European Gas Quality & Interchangeability Summit 2006
London 26-27 September

TRADING PERSPECTIVES OF EUROPEAN GAS QUALITY ISSUES

Colin.Lyle@EFET.org
Contents:

- About EFET
- The EU Gas Market
- Regional Hubs and gas quality challenges
- Solving a UK/Continent quality problem
- Conclusions
ABOUT EFET:
The voice of energy traders in Europe.

The European Federation of Energy Traders (EFET)

- Represents over 80 trading companies operating in about 20 countries
- Promotes pan-European energy trading in open, transparent and liquid wholesale markets.
- Main activities include:
  - Advocacy for liberalised markets
  - Promotion of energy trading in Europe
  - Standardisation of contracts
ABOUT EFET:
Improve conditions for energy trading in Europe.

“... fostering the development of an open, liquid and transparent European wholesale energy market”.

Achieving our mission through better...

- Information transparency
- Data exchange
- Products and procedures
- Laws
- Regulation
- Taxation
- European Contracts
- Organised market
ABOUT EFET:
Recent gas publications.

August 2006
- Gas Information position paper

September 2006
- Note on liquidity providers
- Letter on N/NW Regional Initiative
- Gas Quality position paper

All available at www.EFET.org
TRADERS’ PRIMARY GAS QUALITY CONCERN: Gas quality must not be an undue barrier to trade

- Throughout Europe, it should be possible to buy and sell gas, whether LNG or pipeline gas, without any undue physical, commercial or legal barriers.
- Once gas is in EU infrastructure, control of gas quality and other interconnection issues should be the responsibility of the infrastructure operators, who must ensure that they neither prevent fair access to gas, nor fair access to capacity.
- Traders must not be exposed to unquantifiable risks.
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THE DEVELOPING EU GAS MARKET: Regulated infrastructure, traded supplies

Competing Producers

Gas Interconnectors

Regulated, Independent Network Operators

Demand management

Trading Hubs set Market Prices

Competing Suppliers

Industrial & Commercial

Customer Choice of Suppliers

Residential

LNG

LP Distribution

Quality Conversion

Blending

I/O

Storage

CG

I/O

I/O
I consider that a derogation from the requirements of TPA should be the norm not the exception for new LNG terminals”

EU Energy Commissioner Andris Piebalgs

(@23rd WGC June 2006)
THE DEVELOPING EU GAS MARKET:
Single market requires a consistent approach

- A shared (H gas) quality specification setting out clearly defined parameters will help to facilitate greater cross-border trade.

- Gas meeting this quality specification that is delivered at any cross-border or inter-TSO point within the EU must not be refused on grounds of quality.

- The responsibility for investment to ensure that this can be achieved lies clearly with the TSOs overseen by their national regulators.
THE DEVELOPING EU GAS MARKET:
Gas grids require compatible access rules

Source:
EFET PGEE
09 Feb 2006

* schematic of high calorific (H-gas) systems only

Germany proposes 15 H-gas zones from October 2006
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REGIONAL HUBS AND GAS QUALITY CHALLENGES

LNG Connects markets with different gas qualities

Source: IGU
REGIONAL HUBS AND GAS QUALITY CHALLENGES

Europe has its own regional variations in trading

Virtual hub (in-grid balancing point)
Physical hub (e.g. border point)
Less liquid gas trading locations

NB. Not all trading locations are shown
### REGIONAL HUBS AND GAS QUALITY CHALLENGES

**EFET position on the ERGEG roadmap (Jan 06)**

<table>
<thead>
<tr>
<th>Physical issue</th>
<th>Actual (net) physical flows need to meet the quality specification; gas quality constraints should not apply to each contractual trade or flow.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversion and Variation</td>
<td>Quality conversion services linking existing markets (e.g. H &amp; L grids) and dealing with quality variations (e.g. from new imports) have different features</td>
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<tr>
<td>Information</td>
<td>Transparency on the capacities of blending, conversion and other services is essential if risks are to be reduced and optimum solutions implemented</td>
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Facilities

- Usually sized for market, must be open access to all (competing) suppliers.
- Alternative to UIOLI is to deliver at hub and ‘deem’ conversion by TSO for delivery at city gate.
- Possible ‘virtual coupling’ of H & L gas

Financing

- Costs for existing facilities could be socialised or levied on throughput (correct user pays)
- Investment for new facilities part of normal regulated regime (cannot rely only on competing shippers’ load estimates)
Regional Hubs and Gas Quality Challenges

Key features of quality variation

Responsibilities

- Party providing gas at the entry to the EU system must meet the relevant entry specification, and obtain blending or treatment if required.
- At all cross-border points in the EU it must be the responsibility of the TSOs to manage the interface.

Financing

- Costs must be market related or subject to regulatory oversight
- Investment decisions require extensive consultation and information provision
### Key conclusions on gas quality

<table>
<thead>
<tr>
<th>TSO Responsibility</th>
<th>A European Gas Quality Specification</th>
<th>Transparency</th>
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<tr>
<td>▪ TSOs must remain responsible for managing the gas quality within their grids and the gas quality interface with connected systems</td>
<td>▪ A shared (H-gas) quality specification setting out clear and defined set of parameters under which <em>gas that is delivered at any cross-border point within the EU must not be refused on grounds of quality</em> will help to facilitate greater cross border trade.</td>
<td>▪ Good investment decisions and risk management require information</td>
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## REGIONAL HUBS AND GAS QUALITY CHALLENGES

### Good solutions need shared information

Source: EFET paper on information Aug 2006

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SOLVING A UK/CONTINENT QUALITY PROBLEM
...there are many unknowns and concerns

Richer Norwegian gas

Rich LNG

Can IUK accept the gas?

Can Bacton blend?

Enough lean gas to blend?

Capacity to move lean gas to IZT?

Source: GIE website for map www.gte.be
Gas from Norway could be separated, with leaner gas through Langeled and richer gas through Zeepipe. How rich will gas be from Zeepipe? How often above UK spec?

- What pipeline capacity will there be to move gas from ZPT to IZT? How will it be made available?
- Will capacity be interruptible for quality reasons (insufficient lean gas for blending)? How will that work?

Fluxys has said they will ensure that gas will not be presented to IUK that does not meet the required (UK) spec.

- Does this mean that gas will not reach the hub if it does not meet UK spec?
- If insufficient blending gas is available and/or other imported gas is too high Wobbe, how will this be effected?
SOLVING A UK/CONTINENT QUALITY PROBLEM
... some concerns

- Failure of transportation system beyond Eynatten treated as FM, and shorts hub doubly (reduced Eynatten gas, reduced blending capability for richer gas). Potentially serious shortfall at hub.

- If IUK is allowed to accept richer gas (e.g. for blending at Bacton), then more Norwegian gas could get through. But this will depend on lean gas at Bacton. What happens on a shortfall of lean gas – will IUK be shut down? Will capacity be treated as interruptible?

- If rich gas enters IUK above UK spec (e.g. for a few hours before problem identified) does this lead to pipeline shut down?

- If rich gas above UK spec enters NGT this counts as “contaminated” and leads to NationalGrid declaring an emergency!
Traders’ main concerns are liquidity destruction and economic loss:

- In previous interconnector shutdown, cleanup costs were manageable compared to economic loss of being left long at Bacton and short at Zeebrugge.

- During interconnector interruption, Zeebrugge becomes highly illiquid, with a few flexibility holders able to capitalise on distressed positions.

- Could create questions over property rights associated with gas quality – can Fluxys freely substitute gas to optimise network, or is importer of lean gas (which is being substituted or blended) able to extract value?

- Costs of extended shutdown or curtailed supply could be measured in many tens of £millions. Initial brunt borne by traders, then passed through to customers. Interruption of peak flows on import is likely to be very expensive.
SOLVING A UK/CONTINENT QUALITY PROBLEM
... the opportunities for action

- Blend at Zeebrugge
  - what capability does Fluxys have?
  - What are anticipated qualities of imported gas?
  - More open information or risk setbacks to Zeebrugge hub trading

- Blend at Bacton
  - Advantica study shows this is possible
  - What is risk of reduction of lean blending gas below critical levels?

- Timescales for investment
  - What is lead time on equipment for Bacton?
  - What options for this year?
  - Ofgem must consider fallback options for winter 2006/7
SOLVING A UK/CONTINENT QUALITY PROBLEM
... the most prudent course of action

• **NationalGrid** invests as required in UK to ensure ‘European Quality’ gas can be accepted at Bacton

• **Ofgem** allow costs to be socialised unless a better solution is found

• **Fluxys** continue to blend and substitute gas in Belgium in the short term
  
  • Greater emphasis on **transparency of information**
  
  • **Advance warning of possible interruptions** to the Fluxys service, to allow parties to take mitigating action.

**Action is needed now** to ensure that gas can flow to the market; there are potentially serious political and economic costs of delay
About EFET

The EU Gas Market

Regional Hubs and gas quality challenges

Solving a UK/Continent quality problem

Conclusions
H-gas **quality variation** should be tackled separately from H-gas/ L-gas **quality conversion**. The **L-gas market** should not be excluded from competition.

Rules for exercise of **TSO discretion** on whether to accept marginally off-spec gas need to be clearly defined, and should not allow discriminatory conduct.

Rules for gas quality **curtailment of flow** should be published and clearly understood.

If transportation can be interrupted, then quality becomes a parameter in Available Capacity - with **increased requirements on transparency**.

**Transitional arrangements** may be necessary if changes impose significant costs on certain market parties. Services provided should be cost-related.

**TSO must accept responsibility** for gas quality in its grid: no-one else can.
Thank you.
Any Questions?

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