Towards a New Gas Market in Brazil: Insights from European experience

Gergely MOLNAR, Gas Analyst
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Brazil's gas market is moving from a vertically integrated model to a liberalized, competitive market structure.
Gas market reform dialogue and peer-review process

Jan 2018

IEA fact-finding mission and workshop in Brazil (Brasilia / Rio de Janeiro)

Aug

Towards a competitive natural gas market in Brazil (report)

Nov

IEA Brazil gas workshop 2018 (Brasilia)

Jan 2019

IEA Brazil Gas workshop 2019 (Brasilia)

Jan 2020

Implementing Gas Market Reform in Brazil: Insights from European experience (webinar)

TODAY

Jan 2019

IEA Gas Technical Mission (London / The Hague)

13 Nov

IEA Brazil Gas Workshop 2020 (TBA)
Bringing decades of European experience in gas markets

Markus Krug  
Deputy Head of Gas Department  
E-control, Austria

María Junco Madero  
Analysis & Development Manager  
ENAGAS, Spain

Justin Goonesinghe  
Head of European Gas,  
Dept. of Business, Energy & Industrial Strategy, UK

Wim van ‘t Hof  
Head of Gas Markets,  
Ministry of Economic Affairs & Climate,  
The Netherlands

Paolo Maffeis  
Executive Manager  
PRISMA European Capacity Platform

Annamária Fehér  
Senior Strategy Expert  
Hungarian Gas Storage, Hungary

Gareth Davies  
Head of Industry Frameworks and Code Governance Manager,  
National Grid, UK

Carla Robledo  
Policymaker  
Ministry of Economic Affairs & Climate,  
The Netherlands

Arnaud Berthet  
Chief Business Development & Strategy Officer  
Storengy, France

Patrick Heather  
Senior Research Fellow  
Oxford Institute for Energy Studies, UK
Insights from European experience
A competitive gas market is based on a transmission system providing firm physical deliverability, a regulatory framework enhancing midstream flexibility and a hub design facilitating trade.
European experience shows that multiple models of unbundling can co-exist.

Ownership Unbundling:
- the TSO owns and manages the network;
- only minority shareholding and dividends allowed;
- no operational control and no voting rights;
- no appointment of administrators.

Independent System Operator:
- energy supply companies still formally own gas transmission networks;
- operation, maintenance, and investment in the grid is managed by an independent company;
- owner is obliged to finance the investments decided upon by the ISO and the Regulator.

Independent Transmission Operator:
- energy supply companies still own and operate gas transmission networks through a subsidiary;
- operation, maintenance, and investment in the grid is done independently from the parent company;
- ITO submits annually an investment plan to the Regulator.
The development and implementation of network codes and guidelines provides the regulatory framework necessary for the well-functioning of a liberalised gas market.

Network codes and Guidelines

Capacity Allocation
Congestion Management

Tariffs

Balancing

Transparency
Data exchange

Objective, non-discriminatory and transparent third-party access
The incremental capacity process adopted in the Europe consists of two main phases: a non-binding phase and a binding phase.
An entry-exit model breaks down the contractual and path-rigidities of a point-to-point system by allowing market participants to trade on the virtual hub.
A liquid hub allows for price discovery

Illustrative example of contractual hub-pricing

Contractual spot-indexation reflects market prices, whilst reduces the spot volatility via damping and averaging traded gas contracts.
The role of Distribution System Operators on Gas market opening

European experiences highlight important aspects for a well functioning Distribution market

- Clear definitions on TSO and DSO categorisation
- Guaranteeing the independence of the DSO from the vertically integrated utility
- Allowed revenues and tariff structures incentivizing operational efficiency
- Defining strategy and indicators for monitoring performance of gas retail markets
There are many pathways to produce low-carbon gases. Their deployment could be facilitated by the existing gas infrastructure, leading to a more cost-effective energy transition.
Improving diversity in the oil & gas sector would increase productivity and creative problem-solving, supporting the profound transformation that the energy sector is undergoing.
Final considerations

• **Gas market liberalization is a lengthy and complex process.** While each market has unique challenges and opportunities, **international experiences provides useful guidance.**

• The *Novo Mercado de Gás* has the potential to address many of the key challenges that need to be addressed in order to develop a **competitive gas market in Brazil.**

• A **well-designed regulatory framework** for the transmission system, **network codes, clear guidelines** and **continued engagement of all market actors** are needed for a successful transition.

• A well-functioning and competitive gas market **can be the gateway to unlock low-carbon technologies,** as well as providing an opportunity to promote **gender equality and inclusiveness** in the energy sector to capture the benefits of a more diverse workforce.

• **Brazil has all the ingredients for a successful gas market reform** – the IEA will continue to support the Brazilian government as it moves towards implementing the *Novo Mercado de Gás.*