Implementing the natural gas market reform in Brazil: Insights from European experience

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Hub-Based Gas Market

EXIT to e.g.:
A neighbouring Hub?
Exports via pipe/LNG?

Source: Heather
THE ‘NEW WORLD’ HUB-BASED GAS MARKET:
all producers bring their gas supplies to the hub market, usually the gas grid situated in the demand area;
all buyers make their purchases from the hub, including exports (whether national or international) from the hub to another;
re-trading takes place
What constitutes a ‘good’ hub?

The ‘Path to Maturity’ starts with Third Party Access and, over a period of time, develops to provide first OTC then financial products, ending with Indices used as reference prices in physical contracts.

Source: Heather (2015)
Mature Traded Hubs

• ‘Mature’ traded hubs have:
  – Good liquidity, good volumes, often high volatility
  – Often a benchmark
  – Are a true market place, reflective of supply/demand
  – Not just a physical transfer point but also attracting ‘speculative’ trading

• ‘Mature’ traded gas hubs are:
  – Henry Hub: the first traded gas hub and the North American benchmark
  – NBP: the first traded gas hub in Europe and the British and NWE Sterling benchmark
  – TTF: has developed to be the Continental Leader and the European Euro benchmark

The change in gas price formation that has necessitated a robust and reliable marker price to be able to risk manage gas portfolios
Market development hurdles

**Liquidity and transparency** are key but assessment needs defined measures and criteria.

**Physical connectivity** is also key to realise the EU’s aim for regional Market Areas.

**Political willingness** and **cultural attitudes** to trading are also key to the development of successful gas trading hubs.

Even if these hurdles can be overcome, there also needs to be **commercial acceptance** for trading to flourish.

These hurdles need to be overcome if a traded gas market is to succeed.
Routes to Market

- Negotiated Contracts
  - Direct
    - Non regulated
      - Non-standard
        - Bilateral
  - Counterparty Risk
    - All details negotiated: Quality, delivery, quantity, t+c's

- OTC
  - Non regulated
    - Standardised
      - Bilateral
      - Physical (always actual delivery)
        - Spot
        - Prompt
        - Forward
      - Paper (usually financial only)
        - Swap
        - Options
        - Swaption

- Energy markets
  - Exchange
    - Regulated
      - Standardised
        - Cleared
      - Paper (physical delivery or financial settlement)
        - Futures
        - Options

Source: Heather (2010)
Mature OTC gas markets: their function

- **Open and Transparent markets:**
  - Foster trading, competition and, ultimately, the ‘best’ or ‘right’ price at any given time
  - Attract many participants of different types who bring liquidity

- **Liquid markets allow for the ability to:**
  - Physically adjust portfolio volumes over time
  - Financially risk manage gas portfolios

- **Mature gas markets can help provide:**
  - Security of supply and security of demand
  - Providing a market place for the buying and selling of, usually, marginal quantities of physical gas

**Most of all, mature, open, transparent and liquid markets provide secure Risk Management tools**
Gas exchanges: their role and function

• **Price Discovery & Transparency**
  – The ability to know the price of gas now and in the future (up to six years ahead on ICE NBP and five years for ICE-Endex TTF)
  – Publicly and easily accessible

• **Supply/Pricing flexibility**
  – The ability to separate price function from supply function

• **Physical balancing**
  – Providing a market place for the buying and selling of, usually, marginal quantities of physical gas

• **Risk Management**
  – Providing a facility for managing price risk through a secure and *regulated* market – hedging and trading

Exchanges are complementary to the OTC markets and assist in the development of traded gas hubs in a secure, regulated environment
Thank you!

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