

GTE Position Paper

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1. Objective

Focusing on the needs of users of the gas transmission networks (shippers), GTE's main objective is to contribute to increasing customer satisfaction within the framework of safe and efficient utilisation of those networks and based on non-discriminatory and transparent access¹. GTE perceives a role for itself in the European context in facilitating and promoting a fully operational integrated European gas market.

In this position paper, GTE seeks to identify possible impediments to the achievement of effective and efficient cross-border transmission, brings forward suggestions for improvement and areas for debate or further study and proposes a number of concrete actions, working from the context outlined below and based on an analysis of technical and commercial aspects of gas transmission in Europe as well as discussions with customers. In the annexes GTE will, in the context of this position paper, comment further on several documents prepared by the European Commission.

2. Context

Gas transmission in Europe

The Western European gas market has been an international market from its beginnings in the 1960s. In addition to internal movement of gas for use on the home market, cross-border carriage has always played a key role. Today, over 60% of the gas consumed in the EU crosses at least one national border, a logical consequence of the fact that gas is a natural resource which is not found everywhere in the same quantities (and in some places not at all). The main gas producing and exporting countries for Europe are Norway, the Netherlands, Russia and Algeria. The main importing countries include France, Germany and Italy.

For that reason, gas has always had to be carried by the transmission system over long distances from the source to the consumer. Right from the start (long before the first European gas directive), physical gas flows and chosen trading routes were determined on a competitive basis.

Reflecting the differences in their national energy policies and transmission system characteristics, the Member States have organised their gas transmission in different ways, though always based on an economic optimisation. Some have organised gas transmission in the framework of public entities whereas it is completely subject to private entrepreneurship in other Member States. These differences have continued to exist, even after the implementation of the EU gas Directive. Within the EU access to the network is on either a regulated or negotiated basis. All of these factors have resulted in a diversity of tariff systems, balancing regimes and other aspects.

¹In this position paper GTE addresses access to transmission networks and ancillary services only; not access to distribution networks.

There is also a wide (natural) variation in gas quality. For safety reasons this results in a few quality bands which are brought onto the market. GTE sees it as part of its task to propose solutions where this international diversity is an impediment to cross-border carriage.

Transmission is the physical process of carrying gas between two points, the direction and rate of flow being dictated by the pressure difference. For the carrier, therefore, maintaining pipeline pressure is necessary so that the system can deliver to its required capacity. These pressures are determined by the amount of gas in the pipeline system. Therefore, the matching of input and output (balancing) to maintain these required pressures is essential to the transmission business.

Important principles

- Sanctity of contract

The guiding principle for GTE is that the sanctity of contract should be respected in support of a stable business and investment environment. Transmission companies, nonetheless, could envisage the possibility of requests from contract parties for amendments that would be to the general benefit.

- Subsidiarity

GTE's objective is to promote cross-border transmission and remove obstacles to it. An important precondition is that effective and efficient supervision of their national transmission systems is provided by the supervisory authorities and/or regulators in the Member States. This should be organised in accordance with the principle of subsidiarity. GTE supports this principle because local circumstances in Member States uniquely affect the functioning of (and/or access to) the transmission systems. The variation in carriage terms, which characterise the way in which transportation is organised in the individual countries reflects not only the different physical design models within the gas industry itself, but also different emphases within the national energy policies of the Member States. Uniform carriage terms would not necessarily promote efficient use of transmission systems which have different physical characteristics. Thus adoption of uniform terms would not promote the development of the internal EU market for gas. There are however a certain range of issues especially with respect to cross border activities that should be addressed at a European level, and where increased convergence between Member States may be required.

- Difference between gas and electricity

The third important principle for GTE is a good understanding of the similarities and differences between gas and electricity. The principal similarity between gas and electricity is that both are energy-carriers and that they can essentially only be brought to the consumer by cable or piping. At the distribution level there is a strong convergence (multi utilities). However in the production, transmission and storage area the differences are great. They therefore unquestionably require a different approach. Gas is a mineral resource and found where nature has placed it and has to be physically moved from the source to the consumer. This physical movement can take many hours even in national systems. Electricity is a secondary energy carrier. It is brought from the power station to the consumer more or less instantaneously.

In the case of gas, therefore, there is less freedom of choice regarding transportation distance than there is with electricity. Because most countries are not self-sufficient in gas, they are heavily dependent on imports

which relatively few countries are able to provide. Most of the gas has to be transported on a thousand kilometres or more. Electricity in continental Europe is not imported except where there is regional surplus capacity or regional advantages in electricity generation (hydro, nuclear). The differences between gas and electricity are important factors in the debate on the tariffication system for transmission, and on the future planning and design of long-term investment in the gas transmission system.

- Difference between gas transmission and supply

The fourth important principle applied by GTE in the debate on a fully integrated European gas market is that the primary task of the gas carrier is to provide sufficient transmission **capacity** which is used efficiently, effectively and – above all – safely. Investment in pipelines is needed to provide this physical capacity and this is a responsibility of the transmission company in order to match the demand for its transmission services. Transportation tariff structures and levels should be designed to promote timely and economically efficient investment in capacity by the transmission company to support customer demand – not least demand in specific severe weather conditions. Other issues relating to security of supply (such as reserves management) which relate to the provision of adequate supplies of gas should in the view of most GTE members fall outside the responsibilities of the transmission company.

3. Transmission problems, suggested solutions and areas for further study

Despite effective supervision of access to and conditions for use of the networks, GTE is of the opinion that the conditions for effective cross-border transmission can still be subject to further improvement. In this position paper, GTE identifies the areas for improvement and puts forward practical proposals for improvement or further study. These relate to:

- the role or function of the transmission company;
- allocation of transportation capacity and congestion management;
- interoperability of different transmission systems.

The role or function of the transmission company

GTE considers that the task of the transmission company is to operate its transmission network as safely, efficiently and effectively as possible, as a separate organisation or, in the case of an integrated company, as a separate function (in accordance with the requirements of the Directive relating to unbundled accounts, separating confidential information through firewalls etc.). GTE considers it essential that clear rules are agreed to enable the transmission company to perform its task as efficiently as possible. Problems can arise in (international) transmission if the allocation of tasks between the different parties is not clearly defined. Security of supply will be jeopardised if the responsibility of the shipper, which is to supply sufficient gas, and that of the transmission company, which is to supply the pipeline capacity and balancing services is not clearly agreed.

The way in which the system is operated (and hence the agreed procedures required for effective performance of the task) depends on its technical characteristics which, as noted above, can differ from country to country as a result of historical development, technical or economic circumstances.

- Matching supply and demand is shipper's responsibility

Some of the characteristics of gas supply and demand were noted in the description of gas transmission in Europe. Thus, over-time widely fluctuating demand and relatively stable supply have ultimately to be brought into balance. This function is the shipper's responsibility. The transmission company sets rules for the operational management of the network and admission of shippers to it. These rules reflect the system-specific attributes of the transmission system, which promotes balancing on an hourly basis in some systems and on a daily basis in others.

The transmission company has a responsibility to provide access to an efficient and safe system and ensures that the system remains 'on line' even where the shipper does not precisely balance his inputs and outputs. The transmission company can for example draw on a given gas supply and utilise the flexibility inherent in the pipeline system. This flexibility may also be made available to all users of the network (shippers) via non-discriminatory tariffs. It depends on the characteristics of the system whether the flexibility is provided by line pack or, for example, by using storage facilities which are linked to the transmission network. But always the principle remains the same: the shipper bears responsibility for matching supply and demand but the transmission company may provide services to assist.

- The responsibility of the transmission company is the provision of technical transmission capacity only.

The transmission companies are responsible for transmission capacity. In this area, too, GTE advocates a clear allocation of responsibility. The transmission company must provide sufficient physical transmission capacity to meet nationally agreed criteria, but this is separate from providing the gas to meet any security of supply criteria, which relates to the reserves position and, according to most GTE members, is not one of the tasks of the transmission company. GTE takes the view that the flexibility offered by the transmission system (and which varies from country to country!) should be used to maintain system pressures in the short term supply deficits (i.e. balancing period).

Recommendation

GTE proposes the following action with regard to the above issues: joint development with other market participants of a model which clearly defines the roles of the transmission companies, shippers and other players and which is clearly communicated to existing and potential market participants. GTE considers that the allocation of functions outlined above provides a satisfactory division of responsibilities and tasks. GTE is more than willing to discuss this aspect with other parties.

Allocation of transmission capacity and congestion management

There seems to be a number of issues at present in the area of transmission capacity allocation which may be considered as an obstacle for trans-European gas transmission.

GTE is prepared to do further analysis on how differences in the determination of capacity exist within Europe. Moreover GTE is prepared to improve the **transparency** of different commercial perspectives with respect to capacity issues and to do further studies on the question which model is applicable under what circumstances.

Currently however, the fact that both transmission systems, tariffs and terms differ so widely between countries, makes it administratively more complicated for shippers who wish to contract cross-border transmission, requiring appropriate administrative solutions.

- Capacity allocation

Capacity allocation can in theory be based on many different mechanisms, such as the 'beauty contest', first come, first served, auctions or even lotteries. In continental Europe, capacity is allocated in accordance with the first come, first served principle (chiefly in times of congestion). In the UK, system entry capacity is allocated by auction. The available capacity can be derived from the physical capacity less the capacity needed to meet existing obligations (among which is the capacity required for PSOs) and any capacity needed to maintain the integrity of the system.

Recommendation

GTE supports the proposal that indications about the amount of available capacity are made for cross border nodal points in order to inform shippers and other players at an early stage. This can be done using a **traffic-light system**: a green light indicating that no problems are expected, an amber light indicating that the capacity is available at the point in question but that, depending on the specific application, problems cannot be excluded and a red light indicating that capacity is tight and can only be made available on a very limited scale or not at all. Moreover GTE is of the opinion that shippers should have access to this information through Internet, where it should be updated on a monthly basis.

- Effective cross-border contracting: One-stop shopping

Most of the European carriers have opted for commercial tariff models based directly on physical capacity. In these models, capacity is offered unconditionally and is secured on the contractual route. Other Members States have a variant of this approach based on the pool model, which is less obviously tied to the physical reality but allows more commercial freedom for shippers without sacrificing system security. As already noted by GTE, each country has chosen a model which best suits the specific circumstances of the network. Political, social and, more importantly, economic factors have helped to determine how these matters are organised. Taking due account of local circumstances will benefit the effectiveness and efficiency of gas transmission in the EU member states. If the tariffs are clear, comprehensible, transparent and applied in a non-discriminatory manner, the differences will have no adverse effect on cross-border trade. Moreover, if tariff charges are cost-reflective, tariff systems will not lead to pancaking and not hamper liquidity in the market. Abandoning that concept (which is closely related to the principle of subsidiarity) in favour of a single European 'gas lake', for example, could lead to unnecessary inefficiencies. GTE acknowledges the criticism that the diversity of 'translations' has resulted in a diversity of tariff structures and conditions in Europe which, in some cases, can be a practical obstacle to shippers by causing delay in concluding international transportation deals. The one-stop shopping concept, which enables shippers to book cross border transmission more easily can help to overcome administrative complications caused by differences in tariff systems.

Recommendation

Although a one stop shopping concept could be developed by any player in the market GTE is considering promoting the development of a one-stop shopping concept, enabling shippers to

reserve capacity throughout the European transmission network. GTE's member organisations, and for that matter any other organisation, should individually be able to assist shippers to reserve capacity throughout the European network. For a speedy introduction of the one-stop shopping concept, GTE will study the necessary preconditions and possible obstacles.

Interoperability

As mentioned above in reference to the European gas transmission network, a high percentage of gas used in Europe has had to be carried cross one or more borders right from the early days of the European gas market. This testifies to the success of international gas transmission. However many of the existing contracts are long-term and some are between integrated companies which are both shippers and carriers. As the European gas market becomes increasingly liquid, with a growing number of shippers wanting to enter into more short-term transmission contracts, interoperability (the technical provisions needed to ensure that gas can flow safely and efficiently from one network into another) has become more complex. A good example of an interoperability issue is the multiplicity of different gas quality requirements. Because the gas quality required on the various national markets can vary widely from one country to another, shippers delivering gas to the border can encounter quality problems. This is clearly an instance in which the complexities involved in interoperability can be a barrier to international transmission, however for natural reasons. Other interoperability issues include standardisation of communications between transmission companies, harmonisation of definitions of parameters which are relevant to carriers and matching the different balancing regimes in the different countries.

As regards the issue of different gas qualities, GTE stresses the role that safety has to play here. Because of the natural differences in gas qualities found throughout Europe, over the years different bandwidths of quality specifications have been introduced. The main reason for this is safety; gas-fired equipment typically can only take a certain range of qualities. GTE is not at this stage contemplating the duplication of the transmission systems to enable different gas qualities to be transported throughout Europe. This would require massive investment and clear agreement on the return on that investment. Nor is setting a uniform gas quality standard for the whole of Europe a feasible option at present, given the massive investment and operational cost. However, GTE aims to further reduce the number of gas quality specifications while maintaining the safety of gas application.

The rapid growth in the number of the companies involved in international gas transportation in recent years has been matched by growth in the volume of information exchanged between market participants. The number of contracts per market participant has also grown, making communication between the parties increasingly important. GTE proposes that this information be communicated in accordance with the EDIG@S standard.

The use of different definitions for the same terms is clearly an obstacle to international gas trading, and both shippers and carriers benefit from unambiguous definitions of such terms as gas day and gas year and units of measurement such as the kilowatt and cubic metre. The same applies to the timing of nominations and re-nominations. To promote the mechanism that will eventually lead to harmonisation, GTE suggests the establishment of a **European Gas Industry Standards Board (EGISB)**.

Operational Balancing Agreements have been proposed and successfully adopted by some transmission companies, also at interconnections of systems with different balancing periods. These Agreements may

serve as examples for operational agreements at all other points where networks interconnect. The OBA sets out the procedures for allocation of nominations by shippers and procedures for dealing with imbalance at an interconnection point.

Recommendation

GTE considers it important to develop new interoperability tools, in order to facilitate the establishment of standard, flexible and readily updateable procedures which ensure non-discriminatory treatment of shippers.

- A communications protocol is required, in accordance with the standard developed by EDIG@S.
- Harmonisation of the principal definitions and units of measurement is extremely important.
- A permanent, voluntary, independent non-profit organisation will be considered, in which all market participants are represented, in the interest of good international co-operation (EGISB).
- At all points where networks interconnect, Operational Balancing Agreements should be implemented.

4. Conclusions, recommendations

A fully operational, integrated internal gas market in Europe is the shared goal of all the parties. Various issues that need further discussion for the way ahead have been identified in this paper and solutions to some of them have already been proposed. Provided due account is taken of these issues, the movement of gas between Member States in Europe will be further improved.

In conclusion, the recommendations put forward in this paper are reiterated below:

- In the next half year, GTE will take the initiative in developing a model which clearly defines the allocation of functions between transmission companies, shippers and other players, and which is clearly communicated to all concerned. Fundamental principle: matching supply and demand is the shipper's responsibility, technical delivery capacity (providing enough physical capacity) is the responsibility of the transmission companies.
- A one-stop shopping concept will be considered enabling shippers to reserve capacity throughout the European transmission network. GTE should like to see proposals for this concept put forward before May 2002. For a speedy introduction of the one-stop shopping concept, GTE will study the necessary preconditions and possible obstacles.
- GTE proposes to immediately start developing the traffic-light system and publishing the data on its website: www.gte.be. This is a good way of informing shippers and other players of available capacity.

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- The transmission companies must develop new interoperability tools, in order to facilitate the establishment of standard, flexible and readily updateable procedures which ensure non-discriminatory treatment of shippers. A lot of these tools are now in the process of being developed; GTE aims to continue the development throughout the next year.
- A clear communications protocol is required, in accordance with the standard developed by EDIG@S.
- Harmonisation of the principal definitions and units of measurement is essential.
- A European Gas Industry Standards Board (EGISB) is needed to facilitate international co-operation. The EGISB is a permanent, independent non-profit organisation in which all market participants are represented. GTE plans the setting-up of this organisation together with all involved parties in 2002.