A financial analysis of the importation of Liquefied Natural Gas from the United States as a natural gas source to the Brazilian market

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To analyse information about the Liquefied Natural Gas (LNG) market worldwide, focusing on financial viability of this supply format to importation LNG from United States (US) as a supplier to the Brazilian market, making the comparison to the current national supply, complementing the matrix of multiple sources of national natural gas (NG).

NG Brazilian Matrix.  

US Shale Gas  
Source: EIA, Short-Term Energy Outlook, August 2018.
Brazilian LNG Import capacities and otiosity (million m$^3$/day)
Source: Secretaria de Energia do Estado de São Paulo, 2018.
LNG globally Cycle. Source: Golar 2019
LNG Global Prices Index

LNG Contracts by Price Index.
Source: Chandra, Vivek 2018
GN Brazil Prices

Brazil NG Prices and LNG Importation.
Source: Comex and Gas Energy
GN Brazil Prices

Preços City-Gate (US$/MMBtu)
Agosto 2019

Gás Boliviano
6,55
1,64
4,91

Gás Doméstico
9,21
1,65
7,57

Transporte

Commodity

 GN Prices – Brazil and abroad
Source: MME, Gas Bulletin, EPE, FGV Energia, April 2019
LNG Prices EUA x Brazil
Netback Price

**GNL USA**

- Storage

**Regasification**

- Storage e Regás:
  - Storage for 10 days with 20k m³ each. Regas terminal with 10 MMm³/day
  - 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

**Price of feedstock, Liquefaction and importation**

- Price refered to Henry Hub: 1,15 x HH + 3,50
  - HH = 2,601 US$/MMBtu
  - Price: 6,49 US$/MMBtu

**GNL DES Brazil** = **GN (hh) x (1 + Traders) + Liquefaction + Importaiton + Regas + Transportation [USD/MMBtu]**

- GNL DES Brazil = 2,601 x (1,15) +3,50 + 0,57 + 1,00

**GNL Brazil** = 5,56 [USD/MMBTU] (Oct/19)
What challenges will Brazil face in developing a LNG market?

➢ REGULATORY: The sharing and use of third party structures such as pipelines, UPGNs and regas terminals.

➢ TAX: The importation using regas terminal ends up changing hands and becoming an internalized product. Sharing faces makes it harder than a single company.

➢ VOLUME: LNG vessels are huge for the consumption of a single company. To be an inter-company pool for importers on a regular basis, it is necessary to overcome the obstacles mentioned above regarding regulation and taxation.

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

➢ PRICES OFFERED BY INTERNATIONAL TRADERS: Traders know how cost the Natural Gas and other sources in Brazil and use this to his favor.
There are favorable trade conditions for the importation of LNG from the United States to Brazil, creating the relative competitiveness of the already consolidated Natural Gas suppliers;

US supply LNG prices in Brazil is around USD 6.00 / MMBtu, which compared to domestic prices presents commercial viability;

The reference Henry Hub (HH) price is seen as a low future price, providing more attractive financial conditions for imports to Brazil;

The government-initiated “New Gas Market” Program will enable favorable regulatory and conditions to make the LNG import operation competitive;


Thank you!

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