billion world-scale integrated polymers facility in the Texas Gulf Coast area in the United States of America. Located about 180 kilometers east of Houston, the plant will include an ethylene cracker unit with a capacity of 2.08 million tons per annum, making it the largest in the world, and two high-density polyethylene units with a combined capacity of 2 million tons per annum, also making them the largest derivatives units of their kind in the world. Construction of the plant will begin immediately, with an expected startup date in 2026. The plant will be owned by Golden Triangle Polymers Company LLC, a joint venture in which QatarEnergy holds a 49% equity interest with 51% held by CPChem. **17th November 2022**

Mailing address is:

info@gerabgroup.com

Gerab National Enterprises L.L.C.

PO Box 17719, Jebel Ali Free Zone

Dubai, United Arab Emirates

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