

# Is the European Gas Market Ready for 2007?

The new EU Gas Market Directive passed in June 2003 sets out an accelerated timetable for market liberalisation - all consumers will be able to choose their gas supplier by 2007. But how feasible is this new timetable? What progress has been made so far and what could hinder the development of a truly competitive market? By **MARY JACKSON & NIGEL HARRIS** of Kingston Energy Consulting.

**THE EUROPEAN COMMISSION** (EC) kick-started moves towards the goal of a single, competitive market for natural gas with the 1998 directive 98/30/EC. The directive, concerning common rules for the internal market in natural gas, laid down the timetable for a partial opening of the market to competition over a ten year period. In line with the principle of subsidiarity, the directive did not propose a unified approach to developing a liberalised market, but left individual countries to interpret the directive to meet local circumstances. It was expected that, over time, there would be a gradual convergence of gas regulations and markets in Europe. In practice, however, the differing regulatory frameworks among European Union (EU) Member States have caused unequal progress towards market opening and some market distortions.

It was to address these issues, that, in June 2003, the original 1998 gas directive was repealed and replaced by Directive 2003/55/EC. The main provisions of the new directive, which must be written into law by Member States before July 2004, are:

- An accelerated timetable for complete market opening, with all non-household customers becoming eligible to choose their supplier by July 2004, extending to all customers by July 2007.
- Third party access (TPA) to gas transmission and distribution systems and liquefied natural gas (LNG) facilities to be regulated, with tariffs approved by a national regulator. The original directive allowed for unregulated, negotiated access.
- Transmission system operators (TSOs) to be legally separated from other commercial gas market activities by July 2004 - the original directive called only for unbundling of accounts. Distribution system operators to be legally separated by July 2007.
- Gas storage facilities to be opened to TPA.
- Strengthened jurisdiction of regulators to monitor competition in the gas market; the Council of European Energy Regulators (CEER) will harmonise the national regulators' work.

## Market Opening - Progress to Date

The gas markets of several continental European countries are already fully open to competition in the way the new directive envisages, (as is that of the UK). In Italy, for example, all consumers have been legally able to choose

their supplier since January 2003, transmission and distribution functions are already legally separated from other activities, and TPA is offered on the basis of a regulated tariff structure. In Austria, Spain, and the Flanders region of Belgium, all gas consumers are also free to choose their supplier, and these regions have also implemented regulated TPA and other competition-enabling changes required by the new directive.

On paper, all German gas consumers have also been free to choose their supplier since 1998. However, in practice, the largest of continental European gas markets is one of the least compliant with the requirements of the new EC directive. Germany is the only EU Member State without a regulator for its gas market. Instead it has relied on self regulation by the gas industry through a system of voluntary codes. These *Verbändevereinbarung* agreements implement a system of TPA to transmission networks that is negotiated rather than regulated and uses a distance related tariff structure that has discouraged competition through its expense and complexity. Much of gas transmission and distribution in Germany remains within the control of vertically integrated gas concerns, and is only separated from gas supply business by unbundling of accounts.

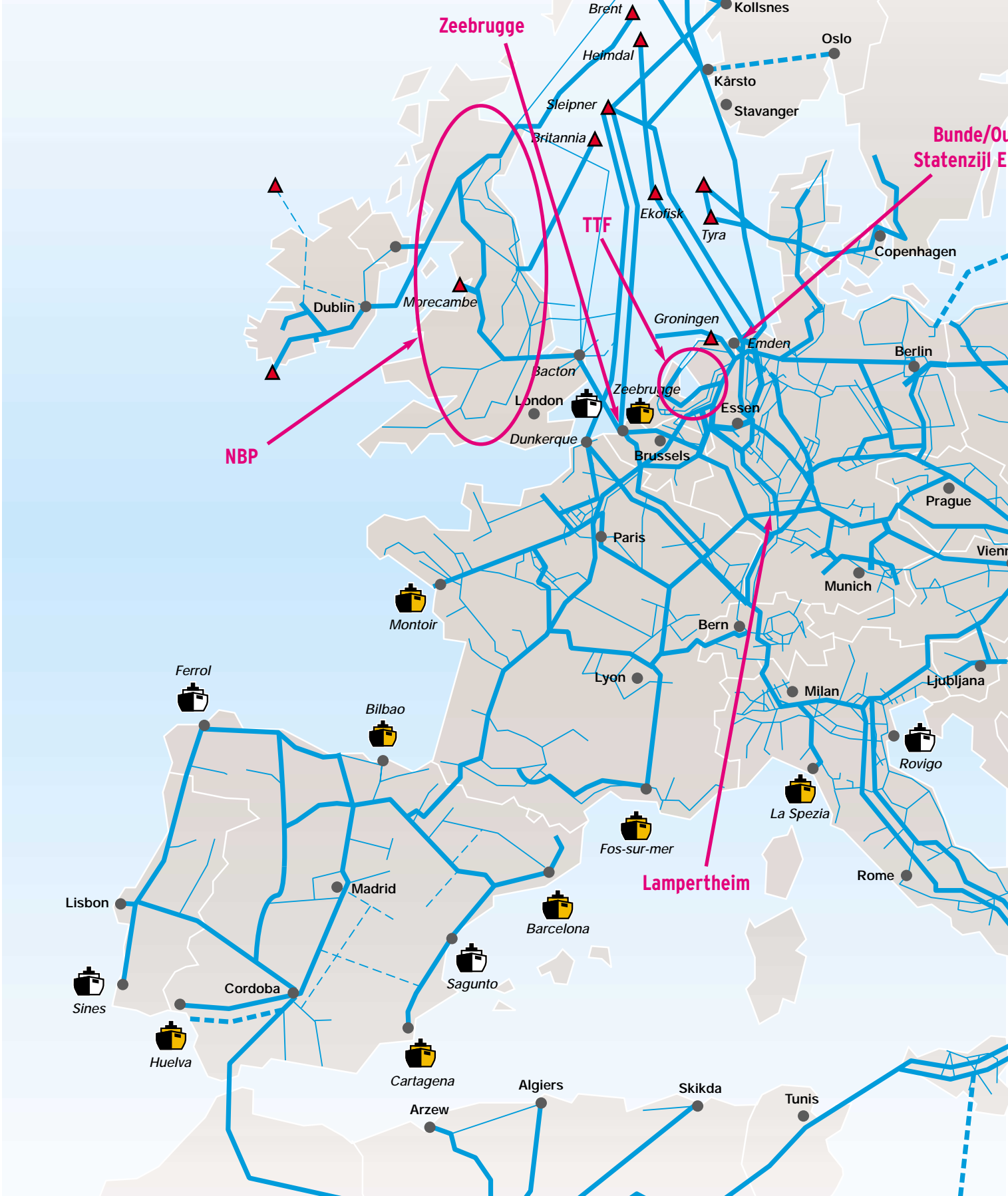
Other countries have gas markets that are partly open. Denmark, Ireland, Luxembourg, The Netherlands and Sweden have all opened their markets to at least the extent envisaged in the original directive, with power generators

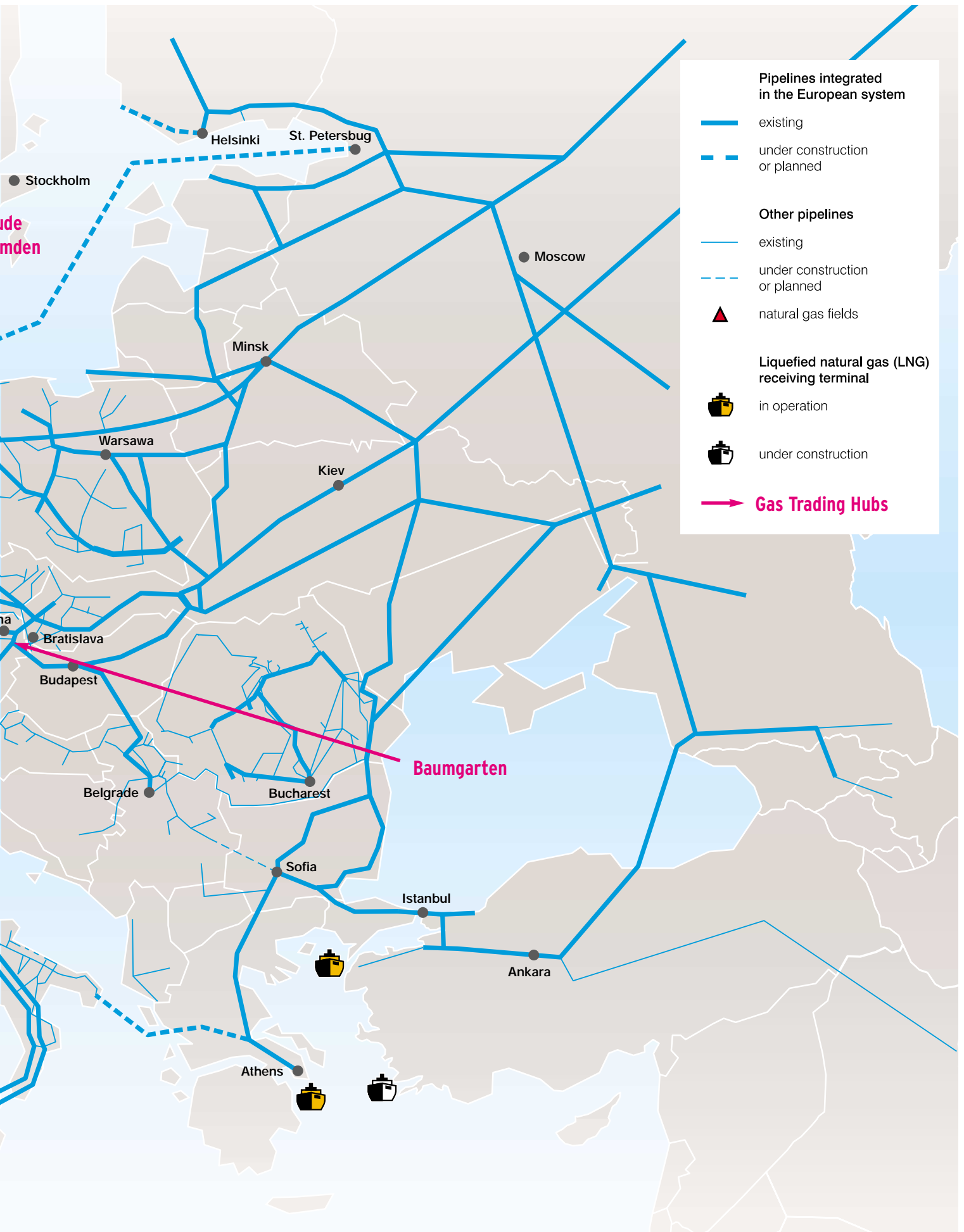
> It was expected that ... there would be a gradual convergence of gas regulations & markets <

and larger industrial consumers able to choose their supplier, but have not yet extended supplier choice to all commercial customers. All these countries have regulated TPA to transmission networks, but only Denmark has implemented the legal separation of transmission and distribution operations that the new directive requires.

The French government delayed incorporating the 1998 gas directive into its national legislation until forced to do so in January 2003 by a European Court of Justice ruling. Despite the lack of a legislative framework, the French TSOs have made some progress towards market opening on their own initiative by providing TPA to their networks and allow-

# European Natural Gas Grid, 2002





ing power generators and large industrial consumers to choose their supplier since August 2000. To date only 37% of the French gas market is open to competition.

Finland, Greece and Portugal have each been granted a derogation from the requirements of the EC Gas Directive until 2006. Greece and Portugal are in the process of developing their natural gas infrastructures and the derogation is intended to encourage investment in development, while neither Greece nor Finland yet have gas transmission connections to any other EU Member State.

Overall, at least 80% of gas consumed in continental Europe is supplied to end-users who are already legally able to choose their supplier. So, if on paper the majority of consumers can choose their suppliers, to what extent has this stimulated competitive supply of gas, and to what extent have new players entered the market?

### Development of Competition

EC benchmarking data shows that the proportion of eligible customers who had actually switched their gas supplier by the end of 2001 ranged from less than 2% in Germany and Austria to 30-50% in The Netherlands, with most other Member States reporting 20-30% switching rates. During 2002 and 2003, competition has undoubtedly continued to pick up, with large consumers and municipal utilities receiving more competitive offers from new suppliers, but the overall level of competitive gas supply activity in continental Europe remains disappointing compared to the UK or to the electricity market.

> ...the overall level of competitive gas supply activity in continental Europe remains disappointing <

The German gas market, with over 700 municipal utilities and local distribution companies and a wealth of industrial gas users, is the biggest European target for new suppliers. But, because of its distance-related, negotiated TPA arrangements, and because Germany has many separate transmission networks owned and operated by different companies, gas transmission by third parties over significant distances is both expensive and administratively difficult. The only company to have presented any significant challenge to the incumbent major suppliers has been Wingas, a partnership between Germany's Wintershall and Russia's Gazprom, which had to construct its own pipeline network to supply gas to industrial consumers and distribution companies. No competition has developed at all for household consumers since they became legally eligible to choose their supplier in 1998.

A major factor in the development of competition in the continental European gas market is the degree to which the wholesale supply of gas is concentrated in the hands of a relatively small number of large players. Germany, where Ruhrgas supplied 57% of total consumption in 2002, has among the lowest wholesale market concentration of any continental European country. Many countries have a single dominant supplier that controls 75% or more of the gas supply. Italy and Spain have both introduced gas release pro-

grammes designed to increase the diversity of suppliers and, in Germany, Ruhrgas is required to sell by auction around 5% of its gas supply between 2003 and 2009 as a condition of its merger with E.ON. In addition, the Italian government has passed legislation to prevent any one company having more than 50% share of the market for gas sales to end users or more than 75% share (tightening to 61% by 2010) of the available gas transmission capacity.

### Hub Trading

As the gas markets become open to new suppliers and as existing suppliers seek to become more flexible in their gas procurement, traders hope to see prices becoming based more on gas-to-gas competition and less on the price of substitute fuels, and to see liquid markets developing at key geographical 'hubs'. This is starting to happen.

At Zeebrugge in Belgium, gas is landed from Norway through the Zeepipe pipeline and from countries such as Algeria and Nigeria in the form of LNG. Zeebrugge is connected by the Interconnector pipeline to the UK network and by high-capacity pipelines to the French, German and Dutch networks. Zeebrugge is therefore a natural hub for gas trading. In 2002, trading volumes at Zeebrugge were equivalent to twice the consumption of the Belgian market, or around 10% of total continental European consumption.

Another key physical hub lies on the German-Dutch border at Bunde/Oude-Statenzijl, where the German transmission networks of Ruhrgas, BEB and Wingas connect with the Dutch transmission network, and where, in addition, Norwegian gas is available through the Norpipe pipeline which terminates nearby at Emden. Here both Dutch and German companies (EuroHub and HubCo) offer hub services, but trading has been sluggish, probably because of the difficulty and high cost of access to the German gas networks. Trading at these hubs has been eclipsed during 2003 by the growth of trading at the Title Transfer Facility (TTF) hub, a virtual hub on the Dutch network, similar to the UK's National Balancing Point (NBP).

Other locations at which trading activity might focus in future include Baumgarten in Austria and Lampertheim in south west Germany. For now, though, Zeebrugge and TTF remain the only centres of any significant trading activity, and trading volumes are still far below those of the UK market.

Looking forward, what factors will be important in achieving the EC's desired outcome of a fully open, competitive single market for natural gas by 2007 and how realistic is this timing?

### What Needs to be Done?

The first step is the transposition into national legislation and the implementation in practice of the new Directive, much of which has to be in place by July 2004. This will require some fast footwork in certain countries.

Germany must appoint a new regulator for both electricity and gas markets by July 2004. The government has committed to meet this tight deadline and will probably expand the role of the existing regulator of post and telecoms (RegTP) to fulfil this requirement. Germany also faces the task of completely redefining the basis for TPA to the gas transmission and distribution networks. The existing negotiated tariff sys-

tem will be replaced by a regulated system of zonal entry-exit tariffs. The number and size of zones is yet to be decided.

No other country faces such a complete change in its gas market arrangements, but nevertheless there is a lot of work to be done elsewhere. The Netherlands operates a hybrid tariff system for network access - TPA is negotiated within the constraints of regulatory rules and published indicative tariffs. Belgium has regulated TPA for transmission of gas within Belgium, but negotiated TPA for gas in transit to other countries. In both cases, a fully regulated system of TPA will have to be adopted.

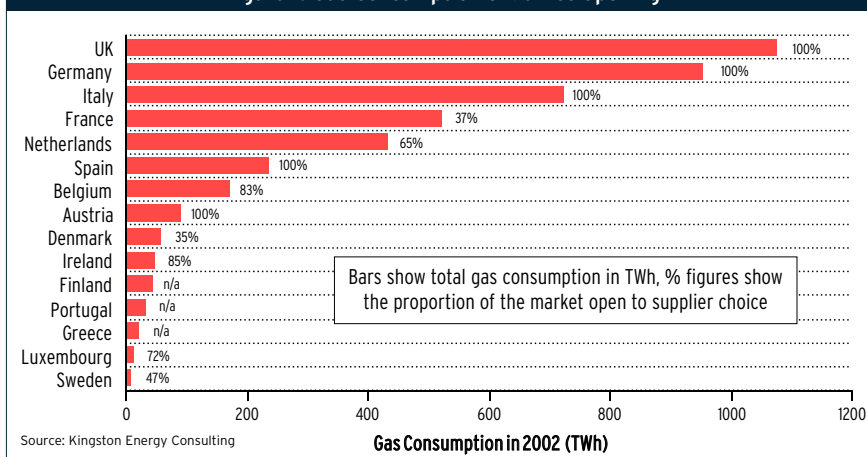
The EC, the regulators, traders and consumer organisations all favour the entry-exit tariff model for TPA to transmission networks. Following clear recommendations from the Madrid Forum on European Gas Regulation, several countries have recently moved from distance-related tariffs to an entry-exit structure. France introduced a zonal entry-exit model in January 2003. The Netherlands switched from a zonal system to a network-wide entry-exit model in January 2003. In November 2002, Belgium adopted a system in which capacity is subscribed to on a point-to-point basis, while actual use is priced according to the volume transmitted irrespective of distance, and will probably adopt an entry-exit model for capacity charges in 2004. All other countries already have entry-exit or postalised tariff models for network access.

### Governments & Regulators

The attitude of national governments to market regulation has clearly had a big influence on the implementation of the EC directives. The most obvious reluctance has been in France, where the government repeatedly delayed implementation of the original directive, and where Gaz de France (which dominates the French market) is still wholly state-owned and unbundling of transmission and supply activities has yet to occur. In the Netherlands, the proposed unbundling of the dominant gas supplier Gasunie has been the subject of much debate and plans to create a separate transport company are currently on hold. In Germany, there has been strong objection in principle to EC and government intervention through direct regulation of the market, but there is also now a realisation that the favoured approach of self-regulation through consensus has failed to create a competitive gas market. However, the German network operators look set to embrace the EC unbundling requirements with reluctance rather than enthusiasm.

The nature and strength of the national regulators has also had an impact on the speed of market development in each country. While some traders and new market entrants are keen to see markets opened to competition, the incumbent network operators and gas suppliers are reluctant to relinquish their competitive advantages any faster than they need to. The regulator thus has an important role in enforcing change. In the Netherlands, the Office of Energy Regulation (DTe) has been very proactive in developing a competitive energy market, but appears to have been fighting a reluctant Gasunie every step of the way. In Belgium, the presence of four separate regulators - one federal and

Figure 1. Gas Consumption & Market Opening



three regional regulators - has led to regional inconsistencies in the speed and depth of liberalisation.

In Germany, in the absence of a regulator, it took two major rounds of negotiations to arrive at the present TPA arrangements, which would-be market entrants still view as strongly favouring the incumbent suppliers. A third round of negotiations broke down irretrievably in April 2003. It seems the new regulator will face a tough task in imposing pro-competitive changes on a reluctant industry.

### Barriers to a Gas Market

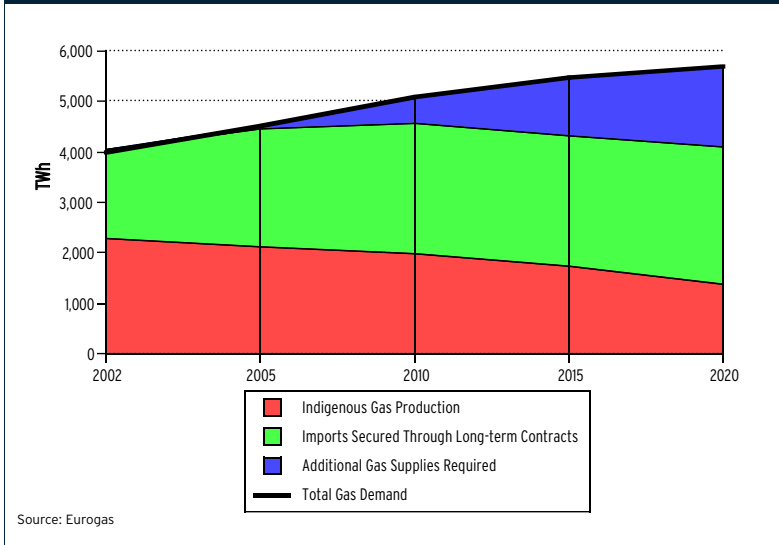
Establishing a suitable legal and regulatory framework is an important prerequisite for the development of a competitive market, but it by no means guarantees that competition will occur. In order to compete, suppliers need to be able to bring gas supplies into a country at a competitive price. They need capacity to be available on cross-border and national pipelines and a workable system for securing that capacity. And they need to be able to access storage and blending facilities.

Natural gas is far from plentiful in continental Europe. Around 75% of continental European gas demand is met through imports and this will grow as consumption increases and domestic production declines. The vast majority of gas is both procured and delivered through long-term contracts, leaving relatively little scope for spot trading. And many key pipelines and border crossing points have most or all of their capacity taken up with these long-term supply agreements, leaving little spare capacity for new suppliers and trading.

Physical constraints exist at various points within the European gas network. For example there is a lack of pipeline and LNG terminal capacity for bringing gas into south-west France. In the Netherlands and some nearby areas of Belgium, France and Germany, household appliances are designed to burn gas of relatively low calorific content (L-gas) produced from onshore gas fields. Gasunie controls the output of the massive Groningen field, giving it a huge advantage in the Dutch market. To compete, other companies need either to obtain a source of L-gas from local production, or to blend it from higher quality imported gas. The availability of access to suitably located gas blending stations is a barrier to competition in this part of Europe.

Storage capacity is also in short supply at key trading areas such as the Dutch-German border. In October, D-Gas (the trading arm of German E.ON) launched a short-term

Figure 2. EU 15 Natural Gas Demand & Sources of Supply



'flexibility' service by linking leased salt cavern storage in Germany directly into the Bunde-Oude hub. Dutch trader Essent recently acquired a share of three mature onshore gas fields in the Netherlands, which it plans to use for storage when they are depleted within the next few years. And Dutch market participants Akzo Nobel, GTS and Nuon announced in September a plan to build a flexible salt cavern storage facility in the Groningen region.

In a fully open, competitive market, the wholesale price of gas would be based on gas-to-gas competition. Currently, the great majority of gas is procured and supplied on long-term con-

tracts that are indexed to the price of petroleum products. But a small number of supply contracts have been indexed against spot market prices at Zeebrugge and the UK NBP, and this is likely to be a growing trend as the liquidity of trading and the reliability of spot prices increase. Zeebrugge is an established market; around the Netherlands and the Dutch/German border and a single market seems likely to emerge out of the TTF, HubCo and EuroHub initiatives. Further liquid markets may develop at key physical pipeline hubs and border crossing points such as Baumgarten in Austria, Lampertheim in southern Germany and at the French/Spanish border if capacity constraints are removed.

In short, everything is moving in the right direction. But there are many barriers to overcome, not least in the legal and practical implementation of the new directive and in creating the right conditions for open, competitive access by new suppliers. Only then can a truly open market emerge in which natural gas is traded as a commodity throughout Europe. But there are encouraging signs that, when the right conditions are created, competition will emerge. And the new gas directive, provided it is taken on board by a previously reluctant France and made to work in Germany, will go a long way to removing some of the highest barriers to competition in two of the largest markets in continental Europe ■

**MARY JACKSON & NIGEL HARRIS** are the authors of  
 Prospex's forthcoming report *European Gas Trading*.

[www.prospex.co.uk](http://www.prospex.co.uk)