

**Report for the European Commission  
Directorate General for Transport and Energy  
to determine changes after opening of the  
Gas Market in August 2000  
Volume II: Country reports**

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# 1. INTRODUCTION

DRI•WEFA<sup>1</sup> was commissioned by the European Commission to undertake a study to determine what changes had taken place over an eight-month period following the official opening of the European Gas Market in August 2000 and also to recommend how monitoring of the process should be undertaken in the future.

A particular requirement of the study was to involve the gas industry as widely as possible. In order to satisfy this and to collect information on the changes we issued over 200 questionnaires to five different sectors of the industry (producers, incumbent transmission companies, distributors, industry and power companies). The response rate at 60% is very high for such surveys. Many companies supplied extremely rich and detailed information, especially those who were dissatisfied with the regime in the countries they sought to enter. Whilst there is the risk of some resulting bias, this will serve to underline areas where attention is needed. It should be borne in mind that in some markets developments are rapid and by the time this report is published competition will have made more progress and some of the deficiencies of regulatory regimes may have been addressed.

Throughout the study we worked in close conjunction with the Commission. They reviewed the questionnaires together with the proposed range of recipients. The contents of this study are based on the replies received, together with other information in the public domain and a number of meetings held with the larger players and regulators. The following chart and table shows the number of questionnaires returned by country and market sector.

The report is split in 2 volumes. This second volume presents key results from the research on a country-by-country basis, whilst the first volume presents key conclusions and recommendations from the work.

We would like to thank all the people involved in this study and who devoted a significant amount of time to this important issue, in particular the 116 respondents to the questionnaires, the representatives from DG TREN and the people who spent a considerable amount of time reviewing and fine tuning the results.

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<sup>1</sup> In May 2001 WEFA was merged with DRI to form DRI•WEFA. WEFA had been founded by a Nobel Prizewinner in 1963 and DRI•WEFA, founded in 1961, was a division of Standard & Poors. The company is now a privately owned economic and energy consultancy with over 500 staff operating worldwide.

## 2. AUSTRIA

- Competition had begun before August 2000
- Only limited additional switching has since occurred
- The TPA provisions are proving very restrictive

### 2.1 REMOVAL OF BARRIERS

#### 2.1.1 Regulatory provisions

##### 2.1.1.1 *State of legislative preparation*

Following discussions and consultations of interested parties on the basis of earlier drafts in 1999, a revised draft law was adopted by the new Austrian government in March 2000 and discussed by the Parliament subsequently.

The Austrian Energy Liberalization Act was published in the Federal Law Gazette on December 1, 2000. This framework legislation includes the Gas Act, which regulates the activities of gas companies with retroactive effect to August 10, 2000.

The Gas Act governs activities related to the transport and sale of gas, and network access by customers, as well as the construction, extension and expansion, modification and operation of gas pipelines.

The guiding principles behind the Act are equal treatment, transparency and cost-based tariffs. For this reason natural gas companies are obliged to unbundled and maintain separate accounts for their long-distance transportation, distribution, storage and trading activities.

##### 2.1.1.2 *Opening-up of the market*

The Energy Liberalization Act provides for phased market liberalization. Since August 10, 2000, operators of gas-fired power plants, end-users with an annual consumption of more than 25 mcm and natural gas companies have been free to choose their supplier. In a second stage, effective from October 1, 2002, all customers will have this freedom.

This right can only be effectively exercised if it is also possible to transport the gas to the place of consumption (right of network access).

##### 2.1.1.3 *Organization of access to the system*

Austria has chosen the way of a negotiated Third Party Access (TPA) regime. The Austrian Gas Act, Gaswirtschaftsgesetz (GWG), implements the EU Directive and sets the general legal framework for TPA regime in Austria. Beyond that no specific regulations exist.

Network operators are obliged to conclude network utilization agreements with their customers on the basis of equal treatment and cost-based charges. Network operators must draw up general network terms and conditions (GNTC), subject to approval by the regulator. The GNTC lays down the basic technical and commercial conditions for access to the network. Network operators must

make their GNTC available for inspection; the same applies to the principles underlying pricing and billing.

Systems of access to the gas system and related publication requirements have been published (in Feb 2001) by OMV and are available on the OMV website. Regulated access based on general conditions and pricing structures. Access charges are based on a cost-plus approach (including a reasonable profit) and subject to European benchmarking.

Under discussion is the establishment of an independent grid operator.

#### **2.1.1.4 Unbundling (transparency of accounts of integrated undertakings in the sector)**

Unbundling of internal accounts required by law. The main incumbent OMV has created separate accounting procedures for the transport and supply divisions. The divisions have been unbundled from an organizational standpoint.

#### **2.1.1.5 Regulatory system**

The sectoral regulator (within the Minister of Economic Affairs) has been set up only very recently.

#### **2.1.1.6 PSO**

Obligation to connect customers or to supply, in case access to the network is denied.

### **2.1.2 Other entry barriers**

The timeframe is too short to notice major changes on the Austrian gas market since the liberalization process has been initiated, the major reason being that the law implementing the European directive has been passed and published only at the end of last year. The regulator was only nominated in February 2001. Subsequent changes (tariff and grid access conditions publications, nomination of a regulatory authority,...) have happened only very recently.

The most important entry barrier is the difficulty for new entrants to get access to the Austrian grid. This difficulty stems from congestion problems on entry points and from the importance of long term contracts held by the main incumbent, which make it difficult to free capacity. Moreover delays in the administrative processing of requests formulated by companies interested in accessing the grid prevent new comers from entering the market.

It is helpful to explain how gas is imported in Austria. OMV imports gas in conjunction with Austria Ferngas, but based on the requirements of the individual Laender companies. We understand that the import contracts are jointly signed by OMV and the respective Laender companies, which base their requirements on the volumes they are certain of being able to sell.

As long as this structure and basis for importing remains, it will be difficult for new suppliers to make much headway.

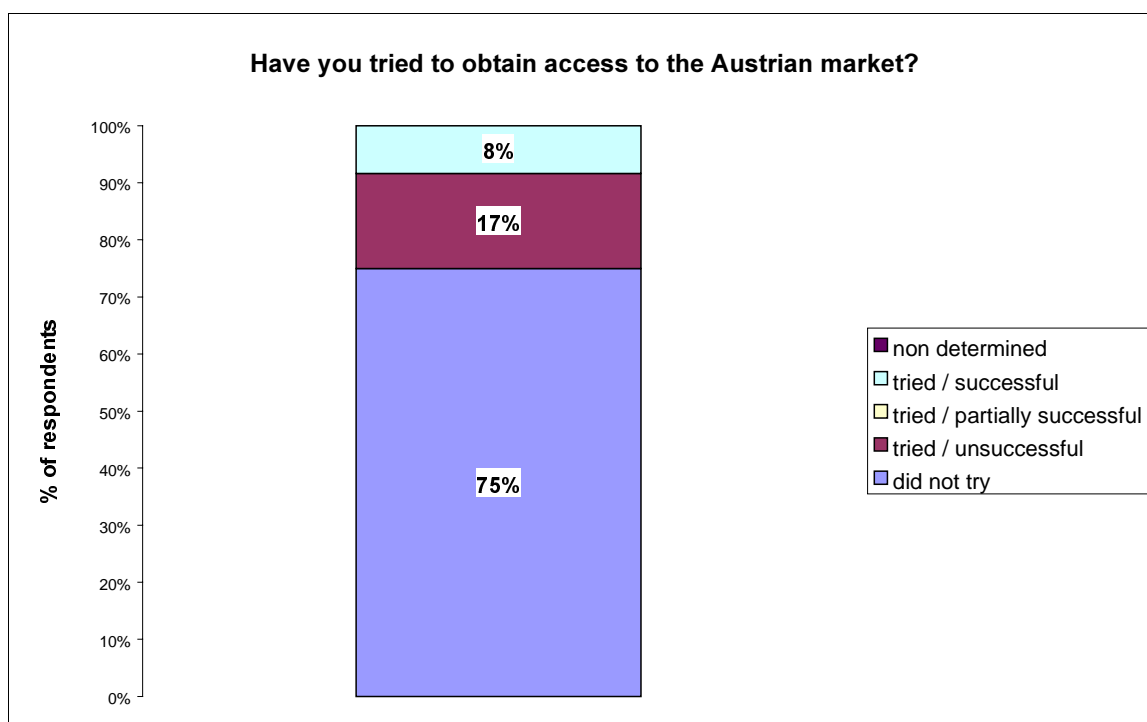
Similarly access to OMV's storage capacity is parcelled out amongst the Laender companies according to their needs and through bilateral contracts. Even though Austria is principally dependent upon the high load factor Russian gas its storage needs are well covered in the Viennese basin. An attempt around 1996/7 to increase the storage capacity (the project

Baumgarten) conspicuously failed because of lack of interest both within Austria and other European companies who were invited to participate.

## 2.2 EMERGENCE OF NEW PLAYERS AND THEIR STRATEGIES

### 2.2.1 New players penetration level on the Austrian market: key results

Ruhrgas is the first challenger under the initial phase of Austrian gas deregulation. Apart from Ruhrgas no other challengers emerge so far. Out of the sample of 12 potential new gas suppliers on the Austrian market we interviewed for the study, ~ 75% never tried to access the Austrian grid and only one out of these twelve candidates has been successful.



### 2.2.2 New players' apparent strategies

#### 2.2.2.1 Ruhrgas

Ruhrgas has given notice it intends to stir up the Austrian gas market and double its market share to 14% by 2003. It is not waiting for the next stage of liberalisation to approach smaller potential customers, that is, those using less than 25 mcm/yr and scheduled to be given supplier choice as from 1 October 2002.

Ruhrgas, on the basis of its full gas concession<sup>2</sup>, assumes that if it can negotiate delivery rights then it can acquire customers at any supply level, regardless of the market liberalisation

<sup>2</sup> Ruhrgas Austria is indeed a domestic concern domiciled in Vienna and with a full domestic concession.

restrictions and dates. Ruhrgas Austria has signed deals with 24 of the country's major users since it began a sales drive last August.

Latest addition to the list is the Gmund ceramics and pottery plant in Upper Austria, where the customer expects to save some 30% in gas costs for its 0.3 mcm annual requirement by switching from Oberösterreichische Ferngas (OÖF) to Ruhrgas as supplier. Ruhrgas Austria now plans to target both the middle-level industrial market segment, which together with households makes up about 34% of annual demand of some 6 bcm, and the municipal utilities of the 15 cities with gas distribution.

Salzburg and Linz utilities are already Ruhrgas customers. Ruhrgas Austria general director Heinz-Peter Hochrainer sees a combination of price and customer service as a winning combination possible for the German concern because of its size. Otherwise, "the Austrian market [itself] is not large enough to allow optimal service orientation and at the same time cost-efficient organisation." An international concern [Ruhrgas] has the potential synergy to achieve both goals, Hochrainer contends.

Currently Ruhrgas' Austrian problems centre on transmission. The Gmund supply contract has been under discussion with OÖF for over nine months and is still not yet definitively resolved. If problems persist, Hochrainer suggests Ruhrgas-Austria will apply to the courts to achieve access to distribution pipelines.

Additionally Ruhrgas is interested in increasing its market presence through acquisition of regional gas distributors. Example of such interest is the letter of intent filed last October by the German concern, together with Bayernwerk parent E.On, when offers were called for a 25-49% buy-in to Energie AG, Upper Austrian utility. For Ruhrgas the attraction is Energie AG's 50% holding in OÖF/Oberösterreichische Ferngas, the country's second largest regional gas distributor with annual sales of about 1.9 bcm. This initiative did not come through as the Upper Austrian government effectively cancelled the privatisation initiative and rejected the two bids received.

It should be noted that E.On holds capital share in Rohöl-Aufsuchung AG (a small gas production and storage company in NW Austria) since 1996.

The new entrants are exclusively German.

### **2.2.2.2 Other changes in market structure**

New companies have been set up lately in Austria in order to seize the benefits of the liberalization process. Gas-alive has been created 6 months ago by a former OMV director and acts as a trader between potential suppliers and large industrial consumers (paper industry, steel,...). It intends to outsource the gas purchasing function from major gas buyers and represents already a gas purchasing power of 1 bcm.

## **2.3 EXPERIENCE OF ACCESSING GRID**

### **2.3.1 Extent of TPA by country**

As said before no new players other than Ruhrgas has succeeded in accessing the grid. OMV estimates it has not lost any customers since liberalisation but had previously lost (before August 2000) 0.4 bcm. Therefore the volume of TPA gas carried by the network operator can be estimated at 5% of total volume carried. It is more or less consistent with the market share assessment of Ruhrgas on the Austrian market.

Main incumbent	Total estimated volume sold (Austria)	Unit	Volume of TPA gas carried (%)
OMV	8	bcm	5%

We sought the opinions of operators in negotiating and accessing the grids. Their responses show there has been little change since August 2000:

### Summary of respondents' view on accessing the grid

<b>Access to the Austrian Grid</b>	<b>2</b>	<ul style="list-style-type: none"> <li>- A main incumbent from a neighbouring country has made significant inroads in Austria (currently has a 7% market share)</li> <li>- Difficulties for traders to access grid for transiting into Italy</li> <li>- Tariffs, network access conditions published early 2001. Up to then case by case negotiation</li> </ul>
<b>Balancing regime</b>	<b>2</b>	- Tariffs, network access conditions published early 2001. Up to then case by case negotiation
<b>Access to storage</b>	<b>2</b>	- The Austrian Gas Act does not cover storage

<b>Legend:</b>	<b>4</b> Favorable but not perfect	<b>3</b> Rather Favorable	<b>2</b> Unfavorable	<b>1</b> Major obstacle / strong complaints
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We have reproduced next page an abstract of potential newcomers' answers.

### **Access to the Austrian grid: Quotes from prospective grid users**

#### **Access into the Austrian grid**

*Ruhrgas Austria's plans for a marketing initiative have received a setback from two of Austria's largest gas distributors. Upper Austria's Oberösterreichische Ferngas has refused to deliver gas to a new Ruhrgas customer, arguing customers may not be pooled to achieve the 25 mcm consumption necessary to allow supplier choice before full deregulation on 1 October 2002. Steirische Ferngas in Styria contends that a separate Ruhrgas request for delivery was not in order legally.*

*German gas giant Ruhrgas, the first challenger under the initial phase of Austrian gas deregulation, counters that its full gas concession gives it a different status from another supplier which might simply want to sell gas. Not surprisingly, Ruhrgas sees the refusals as blockades against market opening.*

*The German concern overcame some earlier problems by threatening to build pipelines across the border but now the firm is negotiating with customers more distant from possible supply points where a direct feed is not feasible. Ruhrgas management says it will go to court if no delivery agreement is possible with the two regional distributors and will ask for damages covering the deals hindered by the regional utilities.*

*To date, there has been little competitive activity in Austria. One reason for this is the inability to secure network access.*

#### **Access for transit**

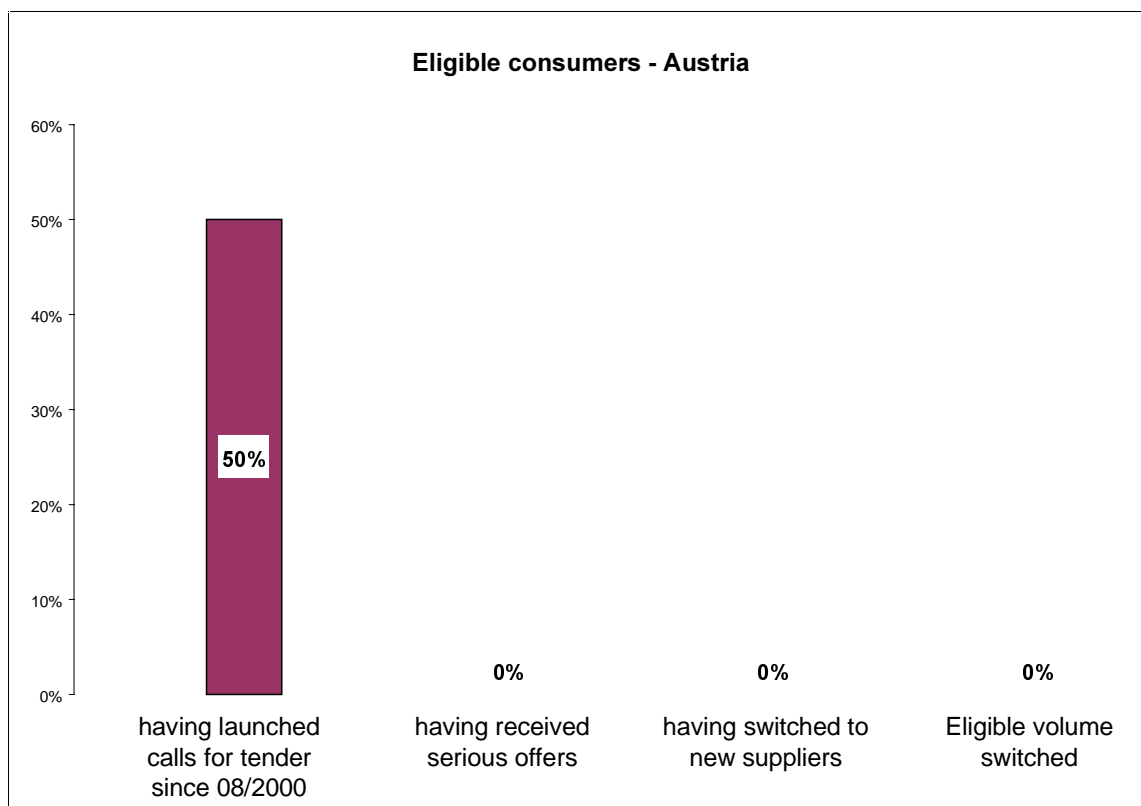
*The Austrian law has appointed OMV as the main high-pressure network operator. We have been requesting access to a particular OMV pipeline. Access was first requested in October 2000. We were informed that the capacity was held by a company registered in Bermuda until January 2001 to be informed – by this Bermuda based company – that there was no access on the pipelines of OMV.*

### **2.3.2 Extent to which eligible buyers have switched suppliers**

We sought information on the number of offers made to large buyers (including power companies and LDC for the share of gas dedicated to their eligible customers) together with an indication of the switching, which has actually taken place.

A majority of large buyers have already launched calls for tenders to potential new suppliers. In the results presented below please note that the eligible clients having answered our survey represent a volume of 1.1 bcm, or 28 % of the total eligible volume in Austria. Despite this good percentage, it should be noted that results understate the reality, as in our sample no clients have switched to new suppliers. However we know that OMV transport division has signed contracts with third party operators and we have already mentioned the inroads made by Ruhrgas in Austria.

**Extent to which eligible buyers in sample have switched suppliers<sup>3</sup>**



Large buyers have had many difficulties securing new sources of gas supply.

We have reproduced below an abstract of the reasons for such difficulties:

**Why Austrian gas buyers did not switch to new gas suppliers: quotes**

**Large buyers are locked into medium term contracts**

*The existing contract with our supplier, OÖ Ferngas, expires in 2004. Changes to new suppliers are therefore not possible (large buyer with a domestic gas consumption of 116 mns cubic meters per year).*

*We have not launched any bids concerning our gas purchases as we are locked into long term contracts with our sole supplier, OÖ Ferngas (large buyer with a domestic gas consumption of 42 mns cubic meters per year).*

*We have launched bids for our natural gas purchases and contacted Ruhrgas, Bayernwerk, Gasunie, British Gas and Norsk Hydro but have not switched yet as our contract with OÖ Ferngas expires end of 2001 (large buyer with a domestic gas consumption of 150 mcm per year).*

<sup>3</sup> Source: interviews. Answers in % of respondents for first three bars. In % of eligible volume switched for 4<sup>th</sup> bar. The sample of interviewed large buyers represents ~28 % of gas eligible volume in Austria

### **Why Austrian gas buyers did not switch to new gas suppliers: quotes (cont'd)**

#### **Impossibility to get alternative offers**

*We have done a lot of work to get offers for gas supply and have sent our request to 23 gas suppliers in 7 EU-Countries in November 2000. Volume of gas required for our mills is 210 mcm/year. We pooled our request with another Austrian Company for which gas requirements reach 470 mcm/year.*

*We could not get any offer, which means the gas market does not work. The same situation happened also for other Austrian companies.*

#### **Despite unbundling of activities by the main incumbent, access to capacity by newcomers exists only in theory**

*Main incumbent has unbundled its activities but has kept all the capacity for its supply division.*

## **2.4 CHANGES RESULTING FROM LIBERALIZATION**

As previously mentioned, it is too early to observe significant changes in Austria. However we notice that:

- TPA tariffs and access conditions are clear and easily available.
- The network's map is available and very clear as well as are OMV's projects to increase transport capacity in order to meet constant growth in gas demand from domestic and foreign customers. OMV is building a third pipeline for which construction will be phased, and will take the form of independently operable sections; completion is scheduled for 2006.
- Progress has been made in the separation of activities of main incumbents.
- Ruhrgas has increased its penetration on the Austrian market.
- New trading companies have emerged in Austria (Gas-alive).

Changes expected in the near term have to do with the reduction of entry barriers mentioned above such as:

- Increased competition and easier access for new players.
- Increased pressure on main incumbents from current and future new players (Ruhrgas, other newcomers).
- Access to storage facilities for all players.
- Price reductions, shortening of contract length.
- The development of a regular information system on items such as transport and storage capacities availability, regular information on capacity bottlenecks, transparent information on gas transmission and distribution prices, details on main business conditions.

## **2.5 NEW PRODUCTS AND SERVICES OFFERED**

No new products or services (such as SWAP) offered to large buyers have been identified in this survey. However there is a will from large buyers to reduce the length of supply contracts and more generally to increase the flexibility of gas purchases (through increased use of SWAP techniques for example).

## 3. BELGIUM

- The Gas law has been passed but Royal Decrees are still awaited to complete the legislative process.
- 50% of those who tried to obtain access succeeded in making sales, although the total volumes are low.
- A proposed Code of Good Conduct should remedy various deficiencies in the current TPA arrangements.

### 3.1 REMOVAL OF BARRIERS

#### 3.1.1 Regulatory provisions

##### 3.1.1.1 *State of legislative preparation*

The Gas Law has been adopted on 29 April 1999. Some secondary legislation has been implemented while other secondary legislation is under final preparation. A Royal Decree was adopted on 21 September 2000 bringing into force the main provisions of the 1999 Gas law. A Royal Decree was adopted on 23 January 2001 on modalities applicable to the definition of eligible consumers.

Royal Decrees are under final preparation regarding:

- Authorisations to supply (adoption expected in May 2001)
- Authorisations to transport (adoption expected in summer 2001)
- Code of Good Conduct regarding access to the network (adoption expected in June 2001). This should address many of the current TPA shortcomings.
- Public Service Obligations (timing uncertain).

##### 3.1.1.2 *Opening-up of the market*

For the present the eligibility level is 25 mcm which corresponds to some 50 customers (including power companies) and 70% of the industrial market (excluding power).

The new law will reduce the threshold to 5 mcm/yr equivalent to an opening of 59% of the entire market. Distribution shall be eligible to purchase gas for their own eligible customers but shall become fully eligible by 1 October 2006. From the same date, there will no longer be any threshold on eligibility for customers connected to the transmission network. It means in principle a 100% market opening. However eligibility of customers supplied directly by distribution companies falls under the authority of the regions.

### **3.1.1.3 Organization of access to the system**

The 1999 Gas Law is based on negotiated access based on published main commercial conditions. However, the Belgian government decided in July 2000 to change this system to **regulated TPA** for the entire system. The change in access system has not yet been implemented.

A Royal Decree on the publication of main commercial conditions for access to the system is no longer foreseen, as the system of access is changing from negotiated access based on published main commercial conditions to regulated access. The new system of regulated access should be implemented early 2002.

A Code of Good Conduct shall be established outlining details regarding procedures for demanding access to the network; requirements for exchange of information; procedures to ensure confidentiality; deadlines for response to demands for access to the network; measures to ensure non-discrimination; minimum requirements regarding administrative and operational separation of transport and supply activities within integrated companies; basic rights and obligations of gas companies and customers negotiating access as well as for using the network; basic principles regarding tariffication and invoicing

Federal legislation requires regional application notably in the field of distribution, which falls under the responsibility of the Regions. The three regions (Flanders, Wallonia and the capital of Brussels) are at different stages of preparing regional legislation.

Distrigaz has published its main commercial conditions on its web site for negotiated access.

Distrigaz favour distance-related tariffs which they believe to be more cost reflective, but recognise that a balance has to be struck against complexity.

In relation to its size Belgian has a large number of entry points – 17. In principle this should augur well for the entry of new gas sources. However we do not know how many of them could actually offer spare capacity. In France for the present only one entry point is able to handle new sources of gas.

### **3.1.1.4 Unbundling (transparency of accounts of integrated undertakings in the sector)**

A strict separation has been introduced in Distrigaz organisation, internal accounting and IT systems, between transport activities on the one hand and natural gas trade on the other. An internal TPA code of conduct has also been developed and implemented.

The physical separation of offices for staff in different functions is taking place in two stages. In the first instance they will be put into different parts of the same building with access control between these parts. The government decided in July 2000 that separate buildings and I.T. systems are necessary. Distrigaz are working to comply.

Distrigaz maintain that the steps they have taken puts them ahead of the current legal requirements.

### **3.1.1.5 Regulatory system**

A Regulatory Commission for Gas and Electricity "CREG" has been established with two gas Directorates (one for technical and market organisational questions and one for price and accounting control). It will have both an advisory, monitoring and controlling role. It shall approve

the main commercial conditions and control the application of rules regarding refusal of access and will also be the dispute settlement authority.

CREG will approve regulated tariffs and will propose to the Minister of Energy to grant supply licences. The Ministry will be the authority proposing transmission licenses after advice from the CREG.

### **3.1.1.6 PSO**

PSOs may be imposed for investments to ensure supply of non-eligible clients where such investments are economical and in relation to guarantee regularity and quality in gas supply. A Royal Decree on PSOs is foreseen (timing uncertain).

### **3.1.1.7 Access to storage**

For the present the limited Belgian storage is totally dedicated to the distribution market that also pays through the tariffs for 100% of the capacity. This application of storage is linked to the PSO which Distrigaz has to cover demand in the sector.

Distrigaz' exclusive right to construct and operate underground storage facilities should be abandoned (separate law of 18.7.1975 amended). This is expected to be implemented shortly through a Royal Decree. The draft new law envisages regulated access to the entire gas system including storage and LNG terminals.

## **3.1.2 Other entry barriers**

Entry barriers have to do with the slow pace of implementation of the European Gas Directive in Belgium. The level of uncertainty which has been prevalent up to now leads new suppliers to adopt a very cautious attitude.

The discriminatory attitude of the main incumbent<sup>4</sup> and the absence of a real Chinese wall between trading and transportation divisions have been mentioned several times by potential new players as a major difficulty in entering the Belgian market.

Transmission tariffs are up to now indicative and not binding.

Tariffs are inflexible point-to-point based, which is seen as particularly inappropriate for such an important transit country. However a new law is under consideration which, if enforced, would clarify transit conditions and would set up a specific transit regime, different from the TPA regime.

The hourly balancing regime is seen as far too restricting. However Distrigaz maintains that it is necessary for a relatively small country with lower linepack possibilities than elsewhere. In any case linepack is not without its price – it reduces the effective capacity of the pipeline. Distrigaz are seeking to avoid cross-subsidization between users and therefore prefer to offer less flexibility than the +/- 15% in some other countries. It believes that hourly balancing offers more security for end-customers and a more level playing field. Also Distrigaz would want to prevent that shippers try to take in 2 hours their total daily quantity, The company wants to offer a wide range of load management tools so that users only have to invest in what they need to respect the rules.

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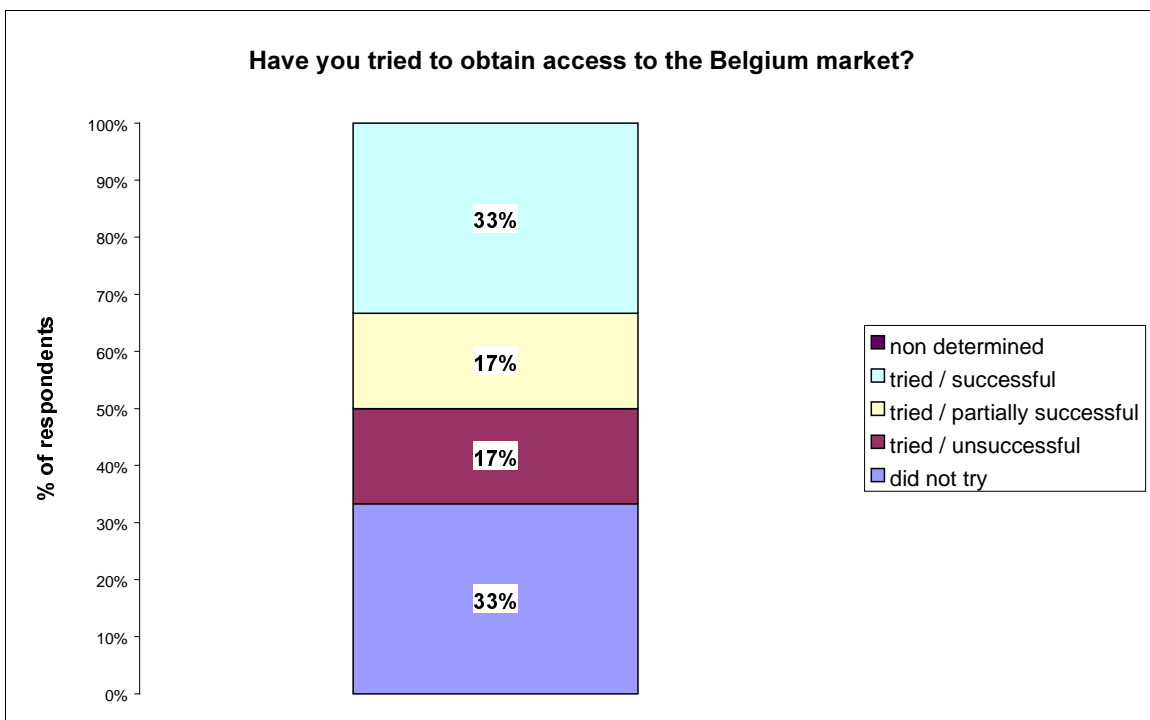
<sup>4</sup> detailed later on in the report

Another major entry barrier is the fact that the demand is covered by long term contracts. Distrigaz long-term contracts in place are likely to be sufficient to meet all of Belgium's gas demand until 2005.

### 3.2 EMERGENCE OF NEW PLAYERS AND THEIR STRATEGIES

New gas suppliers on the Belgian gas market have made limited inroads. One can estimate their market share at less than 5%. (Indeed Distrigaz estimates it has lost less than 5% in volume on its national market since the beginning of the liberalisation process).

Out of the sample of 12 potential new gas suppliers<sup>5</sup> we interviewed for the study, 50% consider they have succeeded in gaining access to the Belgian market. This represents a significant development, notwithstanding the small volumes and other obstacles mentioned.



<sup>5</sup> The sample of interviewed companies is made of Aquila, BP Gas, Centrica, Edison, Enron, Gasunie, GdF, Ruhrgas, OMV, TFE, TXU, SNAM

### 3.3 EXPERIENCE OF ACCESSING GRID

#### 3.3.1 Extent of TPA by country

Main incumbent	Total estimated volume sold 2000 (Belgium) <sup>6</sup>	Gas volume lost by main incumbent (%) <sup>7</sup>
Distrigaz	15 bcm	< 5%

We sought the opinions of operators in negotiating and accessing the grids:

#### Summary of respondents' views in accessing the network

<b>Access to the Belgian Grid</b>	<b>1</b>	<ul style="list-style-type: none"> <li>- Difficulties for traders to access grid for transiting into Germany</li> <li>- Low TPA level</li> <li>- Few suppliers answering large gas buyers bids</li> <li>- No access to low cal grid at all putting a great deal of consumers out of reach</li> <li>- Some complaints by several traders that Distrigas' supply arm will target end users for whom a transport request is received by Distrigas' network operator arm from a third party. The targeting takes the form of price reductions to keep competition out</li> </ul>
<b>Balancing regime</b>	<b>1</b>	<ul style="list-style-type: none"> <li>- Hourly balancing regime felt over-complicated, inappropriate for new entrants</li> <li>- No publishing of balancing penalties which can lead to discriminatory practices</li> </ul>
<b>Access to storage</b>	<b>2</b>	- No access to physical storage. Virtual storage available at published tariffs

<b>Legend:</b>	<b>4</b> Favorable but not perfect	<b>3</b> Rather Favorable	<b>2</b> Unfavorable	<b>1</b> Major obstacle / strong complaints
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We have reproduced below an abstract of potential new comers' answers.

<sup>6</sup> Source: Main incumbents' web site, excluding sales outside Belgium

<sup>7</sup> Source: Interviews

## Access to the Belgian grid: Quotes from prospective grid users

### Access into the Belgian grid

*In order to improve transparency, there are obligations for the grid operator to:*

- send all contracts to CREG;*
- have CREG to test/approve all tariffs and services offered against discrimination;*
- have gardening leaves for personnel transfer between commercial and grid operator subsidiary;*
- have compliance officers with far reaching powers etc*

*However, whether transparency of network access is achieved in practice is contingent on how effective and impartial CREG will be in performing its tasks or regulator.*

\*\*\*\*\*

*It is very apparent that Distrigaz' supply arm will target end-users for whom a transport request is received by Distrigaz' network operator arm from a third party. The targeting takes the form of price reductions to keep competition out. As in Germany, despite being informed by end-users that this is happening, to date we have been unable to persuade an end user to provide evidence to support these claims. Therefore there is no guarantee that transport doesn't speak to trading about deals. Prices for transportation including flexibility are high and make it difficult to compete with incumbent.*

\*\*\*\*\*

*Access to eligible customers is there in theory. Ability to win contracts is difficult since the pricing or availability of ancillary services (balancing, flexibility, refusal of capacity) in the vast majority of eligible customers prevents us offering competitive prices or the ability to supply.*

\*\*\*\*\*

*No access to low cal grid at all putting a great deal of customers out of reach (due to lack of quality conversion service)*

### Transmission tariffs

*The draft Decree allows for a point-to-point tariff system. If, due to an unexpected event, a shipper re-nominates the entry-point, the TSO is allowed to charge related additional transport costs. The decree does however hint at the possibility of having supply zones. Supply zones, would allow re-nomination of the off-take point within a zone at no extra cost. Point-to-point tariffs are very obstructive to trading. In that light, swaps (e.g. between two hubs) are unlikely.*

*We reviewed possible supporting arguments in favor of point-to-point service, leading to the conclusion that they may involve several misconceptions:*

- 1. that pipelines must charge distance-based tariffs to ensure cost reflectivity: Distance-based tariffs have no unique claim to cost-reflectivity – think of (i) the netting effect of swaps or (ii) the fact that the system operator performs internal swaps that minimise the operating costs of meeting nominations and maximise system stability;*

### **Access to the Belgian grid: Quotes from prospective grid users (cont'd)**

2. *that distance-based tariffs require point-to-point service, because each entry and exit point combination is associated with a unique distance: distance-based tariffs do not imply a need for point-to-point service - think of using (i) zones or (ii) modular, tradable units like the right to transport a certain volume per hour per year over a certain distance;*

3. *that point-to-point service is necessary for planning and security - more flexible services can be introduced without threatening planning or security if the system operators retain the ability to reject requested changes to entry and exit points if technically infeasible, or if there is insufficient capacity.*

\*\*\*\*\*

*Tariffs are inflexible point-to-point based, which is particularly inappropriate for such an important transit country. It is important that new entrants have the flexibility to change entry points to utilise different supply sources to enable more efficient and economic supply to the end-consumer. We would therefore advocate a flexible entry/exit charging mechanism combined with the development of an electronic secondary capacity trading market.*

*Transportation costs can be several times higher than in the UK. In particular short-term transportation costs in winter, which can be over 40 times those in the UK, appear excessive and non-cost reflective.*

#### **Access for transit**

*Belgium is a key transit country therefore easy access to the network for new entrants is important for the development of the single European gas market. It is particularly important due to the UK - Belgium Interconnector and the Zeebrugge hub.*

*Distrigaz offers to provide interruptible transportation unlike several other countries, however there are no details available on the website. We would advocate that standard terms and conditions and pricing schedules are made readily available.*

*Distrigaz does not facilitate secondary capacity trading therefore the only means of acquiring such capacity is via another party with existing capacity rights acting as an intermediate which is impractical as that party is invariably a competitor. It is vital that this facility is made available electronically.*

#### **Balancing regime**

*Distrigaz operates an hourly balancing regime, which is over-complicated and inappropriate for new entrants. Daily balancing should be adopted. Balancing penalties are not published which allows the potential for discrimination, excessive charging and does not allow new entrants to assess their risk. Balancing payments should be cost-reflective and transparent.*

\*\*\*\*\*

*Hourly balancing is far too restricting*

#### **Access to storage**

*There is no access to physical storage. Virtual storage is available at published tariffs, which should apply to incumbents as well as new entrants.*

### **Access to the Belgian grid: Quotes from prospective grid users (cont'd)**

#### **Other Difficulties**

*We believe that Distrigaz long term contracts in place that are sufficient to meet almost all of Belgium's gas demand until 2005 and is likely to limit competition considerably. Access to upstream gas will be extremely difficult for potential new entrants.*

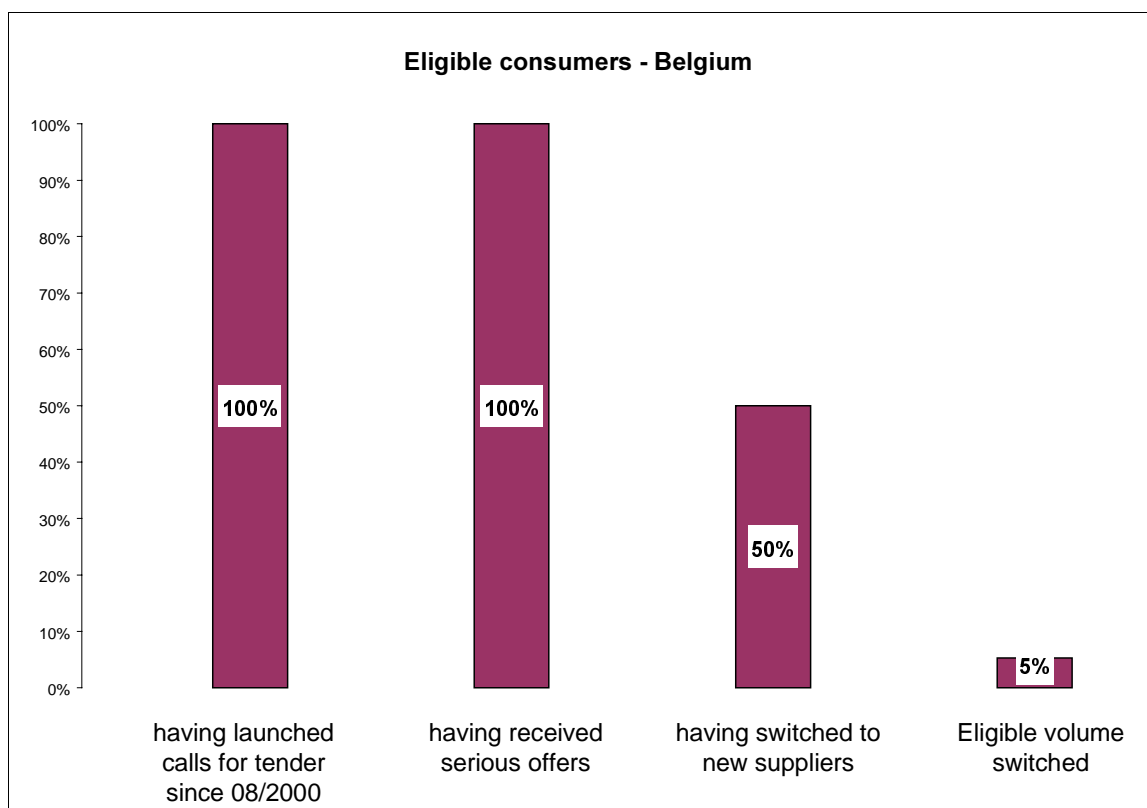
*We have some concerns with the combination of the degree of Government control of Distrigaz through the golden shareholding, the role of CCEG (regulatory authority for non-eligible customers) and the role of CREG. We believe the interests of the end-consumer and the competitive market would be best served by a single fully independent regulator.*

### **3.3.2 Extent to which eligible buyers have switched suppliers**

We sought information on the number of offers made to large buyers (including power companies and LDCs for the share of gas dedicated to their eligible customers) together with an indication of the switching which has actually taken place.

A majority of large buyers have already launched calls for tenders to potential new suppliers. In the results presented below please note that the eligible clients having answered our survey represent an amount of 0.5 bcm, or 6 % of the total eligible volume in Belgium. 5% of eligible volume has been switched to new suppliers.

### Extent to which eligible buyers have switched suppliers<sup>8</sup>



Large buyers have had many difficulties securing new sources of gas supply.

We have reproduced next page an abstract of the reasons for such difficulties:

<sup>8</sup> Source: interviews. Answers in % of respondents for first three bars. In % of eligible volume switched for 4<sup>th</sup> bar. The sample of interviewed large buyers represents ~6 % of gas eligible volume in Belgium

### Why Belgian gas buyers did not switch to new gas suppliers: quotes

#### **A number of eligible gas buyers are locked into medium term contracts**

*Although liberalization of the market was to be expected, sooner or later, there was – and still is – too much legal uncertainty to conclude short-term contracts, given the danger of no alternative suppliers.*

*In principle, contract renegotiation is only possible in view of the termination date of the existing contract (“pacta sunt servanda” – unlike the situation in Italy and the French electricity market)*

#### **Impossibility to get alternative offers**

*From some 20 companies asked to offer gas, only 1 effective answer received by now, 2 late answers announced but still awaited, 2 misled or dissuasive answers, 4 withdrawals. No reaction from the others. (eligible gas buyer with an annual gas consumption of 0.45 bcm)*

*Due to lack of clear legal framework most suppliers were not yet interested in gas deliveries in Belgium in 2000.*

*Main hope in Belgium was supply from independent suppliers in the UK. The recent developments, however, have made this perspective vanishing.*

## **3.4 CHANGES RESULTING FROM LIBERALIZATION**

It is too early to mention significant changes in Belgium, the major reasons being that the regime for accessing the grid has been changed from negotiated access to regulated access in July 2000 by the Belgian government. Effective implementation of such a change has not happened yet. Besides the EU Gas Directive has not yet been fully implemented in Belgium.

However we notice that:

- TPA tariffs and access conditions are made available on Distrigaz web site. However these main commercial conditions presented on Distrigaz web site are for indication only. *"The main commercial conditions are still subject to approval by the Belgian Regulator (the CREG) in accordance with the provisions of the Belgian gas law and the relevant Royal Decrees".*
- A separation has been introduced in Distrigaz organisation, internal accounting and IT systems, between transport activities on the one hand and natural gas trade on the other. An internal TPA code of conduct has also been developed and implemented.
- Distrigaz has lost volume on the domestic market since the beginning of the liberalisation process. Indeed amongst eligible buyers gas buyers in Belgium, some with short term supply contracts were able to "break the monopoly" of the Belgian gas market.
- Eligible clients recognise a change in incumbents' behaviour: while potential new suppliers raise some doubts on the reality of Chinese walls between transportation and supply arms of main incumbent, eligible gas buyers mention that *"Distrigaz transport department is very open, has a very liberalized mind"*. They mention too that *"strict and conservative behaviour of traditional supplier turned more and more customer friendly in recent years, increased flexibility in applying some contractual agreements such as pricing, capacity nomination and peak management"*.

Changes expected in the near term have to do with the reduction of entry barriers mentioned above such as:

- effective implementation of the RTPA regime
- increased competition and easier access for new players
- increased pressure on main incumbents from current and future new players
- access to storage facilities for all players
- price reductions, shortening of contract length
- the development of a regular information system on items such as transport and storage capacities availability, regular information on capacity bottlenecks, transparent information on gas transmission and distribution prices, details on main business conditions.

### **3.5 NEW PRODUCTS AND SERVICES OFFERED**

No new products or services (such as SWAP) offered to large buyers have been identified in this survey. However there is a will from large buyers to reduce the length of supply contracts and more generally to increase the flexibility of gas purchases (through increased use of SWAP techniques for example).

It is clear that the development of the Zeebrugge hub will give birth to the development of new products to the benefit of Belgian customers in particular.

## 4. DENMARK

- A small market attracting little interest from new suppliers
- No new independent sources of gas are available
- No switching has taken place

### 4.1 REMOVAL OF BARRIERS

#### 4.1.1 Regulatory provisions

The Gas Act has entered into force on July 2000

##### 4.1.1.1 *Opening-up of the market and TPA*

Third-party access applies to natural gas customers with an annual consumption of at least 35 mcm per point of consumption (eligible customers) 30% in 2000, increasing to 43% by 2008. Third-party access may be provided both to eligible customers who want to buy natural gas themselves and to natural gas suppliers who want to supply customers having market access.

##### 4.1.1.2 *Organisation of access to the system*

The Gas Act distinguishes between access to the transmission network and storage facilities and access to the distribution network:

- Negotiated third-party access to DONG's transmission network and storage facilities
- Regulated access (postage stamp) to DONG's distribution networks in the South of Jutland, the South of Sealand, Copenhagen and Frederiksberg. This access is allowed under prices and terms publicly available and under the supervision of public authorities.

The Network Code, applying both to DONG's transmission system and storage facilities and to the distribution systems of DONG and the regional natural gas companies, lays down the rules for third-party access in practice throughout the entire Danish natural gas system.

There is a negotiated access to storage when such access is technically necessary for an efficient access to the system.

The price system is considered rather complex also because different prices are charged for different uses even within the same use area of a company (i.e a power/steam plant).

##### 4.1.1.3 *Unbundling (transparency of accounts of integrated undertakings in the sector)*

An unbundling of internal accounts and a documented system of administrative procedures have been decided to ensure that commercially sensitive information is not misused. The main incumbent has complied with these provisions.

#### 4.1.1.4 Regulatory system

There are an Energy Inspection Council (Energitilsynet) and an energy sector specific regulator to monitor and regulate non-competitive activities carried out under monopoly. The Council has been appointed by the Minister and is assisted by the Energy and Competition Agencies.

There is also an Energy Complaints Board (Energiklageankenævnet) to receive complaints.

## 4.2 GAS PLAYERS

### 4.2.1 New players

So far there are no new players on the Gas Danish market. Out of the sample of 11 potential new gas suppliers we interviewed for the study, none have considered entering the market.



### 4.2.2 Main incumbent

DONG is the Danish main incumbent and its share capital is owned entirely by the Danish State through the Minister for the Environment and Energy (in 2000).

The company purchases, transmits and sells the entire production of natural gas from the Danish North Sea sector. The gas is transmitted to shore through DONG's transmission system and is exported or distributed to the customers through four regional companies.

Totally, DONG supplies directly approximately 30% of the end users in Denmark. That is approximately 70 % of the total volume of natural gas in the Danish market.

While its exploration activities are increasing in the sea, negotiations are going on between DONG and the Polish natural gas company POGC for construction of a natural gas pipeline - the Baltic Pipe - between Poland and Denmark. The pipeline will be used for transmission of natural gas from the North Sea to Poland.

Danish state oil and gas company is also considering building a gas pipeline link to the UK as an option for increased export sales, which it is also targeting at Poland. It is currently negotiating with Danish producer DUC to buy additional gas.

In addition, DONG is investigating the possibility of establishing an offshore windmill farm in co-operation with the Danish company Energy E-2.

## **4.3 EXPERIENCE OF ACCESSING GRID**

### **4.3.1 Extent of TPA**

As shown above no potential new entrants that have been interviewed for this study has showed interest for Denmark. There is no TPA volume.

### **4.3.2 Extent to which eligible buyers have switched suppliers**

In the long term, the market opening is expected to influence DONG's natural gas activities significantly. However by the end of December 2000 none of the customers with free market access had chosen another gas supplier than DONG.

There are several reasons to explain these facts as the following quotations bring out.

### Quotes from large gas buyers

#### **Transmission costs**

*The domestic transport in Denmark (handled by DONG Transport) is controlled by the same owner (DONG A/S) as the trading unit (DONG Trading). We suspect that it could be difficult for the two organisations to maintain a 100% separation of activities and information. Further there seems to be an unbalanced transport fee structure between the major liberated industrial consumers and the small private consumers. The result is a transport price which makes it prohibitive to consider taking in natural gas, via the connection to Germany.*

*It should be noted in this connection that DONG from 1999 to 2000 almost doubled the value of the transportation system in Denmark primarily by implementing a new accounting principle. This value being the base for calculation the transport fee per m<sup>3</sup> obviously had a significant impact.*

#### **Financial links between suppliers**

*Some of the potential suppliers are involved at the production level as co-owners of DUC (DONG's key supplier). Why would they start to establish competition against themselves down stream?*

#### **Strong connection within main incumbent and the State**

*The deregulation and opening of the gas market in Denmark does not meet the requirements of the Gas Directive. Although a new legislation on the paper implements the directive, the state owned gas monopoly DONG A/S is still a monopoly, which controls the entire gas market. This is due to a regime based on negotiated access with very high fees and a strong protection of DONG against any attempt of competition exercised by the Ministry of Environment and Energy, who is the owner of DONG and also – at the same time - the regulatory body for the entire energy sector*

**Denmark is a relatively small market** (gas accounts for less than 5 bcm, 22% of total energy consumption).

*With only 30% (objective) of the market liberated it might be less attractive for big league players (such as Gasprom) to enter this market.*

## 5. FINLAND

- A small market supplied exclusively with Russian gas
- Only nominal market opening
- A notional secondary market has been opened for clients who had signed LT contracts before Aug. 2000

### 5.1 REMOVAL OF BARRIERS

#### 5.1.1 Regulatory provisions

The Natural Gas Market Act, which came into force on 1 August 2000, provides for the following changes from the 1<sup>st</sup> January 2001.

- Transmission and distribution companies (including main incumbent Gasum) must separate their natural gas sales and network business in their accounts.
- Transforming of Electricity Market Regulator in the Energy Market Authority that has competencies also for the gas sector.
- New natural gas transmission and energy tariffs system (entered into force at the beginning of 2001).
- Creation of a “secondary market” opened on 1 March 2001.

Following its provisions eligible customers are not free to import gas from Russia (currently the only source) but retailers and large customers (in 2000 >5 mcm /year) may trade with each other within their rights vis-à-vis Gasum, in contracts signed or renewed after 1 August 2000. In other words large users are allowed to trade among themselves any natural gas they have bought from Gasum and not used.

These customers represent 90% of the market. However, the trading flexibility is unknown and interviewees estimate that volumes traded on the secondary market will most probably be very low and will not have a major impact on the gas market.

##### 5.1.1.1 System price (public pricing system)

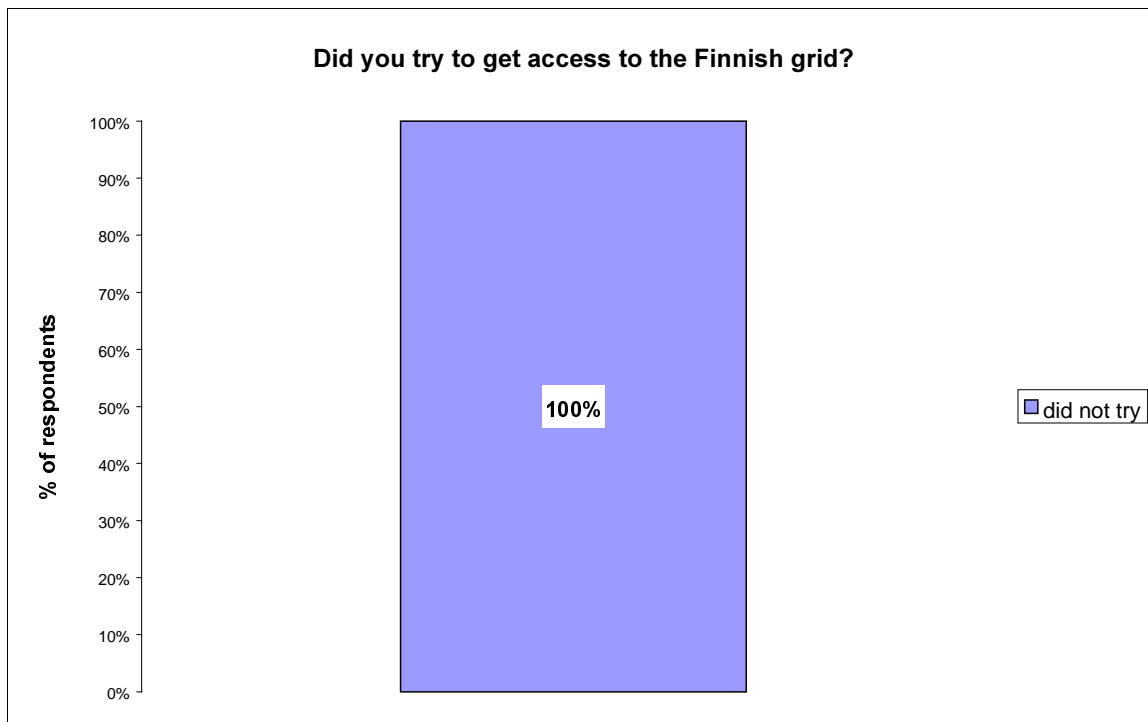
For all customers the access to the grid is regulated and based on tariffs published by Gasum, the main incumbent and by other smaller transporters. There is no possibility to negotiate them.

From January 2001 Gasum has introduced a new natural gas pricing system, valid for three years. The system will be amended in 2002.

## 5.2 GAS PLAYERS

### 5.2.1 New players

So far there are no new players on the Gas Finnish market. Out of the sample of 11 potential new gas suppliers we interviewed for the study, none have considered entering the market.



### 5.2.2 Main incumbent activities

Gasum main activities are:

- Importing and transmitting natural gas (~4 bcm in 1999)
- Operating maintaining and constructing the natural gas transmission system
- Selling natural gas to large customers and distribution companies
- Supplying liquefied natural gas for research purposes and compressed natural gas for use as a traffic fuel.

Its supplier Gasprom holds 25% of Gasum shares, other major Gasum shareholders being the State, Ruhrgas and some large gas buyers (6%). These large buyers account for 51% of the total gas consumption of 4 bcm in 2000.

Gasum's shareholders are:

Shareholder	% of shares
Fortum Oil and Gas Oy (holding company)	25%
OAO Gazprom (supplier)	25%
Finnish state	24%
Ruhrgas Energie (German main incumbent)	20%
Metsä-Serla Corp. (large buyer)	2%
Stora Enso Oyj (large buyer)	2%
UPM-Kymmene Corp. (large buyer)	2%

Gasum currently operates in a monopolistic position and is studying the conditions under which the natural gas grid could be extended to West Finland. Preliminary estimates suggest that energy consumption in the Turku and Naantali area (South West) would be sufficient to recoup the capital expenditure required if the most significant customers in the area decided to switch to using natural gas. The aim is to commence use of natural gas in the Turku region by the end of 2005.

Gasum's study is also examining the feasibility of extending the natural gas pipeline to Rauma and Pori and assessing the viability of natural gas transmission via Gasum's grid to meet the needs of the Stockholm area. This feasibility study is also concerning supply Russian gas to Germany

## 5.3 EXPERIENCE OF ACCESSING GRID

### 5.3.1 Extent of TPA

There is no TPA in Finland.

### 5.3.2 Extent to which eligible buyers have switched suppliers

Finnish eligible customers having participated to our study, consider the market liberalisation purely nominal so far. There is no competition as there is only one gas provider (Gasum) that buys gas from only one source (Russia). They say also that gas average prices clearly have increased.

## 5.4 NEW PRODUCTS AND SERVICES OFFERED

Additional services offered by the main incumbent are:

- Supply of backup gas (a mix of LPG and air) for mills, if there is no natural gas available
- Secondary market access also for customers having long term contracts signed before August 2000.

## 6. FRANCE

- Limited switching has begun despite the absence of a gas law
- Although not legally empowered, the regulator is resolving many issues by consent
- Access only available at one entry point in N.E. France
- GdF is believed to have reduced industrial prices in N. France to meet the competition

### 6.1 REMOVAL OF BARRIERS

#### 6.1.1 Regulatory provisions

##### 6.1.1.1 *State of legislative preparation*

Following broad consultation on the basis of a White Book "Towards the future French organisation for gas" published in June 1999 and a first draft law ("avant-projet de loi") published by the French Ministry of Industry on 19 November 1999, the French government adopted a draft law on 17 May 2000 for submission to the Parliament.

When the Parliament will discuss the law is still a pending issue.

After 2002 the transposition of the second forthcoming directive with the opening of the share capital of GdF will be discussed.

This capital opening was planned earlier (the major expected shareholders are: TotalFinaElf, EDF and Statoil) to facilitate GdF access to capital necessary to finance upstream investments. However, since it is a difficult issue, it will probably not happen if it does before the French presidential election in 2002.

##### 6.1.1.2 *Opening-up of the market*

In the first draft law, eligible customers from 10 August 2000 represent approximately 20% of the market. The threshold for eligibility is 25 mcm/year (site consumption). Once the law is adopted, detailed eligibility criteria should be established by Decree and the Minister for Energy should publish a list of eligible customers.

Threshold for eligibility should be lowered to 15 mcm on August 10, 2003 and to 5 millions m3 on August 10, 2008 in order to enable a market opening equal to 28% in 2003 and to 33% in 2008.

Distributors and electricity producers are also eligible, notwithstanding that over 90% of gas distribution is undertaken by EdF-GdF Service. Some limitations exist for cogenerators benefiting from purchase obligation of the electricity network operator.

##### 6.1.1.3 *Organization of access to the system*

**A regulated TPA regime:** The draft French law foresees a system of access based on published tariffs approved by the regulator requiring only negotiation in exceptional circumstances when

specific conditions justify an individual contract. The regulator will have full insight in all TPA agreements and may intervene in all access cases.

The 3 main incumbents, GdF, CFM and GSO have published temporary systems and tariffs available on their web sites.

Main incumbents offers are based on point-to-point contracts for no less than one year.

Additionally, Gaz de France has developed a Quality Conversion Offer. Indeed as the open market for gas is made of high calorific value gas (H gas), this service enables H gas shippers to supply customers using low calorific value gas (B gas). The quality conversion service is located in Taisnières. Quality conversion contracts can be signed for a period of one year.

Besides Gaz de France has published access conditions to the LNG terminals of Fos-sur-Mer and Montoir-de-Bretagne. Tariff is broken down into three terms (unloaded quantity, unloadings number, and storage on the LNG terminal). The tariff calculation tool proposed by Gaz de France on its website, which is very clear, shows that access conditions are very expensive for small tankers with low rotation levels.

#### **6.1.1.4 Unbundling (transparency of accounts of integrated undertakings in the sector)**

In January 2000 separation of accounts between transport and supply has been implemented.

In May 2000 GdF's new organization is splitting transmission and supplies activities.

In August 2000 dispositions have been taken in order to guarantee confidentiality of commercially sensitive information and a Code of Conduct has been transmitted to all concerned GdF employees.

#### **6.1.1.5 Regulatory system**

There is no regulatory Authority empowered for gas as the law as not yet been passed. The CRE (Commission de Régulation de l'Electricité) has nominated a Counsellor in charge of gas matters. He has held regular meetings with the operators and is steadily resolving issues by consent as though he were actually empowered to do so.

The roles of the future Regulatory Authority for gas and electricity should include approval of access charges, dispute settlement, decisions on specific derogation, advice to the Ministry on tariffs for captive customers and preparation of regulations by the Ministry.

A very large consultation exercise has been undertaken on transportation and regasification tariffs. Jean Bergougnoux, ex Managing Director from EDF (and SNCF) leads the expert group working on these issues. The group has issued recommendations on new tariffs structures by end of April 2001.

#### **6.1.1.6 PSOs**

Gas supply is considered a public service with regard to prices (equalised tariffs for domestic end-users); supply security and diversity.

### **6.1.2 Transportation costs**

As will be developed later on, high transport costs and difficulties for new operators to access to all injection points to the French grid is seen as a major entry barrier. One should note though that progress has been made since main incumbents have voluntarily<sup>9</sup> published clear conditions and tariffs for network access. However the rigidity of these conditions (distance-based, point-to-point with no swap possibilities, often for long term contracts - one year -) is criticized.

### **6.1.3 Balancing costs**

We will explain in detail why the penalties associated to the current balancing regime are seen too high by operators and large buyers, while at the same time tolerance bands proposed by GdF seem reasonable.

### **6.1.4 Access to storage**

Difficulty for new comers to access to storage is seen as a major impediment to competition.

However the "Load Management Services Department" of GdF Supply, Trading & Marketing Arm provides a flexibility offer. Under the terms of the Flexibility Contract, Gaz de France agrees to offtake the gas deposited by the customer at a Flexibility Point and to subsequently return the gas to the same point when requested to do so by the customer. There are 5 Flexibility Points in France. To make deposits or withdrawals of gas at the Flexibility Point, the holder of a flexibility contract must sign one (or more) transportation contract(s)<sup>10</sup>. Therefore a shipper cannot subscribe to the flexibility offer if it does not hold a transportation contract which duration cannot be less than one year. The fact that access to storage is not offered as a stand-alone service is seen by new comers as a disadvantage.

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<sup>9</sup> As there is no law forcing them to do so

<sup>10</sup> Source: GDF web site

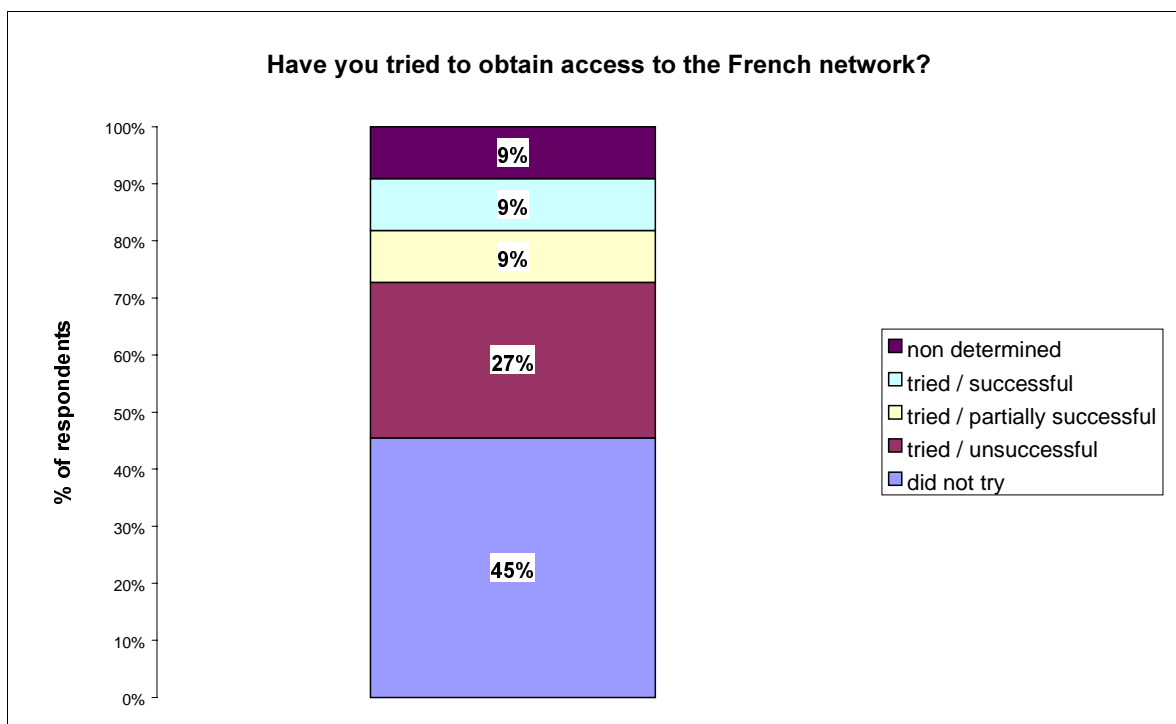
## 6.2 EMERGENCE OF NEW PLAYERS AND THEIR STRATEGIES

### 6.2.1 New players penetration level on the French market: key results

New gas suppliers on the French gas market have made limited inroads. One can estimate their market share at less than 5% as shown below:

Main incumbent	Total estimated volume sold (France) <sup>11</sup>	Volume of TPA gas carried (%) <sup>12</sup>
Gaz de France	30 bcm	5%
CFM	9 bcm	0,9%
GSO	3,6 bcm	NA

Out of the sample of 11 potential new gas suppliers<sup>13</sup> on the French market we interviewed for the study, over two thirds of the respondents either did not try or were unsuccessful in trying to sell gas on the French market as shown below:



New gas suppliers to French eligible consumers usually supply industrial sites in the Northern area of France, as their only available entry point on the network is Taisnières.

<sup>11</sup> Source: Main incumbents' web sites, excluding inter companies sales

<sup>12</sup> Source: Interviews

<sup>13</sup> The sample of interviewed companies is made of Aquila, BP Gas, Centrica, Distrigaz, Edison, Enron, Gasunie, Ruhrgas, OMV, TFE, TXU, SNAM. Information from TFE has not been taken into account as it owns 70% of GSO, one of the 3 main incumbents in France

## **6.2.2 New players apparent strategies**

New players current strategies is twofold:

- To answer bids launched by eligible buyers in order to gain market presence in France
- To exert lobbying actions either directly or through appropriate associations aiming at a full market liberalisation and a removal of entry barriers.

## 6.3 EXPERIENCE OF ACCESSING GRID

### 6.3.1 Extent of TPA by country

Overall new players register limited success in accessing grid. The TPA volume is still at fairly low levels as shown above in 6.2.1.

We sought the opinions of operators in negotiating and accessing the grids. General issues are:

- Transmission tariffs published voluntarily by the incumbents are seen as being clear and transparent.
- Tolerance bands proposed by GdF for the balancing regime are judged reasonable.
- Major complaints have to do with: the limitation for new participants to one injection point, the transmission and distribution tariff principles (distance-related, inflexible point-to-point systems) and the difficulty to access to storage services currently managed by the supply arm of incumbents.

These opinions can be synthesized as follows:

#### Summary of respondents' views on accessing network

<b>Access to the French Grid</b>	<b>1</b>	<ul style="list-style-type: none"> <li>- Published tariffs on a voluntary basis available to market participants</li> <li>- Access conditions published for all injections points in France, but no information on available capacities</li> <li>- Entry for new participants limited, in practice today, to one injection point (Taisnières H)</li> <li>- Transportation tariffs are point-to-point and distance-related, this combined with the limited entry to one injection point: new entrants offers often uncompetitive</li> </ul>	
<b>Balancing regime</b>	<b>2</b>	<p>Tolerance bands proposed by GDF seem reasonable</p> <p>Associated penalties too high: significantly higher than other operators</p> <p>Encouraging progress made by Gdf to replace high imbalance penalties with cash out regime (2Q 2001)</p>	
<b>Access to storage</b>	<b>2</b>	<p>Not available as a stand alone service</p> <p>Only storage services offered are for balancing purposes</p> <p>GDF offers a flexibility tool for storage / balancing purposes</p>	
<b>Legend:</b>			
<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
Favorable but not perfect	Rather Favorable	Unfavorable	Major obstacle / strong complaints

There are 5 possible entry points to the French grid: Dunkerque, Obergailbach, Fos, Montoir and Taisnières. There are **two limitations to access these entry points: contractual issues** on the one hand (i.e. some entry points are fully allocated to long term take or pay contracts, therefore access for short term gas supply is not possible) and **technical limitations** on the other.

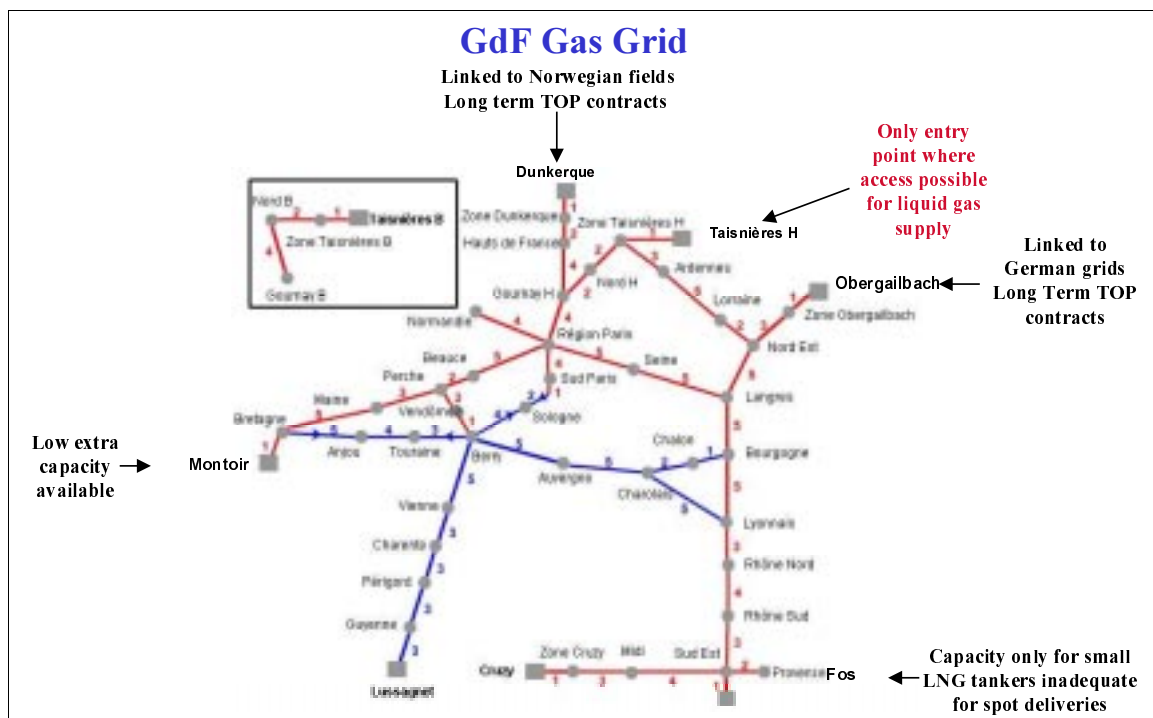
- At Dunkerque, additional technical capacity could be made available through the addition of gas compressor units. However, Dunkerque is linked to Norwegian gas fields through long-term take-or-pay contracts.

- The same holds true for Obergailbach (linked to the German grid and ultimately to gas from Russia).
- There is capacity available at Fos, but only for small tankers (< 70 000 cubic meters). However, to organize economically efficient spot gas deliveries requires tankers of high capacity<sup>14</sup> (150 000 cubic meters). Fos cannot therefore be considered as an efficient entry point for new shippers.
- Montoir has the required infrastructure for large tankers but to our knowledge capacity is almost fully used. A limited number of additional LNG tankers can access the terminal.
- Therefore the only terminal where there is room for liquid gas is Taisnières.

An efficient and transparent TPA service supposes a fluid communication and a regular update on information concerning available capacities at entry points which is not the case today, therefore observations provided above are only indicative.

As the transmission tariff scheme is **point to point** and **distance-related**, **GdF Négoce holds a clear competitive advantage over new comers**, since it can optimise the supply of gas from 5 entry points, vs. one for the others.

The situation on the French grid is illustrated below:



In summary TPA users do not consider the TPA terms to be competitive; we have reproduced below an abstract of their answers.

<sup>14</sup> Using high capacity tankers reduces significantly transportation costs of LNG gas from fields to terminals

## Access to the French grid: quotes from prospective grid users

### Access into the French grid

GdF<sup>15</sup> has published tariffs on a voluntary basis available to all market participants. Access conditions are published for all injection points in France. However, out of all entry points into France (5 in all), entry for new participants is limited, in practice today, to one injection point (Taisnières H).

The only viable entry route for gas into France is in the north east via Belgium as all other entry routes are controlled by GdF and Statoil are unwilling to sell Norwegian gas to new entrants to import into France. As France uses point to point charging this means that competitive supplies can only theoretically be made to eligible customers in north east France. However, as Distrigas will not quote for firm capacity without a firm customer than it is extremely difficult to obtain gas from this source as well.

GdF has cut prices to eligible customers in North of France to make imports from Zeebrugge non competitive.

### Transmission tariffs

Transmission tariffs are distance-related and published. This combined with the limited entry, in practice, to one injection point implies that the transportation tariffs attributed to certain customers will not be cost reflective when they elect to change supplier.

As with several other countries tariffs are inflexible point-to-point based. If new entrants could enter the French market it would be important to have the flexibility to change entry points to utilise different supply sources to enable more efficient and economic supply to the end-consumer. We would therefore advocate a flexible entry/exit charging mechanism combined with the development of an electronic secondary capacity trading market.

Transportation costs can be several times higher than in the UK. In particular short-term transportation costs in winter, which can be over 40 times those in the UK, appear excessive and non-cost reflective.

### Balancing Regime

The balancing regime is published and based on authorised daily and cumulative imbalances. The tolerance bands that GdF proposes (daily levels of 20% for consumption under 1000 MWh/day, 5 % for consumption superior to 1000 MWh/day, and monthly levels of 3%) seem to be reasonable. However, the associated penalties are too high. It must be noted that GdF is making encouraging progress and is proposing to replace the high imbalance penalties with a cash out regime during the second quarter of 2001.

### Access to storage

GdF's offering of storage services is very limited. Storage is not available as a stand-alone service limiting customers' flexibility to match their unpredictable consumption patterns. The only storage services offered by GdF are for balancing purposes (Contrats de Modulation). Furthermore, these contracts must be signed in relation to a supply contract to an eligible customer.

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<sup>15</sup> the 2 other main incumbents, CFM and GSO have published tariffs too

### Access to the French grid: quotes from prospective grid users (cont'd)

*There is no access to storage. Physical and virtual storage should be made available to new entrants on a transparent and non-discriminatory basis.*

*GdF offers a flexibility tool for balancing purposes (Contrat de Modulation). However, in order to receive such services, one must enter into one-year contracts on storage and related transportation services to the customers' site. This provides for an inflexible and uneconomical tool to mitigate balancing risks.*

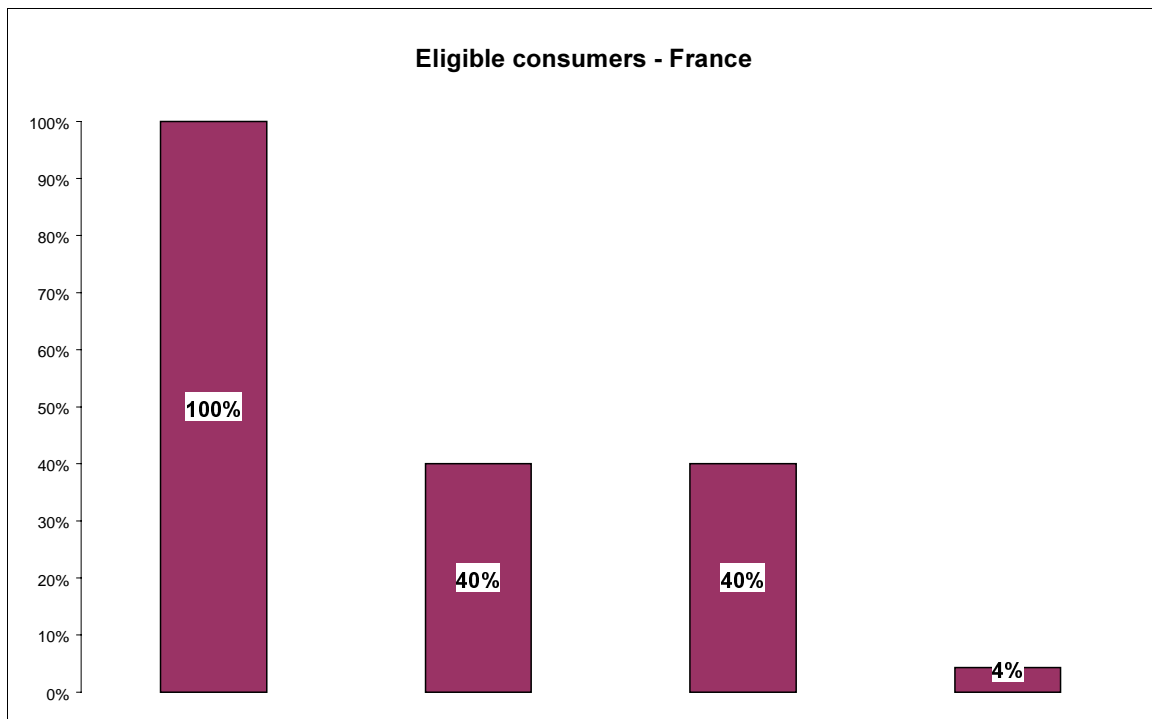
### 6.3.2 Extent to which eligible buyers have switched suppliers

We sought information on the number of offers made to large buyers (including power companies and LDC for the share of gas dedicated to their eligible customers) together with indication of the switching which has actually taken place.

A majority of large buyers have already launched calls for tenders to potential new suppliers. Not surprisingly, the proportion of eligible volume for which supplies were switched is relatively small.

In the results presented below please note that the eligible clients having answered our survey represent an amount of ~4 bcm, or 50% of the total eligible volume in France (8 bcm). The proportion of eligible volume for which supplies were switched is of 4% based on the sample of respondents.

#### Extent to which eligible buyers have switched suppliers<sup>16</sup>



<sup>16</sup> Source: interviews. Answers in % of respondents for first three bars. In % of eligible volume switched for 4<sup>th</sup> bar. The sample of interviewed large buyers represents ~50 % of gas eligible volume in France

The reasons expressed by large buyers as to why offers from new suppliers turned to be unsuccessful converge with the opinions given by new operators on the difficulty to access the French grid.

We have reproduced below an abstract of these reasons:

**Why offers from new suppliers turned to be unsuccessful: quotes from large gas buyers**

***High transportation, modulation & balancing costs***

*We received offers of many potential providers who made very interesting proposals at the border, but which were no more competitive once delivered on sites, due to the high transport, modulation & balancing costs which create distortion of competition between major incumbents and new players.*

*In France transport tariff is dissuasive beyond 200 kms from the border.*

*GdF has access to all entry points in France, unlike competitors.*

***Storage is not managed by the grid operator, which makes access to newcomers difficult.***

*Storage is managed directly by trading arms of major incumbents (GdF, CFM, GSO). Therefore a new comer needs to negotiate with its competitors to have access to storage services.*

Some large gas buyers have tried to measure the competitive disadvantage that new entrants face vs. main incumbents due to the high transport, modulation and balancing costs. In the case study presented below, a new operator should price gas supply 15% to 20% lower than GdF supply arm in order to come up with a commercial offer (gas supply and transport) on equal terms with the main incumbent's one.

This case study is based on a current gas price (supply + transport) of 9cF / kWh proposed by Gaz de France to the client. From that it can be assessed<sup>17</sup> that the cost of transportation for Gaz de France is 0.8 cF / kWh (from the closest entry point - Fos - to the client site, based on published transport tariff conditions). The remaining 8.2 cF / kWh represents the gas purchasing costs and the main incumbent's margin.

Main sources of disadvantage for new entrants are the following:

- **A transportation cost disadvantage:** the industrial site will have to import gas from Gaz de France's competitor from Taisnieres, on the French Northern border. Gaz de France, with access to all entry points, will provide transport from Fos, much closer to the site. As transport tariff is point-to-point and distance based, Gaz de France's competitors will be penalized. Additionally, Gaz de France's competitor will have to sign a Flexibility Contract (contrat de modulation) with Gaz de France Trading and Supply Arm to manage the consumption profile and load factor of the industrial site. The costs of transport and Flexibility contract will represent 2.1 cF / kWh, to be compared with the GdF transportation costs of 0.8 cF / kWh, a disadvantage of ~1.3 cF / kWh
- **A balancing cost disadvantage:** in this example it is assumed that Gaz de France is in a much better position to balance daily intakes and offtakes because of the importance of its customer base. A new entrant with few clients will therefore support balancing charges that

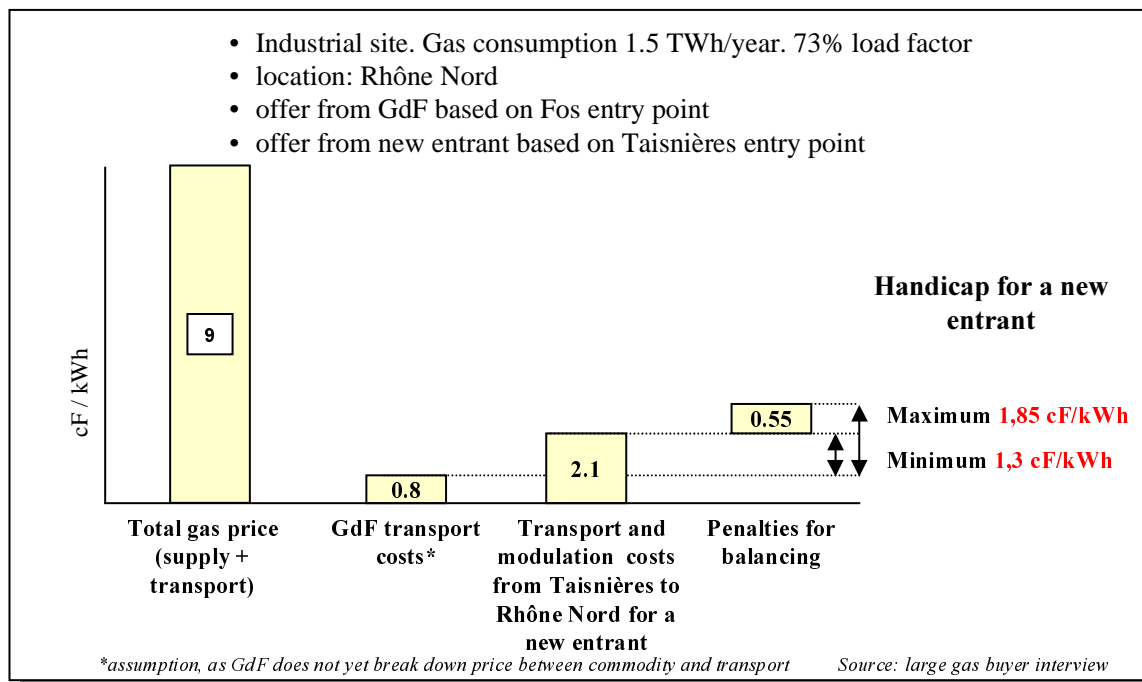
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<sup>17</sup> this information has been assessed by the client as apparently Gaz de France does not split prices between transportation and supply

Gaz de France trading division will - probably - not have to support in totality. This cost disadvantage is assumed to represent anything in the bracket of 0 to 0.55 cF / kWh (0 cF / kWh if Gaz de France balancing charges equal those of new entrants, 0.55 cF / kWh if Gaz de France balancing charges are nil).

- **Overall the handicap for a new entrant represents a minimum of 1.3 cF/kWh and a maximum of 1.85 cF / kWh (1.3 +0.55), a 15% to 20% cost disadvantage vs. Gaz de France on the total price of gas transmission and supply**

### Case study



Many other examples leading to the same result exist and have been cited by respondents. For a client based in the east of France, one respondent indicates that transportation costs from Taisnières are twice the costs than from Obergailbach (the closest entry point). This leads some companies eager to further penetrate the French market to suggest that in order to provide for non-discriminatory access, GdF should be obliged to release some gas from its LT contracts at the other entry points, particularly Obergailbach and Dunkerque.

## 6.4 CHANGES RESULTING FROM LIBERALIZATION

Despite the absence of a law to enforce 98/30 EC directive on the French market changes resulting from liberalization are already visible:

- TPA tariffs have been voluntarily published by the 3 grid operators on July 2000: For GdF that includes transportation conditions on network, a daily balancing regime, a flexibility offer, a quality conversion offer and third party access to the LNG terminals. However the fact that only one entry point is in reality open to new comers, combined with the transmission tariff structure (point-to-point and distance based) makes that experience in accessing grid by new entrants is still limited. Similarly tariff to access LNG terminals is prohibitive for small players and does not provide for fair entry conditions to the LNG terminals

- Incumbents activities have been functionally separated, between transmission, trading storage and marketing.
- New operators have been able to gain access to the French grid, even though the amount of eligible volume switched to new suppliers stays low.
- Major large gas buyers recognize a change in behaviour of main incumbents, in the form of commercial efforts made to reduce market share erosion risk. Even though the impact of liberalisation on price is still unclear, this is a positive sign.

Changes expected in the near term have to do with the reduction of entry barriers mentioned above such as:

- The development of a regular information system on items such as storage capacities available in each location, the amount of available capacities, intake / offtake capacities by entry point, available capacities at LNG terminals.
- A more effective unbundling of supply and transport arms of incumbents.
- More competitive (and transparent) transport cost and access conditions. Transportation tariffs should reflect costs, be fairly simple and allow trade and counter trade. Other models such as an entry /exit tariff or nodal tariff may provide for that type of flexibility. Contracts rigidity (one year minimum) does not permit spot purchases.
- More flexible balancing services and easier access to storage.

## **6.5 NEW PRODUCTS AND SERVICES OFFERED**

GdF has offered several new products or services, amongst which:

- A flexibility tool for balancing purposes (Contrat de Modulation). However this service is only available for customers signing 1-year contracts for transportation.
- A Quality Conversion Offer which enables H gas shippers to supply L gas eligible customers

## 7. GERMANY

- Gas-to-Gas competition first arrived with Wingas' new pipeline system in the early 90s.
- Prices had been progressively reduced across much of Germany so now there was less scope for further reductions after August 2000. However further price reductions and more flexible terms have been offered.
- TPA is available but new entrants have experienced widespread difficulties in securing co-operation from grid operators. The system of negotiated access and absence of a regulator have been widely criticised.
- The 1<sup>st</sup> amendment to the Association Agreement and improved handling of requests for TPA should go some way to solving the reported problems.
- Despite the difficulties some 40 TPA contracts are reported to have been signed by February 2001 and 50% of those who sought grid access were successful.

### 7.1 REMOVAL OF BARRIERS

#### 7.1.1 Regulatory provisions

As background it is important to be aware that in Germany rather than regulation, access to the grid depends upon agreements between representatives of the relevant parties. These are subject to a continuous process of improvement and could not in the first stage solve all problems.

##### 7.1.1.1 *State of legislative preparation*

The Energy Industry Act of 29 April 1998 (Gesetz zur Neuregelung des Energiewirtschaftsrechts) and amendments of the competition law (article 19.4.4 of GWB) have already, in principle, implemented large parts of the Gas Directive. Principles for total liberalisation of the electricity and gas markets have been set in this law.

In December 2000, a draft to an amendment of the Energy Industry Act has been published by the Ministry, which include:

- separate provisions and rights regarding TPA to the gas system;
- definition of the gas system;
- rules regarding unbundling of accounts;
- a reciprocity clause;
- an obligation for gas companies to publish the main commercial conditions for access to their network;
- criteria for possible refusal of access to the network for operational or other reasons

The proposed German law text now enters parliamentary discussion. The first reading will take place on 31<sup>st</sup> May, and afterwards the Committee of Economic Affairs will deal with the topic. At the moment the first debate in this committee is planned on July, 4<sup>th</sup> and in September 2001 a public hearing will follow. Afterwards the second and third reading in the German plenary is foreseen. Therefore under favourable circumstances the Gas Directive will be completely integrated into German law after a last Reading in the Upper House by end of 2001.

### **7.1.1.2 Opening-up of the market**

100% market opening is provided subject to reciprocity according to the provisions of the Gas Directive. This means that players from a given country may enter the market provided that German companies would have the same opportunities in the relevant country.

### **7.1.1.3 Organization of access to the system**

Germany has chosen the way of a negotiated Third Party access (NTPA). There has already been a legal basis for network access of third parties on the basis of German cartel law, which has been modified by Art. 19,4 GWB (competition law) on January 1<sup>st</sup> 1999. This legal basis has been put in more concrete terms by the Associations Agreement (VV).

The Association Agreement has been signed in June 2000 (Verbändevereinbarung [or V.V.] zum Netzzugang bei Erdgas). Originally it was due to run until 30 September 2001 but the Associations agreed to use it as a basis for further debate until superseded by a new agreement.

It should be noted that the Associations' Agreement is a voluntary framework with no explicit legal standing, but based on the German energy law. Because the Agreement has been presented to and checked by the Ministry of Economics and the Bundeskartellamt it has a de facto binding effect. The Association Agreement stands in a long German tradition of industry self-regulation. Voluntary agreements by industrial partners were in as many cases as possible preferred to regulatory measures by the state (e.g. reduction of CO<sub>2</sub>-emissions, waste-recycling, bottle return system).

The V.V. has recently been amended. On 15<sup>th</sup> of March the so-called 1<sup>st</sup> amendment to the Association's Agreement has been adopted, in which the following topics were agreed upon:

- more transparent and easier network access;
- commercial access to storage;
- balancing;
- congestion management

Many undertakings have published the transportation pricing guidelines as it is requested by the V.V.I for Network Access. Overall TPA principles include 3 components:

Element of transport	Pricing parameter
Point-to-point long distance transport	Capacity charge assessed: m3/hour/year * km distance of the contract path
Regional transport charge	Postage system capacity charge of m3/hour/year
Distribution transport charge	Communal postage stamp capacity charge m3/hour/year

#### **7.1.1.4 Unbundling (transparency of accounts of integrated undertakings in the sector)**

Many of the German gas companies have already unbundled their internal accounts or are in process of unbundling them although there is no legal obligation to do so. According to the provisions of the Gas Directive there is limited access to this information and no requirement to make them public. In case of suspicion of abuse of dominant market position, the Federal Cartel Office and the energy supervisory bodies of the "Länder" have the right to investigate the unbundling of the internal accounts.

#### **7.1.1.5 Regulatory system**

The Kartellamt is the general competition authority in Germany and in this context will be some kind of dispute settlement authority. Issues relating to grid access can be put before it, but only as far as the competition law is affected. Other supervisory bodies for gas in Germany exist or are proposed: the draft to an amendment of the Energy Industry Act foresees a linkage of the dispute settlement authority to the Federal Ministry of Economic Affairs. The Association Agreement foresees also a dispute settlement procedure run by the signing parties. Furthermore in every German "Land" a supervisory body is responsible for supervision of the companies. However no gas regulator at a national level equivalent to that found in many other countries is currently envisaged.

One reason why new entrants have experienced considerable difficulty in entering the market is the absence of such a regulatory body which could advise them on procedural matters and assist in the resolution of complaints.

### **7.1.2 Transportation costs**

As will be developed later on, high transportation costs combined with a rigid and bureaucratic handling of grid access requests by grid operators is seen as a major entry barrier by some traders. Publication of transport tariffs by most operators is seen as a first step, even though insufficient, towards the removal of barriers. The amendment to VV deals with this topic. Furthermore the VV states that charges for access to the system must be capable of international benchmarking with due allowance for objectively justified special circumstances.

### **7.1.3 Balancing costs**

The German balancing system goes beyond the other systems in the EU in terms of the level (15%) and billing (at the end of the month). At the end of the month only the real amount of gas counts, not the capacity. There are no fees or penalties for balancing. The balancing services are included in the transportation charge of the German transmission companies.

Nevertheless "penalties associated to imbalance are seen as very high and the balancing regime is considered restrictive by new entrants. The operators explained that these views may be due to some misunderstandings. As in other European countries the VV includes an incentive system to avoid capacity overrun. Therefore a higher capacity tariff has to be paid, if the transportation customer exceeds the agreed maximum hourly capacity including the additional tolerance of 2% (capacity). There does not exist a "penalty" as far as the balancing mechanism (volume-related) is concerned.

#### 7.1.4 Access to storage

There is enough storage capacity available in Germany. Not all owners of storages are at the same time gas companies. Everyone in Germany is free to build and sell storage capacity and therefore a storage market does exist. This is also confirmed by the German Upper House, which ascertained in its statement of February 16<sup>th</sup> to the draft amendment to the Energy Industry Act, that a storage market had already developed and that it should therefore not be regulated. In case that further barriers to storage access should emerge, the draft provides that the Ministry of Economics will lay down rules.

Rules for commercial access to storage have been agreed upon in the 1<sup>st</sup> amendment to VV I and in the general cartel law. BEB has already published its main commercial conditions for storage access on the corporate website. The other companies mentioned in the 1<sup>st</sup> amendment will follow by the end of June 2001.

#### 7.1.5 Other entry barriers

The debate between regulated TPA and negotiated TPA is very vivid. New players believe that regulated TPA is preventing any change from happening in the German gas market. Some of our respondents were particularly damning of the EC for adopting a Directive with provisions for negotiated access.

German players, including some large buyers are on the other hand in favour of the current NTPA regime. They believe that NTPA gives a chance for a much more rapid market development than RTPA for reasons such as:

1. *"It can be revised without damage to the face of politicians: more speed, more flexibility, less cost (no regulatory body). The drawback is that the only body for settlement of disputes is the Cartel Office; this could slow down the liberalisation rhythm. The ideal regime should be NTPA with guidance to be left to the industrial partners.*
2. *The Energy industry is very fragmented in Germany: over 700 grid operators in natural gas which are essentially privately owned vs. one monopoly state-owned grid in other countries: such fragmentation makes it difficult to impose changes through legislation".*

Access to new sources of gas supply is seen as a major factor stifling competition in Germany. Indeed some new players on the German market think that the main supplier for Germany, the Russian Gazprom will not abandon its policy of selling exclusively to the larger German companies. There is a feeling that Gazprom will not open its grids for TPA before 2007, thus preventing newcomers to purchase natural gas from independent Russian producers. Thus the Russian gas supply monopoly will remain untouched for the next years to come.

Whilst Germany may be a useful illustration of the problem of gaining access to gas, this is a general problem facing prospective new entrants in many other European countries. There is no exclusive selling as everyone is free to contract gas. One example is VNG, who started its business beginning of the 90's in Eastern Germany. VNG (and also EVG (Thuringia)) had to negotiate totally new international and national supply and delivery contracts. Every newcomer on the European market has the same possibility to do so. However there is one difference. VNG was facing a defined geographical market so producers selling gas could have some confidence that it would prove a reliable partner. It may be more difficult for trading companies to convince producers that they will be so successful in selling the gas.

In the current negotiations preceding the enactment of the new Energy Act, there is a fear that the German Ministry of Economic affairs will add Russia and countries like Ukraine, Hungary,

Romania to the list of non-EU-members states to be included in EU reciprocity regulation. This could further strengthen the supply position of Wingas, Ruhrgas, Thyssengas, BEB and other major German players. However, the German government and the Bundesrat (Upper House) underlined that the reciprocity clause in respect to Non-EU-countries is to be included in the new Energy Industry act only for **electricity**, but not for gas.

## 7.2 EMERGENCE OF NEW PLAYERS AND THEIR STRATEGIES

### 7.2.1 Brief remarks on German gas industry

The gas industry in Germany is structured as follows:

Five players are essentially involved in transmission activities and in total import most of the gas.. They sell a large share of volumes to regional or communal distributors but they also sell directly to end consumers imported or produced gas. These players are:

- Ruhrgas, which has the largest gas portfolio and a large share of the high pressure transmission system
- Wingas (65% of capital owned by Wintershall and 35% by Gazprom) which controls a broadly parallel network of pipelines which can import gas from east and west and supply a high proportion of the country
- VNG which works in ex Eastern Germany territory (leading shareholder: Ruhrgas)
- BEB (50% owned by Shell and 50% by Esso) which is the major national producer
- RWE/Thyssengas. RWE is one of the two very large electricity companies and has declared its aim to become the second largest German gas company. Over the past years it has bought into Thyssengas and now has a controlling interest of 75% in the company.

Round about 30 companies are involved in regional transportation.

Round about 700 Stadtwerke (local distributors) which are in most cases multi-fuel. Some are involved in other public services activities, such as transportation.

Some Stadtwerke seem to be not big enough to survive in a competitive environment. Many local authorities sell shares of their distribution activities and it is generally recognized that the number of distribution companies will decrease in the near future often based on building up larger regional players.

A particular feature of the German gas industry, but not unique to the country, are the links between some of the large importing/purchasing companies and the Stadtwerke. Ruhrgas, for example, has minority interests in 7 regional companies and 11 Stadtwerke. E.on the newly formed large electricity company owns two subsidiaries – Thuega and Contigas – each of which have a significant number of minority interests in Stadtwerke. RWE also has such a network of regional companies and Stadtwerke, including parts of Rhenag and the interests based on public private partnership out of former VEW.

The possibilities for shareholding between the gas business companies are restricted mostly to under 25%. The cartel office on a case to case basis examines this. However it is reasonable to assume that the large gas companies derive some benefits other than the dividends from their

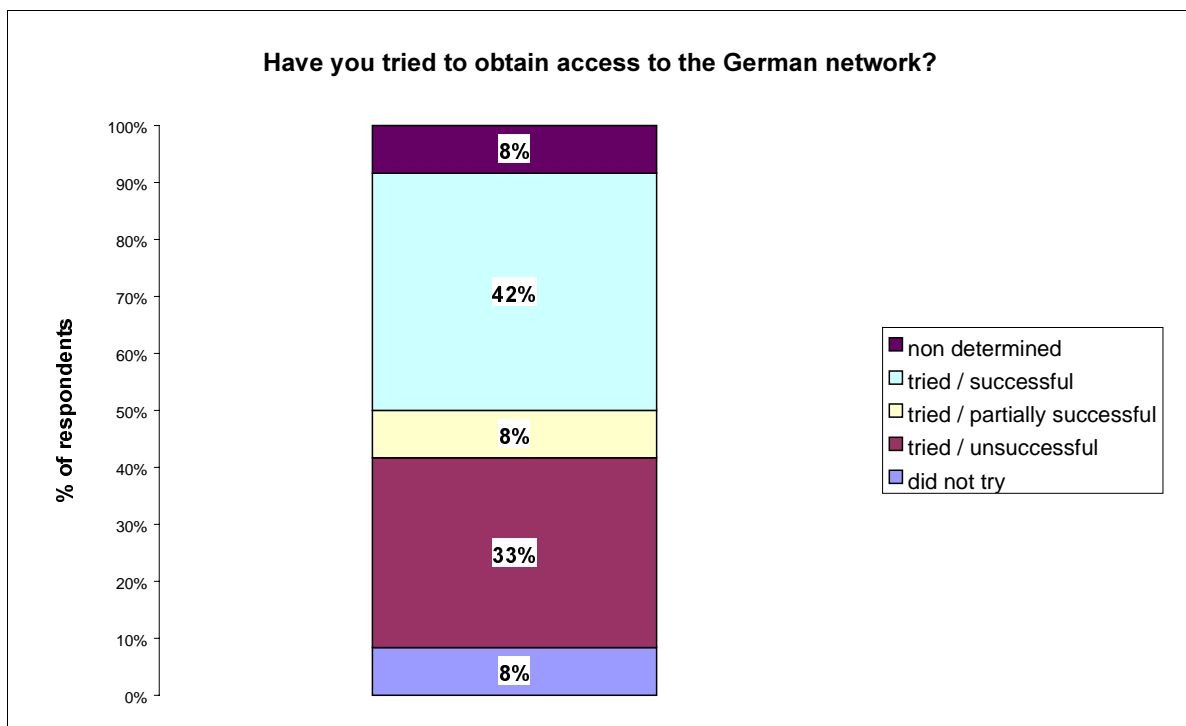
interests in these companies. Investment may help encourage the companies to remain loyal to their supplier, but only so long as the price is in line. Usually supplying shareholders have no rights to vote in the process of negotiating new supply contracts. In one notable example in which BEB has a share in Hamburger Gaswerke (HGW) it learned to its cost that shareholding was no guarantee that the supply contracts would be secure. Wingas won a new contract in competition to BEB.

### 7.2.2 New players penetration level on the German market: key results

Since the entry into force of the Association Agreement in June 2000, the main incumbents entered into transportation contracts with new gas suppliers. All together a good 40 contracts were reported to have been signed by February 2001 and the share is increasing. We do not know the typical length of these contracts or the quantity of gas carried.

Out of the sample of 12 potential new gas suppliers on the German market we interviewed for the study, over 90% of the respondents tried to sell gas on the German market. 50% of the new suppliers have been successful so far. 33% of the requests to system operators have been unsuccessful. It should be noted that even amongst players who have gained access to the German market, the overall feeling on market entry conditions is overwhelmingly negative, as we will see later on.

The numerical results show a more positive result to the process than the remarks of many respondents might suggest. The negative feeling on market entry conditions can result from misunderstandings in the procedure or insufficient legal advice on the German system. The large companies also admitted that there is a need to improve their communications and handling of requests; when sufficient attention will be given to this issue then we would expect that shippers will find that the handling of TPA requests works much better.



### 7.2.3 New players apparent strategies

New players current strategies is twofold:

- To answer bids launched by eligible buyers in order to gain market presence in Germany
- To exert lobbying actions either directly or through appropriate associations aiming at removal of entry barriers and to improve the co-operation from network operators.

## 7.3 EXPERIENCE OF ACCESSING GRID

### 7.3.1 Extent of TPA by country

A significant proportion of new players experienced considerable difficulties in accessing the grid. The amount of eligible volume which has been switched to new suppliers is still very low as we will see later on. Unfortunately we do not have information on the volume lost on domestic market since liberalisation by the main incumbents, but we think it is still very low. Reasons are the importance of long term contracts between main incumbents and their suppliers, the flexibility and the competitive behaviour of the existent suppliers and furthermore the existence of financial links between suppliers together with the downstream links.

We sought the opinions of traders in negotiating and accessing the grids. Their responses have been very negative and can be synthesized in the following table. Many of the issues raised by the traders have been solved by the 1st Amendment (e.g. access to storage). As against these negative reactions it should be borne in mind that by February some 40 TPA contracts were reported to have been signed and that our survey showed that 50% of those attempting to access the grid were successful, at least in part.

#### Summary of respondents' view on grid access

<b>Access to the German Grid</b>	<b>1</b>	<ul style="list-style-type: none"> <li>- Rigid and bureaucratic handling of grid access requests by the operators, who often do not process them in time</li> <li>- Absence of information about bottlenecks, uncertainty of availability of capacity</li> <li>- Network access procedure and payment system viewed as complex. Pancaking</li> </ul>								
<b>Balancing regime</b>	<b>1</b>	<ul style="list-style-type: none"> <li>- Hourly balancing technically impossible to observe and causing exorbitant balancing costs</li> <li>- Associated penalties too high</li> <li>- Global feeling (by new entrants) that VV rules are unclear</li> </ul>								
<b>Access to storage</b>	<b>2</b>	<ul style="list-style-type: none"> <li>- Original Gas VV from July 2000 contains no provisions for access to storage by third parties</li> <li>- Commitments by VV signing parties that rules would be set on storage access by Dec 2000. It has not happened</li> <li>- Third parties have no access to storage</li> </ul>								
<b>Legend:</b>		<table border="0"> <tr> <td style="background-color: #90EE90; width: 20px; text-align: center;"><b>4</b></td> <td style="padding: 0 5px;">Favorable but not perfect</td> <td style="background-color: #FFFF99; width: 20px; text-align: center;"><b>3</b></td> <td style="padding: 0 5px;">Rather Favorable</td> <td style="background-color: #FFA500; width: 20px; text-align: center;"><b>2</b></td> <td style="padding: 0 5px;">Unfavorable</td> <td style="background-color: #FF0000; width: 20px; text-align: center;"><b>1</b></td> <td style="padding: 0 5px;">Major obstacle / strong complaints</td> </tr> </table>	<b>4</b>	Favorable but not perfect	<b>3</b>	Rather Favorable	<b>2</b>	Unfavorable	<b>1</b>	Major obstacle / strong complaints
<b>4</b>	Favorable but not perfect	<b>3</b>	Rather Favorable	<b>2</b>	Unfavorable	<b>1</b>	Major obstacle / strong complaints			

The main system operators have made the following observations on the above table.

#### Access to the German grid:

- In the VV it is provided that “the system operator shall respond to a full and complete request within an appropriate time period, preferably within 12 working

days". (From the reaction of respondents it did not seem that this period was always respected.)

- Information about bottlenecks and capacity is only necessary in a "Pool-Model" which doesn't exist in Germany; availability of capacity is always certain as far as the capacity is booked.
- This is a new process; everyone is still learning.

#### **Evaluation of transmission & distribution tariffs:**

- The amendment to VV provides more transparent and easier tariffs.
- Long-distance charges are handled as in nearly all other EU-countries and US (length and diameter dependent).
- Swaps refer to trading and have nothing to do with transportation; they have to be agreed upon bilaterally but between the sales or trading arms of the companies.
- Comment to the sentence: stratified rate....: The 1<sup>st</sup> amendment to VV eliminates pancaking on one level of the supply chain as far as postage stamp tariffs are concerned.

#### **Balancing regime:**

- Please see 7.1.3

#### **Commercial access to storage:**

- Commercial access to storage for third parties on a bilateral basis has always been possible. This has finally been put in concrete terms in the 1<sup>st</sup> amendment to VV on March 15, 2001 (see 7.1.4).
- It has been agreed in the VV, that commercial access to storage is part of the issues laid down in the "Stufenplan" to follow-up the VV. There has never been a commitment for reaching an agreement until December 2000,

In summary TPA users do not consider the TPA terms to be competitive and we have reproduced below an abstract of their answers.

#### **Access to the German grid: quotes from prospective grid users**

Notes from the operators are put in [ ] where appropriate.

##### **Access into the German grid**

*Germany has chosen the way of a negotiated Third Party access (NTPA). The Association Agreement (Verbändevereinbarung zum Netzzugang bei Erdgas), which is valid till 30 September 2001, is currently the only basis – albeit informal – for the opening of the gas market. It should be noted that the Associations' Agreement is a voluntary framework with no legal standing. Although, the Agreement states that it guarantees non-discrimination, there is nothing on how this will be applied in a manner that gives all participants the certainty that they will be treated in a non-discriminatory way. [The operators have explained in 7.1.1.3 that the agreement has more of a legally binding character.]*

### Access to the German grid: quotes from prospective grid users (cont'd)

Notes from the operators are put in [ ] where appropriate.

*The Association Agreement AA negotiated by four German associations (BGW and VKU on behalf of the gas industry, BDI and VIK on behalf of the industrial customers) outlines merely basic guidelines regarding TPA. These are insufficient to allow competition to develop for a number of reasons:*

- *So far only a small proportion of 700 incumbent gas grid operators have published their terms and conditions. System transparency is therefore very low.*

[Most of the system operators have published their terms and conditions (nearly 80%) but not always on the Internet. Therefore BGW and VKU offer the gas system operators the possibility to publish their conditions on the BGW or VKU Internet page].

- *The AA is based on transaction-based (point to point) charging with assumed or nominal gas transport paths between the delivery point (normally at the border) and the redelivery point. As a result a newcomer to the German gas market has to negotiate two or three (in some cases up to four) individual transport contracts in order to supply a single end customer with gas. System administration costs are therefore very high and it is difficult for new entrants to act with the speed which customers reasonably expect.*

- [Point-to-point is only valid for transmission companies (Ferngasunternehmen) like in nearly all other countries, but not for regional transmission and distribution companies (postage stamp tariff) In the 1<sup>st</sup> Amendment the Associations agreed, that voluntary assistance for organisation of access to the grid may be offered by system operators. This service has to be paid.]

- *Furthermore new entrants are unable to renominate the entry and exit points, reducing their operational flexibility and are prevented from entering into secondary capacity trading to match their requirements to their changing customer portfolio. System responsiveness and flexibility are therefore very low and represent a major barrier to entry.*

*Access to eligible customers is there in theory. Ability to win contracts is difficult since the pricing or availability of ancillary services (balancing, flexibility, refusal of capacity) in the vast majority of eligible customers prevents us offering competitive prices or the ability to supply.*

[Operators have emphasised that balancing and flexibility rules are laid down in the VV and are more accommodating than in other member states.]

*Requests from third parties for capacity have been refused by the network operator on the basis that there is no available capacity despite the fact that there are no new volumes involved, i.e. not a new connection, just a different supplier. We have recently experienced this response from a German network operator and have referred the dispute to the Federal Cartel Office (FCO). However, the speed with which the FCO takes action further hinders our progress in the German gas market.*

*Capacity in Germany is also only offered on a non-firm or preliminary basis. [The operators claim this is not the case, although experience of many shippers shows they were not able to obtain firm capacity offers.] Network operators procrastinate when responding to requests from third parties for capacity; requests are answered with sentences like:*

- *"Today we are not able to finally conclude whether the capacity you asked for is available..."*
- *"At this point we are not able to confirm the availability of capacity.."*

### Access to the German grid: quotes from prospective grid users (cont'd)

Notes from the operators are put in [ ] where appropriate.

- *"We will examine the possibility to realise the transport you asked for..."*

[These complaints should be examined in more detail, in which context and stage the access request has been. To plan the availability of capacity for a longer time period takes some time by the system operator, because he has to examine some scenarios. Every action in the system has direct or indirect effects on the capacity planning. The experience was that a lot of requests for access to the system are made in an unclear way not including all necessary information required in VV].

*Transportation contracts are sent out only after weeks of requests and are sent under the proviso that they are still subject to "internal checks".*

*Long, drawn out difficult process without necessary Chinese walls between TSO and retail businesses and the creation of artificial barriers to access.*

#### Transmission tariffs

*Gas transport tariffs in Germany are problematic for several reasons: high transport fees, pancaking, lack of transparency, and complex, risky negotiations.*

[Operators advise that the 1<sup>st</sup> amendment to the V.V. will help ease some of the problems mentioned in this section.]

*Many undertakings have published the transportation pricing guidelines as it is requested by the Associations' Agreement for Network Access. However not all utilities have fulfilled this requirement. Furthermore, even where the transportation pricing guidelines are published, they are often unclear and incomplete.*

*The rates are stratified resulting in very high charges and significant pancaking.*

*A complex tariff structure, where a typical gas delivery may result in 3-4 separate transport charges (one long distance, two regionals, and one local). Cross-subsidy is very likely. [The tariff structure is due to the German industry structure which consists of over 700 companies in three layers.]*

*At the long distance and regional layers an additional system service charge is assessed whether they are used or not.*

[These charges are an integral part of the VV: system services charges for services always maintained by system operators which are necessary for access to the system.]

*The overall costs for gas transport in Germany are in the range of 2-4 times higher than equivalent shipments in other EU countries. The goal in the German Verbändevereinbarung is that these costs correspond to comparable international markets is in no way realised. [We were not given a detailed proof of this allegation such that the Germany industry could rebut it.]*

*There seems to be no visible relationship between the charges that are assessed and the costs that are incurred.*

### Access to the German grid: quotes from prospective grid users (cont'd)

Notes from the operators are put in [ ] where appropriate.

*German transmission tariffs (based on those so far published) are typically 2–4 times higher than equivalent tariffs in UK for long-term gas transport to similar types of customers. The cost differential for short-term transactions is even more noted and can be around 40 times in excess of UK prices. We note that monthly capacity charges for suppliers are 12 times the annual charges, i.e. the same price as annual capacity. Such differences cannot reasonably reflect underlying costs. Distance-related tariffs in Germany are explicitly not based on costs and are unjustified. [The German operators cited a presentation at the 2<sup>nd</sup> Madrid meeting in February 2001 which indicated that for certain distances they had the lowest transportation tariffs in Continental Europe. There were however examples where the German tariffs could be found between 2-4 times the level of the lowest charges.]*

*For example, it is frequently the case that German end customer prices minus TPA costs (as charged to new entrants) are less than those prices charged for gas delivered to the German border. This can only result from cross-subsidy or from discriminatory pricing. In either case it is fundamentally anti-competitive. [The calculation of tariffs for individual customers must not be based on average border prices, because an average border price reflects an average of different market sectors and furthermore contains elements of capacity charges which are not relevant for an individual customer.]*

#### Balancing Regime

*The rules provided in the VV are very restrictive and can easily result in discriminatory behaviour. The aim of a balancing regime is to allow a certain flexibility. This flexibility is necessary because a customer, to whom gas is delivered is not able to guarantee that the same quantity of gas (due to production reasons or offtake variations) is needed. The third party, which signs a contract with the network operator sets that it is going to inject a fix amount of gas. However, it can happen that one day the customer (to whom the third party delivers gas) takes out more gas and another day the customer takes out less gas. It therefore happens that a customer needs more or less gas on an hourly basis. Accumulating these hourly quantities of gas, which are taken out, a daily balance builds up. This explains why rules for the balancing regime are needed. [The operators are surprised by this because VV already provides rules for balancing. Further provisions have been made in the VVI amendment. ]*

*The Association Agreement provides the following rules:*

- 1) It sets that the cumulative difference between the gas which is injected by the third party and the gas which is taken out by the third party can not be more than 15% of the maximum daily quantity which is based on the maximum hourly based quantity multiplied by 24.*
- 2) It sets that on an hourly basis the difference, which is injected can vary only within 15%, i.e. the customer should not need more or less than 15% of the injected quantity.*
- 3) It sets that the balance which results at the end of the month must be zero.*

*[This understanding is wrong. If you lead through a smaller amount within the flexibility, you get your money back. There is a general misunderstanding: the 15% flexibility is incorporated in the transmission charges. If the third party exceeds the 15% range then he has to pay more.]*

*The price which has to be paid varies:*

- if the injected quantity (by the third party) is more than the quantity which the customer takes out the network owner pays a price A to the third party. This price is negotiated in the contract between the network operator and the third party.*

### Access to the German grid: quotes from prospective grid users (cont'd)

Notes from the operators are put in [ ] where appropriate.

- *if the quantity taken out by the customer is more than the quantity which is injected the third party has to pay a price B to the network operator. This price is negotiated in the contract between the network operator and the third party.*

*These restrictive rules mean that:*

- *Newcomers can not sign a full requirements contracts, unless the customer has extensive load management capabilities*
- *Of course they can, but they have to do a proper calculation concerning the amount of gas.*
- *The allowed difference of 15% is too restrictive. – [It is much more generous than in all other EU- countries where the normal range is 2-5%.]*
- *There is no reason why at the end of the month difference has to be balanced. [A further misunderstanding.]*

*We believe that the only companies to offer balancing services (for 15 % of the hourly capacity) are Ruhrgas, BEB, WINGAS, VNG and Thyssengas. Some companies, eg Ruhrgas, measure gasflow using normalised volumes where some regional companies and cross-border TSOs use energy content. This either results in imbalance charges, the need to purchase additional capacity or acquire "standardisation" services.*

#### Access to storage

*The original Gas VV from July 2000 contained no provisions for access to storage by third parties. However, a commitment was made among the four negotiating associations and the Minister of Economics that rules would be set on storage access by December 2000 and incorporated into the VV. This did not happen. Therefore, at present, third parties have no access to storage in Germany and are thereby at a significant disadvantage to incumbents in the market place. This contributes to the difficulty that the third parties cannot know in advance how much transport will cost.*

*Access to storage is currently discretionary, as it is not covered by the AA at all, and does not appear to be promoted by the incumbents. Even if access was provided it would be under the terms and conditions of the incumbents and in our view is extremely unlikely to be commercially viable to new entrants. Storage has a number of important roles to play in gas transmission, for example in system balancing and in substituting for scarce pipeline capacity in key geographical areas. Access to these facilities is essential if new entrants are to be able to compete effectively against the incumbents. V.V.II agreed in March does provide access to real or virtual storage.*

[\[See section 7.1.4 where further explanation on these issues is given.\]](#)

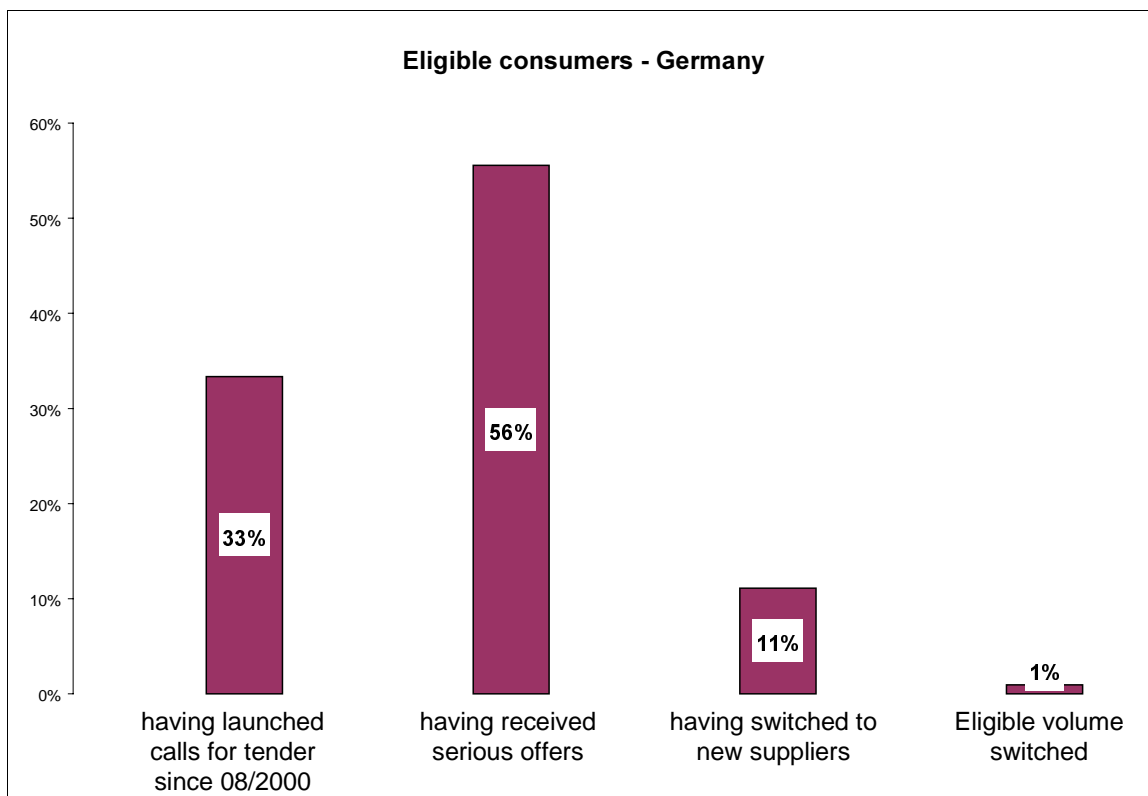
### 7.3.2 Extent to which eligible buyers have switched suppliers

We sought information on the number of offers made to large buyers (including power companies and LDC for the share of gas dedicated to their eligible customers) together with an indication of the switching which has actually taken place.

A majority of large buyers have already launched calls for tenders to potential new suppliers. Not surprisingly, the proportion of eligible volume for which supplies were switched is very small. (This situation is similar in all EU countries, except the UK.)

In the results presented below please note that the eligible clients having answered our survey represent an amount of 9 bcm, or roughly 10% of the total eligible volume in Germany (based on a 100% market opening).

**Extent to which eligible buyers have switched suppliers<sup>18</sup>**



The reasons expressed by large buyers as to why offers from new suppliers turned to be unsuccessful converge with the opinions given by new operators on the difficulty to access the German grid. The picture shows, that 56% have received serious offers, which is surprisingly high, if compared to the non-existence of over-capacities and free gas amounts, which are not contracted. It cannot be neglected, that a lot of customers ask for offers by new entrants just to renegotiate their existing supply contracts.

We have reproduced below an abstract of these reasons for failure to access the grid.

<sup>18</sup> Source: interviews. Answers in % of respondents for first three bars. In % of eligible volume switched for 4<sup>th</sup> bar.

## Why offers from new suppliers turned to be unsuccessful: quotes from large gas buyers

### **High transport costs for new players are a key reason**

*High transport costs from the boundary to the site make it impossible for new comers to come up with a competitive offer*

*Access fee for the grid is too high. The biggest problem is pancaking. Each grid operator wants individual fees, what they ask for is unreasonably high. Often the price of transport in Germany is as high as the price at border level (up to 1.5 Euro cents / kWh)*

### **Lack of competition between major players**

*Our gas purchases are split between 12 suppliers, Ruhrgas having the lion share, Wingas and 10 smaller grid operators. As Ruhrgas supplies these smaller operators it will not make an offer direct to us, with the risk of bypassing its clients. Incumbents will not hurt each other.*

*Ruhrgas, Thyssengas and to a lesser extent Wingas do not compete against each other. And Ruhrgas' participation in many supply companies is seen as a factor preventing the development of competition.*

*The market is dominated by Ruhrgas. Despite numerous gas undertakings (765) operating in Germany the many financial and supply links with Ruhrgas means that many of the traditional German gas companies (Wingas included) are reluctant to take the risk to offer gas in regions which are supplied directly or indirectly by Ruhrgas. [The Bundeskartellamt watches the links between companies very closely.]*

The results are somewhat different with local and regional distribution companies we have interviewed. The main results show that they are satisfied with the current level of competition between gas suppliers and have overall good commercial relations with their main suppliers and have therefore no intention of switching. We think that the importance of the financial links between these distribution companies and their gas providers may contribute to stable supply sourcing. However some local distribution companies already changed their supplier and in some cases the Cartel Office regulated the access.

## 7.3.3 Changes resulting from liberalization

### **Major changes resulting from liberalization are already visible:**

- TPA tariffs have been published by most operators
- System Maps are available but tend to be out-of-date or not detailed enough to provide information necessary for to file a complete network access request. (For example the current map (Gasnetz Karte) available on BGW homepage). The Gasnetz Karte is being updated at the moment as laid down in the "Stufenplan" to the VV.
- Major large gas buyers recognize a change in behaviour of main incumbents, in the form of commercial efforts made to reduce market share erosion risk: Ruhrgas AG lowered prices for major customers by ~ 10 % beginning of February 2001. (This was reported by one or two respondents, but we have doubts about the size of the cut and the volumes affected.) Progress has been made in the **voluntary** separation of activities of main Incumbents, even though new comers judge these progresses insufficient.

- New operators have been able to gain access to the German grid, even though the amount of eligible volume switched to new suppliers stays low.
- There has been a real change in market structure: inroads were made by non-domestic gas suppliers on the German market and new companies (traders such as Natgas, local gas companies such as Trianel).

Changes expected in the near term have to do with the reduction of entry barriers mentioned above such as:

- Increased competition and easier access for new players
- Increased pressure on main incumbents from current and future new players (Trianel, Enron, Distrigaz, Natgas, Snam). Other very large companies are to be seen as preparing their strategies for market entrance including recruiting professional staff.
- Price reductions, shortening of contract length.
- The development of a regular information system on items such as transport and storage capacities availability, regular information on capacity bottlenecks, transparent information on gas transmission and distribution prices, details on main business conditions.

The amendment of the VV deals with the first three of the above topics.

Understandably the German companies do not favour publication of regular logistic information, claiming amongst other reasons that it is constantly changing and could compromise commercial information. However if the transportation system is required by law to be operated on a non-discriminatory basis equally for the benefit of all users we do not see why as much logistic information (current and planned) as possible should not be publicly available. It will play a vital role in improving the efficiency of the industry and drawing attention to forthcoming bottlenecks. Any possible compromise of confidentiality would have to be balanced carefully against the benefits of wider dissemination.

## **7.4 NEW PRODUCTS AND SERVICES OFFERED**

No new products or services (such as SWAP) offered to large buyers have been identified in this survey. However there is a will from large buyers to reduce the length of supply contracts and more generally to increase the flexibility of gas purchases.

## 8. GREECE

- The Greek market is due to be opened in 2006
- So far there is only one monopoly supplier- DEPA (Public Gas Corporation)

### 8.1 REGULATORY PROVISIONS

#### 8.1.1 State of legislative preparation

Greece is an emergent market and also not directly connected to the interconnected system of any other Member State and has only one main (with a market share of more than 75%) external supplier.

#### 8.1.2 Opening-up of the market

The opening of the Greek gas market is scheduled for 2006, since the Greek energy market is considered to be an "emerging" one. So far there is only one gas supplying company in Greece, namely DEPA (Public Gas Corporation), operating under monopolistic market conditions

#### 8.1.3 Organisation of access to the system

Not yet decided.

#### 8.1.4 Unbundling

Currently there is no unbundling of gas supply and high pressure transmission. There are plans to separate DEPA's activities between transmission and supply, this will probably not happen before 2003/2004.

Low pressure gas distribution is performed (for individuals and small industrial consumers) through 3 independent private companies, each of these covering a specific geographical area.

#### 8.1.5 Regulatory system

An Energy Regulatory Authority (for gas and electricity and possibly other sectors) has been established by Law 2773/99.

#### 8.1.6 PSOs

Not yet decided.

#### 8.1.7 Access to storage

Not yet decided. Greece has an LNG terminal which may serve as storage. No underground gas storage yet in operation in Greece.

## 9. IRELAND

- Competition was introduced by national legislation in 1995
- A relatively small market no attracting many new players
- Little switching has occurred. 7 clients are eligible as of today

### 9.1 REMOVAL OF BARRIERS

#### 9.1.1 Regulatory provisions

##### 9.1.1.1 *State of legislative preparation*

Irish TPA legislation was introduced under the Energy (Miscellaneous Provisions) Act, 1995. To facilitate the implementation of the EU Gas Directive by the Member States, the Department of Public Enterprise has issued in 2000 two draft Directives for comment. The first of these (draft) Directives defines the standard service to be offered by Bord Gáis and the second (draft) Directive outlines the indicative tariffs to be charged.

To our knowledge these draft directives have not been passed yet.

##### 9.1.1.2 *Opening-up of the market*

The 1995 Energy Act and DPE draft directives provided for voluntary Third Party Access (TPA) for gas-fired power generators and for eligible gas customers with volumes of over 25 mcm/year. This has effectively opened 80% of the Irish natural gas market to Third-Party Access (TPA) competition (albeit only 7 customers).

##### 9.1.1.3 *Organisation of access to the system*

Ireland has opted for Regulated third-party access. On 16 July 1999 the transmission division of Bord Gais Eireann published a code of operations which clarifies access conditions to the transportation system from the Moffat entry point (being the point at which Natural Gas enters the Transportation System from the NTS) and the Inch Entry Point to each of the Exit Points from the Transportation System as nominated by Shippers.

The Code is intended to provide a clear, fair, transparent and not unduly discriminatory framework for Shippers wishing to use the Transportation System consistent with principles of third party access referenced in the Gas Act 1976 (as amended by the Energy (Miscellaneous Provisions) Act 1995) and certain Directives issued by the relevant authorities of the European Union and Irish Government.

In compliance with any general Directive issued pursuant to the provisions of the Gas Act 1976 concerning Standard Service pricing, BGE will apply the same charge for the provision of Standard Service to its own activities for the transmission of Natural Gas as it will apply to Shippers.

Each Shipper on the Transportation System contracts on an annual basis (or, if for a period greater than one year, in multiples of a year) with the Transporter through a STA (Standard Transportation Agreement).

#### **9.1.1.4 Unbundling (transparency of accounts of integrated undertakings in the sector)**

BGE Natural Gas transmission activities is independent in management terms from its other activities and to this end a separate Management Division within the integrated organisation has been established. The confidentiality of commercially sensitive information obtained in the course of carrying out its transmission business will be maintained and respected by such Management Division.

Bord Gáis has since the implementation of its Code of Operations been restructured into four separate business units. This re-organisation is to increase focus on customer needs and ensure that each business unit is accountable for its own performance. In addition this new structure will ensure transparency between the operation of the pipeline business and the supply and new asset business; it will also facilitate the development of new products and services. The four business units are as follows :

- Transmission Operations: Responsible for the major gas pipelines including the interconnector.
- Distribution Operations: Manage the low pressure networks within towns and cities.
- Business Development-Customer Products: Responsible for buying and selling gas, customer service and new product development.
- New Business Development-Assets: Responsible for the diversification into new asset based developments including Combined Heat and Power (CHP).

In addition to the business units, the Corporate administration centre handles the company's administrative requirements.

BGE keeps separate internal accounts for its Natural Gas transmission, distribution and other activities.

#### **9.1.1.5 Regulatory system**

The regulator has not been formally appointed yet. The Commission for Electricity Regulation (CER) should be the regulatory authority for gas matters too.

### **9.1.2 Transportation costs**

Transportation tariffs are currently fully postalised. It is expected the 'on-shore' elements of the tariffs will continue to be on a postalised basis, with competition at entry.

The Tariffs outline the charges which are applied for the Third Party Access service. These charges consist of capacity (space in the pipeline) and commodity (actual gas flowed) elements. The capacity charge in the DPE draft directive (currently under review) is IR£10.58 per peak-day therm (IR£0.36 per peak day kWh) and the commodity charge is IR0.40p per therm throughput (IR0.014p per kWh throughput).

Tariff proposals are not yet available but BGE web site should be shortly updated with this information.

### 9.1.3 Balancing costs

Balancing Charges are designed to encourage Shippers to stay within the tolerance levels presented below:

Annual Consumption at Exit Point	Aggregate Permitted Tolerance at Exit Point
> 1 500 000 MWh	+/-3%
260 000 to 1 500 000 MWh	+/-8%

The Standard Service requires Shippers to balance their input and offtake of Natural Gas into and from the Transportation System on a daily basis.

If the Shippers stay within above-mentioned tolerance, the imbalance will be cashed out at the cost to the Transporter of acquiring Balancing Gas (cost of Natural Gas as determined in the Balancing Act Agreement + all the Transporter's costs directly associated, including administration charges).

Imbalances outside such tolerance levels will be cashed-out at a cost of:

- Twice the Balancing Gas Price or the System Marginal Buy Price for that Gas Flow Day on the Flexibility Mechanism in Great Britain (whichever is higher) for under- deliveries
- And half the Balancing Gas Price or the System Marginal Sell Price for that Gas Flow Day on the Flexibility Mechanism in Great Britain (whichever is lower) for over- deliveries.

### 9.1.4 Access to storage

There is no storage of Natural Gas in Ireland. However, BGE provides for fluctuations in demand through supply contracts which can benefit from storage facilities available in the UK.

### 9.1.5 Other barriers

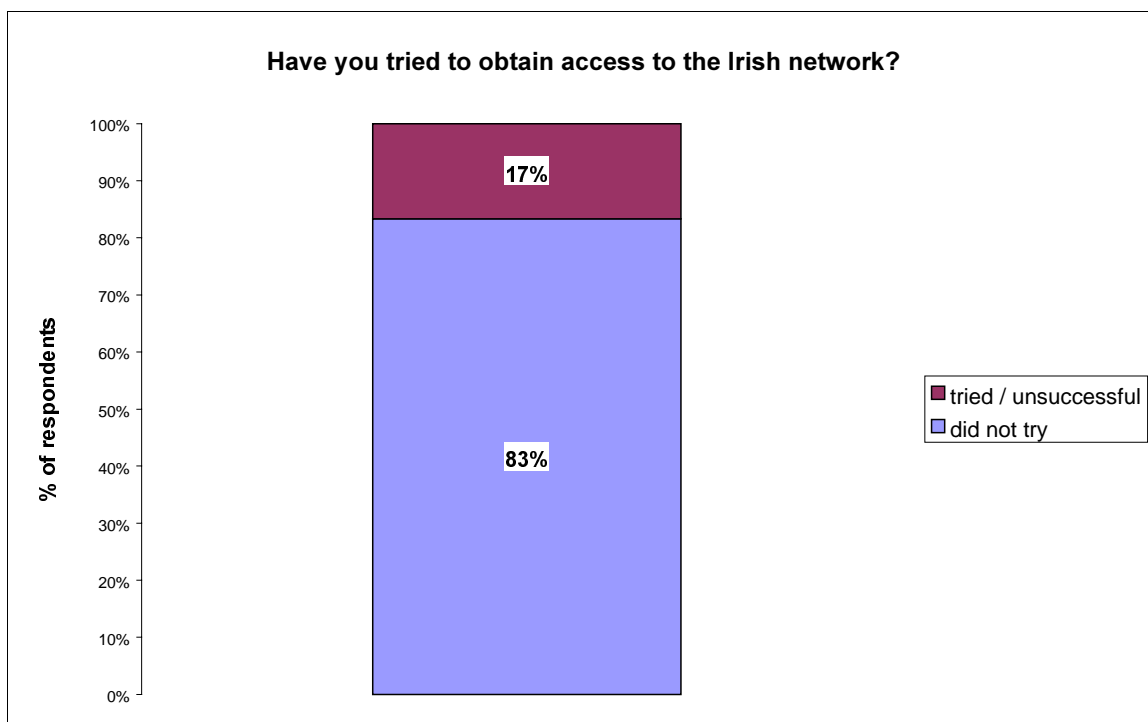
Insufficient regulation of the major Oil companies operating in the UK Continental Shelf was cited as a further barrier to competition.

## 9.2 GAS PLAYERS

### 9.2.1 New players

So far there are few new players on the Gas Irish market. Out of the sample of 12 potential new gas suppliers we interviewed for the study, over 80% have not considered entering the market, 2 have tried with no success so far. Major reasons for these unsuccessful trials up to now having to do with "bureaucratic delays"<sup>19</sup>.

<sup>19</sup> Source: respondents questionnaires



## 9.2.2 Main incumbent strategy

### 9.2.2.1 Development of new services and distribution channels

While liberalisation has created new competitive pressures, it has also created opportunities in other sectors for BGE. For example, BGE Customer Products Business Unit is charged with developing a range of products and services to extend product market and customer base.

Bord Gáis is developing internet-enabled systems and will offer services over the web in the near future to service existing and new product customers.

#### Upgrading Irish network in order to address congestion issues

The main aim of Bord Gais Transmission Business Unit is to improve the capacity of the network, laying pipes and building infrastructures (i.e. a major compressor station is being constructed in South-west Scotland on behalf of the Bord Gáis subsidiary BGE (UK) Ltd to increase the deliveries of gas to Ireland by 50%).

As the internal demand growth (16% in 2000) has exceed forecasts BGE has asked the Government to build a second Scotland-Ireland interconnector gas pipeline to avoid congestion on grids entry points and gas shortages from winter 2002-2003. Under this scenario gas will grow at nearly 10% per annum in the next years and existing supply capacity will be full by 2003/4.

The Parliament has to decide how to allocate scarce capacity in the UK-Ireland Interconnector to new power stations to facilitate the opening of the electricity market pending construction of new supply infrastructure.

An ambitious program is under way to transform the Irish network to 2025, as current gas demand forecast shows a three-fold increase on existing throughput, which cannot be accommodated with current infrastructure.

## 9.3 EXPERIENCE OF ACCESSING GRID

### 9.3.1 Extent of TPA

In our opinion TPA in Ireland is still limited. BGE states in its latest annual report that *"already some large customers are availing themselves of Third-Party Access"*. BGE has experienced a loss of market share in the gas supply business due to competition as larger users source their own supplies independently of Bord Gáis. However, a portion of the business of the major customers has been retained as Bord Gáis competes with other suppliers for various tenders.

We summarise below our understanding on current access conditions for new players on the Irish market:

#### Experience of respondents in accessing the grid

<b>Access to the Irish Grid</b>	<b>2</b>	<ul style="list-style-type: none"> <li>- Forecasted congestion on grid entry points</li> <li>- Some bureaucratic delays noticed by some potential new players</li> <li>- Publication of network map with current investment projects</li> <li>- Publication of a Code of operations by BGE in 1999 to explain grid access conditions</li> </ul>
<b>Balancing regime</b>	<b>3</b>	<ul style="list-style-type: none"> <li>- Daily balancing regime</li> <li>- penalties do not seem discriminatory for new entrants</li> </ul>
<b>Access to storage</b>	<b>2</b>	- No storage of natural gas in Ireland. Access to storage facilities in the UK

<b>Legend:</b>	<b>4</b>	Favorable but not perfect	<b>3</b>	Rather Favorable	<b>2</b>	Unfavorable	<b>1</b>	Major obstacle / strong complaints
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### 9.3.2 Extent to which eligible buyers have switched suppliers

To our knowledge the switch level has been limited so far. The number of eligible customers is in itself very limited so far.

## 9.4 CHANGES RESULTING FROM LIBERALISATION

The major areas of change include:

- Increased competition
- Increased customer awareness of price
- Increased price transparency
- Clarification of the rules of the game (TPA)
- Development of new products and services (daily gas shipping services, trading services, soon to come web-based products)

Changes expected in the near term are:

- Nomination of the Authority for regulation
- Increased regulatory requirements with increasing competitive influence on regulatory rules.
- Bord Gais expects that the effect of the Entry Capacity Costs at St. Fergus will continue to increase the gas prices for Ireland.

## **9.5 NEW PRODUCTS AND SERVICES OFFERED**

Bord Gais is currently offering daily gas shipping services to customers who choose to use other suppliers.

## 10. ITALY

- TPA has been offered since 1991; by 2000 16% of gas sales were made on this basis
- A transitional transportation access regime is in place until the regulator publishes the network tariffs
- The transport network and storage facilities are to be independently owned by respectively Rete Gas Italia and Stoccaggi Gas Italia, thus offering open rather than third party access to the grid
- A lack of upstream competition and limited entry capacity are expected to limit competition after the downstream barriers will have been removed
- SNAM is required to cut its market share to 75% in 2002 and then in stages to 61% by 2009

### 10.1 REMOVAL OF BARRIERS

#### 10.1.1 Regulatory provisions

##### 10.1.1.1 *State of legislative preparation:*

The Gas Directive has been transposed into Italian law in May 2000

The Regulator (Autorità per l'Energia Elettrica e il Gas) is currently (May 2001) engaged in producing a network code and tariffs for transport and services (that should have been published by January 1<sup>st</sup> 2001). A particular provision of the legislation is open access rather than third party access.

Until the publication of these documents, networks have provisional tariffs and terms for open access published by the main incumbent; the new tariffs system will apply retrospectively to transportation contracts signed since July 2000.

Players are waiting for rules and wonder to what extent the results of the legislative election in May 2001 will affect the liberalisation process.

##### 10.1.1.2 *Opening-up of the market*

Today all power generators, wholesale traders, distributors and final customers consuming more than 0.2 mcm/yr, and associations of enterprises consuming more than 0.2 mcm /yr (and each more than 0.05 mcm/yr) are eligible (i.e. 65% of the total market). From January 1<sup>st</sup>, 2003, all customers will be eligible (100% opening).

##### 10.1.1.3 *Organisation of access to the system*

During the transitional regime, the Italian law (164/2000) obliges the main incumbent to handle the grid access, if capacity exists and technical conditions are met. This access has currently to be negotiated with the main incumbent. Temporary indicative tariffs and terms are published by SNAM. Once the Autorità publishes the document for open access, the network access will be

regulated (expected in summer 2001). The main incumbent offers are based on point-to-point contracts.

#### **10.1.1.4 Unbundling (transparency of accounts of integrated undertakings in the sector)**

The following obligations for unbundling shall be met on 1<sup>st</sup> January 2002:

- Legal unbundling for transport, distribution and storage activities and from other gas sector activities (a company performing both transport and storage may unbundle these only for accounts and management);
- Selling gas can be performed only by companies which do not perform other activities within the gas sector, except exploitation, import, export, and wholesale customers' activities;
- Distribution companies selling gas to more than 100,000 customers must unbundle by Jan 2002. Those selling to less than 100,000 final customers may delay compliance with legal unbundling requirements until 1<sup>st</sup> January 2003.

SNAM's supply, trading and marketing activities will be attached to the activities of its mother company, ENI.

These companies are in process of being set up.

#### **10.1.1.5 Regulatory system**

A common Regulatory Authority for gas and electricity is in place. With regard to gas, the main competencies of the regulator are publication of network code, access charges, dispute settlement, in case of access refusal, decisions on specific derogation, tariffs for captive customers, transportation, storage and distribution tariffs, congestion management methodologies and unbundling

### **10.1.2 Transportation costs**

Temporary transport costs and terms for grid access could be considered as an entry barrier because new players have difficulty to obtain offers.

One of the most important resolutions contained in the temporary network code published by SNAM states that the same tariffs have to be applied both to Snam's clients and to TPA clients. This resolution seems to be effective as all players interviewed recognised it is implemented

The main incumbent has voluntarily published conditions and tariffs for network access, the Autorità has not approved nor rejected these as it is in process of setting tariffs itself. Currently transport tariffs are distance-related and the final cost for the customer depends on the volume carried (more volume, more discount). The Autorità will set the conditions for access and tariffs that will be applied retrospectively to contracts signed after June 2000. These will contain entry-exit terms related to capacity on entry/interconnection points on the national network as well postage stamp terms related to capacity on regional network.

### **10.1.3 Balancing costs**

Currently these are included in the total supply cost.

### **10.1.4 Access to storage**

Storage must be legally unbundled from merchant activities but can be linked to transport. A new company Stoccaggi Gas Italia, under constitution and waiting for “rules of the game” will offer the service in the future.

For several years Edison has used ENI storage, so the concept of access is not entirely new. Currently access to storage is available under temporary provisions and we do not know whether operators other than Edison are using the ENI storage.

### **10.1.5 Are current regulatory provisions conducive to liberalisation**

Overall the companies interviewed recognise that the Italian Regulator is working hard to open the Italian market. Meanwhile most of them think that an excess of regulation is not favourable to develop competition, because it introduces additional costs for final customers, i.e. additional staff has to be dedicated to monitoring energy activities. In general the overall gas prices are not increasing.

For all interviewed companies the situation of the Italian market could be summarised as follows: an advanced liberalisation degree on the clients' side (65% of openness), but not enough upstream players.

A large gas buyer explains the negative effects of an excess of energy market's regulation on industries:

*The first aim of a liberalised market must be price reduction and I am not sure that current regulatory provisions are moving in this sense for large industry clients. Currently the total supply prices (included transport and services) is negotiated exclusively on a volume basis for large industrial consumers: it means the more volume the greater the discount.*

*When transport and services tariffs will be fixed by Autorità, negotiation with suppliers will be possible only for the percentage of the total price related to the volume: it means less total discount, because tariffs for transport and annexed services are fixed by law and not negotiable. It will be possible to negotiate only upon the commodity (ex. 50% of the total gas price for large buyers).*

*In addition instead of only one party (the main incumbent) large buyers will have two companies to deal with: the supplier and the carrier.*

*Firms will have to dedicate one or more people to manage energy matters, which will be made more complicated by the legislation.*

### **10.1.6 Level of unbundling of main incumbent**

The Italian law foresees a legal unbundling of the vertically integrated companies. Storage activities can continue to belong to transportation branch but must be managed separately. Accounts should be unbundled too. (In the current situation storage facilities do not actually belong to the transportation branch).

SNAM has already unbundled itself. The transportation and storage activities are being made the subject of two separate companies, but currently wholly owned by ENI:

- “Rete Gas Italia” has received transport and dispatching activities and it will be fully operative once the Network Code is published (normally within the summer 2001). This company will be quoted on the stock market.
- “Stoccaggi Gas Italia” is under constitution and will manage gas storage facilities. It is not clear whether it will be listed on the stock market.

SNAM’s supply, trading and marketing activities will become incorporated as divisions of its mother company, ENI.

### **10.1.7 Congestion issues on grids entry points**

Italy produces only one third of internal gas consumption. Entry points to the grid have limited additional available capacity, the extent of which is indicated below:

Two pipes entry points in the North:

- Tarvisio at Austrian border (no capacity)
- Passo Fries at Swiss border (limited capacity)

One entry point in the South:

- Mazzara del Vallo (Sicily) receiving the Algerian gas

One LNG terminal in the North West:

- Panigallia (Genova) which current available monthly capacity is made of 1/2 additional LNG tankers. Capacity will be saturated end of 2001.

### **10.1.8 Access to services for new entrants (storage, balancing)**

Currently access to storage is available under temporary provisions, because the new company “Stoccaggi Gas Italia” is not operational yet.

### **10.1.9 Conclusions on removal of barriers**

The Authority is seen to be making considerable efforts to open the market.

However interviewed companies wonder to what extent a strong regulatory frame will contribute to increase upstream competition. This competition is indeed stifled by lack of available capacity on the network especially at entry points.

## 10.2 GAS PLAYERS STRATEGIES

### 10.2.1 Brief remarks on energy sector in Italy

In order to make easier the comprehension of liberalisation issues it is useful to have a look on the financial links between the different branches of the main incumbent.

Before the energy liberalization there were two very large national vertically integrated energy companies: ENEL for electricity production and transport and ENI for oil and gas.

ENEL is the national main incumbent in the power production and after the liberalisation in the Italian electricity sector is obliged to sell off power capacity (15.000 MW).

Concerning ENI this company and affiliates covers:

- Oil and gas exploration and production (Agip)
- Storage. Historically SNAM have operated the compressors and other above-ground facilities whilst Agip have owned the depleted fields. Under the new regime the storage facilities will be put into a new company – Stoccaggi Italia.
- Transmission and importing (SNAM, the main incumbent, in the future, Rete Gas Italia)
- Substantial interest in distribution (40% of Italgas through SNAM).

### 10.2.2 Current strategies of new players

The most serious challengers in the gas market are ENEL (the former state power company) and Edison.

While lack of rules and provisional terms and tariffs offered by SNAM until the Autorità publishes final documents keep foreign players in an expectation attitude, power companies like ENEL and Edison or large municipalities act to become important actors in the Italian gas market. They have already gained eligible customers for gas and are allowed to buy gas from other suppliers or to produce it directly to supply their own power plants or to sell to eligible customers. Their core business is power production. They are evolving into multi-utility companies (electricity, gas, telecommunication, water, waste) and look for alliances with local distribution companies.

ENEL and Edison have so far been the first companies to negotiate with SNAM available capacity on existing imports network for long-term contracts and large volumes.

The main incumbent explains that reasons why grid access has been offered to these large gas players is because they do not ask for spot contracts but for long term supplies. Long-term transportation contracts is the only way to share risks equitably and to be sure that infrastructure investments will be repaid.

Large municipalities are also active. Some of them, especially in the northern region (Milan, Genoa, Brescia) have created a consortium – Plurigas - to buy large gas volumes (3 bcm per year).

Another consortium, Energia, is owned by the Austrian power company – Verbund – together with CIR of the Italian De Benedetti group.

ENEL is obliged to sell off 15 MW of power capacity to comply reduce its market share. It is unclear whether some of ENEL's gas will be sold off with the capacity or whether the new owners will have to find all their own gas. With its large gas portfolio ENEL is in a strong position to compete. In particular it will have the opportunity to arbitrage between burning gas in its (remaining) power plants and selling it into other markets.

## **10.2.3 Main incumbents apparent strategies**

### **10.2.3.1 *Very little changes in main incumbent's behaviour***

Due to uncertainty about market rules, not published yet, changes in main incumbent's attitude are limited. Some interviewed companies noticed SNAM seems more open to discussion for supply contracts renegotiation, or in very rare occasions for interrupting existing contract<sup>20</sup>. Due to the Gas Liberalisation Decree SNAM negotiated a few gas sales contracts with different operators (e.g. Edison, Municipalities and GdF) in order to reach the production/import maximum caps. Therefore access on the transportation network is increasing.

### **10.2.3.2 *Diversification in near-by countries***

As SNAM will not be allowed to participate in the growth of the internal market because of Italian law disposals<sup>21</sup> its objectives in the next future are to develop business in other European countries.

### **10.2.3.3 *Diversification strategy in the internal market***

SNAM has already contracted large gas volumes on long term take or pay contracts and in order to meet regulatory disposals concerning the maximum internal gas market share, must find a way to sell off extra gas volume. It is also for this reason that ENI group (to which SNAM supply arm belongs) has decided to take advantage from liberalisation of Italian electrical market and to become a player in the power production.

ENI's excursion into the power markets (through its affiliate Eni Power) and ENEL's move into the gas market are both partly due to the companies being encumbered with surplus gas supplies. In any event having a large gas portfolio is an invaluable asset when seeking to penetrate new gas markets.

## **10.2.4 Conclusions on changes in market structure**

Interviewed companies have not yet seen substantive changes on the Italian gas market structure, but all recognise that something is moving at an administrative and organisational level.

Lack of network code (notwithstanding the existence of a consultation document), temporary tariffs and legislative elections make players (especially non domestic ones) cautious in entering the market.

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<sup>20</sup> Such as Edison Distribuzione Gas, which asked SNAM to cancel existing contract in order to buy gas from Edison Gas (a private player with 5.2% of national gas market and unique shareholder of Edison Distribuzione gas)

<sup>21</sup> no more than 50% of the final sales in 2003, self-consumption excluded could be served by SNAM

## 10.3 EXPERIENCE OF ACCESSING GRID

### 10.3.1 Extent of Access to Grid

In Italy access to grid by third parties is not new. In fact independently of the Directive, since 1991 national producers, ENEL and Edison, have secured access to the grid (SNAM was obligated to offer access for gas supplies to their own plants). TPA represented about 10% of total gas carried before the Directive came into force.

**SNAM - sales and TPA levels<sup>22</sup> (bcm)**

	1995	1996	1997	1998	1999	2000
Total sales	na	56,0	55,9	58,4	62,9	64,7
- home market	52,55	53,23	53,14	55,69	60,2	59,9
- international	na	2,8	2,79	2,73	2,7	4,8
Third-Party transport	6,0	6,6	8,1	10,6	11,3	14,7
- home market	1,48	2,42	4,35	6,7	6,9	9,5
- international	4,53	4,22	3,72	3,9	4,4	5,3
Amount of TPA in Italy (as % of sales in the home market)	3%	5%	8%	12%	11%	16%

The access increase in 2000 (5%) is partly due to Edison's contract to import Russian gas from Gazprom (in 2000, Edison Gas signed a long-term contract with Promgas, a JV between Gazprom and SNAM, to buy and transport Russian gas).

Edison Gas seems to be the only new player having gained lately access to the grid. But other new players such as Plurigas and Energia are in process of doing so.

The amount of Russian gas contracted by Edison and transported by SNAM network represents less than 2% of the national transport capacity. The transport of this gas has been made after the Directive coming into force, but the contract has been negotiated many months before, so it is difficult to consider this transport service as due to official opening of the market.

Foreign suppliers or traders are waiting for network code and final tariffs. They complain about the lack of available capacity at entry points, especially for spot contracts.

*"There is considerable regulatory uncertainty as access proposals have not been finalised, never mind implemented. Access is only available through negotiation, rather than on published terms as proposed by the regulator. There is little transparency in the market in relation to terms and conditions, a factor which is exacerbated as tariffs are currently only provisional and may be subject to rebates. Gaining access to capacity is also extremely difficult due to the alleged degree of congestion. SNAM will only provide gas for delivery to designated points, so flexibility is non-existent. The combination of these factors means that the commercial risks are unacceptable to new entrants and therefore we have currently not sought to apply for access in Italy although we intend to do so once the market has improved."*

*Foreign trader*

<sup>22</sup> Source: SNAM web site

**Experience of respondents in accessing the network**

<b>Access to the Italian Grid</b>	<b>2</b>	<ul style="list-style-type: none"> <li>- Network code not published yet. Temporary rules adopted by the main incumbent lack of transparency</li> <li>- The new tariff system is going to be published by the Regulator before summer 2001</li> <li>- Lack of capacity at the borders especially for spots contracts</li> <li>- Access almost impossible for new comers at Tarvisio (Austrian border) and at Panigallia LNG terminal (saturated end of 2001)</li> <li>- Non spot contracts: significant advantage to negotiate grid access</li> </ul>
<b>Balancing regime</b>	<b>2</b>	- Not directly available; offered under temporary conditions
<b>Access to storage</b>	<b>2</b>	- Storage service offered by Agip (a ENI company) and available for new entrants under temporary conditions

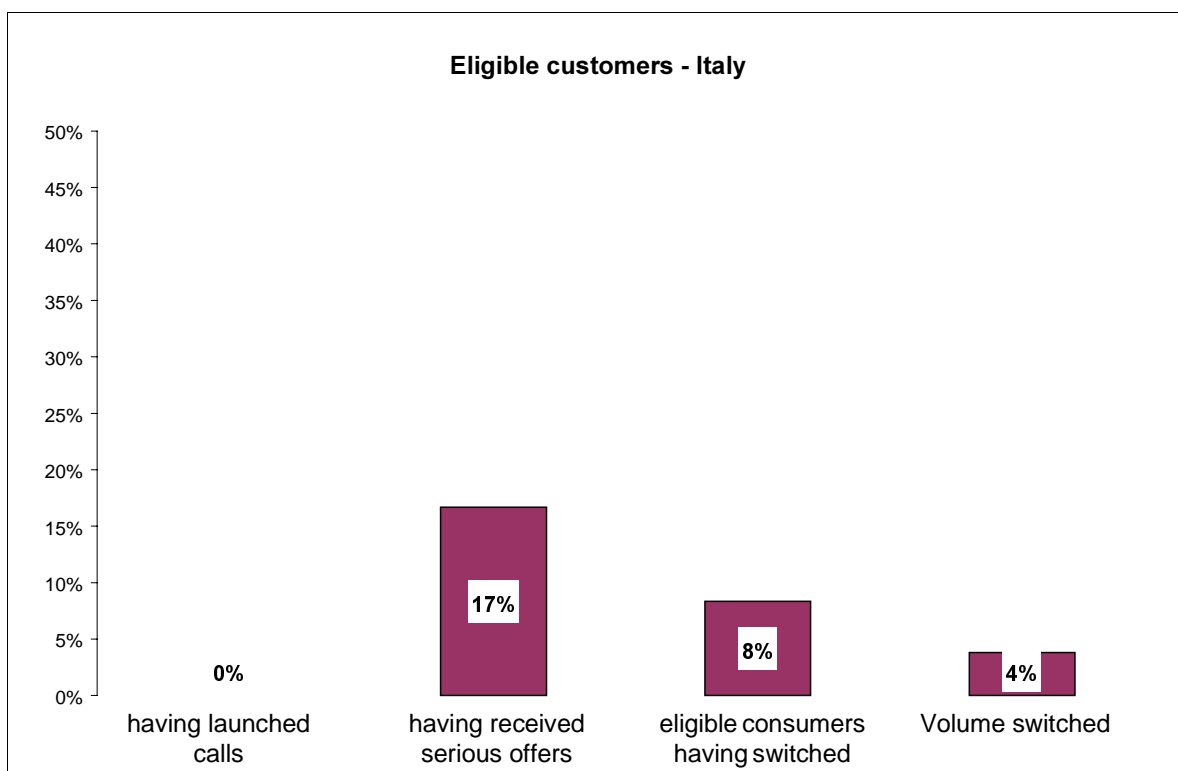
<b>Legend:</b>	<b>4</b> Favorable but not perfect	<b>3</b> Rather Favorable	<b>2</b> Unfavorable	<b>1</b> Major obstacle / strong complaints
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**10.3.2 Extent to which eligible buyers have switched suppliers**

We sought information on the number of offers made to large buyers (including power companies and LDCs for the share of gas dedicated to their eligible customers) together with indication of the switching, which has actually taken place.

In the results presented below please note that the eligible clients interviewed (industrial companies and some LDCs exclusively) represent an amount of ~4.5 bcm, or 9% of the total eligible volume in Italy (~45 bcm). There has been so far little change in the sourcing of gas suppliers.

**Extent to which eligible buyers have switched suppliers<sup>23</sup>**



We have excluded from the results presented above information collected from the national power producers (ENEL, whose gas consumption accounts for almost 20% of the eligible market) or Edison (4% of eligible market). The gas purchasing process of these companies differs widely from processes of the bulk of eligible buyers. ENEL for example has been buying gas on the international market place for a long time (major suppliers: Nigeria, Algeria and SNAM). For Edison, we have described in upper section deals secured by this company to get direct supply from Promgaz; the company is also supplied from its own Italian production. We have reproduced below major reasons stated by eligible customers that led them to stick to their current gas suppliers:

**Lack of rules**

- Eligible customers and potential new entrants find it difficult to contract as rules and tariffs for TPA services are not binding. Transportation tariffs are due to be published soon
- Additionally the main incumbent is the best to fully master the consumption needs of these firms, based on a full understanding of their gas load profiles.

For these reasons few new players have made inroads in the Italian gas market.

**Lack of additional available capacity (especially for spot contracts)**

There is a critical lack of capacity on pipes carrying the gas into Italy especially for spot contracts.

<sup>23</sup> Source: interviews. Answers in % of respondents for first three bars. In % of eligible volume switched for 4<sup>th</sup> bar.

*We received offers of foreign providers who made interesting proposals at the border, but the problem is to carry the gas to Italy, because of all booked available capacity.*

*Eligible gas buyer*

*We have potential clients for gas supply, but we encounter problems because of lack of transmission capacity. But the Libyan pipeline and a new LNG terminal both commissioned in 2004, will set free some transport capacity as well as capacity at entry points.*

*National potential new entrant*

### **Not enough competition between suppliers**

Lack of available capacity prevents competition from being fully effective. Furthermore SNAM, through long-term take-or-pay supply contracts, has already secured gas purchases which seem sufficient to meet most of market demand<sup>24</sup>. In the short to medium-term, national power companies are likely to be the most serious contenders to the former gas monopoly.

### **Not enough co-ordination at European level**

The heterogeneity of systems and principles in European countries make it difficult for Italian firms to buy gas outside domestic boundaries.

## **10.4 CHANGES RESULTING FROM LIBERALISATION**

Changes resulting from liberalisation are visible:

- TPA tariffs and access terms have been voluntarily published by the main incumbent.
- Access to the SNAM transportation grid is growing.
- SNAM's activities have been separated into transmission, storage and trading/marketing. The first two activities are the subject of newly formed companies (subsidiaries of ENI) whilst the latter are becoming a division of ENI.
- Very large gas buyers are restructuring the gas purchasing department and some industrial buyers are approached by potential new entrants.
- Large distributors are pooling gas purchases (consortiums are set up across distributors). The large power companies are restructuring their gas departments.

Changes expected in the near term have to do with:

- Publication of "rules of the game" by the Autorità, including transport costs, access conditions, distribution tariffs concerning the margin available for distribution to eligible clients, cost of supply and wholesale sales to eligible clients.
- An effective unbundling of supply and transport arms of incumbent.
- The development of a regular information system.

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<sup>24</sup> Source: large buyers association

## **10.5 NEW PRODUCTS AND SERVICES OFFERED**

In some cases SNAM has proposed maintenance and other engineering services which see little success (from interviewed clients' standpoint) because customers priority is not increased services but lower prices.

# 11. LUXEMBOURG

- Although regulatory provisions are not complete, the threat of competition has been sufficient to ensure some price reductions

## 11.1 REMOVAL OF BARRIERS

### 11.1.1 Regulatory provisions

The new regulatory provisions have been prepared in March 2001 and came into force in June 2001.

#### 11.1.1.1 *Opening-up of the market*

The threshold for industry is 15 mcm/year (market opening of 51% since August 2000). This is confirmed also for the current year.

All power producers will be eligible unless those among cogenerators having chosen a "tariff preferentiel" (subventions for production employing cogeneration).

From the 1st October 2003 the threshold will be 5 mcm. From the 1<sup>st</sup> October 2008 the threshold will be 2 mcm.

Distributors are eligible only for the volume provided to their eligible customers, but from 2006 also for an additional one third of their total non-eligible consumption.

As a new power plant is due to come on stream in 2001 opening would leap to 80%.

#### 11.1.1.2 *Organisation of access to the system*

The grid access conditions are regulated and tariffs are published under temporary basis until the Regulator will approve them. Capacity is available.

#### 11.1.1.3 *Unbundling (transparency of accounts of integrated undertakings in the sector)*

The unbundling of accounts between supply and transport and distribution costs offers different price formulas.

*"...and there is not discrimination for the access, we have no objections with the present system"*  
large buyer

#### 11.1.1.4 *Regulatory system*

The existence of a single, independent regulator for telecom, gas and electricity (Institut Luxembourgeois de Régulation) should be confirmed soon.

#### 11.1.1.5 *Balancing and storage*

Underground gas storage is not available in Luxembourg.

*“Balancing service is in place and risk management is possible, but has not been used so far by us”*

*Large buyer*

## 11.2 DOMESTIC GAS MARKET AND POSITION OF INTERVIEWEES

SOTEG is the main importer of natural gas in Luxembourg and it provides both the four distribution companies and industrial customers.

Its shareholders are:

### Shareholders of SOTEG

State of Luxembourg	31%
Arbed (large buyer)	20%
Ruhrigas (German main incumbent)	20%
Cegedel (power company)	20%
Saar-Ferngas (German main incumbent)	10%

SOTEG's suppliers are Distrigaz, Gaz de France and Ruhrigas.

No eligible customers have switched.

### Quotes from large gas buyers

*We asked new gas suppliers to provide us with quotations. As SOTEG offered us better conditions we stick to our traditional supplier.*

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*We have not switched because current conditions and prices are more competitive compared to these from new reliable suppliers. Our supplier has increased its supply spectrum and obtained better prices so our supply costs have been reduced.*

*The main obstacle to liberalised market is that there are only 4 major gas producers and this means that there will probably be no real competition on the gas side.*

*The most important is to be sure that there will be no bottlenecks in the pipeline system.*

## 11.3 CONCLUSIONS

No eligible customer has switched to a new gas supplier. So far it seems that gas suppliers show little interest in the Luxembourg gas market. Luxembourg is indeed a small market for gas (750 mcm/yr is the total gas consumption). ARBED represents 1/3 of the total gas market in the Luxembourg and is one of SOTEG's shareholders.

## 12. THE NETHERLANDS

- Despite qualifications about access provisions, a number of shippers have gained access.
- Gasunie has lost 22% market share through TPA and the construction of a new pipeline. The TPA level is higher in the Netherlands than in other countries for the following reasons: tariffs have been published long ago (Jan 99), there is a higher number of eligible buyers than in other countries. 15 shippers have gained to access Gasunie's Grid with 75 different shipper contracts to supply eligible clients.
- Essent had built its own importing pipeline before Aug. 2000.

### 12.1 REMOVAL OF BARRIERS

#### 12.1.1 Regulatory provisions

##### 12.1.1.1 *State of legislative preparation*

The NL Gas Act has been published on September 1999. In August 2000, the DTe (the Dutch Energy Regulator) released its "Temporary Guidelines" for 2001 that were to be issued as the start of a process to establish a framework for TPA conditions in the Netherlands. It was clear from the outset that Gasunie was against many points and concepts contained in the guidelines arguing that they constituted RTPA instead of NTPA, as deemed in the recent Gas Act. During January 2001, Gasunie and DTe issued press statements explaining that they had bilaterally agreed to a 6.5% reduction in TPA tariffs during 2001, and as such, Gasunie would not be expecting to have to change any of its terms and conditions during 2001. This agreement has been strongly criticised by new players and industrial associations.

##### 12.1.1.2 *Opening-up of the market*

The Dutch authorities have opted for a gradual opening of the market. Consumers using more than 10 mcm/year/site are already eligible to choose their supplier today. From 1 January 2002, consumers using more than 1 mcm /year will be eligible, while all Dutch gas consumers will be eligible to choose their supplier as from 1 January 2004. The same thresholds are proposed for CHP as for the other gas consumers. In percentages this will result in the following market opening 2000: 45%; 2002: 51%; 2004: 100%. The Dutch Gas Act (article 1) has the possibility for speeding up the liberalisation process; in that case all customers will be eligible in 2003.

##### 12.1.1.3 *Organisation of access to the system*

The Netherlands opted for a negotiated TPA for transmission. However, access will be subject to regulatory control and the publication of indicative tariffs and terms for transport and necessary ancillary services related to gas transport. Access at distribution level (for captive customers until 2004 and afterwards optional for consumers using less than 170,000 cm/year) will be regulated TPA. For upstream pipelines, negotiated TPA applies under competition law.

#### **12.1.1.4 Unbundling (transparency of accounts of integrated undertakings in the sector)**

The Gas Act stipulates that the gas distribution companies have to be split legally into network managers (gas transmission companies) and licence holders (supply companies). The purpose of splitting these companies is to guarantee the independence of the network managers, to ensure objective and transparent access by third parties to the networks and to guarantee the supply of gas to captive customers.

The main points of this Act are:

- Unbundling of the accounts of the vertically integrated main incumbent (Gasunie) for its transmission, distribution, storage and non-gas activities.
- Chinese Walls
- Legal unbundling between supply and transportation at distribution level. Review in 2 years time.

At this moment Gasunie doesn't handle gas trading and transmission activities in separate companies, however has the intention to legally un-bundle in 2002.

*"We recognise that some aspects of physical separation have been fulfilled. Gasunie has moved its transport department into another building and there are apparently "Chinese walls" put in place between it and the supply group. However, problems as to confidentiality of commercial information, separation of information flows and management separation have not been implemented in practice. According to our knowledge, there still remain some employees within the integrated organisation who have access to all the information (both transport and supply). This obviously does not give the market comfort that Gasunie would not leverage its already advantaged position by transferring information between the departments. Full legal separation is therefore required.*

*Unbundling is the key issue. We believe that most problems currently being encountered by other new entrants and us can be directly attributed to insufficient unbundling. Transportation companies that are sufficiently separated from their marketing affiliates have no incentive to discriminate in favour of one company or another."*

*Foreign global services providers*

With a view to this Act, the DTe has granted (in March 2001) 26 temporary licences to supply companies.

#### **12.1.1.5 Regulatory system**

The electricity regulator (DTe) has become the energy regulator (gas and electricity) subject to Competition Authority/law.

#### **12.1.1.6 PSOs**

There are PSOs for supply of captive and small customers (< 170,000 cm/year); for energy saving purposes; and for sustainability and the so-called "small fields policy".

### **12.1.1.7 Small fields' policy**

The Minister of Economic Affairs in the Netherlands is aware of adverse effects of a liberalised market on the continuation of the small fields' policy. For this reason, at the occasion of the implementation of the Gas Directive in the Gas Act, it has imposed an obligation on Gasunie to continue taking gas from small fields, when offered by a producer. The producer is free to offer his gas to any party in the market. Gasunie may, however, be liberated from this obligation should Gasunie meet unfavourable economic or financial conditions. Improved conditions for small fields offshore have been announced on 29 May 2000 and have become effective on 1 July 2000 and 1 January 2001.

*"This policy states the priority of production from small fields over Groningen production (the major gas field in NL). It has led to the discovery of reserves in total half the size of the Groningen reserves and has proved to be extremely successful, both for the companies as for the Netherlands energy position. But this policy should be ascertained. We would wish strong support from the European Commission in fostering this policy and recommend governments to apply more favourable conditions for the production of gas and oil from small and marginal fields."*

*National Producers Association*

### **12.1.2 Transportation costs**

As will be developed later on, high transportation costs combined with a less flexibility in handling grid access requests by grid operators are considered as a major entry barrier for new entrants.

Gasunie has implemented the commodity service system (CSS), which distinguishes between two classes of client:

- 1) **Single supplier off take contract** for customers supplied exclusively by Gasunie commercial branch
- 2) **Multiple supplier off take contract** for customers choosing to buy gas also from other suppliers (either mixed supply by Gasunie and a third party or exclusive third party).

New players argue that TPA prices are higher than transport prices for customers supplied exclusively by Gasunie commercial branch.

These new players argue as well that the hourly balancing regime<sup>25</sup> makes it difficult to manage additional capacity for TPA customers, so they must contract supplementary services to limit penalties.

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<sup>25</sup> Hourly flexibility can be used to set off a short imbalance between the gas flow of third parties at the in-take point and the gas demand of the customer at the off-take point. Hourly flexibility is a virtual gas storage, which entitles the customer to have capacity available for a certain period in addition to the capacity that is supplied at that time by the other gas supplier and possible incidental capacity. This capacity can be consumed as long as the volume hour flexibility is greater than 0. Each m<sup>3</sup> that is consumed under the Capacity Hour flexibility is deducted from the Volume Hour flexibility. If, during any hour, less is consumed than the capacity supplied at that time by the other gas supplier, then the Volume Hour flexibility will be increased by the minimum of this under-consumption and the Hourflex Capacity until the contracted Volume Hour flexibility is reached. The tariffs for the hour flexibility service are published on Gasunie website. Souce: Gasunie website

Based on new entrants and eligible customers' opinions, different pricing rules between Gasunie and TPA customers create distortion of competition. To be competitive a new entrant must have a very low gas price and can only buy it abroad (new national fields are rare and existent ones are already full contracted).

Based on Gasunie comments penalties are not higher for TPA customers than for Gasunie customers. Also, the same metering requirements apply for Gasunie customers and TPA customers.

The DTe, the regulator of the Dutch energy market, after receiving complaints about the discriminative TPA tariffs system, has started (in March 2001) an investigation into the tariffs that Gasunie charges for its transmission, quality conversion and hourly flexibility services. The central focus of this investigation will be the relationship between the costs of the various services and the tariffs.

The DTe expects to receive the conclusions of this research before the summer and will then present these to the market players for consultation.

### **12.1.3 Balancing costs**

New players consider penalties associated for imbalance very high and discriminative. Penalties associated to the hourly balancing regime are considered restrictive.

Under the pressure of industrial associations and new entrants, the DTe has decided (March 2001) to carry out research into the storage and balancing of gas in the Netherlands, to establish what balancing regime provides the best support for trade on the gas market, given Gasunie's transmission infrastructure. Consideration will be given in this regard to the question of whether the present system of hourly balancing is necessary. In addition, research will be carried out to establish what effect a more liberal balancing regime will have on, for instance, the transmission capacity of Gasunie's high-pressure network.

The DTe expects to receive the conclusions of this research before the summer and will then present these to the market players for consultation.

### **12.1.4 Access to storage**

The TPA regime for gas transportation includes "services necessarily associated with this". These include load factor conversion i.e. flexibility and services related to gas quality and pressure. According the Article 18.2 storage companies with dominant position (NAM, BP Amoco and Gasunie) are required to give new parties access to their gas storage installations.

The storage capacity belonging to BP Amoco and NAM is currently tied up in long-term contracts with Gasunie.

*The contracts may be abusive in several ways. First, Gasunie could cite the lease payments to NAM and BP Amoco as its "cost basis" for determining third-party storage rates. This could provide an open licence for the exploitation of market power because NAM and BP Amoco could set lease payments at monopolistic levels. Gasunie would be willing to pay them, knowing that it could pass them on to third parties. Moreover, ownership connections between NAM and Gasunie could mean that Gasunie does not feel the burden of NAM's monopolistic lease payments. Second, Gasunie could set monopoly rents sufficiently high so that third-party access to storage is made economically unfeasible, thereby denying storage access to third parties. Third, specific lease terms other than the price could restrict third party access. Competition*

*authorities have found that several types of provisions in long-term contracts can aggravate market power.*

*From "DTe implementation of the Gas Act", Brattle Group, December 2000*

After receiving many complaints from new entrants the DTe, has decided (March 2001) to carry out a research into gas storage focused on determining how much storage capacity is available for third parties.

DTe expects to receive the conclusions of this research before the Summer 2001 and will then present these to the market players for consultation.

### **12.1.5 Other entry barriers**

There are difficulties for new comers to access to gas resources as most of the Groningen fields capacity has been contracted through long-term TOP contracts.

Besides Gasunie meets a high percentage of gas demand in the Netherlands through long-term supply contracts. It is therefore difficult for new players to gain market share in the Netherlands.

Financial links between Gasunie and main domestic producers reinforce this issue.

## **12.2 EMERGENCE OF NEW PLAYERS AND THEIR STRATEGIES**

### **12.2.1 Brief remarks on Dutch gas industry**

The natural gas market in The Netherlands may be divided into two distinctive parts: one served by distribution companies and the other served by Gasunie (the main incumbent)

Most of the distribution companies are public limited companies owned by local authorities. According to an agreement between the government and Gasunie these distributors buy gas from Gasunie and provide gas to residential, commercial and industrial customers. Among these companies only a small proportion are pure gas companies: the biggest are horizontally integrated companies distributing also electricity and or water.

The agreement between Government and Gasunie obliged it to supply unlimited gas quantities to distributors that were required to buy gas exclusively from the main incumbent. Currently distribution companies are trying to find other sources of gas supply. They are creating purchasing pools to increase gas-buying power and to exert pressure on gas prices. In 1999 Gasunie unilaterally agreed to shorten the exclusive contracts (for the non eligible customers) to the distribution companies to match with the 100% market opening date of 2003/04.

Gasunie, which handles both gas trading and transmission in separate companies, is owned jointly by the State and private companies:

### Gasunie's shareholders

Shareholder	% of shares
Energie Beheer Nederland B.V.(shares are owned by Government)	40%
Esso Holding Company Holland, Inc	25%
Shell Netherlands	25%
Dutch State	10%

Gasunie sells gas to distribution companies as well as to large customers and to power producers. Its main supplier is NAM, a national company owned equally by Shell and Esso.

An agreement reached in 1963 between EBN, Shell, Exxon and NAM states that Gasunie is the central entity for transporting and marketing gas in The Netherlands and NAM is the producer of Groningen gas (major field in the country). The Dutch gas industry is therefore strongly integrated, as players active at upstream level are majority shareholders in the supply and transmission branches of the main incumbent

### Gasunie. Gas supplies (%)

Source of gas	1994	1995	1996	1997	1998	1999	2000
Groningen	42%	41%	45%	35%	29%	26%	26%
Other Dutch fields	54%	55%	51%	60%	66%	67%	67%
Imports	4%	4%	4%	5%	5%	7%	7%

## 12.2.2 New players penetration level on the Netherlands market: key results

Despite many complaints from potential or current new entrants against discriminative terms on grid's access for the third parties, the Netherlands is one of the European countries in which new suppliers presence is the highest:

- 15 shippers (trading companies, producers from the Netherlands and from abroad) have gained access to Gasunie's grid with 70/75 different shipper contracts to supply eligible clients.
- 3 others (at least) have tried with no success
- 1 other tried with partial success

Many foreign players having obtained access to Dutch grid have affiliates companies in the Netherlands.

Essent has strong ambitions in the Dutch gas market and has built its pipeline in co-operation with Delta<sup>26</sup>) for its own gas needs (power plants) and to supply eligible and non eligible customers. Thus it competes directly with the Gasunie transmission division.

<sup>26</sup> Local distribution company

### 12.2.3 New players apparent strategies

New players current strategies are to exert lobbying actions either directly or through appropriate associations aiming at a full market liberalisation and a removal of entry barriers (especially concerning TPA tariffs system, considered very discriminative against new entrants).

## 12.3 EXPERIENCE OF ACCESSING GRID

### 12.3.1 Extent of TPA by country

Many requests for transport of gas to the Dutch market, particularly from the United Kingdom, were received in 2000 and a substantial number have been implemented (more than 75 until May 2001, source Gasunie).

Gasunie Transport Services answered to ~100 quotations requested for transportation by 25 different parties. Out of these, 23 have resulted in transmission contracts in 2000. These contracts serve around 50 end-users end of 2000; the number of end-users served with third-party gas is expected to rise to around 100 in 2001.

As seen below, the percentage of third-party transport (11% in 1999) strongly increased in 2000. The Netherlands is one of the European countries where the third-party transport percentage on domestic territory is the highest. 22% of gas volume carried (in 2000) coming from third-party contracts on the Dutch grid is quite a remarkable percentage when one takes into account that only 45% (in volume) of the gas market is opened for eligibility.

Gasunie key figures<sup>27</sup> bcm

	1996	1997	1998	1999	2000
<b>Total sales</b>	<b>93,8</b>	<b>84,0</b>	<b>79,8</b>	<b>75,4</b>	<b>73,0</b>
- home market	47,9	43,9	43,4	40,4	36,4
- export	45,9	40,1	36,4	35,0	36,6
<b>Third-Party transport</b>	<b>9,8</b>	<b>10,8</b>	<b>9,0</b>	<b>9,4</b>	<b>12,1</b>
- transit	8,3	8,4	6,6	5,0	4,1
- transport in the Netherlands	1,5	2,4	2,4	4,4	8,0
<b>Amount of TPA in the Netherlands (as a % sales in the home market)</b>	<b>3%</b>	<b>5%</b>	<b>6%</b>	<b>11%</b>	<b>22%</b> <sup>28</sup>

Below key reactions of new gas operators on the Dutch market are summarised:

<sup>27</sup> Source: Gasunie annual report

<sup>28</sup> Essent uses a new short pipeline section (Zebra) separate from Gasunie system. However to Gasunie's knowledge from past deliveries, the area's off take could add up to perhaps max. 5% of the 22%

**Summary of respondents' views on accessing the grid**

<b>Access to the Dutch Grid</b>	<b>3</b>	- TPA on Gasunie grid amounts to 22%
<b>Balancing regime</b>	<b>1</b>	- The entry for foreign gas is limited, in practice today, to two injection points (Noordbroek in the North and Zelzade on the South) - Hourly balancing technically difficult to observe and causing exorbitant balancing costs for new entrants - Associated penalties too high - Global feeling (by new entrants) that Gasunie rules are anti competitive
<b>Access to storage</b>	<b>2</b>	- General terms and tariffs are considered not competitive (by new entrants); tariffs for contracting flexibility are very high - Third parties have not yet direct access to storage
<b>Legend:</b>	<b>4</b>	Favorable but not perfect
	<b>3</b>	Rather Favorable
	<b>2</b>	Unfavorable
	<b>1</b>	Major obstacle / strong complaints

The new entrants' main complaints can be synthesised as follows:

- Discrimination on transport and modulation tariffs against customers buying gas from new entrants
- Anti-competitive hourly balancing and non cost related associated penalties
- Swap not yet available for third parties

**Access to the Dutch grid: quotes from prospective or successful grid users**

**Access into the Dutch grid**

*Compared to other countries, the access regime to eligible customers is relatively detailed. We have been able – with much work – to secure access to the system to enable delivery to a distribution company. However, we have also had experience of negotiating for the transit of gas through the Netherlands from Germany to Belgium. In the end, this deal was executed. However, we are paying for the transport of gas where that gas is moving against the prevailing flow in that part of the system. That is, we are paying to Gasunie a charge for transportation when in fact that transportation is saving costs for Gasunie.*

*Gasunie should apply the same rules towards its own customers as it does to third parties. The current situation is an obvious example of a discriminatory system in practice.*

*As Gasunie has contracted more than 95% of domestic gas and other entry points have capacity or flow problems, new players have made limited inroads to carry gas into the Netherlands. For example at Balgzand (NorthWest) all capacity has been contracted by Gasunie, or at Maasvlakte (West) no extra capacity is available.*

**Transmission tariffs**

*Transmission-tariffs are distance-related based but calculated on a different point to point basis for the two systems: the first for Gasunie customers and the second for TPA's customers. The TPA system calculates the distance from the entry point to the customer, while the COM<sup>+</sup> (Gasunie clients' system) system calculates the tariff from the closest entry point. Therefore Gasunie's supply business is not required to sign transportation agreements with the TSO arm and is obviously not affected by any changes in its exit points, unlike new entrants.*

### Access to the Dutch grid: quotes from prospective or successful grid users (cont'd)

*Although the tariffs for the services are the same for Gasunie's customers and TPA customers the overall costs are different, on account of a different calculation procedure. The TPA system is considerably more expensive than that for Gasunie, which clearly discriminates against new entrants*

*Consequently the only way new entrants can compete in the market is to secure gas supplies at a far lower cost than Gasunie. However, the Dutch small fields policy makes it extremely difficult to for any company, other than Gasunie, to economically purchase gas in the Netherlands.*

*Gasunie doesn't publish sufficient information that would allow market participants to understand exactly how the tariffs are derived from underlying costs. This means that market parties find it very difficult to make an informed decision regarding the type of contract most suitable for its needs in the Gasunie system. For example, a market party, which contracted with an end-user for 5 years, has insufficient information to decide whether to buy a 5-year transport contract or five 1-year contracts instead.*

*As access to upstream gas in the Dutch market is not readily available, market parties rely on imports to satisfy their customers' needs. Gasunie has recently gone some way to provide the market with capacity information at the principal entry points into the Netherlands, which it posts on its website. The data is updated on a monthly basis. In order to make informed decisions, market parties require information on a more timely basis and forecasts of such capacity further out in time.*

#### **Balancing Regime**

*The hourly balancing regime is not cost-reflective, and therefore is restrictive to trade and discriminatory, for a number of reasons:*

- Firstly, Gasunie charges for any imbalance in the gas volumes (if a market party is short, i.e. more gas has been taken by a customer than the amount put in by this market party) as if that gas came from the Groningen field. It charges not only for the commodity, but also for the transport from Groningen and a capacity charge from the Groningen field. This certainly does not reflect actual costs incurred by Gasunie and represents a penalty for a market party. It is noteworthy that Gasunie does not charge its own customers such a penalty (provided their consumption is below their contracted maximum) for any hourly variations in load, i.e. they do not have to nominate in advance, unlike third parties.*
- Secondly, Gasunie does not recognise the portfolio effect of mutually offsetting imbalances for third parties. For example, if two market players are supplying their respective customers and on a given hour one customer has taken x units of gas more than its nomination and the other customer has taken x units of gas less than its nomination, each third party supplying these two customers will be charged an imbalance penalty. Obviously, from the system operator's point of view, the system is in balance according to the summation of the nominations (portfolio effect), but it nonetheless charges market parties a penalty that it would not have charged its own customers. Hence, Gasunie uses the benefit of its portfolio of customers in a discriminatory manner. Moreover, such a practice can be regarded as effectively allowing cross-subsidisation to the detriment of third parties.*

*Hourly balancing is not required for the efficient operation of the system, particularly in developing gas markets where competition has not been established, and is extremely onerous to new entrants who are exposed to higher balancing costs and associated penalties.*

### **Access to the Dutch grid: quotes from prospective or successful grid users (cont'd)**

*We have also experienced rule changes to the available balancing mechanism, as offered by Gasunie, without consultation or even any prior notice. Hourly Flexibility (HF) is a balancing tool based upon a virtual gas storage facility, which is important for peak shaving. After renewing a contract with an end consumer, we found out that the methodology of HF had been changed without notice, which impacted on the value of our contract, which was already based on an extremely tight margin. This added uncertainty is another additional risk facing new entrants.*

*Imbalance penalties are extremely onerous to the extent that new entrants are more or less forced into taking Gasunie's HF service. Penalties are supposedly based upon Gasunie's gas prices, i.e. the COM<sup>+</sup> system (prices and terms for Gasunie's clients); for the purchase of additional capacity in relation to the Groningen field which already include the costs of some services in the price. Therefore, in the case of incurring imbalance penalties, this will result in new entrants paying twice for the same services, e.g. blending, which is clearly discriminatory.*

*Gasunie's balancing charges are not volume-related, are non-cost reflective and can be a factor of a hundred or more in excess of UK charges. There is no apparent justification for this punitive level of charging.*

#### **Access to storage**

*NAM, BP-Amoco and Gasunie enjoy dominant positions in the Dutch market as regards storage facilities and services. Gasunie has purchased long-term storage under the contract from NAM and BP Amoco. Market parties have no information as to whether the storage arrangements offered by Gasunie (via the above mentioned parties) are cost-reflective.*

*There are several ways in which storage contracts on offer may be made unacceptable for third parties:*

- *Lease payments as the costs basis – may be employed in a discriminatory fashion;*
- *Given the monopolistic nature of the gas storage market Gasunie is able to fix prices at a level which would make access for third parties economically unfeasible;*
- *Lease terms - other than the price – may be specified in such a fashion as to restrict third party access.*

*Transparency is required as regards the availability of storage capacity to third parties. Unused storage should be made available to the market. We suggest the possibility of auctioning available capacity should be considered.*

After receiving questionnaires from potential new entrants and main incumbent we asked Gasunie to provide some extra explications about newcomers' complaints:

### **Access to the Dutch grid: the Gasunie<sup>29</sup> position**

*Gasunie considers that it is incorrect to see the two classes of clients (Gasunie's customers and multiple supplier off take point) as evidence for discrimination with regards to transmission charges. The CSS does not discriminate, it uses the same tariffs for identical services. Based on these two cases of Gasunie gas customers the conclusion that Gasunie discriminates between its customers and TPA customers in terms of transmission charges is incorrect.*

*The Gasunie approach to negotiated TPA has shown itself to be successful. Any complaint is taken seriously by Gasunie to improve the TPA system for its customers. Many improvements have been made since the introduction of the CDS access regime in January 1999.*

*With DTe (Dutch energy regulator) it was agreed to fully support a study on the present hourly balancing regime and storage.*

*The Gasunie approach of TPA with all its additional safeguards such as firewalls and external auditing has shown that it is possible to guarantee that commercially sensitive information will be and is not abused.*

*Gasunie is aiming at further improvements for non-discriminatory access to the system by drafting a contract between the trading and the transportation section.*

### **12.3.2 Extent to which eligible buyers have switched suppliers**

We sought information on the number of offers made to large buyers (including power companies and LDC) together with indication of the switching that has actually taken place. Unfortunately we did not receive enough replies from eligible clients and distributors, so we can only estimate the TPA volume, based on interviews of industrial association and Gasunie:

- Gasunie says the amount of third-party transport in the Netherlands amounts to 17% of gas volume carried (A further 5% is carried through a new import pipeline). 30% of the eligible customers now purchases gas from other suppliers. Half the sales made by Gasunie to eligible customers have been lost to 15 different new suppliers.
- A very large industrial association recognises that 10-20% of its members has switched.

The Netherlands is one of the European countries where the extent to which eligible buyers have switched suppliers is the highest.

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<sup>29</sup> Please note that Gasunie has published on its website clear and detailed information concerning TPA procedures and available capacities at entry points (on monthly basis). A Transport Protocol has been also developed to describe in detail the progression from initial contact to a contract. It is based on following principles:

- Transparency and non-discriminatory (first come, first served)
- Efficient use of the net is paramount: declaration of sales contract
- Investment is only undertaken if economically viable.
- Transmission rights once acquired must not be abused.

Source: Gasunie website

## 12.4 CHANGES RESULTING FROM LIBERALISATION

Major changes resulting from liberalisation are already visible:

- TPA tariffs have been published.
- Level of third-party transport in the Netherlands amounts to 22% of gas volume carried.
- 50 end-users have switched to new suppliers as of end 2000, an amount expected to double in 2001.
- Legal unbundling of activities of main incumbents, even though new comers judge these progresses insufficient.
- Very clear reporting of main incumbent on performance by activities (sales, TPA) unlike in many other European countries.
- Large distributors can buy gas from other suppliers and are pooling purchasing services.

No important changes are expected in the near term except:

- Increased pressure on main incumbents from current and future new players through lobbying actions to change TPA terms.
- Results from current investigations led by DTe on pricing conditions and terms of services (transmission, balancing and storage) are expected for further action
- A risk that more market liquidity causes prices volatility.

*“Market liberalisation should not loose focus on its primary objectives: maintaining security of supply. More market liquidity will result, but market liquidity is not the main objective and/or the cure in itself for everything that goes wrong in market liberalisation (see California requiring long term commitments).*

*However, liquidity does guarantee more price volatility and/or more premium for risk management tools, probably even higher transaction costs and does not support large new investments now based on long term take or pay contracts.”*

*quote from a respondent*

## 12.5 NEW PRODUCTS AND SERVICES OFFERED

Once Gasunie's Transport Services has reached agreement with a shipper – as well as carriage, the contract may also cover services such as capacity, back-up, quality conversion and, in future, underground storage.

There is also a will from large buyers and traders to reduce the length of supply contracts and more generally to increase the flexibility of gas purchases so that Gasunie foresees to relax the condition for short-term contracts <sup>30</sup>.

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<sup>30</sup> Source: Gasunie website

## 13. PORTUGAL

- This small market is not yet open

### 13.1 SOME CONSIDERATIONS ON THE GAS MARKET

The gas market in Portugal is very small.

Transgas is the main operator responsible for the high-pressure network. It has been set up in 1993 and its major shareholder is Gas de Portugal. Previously Gas du Portugal was in charge of supply and transmission.

Industrial and commercial consumers with a gas consumption profile of over 10 mcm are served directly by Transgas, as are the 4 distribution companies in Portugal (Gas de Lisboa, Portgas for the Northern region, Lusitania Gas for the Center region, Set gas for Southern region) which in turn sell to smaller size distribution companies (less than 2 mcm purchased annually).

In 2000 the government merged the oil and gas operators (all public-owned) in Portugal with the intention to privatise them. A holding was set up (Galp-SGPS) in which Electricite du Portugal is the major shareholder. ENI took 33% of the capital. This holding regroups the interest of the Portuguese government in Gas du Portugal (gas) and Petrogal (oil activities). To our knowledge this privatisation has not taken place yet.

### 13.2 REGULATORY PROVISIONS

#### 13.2.1 State of legislative preparation

Portugal is an emergent market and has applied for derogation. The directive will not be implemented before 2007.

#### 13.2.2 Opening-up of the market

The opening of the Portuguese gas market is scheduled for 2007.

#### 13.2.3 Organisation of access to the system

Not yet decided.

#### 13.2.4 Unbundling

Not yet decided.

#### 13.2.5 Regulatory system

Possibly an independent regulator for gas.

### **13.2.6 PSOs**

Not yet decided.

### **13.2.7 Access to storage**

Currently, no gas storage facilities available in Portugal.

## 14. SPAIN

- Vigorous action taken to open the market, even before Aug. 2000
- A gas-release programme is being introduced to promote competition
- The regime is seen as more favourable than in many countries
- 67% of eligible buyers in our survey are in process of switching to a new supplier, including the new commercial division of Gas Natural

### 14.1 REMOVAL OF BARRIERS

#### 14.1.1 Regulatory provisions

##### 14.1.1.1 *Opening-up of the market*

Spanish Government has reduced the consumption threshold for eligibility several times. The latest change was in June 2000 (Royal Decree of June 2000) which states that all power generators competing in the electricity market and all other large customers using more than 3 million m<sup>3</sup> /year are eligible (72% of the market). On January 1<sup>st</sup> 2002 the threshold will be reduced to 1 million m<sup>3</sup> /year. On January 1<sup>st</sup> 2003 the entire market will be fully liberalised, well before schedule set by the current European Directive.

##### 14.1.1.2 *Organisation of access to the system*

A regulated TPA regime: The Ministry of Economy shall issue the necessary provisions to establish the rates and fees for the basic services for third party access, through a Ministerial Order, following a resolution adopted by the Government Committee for Economic Affairs. It shall set the concrete values for those rates or a system to determine and automatically adjust them. Such rates and fees for basic third party access services shall be a maximum ceiling. Transportation and distribution companies must notify the Ministry of Economy of the rates they actually apply. This information shall also be made available to any Autonomous Regions that request it with regard to their territorial scope. The differences between the maximum rates approved and those, which the transportation and distribution companies may possibly charge under the maximum prices, shall be borne by the transportation and distribution companies.

Transporters that deliver gas to the system and traders must diversify their provisioning when the proportion of their supplies that come from the same country is over 60 per cent when all their supply provisioning is added together. The Ministry of Economy shall develop the conditions for the fulfillment of this obligation in regulations, taking into account the market situation, and it may modify this percentage, making it higher or lower depending on the evolution of international natural gas markets.

##### 14.1.1.3 *Unbundling (transparency of accounts of integrated undertakings in the sector)*

The exclusive corporate purpose of firms carrying out one or more of the regulated activities (regasification, strategic storage, transportation and distribution), must be solely to carry out those activities and they cannot, therefore, carry out trading activities. The sole corporate purpose in the gas sector of companies trading natural gas must be that activity and they cannot conduct any

regasification, storage, transportation or distribution activities. Natural gas companies carrying on more than one of the business regulated activities shall keep separate accounts for each one in their accounting, just as would be required if these activities were carried out by different companies, in order to avoid any discrimination, cross-subsidizing of activities and distortion of competition. Likewise, transporters must keep separate accounts for their operations to purchase and sell gas and distributors for their tariff trading.

In Spain a new legal structure for the supply division of main incumbent has been set up: Gas Natural Comercializadora, which is different from the legal structure of the transmission division: Enagas

New set of measures has been taken in June 2000 in order to increase competition in the domestic gas market.

The current legislation mentions that any operator should not hold more than 35% in Enagas, the Transmission System Operator, and should limit its market share for gas supply in Spain to 70% of the total consumption. New players consider these positions as protecting too much Gas Natural current dominant position.

#### **14.1.1.4 Regulatory system**

The National Energy Commission (Comisión Nacional de Energía – CNE) is the dispute settlement authority and has responsibilities in relation to the regulation of the gas, oil and electricity sectors (in co-operation with authorities responsible for fair trading and general competition law). However, the Ministry of Economy has the main role in overall gas market regulation including in relation to approval of tariffs and granting of authorisations for new installations.

#### **14.1.1.5 PSOs**

Gas is considered an activity in the general economic interest.

The supplies in the hydrocarbons sector are especially important for the progress of economic life. That means the State must safeguard their security and continuity and it justifies the obligation to keep minimum security stocks for natural gas. An obligation is imposed on transporters, suppliers and eligible customers to maintain back-up reserves for at least 35 days of consumption/supply (excluding alternative supply possibilities).

Another measures taken into account in the law, related to the general economic interest qualification are:

- Obligations to connect and supply
- Obligations to maintain quality levels set by the law
- Obligations to maintain and where necessary enhance capacity within exclusive supply areas in order to enable connection of customers requesting supply.

#### **14.1.1.6 Gas release program**

In order to promote competition, the Spanish Government established a release program for a 25% of the gas contracted with Algeria and delivered to Spain through the GME.

This gas release program (Regulation system) from the GME should be in place before Summer 2001 and will extend for 3 years - 2001 to 2003 - providing greater operation flexibility than the ones available internationally (because of larger quantities and longer periods).

### 14.1.2 Transportation costs

TPA tariffs are regulated and have decreased twice along 2000. Some large gas buyers (i.e supply pressure above 16 bar and more than 350 million of m<sup>3</sup>/year, or more than 1 million m<sup>3</sup>/day) have obtained price reduction, but there is a lack of legislation especially concerning:

- a network code,
- TPA tariffs. A new integrated economic system is now being developed and it is likely to be approved by the Government in a few months. According to the law, tariffs, rates and fees must be set in such a manner that they are worked out on the basis of the following criteria. They should:
  - a) Ensure the investment made by the owners is recouped in the space of the useful life of the facilities.
  - b) Allow reasonable return on the capital invested.
  - c) Determine the remuneration system for operating costs so that incentives are given for efficient management and enhanced productivity, which must be partly passed on to users and consumers.
  - d) Not produce any distortions between the system of supplies under tariffs and the non-tariff system.

### 14.1.3 Access to storage

Storage is a service offered by the TSO (Enagas). In all TPA contracts (including LNG) a 10 days storage service is included in the tariff.

Below are detailed current storage capacities as well as key information on major storage units<sup>31</sup>:

Name	Situation	Type	Number of fields	Active since	Cushion gas storage capacity	Working gas storage capacity	Injection capacity	Extraction capacity
Serrablo	Huesca	Depleted gas field	5	1991	420 Mm3 (n)	495 Mm3 (n)	100.000 m3(n)/h	150.000 m3(n)/h
Gaviota	Vizcaya	Depleted gas field	5	1994	1645 Mm3 (n)	780 Mm3 (n)	187.500 m3(n)/h	208.333 m3(n)/h

### 14.1.4 Congestion issues on grids entry points

The Spanish gas infrastructure has five entry points for natural gas in Spain: two gas pipelines (Lacq-Calahorra in the north and the Maghreb-Europe pipeline in the south) and three regasification plants (Barcelona, Cartagena and Huelva).

Despite the continuous works to enlarge capacity at existing entry points Spain has currently a lack of infrastructures that make it difficult to new agents the access to the natural gas system on the short term.

<sup>31</sup> Source: Sedigas

**LNG terminals**

Enagas owns the three LNG terminals:

- Huelva (Andalously) on the Atlantic coast
- Cartagena (Murcia) on the Mediterranean coast
- Barcelona (Catalogna) on the Mediterranean coast

**Gas origin by LNG terminal**

Barcelona	Cartagena	Huelva
Algeria	Algeria	Algeria
Libya		Nigeria
Abu Dhabi		Libya
Trinidad y Tobago		Abu Dhabi
		Trinidad y Tobago
		Qatar
		Australia

To cope with the need of future domestic demand three new LNG terminals are in project:

- Bilbao, (Pays Basque)
- Valencia
- El Ferrol, (Galicia).

**14.2 GAS PLAYERS AND THEIR STRATEGIES**

**14.2.1 Brief remarks on energy sector in Spain**

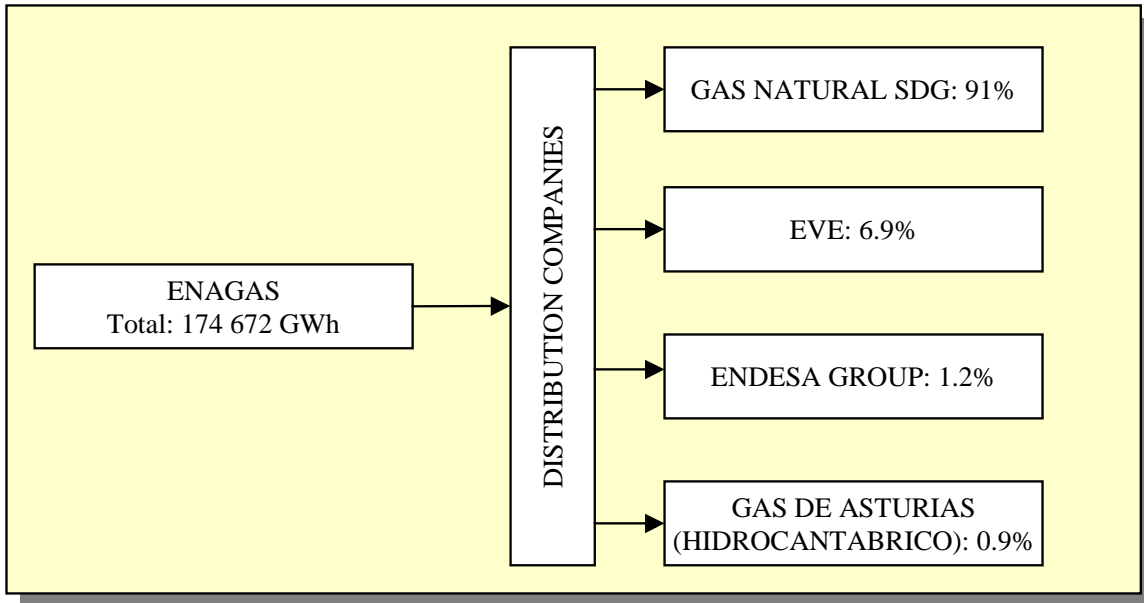
In Spain, the natural gas market has been developed later than in other European countries, like UK, France, Netherlands, Germany... Some of the reasons could have been the warmer climate, the lack of domestic sources of natural gas and the high dependence on external supplies.

Nevertheless, this sector has recently grown up really fast. The natural gas represents a current share of 11% in the primary energy demand of the country, which is significant even though lower than EU average. Furthermore, this proportion is expected to increase, mainly due to the electricity sector (CCGT: Combined Cycle Gas Turbine).

As a result of the historic evolution, the natural gas industry is concentrated around the Gas Natural-Enagas group, which has a strong position at all stages of the Spanish gas chain. But after the Royal Decree Law 6/2000, dated on 23<sup>rd</sup> June, this situation is becoming different.

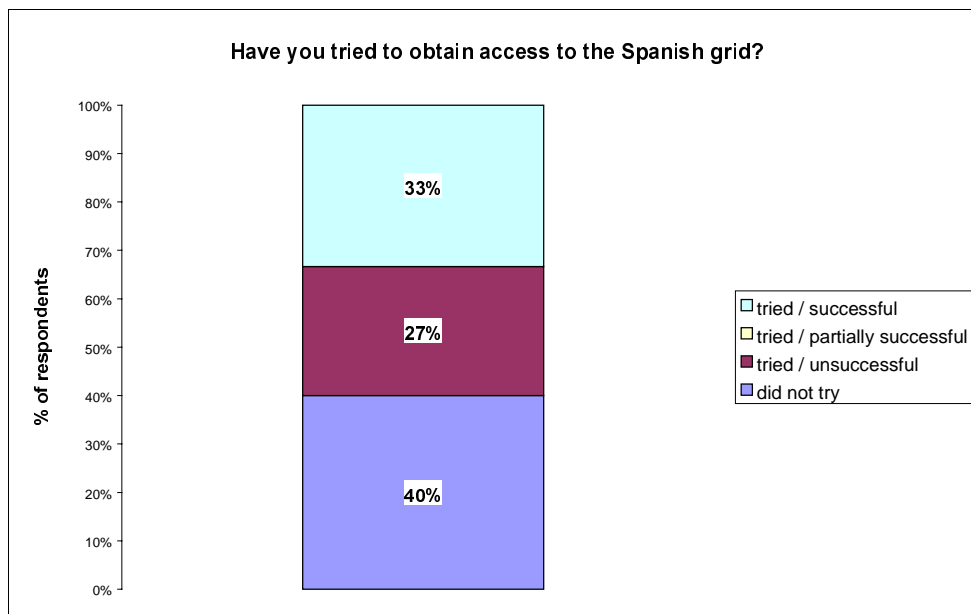
One of the main measures of this Royal Decree imposes that any agent should not hold more than 35% in the shareholding of Enagas (Transmission System Operator). This measure, combined with the prohibition to incorporate gas to the system in a proportion above the 70% of the domestic consumption, and the opening of the 25% of the Algerian gas imported by Enagas (≈16% of Spain’s consumption) to retailing companies that have been awarded licences to trade gas, gives to other agents, incumbents and new agents, the chance to play a more important role in the market.

The chart below gives a picture of the Spanish gas market as of late 1999.



### 14.2.2 New players penetration level on the Spanish market: key results

Out of the sample of 15 potential new gas suppliers<sup>32</sup> for which we collected information on their interest in the Spanish market, 5 companies have succeeded in accessing the grid.



<sup>32</sup> The sample companies on which we collected information related to the Spanish market is made of Aquila, BP Gas, Centrica, Distrigaz, Edison, Enron, Gasunie, GDF, OMV, TFE, TXU, SNAM, Shell, CEPSA, Endesa

Active **national new players** at present are:

- CEPSA, which has been the first operator to take advantage from gas liberalised market using the ENAGAS network to carry Algerian gas into Spain for its own consumption only (after long negotiations with Government it obtained a reduction of TPA fee),
- The supply–marketing arm derived from unbundling of former monopoly company,
- An affiliate of a domestic large power utility, which has entered the market in early 2001 with very few initial customers.

**Successful foreign players** are:

- Two very large vertically integrated companies, BP and Shell (they have entered the market in April 2000 for the first one and November 2000 for the second one).
- A third one, SNAM, has gained an important gas supply contract (1.5 bcm) which will start in 2002 to provide gas to CCGT power plants.
- A fourth company is building with local partners a CCGT power plant and therefore has asked for a long time grid access to supply gas. Up to now access has not been secured yet, due to declared lack of capacity from the grid operator.

The length of the new contracts ranges from 1 to 2 years on average.

As said before market open for eligibility accounts for 72% in volume of the total gas consumption in Spain. In 2000 out of these 72%, 13% of eligible volume (equivalent to 16 000 Mte) has been switched to a retailing company, i.e. a company having a gas-trading license in Spain (23 as of today):

- 2/3 switched to Gas Natural Comercializadora
- 1/3 to other new players.

<b>Spanish gas market: key characteristics</b> <sup>33</sup>	<b>2000</b>	<b>2001 (forecast)</b>
Natural Gas consumption	169 000 Mte	187 600 Mte
Eligible volume (% of total gas market)	67% until June 2000, 72% from June 2000	72%
<b>Volume switched (as % of total gas market)</b> <sup>34</sup>	<b>16 000 Mte (9%)</b>	<b>69 700 Mte (37%)</b>
- of which volume switched to Gas Natural Comercializadora	10 700 Mte (6%)	NA
- of which volume switched to other companies	5 300 Mte (3%)	NA

Some regulatory provisions publications have not been published yet. Therefore not all of the 23 companies having a gas-trading license in Spain<sup>35</sup> have started to develop their activities.

<sup>33</sup> Source: Enagas

<sup>34</sup> The ENAGAS definition is: volume supplied by either Gas Natural Comercializadora or by companies having a gas trading licence to operate in the liberalised market

<sup>35</sup> amongst which Enron España Energía, Union Fenosa Gas Comercializadora, Naturgas Comercializadora, Iberdrola Gas, Hidrocantabrico Energia, BP Amoco Gas España, Comercializadora Iberica de Gas, Endesa Energia, Shell España, Cepsa Gas Comercializadora, Gas Natural

During the first Quarter 2001 new suppliers got 7% of the total market and a gas release program will grant new players an additional 8% of the market<sup>36</sup>.

### 14.2.3 Main incumbent's behaviour

Respondents to our study (large buyers, traders, and large buyers association) see some changes in main incumbent's behaviour due to liberalisation:

- Availability to offer better prices in new contracts
- More commercial attitude, more flexibility
- Granted access to 4 new entrants (but TPA is small in volume in 2000, even though strongly increasing in 2001)
- The commercial branch is offering premiums (tariffs discounts) to large buyers to secure the customer base
- Some positions have been toughened to react against potential competition.

## 14.3 EXPERIENCE OF ACCESSING GRID

Enagas has third party access agreements to its infrastructures with BP Amoco Gas, Cepsa (domestic operator), Shell and Gas Natural Comercializadora, and over 20 different projects have applied for reserve capacity to use Enagas' storage and transport infrastructures.

### 14.3.1 Extent of TPA

Four new operators obtained grid access in 2000.

We sought the opinions of operators in negotiating and accessing the grids. 2 key points emerge:

- Although there is regulated TPA, there is no network code and standard terms and conditions remain to be published. In fact Enagas has not yet published its revised tariffs, whilst interruptible services and imbalance charges also remain to be defined.
- Lack of infrastructures

These opinions can be synthesised as follows:

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Comercializadora, Aquila Energy Comercializadora, Gaz de France Comercializadora , Totalfina Elf Gas & Power, Comercialización de Energía Natural, Louis Dreyfus electricidad y gas, Sempra Energy Europe España, Carboex, Edison Gas España, RWE Trading GMBH Sucursal en España, Enron Directo, El Paso Merchant Energy Spain and TXU Europe Energy Trading B.V. Sucursal en España.

<sup>36</sup> Source: Spanish Power and Gas conference - may 2001

<b>Access to the Spanish Grid</b>	<b>2</b>	- Difficulties for shippers to import. Lack of interconnection capacities for import - TPA legal and regulatory framework is under slow development - Main incumbent granted access to 4 new operators. However low volume levels contracted
<b>Balancing regime</b>	<b>2</b>	- No rules regarding the balancing regime have been published; access negotiated with Enagas in bilateral contracts
<b>Access to storage</b>	<b>2</b>	- Regulated Third-Party access, with exception of LNG storage
<b>Legend:</b>	<b>4</b>	Favorable but not perfect
	<b>3</b>	Rather Favorable
	<b>2</b>	Unfavorable
	<b>1</b>	Major obstacle / strong complaints

**Access to the Spanish grid: quotes from prospective grid users**

*There is a great and general concern about how the foreseeable bottleneck in the capacity of the gas entry points is going to be solved. This is a key point that if not solved quickly would severely undermine market opportunities to grow and evolve.*

*Despite key issues still pending—particularly regulatory clarification—the prevailing conditions of access have offered enough room to achieve an early participation in the process of market opening, in sharp contrast with barriers existing in other European countries.*

*Spain has an underdeveloped infrastructure, basically affecting the gas entry points to the system. Lack of separation of Enagas from Gas Natural has led to discrimination/unfair treatment against new entrants.*

*Enagas has not yet published its revised tariffs<sup>37</sup>, whilst interruptible services and imbalance charges also remain to be defined. As Enagas requires two-year contracts, shippers have to back off such contracts - which is extremely difficult and time-consuming - or take the market risk - which is considerable.*

*In Spain, we have recently filed a request for TPA for a CCGT to enter into operation in October 2003, which has been denied by Enagas. Enagas has not sufficiently motivated their denial and the alternatives proposed (TPA from April 2004) are conditional upon obtaining permits and authorisations for the construction of new infrastructures necessary to our request.*

*This denial and lack of capacity has come as a surprise for us since we have been informing Enagas during the last two years about the progress of our power plant, and the expected start of operations, so that Enagas could plan their system expansion accordingly. Enagas has not planned properly the development of the Spanish Network, and has not acted in an objective and non-discriminatory way by giving priority to the existent capacity to Gas Natural and other utilities' CCGT Projects.*

*Continuous delays in response, lack of compromise and repetitive references to insufficient regulatory framework.*

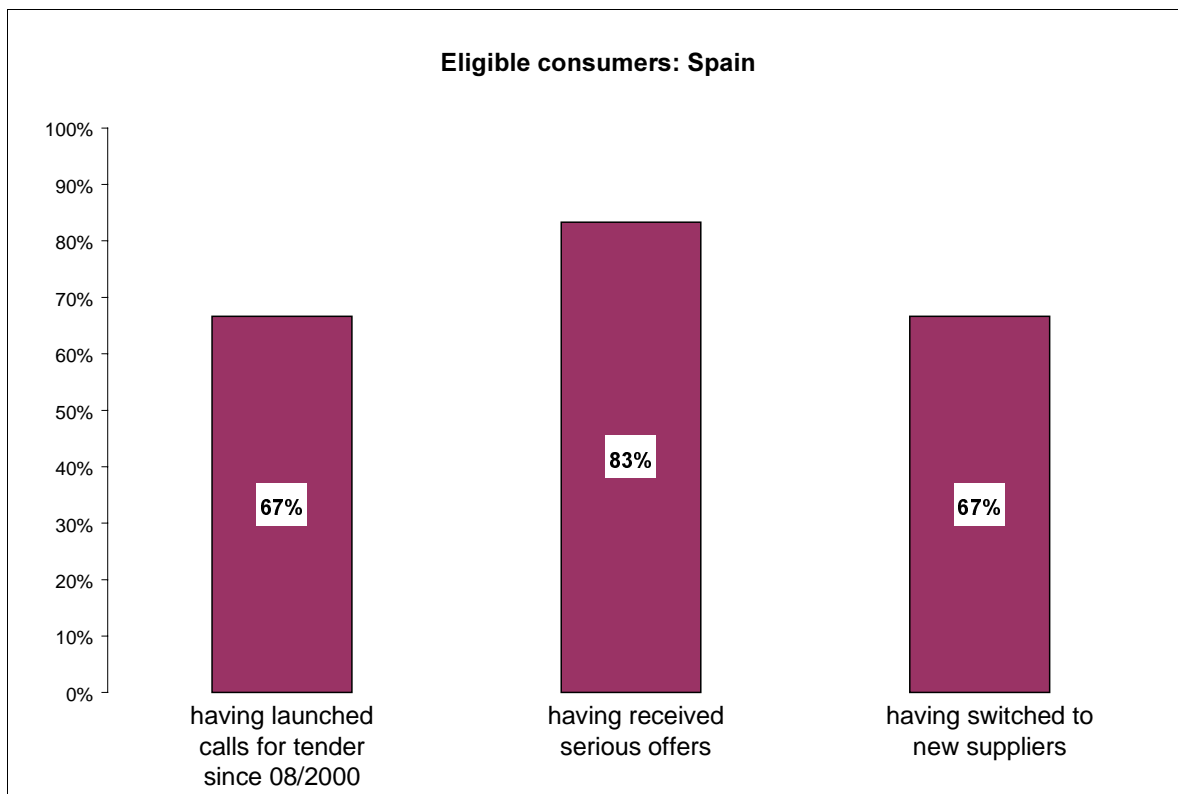
<sup>37</sup> Tariffs are published by the Government. These tariffs shall be maximum, and the differences between the maximum rates approved and those which the transportation and distribution companies may possibly charge under the maximum prices, shall be borne by the transportation and distribution companies.

### 14.3.2 Extent to which eligible buyers have switched suppliers

We sought information on the number of offers made to large buyers.

A majority of large buyers having replied are power companies or industry associations and almost all of them (or their members) have already launched calls for tenders or received serious offers from potential new suppliers.

**Extent to which eligible buyers have switched suppliers<sup>38</sup>**



The proportion of eligible customers (large gas buyers, or large gas buyer association) having switched is very high. Please note however that half of those who switch did it in favour of Gas Natural Comercializadora which is the newly created supply division of the former main incumbent.

The reasons expressed by large buyers as to why there is so far limited competition between gas suppliers converge with the opinions given by new operators on the difficulty to access the Spanish market:

- Rules are not clear and under low development, no spot market
- Real lack of capacity in importing gas

<sup>38</sup> Source: interviews. Answers in % of respondents. The sample of interviewed large buyers represents ~25% of gas eligible volume

- The main incumbent's commercial branch offers interesting discount to large buyers to retain customers

According figures of Spanish Power Gas Conference (may 2001), during the first Quarter 2001 at least 50% of eligible customers have sought competitive bids from traders

Below is an abstract of large buyers' positions and opinions on the state of liberalisation in the gas industry:

#### Quotes from large gas buyers

##### **Lack of regulation**

*Until there is a greater degree of regulatory certainty and market reforms to reduce the uncontrollable risks to an accepted level it is unlikely that new entrants will be able to participate to any real extent in the Spanish market.*

*TPA regulation is still extremely patchy and unpredictable, and this not only causes concern to new entrants but also to Enagas, the main transportation company because of the uncertainty about their revenues for regulated activities.*

*Lack of a comprehensive legal framework has forced us to accept some imposed conditions from the former monopoly incumbent as a result of the current lack of definition in key areas with a direct impact in business activities. Installation of automatic data loggers and access to meter information are both real issues of concern.*

*A new contract was negotiated and as a consequence of the lack of transparency in the market, we have been obliged to sign with the main supplier. The new contract includes some benefits for all qualified consumers which are members of our industry association.*

##### **Lack of infrastructure**

*The lack of predictable TPA tolls and revenues has caused Enagas to refuse to engage timely on the construction of new terminals and regasification facilities, which is creating congestion in the system, and delaying the connection of new CCGTs, one of the new main users of gas facilities in the next years. This is a critical issue, which is currently affecting the security of supply on both gas and power sectors.*

## 14.4 CHANGES RESULTING FROM LIBERALISATION

Despite the temporary terms for grid access conditions changes resulting from liberalisation are already visible:

- TPA tariffs have been reduced by the Government (15-30%).
- Price reductions on gas supply from main incumbent and new entrants. However as the oil indexation is still very much the rule, little effect on end-users prices.
- Large gas buyers (heavy industry) are forming gas-trading companies (i.e CSG Commercialisadora Sideriberica de Gas) to buy gas for their industrial installations and sale excess to other clients.

- 4 new operators have been able to gain access to the Spanish grid in 2000. Third-party transport of gas is growing strongly.
- Incumbent activities have been separated (even though there are criticisms).
- Major large gas buyers recognise a change in behaviour of main incumbent, in the form of commercial efforts made to reduce market share erosion risk and good attitude to work with new formed trading company (CSG).

*We have pressed about the urgency of having TPA terms and conditions clearly defined and settled so as to the fees of services provided accurately reflect the actual costs of rendering them while also provided in a transparent and non-discriminatory manner to the third parties interested.*

*Similarly we have also expressed our views about the consistency required between the rules applied to both segments of the market that will co-exist up to the time the whole market is liberalised.*

*As a result of such suggestions, we have had a direct participation in the process of drafting of new regulation covering both issues, which is expected to be approved soon.*

*Also at a request from most market players, we have also had a direct engagement in the elaboration and wording of the Technical Norms for the System. Government was receptive to this aspiration and sponsored that those interested parties were in charge of developing this piece of the future regulation.*

*Foreign vertically integrated company*

Changes expected in the near term have to do with the reduction of entry barriers mentioned above such as:

- Publication of new rules for TPA (network code and tariffs).
- More competitive and transparent transport costs and access conditions. Transportation tariffs should reflect costs.
- Release of 25% of the Algerian imported gas for retailing companies with a maximum of ¼ of this part.
- Reduction to 35% the participation of the majority shareholder in Enagas, the Transmission System Operator.

## **14.5 NEW PRODUCTS AND SERVICES OFFERED**

No new products or services (such as SWAP) offered to large buyers have been identified in this survey. However there is a will from large buyers to reduce the length of supply contracts and more generally to increase the flexibility of gas purchases.

## 15. SWEDEN

- A market of less than 1 bcm
- No new sources of gas have been offered and no switching has occurred

### 15.1 REMOVAL OF BARRIERS

#### 15.1.1 Regulatory provisions

The Natural Gas Act came into force on 1st August 2000

##### 15.1.1.1 *Opening-up of the market*

During the first stage, only natural gas companies, those using natural gas for electricity production and other users with contracted agreements for the supply of more than 25 mcm per year (47% in 2000), are able to choose their supplier.

The government has proposed 100% liberalisation from 2003.

##### 15.1.1.2 *Organisation of access to the system*

The access to the grid is regulated.

##### 15.1.1.3 *Unbundling (transparency of accounts of integrated undertakings in the sector)*

An unbundling of accounts foresees the separation of trading and transport functions.

##### 15.1.1.4 *Regulatory system*

The network authority, which is a part of Statens Energimyndighet (Swedish National Energy Administration) is the regulator for electricity and gas. The Administration publishes regulations and guidelines, and holds functions of Surveillance Authority under the terms of the Act. Special regulations and Surveillance Authority control transport of natural gas.

The Administration is the authority that can grant concessions for the supply of natural gas, provide information, gives advice and monitors the natural gas markets in Sweden and in other countries. It has issued regulations concerning publication of tariffs and metering, together with the reporting of quantities of natural gas supplied. More detailed regulations concerning the presentation and auditing of information have to be published.

### 15.2 BRIEF REMARKS ON THE SWEDISH GAS MARKET

Natural gas currently accounts for less than 2% of Sweden total energy consumption (~500 TWh). In the 26 municipalities that have access to natural gas, it accounts for 20 % of the energy consumption, a level that is equivalent to the rest of Europe.

Around 40 % of the natural gas market consist of industrial plants, where it serves both as raw material and as fuel for heating. The same proportion is used for combined heat and power generation and for the district heating sector. Households absorb the remaining 20 %. The number of end customers is around 55 000, most of whom are single-family houses and apartment blocks.

Most of the industrial companies located adjacent to the existing natural gas network already use natural gas. The availability of natural gas has improved the competitiveness of these companies. In some cases, this has also been decisive to the siting of the company, since natural gas is a vital element in their processes.

All the gas comes from the Tyra field in the Danish sector of the North Sea. After transiting Denmark, a pipeline under Öresund brings the gas ashore at Klagshamn outside Malmö. A 300-km trunk main extends from Trelleborg in the south to Gothenburg.

Vattenfall Naturgas AB is responsible for operation of the existing trunk main and for importation of the gas to southern and western Sweden. Sydgas AB is responsible for the distribution system in southern Sweden.

In 1999, imports of natural gas amounted to 854 mcm.

## 15.3 GAS PLAYERS

Vattenfall Naturgas is the Swedish main incumbent and its owners are:

### Shareholders of Vattenfall Naturgas

Main incumbent's shareholder	% of share capital
Vattenfall Group	51%
Ruhrgas AG	14,5%
Statoil	14,5%
Dong	10%
FORTUM Oil And Gas Oy	10%

As a result of liberalisation Vattenfall is now able to purchase natural gas from other suppliers (has already started to buy from German suppliers) as well as from its main supplier, the Danish company DONG. This has meant an increase in the share of gas purchased on short-term conditions.

## 15.4 CHANGES RESULTING FROM LIBERALIZATION

The gas consumption in Sweden stays very low (9.5 TWh because of lack of network) but some changes are visible:

- Distribution companies are confident in the future gas development business. They invest in the expansion of local distribution networks
- Distribution companies create as well storage facilities (i.e Sydgas, the Malmö's distribution company, in co-operation with Gaz de France) and participate to large new projects (Sydgas is a part of the BGI-project, the Baltic Gas Interconnector that will improve security of supply in the region and could be in place during 2003.

- Municipalities are negotiating between them projects of great interest (including market and technology studies for a continued expansion of the regional high-pressure natural gas network linking cities).
- New sites of industrial companies are increasingly located in areas where access to the gas network is possible and close to CCGT plants currently existing or for which construction project has been approved by local authorities.

## 16. UNITED KINGDOM

- Provisions for TPA date back nearly 20 years to the 1982 Gas Enterprise Act
- TPA has been a reality since 1990
- The market is now 100% open with all gas (except plants supplied directly) using TPA
- The TSO, Transco is legally separate from all operators
- Transposition of the Gas Directive has required minor technical modifications to the law but has had no further effect on competition
- Many respondents believe that the UK system should be the benchmark for other Member States.
- There are some serious logistic bottlenecks (e.g. at St Fergus) which highlight a shortcoming of the regime

### 16.1 INTRODUCTION

The purpose of our report is to identify changes which have taken place since August 2000. From this perspective it would be unnecessary to catalogue the progression of competition which has taken place in the country. However we have done so for two reasons:

- It provides a helpful reminder of the issues which the UK authorities found essential to address in opening the market.
- It offers some valuable clues as to what items should be bench-market across Europe to monitor progress in competition.

### 16.2 REMOVAL OF BARRIERS

#### 16.2.1 Regulatory provisions

##### 16.2.1.1 *State of legislative preparation*

The liberalisation process began in the UK in the late 80's. In 1986 British gas was privatised and became British Gas plc. The 1986 Gas Act did not change significantly the industry structure in the UK: British gas plc still buys gas under take or pay contracts and all gas produced on the UK Continental Shelf is committed to BG Plc through these TOP contracts. Therefore there was no free gas available.

In the early 90's the Regulator leads a policy of asymmetrical regulation against the main incumbent under the pressure of customers dissatisfied with gas supply and terms conditions.

First the regulator enforces the 90/10 rule through which BG plc cannot contract for more of 90% of newly discovered gas on the UK Continental Shelf, the remaining 10% are free.

BG plc was then forced by the regulator to respect minimal prices (schedules) hence enabling newcomers to sell gas at prices just below BG plc prices on selected customers. BG plc was then obliged to respect quantitative targets of loss of market shares (UK gas release program).

The 1995 Gas Act paved the way for opening the gas market to full competition. BG plc was demerged in 1995, giving birth to two companies, BG plc and Centrica. BG plc kept gas transmission, distribution and storage activities while Centrica was in charge of the shipping and supply. Full competition was achieved in May 1998 since when all gas consumers could freely choose their gas supplier.

New Gas Trading Arrangements (NGTA) were introduced in Great Britain from 1 October 1999. These new arrangements were introduced to address some of the fundamental inefficiencies in the old capacity and gas balancing arrangements. Under the old gas balancing regime, BG Transco bought and sold gas on a flexibility mechanism but had no exposure to the costs it incurred. The costs of being out of balance were not properly targeted to the companies causing them. The gas balancing regime often led to higher than necessary balancing costs, which could have knock-on effects on the gas spot, forward and futures markets. Under the old capacity regime, BG Transco could oversell capacity, could scale back capacity in the event of a constraint and had no incentive to maximise available capacity. The problems with the old regime were exposed during the summer of 1998 when capacity constraints at the St Fergus terminal led to significant additional costs being incurred by companies and shippers and led to a significant increase in spot and forward gas prices.

The new arrangements saw the introduction of:

- a new screen-based within-day gas market, the on-the-day commodity market (OCM) to allow gas shippers to fine tune their daily gas positions and BG Transco to purchase and sell gas to balance the National Transmission System (NTS);
- price auctions of NTS entry capacity related to the physical capacity available; and
- new commercial incentives on BG Transco relating to the capacity regime and its role as residual system balancer and improved incentives on shippers to balance their own position.

Further developments to the regime were introduced from 1 April 2000. BG Transco increased the amount of capacity sold in the monthly NTS entry auctions and from 1 June 2000 introduced a new within-day capacity market that allows BG Transco to sell additional capacity and/or buy back capacity in the event of a constraint within the gas day. BG Transco also implemented further changes to the gas balancing regime that sees the introduction of an auction of balancing tolerances from 1 October 2000.

### **16.2.1.2 Opening-up of the market**

The market is already 100% open with all sales being made by suppliers unconnected with the TSO.

### **16.2.1.3 Organization of access to the system**

Regulated access is based on published tariffs. The network is 100% open. The owner Transco is separate from all trading activities.

In March 2000 British Gas Group (BG Group) plc announced its intention to pursue a demerger which would separate its two principal businesses, Transco and BG International, in order to

provide each with greater opportunities to realise their potential for growth, based on their different core skills and markets.

At an Extraordinary General Meeting of BG Group's shareholders held in October 2000, the resolution to approve and deal with the procedure for implementing the demerger of Lattice Group plc was passed. Lattice's principal business is Transco, which owns, operates and develops the substantial majority of the gas transportation system and all of the liquified natural gas (LNG) storage facilities in Great Britain. The Lattice Group provides, manages and services infrastructure networks and has no interest in gas supply businesses.

Transco publishes a wide array of publications on its web site to inform shippers, regulator, gas customers on access conditions to the grid, tariffs, performance of the network operator, its strategic business plan, etc. It is by far in all countries surveyed the operator which publishes the widest range of information.

Transco is the owner of the majority of Britain's gas transportation system. It receives gas from several coastal reception terminals around Great Britain, and transports it to the meters of more than 20 million industrial, commercial and domestic customers. Its network is made up of around 275,000 km of pipeline, comprising high pressure national and regional transmission systems, and lower pressure distribution systems. Gas is pumped through the system by 24 compressor stations located around the country. An interconnector to Belgium links Transco's own gas transportation system to continental Europe's high-pressure gas grid. A second interconnector supplies gas to Ireland and Northern Ireland.

Transco transports gas for approximately 75 gas shippers. The consequent task of ensuring that the gas in the pipeline system remains in physical balance and the customers are correctly billed requires the use of one of the largest and most complex information systems in Europe. Annually, Transco processes around 200 million e-transactions using this system.

Transco also operates the freephone 24-hour national gas emergency. Its three call centres between them receive 6.5 million calls each year and respond to 1.4 million gas escape reports.

The gas transportation system is highly regulated and subject to price controls. Far-reaching changes lie ahead for Transco as some of its operations, such as metering and connections, are moved outside the regulated environment to compete and pursue new business opportunities.

#### **16.2.1.4 Unbundling (transparency of accounts of integrated undertakings in the sector)**

Full separation (legal unbundling) of gas transportation and gas supply business is in force with totally separate legal ownership of the entities.

#### **16.2.1.5 Regulatory system**

The OFGEM (Office of Gas and Electricity Markets) is the independent regulator.

Ofgem's objectives are to promote and protect the interests of gas and electricity customers. Ofgem licences and monitors the gas and electricity companies, taking action where necessary to ensure compliance.

Ofgem's main tasks are to:

- Promote competition in all parts of the gas and electricity industries by creating the conditions which allow companies to compete fairly and which enable customers to make an informed choice between suppliers;
- Regulate areas of the gas and electricity industries where competition is not effective by setting price controls and standards to ensure customers get value for money and a reliable service.

Ofgem can provide free advice to customers on how changing their gas or electricity supplier, to go about this. This includes information on prices, the right questions to ask if a customer is thinking of changing supplier and what to look out for. The Consumer Factsheets or the latest Price Comparison Sheets on Ofgem's web site assists the customer in making an informed decision.

Ofgem is now working to introduce more competition in other parts of the electricity and gas industries such as electricity generation and gas transportation.

Examples of the changes which are taking place include measures to bring more competition to parts of Transco's monopoly business in the transportation of gas. Under the terms of the Public Gas Transporter's licence, Ofgem regulates the prices Transco charges for use of the gas network. Transco's current price control will expire on 31 March 2002. Ofgem is currently reviewing the control, with a view to implementing a new price control from 1 April 2002. Ofgem is expected to make Initial proposals in June 2001, and final proposals in September 2001.

Ofgem plans to spend £34.1m in 2001/2, nearly half of which will be on back office costs. But its costs are to more than halve from this year's estimate of £87.1m, although they are higher than 1996's £23m. Ofgem has been criticised by the industry for its costs, but a report commissioned by the Treasury in February 2001 described them as "modest", at around 0.1% of industry turnover. The Treasury report did criticise Ofgem for spending too much on outside consultants. Ofgem hopes to reduce these costs by 15% to £7.9m in 2001/2, but only if it has the means to attract good staff.

#### **16.2.1.6 PSO**

Certain social obligations and public services are set out in licenses for Suppliers, Shippers and Transporters and are essentially funded by the companies themselves, although the costs of any obligations must economically pass through to end consumers (and/or tax payers) in a liberalised market.

These PSOs fall mainly on domestic retailers, but on an equal basis for all companies. Examples include: the duty to supply all customers on request, according to published terms; the duty to provide a free appliance safety check for older and/or disabled customers; the duty to permit customers to pay debts according to their means; and the duty to provide energy efficiency advice.

#### **16.2.1.7 Access to storage:**

A BG group subsidiary, BG Storage, provides storage on a non-discriminatory basis to any shipper. Storage capacity is auctioned subject to reserve prices. Other players such as Enron offer "virtual storage".

### **16.2.1.8 Balancing regime**

Proposals for further reform of the existing regime have been announced by energy regulator Ofgem in February 2001 as part of the continuing development of wholesale gas trading arrangements.

The proposals recommend reforming:

- the existing balancing arrangements, which Ofgem believes are inefficient and can lead to higher prices and balancing costs;
- Transco's role and incentives to ensure it operates the system as efficiently as possible; and
- the way information is provided to customers and gas shippers to ensure transparency and help prevent market distortion.

Ofgem believes that if reforms are not made, a number of market developments would lead to inefficient arbitrage between the gas and electricity markets and significantly higher direct balancing costs. As these direct costs are spread across all market participants and not directed at the companies causing them, competition could be distorted.

The developments include increasing price convergence between the wholesale gas and electricity markets, the growth of gas-fired generation, the introduction of the New Electricity Trading Arrangements (NETA) and increasing trade with other European countries.

Ofgem's proposals include:

- measuring shippers' inputs and offtakes to the system over a shorter time period (of either a half-hour or one hour) than the present regime of measurement over a period of one day; this could lead to the introduction of hourly balancing which would be done not because it was deemed technically desirable but to avoid price manipulation (unscrupulous shippers are alleged to inject low quantities of gas in the early hours of the day to drive up the price);
- selling to shippers storage in the pipeline system itself, known as linepack, to allow them to carry imbalances between each shorter period;
- revising and extending Transco's energy balancing incentives to ensure efficient operation of the system;
- placing a new licence obligation on Transco to operate an efficient and economic system; and
- improving access to information on the wholesale gas market by making more operational information available to customers and shippers than has been the case to date.

An industry seminar to discuss these proposals has been held on Thursday 22 March 2001.

### **16.2.2 Other issues**

- Northern Ireland possibly to be treated as an "emergent region";
- Rules implementing article 23 of the Gas Directive for upstream pipelines are under preparation;

- Rules filling gaps in the downstream regime are under preparation.

## 16.3 REVIEW OF THE DEVELOPMENT OF COMPETITION

### 16.3.1 Upstream competition

There are more than 50 producers of gas on the UK Continental Shelf (UKCS) and 6 beach-head terminals with more than 30 offshore pipelines feeding them.

The majority (some 85%) of UKCS gas produced for the UK market is sold under long and medium term contracts indexed to, but lagging inflation and energy prices. The remainder is sold directly into the wholesale spot market.

The European gas Interconnector pipeline between Bacton and Zeebrugge was opened in 1998 and allows gas to flow to or from the European market. The facility has an export capacity of 20 bcm, or about 15% of the UK's peak demand, but a smaller volume of gas 8 bcm can flow into the UK. To date, export gas has predominated although later in this decade, if UK gas supplies begin to dwindle, gas imports through the Interconnector may be expected to rise. In either case, UK gas prices seem increasingly likely to move up or down as European gas and other energy prices fluctuate. Europe offers a market opportunity for UKCS gas but the additional costs of transportation, distribution and market access, in a less liberalised regime than the UK, can inhibit commercial sales.

Historically, in the UK, gas was regarded as a premium fuel and sold into the domestic, commercial and certain industrial markets. During the 1990s, market liberalisation and the desire to reduce the polluting emissions of coal-fired power stations have led to rapid growth of gas-fired power generation and gas demand has doubled over the last five years to over 100 bcm.

Since the mid-1980s the real price of gas supplied by UKCS producers at UK delivery points declined by 40%. By October 2000, the real price had recovered to 75% of its 1990 value. However, the average contract prices in 2000 are estimated to be 19p/therm, still some 60% of oil's value in equivalent terms, in spite of the superior environmental quality of gas. In 1995 UK gas began to be traded on the spot market. Spot gas prices fluctuate widely, both seasonally and within day, but the average price has remained relatively weak throughout the period.

Since November 1997 the Stricter Consents Policy for gas-fired power stations has restricted the growth of demand for gas and slowed the pace of development of gas fields which had a knock-on effect on investment, jobs and research and development. However, in November 2000, the Secretary of State for Trade and Industry rescinded the policy. Although the industry will require further clarification on how the Government will consider future applications for gas-fired power stations and the guidance on combined heat and power (CHP), the industry has welcomed the removal of this obstacle to future UKCS gas field exploration and production.

Gas production in 2000 is expected to set a new record in excess of the 100 bcm produced in 1999. Gas now represents almost 40% of UKCS annual hydrocarbon production and 33% of UK energy production. The UK produces 4.3% of world gas production and is the fourth largest gas producer. In 1999 the UK was a net exporter of gas with production exceeding consumption by 9%.

Despite these positive figures, it is fair to say that the supply position has not recovered from the impact of the dramatic fall in the oil price at the end of 1998 and early 1999. Although the oil price has substantially recovered, partly through the intervention of OPEC, producers appear to be cautious regarding exploration investment given the potential volatility. An additional factor is that

UK continental shelf fields that remain untapped tend to be small and, as such, will only be developed if market conditions make them economically viable.

With the southern North Sea basin now in decline and the northern North Sea basin reaching maturity the only remaining large volumes of gas available for GB are from West of Shetland, imports from Norway or imports from Europe via the continental interconnector.

A number of key messages are applicable to future gas supplies:

- Gas is still seen as a by-product with oil being the motive force for exploration;
- The IUK continental interconnector has influenced the GB gas price with a stronger link seen between oil and gas prices, as they are in Europe;
- UKCS is seen as a declining source of gas;
- Future gas supplies will be imported

### **16.3.2 Storage**

BGS (British Gas Storage) is dominant in the storage market. Direct competition includes physical storage services offered by US Aquila, and virtual storage offered by US Enron. There is indirect competition from the flexibility offered by the UK-Belgium Interconnector, upstream producers' flow-rates, the spot market and end-user interruptibility.

Transco owns, operates and develops all of the liquified natural gas (LNG) storage facilities in Great Britain.

### **16.3.3 Industrial and commercial gas supply market<sup>39</sup>**

Competition in the industrial and commercial gas supply market is continuing to develop very well. During the latest review performed by Ofgem (published in August 2000), Ofgem has received very few complaints about barriers to entry in the market, and it appears that there are no significant barriers to suppliers making, and customers obtaining, potentially competitive offers.

#### ***16.3.3.1 Number of active competitors in the market***

There are more than 30 shippers and suppliers, more than sufficient for a competitive market to function effectively.

A fundamental feature of a competitive market is the choice available to customers in the market. One way this may be measured is by reference to the number of industrial and commercial gas shippers and suppliers operating in the market.

This chapter explains the changes in the number of industrial and commercial gas shippers and suppliers during the gas years 1997/98, 1998/99 and the first quarter of the gas year 1999/2000. It also considers which of those shippers and suppliers have been active in the market since October 1997.

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<sup>39</sup> The chapter below comes from Ofgem web site

**Number of gas shippers and suppliers licensed to operate in the industrial and commercial market at dates since October 1997**

	Licensed gas shippers	Licensed gas suppliers
1 October 1997	75	75
1 October 1998	93	83
1 October 1999	106	90
31 December 1999	107	91

Over the period of the survey there have been a number of new shippers and suppliers entering the market. In part this is due to new companies entering the market, but it is also because current shippers and suppliers have applied for additional licences.

Over the period of the survey there have been a number of mergers and acquisitions, which have altered the number of competitors in the market. These include, the mergers of gas producers Exxon and Mobil, and BP and Amoco, which then subsequently merged with Atlantic Richfield. Also, some of the mergers of electricity companies over the period of the survey has reduced the number of competitors, including the mergers of East Midlands Electricity

There is no requirement for licence holders actively to ship or supply gas to end-users. Also, a number of companies hold more than one shipping and/ or supply licence. Based on the results of Ofgem's survey, the table below shows Ofgem's estimate of the number of active competitors in the industrial and commercial gas supply market.

**Ofgem's estimate of the number of active competitors in the industrial and commercial gas supply market**

Gas years	Shippers	Suppliers
1997/ 98	22	30
1998/ 99	22	30
1999/ 2000	24	34

Over the period of the survey, the number of actively competing shippers and suppliers in the market has grown. The increase in the number of active competitors is due to new companies entering both the shipping and supply markets, against the background of some consolidation amongst existing shippers and suppliers.

### **16.3.3.2 Market shares and price offers**

Overall Centrica, (brand name - British Gas Trading (BGT)) has a market share of about 12% by volume shipped and 41% by sites shipped to, in the industrial and commercial market, excluding gas shipped for power generation, natural gas vehicles and feedstocks (BGT's market share is 20% of the whole market by volume shipped). This compares with a market share of 26% by volume shipped for the gas year 1997/98 and by 48% by sites shipped to, in October 1998. This decline in market share has taken place at the same time as demand for gas in the industrial and commercial gas market has grown. BGT's market share is lower for sites consuming higher volumes, suggesting that customers with larger bills have switched supplier in greater numbers.

BGT retains a market share of greater than 60% in the interruptible power generation sector, mainly due to its long term supply contracts. Ofgas considered the concerns about the provisions of these contracts, particularly in relation to restrictions on the resale of gas under these contracts, in 1998. Should any new information become available or any issues arise, Ofgem could consider the provisions of these contracts under competition law.

Prices for single site supply contracts have tended to be more stable in nominal price terms than multi-site contracts over the period of the survey (October 1997 – October 1999), which for both firm and interruptible supply contracts have increased in nominal terms over the period of the survey and in some cases become at least as expensive as single site contracts for similar volume levels. The prices offered illustrate the opportunities in most market sub-sectors for customers to obtain relatively competitive prices by shopping around amongst competing suppliers.

### **16.3.4 Domestic gas market<sup>40</sup>**

#### ***16.3.4.1 Experience of the competitive market***

Competition in the domestic energy market is expanding and broadening. As at October 2000, over 29% of domestic gas customers have switched supplier. This represents some 6 million gas customers. Experience across customer groups has been mixed. Those with low and medium incomes for example have switched more often than the average. Those with very low incomes, prepayment meter customers, and those without bank accounts have tended to switch suppliers less.

Satisfaction with energy suppliers is very high. No specific aspect of their service attracts significant criticism. Awareness of the suppliers in the electricity and gas markets is growing strongly, though British Gas is managing to stay ahead by a substantial margin. Doorstep selling is still the main method of contact with suppliers.

As the number of switchers increases, so too does familiarity with different suppliers. Indeed, gas customers recognise more gas suppliers than in 1999.

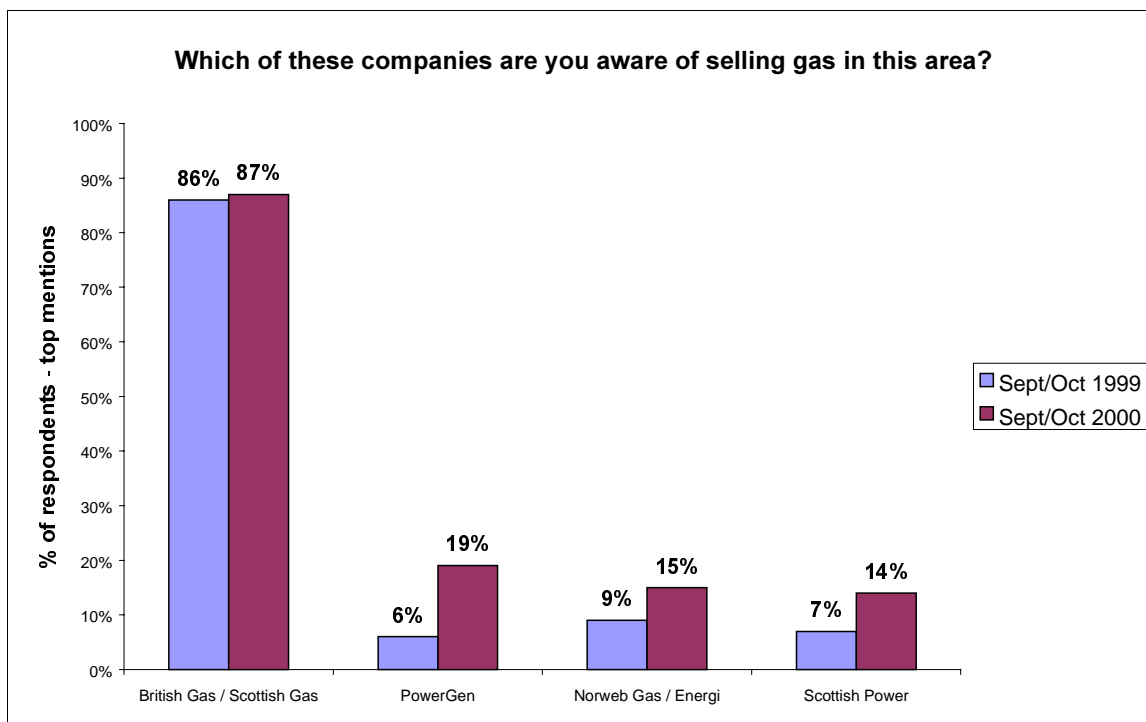
However, despite the fact that awareness is improving, a third (32%) of gas customers are unable to identify more than one supplier (presumably British Gas).

Owing to its long history and national presence, British Gas has a high awareness among customers. PowerGen has also succeeded in raising its profile over the past year, increasing its awareness in the gas market by 13 percentage points. It remains, however, some way below British Gas in both markets. Other suppliers have made relatively smaller gains in awareness over the past year.

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<sup>40</sup> idem. Results of a survey carried out by MORI each year (in September and October) on behalf of OFGEM. MORI conducted 2 338 interviews with domestic electricity and gas customers. All interviews were conducted face-to-face, in-home, between 9 September and 8 October 2000.

### Domestic customers awareness level



#### 16.3.4.2 Market shares

Centrica, formed in February 1997 following the demerger of British Gas PLC, trades as British Gas within England and Wales and Scottish Gas in Scotland. Since its creation Centrica has diversified in many businesses.

- Power: British gas is now a major supplier of electricity to the residential market. Home and Road Services traded under British Gas, Scottish Gas and the Automobile Association - AA - brands
- Financial services (same brands + Goldfish)
- Energy Management
- Business Development
- Telecoms
- Geographical diversification (purchase of Direct Energy, Energy America and Avalanche Energy, with over a million customers and natural gas reserves, has given Centrica a significant base in North America)

British Gas retained 70 per cent of the residential gas market in Britain, with more than a million customers joining or returning to British Gas during the year 2000.

Regional Power companies (such as Power Gen, Norweb Gas,...) hold ~25% of the market.

Gas producers and Generators hold the remaining share.

## 16.4 EXPERIENCE OF ACCESSING GRID

Transco is the owner of the majority of Britain’s gas transportation system. Its network supplies almost half of the country’s energy needs, more in winter.

### 16.4.1 Extent of TPA by country

As seen above British Gas Trading (BGT) has in the industrial and commercial gas supply market a market share of about 12% by volume shipped whereas it still holds 70% of the residential gas market in Great-Britain. Therefore third party access is widely developed.

We sought the opinions of operators in negotiating and accessing the grids. The prevalent opinion is that the UK rules should be considered as the benchmark for all other MSs to achieve.

#### Experience of respondents in accessing the network

<b>Access to the British Grid</b>	4	<ul style="list-style-type: none"> <li>- Transportation is provided according to the terms of a standard contract applicable</li> <li>- UK access arrangements should be adopted as the benchmark for all other MSs to achieve</li> <li>- Not enough capacity in parts of the network</li> </ul>									
<b>Balancing regime</b>	4	<ul style="list-style-type: none"> <li>- Similar to Transco's balancing regime in the UK, the system operator in other European countries should handle operational balancing, only initiating a penalty</li> </ul>									
<b>Access to storage</b>	4	<ul style="list-style-type: none"> <li>- Most markets are, unlike the UK, insufficiently advanced and do not offer flexible trading arrangements i.e. appropriate access to physical and virtual storage</li> </ul>									
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>Legend:</b></td> <td style="width: 10%; text-align: center; background-color: green; color: white; font-weight: bold; font-size: 24px;">4</td> <td style="width: 25%; padding: 2px;">Favorable but not perfect</td> <td style="width: 10%; text-align: center; background-color: yellow; color: black; font-weight: bold; font-size: 24px;">3</td> <td style="width: 10%; padding: 2px;">Rather Favorable</td> <td style="width: 10%; text-align: center; background-color: orange; color: black; font-weight: bold; font-size: 24px;">2</td> <td style="width: 10%; padding: 2px;">Unfavorable</td> <td style="width: 10%; text-align: center; background-color: red; color: white; font-weight: bold; font-size: 24px;">1</td> <td style="width: 10%; padding: 2px;">Major obstacle / strong complaints</td> </tr> </table>			<b>Legend:</b>	4	Favorable but not perfect	3	Rather Favorable	2	Unfavorable	1	Major obstacle / strong complaints
<b>Legend:</b>	4	Favorable but not perfect	3	Rather Favorable	2	Unfavorable	1	Major obstacle / strong complaints			

We have reproduced below an abstract of gas producers, suppliers and traders’ answers.

#### Access to the British grid: Quotes from grid users

**Access into the British grid**

*We suggest UK access arrangements are adopted as the benchmark for all other MSs to achieve.*

*In the UK we are willing to enter into flexible contracts to suit the customer's requirements. Volumes vary considerably from small retail customers to large CCGTs as well as wholesale requirements. Contracts, which can be either firm or interruptible, can be short term eg monthly (or even less), or long term eg 15 year power station deals. Gas would be secured from a portfolio of sources including eg long and short term contracts with upstream producers, swaps with producers and other retailers, spot market purchases. We are seeking to do likewise in Europe although this obviously depends on sourcing sufficient economic quantities of upstream gas, market liquidity and access to capacity and supporting services. At present a very large percentage of gas is delivered through long-term contracts with monopoly or near monopoly purchasers and it is very difficult to build a flexible gas supply portfolio which can match supply, swap and trading commitments.*

*It is proving extremely difficult for a new entrant to economically compete in Europe with the exception of UK.*

### **Access to the British grid: Quotes from grid users (cont'd)**

*There is a fully open access with in-grid trading in the UK*

*Capacity is auctioned in the UK.*

*Not enough capacity available in parts of the network. At one of the beach-head terminals in UK it could and should be better. This entry capacity issue is under consultation and discussion with the regulator.*

#### **Transmission tariffs**

*Transportation is provided according to the terms of a standard contract applicable equally to all prospective users (known as the Network Code). The transporter is obliged to meet all reasonable requests for service as part of its common carriage obligations. A refusal to do so is appealable to the regulator.*

#### **Balancing regime**

*In many Member States most tariffs have very onerous balancing regimes which are not based on market conditions. Incumbents need to be able to differentiate between contractual/commercial balancing and operational balancing. Shippers should only have to worry about the former, and the system operator should handle the latter, only initiating a penalty regime when the system threatens to go out of balance operationally (similar to Transco's balancing regime in the UK).*

#### **Access to storage**

*Most markets are, unlike the UK, insufficiently advanced and do not offer flexible trading arrangements for example appropriate access to physical and virtual storage, balancing arrangements, secondary capacity trading, swaps, flexible entry/exit point nominations. This is a major barrier to new entrants.*

## **16.4.2 Extent to which eligible buyers have switched suppliers**

As said before the market is fully opened know and the extent of supplier switch is very high in the UK: 6 millions of domestic clients have switched suppliers. In the industrial and commercial gas segment, BGT market share equals to 12% in volume.

A major area of concern for large gas buyers is the sudden increase in price of the commodity:

*"In the UK my company has seen a 75% increase in gas cost between November 2000 and January 2001. Whilst the Department of Trade & Industry has expressed concern, I am not convinced there has been sufficient response or any real determination to discover whether the UK gas market is being manipulated by producers or traders.*

*We have complained about the sudden and unjustified surge in wholesale gas prices in the UK and attended a meeting with the Energy Minister Peter Hain on 26th February where our concerns were made clear.*

*The Minister has already requested the EU Competition Commission to investigate the operation of the interconnector. The Energy Minister confirmed at the meeting that the DTI is also looking at other aspects of the UK gas market to see whether it has been manipulated in recent months."*

*Large gas buyer*

## **16.5 CHANGES RESULTING FROM LIBERALIZATION**

Over the last 15 years changes in the UK have been drastic and it would be too long to summarize all of them. Some visible examples of these changes are highlighted below:

- The former monopoly, British Gas, after several demergers holds today 12% of the commercial and industrial gas market, and 70% of the domestic consumer market
- 70 shippers have access to the UK transmission and distribution network
- The transmission network operator mother company has no interests in the gas supply businesses
- 6 million of domestic gas consumers have switched suppliers

Changes expected in the near term have to do with the introduction of more competition in other parts of the gas industry.

## **16.6 NEW PRODUCTS AND SERVICES OFFERED**

New products or services have been offered to large buyers since the liberalisation process was initiated. Amongst these, one can cite:

- Flexible contracts to suit the customer's requirements. Volumes vary considerably from small retail customers to large CCGTs as well as wholesale requirements. Contracts, which can be either firm or interruptible, can be short term eg monthly (or even less), or long term e.g. 15 year power station deals. Gas would be secured from a portfolio of sources including e.g. long and short term contracts with upstream producers, swaps with producers and other retailers, spot market purchases
- UK swaps are a regular occurrence, with a variety of producers and suppliers and usually take the form of telephoning key contacts to explore the potential for a mutually beneficial solution.
- Virtual storage, "virtual interconnector" services
- Auxiliary risk management services and trading expertise ...