

Note on Gas Hub Interconnection Capacity

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Introduction

Since the end of 2010 ERGEG has been engaged in a process to develop a Gas Target Model for the EU. This process has been developed through a public consultation exercise and includes the commissioning of reports and studies presented in a series of workshops. At these workshops the views of 'stakeholders' have also been presented and expressed subject to the overall guidance and direction of ERGEG as it seeks to progress this process to a conclusion.

The principal challenge confronting ERGEG is to secure agreement on a vision, or process, or approach that will ensure the integration of existing, fledgling or yet-to-be-developed wholesale gas markets operating at virtual or physical hubs on a national or sub-national basis. As the process has developed the overall thrust being dictated by ERGEG (though not, perhaps, with full 'buy-in' by all stakeholders) is to seek to replicate some variant of the 'market-coupling' being developed and applied in the electricity markets.

ERGEG is being driven down this route, apparently, because of the constraints imposed by the relevant EU legislation and regulation (Directive 2009/73/EC and Regulation EC 715/2009 respectively).

Regulation EC 715/2009, in Article 13 (1), 4th paragraph imposes a requirement to apply Entry/Exit tariffs to all transmission networks and proscribes, from 3 September 2011, transmission tariffs based on 'contract paths':

"Tariffs for network users shall be non-discriminatory and set separately for every entry point into or exit point out of the transmission system. Cost-allocation mechanisms and rate setting methodology regarding entry points and exit points shall be approved by the national regulatory authorities. By 3 September 2011, the Member States shall ensure that, after a transitional period, network charges shall not be calculated on the basis of contract paths."

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The rationale for this requirement and associated prohibition is presented in Recital (19) of the Regulation:

“To enhance competition through liquid wholesale markets for gas, it is vital that gas can be traded independently of its location in the system. The only way to do this is to give network users the freedom to book entry and exit capacity independently, thereby creating gas transport through zones instead of along contractual paths. The preference for entry-exit systems to facilitate the development of competition was already expressed by most stakeholders at the 6th Madrid Forum on 30 and 31 October 2002. Tariffs should not be dependent on the transport route. The tariff set for one or more entry points should therefore not be related to the tariff set for one or more exit points, and vice versa.”

It is also understood, though this has not been expressed in the legal texts, that the preference for entry-exit and the prohibition on pricing based on the transport route (or contract path) is designed to fully integrate existing ‘transit lines’ into the legal and regulatory arrangements and to deprive them of any possibility of maintaining a special status separate from these arrangements.

So, it appears this legally-binding Entry-Exit pricing requirement and the associated prohibition on the definition and pricing of pipeline capacity on a ‘point-to-point’ (P2P) basis are based on nothing more than (a) a highly contentious and un-evidenced assertion about the necessity to separate gas trading from the physical location where this takes place and (b) a desire to extend full legislative and regulatory jurisdiction to existing transit lines.

The approach being pursued by ERGEG is both unnecessary and inefficient (in that it will impose additional costs that will be borne ultimately by final consumers and, to some extent, by all EU citizens). This note seeks to demonstrate why and to outline an alternative approach.

ERGEG’s Approach is Unnecessary

Why is ERGEG pursuing this approach?

ERGEG’s approach, at the most basic level, is being determined by a requirement to develop a means of connecting markets while being constrained by the currently accepted definition of Entry/Exit zones – which may vary among Member States.

Defining Entry/Exit Zones

Despite all this focus on connecting entry/exit or balancing or market zones, it is interesting to note that neither the Directive nor the Regulation defines entry/exit zones. The Directive defines ‘transmission’ as a function in relation to a network of high-pressure pipelines that is separate from upstream pipeline systems and from pipelines primarily dedicated to distribution to consumers (Art. 2 (3)). It defines a ‘transmission system operator’ (TSO) in terms of the transmission function with responsibilities for the transmission ‘system’ in a ‘*given area*’ and, ‘*where applicable*, its interconnections with other systems’ (Art. 2 (4)) (Author emphasis). It also defines an ‘interconnector’ as a transmission line which crosses or spans a border between Member States for the sole purpose of connecting their national transmission systems (Art. 2 (17)).

These definitions seek to cover situations where there is more than one transmission system (and TSO) within a Member State, but they are silent on the definition of entry/exit (or balancing) zones embedded in these transmission systems. And, whereas some Member States with a single national transmission system have been content with one associated entry-exit zone, other Member States, often with more than one transmission system, may have multiple entry/exit zones – though there is a general trend to merge these zones and reduce the number. Indeed the process of merging entry/exit zones may involve the linking of separately owned and operated transmission systems.

Connecting Entry/Exit Zones

For a pipeline crossing an internal border it is simply in terms of de facto ownership, and custom and practice under the previous regulatory dispensation, that the border point is treated as an entry point to one entry/exit zone and as an exit point from the other. This appears to be an accepted part of the definition of a 'given area'. The connection between entry/exit zones within a Member-State can be less straight forward. It may not be possible to identify unambiguously a connecting pipeline (or pipelines). This, potentially, raises issues about the definition of the entry/exit zones.

It is also interesting to note that for interconnectors where there is a distance between the borders of the Member States, e.g., sub-sea interconnectors, these pipelines effectively fall outside the provisions of the Directive and the Regulation in relation to entry/exit pricing and the prohibition on P2P pricing.

Some Preliminary Conclusions

On the basis of these definitions and relevant features of the interconnected networks it is possible to draw some preliminary conclusions.

First, it appears that the definition of the 'given area' in which a TSO operates is determined implicitly by its ownership of the pipes and facilities in the network. Both the Directive and the Regulation do not make this explicit. It has been subsequently and again implicitly confirmed by the establishment of national regulatory authorities (NRAs) which licence or authorise TSOs to carry out transmission functions and which include these assets in Regulatory Asset Bases (RABs) which they employ to make transmission revenue and tariff determinations. However, all NRAs have a duty to facilitate competition in gas and to support the completion of the internal market gas. Defining internal border points as the connection points between adjoining entry/exit zones is proving to be an obstacle to the completion of the internal market and it is proving difficult to develop arrangements to address this efficiently and effectively. As a result, it appears there is nothing, in principle, to prevent NRAs identifying existing cross-border pipelines as interconnectors between transmission systems, separating them from the RABs of the connected transmission systems and defining the capacity on a P2P basis.

Secondly, such a separation and re-definition would not impact on the property rights of the TSOs involved. The two parts of the interconnecting pipeline would be placed in a separate entity with ownership shared between the two TSOs in proportion to the values in the two RABs. The new entity would require joint and collaborative regulation by the two NRAs and there might need to be some reconciliation of the basis for valuation, but both TSOs would receive the same revenue in total as they did when the segments up to the border point were in each TSO's RAB.

Thirdly, this definition of interconnector capacity would require a very limited change in the geographic scope of (and, possibly, in transmission tariffs for) each entry/exit zone. In practice,

the exit point in one zone and the entry point in the other would be pushed back to the points of connection in both zones. Ideally, it would make sense to incorporate the revised entry and exit charges in a single tariff structure for the entire interconnection capacity.

Fourthly, even if the prohibition on P2P capacity is intended to fully incorporate 'transit lines' within the current legislative and regulatory arrangements and to deprive them of any claim to a special status, the scope of the Directive should be sufficient to ensure this. In addition, where transit lines exist, the appropriate definition of entry/exit zones and of the capacity between them, as proposed here, would ensure that they would be treated in exactly the same way as all other pipelines and networks in the interconnected system.

All this leads to the conclusion that what ERGEG is currently minded to propose is unnecessary and a much simpler and more effective solution is possible. A fuller description of this alternative approach is available.²

ERGEG's Approach is Inefficient

The most specific outline of a 'pragmatic' mechanism that is, perhaps, most compliant with ERGEG's approach has been provided by E-Bridge and EEX³. It is described as Hybrid Market Coupling and requires three mechanisms – an exchange, an auction office and a capacity platform. These three mechanisms will be required between each pair of zones that will be coupled.

At this stage it is difficult to assess how time-consuming and costly all this might be, but there can be no doubt that it would be far more costly than defining inter-hub capacity on a P2P basis and allowing network users to reserve and trade this capacity.

The inefficiencies (in the sense of imposing additional unnecessary costs on final consumers) extend in a number of directions. One is in relation to the exercise of monopoly power. It is generally accepted that TSOs will monopolise transmission functions in entry/exit zones, but it is inefficient to extend this monopoly power across the interconnections of zones as opportunities for the competitive provision of interconnection capacity will be lost. Indeed, every effort should be made to reduce the monopoly power and range of TSOs – which is what the alternative, simple, capacity-defining approach seeks to do.

Another is in relation to the amount of TSO and regulatory co-ordination (in addition to that required in the coupling mechanisms) to ensure the timely and appropriate provision of new interconnection capacity. Any failures or slippage in this area will run the risk of a requirement for public support in the form of guarantees or partial public funding. A properly functioning market in pipeline capacity would prevent this risk arising.

Conclusion

The conclusion is very simple and clear. There is no need to pursue this complex and costly approach. A simple and efficient alternative exists. The answer is an efficient market in inter-hub pipeline capacity.

² <http://www.oxfordenergy.org/pdfs/NG23.pdf>

³ http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/Gas%20target%20model/Tab1/110411_E-Bridge_EEX_V10x.pdf