

LNG Review December 2023
- Recent issues and events - #96
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Introduction

The immediate LNG market in the Northern Hemisphere winter high demand period has observed a relatively stable demand and supply balance. Both Asian spot LNG and European spot gas prices were slashed by more than half by the end of 2023 from the level of one year earlier and lost USD 3 - 4 per million Btu in a month. This is attributable to European lower gas demand (caused by gas saving efforts and demand destruction), Japan's reduced intake of LNG, and China's slower-than-expected increase of LNG imports.

However, there are still uncertain factors potentially adversely affecting stable LNG supply, including shipping issues due to the instability in the Middle East and restrictions on the transportation of LNG from the United States to Asia due to the Panama Canal drought. In late November 2023, an LNG carrier docked at the APLNG facility in Eastern Australia was unable to move due to an electrical failure for eight days after loading a cargo destined for China.

These days more commercial disputes in the LNG industry involve regulators and arbitrators, rather than being resolved through discussions between the parties buying and selling LNG. In particular, the dispute between Venture Global LNG of the United States and European major buyers, as well as disputes between portfolio sellers and South Asian LNG buyers, are all cases in which long-term contract buyers accuse sellers of breaches of contracts and should be watched from the perspective of supply security.

From late November to December 2023, the global LNG market saw announcements of several additional long-term LNG SPAs. As a result, the total volume of term LNG sales concluded globally in 2023 stands at around 75 million tonnes per year, surpassing the level of 2022.

The LNG sales from the United States continued to represent the largest portion of the total, although the volume committed in 2023 was 32 million tonnes, decreasing from 60 million tonnes in 2022. Sales deals from Qatar, where major LNG production expansion projects are underway, for 17 million tonnes per year were announced, mainly for equity partners in the expansion projects. The focus in the projects then shifts to progress of LNG marketing to parties other than equity partners, as well as additional equity participations.

* The writer belongs to the Energy Security Unit.

[Asia Pacific]

Saibu Gas Co., Ltd. announced on 4 December 2023 that the demonstration programme of methanation based on local feedstocks and demand to realise cost reduction in collaboration with IHI, JCCL, Kyushu University, Japan Gas Association, Hibiki LNG, Hokkaido Gas, Hiroshima Gas and Nihon Gas was adopted on 27 September as an eligible project of "Regional co-creation/cross-sector carbon neutral technology development/demonstration project" by the Ministry of the Environment under its second public call in FY 2023 (April 2023 - March 2024).

Saibu Gas announced on 22 December 2023 that the company had made a basic agreement with agreed in principle to Hitachi Zosen Marine Engine Co., Ltd. to supply the latter with carbon-neutral LNG (CNLNG).

Japan's Kansai Electric Power and commodity trading firm Hartree Partners announced on 14 December 2023 that they had signed a multi-year LNG supply agreement, coupled with an investment commitment in a nature-based carbon project in Australia.

NYK Line announced on 12 December 2023 that the company, Namura Shipbuilding Co., Ltd. and Sasebo Heavy Industries Co., Ltd. had been collaborating to replace the main propulsion on steam turbine-driven Moss-type LNG carriers and in October 2023 NYK was granted Approval in Principle (AiP) from the Japanese classification society Class NK for converting the steam turbine of an LNG carrier to a dual-fuel diesel engine.

According to China's NDRC (National Development and Reform Commission (NDRC), the country consumed 356.61 bcm of natural gas, and according to the country's NBS (National Bureau of Statistics), the country produced 209.6 bcm, during the first eleven months of 2023. 7.3% and 6.0% more than the same period of 2022, respectively. According to China's customs statistics, China imported 6.8 million tonnes in November and 62.99 million tonnes of LNG during the first 11 months of 2023. The eleven-month volume is 10.82% more than that of 2022, but 11.65% less than the same period of 2021.

Japan's JERA announced on 25 December 2023 that it had concluded an agreement with the Association for Overseas Technical Cooperation and Sustainable Partnerships (AOTS) related to system design and other support for the adoption of LNG in the Philippines.

Chiyoda Corporation announced on 11 December 2023 that it had been awarded a Technical Service Agreement for Indonesia's Donggi-Senoro LNG project.

Japan's INPEX announced on 5 December 2023 that it had been granted approval for the revised Plan of Development (POD) incorporating a carbon capture and storage (CCS) component for the Abadi LNG project in the Masela block in Indonesia. The project is the first with CCS-related costs eligible for recovery based on the production sharing contract (PSC) scheme governing upstream operations in Indonesia.

Indonesia's PT AKR Corporindo Tbk announced on 6 December 2023 that it had

entered into a Joint Development Agreement with BP GAS & POWER INVESTMENTS LIMITED (bp) to jointly develop an LNG import project involving a regasification terminal in Java Integrated Industrial and Port Estate at Gresik, East Java (JIPE).

JERA announced on 15 December 2023 an MoU (Memorandum of Understanding) with Indonesia's Pertamina to collaborate on Business Opportunity Discussion.

India's Petronet LNG Limited (PLL) announced on 28 December 2023 that the company had signed binding transaction documents with Gopalpur Ports to set up PLL's maiden LNG terminal on the east coast of India. PLL plans to set up an FSRU (floating storage and regasification unit) based LNG terminal in Phase 1, with provision for converting to a land-based terminal at Gopalpur Port in Odisha.

Japan's Toho Gas and Australia's Santos announced on 13 and 19 December 2023 that the two companies had signed an MOU to investigate the potential for producing e-methane in South Australia's Cooper Basin. Toho Gas aims to import 30,000 tonnes of e-methane in 2030.

Australia's Santos, JX Nippon Oil & Gas Exploration Corporation and ENEOS Corporation announced on 15 and 18 December 2023 an MoU on a joint feasibility study to evaluate the potential to capture, transport and sequester emissions from Japan, supporting expansion of the Moomba CCS project.

Origin Energy revealed on 1 December 2023 that the LNG vessel that previously lost power and was unable to leave the Australia Pacific LNG facility had departed. The vessel was moved to safe anchorage for further repairs by the ship's owner, led by Gladstone Ports and Marine Safety Queensland in conjunction with the Australian Maritime Safety Authority. In total, three LNG cargoes were unable to be loaded during this event.

Australia's Woodside and Santos confirmed on 7 December 2023 that they were in discussions regarding a potential merger.

Woodside announced on 13 December 2023 that it had reached agreement with three Australian maritime unions on the Australian crewing of an LNG vessel.

Woodside announced on 21 December 2023 that it had signed an SPA (Sales and Purchase Agreement) with a subsidiary of Pilbara Minerals, for the supply of Domestic LNG from the Pluto Truck Loading Facility. Supply will commence in the fourth quarter of 2024 for five years. The average volume to be supplied is 3.4 terajoules/day (23 thousand tonnes per year).

Woodside announced on 19 December 2023 that it had signed an MOU with Japan's Sumitomo Corporation, JFE Steel Corporation, Sumitomo Osaka Cement Co. Ltd and Kawasaki Kisen Kaisha, Ltd. to enable studies of a potential CCS value chain between Japan and Australia.

Greenpeace Australia Pacific announced on 14 December 2023 that it had filed a

lawsuit against Woodside in the Federal Court of Australia, alleging that the company had been misrepresenting its climate performance and plans.

Santos said on 6 December 2023 that the last LNG cargo produced from the Bayu-Undan gas field had sailed from the Darwin LNG plant in Northern Territory.

Santos announced on 18 December 2023 that the Barossa Development Drilling and Completions Environment Plan (EP) was accepted by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) on 15 December.

Santos confirmed on 29 December 2023 that further to the announcement on 31 August for the sale of 2.6% of PNG LNG to Kumul Petroleum Holdings Limited, funding for the transaction had been secured by Kumul.

[North America]

The U.S. Environmental Protection Agency (EPA) announced on 2 December 2023 a final rule that it expected would sharply reduce methane and other harmful air pollutants from the oil and natural gas industry, including from hundreds of thousands of existing sources nationwide and promote the use of cutting-edge methane detection technologies.

Cheniere Energy revealed in its filing to FERC (Federal Energy Regulatory Commission) on 17 November 2023 that its Sabine Pass Liquefaction Stage 5 Expansion Project (under a pre-filing process) planned to include 2 liquefaction trains with a nameplate capacity of approximately 7 million tonnes per year each, instead of 3 with 6.5 million tonnes per year each.

ExxonMobil said on 6 December 2023 that it expected to grow its LNG supply to 27 million tonnes per year by 2027. Train 1 of the Golden Pass facility mechanical completion is expected at the end of 2024 with first LNG in first half of 2025, according to the statement. ExxonMobil said that QatarEnergy's North Field East project would start up in 2026. The Papua LNG project is targeting 6 million tonnes per year of gross LNG liquefaction capacity, with FID expected in the first half of 2024. In Mozambique, the company continues to work with its partners and the government to optimize the onshore LNG plans for Rovuma.

Tellurian Inc. announced on 8 December 2023 that its Board of Directors had named Martin Houston, Co-Founder and Vice Chairman, to be Chairman of the Board.

NextDecade said TotalEnergies had offered to sell a 17.5% stake in NextDecade, the company said in a SEC filing of 22 December 2023.

bp filed a complaint against Venture Global Calcasieu Pass, LLC with FERC (U.S. Federal Energy Regulatory Commission) on 11 December 2023. bp accused Venture Global of contract violations relating to LNG deliveries from its Calcasieu Pass LNG facility.

Venture Global submitted with FERC on 2 January 2024 its response to the complaint filed by BP Gas Marketing Limited on 11 December 2023, releasing its SPA

contract terms with bp. In the submission Venture Global argues it has not met the conditions for commercial operations, as laid out in the contract. Shell NA LNG LLC submitted with FERC on 2 January 2024 comments in support of BP Gas Marketing Limited's complaint against Venture Global Calcasieu Pass, LLC (VGCP).

Venture Global announced on 12 December 2023 that the roof on the fourth and final LNG storage tank at Plaquemines LNG had been raised.

Japan's INPEX on 7 December 2023, JERA on 8 December, and Germany's SEFE on 11 December, urged FERC in a letter each, to expedite the approvals of Venture Global's CP2 LNG project in Louisiana. Venture Global had originally hoped to start construction in April 2023, with first cargoes due in the first half of 2025 and full commercial operation scheduled for the first half of 2026.

Magnolia LNG initiated on 5 December 2023 a new export application process for non-FTA export authorization from DOE (the U.S. Department of Energy), withdrawing its request for a five-year extension on its previous export authorization.

The FERC noted in a letter of 20 December 2023 that it had terminated the pre-filing review process for the Fourchon LNG project in Louisiana.

Glenfarne Energy Transition announced on 8 December 2023 that its subsidiary Texas LNG and ABB had signed an MoU to collaborate on core automation and electrical equipment for the Texas LNG facility. Texas LNG and ABB have agreed to a framework for ABB to make an investment in the project.

Williams, one of the largest natural gas infrastructure companies in the United States, announced on 27 December 2023 that it had reached an agreement to acquire a portfolio of natural gas storage assets from an affiliate of Hartree Partners LP. The transaction includes six underground natural gas storage facilities located in Louisiana and Mississippi with total capacity of 115 bcf (2.4 million tonnes), as well as 230 miles (370 km) of gas transmission pipeline and 30 pipeline interconnects to attractive markets, including LNG markets, and connections to Transco, the nation's largest natural gas transmission pipeline.

Tokyo Gas announced on 18 December 2023 that its subsidiary Tokyo Gas America Ltd. had decided to acquire all shares of Rockcliff Energy II LLC (RC), a portfolio company of Quantum Energy Partners, through its ownership interest in TG Natural Resources LLC (TGNR). As a result of the acquisition, the production volume of gas and natural gas liquid held by TGNR will increase by approximately 4 times from approximately 0.33 bcf/d (9.3 mcm/d gas equivalent) to 1.3 bcf/d (37 mcm/d gas equivalent, or 9.87 million tonnes per year).

Occidental announced on 11 December 2023 that it had entered into a purchase agreement to acquire Midland-based oil and gas producer CrownRock L.P., a joint venture of CrownQuest Operating LLC and Lime Rock Partners.

Environment and Climate Change Canada announced on 4 December 2023 that Canada had published strengthened oil and gas methane regulations. The agency announced on 7 December that it had introduced a draft "Regulatory Framework for an Oil and Gas Sector Greenhouse Gas Emissions Cap". The purpose of the proposed regulations is to reduce GHG emissions from the oil and gas sector through the establishment of a national emission cap-and-trade system.

Canada's Pembina Pipeline Corporation said on 11 December 2023 that an FID (final investment decision) for the Cedar LNG project was now expected by the end of the first quarter 2024.

New Fortress Energy announced on 1 December 2023 that the company had achieved the first gas for its Fast LNG 1 unit in Altamira.

The U.S. Department of Energy (DOE) issued on 12 December 2023 a final Environmental Assessment (EA) under the National Environmental Policy Act (NEPA), in connection with the pending application of NFE Altamira FLNG, S. de R.L. de C.V. for the export up to 158 billion cubic feet per year (Bcf/y) of natural gas through an existing cross-border pipeline, of which approximately 13 Bcf/y would be consumed as fuel in the liquefaction process and as process gas loss during the pretreatment process, and the remaining 145 Bcf/y (3 million tonnes) would be liquefied for export at the proposed NFE Altamira FLNG facility.

Australia's Woodside announced on 6 December 2023 that it had signed an SPA (sales and purchase agreement) with Mexico Pacific Limited to purchase 1.3 million tonnes per year of LNG for 20 years. Woodside will purchase the LNG from the Saguario Energía LNG Project, located in Sonora, Mexico on an FOB (free-on-board) basis with pricing linked to gas indices in the United States. The SPA is subject to Mexico Pacific taking an FID (final investment decision) on the proposed third train at the Saguario Energía LNG Project. The FID is expected in the first half of 2024 and commercial operations are targeted to commence in 2029.

[Middle East]

Abu Dhabi's ADNOC announced on 20 December 2023 a 15-year HOA (Heads of Agreement) with ENN LNG (Singapore) Pte. Ltd., a subsidiary of ENN Natural Gas Co. Ltd., for at least 1 million tonnes per year of LNG. The LNG will primarily be sourced from ADNOC's Ruwais LNG project. The deliveries are expected to start in 2028, upon commencement of the facility's commercial operations.

QatarEnergy announced on 3 December 2023 integration of all marketing and marketing-related activities formerly managed by QatarEnergy LNG.

[Africa]

Chart Industries, Inc. announced on 28 December 2023 the recent receipt of multiple LNG-related awards, including LNG infrastructure related orders, including tanks, fuelling stations in Europe, and Morocco's first LNG regasification units.

Nigeria's UTM Offshore Ltd announced on 22 December 2023 that Delta State Government, Nigerian National Petroleum Company Limited, and UTM Offshore Ltd signed a Shareholders Agreement for the development of the first FLNG (Floating Liquefied Natural Gas) in Nigeria on 19 December. The state will own an 8% share of the project, NNPC 20%, and UTM 72%. The Governor of the state said that over 300,000 tonnes of LPG (cooking gas) would be produced and dedicated to the domestic market. He added that the project was also expected to reduce gas flaring. UTM expects an FID (Final Investment Decision) on the project to be taken in the first quarter of 2024.

TotalEnergies reaffirmed the long-term partnership between the company and Nigeria on 18 December 2023. The company owns a portfolio of projects which might represent more than USD 6 billion investments (100%) in the future years. The company, in partnership with Nigerian National Petroleum Company Limited (NNPCL) finalized in December 2023 the OML 100 Flare Out project, thereby becoming the first major operator in Nigeria to eliminate routine flaring from all operated assets. TotalEnergies also announced a cooperation agreement with NNPCL to carry out methane detection and measurement campaigns using its drone-based technology AUSEA on Oil & Gas facilities in Nigeria. This announcement follows similar agreements signed ahead of COP28 with Petrobras in Brazil, SOCAR in Azerbaijan and Sonangol in Angola.

Italy's Eni announced on 28 December 2023 the introduction of gas into the Tango FLNG (Floating Liquefied Natural Gas) facility moored in Congolese waters, twelve months after the FID (final investment decision). Tango FLNG will produce its first LNG cargo by the first quarter of 2024, according to the announcement.

TotalEnergies said on 14 December 2023 that several of the existing partners of Mozambique LNG, including TotalEnergies, had indicated their willingness to acquire these LNG volumes that were previously allocated to Indonesia's Pertamina.

[Europe / Surrounding regions]

PRISMA announced on 4 December 2023 a fourth tender for joint gas purchasing under the EU Energy Platform. It covers gas deliveries from January 2024 to March 2025. European companies registered a total volume of 10.1 Bcm of gas purchase needs.

Netherlands' Gasunie announced on 1 December 2023 that Vopak had become a 50% shareholder in EemsEnergy Terminal, an LNG import terminal in Eemshaven.

Netherlands' storage infrastructure company VTTI announced on 7 December 2023

that it had signed an agreement with Höegh LNG to explore options to develop and operate Zeeland Energy Terminal in southern Netherlands. The terminal will be based on an FSRU (floating storage regasification unit), which in time, plans to transition from import of LNG to hydrogen. The terminal is expected to be in operation in the second half of 2027.

TotalEnergies announced on 3 December 2023 a donation of USD 25 million over 2024 - 2030 to the Global Flaring and Methane Reduction (GFMR) trust fund, an initiative of the World Bank.

According to Germany's RWE's announcement on 22 December 2023, on 1 January 2024, RWE will hand over the LNG infrastructure built in Brunsbüttel to the federally owned Deutsche Energy Terminal GmbH (DET) as planned.

Germany's Deutsche Energy Terminal (DET) revealed on 15 December 2023 that it had completed its auction for regasification capacity at the planned Stade terminal. 11 slots between April - December 2024 were booked. The Stade terminal is under construction and the Transgas Power FSRU is scheduled to moor at the site in February 2024.

Germany's Hanseatic Energy Hub (HEH) announced on 14 December 2023 that it had completed its permitting and marketing phase for its planned onshore LNG import terminal due to open in Stade in 2027.

Norway's Equinor and Germany's SEFE announced on 19 December 2023 a long-term SPAs (gas sales agreements) for 111 TWh (10 bcm) of natural gas per year from January 2024 until 2034, plus an option for another 5 years. The companies also signed a non-binding letter of intent (LoI) with the intention that SEFE will become a long-term offtaker of hydrogen supplies from Equinor.

Italy's Snam announced on 4 December 2023 that it had finalised the acquisition of 100% of the share capital of FSRU I Limited, the owner of FSRU (Floating, Storage and Regasification Unit) "BW Singapore" from BW LNG. The FSRU will be located off the coast of Ravenna and is expected to start operations in 2025.

Greece's Gastrade announced on 17 December 2023 that the FSRU (floating, storage, and regasification unit) "ALEXANDROUPOLIS" had arrived in the Thracian Sea of Greece. The FSRU sailed away from Singapore anchorage on 26 November after completing an almost 10-month conversion at the Seatrium shipyard.

On 8 December 2023, members of the European Parliament (MEPs) and the Presidency the European Council informally agreed on plans to facilitate the uptake of renewable and low-carbon gases on the EU's gas market. MEPs secured the possibility for member states to restrict imports of gas from Russia and Belarus, whether via pipeline or LNG. The legislation will have to be endorsed by Parliament and Council to come into law.

The first train of Russia's Arctic LNG 2 project "has actually started operating," Russia's Deputy Prime Minister said in an interview.

Russia's Gazprom announced on 7 December 2023 that Construction of Amur Gas Processing Plant (GPP) was 90.84% complete with three processing lines were operating. On the fourth production line, preparations were underway for the start of commissioning, on the fifth and sixth lines - construction and installation work.

Gazprom said on 3 January 2024 that it set a new daily record on 2 January for gas supplies to China through the Power of Siberia pipeline. Gazprom said total gas exports to China via the pipeline amounted to 22.7 bcm in 2023, compared to 15.4 bcm in 2022. The company added that in 2025 the Power of Siberia gas pipeline would reach its full export capacity of 38 bcm per year.

[South America]

The AES Corporation announced on 21 December 2023 that it had closed minority sell-downs of its businesses in the Dominican Republic and its AES Colón business in Panama. AES sold 20% of its businesses in the Dominican Republic and 35% of AES Colón in Panama. AES will continue operating its businesses in the Dominican Republic and Panama, with an ownership interest of 65% in each business.

Singapore's Seatrium Limited announced on 22 December 2023 that it had delivered an FSRU (Floating Storage and Regasification Unit) Energos Celsius to New Fortress Energy (NFE). The FSRU will be deployed at NFE's completed LNG terminal in Barcarena Brazil. NFE announced on 27 December that it had entered into an agreement to acquire a 15-year 1.6 GW Capacity Reserve Contract (PPA) from Ceiba Energy. NFE plans to transfer the PPA to new power assets connected to its existing Brazilian LNG terminals - Barcarena and Terminal Gas Sul (TGS).

NGC (The National Gas Company of Trinidad and Tobago) announced on 5 December 2023 that an agreement for a new unitised commercial structure for Atlantic LNG had been executed. The shareholders will be, from 1 October 2024 until 1 May 2027, Shell (47.15 %), bp (47.15%) and NGC Trinidad (5.7%). From 2 May 2027 it will be Shell (45%), bp (45%) and NGC (10%). Shell at this moment has a 57.5% stake in Trains 2 and 3 while bp has 42.5%. Shell owns 51.1%, bp 37.8% and NGC Trinidad 11.1% of Train 4. Train 1, which is mothballed, is owned by Shell (46%), bp (34%), CIC (10%) and NGC Trinidad (10%).

Reference: Company announcements

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