

LNG Review December 2022

- Recent issues and events -

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Introduction

Germany became the latest LNG importing country when the country's first two of the planned FSRU (floating storage and regasification unit) -based import terminals in Wilhelmshaven and Lubmin received their respective commissioning cargoes in December 2022.

Several LNG production projects continued their progresses in the month. Notably, Sempra Infrastructure of the United States announced four long-term SPAs (sales and purchase agreements) from its Port Arthur Phase 1 project during the last forty days of the year amounting to 9.5 million tonnes per year with buyers including those in Europe and China.

NextDecade Corporation's Rio Grande LNG project also secured additional offtake commitments for 1.5 million tonnes per year in December 2022.

In the calendar year 2022, LNG sales deals (SPAs / HOAs (heads of agreement with binding commitment)) amounting to 64 million tonnes per year of North American LNG production were announced, representing a significant majority of the total 74 million tonnes of long-term deals announced during the year. Out of the 74 million tonnes, Chinese companies' procurement deals represented 15 million tonnes per year, while European end-use LNG customers also procured at least 17 million tonnes per year under long-term deals. Japanese companies also made term LNG offtake commitments in late December.

Northeast Asia (Japan, Korea, China and Chinese Taipei) imported 17.36 million tonnes of LNG in November 2022, a 6% decrease from November 2021, while the European Union and the United Kingdom increased their combined imports more than 70% in the same month. The average import price of LNG in Northeast Asia in November 2022 was USD 18.80 per million Btu, declining for two months in a row, as import prices went down in Japan and China from their highs in September and October.

Although China's LNG import was smaller than that of one year earlier (5% less for November and 20% less for the first eleven months of the year), the country imported much more in November than it did in October 2022.

* The writer belongs to Gas Group, Fossil Energy and International Cooperation Unit. Some information pieces that some readers may consider very important may not be included due to different reasons.

[Asia Pacific]

Japan's INPEX CORPORATION announced on 22 December 2022 that it had commenced exploratory onshore drilling operations at a location north of the INPEX-operated Minami-Nagaoka Gas Field in Niigata Prefecture, Japan.

Mitsui O.S.K. Lines, Ltd. (MOL), its group company Ferry Sunflower Limited, and Kyushu Electric Power Co., Inc. (Kyuden) announced on 22 December 2022 that the Sunflower Kurenai, Japan's first LNG-fuelled ferry, received its first LNG fuel supply at the Port of Beppu in Oita Prefecture from Kyuden.

Samudera Shipping Line Ltd. announced on 14 December 2022 that the company had entered into a share purchase agreement dated 6 December 2022 for the purchase of 8,599,702 ordinary shares of LNG East-West Shipping Company (Singapore) Pte. Ltd. (LNG EW) from Nippon Yusen Kabushiki Kaisha (NYK). Samudera Shipping Line is an existing shareholder of LNG EW. Samudera Shipping Line's shareholding in LNG EW increases from 25% to 50%. NYK owns the remaining 50% shareholding interest in LNG EW.

According to China's NDRC (National Development and Reform Commission), the country consumed 31.95 bcm of natural gas in November 2022, 1.5% less than one year ago. During the first eleven months of the year, the country consumed 331.9 bcm, a decrease of 1.2% year-on-year.

India's Petronet LNG said on 15 December 2022 that the company had signed an agreement with Gopalpur Ports Ltd for a floating LNG receiving facility with a capacity of 4 million tonnes per year at the Gopalpur port in Odisha.

Mitsui O.S.K. Lines, Ltd. (MOL) and GAIL (India) Limited, through a wholly owned MOL subsidiary, on 20 December 2022, signed a time charter contract for a newbuilding LNG carrier and agreed on joint ownership of an existing LNG carrier. The new building vessel will be the second MOL Group LNG carrier serving GAIL, following a contract for the first vessel in 2019. The existing vessel still has been chartered to GAIL through a wholly owned MOL subsidiary from 2021.

The Australian Treasury and the Department of Climate Change, Energy, the Environment and Water announced on 9 December 2022 that they were seeking input on the design of the gas elements of the government's plan to address high energy prices and ensure that the country's wholesale gas markets deliver adequate supply at reasonable prices and on reasonable terms to domestic users.

Australia's Woodside said on 13 December 2022 that while the company supported policies that aimed to bring down cost of living pressures for Australian households, the Federal Government's broader plan to intervene in the Australian gas market would not meet this objective and could make matters worse.

Australia's parliament on Thursday 15 December 2022 passed legislation setting a price cap on natural gas for one year. The price cap will apply to new wholesale gas sales by east coast producers.

Australia's Origin Energy announced on 21 December 2022 that the company was on track to complete its due diligence early in the new year over an AUD 18.4 billion buyout offer from a two-firm consortium comprising Brookfield Asset Management Inc., together with its affiliates and their managed funds (Brookfield), and MidOcean Energy (MidOcean), an LNG company formed and managed by EIG, to acquire all the issued shares in Origin.

Australia's Woodside announced on 7 December 2022 that Woodside Energy (Bass Strait) Pty Ltd had entered into a gas sales agreement (GSA) with Qenos Pty Ltd for supply of natural gas from Woodside's equity position in Bass Strait. The GSA covers the supply of 4.5 petajoules (approximately 80,000 tonnes) of gas in 2023 for use at Qenos' polyethylene manufacturing facilities at Altona in Victoria and Botany Bay in New South Wales. Woodside is a non-operating joint venture participant in the Bass Strait Project.

Australia's Jemena announced on Wednesday, 14 December 2022, that it was partnering with engineering and construction firms Zinfra, Nacap, and Wasco to connect Australia's first LNG import terminal at Port Kembla to the Eastern Gas Pipeline (EGP). The partners will build a 12 km underground pipeline which will transport up to 130 petajoules of gas (2.39 million tonnes) per year from Squadron Energy's Port Kembla Energy Terminal (PKET) to customers in NSW and Victoria via the EGP.

Australia's Woodside announced on 20 December 2022 that Woodside Burrup Pty Ltd and the North West Shelf Project participants had entered into separate nonbinding agreements with Western Gas outlining the key terms and process for undertaking joint technical studies and negotiating and finalising agreements for the processing of 2 - 3 million tonnes per year of Equus gas from 2027. It is proposed that Equus gas would be produced on a floating production storage and offloading facility and transported through a 200 km pipeline to the Pluto LNG facility. It is proposed that prior to capacity being available in Pluto Train 1 the Equus gas be transported via the Pluto-KGP Interconnector for processing and export at the Karratha Gas Plant (KGP) with processing and export via Pluto Train 1 to commence once processing capacity becomes available. First LNG for the gas processing opportunity is targeted in 2027, with a target aggregate production of 2 - 3 million tonnes per year of LNG and 50 - 75 TJ/d (0.335 - 0.5 million tonnes per year) of domestic gas.

Shell has suspended production at its Prelude floating LNG following a fire.

Australia's Santos announced on 14 December 2022 that it had entered into a new gas supply agreement with the Walyering joint venture in the Perth Basin. Santos will purchase a total of 36.5 petajoules (0.67 million tonnes) of gas from the Walyering field over

five years, commencing in the first half of 2023. The gas is to be delivered into Santos' WA domestic sales gas portfolio.

ATCO Australia announced on 5 December 2022 the commissioning of two hydrogen projects in Western Australia; blending hydrogen into the natural gas network and a hydrogen refuelling station. ATCO, in partnership with Fortescue Future Industries (FFI), has constructed WA's first Hydrogen Refuelling Station (HRS) that will be utilised by a fleet of 16 Toyota Mirai's. The HRS, located at ATCO's Jandakot depot, will use the renewable hydrogen generated by the Clean Energy Innovation Hub.

Australia's Santos said on 2 December 2022 that the company did not anticipate any material cost or schedule impact, and first gas from the Barossa Gas Project remained on track to be delivered in the first half of 2025, in spite of the Federal Court decision on the day to set aside NOPSEMA's (National Offshore Petroleum Safety and Environmental Management Authority) approval of the project's Drilling Environment Plan.

Australia's Woodside said on 2 December 2022 that the company was reconsidering the potential development of Greater Sunrise via an onshore LNG export plant in Timor Leste.

Korea's Samsung Heavy Industries (SHI) announced on 22 December 2022 that it had won an order for an offshore production facility from a client in Asia.

Japanese joint venture partners (Mitsubishi Corporation, INPEX CORPORATION, JX Nippon Oil & Gas Exploration Corporation, MITSUI & CO., LTD., LNG JAPAN CORPORATION, Sumitomo Corporation, and Sojitz Corporation) of the Tangguh LNG Project led by bp as the project operator, announced on 23 December 2023 that the Government of Indonesia had approved a 20-year extension of Tangguh Production Sharing Contract (PSC). The Tangguh PSC consists of Berau, Muturi and Wiriagar PSCs.

[North America]

Sempra announced on 1 December 2022 that it had entered into a long-term sale and purchase agreement (SPA) with INEOS. INEOS has agreed to purchase 1.4 million tonnes per year of LNG delivered free-on-board (FOB) from the proposed Phase 1 of Sempra's Port Arthur LNG project in Jefferson County, Texas for 20 years. The companies have also signed a non-binding heads of agreement (HOA) for INEOS' potential purchase of an additional 0.2 million tonnes per year from the Port Arthur LNG Phase 2 project. Sempra intends to make a final investment decision for Phase 1 in the first quarter of 2023, with first cargo deliveries expected in 2027.

Sempra announced on 6 December 2022 that it had entered into a long-term sale and purchase agreement (SPA) with ENGIE S.A. for LNG from Phase 1 of the Port Arthur LNG project. ENGIE has agreed to purchase approximately 0.875 million tonnes per year of

LNG for 15 years on a free-on-board (FOB) basis, and sourced from natural gas producers whose gas has been certified by an independent third party in accordance with environmental, social and governance (ESG) performance criteria, according to the announcement.

Sempra announced on 28 December 2022 that it had entered into a long-term sale and purchase agreement (SPA) with RWE Supply & Trading, a subsidiary of RWE, for the supply of approximately 2.25 million tonnes per year of LNG from the Port Arthur LNG Phase 1 project on a free-on-board (FOB) for 15 years. The agreement also provides a framework to explore ways to lower the carbon intensity of LNG produced from the Port Arthur LNG Phase 1 project through GHG emission reduction, mitigation strategies and a continuous improvement approach. Sempra Infrastructure recently announced it has entered into long-term agreements with ConocoPhillips, INEOS and ENGIE for the sale and purchase of approximately 7.3 million tonnes per year of LNG from the proposed Phase 1 project.

Freeport LNG said on Friday 23 December 2022 that the company does not anticipate commencing the initial restart of its liquefaction facility until the second half of January 2023. As of 23 December 2022, the reconstruction work is substantially complete, and the company is submitting responses to the last remaining questions included in the Federal Energy Regulatory Commission's data request of 12 December.

Osaka Gas announced on 22 December 2022 that its wholly owned subsidiary, Osaka Gas USA (OGUSA), had signed a memorandum of understanding (MOU) with Tallgrass MLP Operations, LLC, a leading energy infrastructure company, and Green Plains Inc. an owner of bioethanol refineries, to conduct a joint feasibility study on a project to produce synthetic methane (e-methane) by methanation in the Midwest United States. The project partners aim to produce e-methane from natural gas-based blue hydrogen and biomass-based carbon dioxide (CO₂) that will be captured at bioethanol refineries owned and operated by Green Plains. The targeted e-methane production volume is up to 200,000 tonnes per year by 2030. The possibility of utilizing green hydrogen in the future is also included in the scope of the joint study. The project is scheduled to complete the feasibility study by around July 2023. The joint study includes the technological assessment for a blue hydrogen plant and an e-methane plant as well as the site analysis for the carbon capture and storage (CCS) of CO₂ generated in the hydrogen production. Osaka Gas also plans to examine the schemes to liquefy e-methane at the Freeport LNG plan.

NextDecade Corporation announced on 20 December 2022 the execution of a sale and purchase agreement (SPA) with Galp Trading S.A., for the long-term supply of LNG from NextDecade's Rio Grande LNG (RGLNG) export project in Brownsville, Texas. Under the 20-year SPA, Galp will purchase 1 million tonnes per year of LNG indexed to Henry Hub on a free-on-board basis. NextDecade is targeting a positive Final Investment Decision (FID) on

the first three trains of the RGLNG export project during the first quarter of 2023, with FIDs of its remaining trains to follow thereafter.

NextDecade Corporation announced on 27 December 2022 a volume increase of the sale and purchase agreement (SPA) with ENN LNG (Singapore) Pte Ltd (ENN), a wholly-owned subsidiary of ENN Natural Gas Co., Ltd. for the supply of LNG from NextDecade's Rio Grande LNG (RGLNG) export project. Under the 20-year SPA, ENN will now purchase 2.0 million tonnes per year of LNG. This is a 0.5 million tonnes per year increase from the original 1.5 million tonnes per year SPA announced earlier in 2022. All volumes of LNG are indexed to Henry Hub and will be supplied from the first three trains at RGLNG on a free-on-board basis.

Japan's INPEX CORPORATION and Venture Global LNG announced on 27 December 2022 that INPEX Energy Trading Singapore Pte. Ltd. (IETS), a Singapore-based subsidiary, and Venture Global CP2 LNG, LLC, a subsidiary of Venture Global LNG, had signed a 20-year sales and purchase agreement for one million tonnes per year of LNG. Venture Global LNG's CP2 LNG project is expected to begin construction in 2023 in Louisiana. The LNG will be delivered to INPEX's Naoetsu LNG Terminal as well as other terminals of customers in Japan and other countries. INPEX aims to handle about 10 million tonnes per year by 2030 combining its equity volume from current projects.

Energy Transfer LP announced on 15 December 2022 its subsidiary, Gulf Run Transmission LLC had received FERC (Federal Energy Regulatory Commission) approval to place the Gulf Run pipeline in service delivering natural gas to meet the demand along the Gulf Coast and international markets. The pipeline in Louisiana has a capacity of 1.65 Bcf/day. Energy Transfer owns and operates approximately 120,000 miles (193,116 km) of pipeline and related infrastructure across 41 states transporting natural gas, crude oil, natural gas liquids and refined products. Energy Transfer also owns Lake Charles LNG Company.

Australia's Woodside announced on 20 December 2022 that it had awarded a contract to Air Liquide Engineering and Construction (Air Liquide) for the liquefaction equipment at its proposed H2OK hydrogen project in Ardmore, Oklahoma. Air Liquide will provide the engineering and fabrication of two 30 tonne per day liquefaction units which will liquefy hydrogen produced through electrolysis. The awarding of the liquefaction equipment contract follows Woodside's selection of Nel Hydrogen Electrolyser AS, a subsidiary of Nel ASA, to design and develop alkaline electrolyser equipment for H2OK. The proposed H2OK project site in Ardmore is located close to national highways and the supply chain infrastructure of major transport companies, with good availability of water and renewable energy. Woodside is targeting a final investment decision for H2OK in 2023. In addition to H2OK, Woodside is working on proposed hydrogen projects in Australia, H2Perth and

H2TAS, and was recently named the preferred partner to move forward to the development stage of the proposed Southern Green Hydrogen project in New Zealand.

Williams announced on 15 December 2022 that it had reached an agreement to acquire MountainWest Pipelines Holding Company (MountainWest) from Southwest Gas Holdings, Inc.. MountainWest comprises roughly 2,000-miles (3,219 km) of interstate natural gas pipeline systems primarily located across Utah, Wyoming and Colorado, totalling 8 Bcf/d of transmission capacity. MountainWest also holds 56 Bcf of total storage capacity.

The Canadian Energy Regulator (CER) issued on 14 December 2022 a 40-year Licence to export LNG to Ksi Lisims LNG, a proposed 12-million-tonne-per-year natural gas liquefaction project. The project's commercial operations are planned to start in late 2027 or 2028. The Ksi Lisims LNG's application was submitted to CER in April 2022.

Sempre Infrastructure announced on 22 December 2022 that Energía Costa Azul, S. de R.L. de C.V. (ECA LNG) and Vista Pacifico, S.A.P.I. de C.V. (Vista Pacifico LNG) had received authorization from the U.S. Department of Energy (DOE) to re-export U.S.-sourced LNG from Mexico to non-Free Trade Agreement (FTA) nations. Vista Pacifico LNG is authorized to re-export up to 200 Bcf per year of LNG from U.S.-sourced natural gas from the project under development in Topolobampo, Sinaloa, Mexico. Vista Pacifico LNG is projected to be a mid-scale facility with approximately 3.5 million tonnes per year of export capacity. Sempra Infrastructure is advancing the development of Vista Pacifico LNG in collaboration with Mexico's CFE (Comisión Federal de Electricidad). The DOE also increased the authorized export volumes of ECA LNG Phase 2, permitting it to re-export up to 636 Bcf per year of LNG from U.S.-sourced natural gas from the proposed project in Ensenada, Baja California, Mexico. The proposed ECA LNG Phase 2 is expected to be comprised of two trains and one LNG storage tank and produce approximately 12 million tonnes per year of export capacity. ECA LNG Phase 1 received non-FTA export authorization in 2019 and is under construction with commercial operations expected in 2025.

[Middle East]

Oman LNG announced on 27 December 2022 the signing of binding sheet agreements with three Japanese firms for the delivery of LNG, starting in 2025. ITOCHU Corporation, JERA Co., Inc. and Mitsui & Co, Ltd have agreed to purchase 2.35 million tonnes per year of LNG - based on contracts varying from 5 to 10 years - ITOCHU 0.8, JERA 0.8 (for 10 years) and Mitsui & Co. 0.75.

Chevron announced on 8 December 2022 that it had taken a final investment decision (FID) to expand the Tamar field, offshore Israel. Chevron Mediterranean has a 25% stake in the project. The first phase involves a third 150 km pipeline from the Tamar field to

the Tamar platform. This will be upgraded to be able to deliver 1.2 billion cubic feet per day of natural gas. Chevron expects to complete this work in early 2025.

[Africa]

The Japan Bank for International Cooperation (JBIC) announced on 30 December 2022 a loan agreement in project financing amounting to up to USD 35 million (JBIC portion) with SENEGAL LNGT COMPANY LIMITED (SLNG) in the Republic of the Marshall Islands, which is incorporated by Mitsui O.S.K. Lines, Ltd. (MOL). The loan is co-financed with MUFG Bank, Ltd., bringing the total co-financing amount to approximately USD 71 million. In Senegal, there is an ongoing project in which a floating storage and regasification unit (FSRU) owned by SLNG will regasify LNG, which will then be used to generate electricity on an LNG powership. The generated electricity will be sold to Société nationale d'électricité du Sénégal (Senelec), a state-owned power company in the country.

Eni announced on 22 December 2022 that the company had signed a contract with Wison Heavy Industry for the construction and installation of a Floating Liquefied Natural Gas (FLNG) unit with a capacity of 2.4 million tonnes per year. The FLNG will be deployed offshore the Republic of Congo. The 380 metres long and 60 metres wide vessel will be anchored at a water-depth of around 40 metres and will be able to store over 180,000 cubic meters of LNG and 45,000 cubic meters of LPGs. The facility will be the second FLNG to be deployed in the Republic of Congo, the first one being Tango FLNG (0.6 million tonnes per year capacity), with LNG production expected to begin in 2023. With the second FLNG, overall LNG production capacity on Marine XII will reach 3 million tonnes per year in 2025.

JGC Holdings Corporation announced on 19 December 2022 that a ceremony was held in Mozambique on 23 November to celebrate the 1st LNG cargo shipment from Coral South project, operated by Eni on behalf of Area 4 Partners. JGC Corporation, which operates the overseas engineering, procurement and construction (EPC) business of the JGC Group, implemented the Engineering, Procurement, Construction, Installation & Commissioning (EPCIC) for the Coral Sul FLNG, in a consortium with Technip Energies N.V., TechnipFMC plc and Samsung Heavy Industries Co., Ltd.

[Europe / Russia]

The EU and Japan signed on 2 December 2022 a Memorandum of Cooperation (MoC) to spur innovation and develop an international hydrogen market.

IEA released on 12 December 2022 a new report - How to Avoid Gas Shortages in the European Union in 2023 - setting out actions that Europe could take to build on the progress in 2022 in reducing reliance on Russian gas supplies and filling gas storage ahead

of the winter. The European Union faces a potential shortfall of almost 30 billion cubic metres of natural gas in 2023 - but this gap can be closed and the risk of shortages avoided through stronger efforts to improve energy efficiency, deploy renewables, install heat pumps, promote energy savings and increase gas supplies, the IEA says.

The EU Agency for the Cooperation of Energy Regulators (ACER) announced on 1 December 2022 a plan to establish an Expert Group on LNG Price Assessment/Benchmarks. Application deadline is 14 December. The proposed new Council regulation on enhancing solidarity through better coordination of gas purchases, exchanges of gas across borders and reliable price benchmarks tasks ACER with developing an LNG price assessment tool by collecting real-time information on all daily transactions.

EU energy ministers on 19 December 2022 reached a political agreement on a Council regulation that sets a market correction mechanism to protect citizens and the economy against excessively high prices, with a temporary price cap of €180/MWh for TTF front-month derivative contracts.

The European Council on 19 December 2022 reached an agreement (general approach) on a proposal to track and reduce methane emissions in the energy sector. The proposal introduces new requirements for the oil, gas and coal sectors to measure, report and verify methane emissions (MRV) at the highest standard.

The Prime Minister of the United Kingdom and the President of United States announced on 7 December 2022 the new 'UK-US Energy Security and Affordability Partnership'. The initiative will be steered by a new UK-US Joint Action Group. The group will work to ensure the market delivers sustained increases in the supply of LNG to the United Kingdom from the United States. The United States will strive to export at least 9 -10 bcm of LNG over the next year via the United Kingdom terminals, more than doubling the level exported in 2021.

Netherlands' Gasunie announced on 12 December 2022 that the company was investigating options for further temporary expansion of LNG import capacity in the Netherlands. Both existing and new sites are being looked at. For instance, there are plans to further expand the existing LNG facilities in Eemshaven (EemsEnergyTerminal) and in Rotterdam (Gate) on the basis of technical optimisations. In addition, one or more new (floating) LNG terminals will have to ensure a sufficient supply of gas next year as well. For this, the port of Terneuzen is currently in the picture.

Netherlands' VTTI said on 12 December 2022 that the company was exploring the development of a floating LNG facility. In time, VTTI plans to use the infrastructure for the import of green energy carriers such as hydrogen. VTTI aims to bring the facility operational in the beginning of 2024.

Germany's EnBW announced on 8 December 2022 that the company had booked 3 bcm per year capacity of LNG at the Hanseatic Energy Hub in Stade beginning with commissioning. EnBW will have the option to move to ammonia as a hydrogen-based energy source at a later date. This possibility is open to all Hanseatic Energy Hub customers with a long-term contract of more than 10 years.

Germany's Uniper announced on 15 December 2022 that the Höegh Esperanza Floating Storage and Regasification Unit (FSRU) had arrived in Wilhelmshaven. The FSRU loaded LNG in Spain. Uniper announced on 17 December that the first German floating terminal for importing LNG had been commissioned for service. At the request of the Federal Republic of Germany, Uniper will be operating the terminal. The FSRU was chartered and made available by the Federal Republic of Germany. Höegh LNG Holdings Ltd. announced on 15 December 2022 that it had signed a binding 10-year Time Charter Contract with the German Federal Ministry for Economic Affairs and Climate Action.

Germany's Deutsche ReGas announced on 16 December 2022 that the FSRU (Floating Storage & Regasification Unit) NEPTUNE had arrived at the Lubmin port after a stopover at Mukran Port on Rügen and the final preparatory work to be the first and so far only privately financed LNG terminal. Deutsche ReGas announced on 30 December that the CORAL FURCATA had entered the port of Lubmin with the first LNG cargo. The LNG was originally picked up by HISPANIA from Egypt's Idku plant.

Germany's Uniper announced on 19 December 2022 that the German Federal Government and Uniper had concluded a framework agreement to concretize the measures to stabilize Uniper agreed between the Federal Government, Uniper and Fortum on 21 September 2022. The company said the agreement formed the basis for the state stabilization of Uniper in the form of a capital increase of EUR 8 billion and for the creation of authorized capital of EUR 25 billion. Uniper announced on 20 December that the European Commission had approved the stabilization package for Uniper under state aid law.

Norway's Equinor announced on 20 December 2022 that the Snøhvit partners would invest NOK 13.2 billion in upgrading the Hammerfest LNG plant, HLNG, at Melkøya. The project involves gas onshore compression and electrification and will secure the future of HLNG. Equinor submitted a plan for development and operation (PDO) of Snøhvit Future to the Minister of Petroleum and Energy. Onshore gas compression will provide enough flow from the reservoir to extend plateau production and maintain high gas exports from HLNG beyond 2030. Electrification will reduce CO₂ emissions from HLNG by around 850,000 tonnes per year, the announcement said.

Gasgrid Finland announced on 20 December 2022 that construction work on the port terminal for the LNG floating terminal had been completed in the deep harbour area in

Inkoo. The work began in August 2022 and the contract included the pier and mooring structures and systems needed by the floating storage and regasification unit (FSRU) as well as the construction of a 2.2-km gas pipeline.

Excelerate Energy, Inc. announced on 28 December 2022 that its floating storage and regasification unit (FSRU) Exemplar arrived at the port of Inkoo, Finland. The FSRU was earlier loaded with a partial cargo of LNG as the initial commissioning cargo for the terminal. The FSRU Exemplar is chartered to Gasgrid Finland Oy for ten years. In addition to providing regasification services under the Time Charter with Gasgrid, Excelerate, through its recently formed Finnish gas marketing subsidiary, Excelerate Finland Gas Marketing Oy, has executed an agreement for the sale of commissioning volumes and regasification capacity rights during the commissioning phase. Through this agreement, Excelerate Finland will be able to provide natural gas to downstream customers in Finland and other Baltic countries.

Spain's TSO (Transmission System Operator) Enagás announced on 16 December 2022 that the Sagunto regasification plant had been in charge of loading the Höegh Esperanza, the first vessel to operate as a Floating Storage and Regasification Unit (FSRU) in Germany.

Spain's Enagás announced on 13 December 2022 that the company, the French TSOs GRTgaz and Teréga and the Portugal's TSO REN had signed a Memorandum of Understanding (MoU) to formalise their commitment to collaborate on the joint development of H2MED. The objective of this partnership is to make the infrastructure available as of 2030. The three countries decided on 20 October 2022 to accelerate the development of energy interconnections and to create a green energy corridor connecting Portugal, Spain and France with the EU energy network. They also agreed on the conclusion of a hydrogen interconnection between Portugal and Spain (Celorico-Zamora) as well as the development of a maritime pipeline connecting Spain and France (Barcelona-Marseille) in order to transport renewable hydrogen from the Iberian Peninsula to Central Europe. The three leaders ratified this commitment in the Euromed Summit on 9 December.

Further to its principles of conduct defined for its activities in relation to Russia, published on 22 March 2022, TotalEnergies said on 9 December 2022 that it had started to withdraw from its Russian assets while ensuring that it continues to supply gas to Europe. TotalEnergies holds a 19.4% stake in the company Novatek, a stake that it cannot sell given the prevailing shareholders' agreements, as it is forbidden for TotalEnergies to sell any asset to one of Novatek's main shareholders who is under sanction.

France's GTT announced on 2 January 2023 that after an analysis of European sanction packages prohibiting engineering services with Russian companies, it was ceasing its activities in Russia, by suspending its contract with Zvezda Shipbuilding Complex as of 8

January. GTT has been involved in Russia in the tank design of 15 ice-breaking LNG carriers under construction by Zvezda, as well as in the design of three GBSs (Gravity Based Structure units).

Russia's Gazprom announced on 21 December 2022 that the Kovyktinskoye gas condensate field and the Kovykta-Chayanda section of the Power of Siberia gas pipeline had begun operation. The Kovykta field is the largest in terms of gas reserves in the East of Russia. It is a key field for the Irkutsk gas production center and, along with the Chayandinskoye field in Yakutia, a resource base for the Power of Siberia gas pipeline.

[South America]

The partners of Trinidad and Tobago's Atlantic LNG project on 6 December 2022 agreed to restructure ownership unifying the structure throughout Trains 2 - 4.

Reference: Company announcements, Cedigaz News Report.

Contact: report@tky.ieej.or.jp