Statistics in focus

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Authors

John GOERTEN
Emmanuel CLEMENT

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Competition indicators in the gas market of the European Union

Highlights

- According to the European Gas directive, all consumers will be free to choose their gas supplier from July 2007 onwards
- Gas markets remain however subject to significant rigidities in many cases, often the result of the continuing lack of integration of national markets. Without cross-border competition, existing enterprises can easily protect their position
- The opening of the market and the level of competition is well developed in the United Kingdom, the Netherlands, Ireland, Italy and Spain
- Most gas retailers were registered in Germany and Italy, followed at a considerable distance by Spain and Poland
- Often the retail market is still dominated by a couple of very large companies, except for Germany, Spain and the Netherlands.

Table 1: Degree of market opening at 1 January 2005

Gas				
	2001	2005*		
Country	Declared market opening	Declared market opening	Eligibility threshold	Size of open market billion m^3
EU-25		57%		360
EU-15	50%	74%		353
BE	59%	90%	Full*	11
CZ	:	0%	Full	0
DK	30%	100%	Full	5
DE	100%	100%	Full	82
EE	:	95%	non HH	1
EL	0%	0%	0	0
ES	72%	100%	Full	20
FR	20%	70%	non HH	28
IE	75%	86%	>0.5 mcm	3
IT	96%	100%	Full	62
LV	:	0%	Full	0
LT	:	70%	>1mcm	2
LU	51%	72%	>15mcm	1
HU	:	69%	non HH	8
NL	45%	100%	Full	38
AT	49%	100%	Full	7
PL	:	34%	>15mcm	4
PT	0%	0%	0	0
SI	:	91%	non HH	1
SK	:	34%	>15mcm	2
FI	0%	0%	0	0
SE	47%	95%	>15mcm	1
UK	100%	100%	Full	95

Note: EU-15/EU-25 are computed as the average of the countries. Except in billion m^3 = sum
*BE -> Full only in Flanders regions
2005*-> Missing countries are shown as 0 (CZ, EL, LV, PT, FI)

Source: DG TREN, on the basis of information provided by Regulators / Member States.

Introduction

The data presented in this publication are essentially based on the results of a questionnaire-based data collection aiming at monitoring competition in the gas market.
The Gas directive 2003/55/EC is the key European legislation to establish the Internal Market for Gas. The directive had to be implemented by 1 July 2004.
From July 2007 at the latest, all consumers will be free to choose their gas supplier. The current supplier will no longer be the only choice.

The infrastructure will be separate from the supply companies and all will use the same pipes. End-consumers will not notice any difference. Regulators have been established in each EU country to ensure that suppliers and network companies operate correctly and provide the services they promise to their customers. All stakeholders regularly meet to discuss how the gas market could be improved (‘Madrid Forum’).

In some Member States, the introduction of competition has been made more difficult by the existence of companies with an excessive degree of market power at national or regional level. The Commission has regularly drawn attention to this issue and some Member States must tackle this problem and further promote cross border exchanges and improve inter-connection. However, it should be borne in mind that those Member States which are poorly integrated with their neighbours and have limited availability of external sources have experienced more difficulty in developing competition.

Hence, the best performance appears to be in markets close to a diverse range of resources such as Belgium, Denmark and the Netherlands. Italy and Spain have also made significant progress during 2004.

Table 1 outlines the state of progress of the liberalisation process and expresses, in %, the degree of market opening. The market opening is defined as the percentage of the total natural gas consumed by those customers that are given the choice of their natural gas supplier.

At the beginning of 2005, full market liberalisation was completed in 10 Member States (although in Belgium, only the Flanders region was concerned). The eligibility threshold shows that for certain countries, the freedom to choose the supplier is still limited to non-household customers. In other countries the threshold is linked to a certain quantity, quantities that are normally not reached by household consumers.

The following pages give an overview of the situation in the individual countries and notably outline the number and importance of both gas producers/importers and gas retailers.

Production and import: number of entities and their relative importance

Most natural gas is delivered from outside the European Union. When looking at the availability of gas in the individual Member States, it appears that in 2003, only Denmark covers its own needs by national production; the United Kingdom approaches ‘self-sufficiency’: 93% of the gas available comes from national production. In the Netherlands, nearly three quarters of the gas consumption was covered by inland production. Poland was able to cover one third of its needs and Germany, Italy, Hungary and Austria around one fifth.

On the other hand, ten Member States covered the totality of their gas needs through imports and a further four the near-totality (Czech Republic, Spain, France and Slovakia).

It does not come as a surprise that the countries with significant own production generally show a high market availability of gas. In absolute terms and expressed in energy units (Petajoule (PJ) - see Methodological Notes), the United Kingdom recorded the highest value with 4 617 PJ in 2003. The Netherlands registered 3 278 PJ, a high value considering the size of the country. Germany stands between these countries with 3 928 PJ despite the fact that over 80% had to be imported.

Table 2: National gas production and imports, by Member State, 2003

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	LV	LT	LU	HU	NL	AT	PL	PT	SI	SK	FI	SE	UK
Total in PJ	689	366	335	3928	32	92	1002	1842	:	2897	65	111	49	569	3278	400	519	123	42	264	190	41	4617
of which, in % of total:																							
National production of natural gas	*0*	*2*	*100*	*19*	*0*	*0*	*1*	*3*	*:*	*18*	*0*	*0*	*0*	*19*	*74*	*21*	*32*	*0*	*0*	*3*	*0*	*0*	*93*
Imports of natural gas	*100*	*98*	*0*	*81*	*100*	*100*	*99*	*97*	*:*	*82*	*100*	*100*	*100*	*81*	*26*	*79*	*68*	*100*	*100*	*97*	*100*	*100*	*7*

Source: Eurostat.

Table 3: Number of entities bringing gas into the country and their relative importance, 2003.

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	LV	LT	LU	HU	NL	AT	PL	PT	SI	SK	FI	SE	UK
Total number of entities bringing gas into the country (production or imports)																							
	4	6	3	27	2	1	12	10	:	23	1	4	2	10	:	5	11	1	2	1	1	1	32
Number of entities dealing with at least 5% of natural gas (imported and produced)																							
	1	1	2	5	2	1	4	1	:	4	1	3	1	4	:	1	1	1	1	1	1	1	6

Source: Eurostat.

Countries fully dependent on gas imports generally displayed lower values, especially Estonia and Slovenia with 32 PJ and 42 PJ respectively. It is recalled that neither Cyprus, nor Malta, produce or use natural gas.

Table 3 outlines the number of entities bringing gas into the respective country, either as a national gas producer or as an importer of gas.

As mentioned in the January 2005 report from the European Commission on the implementation of the Gas and Electricity Internal Market, a key problem at national level is that there is often only a single company bringing almost all the gas to the market. This has an important impact on the potential for competition at supply level. Even if there are several suppliers, competition between them may be rather ineffective if they are all purchasing from the same wholesaler. It is therefore re-emphasised that the availability of external sources (in other words: the degree of network integration with neighbouring countries) notably influences the rapidity of the liberalisation process.

Another constraint to the development of the internal market is the continued existence of long term reservations of gas transmission capacity. The lack of coherence between the charging structures of individual transmission system operators has also prevented competition in some areas. The above mentioned Commission report illustrates this by taking the example of gas transport from Zeebrugge in Belgium to Budapest in Hungary. Such a transport would require the use of at least five different networks; the complexity linked to the calculation of the charges would constitute a serious disincentive to any potential network user.

Looking at Table 3 reveals that the United Kingdom, Germany and Italy registered 32, 27 and 23 enterprises respectively. As shown in Table 1, these three countries have reached full market liberalisation.

On the other hand, a single enterprise remained responsible for production and import in Greece, Latvia, Portugal, Slovakia, Finland and Sweden, recalling the situation of a state monopoly. In these countries, the level of competition is not developed or not (yet) functioning.

Table 3 also shows the number of enterprises that deal with at least 5% of a country's total gas volume. The survey revealed that in 2003, 13 countries counted only one major enterprise. Spain, Italy and Hungary registered 4 companies with significant market shares, Germany 5 and the United Kingdom 6. The latter country is often considered to feature a mature competitive structure.

Natural gas trade: balance negative for all, except Denmark, the Netherlands and the United Kingdom

Table 4: Imports and Exports of natural gas, in TJ (GCV) – 2003

	Imports	Exports	Balance
BE	689 396	28 876	-660 520
CZ	359 693	1 908	-357 785
DK	0	120 692	120 692
DE	3 187 328	282 769	-2 904 559
EE	31 635	0	-31 635
EL	92 484	0	-92 484
ES	992 448	0	-992 448
FR	1 788 025	38 937	-1 749 088
IE	:	:	:
IT	2 367 686	2 210	-2 365 476
LV	65 403	0	-65 403
LT	110 900	0	-110 900
LU	49 498	0	-49 498
HU	462 396	0	-462 396
NL	849 263	1 603 074	753 811
AT	317 283	40 567	-276 716
PL	350 607	1 767	-348 840
PT	122 992	0	-122 992
SI	41 982	0	-41 982
SK	256 076	0	-256 076
FI	190 004	0	-190 004
SE	37 308	0	-37 308
UK	310 675	637 337	326 662

Source: Eurostat.

As mentioned earlier, most gas is delivered from outside the European Union. In 19 out of 22 Member States (disregarding Ireland which did not supply data and Cyprus and Malta which do not dispose of a natural gas network) the gas balance was negative in 2003.

The main importer of natural gas was Germany with a quantity equivalent to close to 3.2 million TJ followed by Italy (2.4 million TJ) and France (1.8 million TJ.
Germany imported most of it's natural gas from Russia (share in total imports of 44%), from Norway (share of 31%) and from the Netherlands (share of 20%). Italy obtained most of its gas from Algeria (share in total imports of 38%), Russia (31%) and Norway (12%). The main three countries supplying natural gas to France were Norway (30%), Russia (24%) and Algeria (22%).

For the natural gas trade balance, Denmark, the Netherlands and the United Kingdom were the only countries to generate a surplus. In the case of the Netherlands, this surplus was substantial (753 000 TJ).

The Netherlands also appeared as the largest exporter of natural gas with 1.6 million TJ sold abroad. Main destination countries for Dutch natural gas were Germany (45% of total Dutch gas exports), Belgium (18%) and Italy (18%).

Compared to the Netherlands, substantially less was exported by the United Kingdom (637 000 TJ). Three quarters of UK gas exports went to Belgium, 23 % went to Ireland and the remaining 2% to the Netherlands.

Denmark, the third country with a positive gas trade balance and the only country not to import any natural gas, exported an equivalent of nearly 121 000 TJ. These exports were split between only two countries: Germany obtained 66% and Sweden the remaining 34%.

In absolute quantities, Germany – with an equivalent of close to 283 000 TJ – exported more natural gas than Denmark but details on the main destination countries were not supplied.

For the time being, import capacity into the European Union is considered to be more than adequate to serve demand. As long as capacity is available, there are already strong incentives for producing countries and EU suppliers to conclude contracts to serve increasing gas demand.

Currently, there are few very specific measures being implemented at a general level. In the medium term, a number of projects, particularly for LNG (Liquefied Natural Gas) are either in progress or being considered. It is expected that such investments will be forthcoming without specific support measures.

Retailing: a high number of retailers does not necessarily mean a high degree of competition

By July 2007, all customers should become eligible customers having the possibility to choose the most attractive gas supplier. In this context, it is important that the opening of the market provides customers with the same degree of reliability regarding gas provision and at least the same degree of transparency and comprehensibility relating to the way they are charged for this service. An informed choice is thus of prime importance.

Some households and small businesses have expressed the perception that this informed customer choice is often not possible as price comparisons are either not available or difficult to understand. Improvements in this issue are required and industry and regulators need to ensure that meaningful information on prices and services is available in an objective and transparent manner.

Table 5 shows the total number of gas retailers in the various Member States in 2003. It is recalled that a gas producer (or importer – see Table 2) does not necessarily have to be a retailer. Most retailers can be found in Germany; with 701 enterprises they outnumber the number of retailers in Italy (412) by a large margin. However, only a single German enterprise has a market share of at least 5% of the total quantity of gas supplied at national level, whereas in Italy, five enterprises responded to this criterion.

Spain and Poland registered 43 and 40 retailers respectively. Significant market shares were held by 3 (Spain) and 7 (Poland) companies.

Between 20 and 30 retailing enterprises were registered in 5 countries: Belgium, the Netherlands, Austria, Finland and the United Kingdom. In these countries major companies were between 3 and 5, except for Finland, where only a single company was above the threshold of 5% market share.

In Greece, Latvia and Slovakia, there was only a single retailer.

In general, it should be kept in mind that a high number of retailers and a relatively high number of enterprises that hold at least 5% of the total quantity distributed on the national market does not necessarily mean that there is a certain degree of competition in the country. The gas market can be split by a number of regional distributors where the customer does not have the choice of a supplier. As mentioned in the introduction, competition can only start when the gas pipe network is completely separated from the gas supplier.

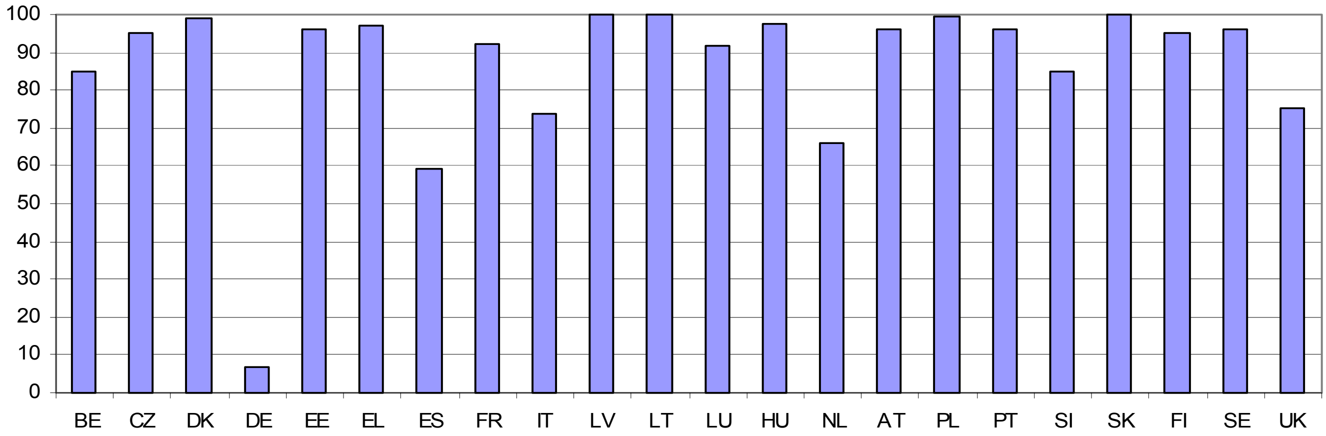
Table 5: Retailing: number of gas suppliers to final customers, 2003

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	LV	LT
Total number of suppliers	27	14	4	701	14	1	43	31	:	412	1	7
Suppliers having a share of at least 5% of the total	3	7	4	1	1	1	3	2	:	5	1	3

	LU	HU	NL	AT	PL	PT	SI	SK	FI	SE	UK
Total number of suppliers	6	14	24	29	40	10	14	1	27	7	23
Suppliers having a share of at least 5% of the total	3	7	4	3	7	4	2	1	1	5	5

Source: Eurostat.

Graph 1: Aggregated market share of suppliers selling at least 5% of total gas consumed, 2003 (%)



Source: Eurostat.

Closely linked to the information presented on the previous page, Graph 1 shows the cumulated market share of the major companies, i.e. the companies that hold at least 5% of the national gas market.

For a good understanding, the following example is given. Italy registered 412 gas retailers in 2003, 5 of which have a market share of more than 5% (from Table 5). These 5 major Italian gas retailers together were responsible for 74% of the total quantity distributed on the Italian market. The 407 remaining retailers thus shared the remaining 26% of the market.

In Spain, the 3 main gas retailers took a stake of 59%. The remaining 40 enterprises distributed the remaining 41%. A similar situation occurred in the Netherlands, where the cumulated share of the four major enterprises amounted to 66%. The 20 smaller gas retailers were responsible for 34% of the total volume distributed in the Netherlands in 2003.

18 smaller enterprises distributed 25% of the gas in the United Kingdom and 24 Belgian enterprises did so for 15% of the Belgian gas.

A particular situation occurs in Germany, where 701 gas retailers were registered, often serving local or regional markets. Only one enterprise has a market share of over 5%, and this enterprise distributed 7% of the total gas consumed.

Table 6: Supplier switching – 2003

	Households		Non-household customers	
	% of consumers	Volume in TJ	% of consumers	Volume in TJ
CZ	0	0	0	0
EL	0	0	0	0
FR	0	0	15	90 000
LT	:	:	0	0
LU	0	0	:	:
AT	0.9	438	0.3	21 919
SI	:	:	0	0
SE	:	:	0	0
UK	15	208 432	:	:

Source: Eurostat.

In all other countries for which data are available, the 'weight' of the enterprises having at least a 5% market share was over 90%.

In this context, it should be recalled that the term 'smaller enterprises' is only relative. Depending on the total volume distributed, smaller companies can distribute considerable amounts of gas. It was mentioned that in 2003, 20 Dutch gas retailers were responsible for 34% of the total quantity distributed in that country. When considering that the Dutch market accounts for 3 278 168 TJ, each of these 20 enterprises distributed an average of 55 729 TJ. On the Italian market, 407 retailers distribute 26% of the Italian gas (corresponding to 753 143 TJ). Each of these companies is then responsible for a quantity corresponding to 1851 TJ. This illustrates the highly individual situation of the retailers in the various countries.

Consistent information on effective supplier switching by end users is not available for many Member States. Apart from the countries that have achieved full gas market liberalisation (see Table 1 on the cover page), the market opening in many countries is still limited to non-household consumers.

In the United Kingdom, 15% of all domestic customers performed a gas retailer change in 2003, corresponding to a gas volume supplied of nearly 210 thousand TJ.

In France, 15% of all non-household customers decided to switch the gas-supplying enterprise. Accordingly, an equivalent of 90 thousand TJ of gas was supplied through a different enterprise than the year before.

➢ ESSENTIAL INFORMATION – METHODOLOGICAL NOTES

Country codes
EU: European Union, including the 25 Member States (EU-25): Belgium (BE), the Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Greece (EL), Spain (ES), France (FR), Ireland (IE), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), the Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Slovenia (SI), Slovakia (SK), inland (FI), Sweden (SE) and the United Kingdom (UK).

EU-15: European Union before the enlargement of May 2004 including BE, DK, DE, EL, ES, FR, IE, IT, LU, NL, AT, PT, FI, SE, and UK.

Symbols and abbreviations

":" non available or confidential.
"-" nil or not applicable.
TJ: terajoule, or one joule x 10^{12}
PJ: Petajoule, or one joule x 10^{15}
GCV: Gross Calorific Value:

Definitions

Natural Gas: comprises gases, occurring in underground deposits, whether liquefied or gaseous, consisting mainly of methane. It includes both "non-associated" gas originating from fields producing hydrocarbons only in gaseous form, and "associated" gas produced in association with crude oil as well as methane recovered from coal mines (colliery gas).

LNG: Liquefied Natural Gas; natural gas cooled to approximately -160°C under atmospheric pressure condenses to its liquid form called LNG. LNG is odourless, colourless, non-corrosive and non-toxic.

Imports and Exports: Amounts of gas are considered as imported or exported when they have crossed the political boundaries of a country, whether customs clearance has been taken place or not.

Data sources
The source of all figures presented in this publication (except Table 1 on the cover page) is based on a questionnaire-survey launched by Eurostat and reflects the state of data availability as of 25 April 2005.

It is recalled that the figures are collected on a voluntary basis. Ireland did not supply information. Also, the reader is attended on the fact that the data in this publication might show differences with similar data published by other national and/or international authorities.

Table 1 is based on information obtained from Directorate General Transport and Energy and is based on information provided by Regulators / Member States.

Data as presented in this publication are not included in Eurostat's statistical reference database NewCronos.

Further information:

Databases

(see page 7, Methodological notes, Data sources)

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