

LNG Review October 2023
- Recent issues and events -
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Introduction

During the first three quarters of 2023, the world imported 295 million tonnes of LNG, a little over 1% increase year-on-year, according to preliminary estimates. While Japan imported 48.91 million tonnes of LNG during the period, down 12% y-o-y, China imported 51.13 million tonnes, up 10% y-o-y, regaining the top LNG importer position. However, the volume was still 12% less than the same period of 2021. The European Union and the United Kingdom imported 81 million tonnes of LNG in the nine months of 2023, increasing by 1% from the same period in 2022.

Ahead of the Northern Hemisphere winter season, the futures curves for both Asian spot LNG and European spot natural gas prices have been in a contango trend (higher for delivery in the future) with a peak in January-February. Still the expected levels are now much lower than those previously expected at the beginning of 2023. As of the end of October, the front month delivery prices fell sharply from those of one year ago: from over USD 30 per million Btu to the USD 15s in case of the representative European benchmark TTF; and to around USD 17 in case of Asian spot LNG price assessments.

In October 2023, the labour disputes at the two Australian LNG export projects reemerged, raising concerns over possible LNG export disruptions. Once again, the labour oversight authority FWC mediated the talks between the two sides, settling the dispute by the end of the month with the conclusion of an enterprise bargaining agreement. In Israel, gas production from a field near the conflict area, and, in turn, pipeline gas export to Egypt have been halted, giving a dimmer prospect for LNG export in Egypt at least for the moment.

During the month, QatarEnergy announced 27-year LNG sales agreement respectively with its three European partners in its mega LNG expansion projects. Thus, six out of the seven international partners in the project have confirmed their offtake commitments from the project.

In Indonesia, the first cargo from the Tangguh Train 3 was shipped out to the country's domestic market.

There were also progresses of LNG production projects in other countries in the Middle East and Africa in the month.

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[Asia Pacific]

INPEX and Osaka Gas announced on 24 October 2023 held a groundbreaking ceremony of one of the world's largest CO₂-methanation test facilities capable of producing 400 normal cubic meters of methane per hour.

KOMIPO (Korea Midland Power) issued an LNG purchase tender on 11 October 2023 for 78 cargoes for delivery between 2027 to 2041 on a delivered ex-ship (DES) basis.

Korea's Samsung Heavy Industries (SHI) said in a filing on 10 October 2023 that it had received an order for a newbuild LNG vessel at around USD 260 million. The company said it will deliver the carrier to an "Asian shipowner" in September 2026.

Classification society DNV presented in October 2023 Hanwha Ocean with an Approval in Principle (AiP) for a 270,000 cbm LNG carrier.

China's National Bureau of Statistics (NBS) revealed on 18 October 2023 that the country produced 170.4 bcm of natural gas during the first three quarters of the year, up by 6.4% year on year. Natural gas production in September reached 17.9 bcm, up 9.3% year on year.

China's Foran Energy announced on 31 October 2023 that it planned to sign an LNG sale and purchase agreement (SPA) with Cheniere Marketing for 0.86 million tonnes per year for 20 years starting in 2028 on a FOB basis. The price will be linked to Henry Hub index. Foran Energy and Cheniere have an LNG SPA of around 0.3 million tonnes per year for 20 years from January 2023. Foran Energy also announced on the day that it planned to sign an LNG SPA with Hong Kong and China Gas LNG International Trading for 0.43 million tonnes per year for 20 years starting in 2028 to the Hong Kong city gas provider.

S&P Global Commodity Insights announced on 23 October 2023 that Platts had launched new daily Southeast Asia LNG (SEAM) cargo assessments.

Singapore's Ministry of Trade and Industry (MTI) and Energy Market Authority (EMA) announced on 23 October 2023 that MTI and EMA would establish Gasco that will centralise the procurement and supply of gas for the power sector. The centralised procurement approach will apply to all future gas demand from the power sector, including gas contract renewals. Gencos will be allowed to continue with the existing gas supply contracts they have with their respective gas suppliers. Other industrial gas customers can continue to procure gas through licensed gas importers and will not be subject to this central procurement framework. EMA intends to set up Gasco in 2024 and will consult the industry on the details of the centralised gas procurement framework in the coming months.

Singapore's Deputy Prime Minister announced on 24 October 2023 SLNG's (Singapore LNG) plan to develop the second LNG terminal in Singapore. SLNG aims to have the terminal operational by the end of the decade. SLNG is studying the option of using a floating storage and regasification unit (FSRU).

MET Group, an integrated European energy company headquartered in Switzerland, announced on 4 October 2023 that it opened its office in Singapore.

Thailand's EGAT (Electricity Generating Authority of Thailand) announced on 3 October 2023 that it had set the goal to import 1.2 million tonnes of LNG per year to reduce the cost of fuel for electricity generation from October 2023. EGAT has begun the short-term procurement of LNG from 2023-2027 in the amount of 1.2 million tonnes per year according to the resolution of the Energy Regulatory Commission (ERC) on 5 April 2023 using competitive pricing. The LNG will be used at EGAT's Bang Pakong Power Plant. The first LNG cargo docked at LNG Map Ta Phut Terminal 2 in Rayong Province on 1 October 2023.

Malaysia's MISC Berhad announced on 31 October 2023 that the company had entered into a binding Heads of Agreement (HOA) with Pengerang LNG (Two) Sdn. Bhd. (PLNG2SB), a subsidiary of PETRONAS Gas Berhad (PGB), for the supply, operation, and maintenance of an LNG Floating Storage Unit (FSU) intended to be deployed at the PETRONAS LNG Regasification Terminal Pengerang (RGTP) in Johor. MISC's LNG Carrier, Puteri Delima Satu, will be converted into an FSU dedicated to this project. The FSU is set to become commercially operational by the second quarter of 2025.

ENI announced on 2 October 2023 a gas discovery from the Geng North-1 exploration well drilled in North Ganai PSC, about 85 km off the coast of East Kalimantan in Indonesia. The discovery has the potential to contribute to the creation of a new production hub, in the Northern part of the Kutei Basin, to be connected to the Bontang LNG facilities on the coast of East Kalimantan, according to the announcement.

ENI announced on 26 October 2023 that the company had signed a 0.8 bcm LNG sales and purchase agreement with Merakes LNG Sellers, starting from January 2024 for 3 years, in addition to the contract with Jangkrik LNG Sellers for 1.4 bcm per year, in place since 2017. Eni's energy transition strategy aims to progressively increase the share of gas in overall upstream production to 60% by 2030, while also increasing the contribution of equity LNG. Eni aims to more than double its contracted LNG volumes to over 18 million tonnes per year by 2026.

bp announced on 19 October 2023 that the first cargo of LNG produced by the new third liquefaction train at the Tangguh LNG facility, in Papua Barat, Indonesia, had been loaded and sailed, to be delivered to Indonesia's state-owned power generator PT PLN (Persero), marking the start of full commercial operation of the expanded Tangguh LNG facility. The start-up brings total plant capacity to 11.4 million tonnes per year. The first cargo sailed from Tangguh on 18 October to be delivered to PLN's regasification facility in Arun, Nanggroe Aceh Darussalam province, Indonesia.

Shell announced on 18 October 2023 that Shell Upstream Overseas Services (I) Limited (SUOS) subsidiary had completed the previously announced sale of its 35%

participating interest in Indonesia's Masela Production Sharing Contract (PSC) to Indonesia's Pertamina and PETRONAS. INPEX Corporation holds a 65% operating interest in Masela PSC and is the operator of the Abadi gas project.

Pakistan LNG revealed its final evaluation report on its latest LNG purchase tender on 4 October 2023. For the company's two-cargo DES buy tender for 7-8 and 13-14 December, Vitol offered in at USD 15.97/million Btu for 7-8 December and Trafigura offered in at USD 18.39 and USD 19.39 for 13-14 December.

The Australian Government released on 3 October 2023 a discussion paper and opened consultations on a national Future Gas Strategy. "The role of gas will change as the world decarbonises - both in Australia's energy mix and in the energy use of our trading partners." The announcement said gas was essential to modern supply chains which connected Australia in complex ways with trade and investment partners. "We need to ensure gas demand decreases faster than supply through the energy transition." "Gas shortages, supply disruptions and high prices are among the consequences of reducing supply faster than demand. The strategy is due to be finalised in 2024.

South Australian energy infrastructure developer, Venice Energy, announced on 27 October 2023 that the company and Origin Energy had agreed on a structural framework that will underwrite the commercial viability of the Outer Harbor LNG import terminal to be built at Port Adelaide. Origin will become the single user of the terminal for a minimum of 10 years. Venice Energy claims that the LNG terminal will be the first in the world to operate exclusively on renewable energy. Stage 1 enabling works will begin in November. First gas is expected to flow into the network by May 2026.

Origin Energy Limited noted on 10 October 2023 that the Australian Competition and Consumer Commission (ACCC) had granted authorisation for the proposed acquisition of the company by the consortium comprising Brookfield Asset Management (Brookfield) and MidOcean Energy, an entity managed by EIG Partners.

Santos said on 19 October 2023 that the Moomba CCS project was 75% complete with first injection on track for mid-2024. The 0.25 tonnes per day Direct Air Capture (DAC) unit arrived in Moomba in September with pre-field trials commissioning completed in Perth.

Chevron said on 30 October 2023 that an enterprise agreement on wage and work terms with Offshore Alliance union workers at the Gorgon and Wheatstone LNG facilities had been approved and would be sent to the Fair Work Commission (FWC) for approval.

Chevron Australia said on 31 October 2023 that its tax and royalties payments exceeded AUD 12 billion since 2009 following an acceleration of company income tax payments over the past year. Chevron Australia's corporate tax cash payments were more than AUD 1.2 billion in the 2022 calendar year. Chevron Australia's company income tax payment liability for the period 1 January to 31 December 2022 was AUD 4.2 billion.

Australia's Woodside said on 18 October 2023 that the Scarborough and Pluto Train 2 project was 46% complete at the end of the period, with fabrication of the floating production unit (FPU) and Pluto Train 2 modules progressing. "The Federal Court's 28 September decision that the Commonwealth Environment Plan for the Scarborough offshore seismic survey is invalid has not impacted our target for first LNG cargo in 2026. The decision does however highlight the urgent need for reform of Australia's offshore approvals process."

Santos said on 19 October 2023 that the Barossa project was 68% complete, excluding Darwin Pipeline Duplication project. Drilling activities remain suspended pending assessment and acceptance of the associated environment plan by the regulator. In October Santos notified NOPSEMA that the company planned to commence pipelay activities on the Barossa Gas Project after complying with the requirements of the General Direction issued by the regulator. Santos said on 31 October that the company would defend Federal Court proceedings commenced by the Environmental Defenders Office concerning its Environment Plan (EP) for the pipeline installation in connection with its Barossa gas project.

[North America]

The EIA (Energy Information Administration) said on 19 October 2023 that in 2022, annual production of associated natural gas increased 9% to 15.5 billion cubic feet per day (Bcf/d) in the major U.S. onshore crude oil-producing regions (Permian, Bakken, Eagle Ford, Niobrara, and Anadarko) mostly due to an 8% increase in crude oil production.

According to a Texas Commission on Environmental Quality (TCEQ) filing of 21 October 2023, the Freeport LNG plant shut down and restarted all three of its trains on the day due to an issue at the pretreatment facility. The FERC (Federal Energy Regulatory Commission) approved on 27 October 2023 Freeport LNG's request to proceed with further measures aimed at restoring its export plant in Texas to full operation. Freeport LNG is expected to take additional steps to bring its second dock back into service. According to a filing with TCEQ on 30 October, Train 3 at the Freeport LNG facility tripped early in the morning. The incident resulted in venting to the liquefaction flare system. Operators restarted the train nine hours later.

Tellurian's Driftwood LNG submitted on 4 October 2023 to FERC a request for 36 month extension of time to complete construction and place each of the LNG Plant and Driftwood Pipeline in Service for the Driftwood LNG Project.

NextDecade announced on 6 October 2023 that it had held the groundbreaking ceremony for the Rio Grande LNG export project.

Baker Hughes announced on 2 October 2023 that it had been awarded a contract to provide a modularized LNG system and power island. The contract was awarded under a master equipment supply agreement between Venture Global LNG and Baker Hughes for

more than 100 million tonnes per year of production capacity.

Venture Global LNG, Inc. announced on 24 October 2023 that it had closed its offering of USD 4 billion aggregate principal amount of senior secured notes.

Shell submitted a letter to the U.S. Energy Department on 9 October 2023 in support of Energy Transfer's request for a new license to export LNG to countries without free trade agreements with the United States, saying the pipeline operator is a reliable gas supplier. Japan's Kyushu Electric Power said in a letter of 25 October 2023 to DOE that the company urges DOE to expedite approval of an export license for the Lake Charles LNG project.

FERC granted on 4 October 2023 a requested four-year extension of time to complete the onshore facilities authorized in the 2017 certificate order to Delfin LNG LLC's Onshore Project. Delfin has time until 28 September 2027, to construct and make available for service the onshore facilities, it said.

Chesapeake Energy and Vitol announced on 31 October 2023 the entrance into a Heads of Agreement (HOA). Chesapeake will supply up to 1 million tonnes per year of LNG for 15 years to Vitol with the purchase price indexed to Japan Korea Marker (JKM). Following the execution of the HOA, Chesapeake and Vitol will jointly select the most optimal liquefaction facility in the United States to liquify the gas produced by Chesapeake for delivery to Vitol. The HOA has a targeted start date in 2028.

Exxon Mobil Corporation and Pioneer Natural Resources announced on 11 October 2023 an agreement for ExxonMobil to acquire Pioneer. Chevron Corporation announced on 23 October 2023 that it had entered into an agreement with Hess Corporation to acquire all of the outstanding shares of Hess in an all-stock transaction.

Chevron said on 10 October 2023 that the company had teamed up with Bridger Photonics, using the latter's flyovers to detect methane leaks along pipelines and other infrastructure. Chevron says the information shared can be used to guide repairs. Chevron's work is expanding to cover operations in the Permian Basin, the DJ Basin and more recently, San Joaquin Valley, California, according to the company.

Canada's TC Energy announced on 30 October 2023 that Coastal GasLink had achieved 100% pipe installation across the entire project route of 670 km, connecting northeastern British Columbia to LNG Canada's facility on the west coast. The work is the last step before mechanical completion on track for the year-end target.

Canada's Ksi Lisims LNG announced on 16 October 2023 that it had submitted its application to the B.C. government for an Environmental Assessment Certificate (EAC). Ksi Lisims LNG claims that it will be one of the most significant Indigenous-supported industrial developments in Canadian history. Ksi Lisims LNG says that it will produce 12 million tonnes of LNG per year.

[Middle East]

Petrofac announced on 3 October 2023 that it had been awarded an Engineering, Procurement and Construction (EPC) contract by Abu Dhabi's ADNOC Gas for its Habshan Carbon Capture, Utilisation and Storage (CCUS) project.

ADNOC and Occidental announced on 3 October 2023 an agreement to undertake a joint preliminary engineering study for the construction of the first megaton-scale direct air capture (DAC) facility outside the United States.

ADNOC announced on 5 October the final investment decision (FID) and award of two engineering, procurement and construction (EPC) contracts, respectively, for the Hail and Ghasha Offshore Development project. The project aims to operate with net zero carbon dioxide (CO₂) emissions. Hail and Ghasha are part of Abu Dhabi's Ghasha Concession which is set to produce more than 1.5 billion standard cubic feet per day (bscfd) (11.39 million tonnes per year) of gas before the end of the decade.

ADNOC and Baker Hughes announced on 4 October 2023 that ADNOC Gas had awarded a contract to Baker Hughes, through its Nuovo Pignone International S.R.L. legal entity, for the supply of two all-electric compression systems for the liquefaction of natural gas, to be powered by clean energy, for the Ruwais LNG project in Abu Dhabi. The Ruwais LNG project consists of two 4.8 million tonnes per year natural gas liquefaction trains.

ADNOC Gas plc announced on 18 October 2023 a multi-year LNG supply agreement, valued USD 500 - 700 million (AED 1.8 - 2.5 billion) with JERA Global Markets.

Korea's shipyard Hyundai Heavy Industries (HHI) revealed on 26 October 2023 a 17-vessel LNG carrier order at a total cost of USD 3.9 billion through a statement to the country's stock market regulator.

QatarEnergy announced on 3 October 2023 that the ground-breaking ceremony had taken place for the North Field expansion project, which will raise Qatar's LNG production capacity from the current 77 to 126 million tonnes per year by 2026.

QatarEnergy announced on 11 October 2023 that QatarEnergy and TotalEnergies signed two sale and purchase agreements (SPAs) for up to 3.5 million tonnes per year LNG from Qatar to France. LNG will be delivered ex-ship (DES) to the Fos Cavaou LNG receiving terminal in southern France, with deliveries expected to start in 2026 for 27 years. The LNG volumes will be sourced from the two joint ventures between QatarEnergy and TotalEnergies that hold interests in Qatar's North Field East (NFE) and North field South (NFS) projects.

QatarEnergy announced on 18 October 2023 that QatarEnergy and Shell had signed two SPAs for up to 3.5 million tonnes per year from Qatar to the Netherlands. The LNG will be delivered to the Gate LNG terminal starting in 2026 for 27 years. The LNG volumes will be sourced from the two joint ventures between QatarEnergy and Shell that hold interests in Qatar's NFE and NFS expansion projects.

QatarEnergy and Eni announced on 23 October 2023 that they signed an SPA for up to one million tonnes per year of LNG from Qatar to Italy, with deliveries expected to start in 2026 for 27 years. The LNG will be delivered to FSRU Italia in the port of Piombino, sourced from the joint venture between QatarEnergy and Eni that holds an interest in the NFE project.

Shell and Mitsubishi Corporation announced on 23 and 24 October 2023 that partners in the Oman LNG LLC venture signed an amended shareholders' agreement for Oman LNG LLC (Oman LNG) extending the business beyond 2024. Oman LNG in turn signed various agreements to secure its gas supply until 2034.

[Africa]

During the fifth annual meeting of the high-level political dialogue on energy between the European Union and Algeria on 5 October 2023, the two sides discussed the Euro-Algerian cooperation on reducing methane emissions in the oil and gas industry and agreed to work together to promote the recovery and commercialisation of methane that would otherwise be dispersed in the atmosphere.

Golar LNG announced on 16 October 2023 that FLNG Hilli Episeyo offloaded its 100th LNG cargo on 14 October. Hilli was the world's first FLNG conversion that also introduced Cameroon as the world's 20th LNG exporting nation in 2018.

Marathon Oil Corporation announced on 16 October 2023 that it had entered into a five-year firm LNG sales agreement with Glencore, for a portion of its equity natural gas produced from the Alba Field (Marathon 64% working interest) in Equatorial Guinea, effective 1 January 2024. The pricing structure for the LNG sales agreement is linked to the Dutch Title Transfer Facility (TTF) index, less a fixed transportation fee. Separately, due to the expected arbitrage between LNG and methanol pricing, Marathon Oil announced it expects to optimize its E.G. integrated gas operations in 2024 by redirecting a portion of Alba Unit natural gas from the local methanol facility (Marathon 45% working interest) to the LNG facility (Marathon 56% working interest).

Allseas announced on 5 October 2023 that it had been selected by bp to complete the subsea pipelay scope for its ultra-deepwater Greater Tortue Ahmeyim (GTA) natural gas project offshore Mauritania and Senegal. The contract covers the installation of approximately 75 kilometres outstanding on the two 16-inch export pipelines with field termination assemblies (FTAs) in water depths between 1,500 and 2,800 metres, and four 10-inch CRA infield lines with FTAs up to two kilometres long in 2,800 metres of water.

ENI announced on 21 October 2023 that Eni had celebrated the sail away of the Tango Floating Liquefied Natural Gas (FLNG) and Excalibur Floating Storage Unit (FSU) vessels from Dubai to Congo's offshore. The first phase of the Congo LNG project is scheduled to startup in December 2023.

Following the filing of a complaint against the company for "manslaughter and a failure to assist people in danger" during the terrorist attacks that took place in northern Mozambique in March 2021, TotalEnergies on 11 October 2023 rejected these accusations and detailed the emergency assistance provided by the Mozambique LNG teams and the resources they mobilized to evacuate more than 2,500 people (civilians, personnel, contractors and subcontractors) from the Afungi site. The security situation has improved since 2021, and terrorist activities have decreased. Current activities on site are limited to strengthening security infrastructure and improving access roads.

[Europe / Surrounding regions]

The European Commission said in its "State of the Energy Union report 2023" on 24 October 2023 that for natural gas, security of supply had improved significantly and the EU was on track to meet the REPowerEU target to be independent of Russian fossil fuels by 2027.

The EU's third round of joint gas purchasing attracted offers totalling 18.1 Bcm from suppliers, according to the European Commission on 6 October 2023, similar to the first round of 18.7 Bcm, and an increase on the second round of 15.2 Bcm. The aggregated demand was 16.5 Bcm, based on requests submitted by 39 European companies. The PRISMA-operated joint purchasing platform matched 11.9 Bcm of demand with suppliers, similar to the second round (12 Bcm), and more than in the first round (10.9 Bcm).

The EU Council adopted on 9 October 2023 the new Renewables Energy Directive to raise the share of renewable energy in the EU's overall energy consumption to 42.5% by 2030 with an additional 2.5% indicative top up to allow the target of 45% to be achieved.

TotalEnergies announced on 26 October 2023 the commissioning of the Cape Ann, its floating storage and regasification unit (FSRU) for LNG in the port of Le Havre. The terminal injected its first gas into the grid operated by GRTgaz, using LNG from Norway. TotalEnergies has contracted 50% of the terminal's annual capacity of around 5 billion cubic meters. The remaining capacity will be marketed according to rules approved by the regulator.

According to TotalEnergies on 26 October 2023, regarding the 27-year duration of the 3.5 million tonne per year SPA with QatarEnergy, all the partners of North Field East and North Field South were asked to take their share of offtake for 27 years. These 27 years is a line on the duration of the concession. It is an alignment between the companies invest, the companies take 3 years to invest, and then the companies have 27 years remaining. If it is the interest of both parties, they can redirect with Qatar agreement and might be the case.

Deutsche Energy Terminal revealed on 26 October 2023 that its first auctions for short-term regasification capacity at Germany's Brunsbüttel and Wilhelmshaven terminals had been completed. Prices ranged between €0.55-0.812/million Btu for the 60 regasification slots on offer from April to December 2024.

According to Deutsche ReGas on 20 October 2023, the company assumed the rights and obligations of the head charter contract between the Federal Republic of Germany and the Greek shipowner. The TRANSGAS POWER is one of the two regasification vessels (FSRUs) planned for the EnergieTerminal 'Deutsche Ostsee' in Mukran.

Gasgrid Finland informed the authorities on 10 October 2023 that a leak causing disruption in gas transmission had been detected in the Balticconnector gas pipeline between Finland and Estonia. The location of the leak was identified in Finland's exclusive economic zone. Finland's National Bureau of Investigation (NBI) said on 24 October that damage to the Balticconnector was likely caused by an anchor belonging to a vessel.

Ukraine's Naftogaz said on 24 October 2023 that it could not extend the contract with Russia for gas transit to the European Union (EU), which is due to expire at the end of 2024.

Russia's Gazprom announced on 19 October 2023 that the company and China's CNPC had signed an Additional Agreement to the Gas Purchase and Sale Agreement along the Eastern Route for additional volumes of Russian gas supplies to China until the end of 2023. Gazprom also said that the "Further Eastern" route gas pipeline was being designed.

Turkmenistan's Turkmengas announced on 9 October 2023 that a memorandum of understanding (MOU) on natural gas supplies had been signed between Turkmengas and the Ministry of Electricity of the Republic of Iraq. The Iraqi side will be ready to purchase Turkmen natural gas in the amount of about 10 bcm per year.

[South America]

The Panama Canal Authority (ACP) notified on 30 October 2023 that vessel transits at the canal would be further reduced due to drought conditions to: 25/day over 3 - 6 November; 24/day over 7 - 30 November; 22/day over 1 - 31 December; 20/day over 1 - 31 January 2024; and 18/day from 1 February until further notice.

Crowley announced on 24 October 2023 that the company was proceeding with plans to provide ship-to-ship LNG bunkering services on the Pacific side of the Panama Canal with a potential start date in 2024, under the first permit issued by the Panama Maritime Authority (AMP) for the provision of such services.

Excelerate Energy announced on 17 October 2023 that the company and Brazil's Petrobras had signed a ten-year contract to charter the floating storage and regasification unit (FSRU) Sequoia. The Time Charter Party and Operation and Services Agreement will commence on 1 January 2024. In addition to the Sequoia, Excelerate's FSRU Experience is currently providing regasification services in Brazil.

Reference: Company announcements, Cedigaz News Report.

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