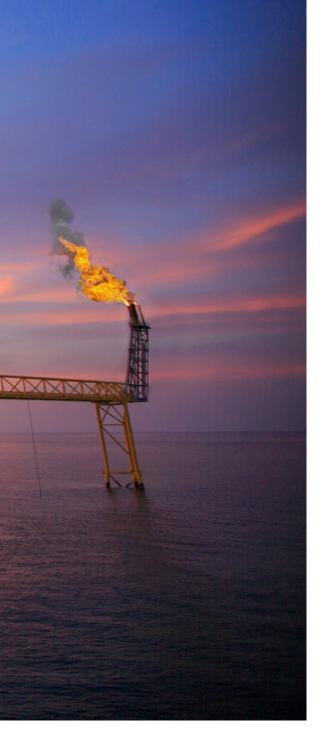


With recent discoveries and a rising domestic demand, Brazil's natural gas sector has grown substantially over the last two decades. WilmerHale's Christoph Harler and Gabriella Bianchini examine the developing gas sector in Brazil and explain the applicable regulatory framework and prevailing pricing standards

istorically, natural gas did not play a significant role in Brazil's energy mix, never exceeding 4% of Brazil's primary energy supply until the late 1990s. Today, natural gas accounts for 12% of Brazil's primary energy supply. This share is projected to significantly increase by 2030 to meet growing demand. In Latin America, Brazil currently ranks second in consumption of gas, and third in production.

Most of the gas found in Brazil is so-called associated gas, which was historically viewed as a byproduct of the production of crude oil. As domestic oil production increased in the late 1990s, which in turn increased the production of





associated gas, energy companies became more interested in producing and marketing gas, and have begun to search for other sources of natural gas in Brazil.

The construction of the Bolivia-Brazil pipeline (GASBOL) and the Aldea Brasilera-Uruguayana pipeline (Aldea), constructed in 1999 and 2000, respectively, to import gas into Brazil from Bolivia and Argentina, increased the supply of gas. Around the same period, the Brazilian government subsidised gas prices for 20 years to power plants commissioned by 31 December 2004, in response to a national energy crisis that occurred in 2001.

For power generation, natural gas in Brazil typically competes with hydropower, which under normal climate conditions accounts for more than 75% of Brazil's domestic power generation. Hydropower is frequently less expensive than gas, such that demand for hydropower is normally higher than that for gas, but several drought-induced energy crises, and the Brazilian Government's subsidy of natural gas, caused demand for natural gas in the power sector to rise.

In 2009, Brazil began importing liquefied natural gas (LNG), with those imports mostly serving to supply gas-fired power plants. Where conditions reduce the availability of hydropower or increase its price, LNG can be purchased on the spot market or on the basis of short-term supply contracts to fulfil shorter term needs and complement a power plant's supply portfolio.

Until now, semi-public company **Petrobras** had been the owner and sole user of the three LNG regasification terminals in Brazil. In 2016, however, **Total** agreed to acquire regasification capacity at the Bahia (in Baía de Todos-os Santos) regasification terminal. At around the same time, Petrobras initiated bidding processes to sell its two other regasification terminals and associated power plants, Pecém (in Fortaleza) and Guanabara Bay (in Rio de Janeiro).

With respect to demand, the industrial sector consumes the most gas in Brazil. The power sector's gas demand is very variable and dependent on rainfall and the availability of hydropower.

In 2016, domestic supply accounted for 62% of all natural gas consumed in Brazil. Imports from Bolivia via the GASBOL pipeline accounted for 33.5% (imports from Argentina via the Aldea pipeline stopped in 2009 due to a contractual dispute, which is further explained below) and LNG imports for 4.5%. When weather conditions limit the availability of hydropower, natural gas consumption increases, and the increased demand is typically met through LNG imports. For example, in 2013, as a result of extended dry periods, LNG imports accounted for 16% of Brazilian natural gas consumption.

After nearly 40 years of state monopoly, the government gradually liberalised the oil and gas sectors. Petrobras is still the key player in the industry, but there are many other companies operating in the gas sector, such as **BG Brasil**, **Petrogal** (a subsidiary of **The Galp Group**), **Repsol Sinopec**, **Shell**, **Statoil** and Total.

Gas market regulation

The Brazilian gas sector is regulated at both federal and state levels.

At federal level, a variety of agencies serve to regulate the production, import, export, distribution and transportation of gas. The Ministry of Mines and Energy (MME) authorises the import and export of natural gas and the construction •

of pipelines. The National Council of Energy Policy (CNPE) approves exploration blocks, which are the physical areas from which gas can be extracted. The Brazilian National Agency of Petroleum, Natural Gas and Biofuels (ANP) organises exploration and production tenders and gas transportation bids, monitors the execution of exploration and production activities, and authorises the construction of LNG regasification terminals.

At state level, state regulatory agencies supervise the distribution of gas and approve end-user prices.

Before 2009, there was no specific legislation regulating natural gas. Rather, it fell under Federal Law No. 9,478/1997 (the Oil Law), which has no specific provisions concerning natural gas. In 2009, Federal Law No. 11,909/2009 (the Gas Law) came into force, regulating natural gas as an independent commodity. The Gas Law regulates transportation, treatment, processing, storage, liquefaction, regasification and trading of natural gas in Brazil. However, exploration and production of gas are still regulated under the Oil Law.

Gas pricing in Brazil

Until 2002, the Federal Government determined gas prices in Brazil, by setting maximum gas prices as a percentage of fuel oil prices (for imported gas, this was 85% in 1994 and 98% in 1999).

Since 2002, gas prices can be freely negotiated at all levels of the gas market, which is still the case today. In practice, however, oil prices remain a key price marker for gas, and gas prices often continue to be linked to, or based upon, oil prices throughout the gas sector.

Gas market related arbitrations

Arbitration plays an important role in the resolution of domestic and international disputes in the Brazilian gas sector (as it does in the entire energy sector). Arbitration clauses are frequently included in different types of gas related contracts, such as exploration and production (E&P) agreements and commercial contracts, including GSAs.

The Brazilian Arbitration Act 2015 (Act) does not distinguish between domestic and international arbitration except with regard to the enforcement of awards. Under the Act, an arbitral award is considered foreign (i.e. international) if rendered outside of Brazil.

Enforcement of domestic awards in Brazil is easier and typically quicker than that of foreign awards. Domestic arbitral awards constitute res judicata. There is no review of the merits of domestic awards and they do not need to

According to ANP, Petrobras adopts the following gas pricing policy:

- Prices of gas produced and distributed in Brazil consist of a fixed portion, which is based upon fuel oil prices, and a floating portion, which is determined by oil price developments. Prices of domestically produced gas also contain a fee for transportation of gas.
- For prices of pipeline gas imported into Brazil under long-term gas supply agreements (GSAs), the GASBOL GSA is the most important agreement. Under the GASBOL GSA, state-owned YPFB supplies Bolivian gas via the GASBOL pipeline to Petrobras in Brazil. The GASBOL GSA is the biggest GSA in Brazil and essentially all pipeline gas imports are supplied through this contract.

The gas price in the GASBOL GSA is indexed to oil prices. The gas price was initially set based on prices of a basket of fuel oils (50% HSFO/Italy, 25% LSFO/US Gulf and 25% LSFO/Northwest Europe) and the indexation mechanism in the contract provides that the price is recalculated every three months based on developments in the prices of these fuel oils.

The price of transportation under the GASBOL GSA is a fixed fee agreed by the parties, which is adjusted annually based on the US Consumer Price Index.

 LNG imports into Brazil often come at a premium, as LNG is typically needed on short notice when the availability of hydropower is restricted. Accordingly, Petrobras buys LNG either on the spot market or on the basis of short-term contracts. Petrobras has no long-term LNG contracts that would enable it to command a more competitive price.

Since Petrobras is the undisputed market leader along the gas value chain in Brazil, its gas pricing policy is indicative of current general gas pricing standards in Brazil.



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be recognised to be enforced. In comparison, foreign awards must be recognised by Brazil's Superior Court of Justice before they can be enforced. Brazil is a signatory to the 1958 New York Convention and recent judicial decisions of Brazil's Superior Court of Justice confirm an increased receptiveness to international arbitration. The recognition proceeding for foreign awards by the Superior Court of Justice, however, takes rather long, on average around 18 months.

E&P agreements in Brazil (also called concession contracts are entered into by the Brazilian State (through ANP) and by national or foreign gas or oil producing companies, that have acquired exploratory rights by winning tenders.

If a foreign company wins a tender, the Brazilian Federal Constitution and the Oil Law require that it must establish a local subsidiary, incorporated under Brazilian law, to enter into the E&P agreement and to carry out gas or oil exploration or production activities.

ANP determines the terms of gas related E&P agreements (Article 12 of the Gas Law), including the arbitration clauses, and provides these terms to all companies participating in tenders for E&P contracts. A successful bidder cannot negotiate the contract terms with ANP.

The Gas Law expressly states that gas-related E&P agreements must contain arbitration clauses. ANP's standard arbitration clause provides that the proceeding is an ad hoc arbitration, "using as [a] parameter" the UNCITRAL Arbitration Rules. It further provides that disputes will be decided by a tribunal of three arbitrators, and the arbitration will be seated in Rio de Janeiro and conducted in Portuguese. The contracts are governed by Brazilian law. Under the standard arbitration clause, interim relief can only be obtained from the Federal Court of Rio de Janeiro.

Because the seat of arbitration for disputes arising in connection with E&P agreements is Rio de Janeiro, awards are typically rendered in Brazil as well. Thus, awards in such cases are considered domestic under the Act.

GSAs relating to Brazil also typically include arbitration clauses. The Gas Law explicitly allows the parties to opt for this dispute resolution method. In contrast to the inability to negotiate the terms of the arbitration clauses in E&P agreements, the parties to GSAs can negotiate the terms of their agreement to arbitrate.

The arbitration clause in the GASBOL GSA provides for arbitration of disputes under the American Arbitration Association Commercial Arbitration Rules. Any arbitration will be seated in New York and the contract is governed by New York law.

The Aldea GSA also contains an arbitration clause providing for arbitration pursuant to the ICC International Court of Arbitration Rules, seated in Montevideo, Uruguay. There was an ICC arbitration under this contract which related to a breach of contract claim because of supply reductions, not a gas price review, which ended in April 2016 with a final award. Reportedly, the award ordered YPFA to pay USD 185 million plus interest to AESU and USD 319 million plus interest to Brazillian turbine manufacturer TGM. YPFA and AES Uruguaiana settled during the enforcement phase, while YPFA and TGM are still pursuing court proceedings in Buenos Aires regarding setting aside the award vis-à-vis TGM.

Arbitral awards rendered in the context of disputes relating to the GASBOL and Aldea GSAs would be considered foreign under the Act, given the foreign arbitral seats, and thus would require the recognition of the Superior Court in order to be enforced in Brazil.

As LNG for the Brazilian market is purchased on the basis of spot and short-term contracts, which typically do not contain price review clauses, there are currently no reported gas price review arbitrations relating to LNG import contracts. This could however change if long-term supply agreements for LNG, which often contain price review clauses, emerge. Price review arbitrations under these agreements could contribute to more international gas price arbitrations involving Brazil in the future.

In summary

Brazil's gas sector has undergone a dynamic development over the last two decades, which is expected to continue. The exploration and production areas of the Brazilian gas sector are still highly regulated. In addition to the requirement to incorporate a local subsidiary to enter into E&P agreements, the inability to negotiate the terms of E&P agreements, including the arbitration clauses, therefore need to be considered from a commercial and legal perspective when foreign companies consider bidding for E&P concessions in Brazil.

Both Brazil's Gas and Oil Laws have express provisions that foster the inclusion of arbitration clauses in the different types of gas-related agreements. Because of that, arbitration will likely continue to be the principal method for the resolution of gas-related disputes. E&P-related disputes will continue to lead to domestic arbitration proceedings, while in cross-border GSAs, where the parties can negotiate the arbitration clauses, international arbitration is likely to remain the preferred form of dispute resolution.