Challenges and Opportunities of LNG in Brazilian market by the Government Program “New Gas Market”

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To investigate the challenges and opportunities of the "New Gas Market" program created by the Brazilian Government in 2019. The work analysis specific the LNG as a new source of Natural Gas in the Brazilian market through the two aspects:

- Feasibility,
- Legal Conditions,
Brazilian Natural Gas Scenario

Mix of Brazilian Natural Gas (em MM³/dia).
Source: Caderno Opinião FGV Energia, Ago/19

NG Brazilian Matrix.
Brazilian Structure

Brazilian LNG Import capacities and otiosity (million m3/day)
Source: Secretaria de Energia do Estado de São Paulo, 2018.
Brazilian Natural Gas Chain

New Gas Market

In 2019, the New Gas Market program started through the federal government's initiative.

Specific aims:

a) To access all links in the gas chain, eliminating private monopolies in the sector;

b) To create an attractive scenario for investments by new players and consequent diversification of NG offer;

c) Integration of NG with the electrical and industrial sectors;

d) Harmonization of state and federal regulations.
New Natural Gas Market

Production

Processing

LNG Terminal

Importation from Bolivia

Distribution Companies

New Natural Gas Market

Production

Processing

LNG Terminal

Storage

Importation from Bolivia

Distribution Companies

Source: Adapted from ANP. 2016 and MME, 2019.
What challenges will Brazil face in developing a LNG market?

➢ **REGULATORY:** The new rules allow sharing and use of third party structures such as pipelines, Natural Gas Processing Units and regas terminals.

➢ **TAX:** The importation using regas terminal ends up changing hands and becoming an internalized product.

➢ **VOLUME:** LNG vessels have a large storage capacity for the consumption of a single company.

➢ **GUARANTEES REQUIRED FOR LONG TERM CONTRACTS:** Traders require high financial guarantees as minimum volumes to make long-term contracts at attractive prices.

➢ **PRICES OFFERED BY INTERNATIONAL TRADERS:** Traders know how to cost Natural Gas and other sources in Brazil and use this in their favor.
What challenges will Brazil face in developing a LNG market?

- The operator of the gas pipeline system and networks.
- Chamber for registration of commercialization contracts.
- Environmental licensing for the creation of underground natural gas storage.
- Improvements to interconnection rules.
- Last-mile agent in the failure of the contracted supplier.
- Standardization of contracts with distributors and access to transport structures.
- Need for evolution and structuring of the supervisory agency.
- Need for expansion of NG flow routes from the pre-salt and sharing between Petrobrás and other exploration companies.
LNG Prices EUA x Brazil Netback Price

**GNL USA**

- **Storage:**
  
  **Price of feedstock, Liquefaction and importation**
  
  Price referred to Henry Hub:  
  \[1.15 \times HH + 3.50\]
  
  \[HH = 3,105 \text{ US$/MMBtu (Jun/21)}\]
  
  **Price:**
  
  7,07 US$/MMBtu

- **Regasification:**
  
  **Storage e Regás:**
  
  Storage for 10 days with 20k m³ each. Regas terminal with 10 MMm³/day
  
  7,06 US$/MMBtu
  
  Storage: 0,39 US$/MMBtu
  
  Regás: 0,18 US$/MMBtu

- **City-Gate:**
  
  **Transport:**
  
  Using the case with a terminal at Guanabara bay (Rio de Janeiro) supplying a company near the terminal, without using a distribution system pipelines
  
  1,00 US$/MMBtu

**GNL DES Brazil** = \(GN \times (1 + \text{Traders}) + \text{Liquefaction} + \text{Importation} + \text{Regas} + \text{Transportation} \ [\text{USD/MMBtu}]\)

\[\text{GNL DES Brazil} = 3,105 \times (1.15) + 3.50 + 0.57 + 1.00\]

**GNL Brazil** = 8,57 [USD/MMBTU] (Jun/21)
The government-initiated “New Gas Market” Program will enable favourable regulations and conditions to make the LNG import operation competitive.

Conclusions
References


Thank you!

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