



Gas Liberalisation, Security of Supply and Investment

Brussels Energy Round Table
1 March 2006

Agenda

1. Achievements
2. Upstream Competition has to be improved
3. Security of Supply (SoS)
4. Investment
5. How to go ahead ?

Main achievements since 2001

- Legal unbundling of TSOs
- Progressive implementation of Directives and GGP
- Increasing transparency and non-discrimination
- Contributions of TSOs made via GTE: input into legislation and policy developments e.g. GGPs
- The management of technical complex issues
Virtual tariff offering versus physical constraints, investments in metering and measuring equipments, IT systems ...

BUT still issues under discussion to achieve an efficient European Gas Market

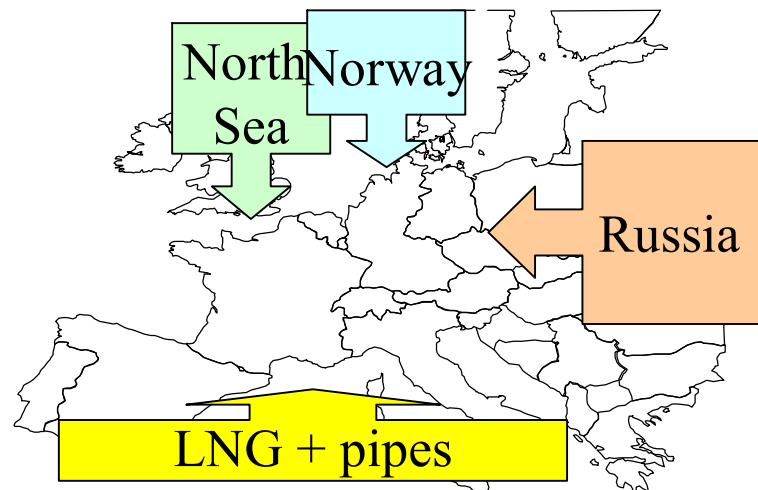
- DG TREN: report about implementation of Directives and State of Liberalisation
- DG COMP: report from the energy sector enquiry, key issues;
 - Market concentration,
 - vertical foreclosure (LT contracts/lack of liquidity),
 - insufficient market integration (lack of cross-border capacity),
 - more transparency needs,
 - lack of market based pricing mechanisms and of complete implementation of Directives,
 - few customers are switching in some countries



Upstream Competition has to be improved


Going towards Upstream Competition...

- Downstream vs Upstream
 - Downstream: ongoing improvements
 - Upstream: Few gas sources, little competition but a strong price impact on the Market



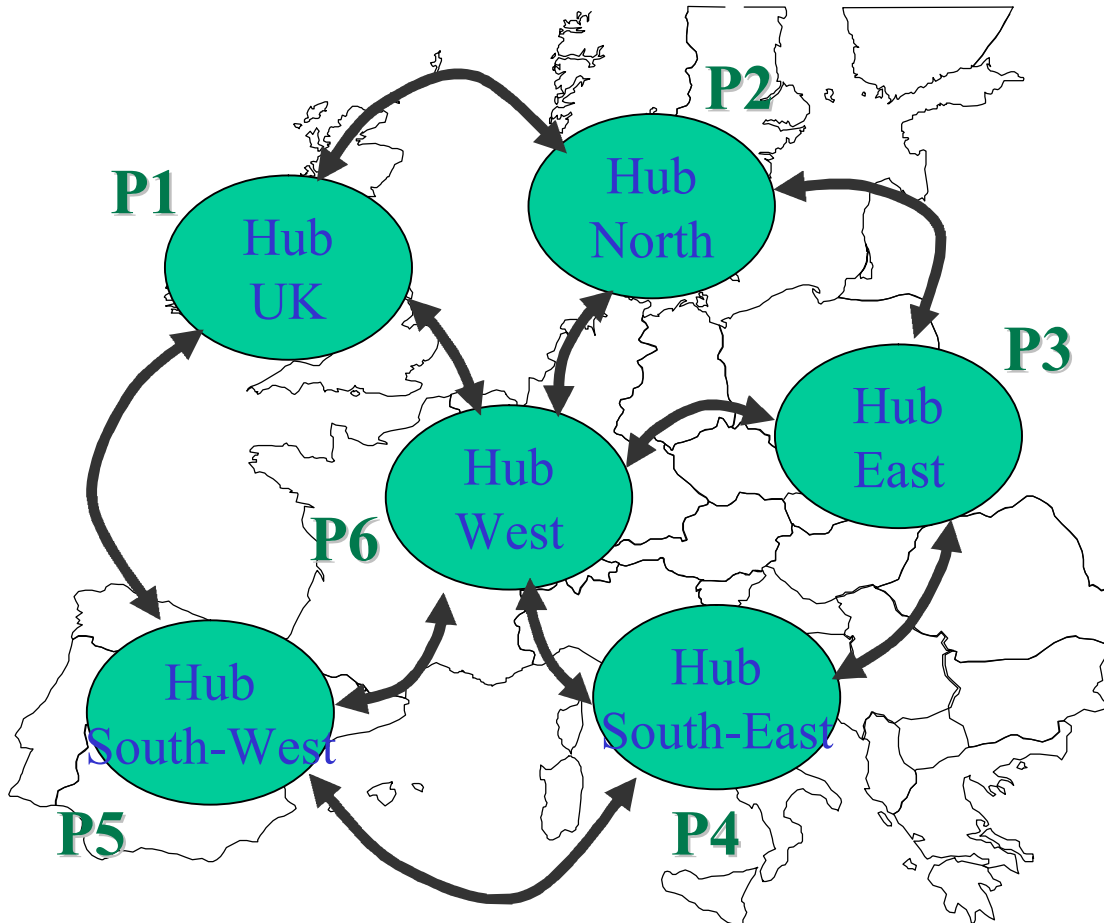
- Competition between sources is necessary to create an efficient market

... Needs Infrastructure Investments

- Most of the margin is upstream
 - Gas price: 15 EUR/MWh  22 EUR/MWh
 - Transmission cost : about 1 EUR/MWh
- What does upstream competition mean?
 - Possible arbitrage and easy switch from a gas source to another (e.g. links between gas hubs)
 - Decrease of upstream margins expected
 - Infrastructures are the key factor for an effective upstream competition
- Cost of necessary extra capacities of the network will be more than compensated by reduction of upstream margins

Benefit to end-customers

Potential European Economic Model



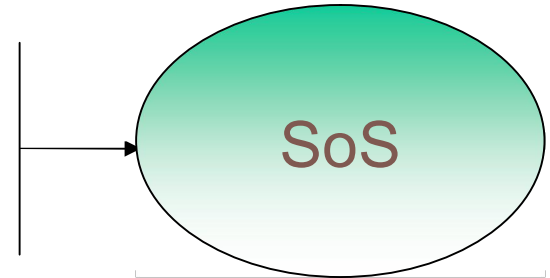
- A lack of available capacity between two hubs creates a price differential between these two hubs
- The market will be efficient if the price differentials between hubs are low enough, so that competition among supply sources is effective
- Transnational inter-hub links have to be sufficient to achieve an efficient market



Security of Supply (SoS)

SoS is an important Issue

- Major risk, real possibility
 - Insufficient supply during cold winter
 - Lack of gas in case of infrastructure failure



Winter 2005/6 price spikes...

...and Russian crisis...

highlight the importance of an effective SoS policy with clear (and policed) roles and responsibilities

Price differentials between hubs

Argus European Natural Gas

Daily Natural Gas Market Prices, News and Analysis

05K — 233 Thursday 1 December 2005

European spot gas prices

NBP		p/therm				Zee-NBP Basis		Zeebrugge				TTF					
Contract		Bid	Ask	+/-			p/therm	Bid	Ask	+/-		Bid	Ask	+/-	€/MWh		
Day Ahead	C1	98.300	98.700	-8.250	▼	G1	-0.750	D1	97.500	98.000	-7.850	▼	H1	26.400	26.600	-0.050	▼
Weekend		99.500	101.500	-0.500	▼	G1b	-0.900	D1b	98.550	100.650	-0.150	▼	H1b	26.900	27.100	0.300	▲
Current Month	C2	105.500	106.500	na	◀ ▶	G2	-1.000	D2	104.450	105.550	na	◀ ▶					
January	C3	106.250	106.750	0.500	▲	G3	-3.500	D3	102.700	103.300	2.300	▲	H3	28.750	28.850	-0.300	▼
February	C4	104.000	105.000	-1.000	▼			D4	100.700	101.800	0.800	▲	H4	28.450	28.600	-0.200	▼
March	C/A5	94.500	95.000	1.750	▲			D5	92.450	93.050	2.400	▲	H5	24.350	24.500	na	◀ ▶
April	C/A6	54.250	54.750	1.300	▲			D6	53.200	53.800	2.500	▲					
May	C/A7	42.750	43.250	na	◀ ▶			D7	42.500	43.100	na	◀ ▶					
1Q 2006	C8	101.700	102.100	0.400	▲			D8	98.750	99.250	1.800	▲	H8	27.150	27.350	-0.225	▼
Summer 2006		44.325	44.525	0.375	▲				43.975	44.275	0.375	▲		19.450	19.600	-0.050	▼
2Q 2006	C/A9	46.150	46.350	0.650	▲			D9	45.650	45.950	0.525	▲	H9	19.700	19.750	-0.075	▼
3Q 2006	C/A10	42.500	42.700	0.100	▲			D10	42.300	42.600	0.225	▲	H10	19.300	19.350	-0.025	▼
Winter 2006		73.400	73.600	1.750	▲				70.800	71.100	1.700	▲		28.225	28.325	0.025	▲
4Q 2006	C/A11	67.650	67.850	1.750	▲			D11	65.550	65.850	1.700	▲	H11	26.950	27.050	0.000	◀ ▶
1Q 2007	C/A12	79.150	79.350	1.750	▲			D12	76.050	76.350	1.700	▲	H12	29.500	29.600	0.050	▲
Summer 2007		41.300	41.500	0.150	▲				41.150	41.450	0.150	▲		18.700	18.850	-0.025	▼
2Q 2007	C/A13	43.050	43.250	0.150	▲			D13	42.850	43.150	0.150	▲	H13	18.700	19.150	-0.025	▼
3Q 2007	C/A14	39.550	39.750	0.150	▲			D14	39.450	39.750	0.150	▲	H14	18.400	18.850	-0.025	▼

SoS : a need for appropriate and timely Investments

- Storage; new capacities needed
- Variety of gas sources: LNG will have a key role
 - LNG investments
 - A positive impact on upstream competition
- But also a transmission grid delivering national SoS standards

Sufficient Investment must be delivered on time
to provide adequate capacity and system flexibility



Investment

A need for good cooperation and framework

- “Art. 22” is an effective tool to create new entry points on the edge of the European gas market
... but difficult to use to expand capacity on existing networks
- **Open seasons:** Where market players lack visibility on their future capacity requirements this may lead to reluctance to make long term commitments for a part of the necessary capacity

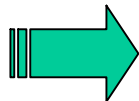
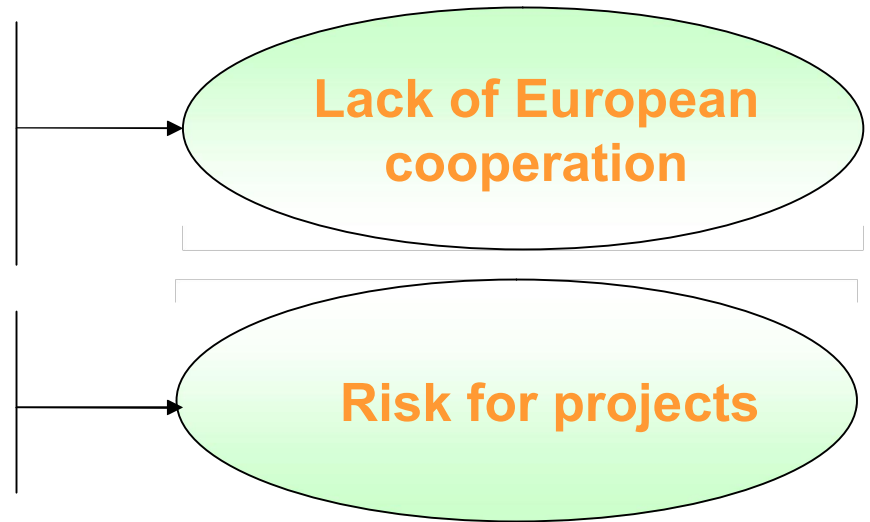
**Need for a European cooperation
and an appropriate framework**

Non Domestic Investment Issues

- Obvious need for Non Domestic Investments (NDI)

BUT

- No Supranational vision
 - National regulation
 - National transmission operators
- Uncertainty
 - Regulatory instability
 - A moving and changing context



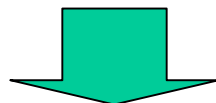
Disincentive to NDI projects

Investments are present costs...
...but future savings

It should be recognised that the implications of late and under investment, for example high and volatile prices, have an enormous market effect compared to over investment

... But who is going to pay ?

- SoS roles and responsibilities need to be clarified and policed
- Where market signals for investment are not forthcoming asset owners may assume the SoS investments in their own country if regulation is appropriate
- Case of NDI is less straight forward ...



Case by case studies to find effective answers
- initially focusing on existing issues

ERGEG : Roadmap for a Competitive Single Gas Market in Europe

- An ambitious but necessarily lengthy process
 - Up to January 2007
 - Regional steering committees => workshops
 - Regulators, TSOs, Network users, Hub operators

Regional markets: stepping stones to the single European market

ERGEG's
Priorities

- | | |
|---|--|
| <ul style="list-style-type: none"> ➤ Regulatory co-operation ➤ Unbundling ➤ Transparency and information handling ➤ Competition and choice of gas sources – availability of gas | <ul style="list-style-type: none"> ➤ Cross-border trading ➤ Effective access to network capacity ➤ Capacity availability ➤ And gas quality |
|---|--|

Conclusion

- Necessity for appropriate and timely investments
- Need improvements to the regulatory framework particularly for pan European investments
- Solving these complex issues requires:
 - Fair and active cooperation between actors
 - Stable regulatory environment
 - Thorough exploration of the problem, for example via the Roadmap regional initiatives, which should consider both long term and short term issues