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## Which regional gas and power markets are more amenable to integration and why?

### Introduction

The purpose of this contribution is to give an update on the most recent developments within ERGEG's Regional Initiative by addressing the key question of which regional gas and power markets could be more amenable to integration and why.

Since its establishment for the electricity and gas sectors in 2006, ERGEG's Regional Initiative (RI) has been a vehicle to promote greater regional cooperation and is meant to be a stepping stone towards the creation of the single European market for energy. Since 2006, the RI have contributed significantly to improved cooperation between TSOs and other market participants and the removal of barriers to market integration and have thus improved competition and increased security of supply within the relevant regions. Another not quite tangible effect is the much improved cooperative spirit between market participants which should make further progress easier.

In order to provide a strategic outlook highlighting the potential for future developments with special emphasis on market integration, we must first decide what the objective of the RI process should be. In other words, criteria for an effective regional market should be identified. For the time being, the RI has mainly focused on wholesale markets; retail markets are not yet included in its scope.

One criterion for effective regional wholesale markets certainly is the existence of liquid standardized market places (power exchanges and trading hubs) with a sufficient number of active players. Also, the management of network congestions should be simple, transparent and efficient, and it should support the effective functioning of the adjacent wholesale markets and the market entry of new players. In addition, market design and outcomes should give proper signals for infrastructure investments (in networks and electricity generation) and should not hinder market integration as is the case too often today. This list is by no means exhaustive, it is rather meant to give an impression of what potential criteria should be used for assessing the future development of regional markets.

### Status quo and key developments

The Regional Initiative and the developments in the regions are strongly influenced by large differences in the countries' starting points, e.g. in terms of market structure, market design or transparency. Despite such differences in the framework similar priority issues have been identified for the work in all regions. A brief overview is given in the following sections.

#### (1) Priorities and deliverables in the regions: electricity and gas

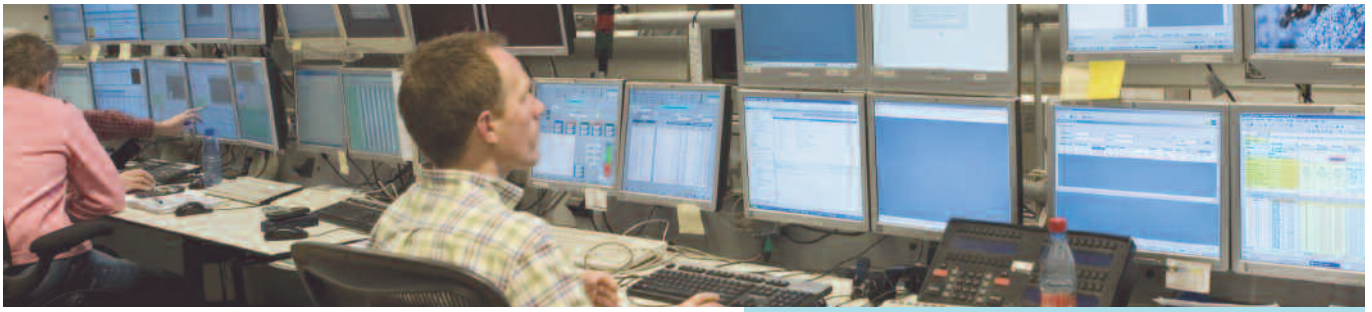
Within ERGEG's Regional Initiative, there are currently seven regional energy markets (REM) for electricity and three for gas, namely

- Electricity: Baltic, Central-East, Central-South, Central-West, Northern, South-West and France-UK-Ireland
- Gas: North-West, South-South East and South

As part of their self-governance process, when areas of work and priorities have been defined, all regions have identified and since then pursue similar priority topics – reflecting EU wide problems. The most important of these are:

- Interconnection and capacity, including congestion management: capacity calculation, allocation, and firmness;
- Transparency, both for electricity and gas;
- Integration and interoperability (including balancing) for gas; and
- The development of liquid trading points, such as energy exchanges and hubs (more in gas, less in electricity), and the removal of market entry barriers (both for electricity and gas).

In electricity, the objective of promoting market integration via market coupling (day-ahead market coupling of Denmark and Germany is scheduled for June 2008) is a major project in the Northern Region. Market coupling is also an issue in the Central-West REM in ▲



close cooperation with the Pentilateral Energy Forum, in addition to the harmonisation of auction rules. Achieving these objectives will be a significant step forward in terms of integration. The availability of network infrastructure (existing physical capacities and calculation of available capacities for the market) remains a reason for concern. In the Central-Eastern Region, fully coordinated flow-based explicit auctions (done by a single Auction Office) with the view to moving to implicit auctions are under development. In the Central-South REM, auctions are also a major issue where progress with explicit auctions and further harmonisation of auction rules is sought as a measure towards better market coupling. In the South-West REM, increasing cross-border transmission capacity remains a key issue and extensive work is currently being done on the issue of congestion management (capacity calculation, explicit auctions, and implicit auctions). As far as the REM France-UK-Ireland is concerned, congestion management is a priority issue, too, where the coordinated allocation of interconnection capacity is envisaged to start in autumn 2008, in addition to cross-border balancing (hopefully implemented by summer 2009). In the Northern, Central-West, Central-East and Central-South Regions, the regulators are working on harmonized standards for market transparency. As far as natural gas is concerned, the efficient use of the existing capacity and facilitating the development of new interconnection capacity remain key priorities across all regions. From the two monitoring exercises on the implementation of the transparency obligations contained in regulation 1775/2005/EC ERGEG has carried out, it was concluded that transparency in capacity and flows needs to be further increased and harmonized in order to conform fully with legal requirements and achieve a level playing field for all market participants. Furthermore, all market participants need to work closely together to prepare themselves for the requirements outlined in the 3rd package. More specifically, in the North-West gas REM, a Memorandum of Understanding (MoU) to improve regulatory cooperation was signed in 2007 and further coordination has been sought via the publication of guidelines on ensuring a coherent application of the so-called "minus 3 rule" in addition to a project to increase transparency and ensure better capacity utilisation and more investment via a coordinated open season at interconnection points.

In the South-South East REM, the development and implementation of a one stop shop platform for capacity booking and the consideration of a Regional Independent System Operator (R\_ISO or RECIT model) are key priorities for further work. Furthermore, work continues on removing obstacles to the conclusion of interconnection point agreements between TSOs, e.g. at the gas hub in Baumgarten. In the South REM, a joint investment plan for Spanish-French interconnection points was published by adjacent TSOs in February 2007, and the development of harmonised capacity allocation rules is under way. Furthermore, agreement has been sought on the principles of developing an Iberian market for natural gas (MIBGAS).

The key issue to be addressed now is how, based on the progress made, market integration can be taken forward.

## (2) Towards integrated energy markets via enhanced cooperation

In electricity, efficient cross-regional coordination has to be ensured, particularly with regard to the enhancement of the networks, different Auction Offices and market coupling developments. In natural gas, stakeholder involvement and the coordination with Member States need to be improved. This is a key for further success since in the absence of a legally binding 3rd Package, which could override conflicting national rules, several market entry barriers can not be removed without government involvement. As far as the structure and focus the work are concerned, the North-West gas REM is currently developing a Roadmap 2008-2012, and both the Memorandum of Understanding and Roadmap could be considered for the other REMs, too. Increasing coordination is also required between the REMs so that best practice procedures can be shared and rolled out from one REM to another.

Therefore, enhanced cooperation, including efficient monitoring of the process, remains the key towards better integrated, more competitive energy markets that ensure high levels of security of supply and offer clear benefits for market participants, but most importantly for end-users, shippers, and traders. ▲

To ensure the coherent development of all regions in electricity and gas towards a single market, enhanced regional cooperation is both sensible and required, in particular in order to close the regulatory gap. In all priority areas, solutions can only be achieved if effective cooperation and coordination across borders and regions is ensured. Where electricity or gas infrastructure (use) affects several Member States, such cooperation has to be made obligatory since there will not always be only winners and therefore a mechanism is needed to overcome local resistance to change. At the present stage, regulatory cooperation tends to be voluntary, as the examples of the MoU in North-West Region (for gas) and the regulators' involvement in the Pentalateral Agreement in the Central-West Region (for electricity) show. Enhanced cooperation between NRAs should ensure coordination between national regulatory decisions, information sharing needs to be facilitated, and regulators need to consult each other on their regulatory practices.

However, at a practical level, there are still difficulties to overcome: as national authorities, NRAs can only act within the law, and there are no exact rules on how NRAs should cooperate in practice or resolve conflicts of interest between national and EU interests. Also TSOs are normally required by national law to put the interest of national network users or consumers ahead of the interest of other EU citizens who are also affected by the TSO decisions. Furthermore, a MoU or similar agreement cannot overrule national legislation and hence, it is only effective within limits.

To promote greater market integration, cooperation among NRAs to ensure future market development requires a clear legal basis in European legislation as does an effective cooperation between TSOs;<sup>1</sup> the regulators believe that only a top-down approach based on clear EU legislation will effectively ensure this. To promote market integration in electricity and gas, the future design of a regulatory toolset should optimally consist of the following three elements:

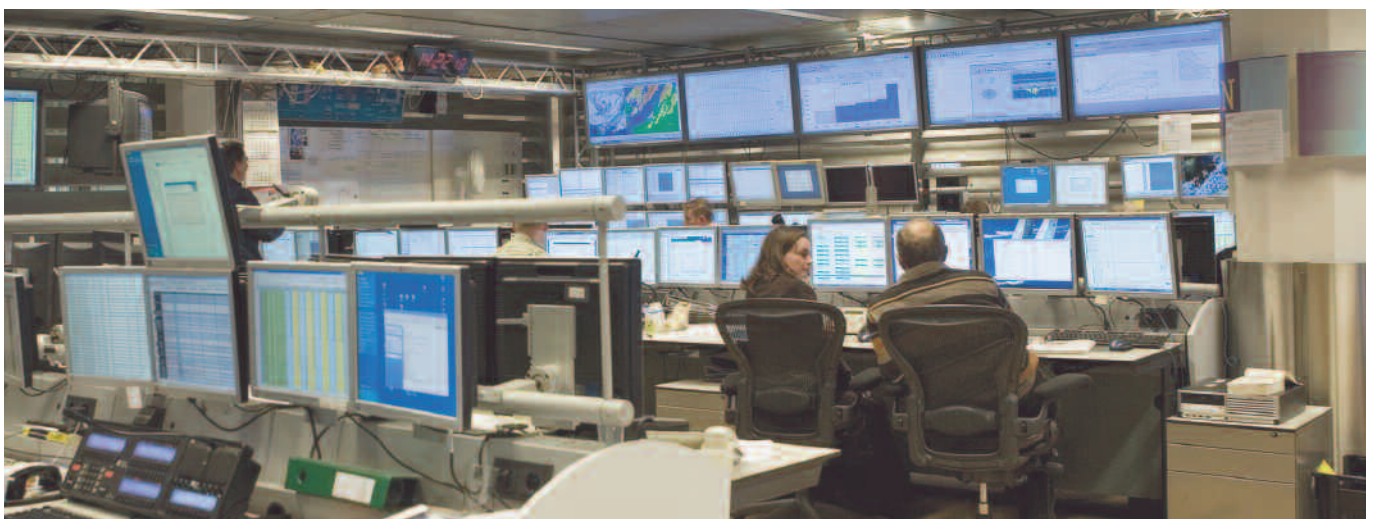
- Firstly, a clear legal basis for an obligatory regional cooperation of TSOs and NRAs
- Secondly, strengthened and harmonised powers and sanction mechanisms for NRAs at national level
- Thirdly, effective regulatory oversight and dispute settlement as a top-down approach based on European law

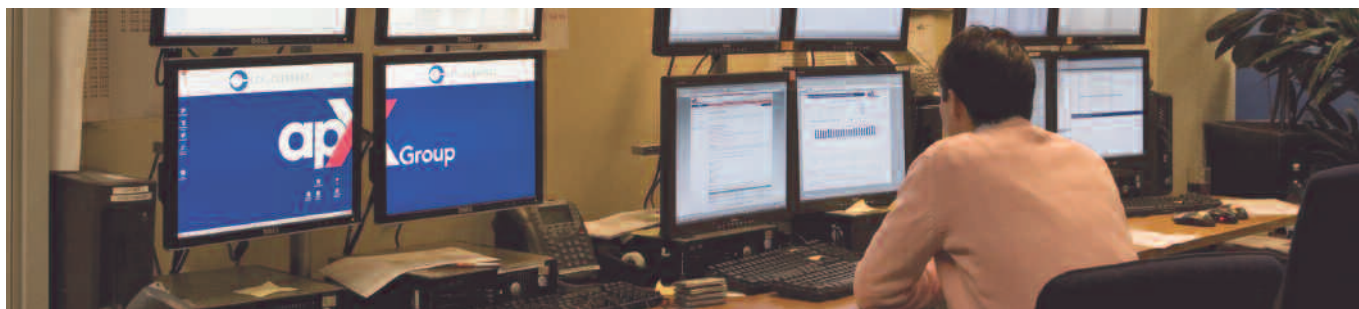
### (3) Regions amendable for integration

In electricity, priority issues and workstreams outlined above show that all electricity regions have the potential to develop properly if the involved parties and stakeholders contribute in a constructive manner. The future success of these markets will depend on their capability to develop and implement solutions and on the infrastructure supporting market integration.

Considering existing networks the best preconditions for market integration are given in the Central-Western, the Central Eastern Region and to a certain extent the Central Southern. These three Regions form geographically the core of the UCTE network. However in all three Regions a number of countries with significant concentration in generation can be observed. Consequently efficient congestion management (e.g. via market coupling) is needed but possibly not sufficient for the creation of truly effective markets. Regions which are geographically less in the centre of Europe, such as the Nordic, the South West or the Baltic do partly have well developed markets (e.g. Scandinavia) or significant steps towards market integration (e.g. MIBEL) but lack the infrastructure to be well integrated with the central markets.

Impediments to this process of market integration are the difficulties in finding agreements among the involved parties on various points. Examples are network models for capacity calculation, firmness of cross-border capacities or the prioritisation of work packages or national legal frameworks. For countries involved in more than one region, resource constraints, the general relevance of different solutions, and timing coordination are challenging. ▲





Ensuring convergence and coherence across the regions not just in terms of priority issues but also in the substance of the developed and implemented solutions is a growing challenge. ERGEG is currently prioritising this issue within the RI work.

In natural gas, key areas for improvements in the market have also been identified. They are access to capacity, transparency of information, hub development etc. Many of these issues are complex and will take time to resolve, therefore realistic timetables are important as is the need for buy-in from the market participants to initiate change. The following criteria are used to measure the success of the regional gas markets:

#### Criteria for measuring benefits to consumers

- Switching behaviour/rate
- Price differences between incumbent and alternative suppliers
- Harmonisation of general terms and conditions, especially with regard to minimum contract duration

#### Measurable benefits to network-user (e.g. shippers)

- One-stop-shop service offered by TSOs for easier access to the systems
- Harmonized TPA-regimes (nomination procedures, tariff systems etc)
- Implementation of requirements of the Gas Regulation 1775/2005; EASEE Gas standards applied

#### Criteria of measuring future success:

- Number of traders at hubs
- New entrants (large-industrial and end-user market)
- Transparency in secondary market trading
- Market share and concentration measure of incumbents (such as HHI)

#### Measuring market convergence:

- Price convergence (at hubs)
- Market structures

#### Conclusions and outlook

Since its inception, ERGEG's Regional Initiative has delivered concrete and measurable results, both for electricity and gas. The Regional Initiative helps to develop practical solutions that create benefits for all market participants, in particular traders, shippers, TSOs, and end-users and plays a vital role in the work towards the completion of the single market. The Regional Initiative has shown that it has the potential to lead to more coherence within each region. However, more emphasis needs to be put on ensuring that the regions join up, i.e. on ensuring coherence. Increasing coordination is therefore needed, e.g. by rolling out achievements from one REM to others and by monitoring the coherence and convergence of the REMs and strengthening it, if necessary.

All regions, both in electricity and gas, have their particularities, but where differences exist they are usually due to differences in local market conditions. The treatment of priority topics should be broadly similar and in principle allow for further integration at a later stage. However, the coherence of the developments towards the creation of the single market needs to be ensured. The overall aim of the Regional Initiatives is the creation of a single EU market, not the parallel development of different regional markets. The regions that are more amenable to integration are therefore those where all stakeholders cooperate to achieve this goal. It is therefore up to them to promote the process and to ensure that the Regional Initiative realises its full potential and really becomes a vital stepping stone towards the creation of the internal market for energy. Without an improved legal basis integration will not be successful in all areas as there are not only winners in an integration process. □

<sup>1</sup> Currently there is no mechanism to enforce a co-operation between TSOs if the costs and benefits are not equally shared. E.g. if one TSO has to invest 5 mio Euro to avoid that the other TSO has to invest 100 mio Euro there is no possibility to ensure, that the 5 mio investment is actually made. There are examples which show that the absence of an obligation to co-operate and invest is costing gas and electricity consumers large amounts of money.