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Argus Brazil Gas and Power

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ABRACEEL
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Market Reporting
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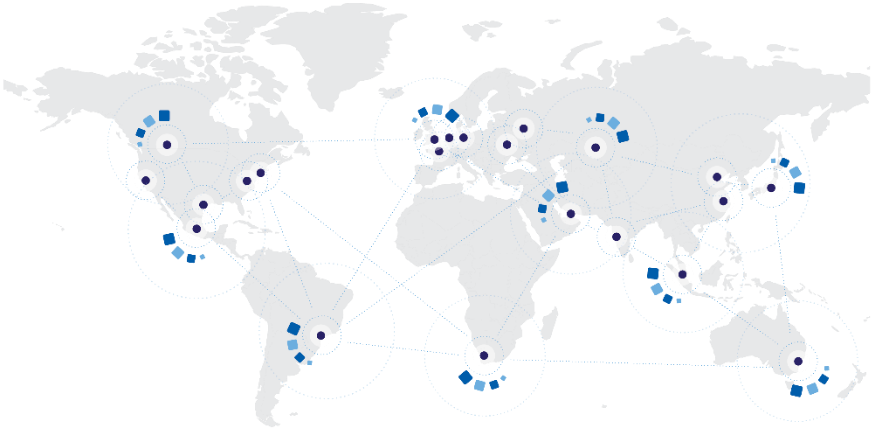

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THE SUNDAY TIMES TOP TRACK 250 Grant Thornton

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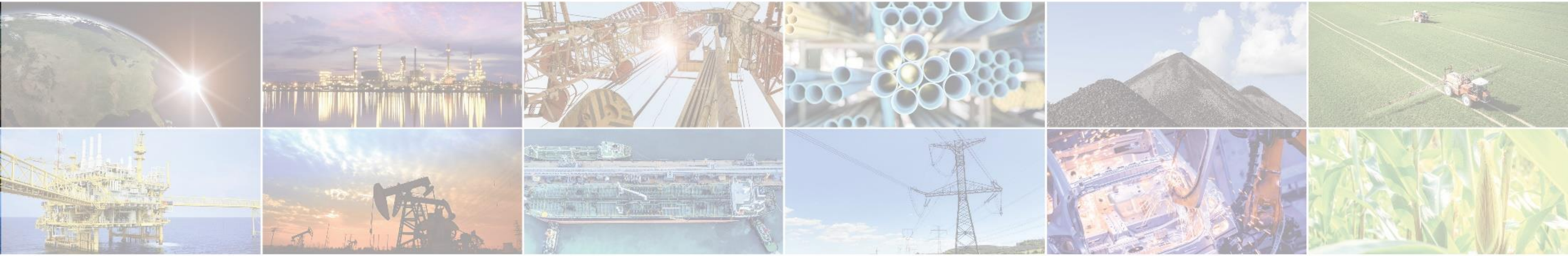

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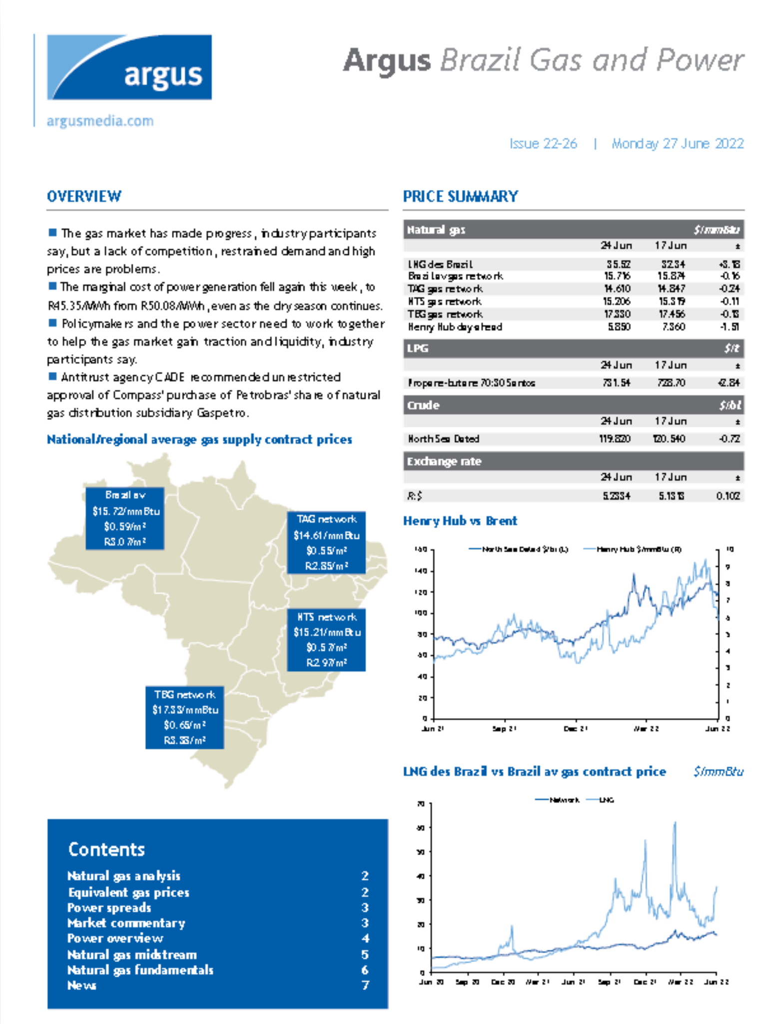

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Argus *Brazil Gas and Power*

Issue 22-26 | Monday 27 June 2022

OVERVIEW

- The gas market has made progress, industry participants say, but a lack of competition, restrained demand and high prices are problems.
- The marginal cost of power generation fell again this week, to R45.35/MWh from R50.08/MWh, even as the dry season continues.
- Policymakers and the power sector need to work together to help the gas market gain traction and liquidity, industry participants say.
- Antitrust agency CADE recommended unrestricted approval of Compass' purchase of Petrobras' share of natural gas distribution subsidiary Gaspetro.

National/regional average gas supply contract prices

Contents

PRICE SUMMARY

Natural gas			$/mmBtu
	24 Jun	17 Jun	±
LNG des Brazil	35.52	32.34	+3.18
Brazil av gas network	15.716	15.874	-0.16
TAG gas network	14.610	14.847	-0.24
NTS gas network	15.206	15.319	-0.11
TBG gas network	17.330	17.456	-0.13
Henry Hub day ahead	5.850	7.360	-1.51

LPG			$/t
	24 Jun	17 Jun	±
Propane-butane 70:30 Santos	731.54	728.70	+2.84

Crude			$/bl
	24 Jun	17 Jun	±
North Sea Dated	119.820	120.540	-0.72

Exchange rate			
	24 Jun	17 Jun	±
R:$	5.2334	5.1313	0.102

Henry Hub vs Brent

LNG des Brazil vs Brazil av gas contract price *$/mmBtu*

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Our daily calculated prices

- **Argus Brazil Gas Network prices** – TAG, NTS, TBG and average – (R/m³, $/m³ and $/mmBtu)

- **Power Spreads –** Spot/ long term; LNG, Network Gas, Fuel oil – (R/MWh and $/MWh)

- **Equivalent prices -** Differences, in USD/m³ to the LNG DES Brazil price from Gas network/ Henry Hub/ S500 Diesel/ PetCoke Brazil/ Fuel Oil/ LPG Brazil ($/t)

- **LPG prices –** Suape and Santos (in six different formulas) – ($/t)

Analysis

NATURAL GAS MARKET ANALYSIS

Bolivian gas supply will be key for Brazil in 2023

Bolivian natural gas will continue to make a difference in the Brazilian market in 2023 and even gain momentum under the new federal administration, as regional gas production remains constrained by a lack of infrastructure.

Bolivia exported 18mn m³/d to Brazil in 2022 — when Brazil's thermal power generation was low — according to data from Bolivian pipeline company Gas Transboliviano (GTB). That is close to 70pc of Brazil's total gas imports and around 26pc of total Brazilian demand.

Bolivia supplied 20mn m³/d of gas to Brazil in 2021 and was close to repeating that figure in 2022, even though Bolivian state-company YPFB shaved volumes sent to Brazil last year to meet Argentinian demand for gas during the winter. The country averaged 15mn m³/d of gas exports to Brazil from April-September, and reached a low of 12.7mn m³/d in September.

YPFB sees Brazil as a strategic partner and is willing to diversify its clientele, something it will pursue in 2023. The Bolivian company wants to shift volumes imported to Brazil by state-controlled Petrobras to new gas shippers, such as trading companies Tradener and Gas Bridge, which could pay higher prices, closer to international levels.

Gas supply agreements between Brazilian distributors and those traders to import Bolivian gas allowed YPFB to increase prices above its agreement with Petrobras. The companies do not disclose details about the deals, but sources say that the Petrobras-YPFB contract is priced at around 8-9pc of the Brent crude index. Petrobras' signed or amended contracts in 2022 with local gas distributors that were priced at 16.75pc of the Brent index.

Tradener's contract with Santa Catarina's state distributor SCGas is priced at 12.81pc of the Brent index, with a 30pc discount or a 20pc premium. Gas Bridge's contract with SCGas establishes a 13.5pc of the Brent price, plus Bolivian pipeline costs.

Bolivia wants to sign more deals of this kind with final gas consumers in Brazil, especially after 2024. The company said in early January that it aims to "diversify clients in Brazil," focusing commercial efforts to meet its commitment with Petrobras for the next two years and to seek other long-term clients in the liberalized market, where YPFB can supply gas directly to the final consumers on either firm or interruptible contracts — with spot ... ment the variable demand from Petro... company Enarsa.

Lula to foster hermanos

President Luiz Inacio Lula da Silva's vi... velopment may favor YPFB plans to ac... ers directly.

Lula met with Argentinian and Boli... Fernandez and Luis Arce on 1 January, ... and discussed energy interactions betw... among other topics. Brazil's public ban... financing the construction of a 583km ... Argentina's Nestor Kirschner pipeline, t... matches Lula's past policies of help de... neighbors that is expected to continue...

Lula's team also asked Petrobras to ... tion projects underway, which will be ... date. Petrobras still controls pipeline c... was on track to be sold as part of Petr... antitrust agency Cade, bringing gas fro... zilian southeast. Gas consumers fear th... resume the sale, allowing Petrobras to ... with Bolivia and possibly with Argentin...

By Flávia Pierry

Delivered LPG Brazil, 13 Jan
Propane Santos
Propane-butane 90:10 Santos
Propane-butane 70:30 Santos
Propane-butane 50:50 Santos
Propane Suape
Propane-butane 90:10 Suape
Propane-butane 70:30 Suape
Propane-butane 50:50 Suape

Includes AFRMM of 8%

POWER MARKET COMMENTARY

Above average rain drives Brazil hydropower

River flows that feed hydroelectric generation across Brazil are expected to remain above the long-term average in all regions except the south this week, according to grid operator ONS.

Flows are down to 136pc of the long-term average, from 138pc a week ago, in the southeastern/mid-center region — where more than 70pc of Brazil's hydropower generation takes place. River flows in the southern region should reach 68pc of the long-term average, up from 67pc. Flows in the northeastern and northern regions should reach 100pc and 164pc, respectively, from 110pc and 159pc.

ONS warned the national water and sanitation agency and other organizations that the Sao Francisco and Rio Grande river basins are near their water capacity threshold because of the increase in rainfall. The Sao Francisco river is one of the most important water sources in South America, flowing from Brazil's northeastern region to the southeast.

For the end of January, ONS expects river flows to be above or close to the long-term average in most regions. The southeastern/mid-center region will be at 122pc of the long-term average and the southern region will be at 84pc. The northeast will be at 94pc, while the north will be at 141pc.

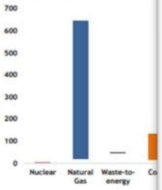
Water storage levels feeding hydropower generators in the southeastern/mid-center region were measured on 13 January at 62.6pc of the maximum storage capacity, from 55.8pc a week earlier. Levels were at 84.3pc in the southern region, up from 85.1pc, and at 74.2pc in the northeast, from 70.1pc. In the northern region, water storage levels were at 78.7pc, from the previous 67.7pc.

ONS estimates that water storage levels in hydropower generators will increase in the southeast/mid-center region by the end of the month. Water levels in the southeastern/mid-center region should reach 67pc of capacity. Levels should drop to 83.1pc in the s... northeast and 70.1pc in the n...

The power generation cos... R0.00/MWh, the same as a we... above the long-term average. (PLD) remained at its R69.04/... bottom, according to Brazil's ... commercialization (CCEE).

Authorized dispatch of the... an average of 3,904MW, from ... Expected power demand for ... 70,658MW, a 2.2pc decrease f... from last week's 71,630MW.

Unitary cost of power gener...



Spot power price, 13 Jan	Southeast/ Mid cente...			
Min	13.49...			
Max	13.49...			
Avg	13.499	13.499	13.499	13.499

— CCEE

POWER INDUSTRY OVERVIEW

Brazil's thermal expansion relies on flexibility

Brazil's thermal power expansion will hinge on the gas sector's ability to create more flexibility, such as with expanded storage.

Brazil's PDE 2032, a 10-year plan for the energy sector, states the country's thermal power generation demand for natural gas will increase to 49mn m³/d by 2032, from 40mn m³/d in 2022. The need for additional thermal capacity will reach 25GW in 2032, partly because of the 13GW of thermal plants with contracts that are expected to end in the next decade.

Additionally, the country will expand its intermittent renewable sources. Therefore, new thermal plants, mainly with high flexibility, will need to be contracted to meet the power requirements identified in PDE 2032, according to the University of Sao Paulo's electricity market group of advanced electric grids laboratory (LGrid).

Initiatives such as the Proescoar bill (PL 3052), which proposes lighter tariffs to gas transportation for storage, could strengthen natural gas plants' ability to provide flexibility to the system, generating power at a moment's notice. The project also proposes prohibiting the use of coal and green petroleum coke for power generation starting 10 years after its approval. These fuels would need to be substituted by natural gas or another fuel that lowers carbon emissions.

PDE 2032 also requires that 25pc of thermal power demand in 2032 will come from the thermal plants mandated by the Eletrobras privatization law, approved in June 2022. It mandates the construction of 2.5GW thermal plants in the northern region, 1GW in the northeast, 2.5MW in the mid-center region and 2GW in the southeast.

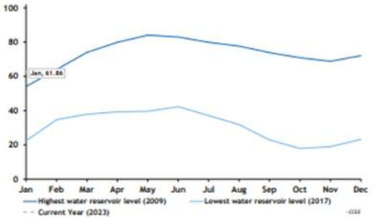
The law's goal is to create an anchor to drive gas supply and demand away from Brazil's coast. The measure was highly criticized by the power sector, which called it expensive and said it favored some gas transportation businesses over others. Newly inaugurated President Luiz Inacio Lula da Silva's power team said it planned to review the obligation for building these plants.

The concentration of demand suggested by Eletrobras' privatization law is not a reason for concern as it stands in the PDE 2032 analysis, according to LGrid. The plan centralizes natural gas demand for thermal plants in the southeast, close to where power load is higher in the country. But the scenario for the other plants not yet considered in the plan, further from power demand, might require more transmission lines.

The expansion of renewable sources in Brazil's northeast signaled the need for more transmission capacity in the PDE 2031, said LGrid. Plans for expanding the power sector will face significant challenges in the next decade, including demand growth regularly lagging below projections and distributed generation continuing to expand, the group said.

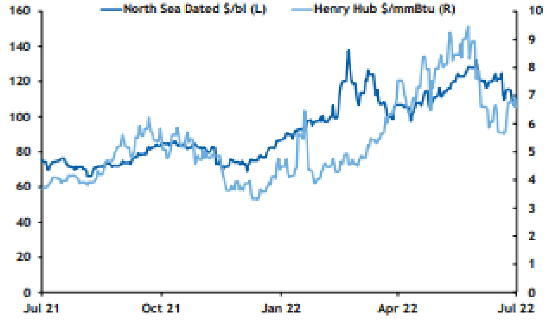
By Rebecca Gompertz

Water reservoir levels for hydropower generation %



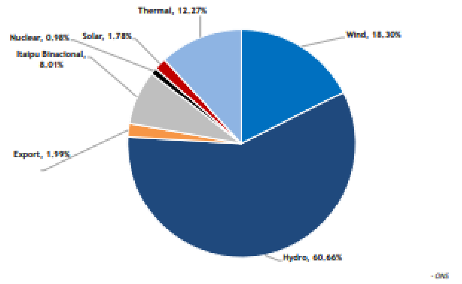
Our weekly fundamental data

Henry Hub vs Brent



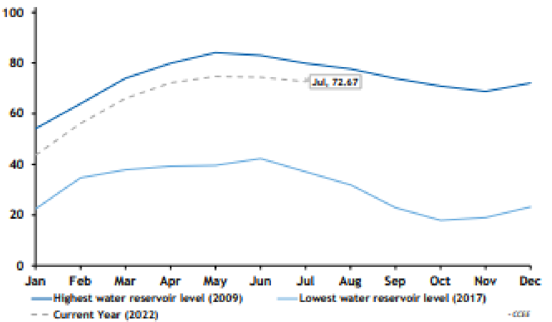
Power load per source

MW avg



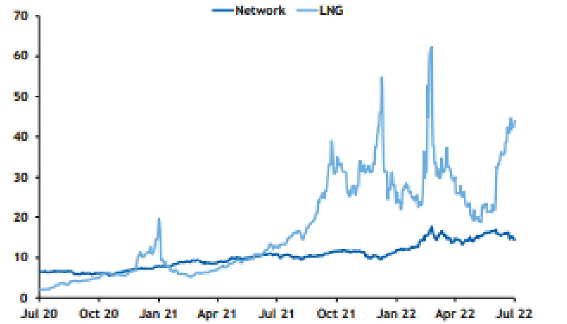
Water reservoir levels for hydropower generation

%



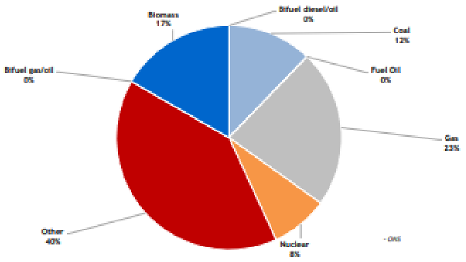
LNG des Brazil vs Brazil av gas contract price

$/mmBtu



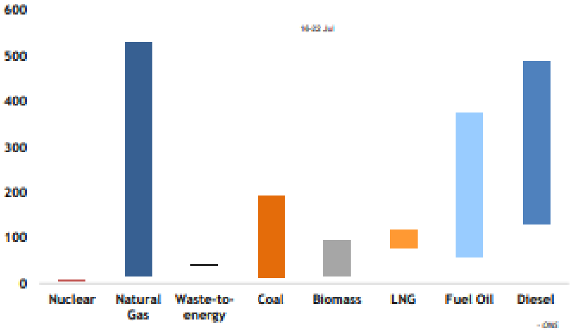
Thermal generation per type of fuel

MW avg



Unitary cost of power generation per source

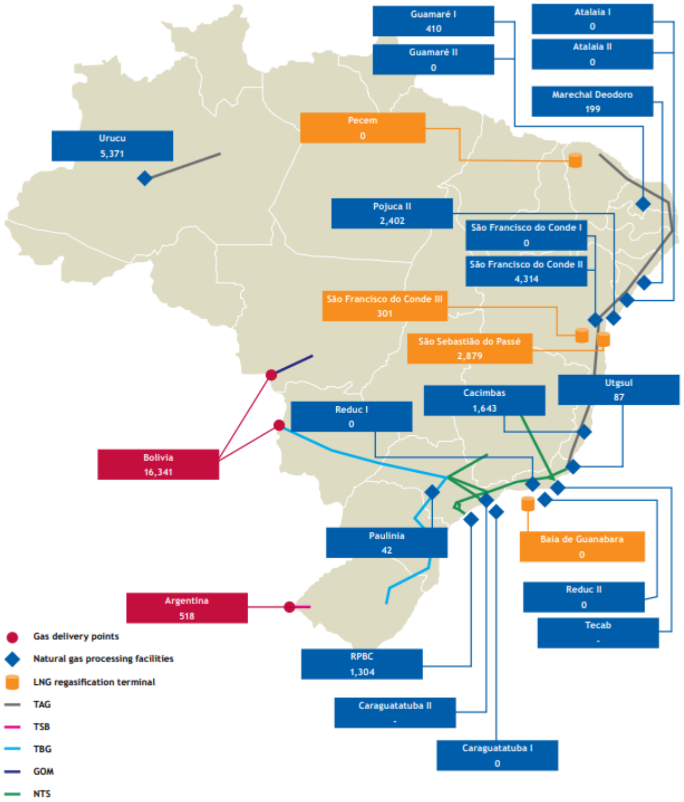
$/MWh



Our weekly fundamental data

BRAZIL NATURAL GAS MIDSTREAM

Average volumes transported, 4-10 Jul — '000 m³/d



Transportation volumes are preliminary and may be revised.

— ANP

BRAZIL NATURAL GAS MIDSTREAM

Natural gas pipeline weighted average calculated transportation tariffs

TAG — *R/mmbtu*

Entry point	Exit point: Alagoas	Bahia	Ceará	Espirito Santo	Paraiba	Pernambuco	Rio de Janeiro	Rio Grande do Norte	Sergipe
Atalaia I	na	na	na	na	na	na	na	na	na
Atalaia II	na	na	na	na	na	na	na	na	na
Cacimbas	11.0953	10.9773	11.4650	11.0492	11.2334	11.1833	11.0924	11.3661	11.0357
LNG Pecém	11.2937	11.1757	11.6634	11.2476	11.4318	11.3817	11.2908	11.5645	11.2341
Guamaré I	11.1532	11.0353	11.5230	11.1072	11.2914	11.2412	11.1504	11.4241	11.0937
Guamaré II	na	na	na	na	na	na	na	na	na
Marechal Deodoro	10.9885	10.8706	11.3583	10.9425	11.1267	11.0765	10.9857	11.2594	10.9290
Pojuca II	10.9461	10.8282	11.3159	10.9001	11.0843	11.0341	10.9433	11.2170	10.8866
TECAB	11.1923	11.0744	11.5621	11.1463	11.3305	11.2804	11.1895	11.4632	11.1328
Connection TECAB	6.6162	6.4982	6.9859	6.5701	6.7544	6.7042	6.6133	6.8870	6.5567
LNG São Francisco do Conde III	10.9706	10.8526	11.3403	10.9245	11.1087	11.0586	10.9677	11.2414	10.9110
São Francisco do Conde I	na	na	na	na	na	na	na	na	na
São Francisco do Conde II	10.9717	10.8538	11.3415	10.9257	11.1099	11.0598	10.9689	11.2426	10.9122
LNG São Sebastião do Passé (TRBA)	10.9496	10.8317	11.3194	10.9036	11.0878	11.0377	10.9468	11.2205	10.8901
UTGSUL	11.1414	11.0234	11.5111	11.0953	11.2796	11.2294	11.1385	11.4123	11.0819

All tariffs have been updated considering the inflation rate in January 2022. Tariffs include surcharges and linepack (except penalties), as fully approved by regulator ANP.

— ANP and TAG, TBG and NTS

TBG — *R/mmbtu*

Entry point	Exit point: Gascar	Mato Grosso do Sul	Paraná	Rio Grande do Sul	Santa Catarina 1	Santa Catarina 2	São Paulo 1	São Paulo 2	São Paulo 3	São Paulo 4
Corumbá	6.0224	5.8259	6.2530	6.5889	6.3925	6.3925	5.9547	6.0342	6.0341	6.0680
Gascar	4.9354	4.7389	5.1660	5.5019	5.3055	5.3055	4.8677	4.9472	4.9471	4.9810
Garuva	5.2210	5.0245	5.4516	5.7875	5.5911	5.5911	5.1533	5.2328	5.2327	5.2666

All tariffs already updated with inflation rates in January 2022. Tariffs include surcharges and linepack and still await final approval by regulator ANP.

— ANP and TAG, TBG and NTS

NTS — *R/mmbtu*

Entry point	Exit point: Minas Gerais	Replan Interconnec-tion	Connection TECAB	Rio de Janeiro	São Paulo
Caraguatatuba	9.4000	6.7630	6.7364	8.9267	9.0774
Paulínia	9.2254	6.5884	6.5618	8.7521	8.9028
LNG Baía de Guanabara	9.0432	6.4061	6.3796	8.5698	8.7205
Guapimirim	9.1293	6.4922	6.4657	8.6559	8.8066
Guararema Interconnection	4.5153	1.8782	1.8517	4.0419	4.1926
Replan Interconnection	4.5188	1.8817	1.8552	4.0454	4.1961
TECAB	9.5948	6.9577	6.9311	9.1214	9.2721
TECAB Interconnection	4.5188	1.8817	1.8552	4.0454	4.1961

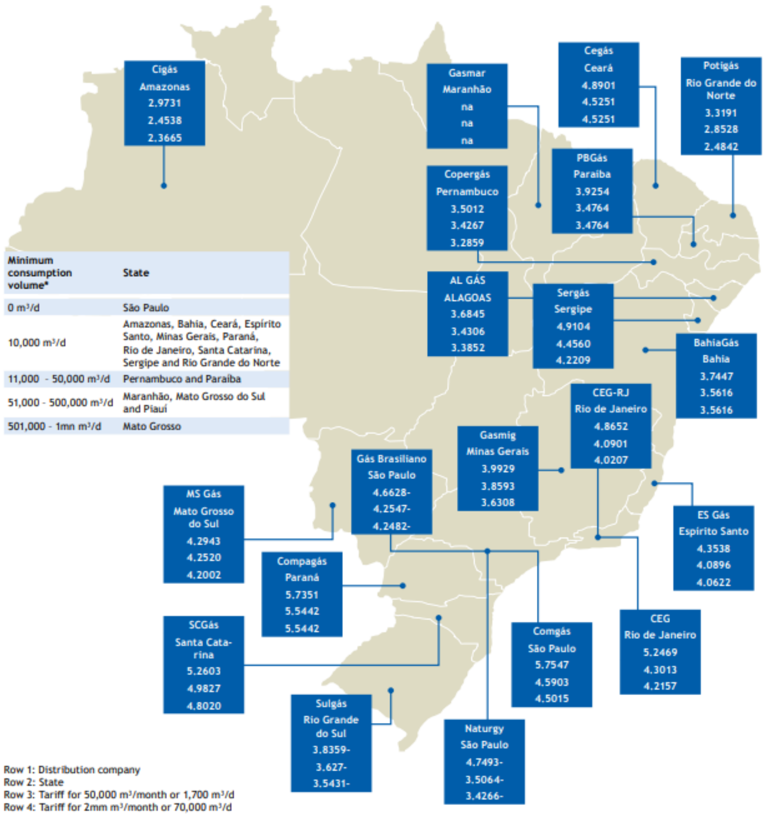
All tariffs already updated with inflation rates in January 2022. Tariffs include surcharges and linepack and still await final approval by regulator ANP.

— ANP and TAG, TBG and NTS

Our weekly fundamental data

BRAZIL NATURAL GAS MIDSTREAM

Natural gas tariffs for retail industrial consumers *R/m³*

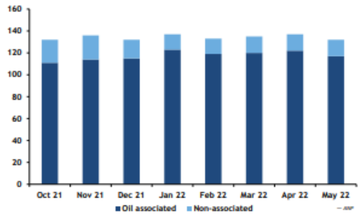


Minimum consumption volume*	State
0 m³/d	São Paulo
10,000 m³/d	Amazonas, Bahia, Ceará, Espírito Santo, Minas Gerais, Paraná, Rio de Janeiro, Santa Catarina, Sergipe and Rio Grande do Norte
11,000 - 50,000 m³/d	Pernambuco and Paraíba
51,000 - 500,000 m³/d	Maranhão, Mato Grosso do Sul and Piauí
501,000 - 1mn m³/d	Mato Grosso

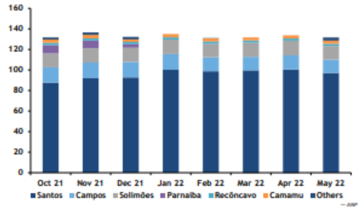
Row 1: Distribution company
Row 2: State
Row 3: Tariff for 50,000 m³/month or 1,700 m³/d
Row 4: Tariff for 2mm m³/month or 70,000 m³/d
Row 5: Tariff for 10mm m³/month or 340,000 m³/d

NATURAL GAS FUNDAMENTALS

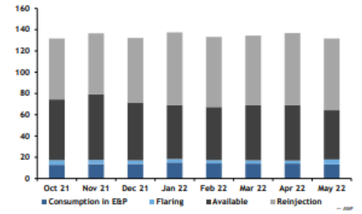
Natural gas production *mn m³/d*



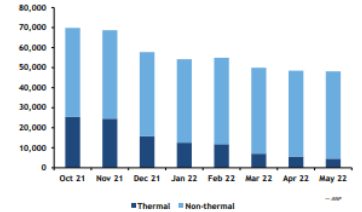
Natural gas production per basin *mn m³/d*



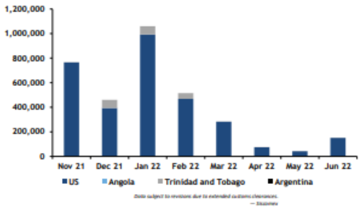
Natural gas availability *mn m³/d*



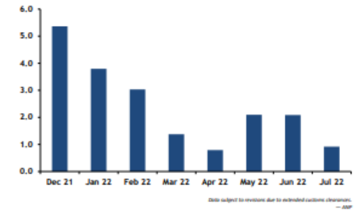
Natural gas consumption in power generation *mn m³/d*



LNG imports *t*



LNG volume regasified locally *mn m³/d*



News

NEWS

Brazil's gas distributors extend long-term deals

Some of Brazil's natural gas distributors have been signing and reviewing contracts with Portuguese gas producer Galp to extend gas supply by 10 years or more, which might mean less competition among gas suppliers in the next years.

Minas Gerais state's gas distributor Gasmig extended its gas supply agreement with Galp to 2042 — the contract was originally signed in 2022 and ended in December 2023. Galp will increase its supply to Gasmig gradually over the years, until reaching 900,000 m³/d in 2026-2032. After that, supply should decrease by 100,000 m³/d every two years until 2041-2042, when it will drop to 250,000 m³/d.

The gas is also priced differently depending on the year and will be priced to a gas contract — the gas-gas method — only after the beginning of 2026. Before that, the contract is indexed to a percentage of the Brent crude price index. Indexation will shift to 115pc of the US Henry Hub price in 2026-2042.

Ceara state's distributor Cegas also extended its contract with Galp until the end of 2031, which originally ran until the end of 2022. The deal sets a schedule for increases in firm supply with decreases in the amount of put-option supply every year until 2026, when the firm and put-option amounts will settle at 180,000 m³/d and 33,000 m³/d, respectively. Put options give holders the right to sell while counterparties have the duty to buy.

Both firm and put-option supply are indexed to the Brent until 2031. The firm volume will be priced at 11.9pc of the Brent price as of 2024. The put- option molecule is multiplied by 9.9pc of crude oil until the end of the contract.

Espirito Santo state's gas distributor ESGas and Galp signed a new contract with supply running until the end of 2032. The Portuguese company will supply ESGas with 100,000 m³/d in put option until the end of 2025. After that, there will be no more put option in the contract. Supply starts at 100,000 m³/d in the firm option until 2024, increases by an additional 100,000 m³/d in 2025 and another 100,000 m³/d in 2026, reaching 300,000 m³/d until the end of the term.

Similarly to the Gasmig contract, the ESGas deal shifts from a Brent indexation to 115pc of the Henry Hub in 2026.

The new contracts do not create barriers for regulated gas consumers that are under contract with the distributors to reduce volumes or terminate their deals with regional distribution companies to migrate to the liberalized market, purchasing gas directly from the producers. All contracts include a clause allowing distributors to decrease the amount of gas bought from Galp if its consumers transition to the free market, in the same proportion.

By Rebecca Gompertz

Brazil regulator delays gas line class ruling

Brazil's hydrocarbons regulator ANP delayed a ruling regarding whether to classify the 31.5km (19.6-mile) Subida da Serra natural gas pipeline as a distribution or transportation asset.

Preliminary negotiations between ANP and Sao Paulo state regulator Arsesp would allow the pipeline to be classified as distribution infrastructure, as long as it is not connected to gas supply infrastructure, such as an offshore field.

ANP was scheduled to rule yesterday on whether to hold public hearings to discuss the agreement, but director Daniel Vieira asked for additional time to analyze its terms.

If it is classified as transport infrastructure, Sao Paulo gas distributor Comgas will not be allowed to operate the pipeline.

Gas transport companies and some large gas consumers contend that if the pipeline is classified as distribution infrastructure, consumers outside of Comgas' concession will not have access to gas transported by the pipeline.

Brazilian law stipulates that gas distribution is regulated by the states, while gas transport is the federal government's responsibility.

The Subida da Serra pipeline is part of a broader project that includes LNG regasification terminal TRSP, being developed by natural gas company Commit, which controls Comgas. The terminal in the Santos port, which is scheduled to begin operating later this year, will have regasification capacity of 14mn m³/d and storage capacity of 150,000 m³.

Petrobras announces gas price reduction

Brazilian state-controlled Petrobras announced an average 11.1pc reduction to its natural gas prices sold to distributors for the February-April quarter from the prior quarter.

The reduction is part of Petrobras' quarterly review of prices, adjusted for Brent crude and exchange rate variations. The start of 2023 also marks a moment where several Petrobras natural gas contracts reduce the multiplying factor on Brent to 14.4pc from 16.75pc.

By Rebecca Gompertz

Brazil probes possible sabotage to electric grid

Power transmission infrastructure in Brazil's Parana and Rondonia states may have been vandalized on 8 and 9 January, according to Brazilian authorities.

Three power line towers were knocked down, three others were damaged and holding cables were cut, according to a joint statement from the grid operator ONS, electricity regulator Aneel and mines and energy ministry MME. No

power outages took place but authorities reported "signs of vandalism".

There were no climate events that could have caused the damage, according to the three agencies. The agencies are investigating whether the damages could have been caused by sabotage or vandalism.

The incidents follow the storming of key government buildings by former president Jair Bolsonaro supporters in Brasilia on 8 January.

In response to the damaged towers and lines, ONS, MME and Aneel established a committee to oversee Brazil's power system, with the goal of "maintaining the interconnected power system's security." The agencies will adopt actions that are traditionally implemented during special events, such as election days or big sporting events, they said.

By Flávia Pierry

Brazil's TBG begins short-term Gasbol offer

Brazilian gas transport company TBG launched its second open season for short-term natural gas transport contracts for its 2,593km (1,610-mile) Bolivia-Brasil pipeline (Gasbol) for 2023.

The company will be offering daily, monthly and quarterly contracts through its web-based system, with bidding taking place in three phases.

Bidding for quarterly contracts will take place on 16-17 January, followed by bidding for monthly contracts on 23-24 January. The company will also receive bids for daily contracts on 26-27 January, which will continue to be offered for one-day delivery the next day, depending upon availability, through the web-based system.

In TBG's previous open season for short-term contracts, Portuguese energy company Galp signed a quarterly contract for 50,000 m³/d of entry capacity at the Campinas-Rio (Gascar) metering station in Sao Paulo state.

TBG also signed long-term contracts for transport between 2023-27 with Galp, state-owned Petrobras and Rio Grande do Sul distributor Sulgas.

Brazil fuel importers tangled in port tax dispute

Successive recent changes in the the merchant marine renewal tax (AFRMM) have caused operational and accounting headaches for fuel and gas importers in Brazil and spurred a flurry of legal challenges.

The tax — a surcharge calculated on the value of freight that helps fund Brazil's merchant marines — was repeatedly altered in 2022 by then-president Jair Bolsonaro, who cut the rate to 8pc from 25pc in the first quarter of 2022 to ease inflationary pressure on fuels. On 30 December, then-vice president Hamilton Mourao signed a decree that reduced the rate used since March 2022 by half.

On 2 January, the first working day of President Luiz Inacio Lula da Silva's administration, the federal government annulled Mourao's decree that had lowered the AFRMM rate to 4pc.

Partners at Martinelli Advogados, a law firm in Brazil, argue that the government's revocation is legal in form, as the decree issued in the final days of the Bolsonaro administration did not go in effect. But the revocation runs afoul of a constitutional principle as it institutes a tax increase in the same financial year it was published.

According to Luis Eduardo Marola, a partner in the international area at Martinelli's Santa Catarina state office, the revocation — which set the rate to 8pc — should only be applicable as of January 2024. The debate has led some companies to take legal action against the decision and ask for a 4pc rate. "Companies will judicialize their cases as quickly as possible to obtain the benefit more quickly," said Marola.

Sources working in the domestic fuel import market told *Argus* that they are still operating with the premise of an 8pc rate, following the new administration's definition, but that their companies' legal and tax services are evaluating the changes.

Import arbitrage

Fuel importers closely monitor the AFRMM, as the difference in the rate directly impacts their operations' competitiveness and changes may open arbitrage in markets.

Maritime freight for a medium range (MR) tanker departing from the US Gulf Coast for Brazil's Paranagua port have averaged 11.9¢/USG (R162.5/m³) since 3 January, according to a survey by *Argus*. A 4 percentage point decrease in the tax rate could generate gains of R6.5/m³ on an imported diesel cargo, which can make a difference on the break-even price of a foreign cargo in a market characterized by narrow margins and increasingly volatile and dynamic arbitrage dynamics — such as Brazil's northeast region.

By Amance Boutin

Brazil expects lowest power price in 2023

The power clearing price (PLD) should average its regulatory minimum in 2023, according to four out of five scenarios from Brazil's chamber of electric energy commercialization (CCEE).

The only scenario where the average clearing price would be higher than its R69.04/MWh ($13.43/MWh) regulatory floor would be if rainfall levels were similar to those recorded between January 2021-February 2022, when the country faced a historic drought. If so, the PLD would average R76.08/MWh in 2023.

By Rebecca Gompertz

Gas consumers' bills in Sao Paulo may drop

A court decision that altered the VAT-like ICMS tax may force natural gas distributors in Brazil's Sao Paulo state to refund consumers for roughly R2bn ($380mn) in taxes collected since 2017, which would be used to lower consumers' energy bills.

The state's regulatory agency Arsesp has been holding public hearings to discuss how these funds will be reimbursed to consumers following the court decision.

Arsesp estimates that Comgas, Sao Paulo metropolitan region's distributor and the country's largest, would be required to pay R1.8bn. The state's other two distributors — Naturgy and GasBrasiliano — would owe R123mn and R51mn, respectively.

Arsesp has proposed that the distributors reimburse consumers with these payments, and they would be reflected in the companies' annual tariff revisions.

Comgas has contested the decision, arguing that the excess tax collected should be treated as extraordinary revenues and that requiring it to reimburse the funds would erode company efficiency.

The electricity sector faced a similar issue and a law passed last year ruled that consumers be reimbursed via reductions in their electricity bills.

Brazil's association of energy-intensive industries Abrace estimates that the discount would reach roughly 8.3pc for natural gas bills if the tax credit is granted to consumers over a 12-month period.

Gas distributors could also be forced to compensate consumers for the excess payments.

Pro-Bolsonaro protests in Brazil appear to fizzle

Protests in Brazil against newly-inaugurated President Luiz Inacio Lula da Silva scheduled for last night saw little turnout, a sign that demonstrations may be losing momentum as authorities act fast to prevent escalations.

Supporters of former president Jair Bolsonaro planned protests in several cities across Brazil on Wednesday night. But in Brasilia — where Bolsonaro supporters stormed the country's congress, presidential palace and the supreme court on 8 January — fewer than 10 people showed up. In Sao Paulo, where demonstrators protested in favor of democracy on Monday, it was the same.

A survey of Brazilians published yesterday by polling agency Datafolha indicates most Brazilians did not welcome the events on 8 January, with 93pc of Brazilians opposed to the Sunday riots and 3pc in favor. The phone survey of 1,214 people found 87pc of respondents say that "some or all" people involved with the protests should go to jail, while 9pc said no one should be arrested.

Brazilian authorities moved swiftly to prevent Wednesday's protests from mirroring the events on 8 January and bolstered security measures nationwide. At least 1,500 people who entered government buildings have been arrested so far, according to federal district police. The country's supreme court (STF) prohibited roadblocks — such as those that Bolsonaro's supporters mounted on 8 January and after Lula's election on 30 October — and increased punishments for storming public buildings. Additionally, the country's attorney general office asked for a temporary ban on demonstrations — including the immediate arrest of all those protesting — and fines for companies or individuals found to be financing the protests' logistics.

Justice minister Flavio Dino said that financiers of the 8 January protests have been identified in 10 states. He added that he has a list of those who hired the nearly 40 buses that drove the rioters to Brasilia but did not give further details.

Pursuing criminal charges against politicians

Brazilian authorities are also pursing indictments to political figures that may have been involved with the riots.

The federal government first bolstered its enforcement power by gaining quick congressional approval to take over security in the federal district surrounding Brasilia until 31 January. Supreme court justice Moraes removed the governor of the country's federal district for 90 days for alleged security shortcomings that failed to prevent the riots. He issued an arrest warrant for Bolsonaro's former justice minister Anderson Torres, who became Brasilia's public security chief after Lula took office on 1 January, accusing him of conspiring with the rioters.

Torres was vacationing with his family in Florida and visited Bolsonaro — who left the country two days before his term expired — a day before the storming of the buildings. Torres said Tuesday on Twitter that he will return to Brazil and turn himself in but has yet to leave the US.

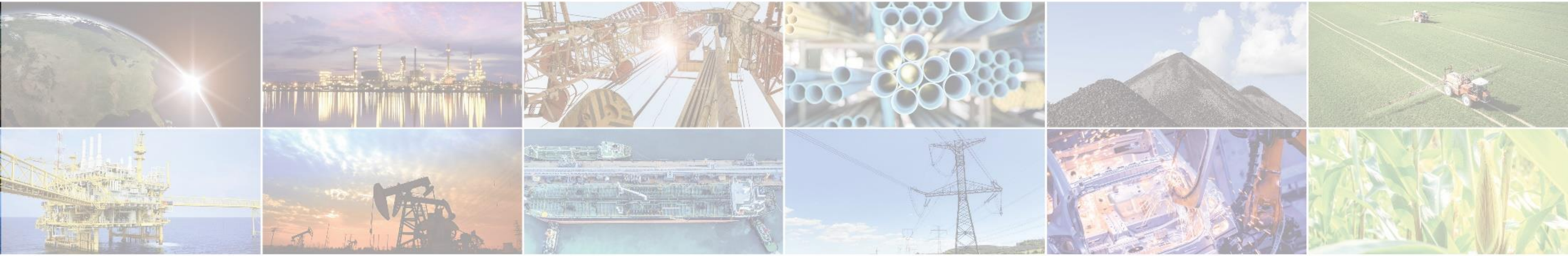
Brazil's federal police raided Torres' home today and said they found a draft of a decree for Bolsonaro to establish a state of defense in Brazil's electoral supreme court — which would essentially have put the former president in charge of the electoral process — and allowing him to change the presidential election outcome. Police will investigate the circumstances surrounding the proposal.

Moraes also issued a warrant for the arrest of Fabio Augusto Vieira, the head of Brasilia's federal police. Lula said the police were "neglectful" during the riots.

Today, Brazil's prosecutor office asked STF to investigate three congressmen — two of them from Bolsonaro's party — for "inciting acts of violence and vandalism registered in Brasilia on 8 January," citing posts made on social media before and after the events.

On Wednesday morning, Bolsonaro — who has claimed previ-

Argus Brazil Natural Gas Bulletin Board



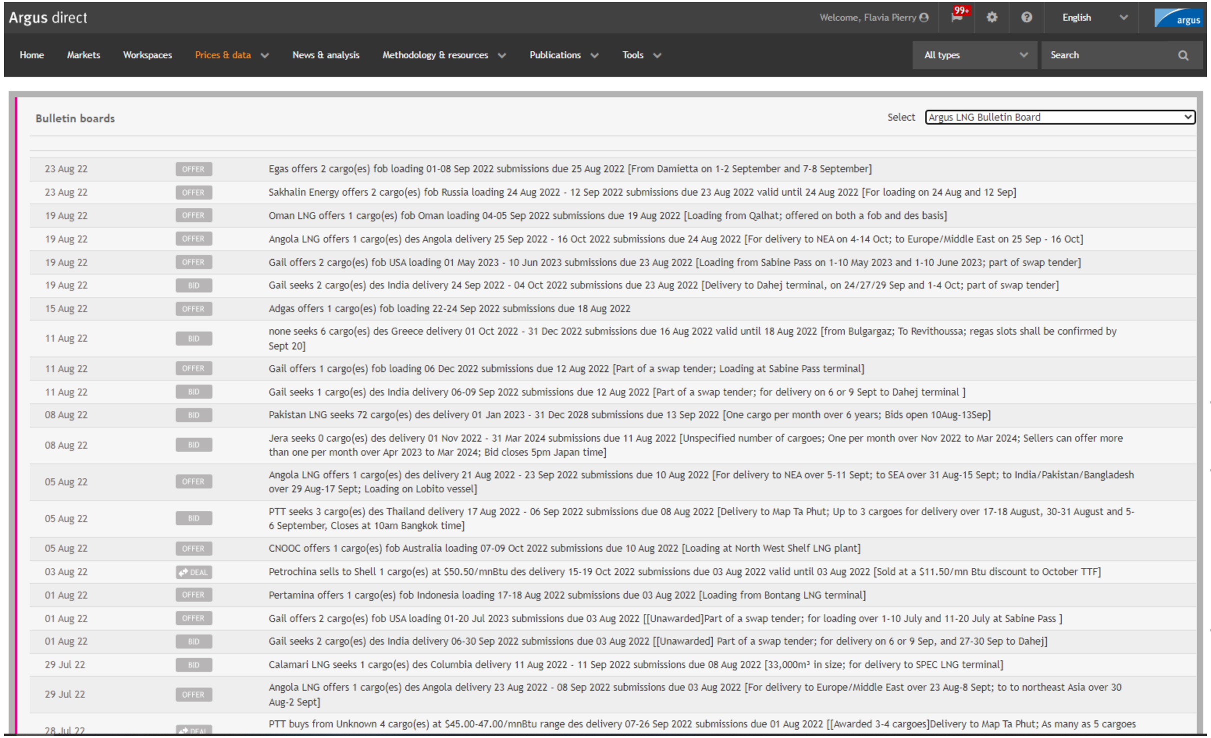
Market Reporting

Consulting

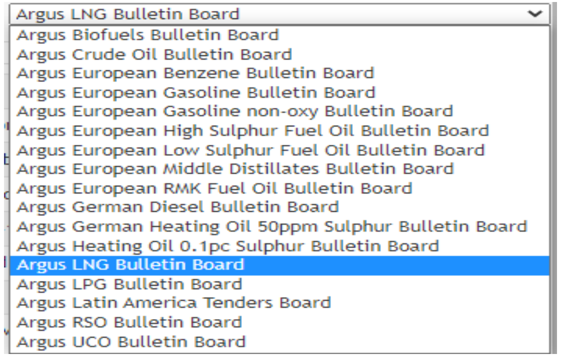
Events

illuminating the markets

Argus Bulletin Boards



23 Aug 22	OFFER	Egas offers 2 cargo(es) fob loading 01-08 Sep 2022 submissions due 25 Aug 2022 [From Damietta on 1-2 September and 7-8 September]
23 Aug 22	OFFER	Sakhalin Energy offers 2 cargo(es) fob Russia loading 24 Aug 2022 - 12 Sep 2022 submissions due 23 Aug 2022 valid until 24 Aug 2022 [For loading on 24 Aug and 12 Sep]
19 Aug 22	OFFER	Oman LNG offers 1 cargo(es) fob Oman loading 04-05 Sep 2022 submissions due 19 Aug 2022 [Loading from Qalhat; offered on both a fob and des basis]
19 Aug 22	OFFER	Angola LNG offers 1 cargo(es) des Angola delivery 25 Sep 2022 - 16 Oct 2022 submissions due 24 Aug 2022 [For delivery to NEA on 4-14 Oct; to Europe/Middle East on 25 Sep - 16 Oct]
19 Aug 22	OFFER	Gail offers 2 cargo(es) fob USA loading 01 May 2023 - 10 Jun 2023 submissions due 23 Aug 2022 [Loading from Sabine Pass on 1-10 May 2023 and 1-10 June 2023; part of swap tender]
19 Aug 22	BID	Gail seeks 2 cargo(es) des India delivery 24 Sep 2022 - 04 Oct 2022 submissions due 23 Aug 2022 [Delivery to Dahej terminal, on 24/27/29 Sep and 1-4 Oct; part of swap tender]
15 Aug 22	OFFER	Adgas offers 1 cargo(es) fob loading 22-24 Sep 2022 submissions due 18 Aug 2022
11 Aug 22	BID	none seeks 6 cargo(es) des Greece delivery 01 Oct 2022 - 31 Dec 2022 submissions due 16 Aug 2022 valid until 18 Aug 2022 [from Bulgargaz; To Revithoussa; regas slots shall be confirmed by Sept 20]
11 Aug 22	OFFER	Gail offers 1 cargo(es) fob loading 06 Dec 2022 submissions due 12 Aug 2022 [Part of a swap tender; Loading at Sabine Pass terminal]
11 Aug 22	BID	Gail seeks 1 cargo(es) des India delivery 06-09 Sep 2022 submissions due 12 Aug 2022 [Part of a swap tender; for delivery on 6 or 9 Sept to Dahej terminal]
08 Aug 22	BID	Pakistan LNG seeks 72 cargo(es) des delivery 01 Jan 2023 - 31 Dec 2028 submissions due 13 Sep 2022 [One cargo per month over 6 years; Bids open 10Aug-13Sep]
08 Aug 22	BID	Jera seeks 0 cargo(es) des delivery 01 Nov 2022 - 31 Mar 2024 submissions due 11 Aug 2022 [Unspecified number of cargoes; One per month over Nov 2022 to Mar 2024; Sellers can offer more than one per month over Apr 2023 to Mar 2024; Bid closes 5pm Japan time]
05 Aug 22	OFFER	Angola LNG offers 1 cargo(es) des delivery 21 Aug 2022 - 23 Sep 2022 submissions due 10 Aug 2022 [For delivery to NEA over 5-11 Sept; to SEA over 31 Aug-15 Sept; to India/Pakistan/Bangladesh over 29 Aug-17 Sept; Loading on Lobito vessel]
05 Aug 22	BID	PTT seeks 3 cargo(es) des Thailand delivery 17 Aug 2022 - 06 Sep 2022 submissions due 08 Aug 2022 [Delivery to Map Ta Phut; Up to 3 cargoes for delivery over 17-18 August, 30-31 August and 5-6 September, Closes at 10am Bangkok time]
05 Aug 22	OFFER	CNOOC offers 1 cargo(es) fob Australia loading 07-09 Oct 2022 submissions due 10 Aug 2022 [Loading at North West Shelf LNG plant]
03 Aug 22	DEAL	Petrochina sells to Shell 1 cargo(es) at $50.50/mnBtu des delivery 15-19 Oct 2022 submissions due 03 Aug 2022 valid until 03 Aug 2022 [Sold at a $11.50/mn Btu discount to October TTF]
01 Aug 22	OFFER	Pertamina offers 1 cargo(es) fob Indonesia loading 17-18 Aug 2022 submissions due 03 Aug 2022 [Loading from Bontang LNG terminal]
01 Aug 22	OFFER	Gail offers 2 cargo(es) fob USA loading 01-20 Jul 2023 submissions due 03 Aug 2022 [[Unawarded]Part of a swap tender; for loading over 1-10 July and 11-20 July at Sabine Pass]
01 Aug 22	BID	Gail seeks 2 cargo(es) des India delivery 06-30 Sep 2022 submissions due 03 Aug 2022 [[Unawarded] Part of a swap tender; for delivery on 6 or 9 Sep, and 27-30 Sep to Dahej]
29 Jul 22	BID	Calamari LNG seeks 1 cargo(es) des Columbia delivery 11 Aug 2022 - 11 Sep 2022 submissions due 08 Aug 2022 [33,000m³ in size; for delivery to SPEC LNG terminal]
29 Jul 22	OFFER	Angola LNG offers 1 cargo(es) des Angola delivery 23 Aug 2022 - 08 Sep 2022 submissions due 03 Aug 2022 [For delivery to Europe/Middle East over 23 Aug-8 Sept; to to northeast Asia over 30 Aug-2 Sept]
28 Jul 22	DEAL	PTT buys from Unknown 4 cargo(es) at $45.00-47.00/mnBtu range des delivery 07-26 Sep 2022 submissions due 01 Aug 2022 [[Awarded 3-4 cargoes]Delivery to Map Ta Phut; As many as 5 cargoes



- 17 markets worldwide
- Buyers and sellers post their trading intentions and deals done
- Independent deals done by market participants

argus

Argus Brazil Natural Gas Bulletin Board

What:

Tool that allows market participants to publish bids, offers and deals of natural gas delivered in the pipeline grid.

Goal:

To contribute to the spot market liquidity and enhance transparency at this market in Brazil.

Who can participate:

All gas market participants authorized by the Brazilian oil and gas regulatory agencu ANP.

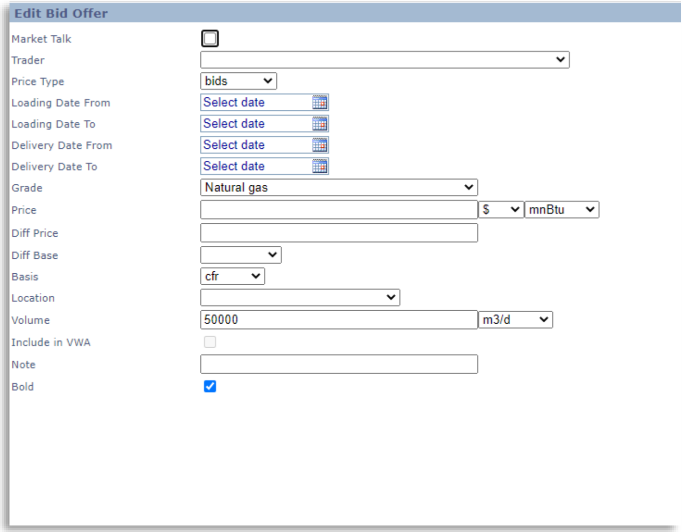
How it works

Traders can inform Argus its bids and offerts daily (except weekends and holidays) 10AM -5PM Brasília time:

- Bid/Offer/Deal
- Name of the company
- Begin and end date for the deal
- Price (Reais/m³, USDolars/mnBtu or diff against brenchmark)
- Delivery point (any place at TAG, NTS pr TBG pipeline grid)
- Volume (m³)
- Transport agreement (if hired, entry, exit or both)

Internal operation

- Editor and reporter receive the information via WhatsApp, phone or e-mail, check the information and add to the system:



Examples Bid

"Company bids 5,000m^3/d of Natural Gas at R4.34m^3 at TAG TECAB Entry for delivery 30 days (01 Oct 2022 – 30 Oct 2022) [Exit Capacity Included]"

"Company bids 10,000m^3/d of Natural Gas at $12.00/mnBtu at TAG Guamare for delivery 90 days (01 Oct 2022 – 31 Dec 2022) [Exit Capacity NOT Included]"

"Company bids 50,000m^3/d of Natural Gas at 13pc Brent at NTS Paulinia for delivery 10 days (01 Oct 2022 – 10 Oct 2022) [Exit Capacity Included]"

Examples Offers

"Producer offers 10,000m^3/d of Natural Gas at 115pc Henry Hub at TAG Guamare for delivery 90 days (01 Oct 2022 – 31 Dec 2022) [Entry Capacity Included]"

Exemplo Deal

"Company buys from Producer 30,000m^3/d of Natural Gas at $0.70/$m^3$ for delivery 90 days (01 Oct 2022 – 31 Dec 2022) [Entry Capacity NOT Included]"

Troubleshooting

- **The information on the name of the company posting the bid/offer is essencia, since Argus does not intermediate businesses.**
- Deals can be posted annonymously
- Argus must check annonymous deals with the counterpart.
- Argus does not participates in trades, does not charcge brokerage or clearing fees.

Test period

- ***From October to December 2022***
- 15 companies selected for the trial.
- 6 companies consulted daily.
- Next steps: Launch the tool open for all gas market participants in 1Q2023 (possibly a previous marketing step, with a free newsletter)

ABGP Bulletin Board

Argus direct

Welcome, Flavia Pierry 99+ English argus

Home | Markets | Workspaces | Prices & data | News & analysis | Methodology & resources | Publications | Tools | All types | Search

Bulletin boards

Select: Argus Brazil Natural Gas Bulletin Board

16 Dec 22	OFFER	[redacted]ffers 50000m3/d of Natural gas at $[redacted]/mnBtu at TAG Catu for delivery 1 day(s) (23 Dec 2022) [TAG costs not included]
07 Dec 22	OFFER	[redacted]ffers 50000m3/d of Natural gas at $[redacted]/mnBtu at TAG Catu for delivery 1 day(s) (15 Dec 2022) [TAG costs not included]
06 Dec 22	OFFER	[redacted]ffers 50000m3/d of Natural gas at $[redacted]/mnBtu at TAG Catu for delivery 1 day(s) (15 Dec 2022) [TAG costs not included]
02 Dec 22	OFFER	[redacted]ffers 50000m3/d of Natural gas at $[redacted]/mnBtu at TAG Catu for delivery 1 day(s) (15 Dec 2022) [TAG costs not included]
01 Dec 22	OFFER	[redacted]ffers 50000m3/d of Natural gas at $[redacted]/mnBtu at TAG Catu for delivery 1 day(s) (15 Dec 2022) [TAG costs not included]
30 Nov 22	OFFER	[redacted]ffers 50000m3/d of Natural gas at $[redacted]/mnBtu at TAG Catu for delivery 1 day(s) (15 Dec 2022) [TAG costs not included]
28 Nov 22	OFFER	[redacted]ffers 50000m3/d of Natural gas at $[redacted]/mnBtu at TAG Catu for delivery 1 day(s) (29 Nov 2022) [TAG costs not included]
25 Nov 22	OFFER	[redacted]ffers 50000m3/d of Natural gas at $[redacted]/mnBtu at TAG Catu for delivery 1 day(s) (29 Nov 2022) [TAG costs not included]
21 Oct 22	OFFER	[redacted]offers 100000m3/d of Natural gas at[redacted]00/mnBtu at TAG Pojuca for delivery 11 day(s) (21-31 Oct 2022) [No exit capacity hired]
20 Oct 22	OFFER	[redacted]offers 100000m3/d of Natural gas at[redacted]00/mnBtu at TAG Pojuca for delivery 12 day(s) (20-31 Oct 2022) [No exit capacity hired]
19 Oct 22	OFFER	[redacted]offers 100000m3/d of Natural gas at[redacted]00/mnBtu at TAG Pojuca for delivery 13 day(s) (19-31 Oct 2022) [No exit capacity hired]
18 Oct 22	OFFER	[redacted]offers 100000m3/d of Natural gas at[redacted]00/mnBtu at TAG Pojuca for delivery 14 day(s) (18-31 Oct 2022) [No exit capacity hired]

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Market Reporting

Consulting

Events

illuminating the markets