

**SUPPLY AND MARKETS DEVELOPMENT COMMITTEE:  
HUB SERVICES**

**1. Introduction and background**

Eurogas first produced a position paper on hubs in late 2003 (03NO448), written from the perspective of the gas supplier.

Since then new hubs have evolved, and their importance to gas market development at member state level and regionally is increasingly being recognised by national regulators as well as by ERGEG/CEER. Hubs are seen as critical to the existence of robust and liquid gas futures markets; they play a vital role in avoiding short-term market distortions, facilitating cross-border trade and the emergence of regional markets. It is also evident that hubs form a key part of the ERGEG roadmap work.

In view of current interest in the subject, Eurogas has updated the previous paper, with a view to contributing to further discussions concerning this significant feature of the internal gas market and facilitating the further development of hub services. The paper continues to be written from the perspective of gas suppliers.

**2. Hubs - definition**

A hub is a point at which title to gas can be transferred between buyers and sellers. It may be

- a *physical* point where several pipelines are connected, or
- a *virtual* point within a pipeline system.

The hub operator offers services that facilitate buying, selling and in some cases physical transportation of gas from or into connected systems, and gas can be exchanged under standard conditions. Transactions at hubs will be performed via clearing houses or over-the-counter trading mechanisms. When a hub is sufficiently liquid, most of the trades at the hub are re-traded and do not result in physical delivery.

Typically only a minority of sales made will be spot sales at a hub. The majority of physical deliveries will be covered by long-term contracts based on spot indexation or other pricing systems.

**3. The value of hubs**

Hubs are intended to create a 'market place' for gas, providing suppliers with access to numerous buyers and sellers of gas (including producers, other suppliers, large consumers and pure wholesale traders). The possibility of short-term sales and purchases enables the supplier to diversify his gas sourcing, in terms both of origin and of allocation between long, medium and short term, adding flexibility to his gas portfolio. Suppliers will make their own judgments regarding their mix of spot, medium- and long-term contracts, based on their expectations of the market. At the same time hubs can be a means by which a market value can be ascribed to gas used for balancing, and for contract indexation purposes.

Hubs offer significant benefits to suppliers large and small, in facilitating operations and improving efficiencies both within a member state and at a wider, regional level. They provide a market-based mechanism for buying and selling gas in the short and medium term, by which suppliers can balance their positions and reduce the risk of imbalance penalties. This helps gas suppliers, particularly those with limited upstream reserves of their own. Hubs also create opportunities for risk management products, which suppliers can use to produce a

wider range of pricing propositions for end-user customers (e.g. capped price offers or fixed-price deals).

In a liquid market, the market price for gas is known and better decisions can be made by management. For example, seasonal variations in traded gas market prices may help unlock the value of storage facilities. Looking forward, intra-day trading allows market-based balancing, removing the obligation on the incumbent supplier to balance the market.

#### **4. Principles for effective hubs**

The two key principles underlying an effective hub are:

- transparency – i.e. prices are public and available on a continuous basis, and
- liquidity – i.e. there is a sufficient number of willing buyers and sellers, and no single participant can exert undue influence on prices. For physical trades, this liquidity also depends on the supplier being able to move gas readily to and from the hub.

Greater price transparency leads to more effective market signals. It is only when market participants adapt their behaviour in response to these price signals and the short-term price of gas is responsive to gas supply and demand that real efficiency gains can be made and competitive markets function most effectively.

#### **5. Existing hubs**

Examples of existing hubs include:

- UK (the National Balancing Point)
- Belgium (Zeebrugge)
- France (PEGs)
- Netherlands (TTF)
- Germany/Netherlands (Eurohub)
- Italy (PSV)
- Spain (MS)

*Hubs vary considerably in terms of their trading terms, access to capacity, numbers of players, degree of liquidity and transparency and whether or not they are regulated. Some are relatively well-developed; others are still in their early stages and have yet to develop the desired characteristics of a well-functioning hub.*

#### **6. Limitations of hubs**

However high the churn ratio, an underlying basis of physical trades is still essential; the fundamentals of the upstream (production) and midstream (transportation) parts of the gas chain remain. Hubs are therefore not to be seen or used as substitutes for long term 'take or pay' contracts, which are a feature of the relationship between producers and suppliers. In fully liberalised markets however, transparent wholesale pricing at liquid hubs can be helpful in ensuring that volume and flow risks are covered and thus assist in underwriting the financial risks associated with capital intensive infrastructure projects.

A hub can also provide price signals that can be used as a reference for gas sales contracts (e.g. with an industrial customer) and purchase contracts from an upstream producer not performed physically at the hub. In such cases, a party to the contract has to be fully confident that liquidity at the hub is such that the price is reliable and cannot be influenced by the other party.

## 7. Hub development

Successful gas hub development depends on:

- transportation capacity i.e. the presence of extensive capacity in the area,
- fair access to that capacity i.e. the ability to move gas to and from the hub,
- the 'firmness' of the hub (either as a notional on-system balancing point or via the provision of sufficient physical back-up services),
- a large number and diversity of players in the market,
- a commercial and regulatory framework which ensures transaction security and transparency of access and related services at the facility, including the possibility for users to evaluate a net (current) trading position during each gas day
- clear and transparent allocation rules and force majeure provisions,
- the existence of standard agreements for hub services, and
- the presence of incentives for investment in infrastructure capacity,
- regulatory oversight on, for example, necessary technical and financial resources of players, verification of natural gas availability, daily operations.

Regulators and gas industries have a major role to play in facilitating hub development, by:

- ensuring open access together with transparent TPA rules,
- addressing any distortions which arise from interactions between adjacent networks or network rules, and
- providing incentives for TSOs to realise new infrastructure linked to hubs, recognising that liquidity will also depend on completion of sufficient major gas infrastructure e.g. to relieve current transmission constraints.

## 8. Hub services

Hub operators differ in the range of services they offer. Services include:

- receiving nominations (nomination should ideally be intra-day, in order to provide within-day gas sources for balancing purposes)
- scheduling nominations
- matching nominations and counterparties
- allocation to counterparty level (allocation also needs to be firm and timely i.e. on-line/hourly so that customers can be notified of any constraints and hence be in a position to nominate their own back-up after the expiry of the mandatory period)
- operational balancing e.g. through the use of operational balancing agreements
- back-up/down, at transparent and market-related prices (for physical hubs)
- quality conversion services where necessary
- IT services, ideally web based, in order that input and output can be interfaced directly with participants' own systems, and manual entry of every data item is avoided.
- tax and fiscal services (VAT treatment in particular related to the hub locations close to the border or on the border of the different countries).

## 9. Hub operation

Assuming that the hub operator is providing a standard range of services, all participants at a hub should be treated on a non-discriminatory basis. It is recommended that the hub operator, where not the TSO, is a separate legal entity from players at the hub, to avoid potentially discriminatory treatment between participants.

The level of standardisation should be maximised, while recognising that hub operators will be separate entities, and that third party arrangements may vary from country to country.

Tariffs for the hub services (where they exist) have to be designed in such a way as to allocate the cost of the different services and provide a fair margin. Tariffs should be structured so as to encourage hub customers to trade.

Each transaction at the hub has to remain strictly confidential and the nomination process has to be clear and simple, facilitated by suitable IT systems. In order to participate in the trading activity at the hub, all participants must first meet stringent financial and industry standards.

Validation of transactions at hubs is essential for all players, and operators of physical hubs should offer back-up services in the event of gas supply failure. To avoid market distortions, clear rules and responsibilities have to be fixed in the case of *force majeure*, with clear identification of the liabilities of the various parties.

## **10. Regulatory initiatives**

While ERGEG acknowledge in their November 'Roadmap' discussion paper that hubs have developed in a number of markets, they feel that trading is generally not yet liquid. They note that there are many markets where hubs have not yet developed at all, and highlight concerns around access to, and availability of, transportation capacity to and from hubs.

ERGEG's roadmap, which is due to be finalised in early 2006, will focus on the importance of regional markets, and the role of hubs within individual regional markets and of hub-to-hub trading within and between regional markets. Based on case studies of existing hubs and hub development, ERGEG are proposing a series of regional initiatives aimed at unlocking liquidity, considering such issues as:

- experience of the development of successful hubs
- access to capacity into and out of hubs (including capacity trading)
- incentives for investment in transportation capacity between hubs and in storage
- transparency
- availability of gas sources
- communication and transaction arrangements
- cross-border compatibility (e.g. of balancing and flexibility regimes)
- cross-border capacity
- the arrangements for regulatory oversight
- the existence of regulatory gaps related to cross-border activity

The purpose of these regional initiatives is to ensure that the particular circumstances of each regional market and the obstacles to hub development in that area can be recognised and the necessary steps taken to improve the prospects for the emergence of liquid hubs, whether through focus on cross-border constraints or through regulatory intervention e.g. through the release of capacity.

## **11. Eurogas position**

Eurogas broadly supports the regional approach envisaged by the roadmap and the wide-ranging work being undertaken by the European regulators and the Commission to encourage the further development of gas hubs. In general, Eurogas believes that hubs should be market-driven and not subject to formal regulation. However regulators and the Commission have an important role in facilitating the emergence and development of hubs.

In its response, Eurogas will consider the specific proposals in the ERGEG discussion paper. It will give thought to how best to engage in the specific regional initiatives envisaged by ERGEG and expects to support any workshops and other opportunities for stakeholder participation in the course of 2006.