Convergence of gas and power trading
- a Pan-European approach

Energy Trading, Central & Easter Europe

31 May 2006

Warsaw, Poland

Dr Colin Lyle
Managing Director
Gas Market Insights
Warsaw, 31 May 2006

Convergence of gas and power trading; a Pan-European approach

Structure of Presentation

• Establishing European energy trading
  – Gas & Power, are they different?

• Trading and Energy Price Formation

• Current EU political and regulatory drivers

• Commercial response – successful strategies
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The European Federation of Energy Traders (EFET)

A trade association formed in 1999, originally representing 26 companies from 12 countries

now represents over 80 trading companies operating in about 20 countries

promotes pan-European energy trading in open, transparent and liquid wholesale markets.

activities include contract standardisation and advocacy for liberalised energy markets

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The EFET MISSION

... involves improving conditions for energy trading in Europe and fostering the development of an open, liquid and transparent European wholesale energy market”.

Through better:

- Information transparency
- Data exchange
- Products and procedures
- Laws
- Regulation
- Taxation
- European Contracts
- Organised market

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EFET Membership spread south and east, as more companies traded gas and power.
EU Energy Market Directives

- 1996 & 1998 EU Electricity and Gas Directives established principles of
  - Third Party Access (TPA)
  - Choice of energy supplier

- 2003 2nd EU Electricity and Gas Directives required, by July 2004,
  - Unbundling (legal separation of transport from trading and supply)
  - Regulated Access
  - and 100% market opening by July 2007.
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Illustration of the Developing EU Gas Market

- Gas Interconnectors
- Regulated, Independent Network Operators
- Trading Hubs set Market Prices
- LP Distribution
- Demand management
- Residential
- LNG Storage
- Competing Producers
- Competing Suppliers
- Residential
- Gas Interconnectors
- Customer Choice of Competing Suppliers

GMI Gas Market Insights Ltd
Do differences in gas and power affect the goal of a single EU energy market?

- Producer oligopoly
- Gas from non-EU sources
- Interconnection
- Distributed power generation
- Gas storage
- System response

Gas and power have related challenges, but with operational and political differences.
Development of gas trading takes time…but will be rapid once market conditions are right

After 4 years - traded volumes at the NBP exceeded UK Gas Demand
After 8 years - sufficient confidence to index LT deals on ‘spot’ price

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After the brief low in the late 1990s, oil prices recovered then rose steadily.
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Competition reduced UK power prices, seasonality changed, prices now risen

UK £/MWhr

Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06

0 20 40 60 80 100
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Low UK gas price in mid-late 90s, seasonal pattern and a sharp price rise last winter
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Traded oil, gas and power prices Jan 1997 - Dec 2000 showed different characteristics

- Brent oil $/bbl
- NBP gas p/therm
- UK Power £/MWhr

Graph showing traded oil, gas, and power prices from Jan 1997 to Dec 2000.
Oil, gas and power price links changed as NW Europe energy trading matured

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Oil still influences long-term gas price trends, but the economic link is complex

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Traded gas and power prices in the UK have become closely correlated

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Convergence of gas and power trading; a Pan-European approach
Are international gas and power prices converging due to CO2 trading?
UK gas forward price links with German power price, with CO2 trading influence

Data Source: Platts

German Power
UK Gas Year
CO2

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The parallel EU approach to electricity & gas Directives & Regulations continues

- 2003 EU Cross Border Electricity Regulation and 2005 EU Gas Transmission Regulation set out minimum requirements on TSOs and established a European regulatory framework for electricity and gas

- **ERGEG**, European Regulators Group for Electricity and Gas
EU Energy Regulators have followed the UK model and deal with both power & gas

Sir John Mogg, Chairman of Ofgem is also the current Chairman of ERGEG

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ERGEG focus on electricity leads and influences gas on several key issues

- Entry/Exit and regulated tariffs
- Maximising capacity allocation and market solutions to congestion management
- Information Transparency
Gas transmission* access increasingly uses an entry/exit system, similar to electricity.

Source: EFET Project Group E/E.
*schematic of high calorific (H-gas) systems only
EFET benchmarking shows best results for ‘pure’ TSOs with electricity grid experience

Distance to average (+ is better than average)

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ERGEG are using Electricity experience to tackle gas issues

- Congestion in major infrastructure
- Regional Market Initiative
- Transparency

Walter BOLTZ
E-CONTROL
leads ERGEG’s Gas Work Group

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Improved access to Europe’s gas routes is essential

Source: Eurogas
ERGEG assess there to be congestion in EU pipelines - but limited TSO plans for expansion

Source: ERGEG
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The Regional Gas Initiative of ERGEG uses four market groupings across the EU

<table>
<thead>
<tr>
<th>Region</th>
<th>Countries</th>
<th>Lead Regulator</th>
</tr>
</thead>
<tbody>
<tr>
<td>North-West</td>
<td>Netherlands, Belgium, France, Great Britain, Ireland</td>
<td>NL</td>
</tr>
<tr>
<td>North (*)</td>
<td>Germany, Denmark, Netherlands</td>
<td>NL</td>
</tr>
<tr>
<td>South</td>
<td>Spain, Portugal, Southern France</td>
<td>Spain</td>
</tr>
<tr>
<td>South-South East</td>
<td>Italy, Austria, Slovakia, Hungary, Slovenia, Greece, Poland, Czech Republic</td>
<td>Italy &amp; Austria</td>
</tr>
</tbody>
</table>

(*) Initially the North and North-West REMs will be run jointly, i.e. under the lead of DTe (The Netherlands). Once the first phase of the REMs has been completed it is intended that the North REM will revert to the leadership of BNetzA (Germany) and will be separated on the North West REM.

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EU Commission sector inquiry summarises the following key issues* for gas and power:

1. Market concentration
2. Vertical foreclosure
3. Lack of market integration
4. Lack of transparency
5. Price formation


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High profile new EU Energy Strategy gives priority to completion of internal market

- Further pressure for Pan-European approach to Gas and Electricity Grids
- Internal and external emphasis on TPA to networks, competition in supply and transparency of market information
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• Commercial response – successful strategies
Commercial response – successful strategies for future growth

- Identify & **exploit core business**
  - What type of company? What type of assets/portfolio?

- **Understand customer** perceptions & needs
  - secure the local market

- **Growth strategies**
  - new (related) products
  - geographical expansion
  - mergers and acquisitions,

- **Preparing for the future**
  - risk management through traded markets
  - lobbying positions, combined representation,
Splitting British Gas allowed focus on core businesses – production, pipelines, sales.

1997

2000

Now part of national grid

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Unbundling increased Shareholder Value & allowed new gas and power combinations

Demerger allowed British Gas market capitalisation to increase

British Gas plc
£10.64 billion

16 Feb 1997

BG Group
£7.74 billion

17 Feb 1997

centrica
£2.89 billion

Lattice
£5.41 billion

23 Oct 2000

BG Group
£9.53 billion

2006

centrica
£9.23 billion

EU & N America gas & power sales

nationalgrid
UK & US gas and power network operator

BG Group
Oil & gas E&P LNG operations & power generation

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**Convergence of gas and power trading; a Pan-European approach**

**Many gas and electricity consumers will change supplier when offered real choice**

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**UK Gas and Electricity Customers Changing Supplier for the First Time**

- **Millions of Customers**
- **Date**
  - Apr-96
  - Sep-96
  - Feb-97
  - Jul-97
  - Dec-97
  - May-98
  - Oct-98
  - Mar-99
  - Aug-99
  - Jan-00

- **Gas**
- **Electricity**
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Expansion of Europe’s Power Majors

- ... Endesa next?
- Largest UK-based energy trader
- International integrated gas and power trader

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Some commercial signals in recent months

- Applied for licence to sell gas in the UK
- Recruited power traders for NW Europe
- Announced plans to enter German market
Combined representation can improve a company’s prospects in the new market

Companies are better informed and increase their influence through the right trade association.

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European energy markets are already linked ... the future is global.
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Thank you
Any questions?

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