The Liberalization of Gas Markets in Europe

On June 22, 1998 all EU Member States unanimously approved Directive 98/30/EC, the so-called Gas Directive, which paved the way for far-reaching changes in the European gas sector and for the establishment of an internal gas market. Five years have elapsed since it was transposed into national law and although markets have started to open up, their rate of progress varies. The next milestone in achieving a fully competitive European market is July 1, 2007, but there are still many obstacles to overcome.

The United States was the first to undertake gas market deregulation when FERC took regulatory action in 1985 and 1992. At the same time, the United Kingdom implemented procedures for opening up to competition that eventually led to full deregulation of the British gas market in 1998. In continental Europe, the transposition of Directive 98/30/EC in August 2000 was a milestone in the gradual yet but radical restructuring of the gas sector. This directive had initially set a mandatory market opening calendar giving the fifteen member countries eight years to open their markets to competition: it specified that the minimum opening rate would rise from 20% in 2000 to 28% in 2003, then to 33% in 2008. Subsequently, a second directive (2003/55/EC) stepped up the pace of liberalization in the move to establish a single European gas market.

Objectives of the Gas Directive

The key objective of the Gas Directive was "to provide fluidity in gas flows and improve security of supply and industrial competitiveness" in Europe. Most of the Member States forming the Europe of Fifteen transposed this directive into national law on August 10, 2000.

The Gas Directive lays down a set of common rules and procedures relating to the organization and functioning of the national gas sector. Its objectives are to:

– Establish a single natural gas market in Europe that is integrated, competitive and regulated at EU level. This objective was stated in the declaration made by the European Council in Lisbon (2000) aiming to make the EU economy the most competitive in the world. In order to create an internal gas market, national markets must be harmonized to some extent and new rules must be adopted to run the gas sector, previously managed at national level.

– Boost the competitiveness of European energy undertakings against international competitors by allowing the market to operate freely.

– Improve the overall structural efficiency of the European gas market and ensure that households and industrial users are free to choose their supplier. Competitive pressure must be such that operators are forced to realize productivity gains and/or decrease their margins, i.e. via economies of scale.

Looking to the long term, the purpose of establishing "gas-gas" competition is to allow a real market price for gas to emerge through the interaction of supply and demand. This implies the development of gas hubs on which adequate volumes of gas are traded in a transparent, fluid manner by different operators and on which benchmark prices emerge. Henry Hub in the United States is the most striking example.

Regulatory Advances Towards Full Market Opening

On June 26, 2003, the European Parliament and the Council adopted Directive 2003/55/EC, which laid down a set of additional common rules for the creation of the internal natural gas market.

This directive, which abrogated Directive 98/30/EC, included new measures intended to:

– Advance legal deadlines for complete opening of national gas markets to July 1, 2004 for all industrial users and to July 1, 2007 for households.
  The public authorities implemented a gradual liberalization program according to a specific schedule, making each Member State responsible for organizing deregulation on its own market. The progress made by individual Member States can be tracked by mapping out theoretical "market opening" based on announcements made by national public authorities. Seven Member States (Austria, Denmark, Germany, Italy, the Netherlands, Spain and the United Kingdom) have exceeded the requirements of Directive 2003/55/CE and fully opened up their respective markets to competition.

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– Reinforce the obligations to keep separate accounts. A new obligation stipulates that, until July 1, 2007, separate accounts must be kept for gas supply operations involving eligible customers and those involving non-eligible customers.

– Further separate transport network management from other gas sector activities.
The directive requires that incumbent operators must ensure that transport operations have a separate legal account from their other activities (one legal entity per activity), effective July 1, 2004 for transport and no later than July 1, 2007 for distribution. The directive did not require a separate legal account for LNG receiving terminals or storage facilities.

– Enable Member States to impose transparent, non-discriminatory public-interest obligations on undertakings operating in the natural gas sector, which may relate to safety, security of supply, regularity, quality and price of supplies, and environmental protection.

– Increase the powers of regulatory authorities, particularly as regards the control of the level of transparency and competition on the market.

Third-Party Access to Essential Infrastructure

To be effective, the liberalization of the European gas sector must offer all operators, whether incumbents or new entrants, the same conditions of network access through impartial, non-discriminatory and transparent management. Obliging the operator to grant Third-Party Access (TPA) to the network under the supervision of an authority responsible for setting network access tariffs is key to creating the conditions for competition. Here, the transport and distribution networks are considered to be natural, regulated monopolies. This entitlement to network access will eventually lead to a situation where all customers can freely choose their supplier.

To ensure non-discriminatory, transparent TPA, traditional operators must separate their transport/distribution operations from their supply operations (unbundling rules) so that competition can develop.

Accordingly, this new directive provides a set of specific rules covering TPA to networks and storage installations. In particular, they contain obligations to:

– Implement a regulated system of TPA to transport and distribution networks as well as LNG receiving installations.
In a regulated TPA system, tariffs are set and published by operators under regulator supervision and in accordance with predetermined tariff standards. Tariffs are applied equally to all suppliers, the purpose being to eliminate discrimination.

– Implement TPA (negotiated or regulated) to storage installations. Access to modulation services and strategic storage functions is recognized as an essential complement to network access, especially for the supply of the commercial and residential sectors, highly exposed to demand fluctuations relative to heating requirements.

The provisions of this directive are applicable to all Member States of the Europe of Twenty Five and took effect on July 1, 2004. Greece, Portugal, Finland, Cyprus and Malta derogate from this directive by virtue of their status as emerging or isolated markets. The Czech Republic benefited from a derogation: the provisions on eligibility did not apply to it until December 31, 2004.

New Market Organization and the Real Status of Market Opening

The implementation of gas-gas competition at national level has already substantially changed the market structure. Indeed, the European markets used to be separated and structured around national operators that often enjoyed a monopoly, as the common model of quasi-vertically integrated, regulated monopoly. Vertical downstream integration gave one player on the domestic market, or a small number of players, a monopoly on import, transport, distribution/storage and supply operations. However, today, it is still premature to say that the gas sector has achieved complete deregulation across the European Union, where different markets have actually opened up to competition to various degrees.

New Market Players

Allowing customers to freely choose their supplier promotes competition between the market players and helps new entrants gain market access.

Today, midstream players (shippers and traders) are positioning themselves on the gas supply chain to handle the exchange of gas in volume between producers and suppliers. Shippers also enable the transfer of transport capacity between transporters and suppliers. Moreover, the current tendency in the commercial strategies adopted by operators, inducing broad horizontal integration and vertical de-integration trends in response to unbundling obligations, has substantially changed the industrial structure of gas markets.

At national level, the liberalized gas market is regulated by an independent authority responsible for undertaking and organizing the implementation of competition. Regulatory authorities supervise the separation of accounts for the different gas industry activities and ensure fair business practices. In particular, they make sure that TPA procedures

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are implemented in accordance with transparent, non-discriminatory criteria.

Actual Market Opening Status

Since July 1, 2004, all industrial and commercial users have been eligible and can freely choose their supplier. However, there is a great discrepancy between the legal market opening rate and the real one. Although it is difficult to evaluate the actual state of competition on a national gas market, given the large number of possible criteria involved, one can make an estimate based on the percentage of eligible customers that have effectively switched suppliers.

In general, one observes that gas market opening is much less advanced in reality than in theory. In addition, the situations of different countries vary considerably:

– The percentage of large users that have actually changed supplier is very high (over 50%) in the United Kingdom, which continues to lead Europe in this respect, as well as in Ireland and Spain.

– The switch rate in France is average for Europe at about 25%.

– In Austria and Germany, this percentage is low (lower than 10%).

– In all of the countries where small customers are already eligible, very few have changed suppliers, except in the United Kingdom and Italy.

The Creation of a Competitive Market: Obstacles and Favorable Conditions

Obstacles to Liberalization

Beyond the reach of EU legislation, real market opening is impeded by a number of obstacles that cannot be only overcome by enacting regulatory texts. The gas sector continues to depend on a number of technical and economic factors specific to Europe and its gas supply situation.

- *Supply is highly concentrated in a small number of producing countries, located outside Europe and in increasingly remote locations*

The main structural characteristic of European gas imports is the lack of competition on the supply side, dominated by State-owned companies from producing countries outside the European Union, such as Statoil, Gazprom and Sonatrach. In 2004, they represented over 45% of European supply.

Table 1
Competition on gas markets

	Eligible market (Bcm)	Legal market opening rate (July 1, 2004)	Real market opening rate	
			Large users	Households
Austria	7	100%	9%	0.5%
Belgium	11	90%	60%*	4%*
Czech Rep.	0	0%	0%	
Denmark	5	100%	30%	< 5%
Estonia	1	95%	20%	
France	30	70%	25%	
Germany	82	100%	7%	< 2%
Hungary	8	69%	5%	
Ireland	3	86%	> 50%	
Italy	62	100%	30%	35%
Latvia	0	0%	0%	
Lithuania	2	70%	0%	
Luxembourg	1	72%	< 5%	
Netherlands	38	100%	30%	2%
Poland	4	34%	0%	
Slovakia	2	34%	0%	
Slovenia	1	91%	0%	
Spain	20	100%	> 50%	5%
Sweden	1	50%	< 5%	
United Kingdom	95	100%	> 50%	47%

* Large users: Flanders 90%, Walloonia 40%,
Households: Flanders only.

Source: European Commission, January 2005 benchmarking report

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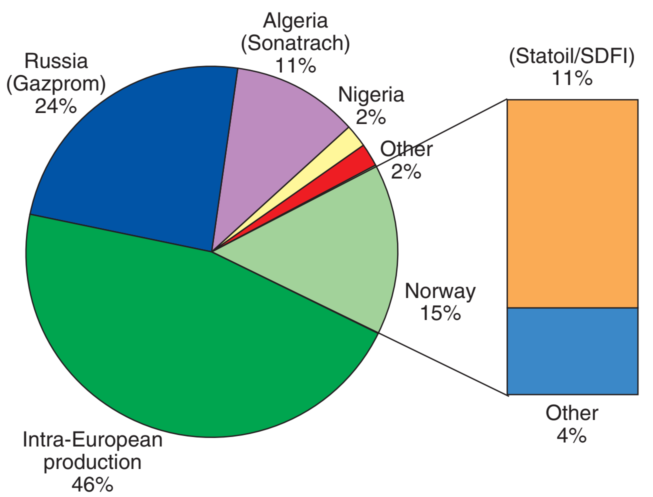
Moreover, this dependence is expected to show a strong increase in the years to come.

Therefore, the deregulation effort is coming up against a major barrier: the European Union is striving to open up its downstream gas market despite the fact that its upstream sector, most of which is not subject to European regulation, represents a high proportion of costs and is still controlled by a small number of market players.

Fig.1 European gas supply in 2004



Source: CEDIGAZ

From this standpoint, the continental European market looks very different from the U.S. and U.K. markets when they first undertook deregulation. The latter were already mature and, enjoyed enough of a supply surplus to avoid having to rely heavily on imports.

- *Rigid Commercial Relationships Limiting Competition Among Suppliers*

In Europe, gas has usually been supplied under long-term import contracts designed to ensure the economic viability of capital investments over time while securing outlets for the gas produced. These long-term contractual relationships established prior to deregulation between producing countries and purchasers are now curtailing possibilities for short-term exchanges and opportunities for new entrants. Outside long-term contracts, sufficient additional quantities of natural gas are not available, which constitutes a major impediment to opening up national markets. As a result, in many instances, a single shipper dominates the market and sells nearly all of the gas available.

Despite substantial fluctuations in the oil or petroleum product prices on which gas prices are indexed, the price of gas sold through long-term supply contracts is usually lower than the price of gas sold on spot markets in winter, which undermines the competitiveness of new operators. Besides, at national level, the high market prices imposed on eligible customers coexist with lower regulated tariffs, resulting in distortions to competition.

The development of competition is hindered not only by the structure of the European gas market but also by regulatory constraints (e.g. a lack of transparency and a lack of harmonization between the markets, especially with respect to tariff setting and mandatory balancing mode ill-suited to certain markets) as well as technical constraints. The latter mainly include:

– differences in gas quality;

– network congestion;

– interconnections between Member States insufficiently developed to support a truly fluid competitive internal market. Capital expenditures in new gas infrastructure currently represents a “missing key” to the emergence of a truly competitive market.

Spot markets are still growing, but signals from short-term markets are not the best indicators for choosing investments geared to long-term profitability. In the years to come, some operators might opt in favor of an underinvestment strategy, which would yield negative growth in transport capacity on the network. Last but not least, other questions must also be considered, especially that of the possible adverse consequences of increasing price volatility on capital spending.

Conditions Favorable to Competition

To achieve competitive national markets, the wholesale and retail markets must be truly accessible to producers (domestic and international), suppliers and traders. This depends not only on the concept of eligibility, but also on a number of regulatory, industrial, technical and commercial factors.

- *Clarification of the European Regulatory and Legislative Framework*

The mission of the public authorities is to clarify the European legislative and regulatory framework and thus improve transparency and visibility for operators. Regulation must provide elements to all of the players in the gas supply chain. In particular, infrastructure operators must have long-term visibility concerning investment conditions in order to maintain the quality of existing networks and ensure their development over the long term.

Opening markets to competition also implies the implementation of a non-discriminatory tarification based on objectives of economic efficiency. The tariff structure must

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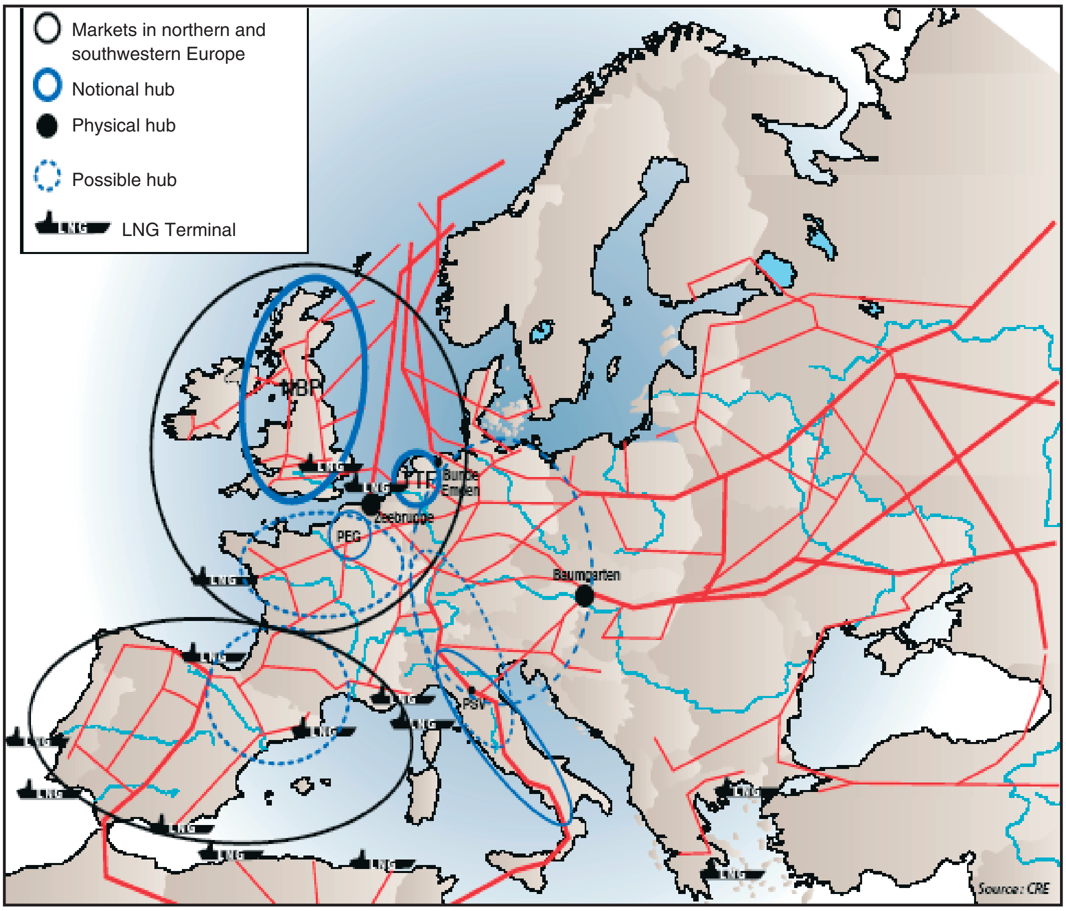
Fig. 2 The marketplaces in Europe



encourage competition and allow the operator to cover the costs of infrastructure development, while presenting adequate mechanisms of remuneration to provide suitable incentives for long-term investment. Generally, it has been found that an "entry/exit" system, for transmission tariffs as well as reserving capacity on a transport network, is more conducive to the development of a competitive market. Such tariffs make it possible to book capacity at entry and exit points by eliminating the identification of physical flows between points within the same tariff zone. Thus, they do not penalize users for distance, and they facilitate trade and the establishment of gas hubs. In Europe, "entry-exit" rates are coming into general use.

- *Weakening the Dominance of Incumbent Operators at National Level*

To facilitate the entry of new gas suppliers onto the market and weaken the dominance of incumbent operators, thereby promoting the development of competition, some countries have introduced gas release programs over a number of years whereby incumbents must divest a portion of their portfolio of long-term contracts. Gas release programs enable new entrants to gain access to the physical resource and win market share from incumbents, even when the latter control nearly all of the imported gas. These procedures are not provided under the Directive, but the European Commission has already imposed a gas release mechanism by way of a compensatory measure in approving certain mergers (e.g. E.ON-Ruhrgas in Germany). In some cases, a gas release arrangement has also been imposed by national legislation (England, Italy, Spain) and by certain regulatory bodies to boost competition in the downstream sector (France, Denmark, Austria). Regulators must check that gas acquired in this way is actually sold in the specified destination country, so as not to undermine the security of supply of the importing country.

- *Providing Sufficient Available Capacity at Interconnection Points*

While the opening of markets to cross-border competition reduces the monopolistic nature of supply, competition

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cannot come into play if transport capacity is inadequate. Operators must provide excess capacity of supply as well as transport, to increase the fluidity of gas flows and competition between suppliers.

- *The Development of Commercial Infrastructure to Boost Trade*

By multiplying the number of operators present on the market, deregulation introduces uncertainty as to the market share held by each operator and translates into a need for trade between a larger number of players on the European market.

Challenging the "destination clauses" : In the past, long-term contracts used to include a "destination clause" prohibiting the importers signing that contract to resell the gas to any other country than the destination country specified in the contract, which virtually eliminated competition between operators. On the grounds that these clauses constituted unfair business practices, the European Commission declared them to be illegal, yet it did so without challenging the principle of the long-term contract. At the end of 2003, Gazprom dropped destination clauses from its supply contracts with ENI, E.ON-Ruhrgas and OMV. Norwegian and Nigerian suppliers have proceeded likewise, and discussions are now underway with Sonatrach.

The key role played by gas hubs: Spot market trading is necessary and growing at gas hubs, the largest of which include the National Balancing Point (NBP) in the United Kingdom, Zeebrugge in Belgium and the Title Transfer Facility (TTF) in the Netherlands. Gas hubs and spot markets have a key role to play in market liberalization, because they provide a direct outlet for new gas resources not supplied under long-term contracts. The presence of wholesalers at hubs enables arbitrage transactions in gas deliveries and the use of flexibility and risk management instruments; this benefits all gas market players, including eligible users, and not only incumbent operators. In addition, the establishment of a European grid network with gas hubs at key nodal points could boost the fluidity of cross-border exchanges and accelerate market opening by facilitating swaps.

Conclusion

Despite the fact that trade between national markets has increased and that vertical integration is less pronounced than in the electricity sector, the European Union has not yet achieved an integrated internal gas market characterized by greater trading fluidity due to active market places.

It is up to the public authorities to lead the process of change whereby the European gas sector will adapt to the new context, while maintaining the confidence of producers and consumers. More generally, governments are facing several tasks at once: they must increase competition on the gas market as well as its competitiveness, guarantee security of supply and public service missions, and ensure compliance with regulatory texts bearing on environmental protection.

Competition must be reconciled with the need to maintain long-term supply/demand balance and set up appropriately structured organizations to ensure that the potential gas supply, whose sources are increasingly remote, can develop sufficiently to cover the strong expected increase in demand.

Armelle Lecarpentier, CEDIGAZ
armelle.lecarpentier@ifp.fr

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