

European Gas: What are the issues and outlook?

GB stakeholder event, 10 January 2011

Rationale for Ofgem's engagement in European gas – in summary...

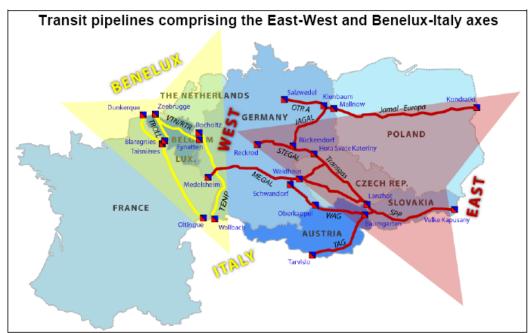
- **GB net importer** of gas (increasingly) so EU matters
 - Alongside direct deliveries of LNG & Norwegian pipeline gas
 - Interconnectors with Ireland (Moffat), Belgium (IUK), Netherlands (BBL); GB transits gas to Ireland
- Continental EU gas market is in early stages of further liberalisation (driven by Third Package)
 - We can bring thought leadership to this
 - GB gas market: most liberalised & liquid gas market in EU
 - Anticipated net **benefits** of further liberalisation for consumers
 - If (potential) risks are managed well...

There are <u>benefits</u> to GB of further liberalisation in the continental EU gas market (incl. better access to gas, at competitive prices); this is likely to trigger some <u>changes</u> here.

Where is the continental EU gas market at?

Key problems identified in Commission's "Sector Enquiry" (2007)

- Large vertically integrated incumbents
- Public service obligations & strategic reserves
- Long term take-or-pay contracts with producers & importers
- Limited access to gas networks & contractual congestion
- No flexibility left for new entrants
- Lack of transparency

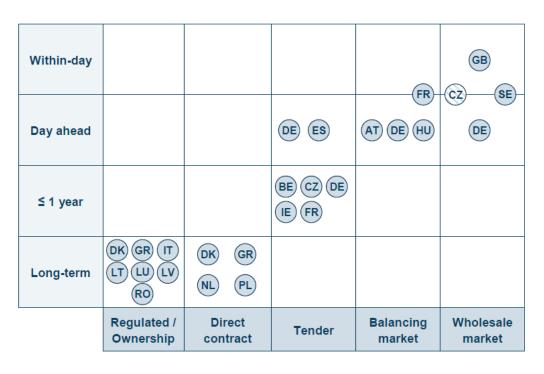


Source: Energy Sector Inquiry 2005/2006

Recent achievements: Increased transparency; consolidation of German network zones; entry/exit becoming the norm; hubs emerging

Continental market is (still) far from being liberalised; however, momentum for change is growing (driven by new & binding provisions in the Third Package)

There are large differences between countries' markets. An <u>example</u> in gas balancing...



- TSO procurement of balancing services: differs significantly across MSs
- How will this picture change as EU gas market becomes more liberalised?

Figure 6: Procurement mechanism and time horizon for balancing services

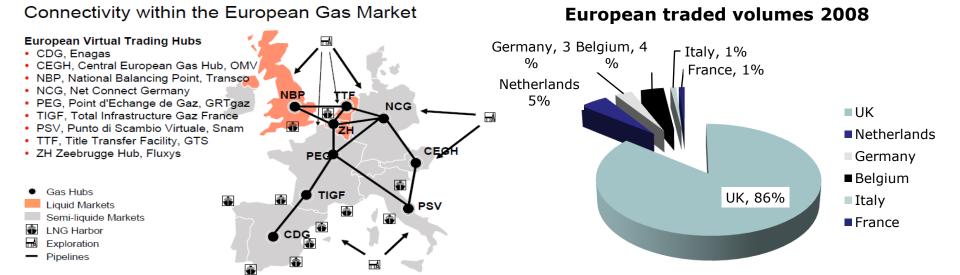
Source: KEMA (December 2009), Gas balancing and tariffs study

Differences between Member States reflect, in part, local (system & economic) realities. How to manage the transition to a market?



Increasing liquidity at some continental trading hubs; NBP still (by far) most liquid

- Approx 14,200 TWh of gas traded in Europe in 2008, up 11%
- Price differentials between hubs (NBP-ZBH-TTF-NCG etc) reducing
- Emergence of new trading hubs...
 - Germany fastest growing traded gas market in Europe (NCG and Gaspool)
- Divergence of wholesale & contract prices leading to lesser oil-price indexation in long term? (~Uncertain supply/demand outlook)



What does the Third Package require for gas? Building a 'well-functioning' EU gas market...

- Entry/exit principles to be implemented throughout EU
 - By Sept-2011, network charges "shall not be calculated on the basis of contract paths" (Art. 13 of Gas Regulation 715/2009)
- Non-discriminatory third party access to:
 - Transmission pipeline systems
 - Incl. cost-reflective (or market-based) tariffs
 - Storage & LNG
- Market-based gas balancing
- Transparency on network capacities & gas flows
- Facilitating emergence of a 'well-functioning' wholesale market
 - Transparent, competitive & liquid
 - Supporting security of gas supply

Third Package envisages effective competition, non-discrimination and efficient functioning of the internal EU gas market; through <u>new, binding provisions</u>

What's needed for a well-functioning (competitive & liquid) EU gas market? Some initial views...

- Improved access to network capacity for new entrants & other nonincumbents
 - For <u>existing</u> capacity:
 - Address contractual congestion, using <u>effective</u> tools, so that more capacity is **freed up** to the market
 - Market-based mechanisms for allocating capacity (i.e. auctions)
 - Encourage efficient use of capacity, e.g. through cost-reflective charging
 - For <u>new</u> capacity (or, ensuring there is <u>sufficient</u> capacity)
 - Regulatory frameworks for cross border investment
 - Role for incentives, where investment is needed

(Cont.)

(Cont.) What's needed for a well-functioning (competitive & liquid) EU gas market?

- 2. Improved access to (flexible) gas:
 - Developing market-based gas balancing regimes
 - Improved access to gas in **storage** (& other flexible gas)
- 3. **Transparency** to the market about **capacity & flows** on pipeline networks and other facilities
 - So parties can participate in the market and trade
 - A fundamental <u>pre-requisite</u> to a well-functioning market

Our views are informed by the GB experience; however, intrinsic differences with other markets & systems need to be recognised.

Some aspects that work well for GB may not (be perceived to) work well elsewhere...



How does Third Package envisage a wellfunctioning EU gas market will come about?

- <u>Default route</u>: Through the process of TSOs developing "<u>network</u> <u>codes</u>" for the different areas of gas market design
 - Initial codes:
 - capacity allocation sent to Commission,
 - balancing, tariff structures and interoperability for 2011
 - Codes set binding EU-wide rules, for national implementation
 - 'High level group' sets annual **priorities**: what codes to develop
 - "Network code" ≠ the GB UNC (likely to be much less detailed?)
 - Not merely cross border? Impacts on national systems...
- Regulators (through ACER) set 'clear and objective principles' for the network codes in (non-binding) <u>framework guidelines</u>
- Member States (MSs) negotiate the final network codes (through "comitology" process) (Cont.)

(Cont.) How does Third Package envisage a wellfunctioning EU gas market will come about?

- Alternative route: Commission can "fast-track" certain areas (perceived as high-priority) through "direct comitology" guidelines
 - Examples: transparency (~done), congestion management (started)
 - In future, **storage**..? (to improve EU-wide access to flexibility)
- TSOs & regulators & MSs developing and negotiating detailed binding rules for gas market design is going into **new territory**
 - This is the start of a **learning** process

Third Package sets a broad framework for EU gas market design; the detailed design, however, is left to <u>quidelines</u> & <u>network codes</u> processes. Important for GB!

What are the key challenges for the network codes & framework guidelines?

- 1. Developing **market-based mechanisms** (through network codes) that strike an appropriate **balance** between:
 - being sufficiently **harmonised** (to build a market & avoid trade/entry barriers), and
 - recognising national/regional system & economic realities (incl. different stages of market development)
- 2. Determining **interim steps** in the network codes & framework guidelines
 - In GB, market-based mechanisms & liquid gas markets didn't come about in one clean sweep; it was a gradual process
 - Will it be the same elsewhere in EU; or can some countries "leap-frog"?

(Cont.)

Need for <u>interim steps</u> (in transition to market based mechanisms) may no longer seem obvious to us in GB; but is likely to be an important issue in some other MSs.

(Cont.) What are the key challenges for the network codes & framework guidelines?

- 3. Considering **transitional impacts** (e.g. on legacy contracts)
 - Legacy contracts to be "brought in line" with provisions of EU law (Madrid Forum conclusions, 27-28 Sept 2010)
 - Market-based mechanisms should continue to allow effective longdistance pipeline transport from distant supply sources (e.g. Russia; North Africa) to demand centres (incl. NW Europe)
 - So, need to **avoid (unintended) barriers** to long-distance transport
 - "Pancaking" example? Entry/exit charges at each system border
- 4. Regulators, TSOs and MSs having to **jointly develop & negotiate** detailed binding rules for gas market design
 - EU negotiations (incl. on framework & other guidelines; network codes)
 are about compromise

For GB, <u>compromise</u> includes a need to identify – as input into future regulatory/MS negotiations – <u>which features contribute most</u> to protecting current & future consumers/citizens (in GB & across EU)...

What else is needed? A <u>target model</u> setting a strategic vision for the EU gas market...

- There is no common strategic vision of what the EU gas market should look like in, say, 5-10 years time
 - After TP provisions (incl. network codes) fully implemented
- European regulators will be chairing a process through 2010-11 to establish a target model for the EU gas market
 - Madrid Forum, 27-28 Sept 2010
 - ERGEG call for evidence 3 Nov 7 Jan 2011
 - Workshops: Vienna 3rd Dec, Bonn 22nd Feb, more planned
 - Key to success of this process: **buy-in** from across sector
- What does this target model need to do?
 - Set a vision for how the different codes fit together & ensure consistency
 - Stay within broad framework set by Third Package
- What will be required to develop a target model?
 - Analysis of different options (existing market models/ others)

How best to achieve buy-in into a strategic vision for the EU gas market through this process? What views do GB stakeholders have on options?



How could continental EU gas market develop to, say, 2020? Four potential scenarios...

	National Champions	Harmonised Europe	Diverse Europe	Competitive Markets
Political will to act together	Low	High	Low	High
Diversity of gas imports into EU	Low	Low	High	High
Scenario	MSs act in their own interests; 'beggar thy neighbour' policies adopted because of low diversity	MSs adopt a co- ordinated approach, with harmonised standards & rules across EU; this helps to address low diversity	MSs do not act together, but have 'luxury' of high diversity; each MS adopts its own preferred position on markets vs. PSOs spectrum	MSs act together by progressing towards liberalised EU gas market; relying on markets to meet their energy policy objectives

A fully liberalised, competitive EU gas market is one – but not the only – possible (longer term) outcome. Key drivers are uncertain supply/demand outlook & political will.

Four key messages...

- 1. Developments in EU gas policy (including new, **binding provisions of TP**) are **important for GB**, because of our increasing gas import dependency
- 2. Getting progress in liberalising continental gas markets (with benefits of increased access to gas for GB) is likely to require some **changes here**
- 3. There are **opportunities for GB stakeholders** to influence the future shape of the EU gas market
- 4. "Gas market **target model**" process (chaired by European regulators) brings together all the various aspects of EU gas market design

To what extent can the GB gas market model 'survive' on a pan-European basis? What compromises may GB want to make & what changes to GB market could these result in?



Promoting choice and value for all gas and electricity customers

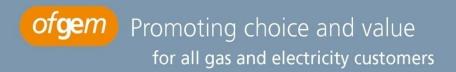


European gas: What has been achieved to date?

GB Stakeholder event 10 January 2011

Overview

- Transparency
- Capacity Allocation Mechanisms
- Congestion Management Procedures
- Security of Supply Regulation



Transmission Transparency has improved significantly

	E.ON GT	Fluxy s	Sven ska Kraft nät	RWE TNG	Natio nal Grid	IUK	Gas- link	WIN- GAS	Ontras	GRT- gaz	Energin et.dk	Gasunie DT	DEP	Swede gas	GRT- gaz DT	GTS	BBL
(C1) Max technical capacity	in place	in place		in place	in place	in place	in place	in place	in place	in place	in place	in place	in place	in place	in place	in place	in place
(C2) Interruption	in place	in place		in place	in place	in place	in place	in place	In place	in place	in place	in place	in place		in place	in place	in place
(C3) Daily commercial firm and interruptible capacity	in place	in place		in place	in place	in place	in place	in place	in place	in place	in place	in place	in place	in place	in place	in place	in place
(F1) Daily flow / aggregated Allocation	in place	in place		in place	in place	in place	in place	In place	In place	in place	In place	in place	in place	in place	in place	in place	In place
(F2) Daily prompt allocation information	in place	in place	in place	in place	in place	in place	in place	in place	in place	in place	in place	in place	in place		in place	in place	in place
(F3) Daily aggregate day-ahead nominations	in place	in place	in place	in place	in place	in place	in place	In place	In place	In place	May 2009 – Delay?	Dec 2009?	Dec 2009?		Dec 2009?	in place	In place
(F4) Historic gas flow information database	in place	in place		in place	in place	in place	in place	in place	In place	in place	in place	in place	in place	in place	in place	in place	In place
Number of IPs	22	19	1	5	8	4	1	8	3	9	6	7	2	1	5	25	4
3 minus rule IPs	0	5	0	3	0	0	0	3	2	0	0	0	0	0	0	12	0

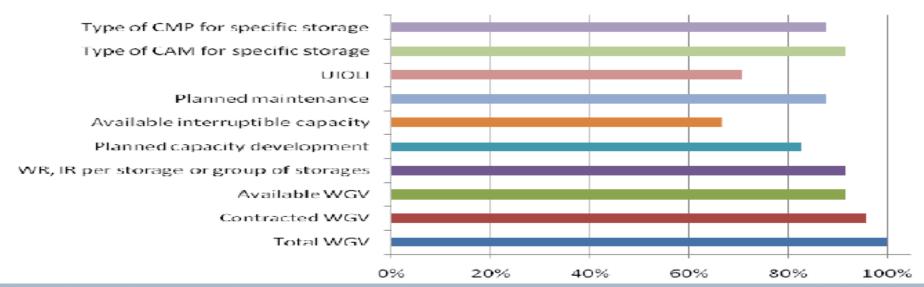
TSOs report published Less than three shippers Not applicable Specific date

Not committed to date

Storage Transparency has significantly improved

- A wide range of data is published predominantly on daily basis (70% of all SSOs).
- All SSOs publish information on capacity
- All but one SSO make available all information also in English

Type of information published



Transparency

- Amendment to Annex of Gas Regulation 715/2009 to be adopted in November builds on N.W. gas region project
- EC has asked ERGEG to consider further requirements
 - Are the current levels of transparency provided for by system operators sufficient?
 - Are there areas along the gas value chain (production, transmission, LNG, storage, distribution, wholesale market) where additional transparency is needed?

How can Transparency be further enhanced?

Capacity allocation (CAM)

- **ERGEG's** pilot framework guideline (June-10)
 - Scope: interconnection points (IPs); existing pipeline
 - Auctions are the target model; pro-rata an interim step
 - (NRA decides); use of FCFS restricted to intra-day
 - Proposal to introduce 'bundled products' at IPs:
 - Reservation of some capacity for short-term allocation
- Impact on GB's interconnectors

Capacity Allocation Mechanisms

- Commission's reaction to pilot (of Sept-10) ERGEG had 3 months to review:
 - Aim for greater harmonisation (auctions only), w/o need for further NRA decisions
 - Clarify what it means by two new concepts, 'bundled services' and 'virtual interconnection points'
 - Exiting supply contracts to remain intact
 - Harmonised 'Gas Day', rules on reserve prices
 - Auctions not sufficient for capacity yet to be built

Implications of the Commission's reaction?

Capacity Allocation Mechanisms

- ERGEG submitted revised FG to Commission in December 2010
 - No exemption to requirement to provide bundled products
 - "Sunset clause" of 5 years after network code comes into force after which all capacity must be bundled
 - Virtual interconnection point required to be established within 5 years of entry into force of network code
 - If interim period agreed in comitology before auctions required, the network code to set out that adjacent TSOs apply harmonised allocation mechanisms at interconnection points
 - Standard duration for the gas day, running from 5:00 GMT to 5:00 GMT unless further evaluation by ENTSOG justifies a different timing (for example to align with electricity

Implications of the Commission's reaction?



Congestion management (CMP)

Commission's letter:

- Maximisation of capacity by means of transparent and clear rules on capacity calculation approved by NRAs
- Overbooking and buy back incentive scheme approved by NRAs
- Surrender of capacity to the TSO approved by NRAs?
- Creation of firm day ahead capacity market by restricting re nomination rights to 50%
- Long term use it or lose it as last resort

Security of Supply

- GB becoming more reliant on imports
- Ukraine-Russia dispute Jan. 2009
- Gas Security of Supply Regulation adopted 11 Oct.
 2010
 - Establishment of preventative actions plans, emergency plans, risk assessment
 - Infrastructure standard
 - Physical reverse flow
 - Greater transparency:
 - Obligation to publish public service obligations
 - Review plans, information exchange

Conclusions

- Have the Gas regional Initiatives run out of steam?
- Will these proposals have a substantial impact on European gas market liberalisation?
- What do the proposals mean for GB?

Progress has been made but more needs to be done



Promoting choice and value for all gas and electricity customers



What's next on the European gas agenda?

Pavanjit Dhesi Regulatory Economist European Strategy

Introduction

Direct Comitology Procedure

Framework
Guidelines/
Network Codes

Other European Legislation

Voluntary
Guidelines of Good
Practice

Voluntary Regional Cooperation

Impact on GB: opportunities for good outcomes and risks of bad outcomes.

Framework Guideline and Network Code for Gas Balancing (1)

Problem

Lack of harmonisation and lack of cross-border cooperation may create **barriers to trade**.

Non-market based balancing regimes are **bad for liquidity**.



Objective 1: move towards greater integration of EU energy markets

Objective 2: move towards market-based balancing



Cross-border cooperation, harmonisation of balancing periods, merging of balancing zones

Shipper-led balancing (reduced role for TSOs), Market-based TSO procurement

Framework Guideline and Network Code for Gas Balancing (2)

- How can we create harmonised balancing regimes that meet the specific requirements of each market?
- How can we define criteria for the application of options such as interim steps?
- What information needs to be made available to network users?
- ...

ERGEG's draft FG and IIA consultation - Consultation closed on 28 October, responses be found on ERGEG's website (http://www.energy-

regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/OPEN%20PUBLIC%20CONSULTATIONS/Framework%20guideline%20on%20gas%20balancing/CD)

Framework Guideline and Network Code for Gas Balancing (3)

39 responses generally supportive of ERGEG's approach

Options and interim steps

 26 respondents support ERGEG's approach (to include a target model and interim steps), 12 respondents want to see a clearer path towards achievement of the target model

Market-based TSO procurement

 29 respondents "broadly" support that TSOs procure balancing services on the wholesale market (nearly all of these respondents would like to use balancing platforms as interim steps only)

Daily balancing period

 25 respondents support harmonised daily balancing period, some reluctance from Dutch stakeholders

(Re-)nomination procedures

7 respondents think harmonisation is needed, 7 don't



Framework Guideline and Network Code for Gas Balancing (4)

Responses to ERGEG's draft FG and IIA consultation continued:

What happens during the gas day?

 Most participants at public workshop (and 13 respondents) consider that there is a need for within-day constraints (7 respondents disagree)

Cost-reflective imbalance charges

26 respondents support using marginal price

Information provision

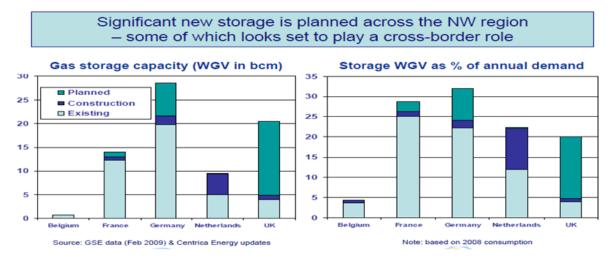
Not much feedback beyond new Annex

Cross-border cooperation

- Is it too early to define rules or are we missing an opportunity?
- -ERGEG to publish a Framework Guideline early this year (ACER will need to adopt FG)
- -ENTSOG to draft a network code
- -ACER to give an opinion
- -European Commission to submit the Network Code to Comitology

Storage (1)

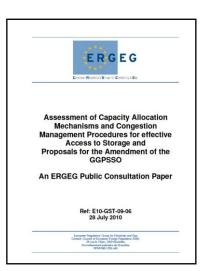
• Efficient, transparent and non-discriminatory access to storage is important to provide flexibility, facilitate competition and ensure security of supply.



- Ofgem led improvements in transparency (but more to do)
- Access to EU storage capacity is restricted in many countries due to longterm contracts between the SSO and the former incumbent e.g. Austria, Germany

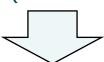
ERGEG's 2008 and 2009 "Status Reviews" highlighted weaknesses of current arrangements for storage capacity management

Storage (2)



"SSOs shall publish nondiscriminatory and transparent capacity allocation mechanisms [...]" (Gas Regulation, Article 17) "Storage facility contracts shall include measures to prevent capacity-hoarding [...] "
(Gas Regulation, Article 17)

ERGEG has consulted on proposed changes to the 2005 Guidelines of Good Practice (deadline was 9 October):



Auctions to be preferred allocation method, increased transparency requirements

Secondary markets to be supported by SSOs

Potential for more prescriptive UIOLI mechanisms

Storage (3)

33 responses to consultation

- The majority of stakeholders agree with ERGEG that an auction in case of congestion – is the most appropriate allocation mechanism. Importance of an appropriate reserve price stressed also
- UIOLI Several respondents felt that UIOLI should not exist at all. A number of respondents however support UIOLI as an appropriate tool to deter hoarding behaviours
- Support the idea of standardizing processes (e.g. terms and conditions).
- Majority against the idea of harmonisation of products
- Majority of respondents agree that combined products should be offered if there is demand
- Secondary trade SSO platforms supported, must not exclude bilateral trades

Next steps:

ERGEG considering consultation responses and planning to publish revised Guidelines of Good Practice in Spring 2011

Storage (4)

What the revised Guidelines of Good Practice may include:

Capacity Allocation Mechanisms

- Start with an open subscription period
- If demand exceeds supply Auction
- Publication of details and results of CAM in local language as well as in English plus ERGEG include list of information required to be published
- Consultation with market on design of CAM
- Best effort to ensure compatibility with transportation CAM
- Allow for the development of a combined storage and transportation capacity product
- Take into account need for balancing markets
- CAM subject to ex-ante review by NRAs

Storage (5)

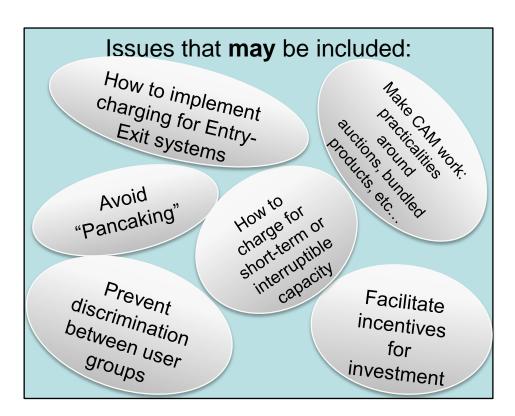
What the revised Guidelines of Good Practice may include:

Congestion Management Procedures

- SSO to implement web based platform to enable secondary trading
- Standardized terms and conditions for access
- "best efforts" of primary customer to nominate in a timely manner. "best efforts" of SSO to ensure they do so
- SSOs to strive to maximise interruptible capacity and offer a reasonable amount on a short term basis (at least day ahead)
- SSOs to publish information on non nominated storage capacity on day ahead basis and already sold day ahead interruptible products

Harmonised transmission tariff structures Framework Guideline & Network Code

- European
 Commission likely
 to invite ACER to
 draft the FG in
 early 2011
- ACER will then consult and produce a Framework Guideline within 6 months



Next step: ACER to publish consultation following the Commission's invitation in 2011

Investment Issues

High priority for many stakeholders, addressed in many contexts

Gas Regulation

•Every two years, TSOs (ENTSOG) need to draft non-binding Community wide **ten-year network development plans** and **Regional Investment plans** (Gas Regulation, Articles 8, 9 and 12)

ERGEG's work

 Considered in many of ERGEG's work streams (e.g. Tariff Structures Framework Guideline)

Energy Infrastructure Package

- Includes gas, electricity, CCS and oil infrastructure
- Aims to remove obstacles to market delivery of investment
- Looks at regional coordination and how investment is permitted and funded

ERGEG's Regional Initiatives

 Investment issues feature highly on the agenda of ERGEG's Regional Initiatives

"Market signals" versus "central planning"?

Gas Target model

- How can we ensure that all this fits together?
- How can we ensure that work is progressed most efficiently?
- Is our current work really looking at the full range options?



Proposal to formulate an over-arching "target model"



- Stakeholders expressed support at Madrid Forum in September
- CEER issued a call for evidence on 3 November 2010 (which closed on 7 January)
- Public workshop on 2 December, more to follow
- Later this year: CEER vision paper

Next steps: public workshops (22 February, Bonn; then one in London), CEER vision paper.



Gas Target Model: Potential options

Gas Target Model: Potential options								
		Size of price zone						
		Very small sub-national	Medium mostly national	Big often super- national				
	Explicit	US gas Explicit trading of capacity.	Status quo Explicit trading of capacity e.g. NBP, TTF. Problem of pancaking for entry-exit transit through multiple zones.	Merge current balancing zones. Explicit trading of capacity remains at borders.				
Cross- border pricing mechanism		Nodal pricing (effectively each transmission route is its own zone). Implicit trading of capacity.	Zones as now, or rechosen on an objective basis (e.g. Market splitting). Implicit auctions for cross- border capacity with market coupling e.g. TLC (shipper led internal pricing) Nordpool (exchange led internal pricing).	Merge balancing zones. Implicit trading at borders.				

Item	Next steps
Capacity Allocation Mechanisms Framework Guideline (CAM FG)	-ERGEG to revise Framework Guideline by end of 2010 -ACER consultation on Framework Guideline April – May 2011 -ERGEG to assess the impact of sunset clause - European Commission to invite ENTSOG to draft Network Code

	Network Code
Congestion Management Procedures	- European Commission to initiate Comitology Procedure
Gas Balancing Framework Guideline	- ERGEG to publish FG in early 2011

das balancing i ramework dalacinic	- ACER to adopt FG - ENTSOG to draft Network Code
Tariff Structures Framework Guideline	- ACER to consult in early 2011 and complete the Framework Guideline within 6 months

	Framework Guideline within 6 months
Infrastructure Package	 November Communication and IA from the European Commission Legislative proposal next summer
	Dublic workshops (Donn 22 Fohrunger London

Target model	 Public workshops (Bonn 22 February; London March/April, Brussels Summer)
Storage	- ERGEG considering consultation responses and likely to publis

Storage	- ERGEG considering consultation responses and likely to pub revised Guidelines of Good Practice in Spring 2011
nteroperability Framework Guideline	- ACER public consultation during O3/ 2011



Promoting choice and value for all gas and electricity customers