Spanish Gas Hub Workshop

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Agenda

10.00   Introductions
- Welcome and safety notice (Enrique Gonzalez, BP España)
- Introduction & workshop objectives including expectations of participants (Doug Wood & Carmen Vindel Sanchez, EFET)

10.15   Presentations:
- Current status and mechanisms of gas trading in Spain (Francisco de la Flor, Enagas, IT platform for gas exchange) (45 mins)
- Comments from CNE on progress in the GRI-S (15 mins)
- Trading at French PEGs (Benoit Enault (GRTgaz) and Richard Katz (Powernext)) (45 mins)

12.00   Coffee break

12.30   Presentations (concluded)
- A brief tour of developments at other European hubs (Doug Wood - GHDG)

13.00   Discussions
- Differences between gas trading in Spain and Europe's more liquid hubs
- Are there advantages in improving the liquidity of gas trading at a downstream virtual point? And if so then what would need to happen/change to achieve this? (panel discussion)
- Conclusions - way forward - possible actions etc.

14.00   Close
Objectives and Expectations

- To understand the current developments and challenges of the Spanish gas market

- To review the experience gained in other European markets where gas trading hubs are developing

- To identify how we can learn adapt the learnings of other markets to the particularities of the Spanish gas market

- To review the way forward in the context of the GRI
Hubs overview
Introduction

- Hub development is a key focus of EC Energy Policy
  - A barometer and facilitator of competitive markets

- Types of hubs
  - Virtual Trading Point
  - Physical

- Characteristics of a hub: liquidity, depth, transparency
European Hubs

No. of member states with hubs is growing. Liquidity is also up

Hub Locations

Trading Volume Development

Heren Energy Hub Liquidity Ranking

- Liquidity rated out of 20 during summer 2007
- Measured using bid / offer spread
- NBP achieved 19

Future Regional Hub Development

Potential regional market development with setting of the short term index prices

Atlantic basins
LNG spot price

R_ISO 0
Border price

R_ISO x

(R) spot price index

R_ISO 1

R_ISO 4

R_ISO 3

R_ISO 5

LNG

Border price

LNG
Features of successful virtual trading points
The features of successful, on-system Virtual Trading Points

Introduction:

- Entry-exit systems facilitate local, notional trading hubs
- Exist within a single transport system, located between entry and exit
- Facilitates market entry for non-integrated players
- Can exist as a single node or part of a multi-node model
- Complementary to regional hubs located at interfaces to multiple pipelines
Hub features

- Establishes a point at which a market can function
- Enables pooling of liquidity at that point
- Reduces transaction costs

- Useful for integrated and non-vertically integrated market players

- Single system means one regulatory authority, one tax regime

- Location for balancing market – allows TSO to compare actions in different locations in price order, and select most efficient
- Also allows bids out of price order
- Location for gas release programmes – contract can be designed to reflect general portfolio, not linked to specific supply deal
Conditions for transportation access terms

- Hub access terms can be built into transportation contracts
- Terms should allow title transfer (or imbalance transfer)
- Allocations as nominations
  - Except for mismatched trades
- Location for imbalance cashout & imbalance trading
  - May be used for *ex post* trading of imbalances
- Clearly defined imbalance charges (for referencing in trading contracts)
- Credit and governance can be treated as part of transportation terms
Multi-node model

- Multi-nodes possible under transitional arrangements to minimise the number of hubs.
- Ability to centralise imbalances i.e. trade imbalances across nodes will help gather liquidity at a smaller number of points.
- Unless separate balancing markets are to be established, imbalance transfer should be possible at predetermined prices.
- Nodes should be reduced over time, e.g. by expanding inter-node capacity, and allowing balance transfer.
- Multi-nodes can co-exist if trading is concentrated as specific points (c.f. PJM)

- Single regional node possible in theory, but no practical experience
Further thoughts

- Access to transportation into/out of hub critical

- Simplified access terms for pure traders, exchange operators

- Costs can be rolled into transportation charges for basic service; leaving fees for exchanges with value-add services

- Standard trading terms should be established by traders, but will depend on quality of the transportation contract.
European hubs
Zeebrugge

Current Situation

- Operated by Fluxys subsidiary Huberator
- 2007 volumes 5 bcm lower than the 2006 traded volumes
- 66 shippers registered at the hub, ~52 are active
- Average churn rate 2007 4.3

Recent changes

- Electronic trading tool for sec. capacity
- New day – ahead service
- New online booking system
- Transit flow data available free to capacity holders (30k euros previously)
- Full Zee platform introduced 1/2/08
- Cooperation between GRTgaz and Fluxys on cross border capacity

Future Developments

- Will CEPA proposed remedies happen?
  - Mandate creation of Belgian NBP?
  - Additional information disclosure- daily capacity availability?
  - New requirements around not having to hold physical capacity to trade?
  - Mandate UIOLI introduction for transit capacity?
  - Distrigas as Market Maker?

Sources: Huberator (2008), CEPA (2008)
Zeebrugge hub & Zee platform

Sources: Huberator (2008)
Current Situation

- 57 registered parties
- 2008 55 active trading parties
- Churn rate increased to 4 end 2007 at present around 3.2
- Traded volumes for Jan-March 08 over twice as high as the same time last year
- Only around 10% HC gas in Netherlands reaches TTF
- Only 1% LC gas in Netherlands reaches TTF

Future Developments

*Minister's letter 18th February 2008*

- Integration of HC/LC networks
- Simplification of balancing
- Greater availability of cross-border transmission capacity
- Single trading platform – transfer of title of gas at TTF or front door no longer at the GOS
- Reduction of shipper liability for counterparties debts at TTF

Points of interest

- BBL links to NBP
- Eucabo/APX secondary trading platform
- Tariff uncertainty
Future Developments

- E.On Ruhrgas final GRP round in May 2008
- Market zone reduction from 14 to 8 and poss. further?
- Balancing Regime developing
- EEX Gas / store-x / trac-x
- Gas Regional Initiative (And Eucabo / APX / trac-x)
- Further sources of liquidity
  - Storage Auctions / Open Seasons

Points of interest

- Influence of the North West GRI.
- How many hubs can Germany sustain?
- CCGT & CHP / LNG / Pipeline developments
- Stadtwerke: BKartA decision on long term supply agreements (2006) / BKartA price fixing investigation

CEGH (Baumgarten)

Current Situation

- Founded 2000
- Originally a subsidiary of OMV Gas International
- 68 registered (47 active) members
- 17.75 bcm ‘title transfers’ in 2007
- Churn rate reached 3.06 in Jan ’08
- Current third largest hub in continental Europe (in terms of volume)

Developments

- Gazprom take a 50% interest in the CEGH
- June ’08: Sixth Gas Release Programme for delivery from 1 Oct at the CEGH
- Exchange hoped to start trading Oct 2008

Points of interest

- Gazprom role as market maker?
- Hub development
- Transit capacity availability
- Linkage to the Austrian Market

Source: OMV (2008), gashub.at (CEGH)

Graph: Churn rate data may be artificially inflated
Current Situation

- PSV launched Oct 2003
- Part of a range of possible trading points
- Trend has been an increase in the use of PSV as a delivery point for transactions amongst shippers
- However, only 7% of volumes (or ~10bcm) are traded at PSV – with around 85% of gas demand covered by long term contracts

Developments

- EC investigation into ENI
- Creation of a balancing market
- New interconnected markets
- Removal of obligations on gas imported from non-EU countries?
- ERGEG GRI S/SE promoting PSV

Only 7% of volumes are traded on PSV

Source: Reuters (2008)
PSV – Proposed Balancing Market

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<tr>
<th>Gas Day &quot;D – 1&quot;</th>
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<th>Settlement (15 m+1)</th>
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<td><strong>Physical Balancing</strong></td>
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<td>Daily Metered: REMI data</td>
<td>Balancing costs TSO</td>
<td>TSO recovery of costs</td>
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<td>Non Daily Metered: total city gate/exit (*)</td>
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<td><strong>h. 12</strong> Shipper Position</td>
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<td>System Price Signal??</td>
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**Inbalances Charges**
- Ex post Trading
- Tolerance Level

**Definitive commercial balance**

**Inbalances Invoicing**

(*) shippers must be informed of their share of the city gate, for each load profile.
Thanks for your attention

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