LGC
Latin America
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Gas Conference
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REGIONAL ASSOCIATION OF
OIL, GAS AND BIOFUELS SECTOR COMPANIES
IN LATIN AMERICA AND THE CARIBBEAN

Digital Dialogue
How will the new gas law transform Brazil's gas market and the region?

Introduction

Digital Dialogue: “How will the new gas law transform Brazil’s gas market and the region?” is the first issue of a series of dialogues to be provided on a monthly basis under a virtual format throughout 2021. This initiative is part of the **Latin American Gas Conference & Exhibition, an event that has been jointly organized by ARPEL, IGU and EnergyNet, with the support of OLADE.**

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The **objective** of these dialogues is:

To promote the development of natural gas as a source of energy capable of reducing emissions, contributing to the energy transformation and the economic recovery of Latin America and the Caribbean; through dialogue and cooperation between companies, governments, and other stakeholders.

Each dialogue will have a specific focus on countries, regions or topics and will gather the main players of the industry in this region, from both the business and the governmental sector.

Photo: YPF

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The New Gas Law

Law No. 14134, known as “The New Gas Law” was passed by Congress in April 2021. It seeks to create a competitive market where the starting point is a monopolistic context.
This law is the result of years of hard work and it is based on the following pillars:

- **Deverticalizing the value chain**
- **Providing open access to infrastructure**
- **Fostering competition and liquidity in the market**

It is expected that these pillars may serve to **break the barriers to entry, increase investment and help reduce prices for end consumers, as a result of competition**, thus fostering the development of productive sectors, such as the industry, which is currently paying very high prices for gas, around USD 15/MMbtu.

This change has been welcomed by the business sector because it **encourages the participation of new agents**, enabling new business opportunities. EPE *(Empresa de Pesquisa Energética)*, the office that prepares the indicative plans for the expansion of energy infrastructure in Brazil, has identified investment projects for 6,000 km of gas pipelines for a total estimated amount over USD 10 billion. In addition, these reports indicate the evacuation routes for the pre-salt gas to reach the continent, and also include several LNG projects.

The enactment of this Law is undoubtedly an important milestone, but the development of a liquid gas market takes time to mature. Some effects are already evident in the short term, such as the sale of assets by Petrobras and the registration of companies to participate in the new market. Currently, the various players are working on the regulation of the Law.

Indicative Plan for Transportation Pipelines

Indicative Plan for Natural Gas Processing and Gathering

Technical Note on LNG Terminals 2019-2020

USD 15/MMbtu
is the current estimated price for the industrial sector

EPE has identified investment projects for:

USD **10 billion**

6,000 km
of gas pipelines

Challenges of the Brazilian Gas Market

1 Rigid Supply vs. Flexible Demand

Supply:

+80% associated gas ➔ **High rigidity**

Demand:

65% of **hydroelectric** power

Natural gas is the adjustment variable of the electric power system

35% of thermal power comes from **natural gas**

LNG provides flexibility to the electric power system but pays the opportunity cost of the spot price

➔ **A higher stability of demand would allow to take advantage of opportunities in the international market, to monetize resources and to leverage investments.**

2

Make quick progress in the regulation and implementation of the new system to take advantage of the window of opportunity for investments, gas monetization and the generation of tax revenue and income for the society at large.

Photo: YPF

Power Generation Matrix
Brazil

- **Coal and byproducts** 2.7%
- **Nuclear energy** 2.2%
- **Oil products** 2.1%
- **Natural gas** 8.3%
- **Solar energy** 1.7%
- **Wind energy** 8.8%
- **Biomass** 9.1%
- **Hydroelectricity** 65,2%

Hydroelectricity supply in 2020: **421.0 TWh**
Total supply in 2020: **645.9 TWh**

Source: ONS

Natural Gas Balance
Brazil 2019
MM m^3/d

Production 122.5

Reinjection 43.2

Flaring and venting 4.4

Own consumption 25.7

Natural gas liquids 5.4

Domestic supply 43.8

Imports from Bolivia 18.6

LNG imports 8.4

Available supply 70.8

Source: ANP

Regional Dynamics and Challenges for Integration

Brazil

Brazil is the dynamizing engine of regional integration because of the size and weight of its market. The new scheme offers several possibilities for the development of gas infrastructure and for the transformations required to foster a better integration of all markets.

It is estimated that **Brazil will continue to import gas in the short and medium term** due to both the variability of its demand and its growth forecasts.

Bolivia

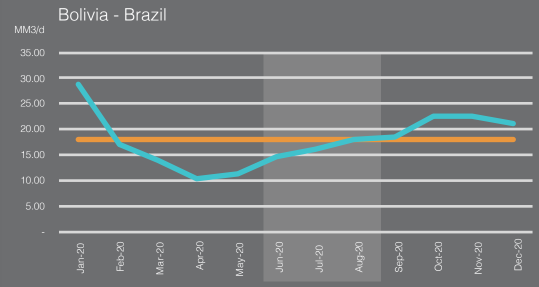
Bolivian gas **will continue to be important for the Brazilian market** since its price is still competitive against LNG and pre-salt gas **even though it is estimated** that dependence on the Bolivian gas **will be increasingly lower**, which poses new challenges for the E&P segment in Bolivia.

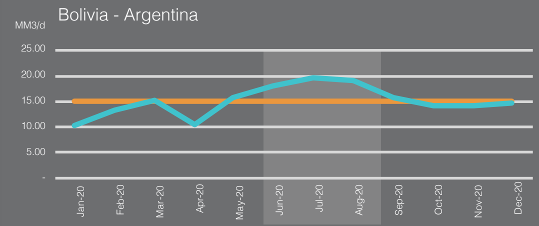
Argentina
Vaca Muerta

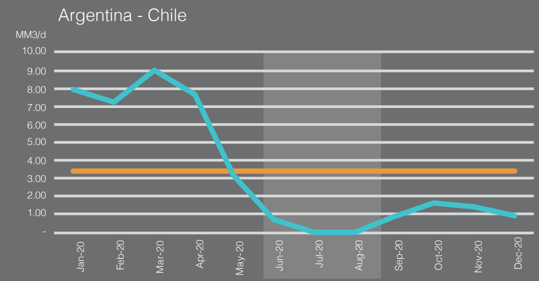
Vaca Muerta formation is in a position to provide a **stable, abundant and competitive gas supply** that may benefit the Brazilian market.

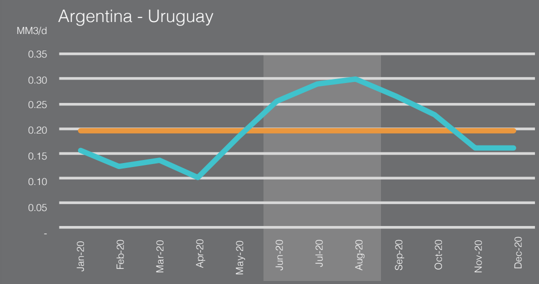
In the last bidding process of the 2020-24 Gas Plan, **over 70% of the gas offered by Vaca Muerta stood below USD 3.60/MMbtu,** despite the macroeconomic uncertainty.

The high seasonality of the Argentine demand offers opportunities **to seek marketing schemes that may allow for optimizing the system and driving investments.**





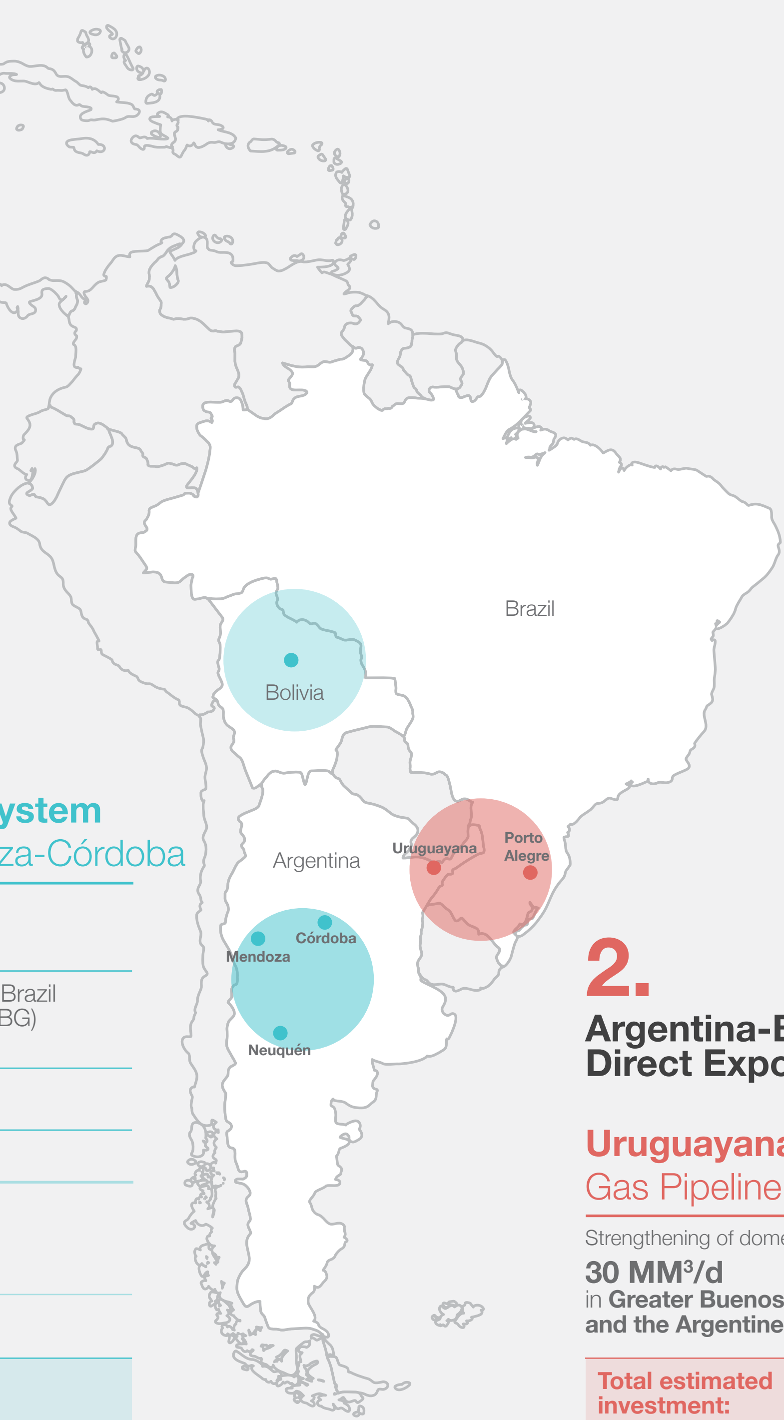




Source: IHS-MARKIT

+ 70%
of the gas volume
offered by Vaca Muerta in the bidding process for the 2020-24 Gas Plan stood below
USD 3.60
/MMbtu

Two roads towards integration



1.

Argentina-Brazil Exports through Bolivia

Strengthening of TGN System
between Neuquén-Mendoza-Córdoba

It allows to place
20 MM³/day in the domestic market

Release the Bolivian gas to be placed in Brazil using the existing infrastructure (GTB / TBG)

Estimated investment: **USD 1.4- 1.5** billion

Additional expansion

To physically inject
10 MM³/d
of **Argentine** gas into **Bolivia**

Estimated investment: **USD 400 to 500** million

Total estimated investment: **1.8 to 2.0** billion

2.

Argentina-Brazil Direct Exports

Uruguayana – Porto Alegre
Gas Pipeline

Strengthening of domestic infrastructure to place

30 MM³/d
in **Greater Buenos Aires and the Argentine Littoral**

10 MM³/d
in **Porto Alegre**

Total estimated investment: **3.0 to 3.5** billion

Photo: TGN

Key Messages

The purpose of the New Gas Law is to create a competitive market that, with the participation of all the players involved, may drive investment, productive development and a reduction of the equilibrium price of natural gas.

The approach adopted for the energy sector in Brazil has been pragmatic and natural gas has been integrated as a booster of the energy transitions and the economic recovery within the framework of the decarbonizing strategy.

Brazil faces the challenge of balancing a rigid associated gas supply with a flexible demand, connected to the backup electrical generation of hydroelectricity. Therefore, Brazil will continue to be an importer in the short and medium term, all of which entails good opportunities for LNG, for the development of domestic supply and for the regional integration.

The maturity of Vaca Muerta formation and an increasing expected demand in Brazil may pave the way for new and potential regional integration schemes between Argentina and Brazil through Bolivia.

What is **ARPEL**

ARPEL is a non-profit association gathering oil, gas and biofuels sector companies and institutions in Latin America and the Caribbean. Founded in 1965 as a vehicle of cooperation and reciprocal assistance among sector companies, its main purpose is to actively contribute to industry integration and competitive growth, and to sustainable energy development in the region.
Its membership currently represents a high percentage of the upstream and downstream activities in Latin America and the Caribbean and includes national and international operating companies, providers of technology, goods and services for the value chain, and national and international sector institutions.

What is **EnergyNet**

EnergyNet has been producing investment forums and executive dialogues for Latin America and Africa's power sector for the last 25 years - in Europe, the USA, China and across Africa and Latin America.
We work with governments and national utilities to facilitate investment summits where international investors can build relationships with credible public sector stakeholders to advance access to power. We facilitate investment into the energy sector to get projects moving and bring electricity to global communities.

What is **IGU**

The mission of IGU is to advocate for gas as an integral part of a sustainable global energy system, and to promote the political, technical and economic progress of the gas industry. The more than 160 members of IGU are associations and corporations of the gas industry representing over 95% of the global gas market. The working organisation of IGU covers the complete value of gas chain from exploration and production, transmission via pipelines and liquefied natural gas (LNG) as well as distribution and combustion of gas at the point of use.

IGU has the vision of being the most influential, effective and independent non-profit organisation, serving as the spokesperson for the gas industry worldwide. The IGU is the "Global Voice of Gas"

What is **OLADE**

The Latin American Energy Organization (OLADE) is an intergovernmental public body of cooperation, coordination and technical advisory, established on November 2, 1973 by signing the Lima Agreement, ratified by 27 countries in Latin America and the Caribbean, with the fundamental objective of promoting the integration, conservation, rational use, commercialization and defense of the region's energy resources.

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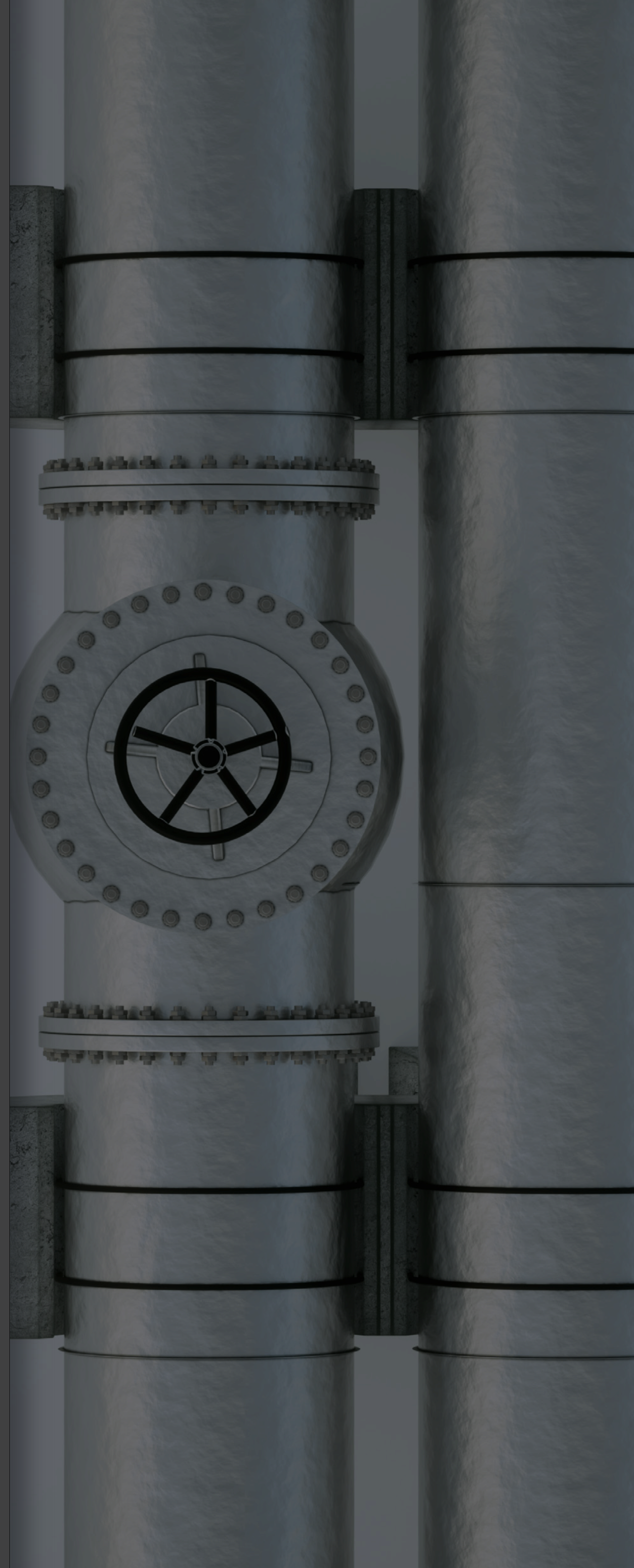

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