

Contribution of CEER to the Madrid Forum – 30/31 October 2002

CONTENT :

Executive Summary

- Context
- Preferred tariff system
- Capacity allocation and congestion management
- Non-firm capacity
- Transparency requirements

Chapter 1: Capacity allocation and congestion management

Chapter 2: The offer of non-firm capacity

EXECUTIVE SUMMARY

Context

Reflecting the requests in the conclusions of the Spring 2002 Madrid Forum, the CEER Gas Working Group's activities have been split into three broad areas:

- tariffs;
- capacity allocation and congestion management; and
- discussion with GTE on transparency of available capacities.

Clearly the importance of this work should be seen in parallel with further liberalisation processes under the proposed Gas Directive. In this respect, the CEER believes that a necessary prerequisite for an effectively functioning and fully competitive gas market:

- Third party access is effective in all Member States;
- Discrimination is prevented, which can be ensured by effective unbundling the different elements of the supply chain;
- Appropriate price signals are allowed to emerge;
- Competitive market structures are promoted, including the prevention of the abuse of any market power;
- Market distortions are minimised; and
- Effective ex-ante regulation promotes the above

In this respect, Member States in coordination with their regulators and the Commission have a key role to play in ensuring sufficiently robust legislation capable of delivering the desirable types of market structures and arrangements.

While the discussions on the Directives continue, the CEER will also continue to provide more detailed discussion to establish principles in a number of key areas. This paper summarises the work of the CEER Gas Working Group and lists the CEER recommendations.

Preferred Tariff System

Most members of the Madrid Forum have identified the need for tariffication regimes in Europe to move closer together. This is motivated by the objectives of facilitating trade between member states and gas-to-gas competition and enabling pro-competitive and non-discriminatory tariff regimes to develop across Europe. For a particular gas flow, facing a multitude of different tariff methodologies as gas flows across different networks, adds an additional level of complexity to each trade, therefore adding an impediments to the full possibilities of effective trade and hubs across Europe. Clearly subsidiarity should be respected whether possible. But in respecting subsidiarity it should be noted that tariff regimes in some Member States are failing to deliver pro-competitive and non-discriminatory

outcomes. It is therefore a useful exercise for the CEER to investigate whether it is possible to identify a tariff methodology that is in the Community interest and a tariff regime that is capable taking into account the specificities and market characteristics of different networks.

The CEER has investigated the mechanisms for establishing a preferred tariff methodology for domestic, cross-border and transit flows. The CEER has produced a separate detailed discussion paper that explains different tariff methodologies and reaffirms the CEER's preference for entry-exit tariffs in particular when assessed against the key objective of promoting competition and trade. It is clear, however, in the CEER's discussions with GTE and Member States that national specificities are a concern to some GTE members. The CEER has explained why in general entry-exit regimes can provide sufficient adaptability to counter these concerns.

In the light of continued objection on the ground of national specificities the CEER recommends that GTE with concerns find solutions to these problems. Clearly, this work need only apply to those GTE members concerned about these national problems.

In the first instance, GTE members (in close coordination with CEER, member states and industry participants¹) should investigate the application of entry-exit regimes to their network. Where problems are deemed to exist, these should be explained and possible solutions proposed by GTE members. Where certain GTE members do not feel that a pure entry-exit regime would be workable within their network, alternative solutions should be presented that also meet the principles agreed at the Spring 2002 Madrid Forum, whilst maintaining a coherence with tariff systems applied on other networks.

In parallel, the CEER will continue work on establishing key implementation issues for entry-exit tariffs, for example establishing the minimum degree of harmonisation and the key outcomes that the CEER wishes to secure through the development of new tariff regimes.

Capacity allocation and congestion management

This paper presents the following high-level principles. Associated with these principles are a number of rules. The CEER believes that at least the rules should be adopted in the guidelines for good TPA practice and the present paper more generally could serve as a useful reference point for industry and regulators.

The high-level principles are:

- **ECONOMIC EFFICIENCY:** Congestion management and capacity allocation procedure(s) should be established and published. They should operate in an economically efficient manner, meeting market demand and providing appropriate economic signals for optimal use of the system and efficient

¹ In this respect, the CEER welcomes the offer by EFET to be involved, in particular, in establishing a workable entry-exit system for the German market.

investment in additional network infrastructure, the revenue system should not create disincentives to reduce congestion.

- **COMPETITION and NON-DISCRIMINATORY:** Congestion management and capacity allocation method(s) should promote effective competition and tradability of capacity across Member States and should be non-discriminatory. The mechanisms should neither facilitate nor consolidate market power and should avoid specific disadvantages for new entrants.
- **TRANSPARENCY:** All relevant information related to the services offered by TSO's, including all cross-border and domestic trade in particular available capacities should be published in a transparent and timely manner.
- **COMPATIBILITY AND INTEROPERABILITY:** Capacity allocation and congestion management are compatible with the market mechanisms used (spot, short term, long term, hub trade, etc.) and should be capable of adapting to evolving market circumstances. Capacity allocation and congestion management should promote interoperability between systems
- **COMMERCIAL CONGESTION:** In any capacity allocation regime, specific anti-hoarding measures should be in place, including an appropriate use of short-term mechanisms and, where deemed insufficient, consideration of appropriate longer-term capacity release mechanisms.

Non-firm capacity

The chapter on non-firm capacity should be seen as emerging from the principles above on capacity allocation and congestion management². As suggested above, the CEER recommends the adoption of the following rules within the guidelines for good practice.

- **REGULATORY CONTROL.** The TSO offering non-firm capacity shall pursue the approval by the regulatory authorities of at least the methodologies used to calculate or establish the terms and conditions for offering non-firm services
- **THE OFFER OF NON-FIRM CAPACITY.** The non-firm services offered by the TSO should meet market demand. The fact that firm capacity is still available should not prevent non-firm capacity being offered. Overbooking of interruptible capacity should also be envisaged. The offer of capacity in any case should be allied with appropriate non-discriminatory and transparent contractual terms.
- **NON-DISTORTIONARY AND ALLOWS COST RECOVERY.** Measures to avoid inefficient incentives on network users and unpredictability of the revenues of the

² “**non-firm capacity**”: gas transmission, LNG or storage capacity that can be interrupted by the transmission, LNG or storage undertakings according to the conditions stipulated in the access contract. The contract specifies the permitted duration, frequency and timing of the interruptions. It also specifies the previous notice required and possibly a fee related to the duration of the interruptions.

TSO should be effectively incorporated into tariff design and regulatory mechanisms.

- PROMOTES EFFICIENT USE OF THE NETWORK AND ADEQUATE INVESTMENT. Appropriate incentives on the transmission companies should be provided to ensure an efficient use of their network through an appropriate balance in the supply of firm and non-firm capacity and through the particular tariff methodology or market-based solution applied.
- ABIDE WITH TRANSPARENCY, CAPACITY AND TARIFF GUIDELINES. Non-firm services should abide by the principles on transparency and CEER guidelines in relation to tariffs for firm capacity and capacity allocation and congestion management rules, in particular non-discrimination.

At the very least, the CEER sees strong potential benefits of non-firm transportation capacity, in particular in relation to transitional markets. However, discussions with industry have highlighted concerns that care must be taken to ensure that the way in which interruptible services are introduced does not create perverse incentives on industry participants. The CEER GWG has taken these observations on board and the following principles should be seen as striking an appropriate balance between introducing regulatory rules or incentives to offer interruptible capacity services whilst ensuring that any requirements are not disruptive to network users or TSO's.

It is important to note that the way in which interruptible capacity is offered in different markets may differ depending on the choice of national regulators in relation to market-based or price regulated approaches. These choices will be reflective of different national circumstances, including the development of the market, but should abide by the key principles outlined in this paper. Further benchmarking of the different interruptible services offered in different markets could provide a useful tool to monitor the effectiveness of different approaches through time.

Transparency requirements

The 'Guidelines for Good Practice' (GGP) attached to the conclusions of the last Madrid Forum provided a strong set of recommendations. The Forum invited GTE and its members to co-operate with the CEER and national authorities in implementing them in practice. However, on 27/2/2002 GTE wrote to CEER, with the following comments:

"...We would like to stress that we do not agree on several points mentioned in this document and however to continue the discussion notably with CEER to resolve this issue. ..."

As a result of the discussions between the CEER and GTE, a document was presented to the Joint Working Group on 20 September 2002. It provides an indication of the areas where GTE's members are willing, on a voluntary and

collective basis, to agree to implement further transparency measures immediately. Remaining discussion point is §12 of the guidelines proposed in that document, concerning confidentiality.

CEER supported the idea of the European Commission to create in the GGP a separate chapter concerning transparency requirements, and suggested a set of rules to be included in this chapter.

CHAPTER 1 – CONGESTION MANAGEMENT AND CAPACITY ALLOCATION

I. Context

The conclusions of the 5th meeting of the European Gas Regulatory Forum (Madrid, 8 February 2002), in §16, entrusted CEER with the following task:

“The Forum took note of a presentation made by GTE on principles applied by different gas companies in relation to allocation of scarce capacity. The Forum invited the CEER in co-operation with the Commission, GTE and other relevant stakeholders to further develop the different principles and methodologies in order to ensure the applicability and convergence of non-discriminatory rules for congestion management and capacity allocation in cases of scarce capacity.”

This chapter does not deal with questions concerning: the requirement to offer interruptible capacity (see chapter 2A), the tariff structure, overbooking of interruptible capacity, the way interruptions are performed, etc.

The requirements proposed in this paper are formulated in order to be added to the guidelines for good practice approved by last Forum of Madrid. The comments are only meant to help facilitate understanding the proposals.

The concrete solutions for congestion management depend strongly on the chosen allocation rules and on the level of congestion. Therefore, this paper does not require a particular system to be adopted everywhere. However, this paper does establish five key principles that should apply to any capacity allocation and congestion management regime adopted at a national level.

II. Detail

For any network the following congestion management and capacity allocation principles should apply. Such principles should form the overall guidelines for different congestion management and capacity allocation rules. In any case, where different approaches are adopted, particular account should be taken of principle 4 on compatibility and interoperability of different approaches between systems:

PRINCIPLE #1. ECONOMIC EFFICIENCY: Congestion management and capacity allocation method(s) should be established and published and operate in an economically efficient manner, offering as much capacity as possible, meeting market demand, providing appropriate economic signals for optimal use of the system and efficient investment in additional network infrastructure. The revenue system should not create disincentives to reduce congestion.

In principle, TSOs should endeavour to accept all commercial transactions including those incurred by cross border trade. In case the scheduled commercial transactions are not compatible with secure network operation, the TSOs should co-ordinate to alleviate the congestion by any means as long as the associated costs are at an economically efficient level. When congestion is structural, the possibility and opportunity to invest in additional transmission infrastructure should be investigated and appropriate congestion management methods should be applied.

1.1 Regulatory rules or incentives should ensure that the TSO offers system users all available capacity on the primary market.

Comment: The system operator should offer the available capacity also on the very short term market, e.g. for the next day. The price charged for this service may take into account that most networks are designed for peak days.

1.2 A congestion management method chosen should not result in undue transaction costs to market participants or TSOs.

1.3 In addition to firm capacity, the TSO should also offer non-firm capacity. The conditions for non-firm capacity reflect both the system congestion and the market demand.

Comment: The CEER's Gas Working Group interruptible capacity paper provides further discussion of this issue and adopts a number of high-level principles in respect of interruptible(non-firm) capacity.

1.4 The capacity allocation system should strike an appropriate balance between commercial flexibility to enable rights to be easily tradable, whilst taking account of the need to provide sufficient quantities of capacity on a firm basis.

Comment: The choice of a capacity allocation system (point-to-point, poststamp, entry/exit) determines the degree of commercial flexibility. The flexibility offered to shippers is important for the development of competition. Offering flexibility reduces the competitive significance of a shippers size. Under an inflexible point-to-point system shippers with a large portfolio of customers have a competitive advantage (using internal swaps). If size offers the possibility of reducing costs it is only natural for a large company to have a competitive advantage. The difficult issues arise when the choice of a capacity allocation system itself creates the advantage of size. Commercial flexibility permits the shipper to start out small in a market. In the absence of flexibility the new shipper might have to tolerate financial losses until he reaches a significant size. On the other hand offering too much commercial flexibility will reduce the amount of firm capacity that the TSO can sell³.

1.5 Incentives should be in place for the TSO to offer flexibility, for example in the duration of capacity contracts offered.

Comment: Besides the choice of a capacity allocation system, the TSO should take into account matching the needs of the system users and the transmission services offered. The role of a secondary market is essential in this respect. The system user will try to match the well-known off-take profile with a transport agreement but may be confronted with a limited offer of possible variations in capacity contracts. For example, the system user has to book firm capacity over the supply horizon according to the peak off-take and will have to resell the surplus of firm capacity on the secondary market (at a lower price if the system is not confronted with congestion). In these circumstances, the imperfect service supply of the TSO will be a source of contractual congestion and sub-optimal use of the network capacity.

It is possible to increase commercial flexibility without reducing available capacity. This can be done in several ways:

- First, most systems can afford to provide much greater flexibility services on other than peak flow days. It makes sense to accompany capacity allocation with balancing tolerances that vary over the course of the year or that depend on temperature.
- Second, the TSO can help solving congestion problems and increase flexibility by offering short-term services which permit the TSO to take advantage of the increasing certainty that arises as a particular day approaches. Experiences (UK) indicate the importance of using a well-balanced mix of long-term and short-term contracts to create competition in forecasting congestion. Short-term contracts provide useful short-term signals concerning congestion but a high price for a one-month capacity contract cannot indicate whether it makes sense to

³ It is important in this context, however, to note the comments of EFET on the CEER papers, the added liquidity and changing role of a TSO for example under an entry-exit regime may actually help to increase the capacity that is offered.

invest in relieving congestion. Long-term transportation contracts foster competition in long-term forecasting.

- *Third, the TSO should offer interruptible capacity. This topic is discussed in a separate paper.*

The TSO should establish a capacity allocation system taking into account the right mix between flexibility services and the level of firm capacity offered combined with a transmission programme (a catalogue of services provided) taking into account the existing market demand and the requirements of system users as well as the specific characteristics of the various transmission services offered. Doing so the TSO is encouraged to adopt a more market-driven behaviour.

- 1.6 Both the capacity allocation rules and the tariffs should, in principle, encourage flows that help alleviate congestion.
- 1.7 Congestion management and capacity allocation take into account safety standards and a sufficient guarantee of system integrity at all times.

On investment signals

Congestion management should be proactive and send out correct signals for investment policy in good time. This entails monitoring by the TSO and effective signals on the level of congestion of the network and information to the authority or party responsible for investment planning or security of supply. Where a TSO is responsible for investment in the network, there should also be sufficient investment incentives in place to respond (efficiently) to congestion signals.

- 1.8 Congestion management and the related investment planning must be directed at avoiding physical congestion:
 - the network should be designed and reinforced timely to meet all foreseeable demands/signals for the need for additional firm capacity on a long run basis;
 - the forecast of future demand for firm capacity takes account of market behaviour as regards non-firm capacity, security of supply, etc⁴.
- 1.9 Usually the physical congestion is a temporary situation where investment is profitable and allows an alleviation of the congestion. In some cases it is not possible to avoid physical congestion because it is not possible to invest in expansion, for example due to planning or environmental constraints that may be outside the regulators or TSO's control. Moreover, economic signals should allow TSO's to weigh the

⁴ This paper does not discuss incentives to invest (return on equity, etc.) or the security of supply issue; neither does it discuss the price signals for system users.

costs of investment against alternatives. Nevertheless the existence of physical congestion makes it necessary to establish specific, transparent and non-discriminatory capacity allocation rules for all capacity that is released as well as the capacity that is made available as a result of the additional investment.

- 1.10 Congestion management procedures may only generate revenue in case of congestion. The procedure for its distribution should neither distort the allocation process in favour of any party requesting capacity nor provide a disincentive to TSOs to decrease the amount of congestion.

PRINCIPLE #2. Congestion management and capacity allocation method(s) should promote effective competition and tradability of capacity across Member States and should be non-discriminatory. The mechanisms should neither facilitate nor consolidate market power and should avoid specific disadvantages for new entrants.

On non-discrimination and competition:

- 2.1 The national regulatory authorities should regularly evaluate the congestion management methods with respect to compliance to these principles and rules by consultation of all market players and through economic studies.
- 2.2 The system operator should apply congestion management and capacity allocation without discrimination among system users. The supply branch of a vertically integrated company should be subject to the same conditions as other shippers (allocation mechanism, tariffs, etc.)
- 2.3 Capacity allocation and congestion management promote competition and do not create barriers to entry; the rules should neither facilitate nor consolidate the abuse of any market power, being as neutral as possible with respect to the size of the system user, avoiding specific disadvantages for small system users. All system users should be subject to the same conditions and tariffs for the similar services.
- 2.4 Transmission contracts should not contain any provisions that are unduly discriminatory or that could impede the way the market works, including:
 - i. provisions that oblige the system user to purchase other services, that are not necessarily linked to the transmission

- service, from the transmission undertaking together with the transmission service;
- ii. provisions that prohibit the system user from purchasing other services from a party other than the transmission undertaking involved in the transmission contract;
 - iii. prolongation of a contract should not be allowed: when a contract expires the holder of the capacity must be placed on a level playing field with all network users;
 - iv. provisions that make the creation or maintaining of the transmission contract dependent upon the presentation of a supply contract, without prejudice to the possible use-it-or-lose-it provisions.

Comment: A market that works smoothly is characterised by the free entry and exit of market parties. In order to promote trade, it is therefore important to avoid market processes that raise barriers to entry and exit and discriminating provisions. Certain requirements which could be linked to access to the transmission network may lead to impediments for the development of the gas supply market. The above requirements are aimed at providing a non-exhaustive summary of certain conditions that may harm the effective functioning of markets and the introduction of competition and should therefore not be included in the transmission contract. Conditional clauses could impede the working of the market by preventing system users from optimising their portfolio. Exclusive rights clauses also hamper the working of the market as they prevent system users from obtaining certain transmission services from other transmission companies. The possibility of renewal clauses that automatically provide the option of extending the transmission contract could mean that system users are constantly allocated capacity, reducing the possibility of new entrants. Even though the capacity allocation rules could be modified in the meantime and this could indirectly cause discrimination. The so-called "show of contract" hampers the development of a secondary market, as it slows down system users who want to contract capacity and impedes the effective functioning of the market as system users are unable to book capacity in anticipation of the conclusion of a supply contract.

- 2.5 Sufficient regulatory mechanisms should be in place to ensure that no undue cross-subsidies or market distortions arise due to differences between eligible and non-eligible customers. Mechanisms could for example require that capacity for captive customers should be booked and nominated separately. It is necessary to control the absence of cross-subsidisation between both categories of customers, and in some cases to control the capacity booked for public service obligations is actually used for this purpose. And is particular that a shipper supplying gas to captive customers is not allocating costs to this segment, and using the corresponding capacity or flexibility services for his customers of the liberalised segment.

On tradability of capacity:

- 2.6 Tradable: liquidity of the capacity markets should be facilitated. The fact that gas is traded on a hub should not entail for the system user additional capacity requirements and corresponding costs, compared with the situation where gas is sold directly to a consumer in the same zone⁵.
- 2.7 The system operator facilitates the secondary market with simple, transparent and low-cost mechanisms to sublet or transfer capacity and flexibility.

Comment: The existence of a secondary market leads to a more efficient allocation of capacity and/or flexibility. This means that a system user who, for instance, does not wish to use capacity itself in a given month can offer this to another system user who needs extra capacity that month. Consequently the latter does not necessarily have to purchase this capacity directly from the transmission undertaking. For secondary markets to function effectively requires sufficient liquidity and diversity in buyers and sellers of capacity..

Secondary market is more than an exchange market. Capacity and flexibility can be traded via an electronic platform. This does not rule out the possibility that system users can trade capacity and flexibility bilaterally. The term 'secondary market' is broader than the term 'exchange market', as the system users on the secondary market can contact one another directly to trade capacity or use a market maker to broke such deals. There are no requirements on the TSO to organise an exchange market as secondary markets can naturally develop. However, it is important that the rules for the trade of capacity and flexibility services do not impede the development of secondary markets..

- 2.8 Secondary markets can and should for example enable capacity contracts to be reformulated to better reflect the needs of system users. For example, secondary markets can permit long-term capacity contracts to be broken up and resold in pieces of shorter duration. The transmission contract should not any provisions that could impede tradability of capacity contain, such as:
- v. provisions that prevent subletting allocated capacity in whole or in part
 - vi. provisions that require system users to inform the transmission undertaking in advance of the party to whom they wish to transfer their allocated capacity in the event of a transfer of capacity as referred to in 1°;
 - vii. provisions that require that the contents of the transmission contract remain confidential.

⁵ If gas entering the system in point A is traded on the hub before it is off-taken from the system in point B, transmission should not cost more than entering gas in point A and off-taking it in B.

Clearly, however, certain rules need to be established in relation to the use of capacity rights on a gas network.

Comment: One must distinguish subletting from transferring capacity. In the first case the holder of capacity remains accountable to the system user. In the latter, the holder of capacity transfers his capacity rights for a particular period and duration to another user and this includes transferring its commitments for that capacity right (for the particular period/duration/quantity) to the new holder. In these circumstances appropriate procedures need to be established to ensure that the responsibilities pertaining to capacity rights are effectively transferred. This includes ensuring that the TSO is effectively informed of holder of capacity rights for a particular period.

Transmission contracts should not contain provisions that impede subletting capacity. System users must be able to trade the capacity allocated to them in whole or in part, and trading conditions should aim to minimise the costs and time taken to conduct such transactions. System users should not have to indicate in advance to whom they wish to sublet the capacity allocated to them and should not need the prior consent of the transmission undertaking. Moreover, it should be made possible for system users to sublet capacity with a system user who has not yet concluded a transmission contract with the transmission undertaking and marketability may not be indirectly impeded by a requirement to treat the contents of a transmission contract as confidential.

| |
|--|
| <p>PRINCIPLE #3. TRANSPARENCY: All relevant information related to the services offered by TSO's, including all cross-border and domestic trade in particular available capacities should be published in a transparent and timely manner.</p> |
|--|

- 3.1 Capacity allocation: capacity should be allocated on the basis of transparent principles and rules that can be easily understood by system users.
- 3.2 System users should be able to obtain information on available on a timely basis and calculation of available capacity takes into account both the physical characteristics of the system and the market characteristics.
- 3.3 All information published by the TSOs should be easily accessible.
- 3.4 The TSO should develop appropriate tools to calculate available capacities taking into account physical gas flows and contractual gas flows, and in particular:
 - ✓ the fact that system users are unlikely to nominate the maximum use of their booked capacity all at the same time;
 - ✓ the degree of predictability of market behaviour (which might be greater for domestic consumption than for other uses);

- ✓ the market for non-firm and interruptible capacity and the buy-back possibilities;
 - ✓ the corresponding risk management should be approved by the relevant authority.
- 3.4 If the system operator denies a firm capacity demand because it exceeds the available firm capacity, this shall be considered as a due substantiation of refusal as far as the regulator has approved the computation method of the available capacities and the applied anti-hoarding mechanisms and congestion management rules or as provided within the network code. The system user retains the right of appeal to the relevant national authority against any decision of the system operator.
- 3.5 The way the secondary market operates is simplified by the existence of a network code or a standardised transmission contract with provisions that makes them easy tradable (see IV.General requirements, point 11 and 12). There should be the opportunity for network users and the TSO to propose modifications to this contract through time. The regulator should at least monitor such negotiations at a high level to ensure that the principles are adhered to.
- 3.6 The TSO offers system users all its transmission services separately:
- transmission
 - flexibility services
 - as regards storage: injection, storage and withdrawal
 - as regards LNG: reception, storage, gasification and liquefaction
 - ancillary services

PRINCIPLE #4. Compatibility and interoperability: Capacity allocation and congestion management are compatible with the market mechanisms used (spot, short term, long term, hub trade, etc.) and should be capable of adapting to evolving market circumstances. Capacity allocation and congestion management should promote interoperability between systems

- 4.1 The TSO should allocate the available capacity on the basis of allocation rules adapted to the market circumstances. This means that first and foremost the TSO takes account of the development of the ratio between supply (known with some certainty) and demand (anticipated). Relatedly, as suggested in the general principle, allocation rules should be capable of changing through time, for example reflecting the degree of competition between shippers.
- 4.2 It must be possible to adapt congestion management and capacity allocation flexibly on the basis of developments on the gas market. Altered market conditions potentially give rise to different congestion problems and other allocation rules. Therefore, the rules and structures should be capable of evolving in an effective and timely manner.

- 4.3 Where relevant, design of congestion management and capacity allocation mechanisms should include consultation with the relevant parties in neighbouring transmission networks.
- 4.4 The capacity allocation rules must foster the development of competition and liquid trading of capacity.
- 4.5 On the primary market the capacity allocation rules can vary according to the offered transmission services. The allocation rules may differ substantially depending on whether they relate to transmission, storage, LNG services, blending or quality conversion. Though some common principles, such as non-discrimination, are likely to apply.

PRINCIPLE #5. COMMERCIAL CONGESTION: In any capacity allocation regime, specific anti-hoarding measures should be in place, including an appropriate use of short-term mechanisms and, where deemed insufficient, consideration of appropriate longer-term capacity release mechanisms. These mechanisms should aim to ensure that in case of commercial congestion that capacity rights are then awarded to parties who actually intend to use them.

- 5.1 The transmission undertaking pursues an active congestion policy aimed at ensuring maximum use of all technical capacity. This policy is designed to set up an objective, non-discriminatory system to distribute the scarce capacity among the system users in the event of contractual congestion and is therefore a means of preventing discrimination between system users or categories of system users.

Comment: Contractual congestion occurs as soon as all technical capacity has been allocated as firm capacity. This means that newcomers can no longer book any capacity on the primary market. The fact that congestion occurs does not necessarily mean that there is physical congestion. This is only the case when all the capacity allocated is actually being used (this is usually nominated) by the system users. In some countries, a large proportion of the technical capacity is allocated to the incumbent on the basis of long-term contracts. This hampers the access to the market of transmission capacity and natural gas for newcomers. The same phenomenon occurs as regards transit capacity. Since natural gas for the European market has to be transported across borders and over long distances, access to transit and interconnector capacity is essential for the successful liberalisation of the European gas market. At the moment, access to transit pipelines and interconnectors is frequently limited because of limited available capacity.

A congestion management policy is in particular facilitated by effective unbundling rules and regulatory incentives. These provide and facilitate the emergence of congestion management techniques by TSO's that aim to make available the maximum use of capacity

- 5.2 In the first instance, appropriate anti-hoarding mechanisms should be in place. Consideration of necessary short-term mechanisms should be established to ensure that capacity that is not used is not hoarded in

an anti-competitive manner and can be made available, in good time, to other markets player who wish to make use of that capacity.

Comment: An example of a short-term anti-hoarding mechanisms is the so-called, non-used-contracted-capacity-release (NUCCR). Under this mechanism or derivatives thereof, the system operator offers as much as prudently possible the non-nominated allocated capacity either as interruptible capacity for the next day. In addition, the TSO may use incentives to ensure that capacity holders nominate correctly and do not simply nominate the use of their capacity rights as a means to hoard capacity.

5.3 Where short-term anti-hoarding measures are deemed insufficient, consideration is needed of the use of longer-term capacity release programmes, in particular where there is no regular auctioning of short term capacity on a system. This could range from one-off release of existing capacity to more permanent solutions.

Comment: This could, for example, require the system operator to include in all his service contracts a provision that entitles him when contractual congestion occurs to release the allocation of capacity that reveals to be unused. The corresponding rules should be established by the regulatory authority.

The “use it or lose it” principle may not be seen as a principle standing alone, but together with the allocation rules and congestion management policy preventing anti-competitive capacity hoarding. The right of access to a transmission network of one system user is limited as a result of the right of access to that transmission network of another system user. Right of access to any transmission network is so essential for the liberalisation of the natural gas market that it may even be classified as a fundamental right on the natural gas market. It is equally fundamental to ensure that the right of access of the various current and future system users is balanced. This balance can only be achieved if the volume of available capacity, which is limited by definition, is allocated in the most efficient manner. This efficient allocation of the available capacity is an essential condition to ensure effective competition on the natural gas market.

Under the long-term mechanism above as soon as contractual congestion occurs, the TSO would release the part of the allocated capacity that reveals to be unused, and make it available to those asking for new capacity. The rules to determine which capacity can be considered as “unused” should be elaborated by the regulatory authority and published. This release of capacity could be limited for example to the amount that is required by new applicants, who can demonstrate that they will effectively use it, through their willingness to pay. The system user concerned can avoid his allocated capacity being released either by demonstrating that he is actually using the capacity or by demonstrating that he needs the capacity on the basis of supply and/or delivery contracts, or by returning capacity to the TSO, or by offering capacity on the secondary market at a duly competitive price.

The TSO is authorised to allocate capacity in the longer term, as long as the contracts includes necessary anti-hoarding mechanisms. As long as there is no contractual congestion, the system user concerned can freely dispose of the capacity allocated to it. Therefore the "use-it-or-lose-it" principle does not under any circumstances hinder the conclusion of transmission contracts in the longer term, on the basis of the future prospects of the system user concerned. For the same reason it may be asserted that the "use-it-or-lose-it" principle does not hinder the implementation by the transmission undertaking of a long-term investment policy.

CHAPTER 2 – THE OFFER OF NON-FIRM CAPACITY

I. Context

At the 5th Madrid Forum:

- in its paper “Calculation methodologies and transparency requirements” CEER defined non-firm capacity as capacity which is not guaranteed in any way by the transmission system operator (TSO), or a form of non firm capacity. Non firm capacity is defined as gas transmission, LNG or storage capacity that can be interrupted by the transmission, LNG or storage undertakings according to the conditions stipulated in the access contracts;
- CEER considered that non-firm capacity is a crucial issue for the development of a competitive and liquid gas market;
- it appeared that many TSOs refuse to offer non-firm capacity, when there is still firm capacity available on the same route. CEER proposed to investigate whether denying access to non-firm capacity would not be in contrast with competition rules. GTE noticed that such refusals in the case of availability of firm capacity are justified by the need to recover the total costs of transmission. Discounted prices for non-firm capacity were claimed not to ensure such recovery. In GTE's view, in the case of excess capacity, all shippers could have incentives to ask for non-firm capacity, anticipating no actual interruptions.
- the Forum invited the CEER, in close collaboration with the Commission, GTE and other stakeholders to undertake work on issues in relation to valuing and charging for non-firm capacity and incentives on TSOs for efficient network operation.

II. Detail

Reflecting discussions of the CEER gas working group internally and with industry participants the CEER has established the following high-level principles. It is important to note that the way in which non-firm capacity is offered in different markets may differ depending on the choice of national regulators in relation to market-based or price regulated approaches. These choices will be reflective of different national circumstances, including the development of the market, but should abide by the key principles outlined in this paper. Further benchmarking of the different non-firm services offered in different markets could provide a useful tool to monitor the effectiveness of different approaches through time.

1. Role of non-firm capacity

The members of the Forum share the belief that non-firm capacity can be an important instrument for fostering competition and an efficient use of the

network, especially in the case of excess of capacity demand. The following considerations support this view:

- a) **non-firm capacity facilitates the development of a spot market for gas**, via an increase of liquidity of capacity. Once a liquid secondary market has well developed and matured, the sale of unused firm capacity rights on the secondary market has the advantage of offering more certainty to new applicants than non-firm capacity does; in addition, it could provide the same flexibility as an non-firm service does. However, and especially in the transitional stage of the development of an effectively functioning market, non-firm capacity provides system users with a more flexible and economical service, and increases the market liquidity;
- b) in the case of scarce capacity, **it could represent a way to let new operators enter the market and to reduce the impact of disputes over the measurement of available firm capacity and over refusal of access**. System users, who are refused firm capacity, can accept non-firm capacity to enter the market, thus avoiding the delay of a disputed solution. But even in the absence of physical congestion, there may therefore be some justification for non-firm contracts to be offered. For example, integrated undertakings may not have the correct incentives to maximise the use of the network, and dominant supply companies may have incentives to hoard capacity. The same may apply where there are unbundled TSOs, but where long term contracts are predominant and leave significant unused capacity in the pipelines, preventing new operators from entering the market;
- c) **non-firm capacity maximises the use of existing infrastructures**: in the pipelines there could be unused capacity in significant but unpredictable quantities. The offer of non-firm services, in addition to firm capacity rights, can better guarantee a more efficient use of the network. On the primary market, non-firm capacity should be offered by the TSO both as a derivative of applying the "non used contracted capacity release" mechanism and as an autonomous product. The use of non-firm capacity contracts on the primary market should be considered complementary to secondary capacity markets, assuring the same effects in terms of efficiency in the use of the network. However, in maximising the use of existing infrastructures, the balance chosen between offering non-firm and firm capacity should provide appropriate incentives on TSO's to ensure that a reliable (more certain) service can be offered and that correct investment incentives are in place.
- d) **non-firm capacity provides a useful tool to manage the demand side**, avoiding investment in capacity reinforcement that becomes unnecessary, once the risk acceptance on the demand-side is clearly revealed. This is particularly pertinent considering that interactions between the gas and the electricity sector are becoming increasingly important, due to the increasing use of gas for power generation. Discounted prices for non-firm capacity services can represent an incentive for power generators to accept interruptions and use other

fuels in peak periods;

- e) **it provides a signal to better adapt the network development to the continuously changing demand scenarios.** Offering non-firm capacity in addition to firm rights, may help system users to take advantage of better demand forecasting techniques or competitive informational advantages that may emerge. At the same time, TSOs can obtain useful information on the nature of demand from system users behaviour, to rely on for future investments.

2. High level principles for charging non-firm capacity on the primary market

PRINCIPLE #1: REGULATORY CONTROL. For the offer of non-firm capacity by the TSO, Regulatory authorities shall be responsible for fixing or approving prior to their entry into force, at least the methodologies used to calculate or establish the terms and conditions for offering non-firm services.

- a) As for any tariff mechanism pertaining to monopoly services, there should be effective regulatory controls and, in particular, to ensure that the principles presented on non-firm services context are applied. Where appropriate, regulators have a role to facilitate market-based methods, such as auctions. In this latter case, for example, there could be a role to ensure that such allocation procedures are pro-competitive and that the revenues emerging from such auctions are effectively controlled.
- b) When capacity offered by the TSOs is not yet subject to regulation, at least publication of prices and main conditions should occur.

PRINCIPLE #2: THE OFFER OF NON-FIRM CAPACITY. The non-firm services offered by the TSO should meet market demand. The fact that firm capacity is still available should not prevent certain non-firm capacity being offered. Overbooking of capacity should also be envisaged. The offer of capacity in any case should be allied with appropriate non-discriminatory and transparent contractual terms.

- c) For particular forms of non-firm service, it is not necessarily the case that it should only be offered where firm capacity is no longer available. Some forms of non-firm capacity can be viewed as a separate service and its offer should not necessarily always be linked to firm capacity. To the extent that this provides uncertainty for the shipper but also possibly enables the TSO to offer more capacity to the market, this could justify an appropriate adjustment to tariffs.
- d) In principle, efficient pricing of non-firm capacity would mean that it is reflective of the risks of interruption. Where the risk for gas flows under non-firm capacity contracts to be effectively interrupted is broadly the same as for firm capacity contracts the regulated_prices for non-firm capacity would be equal to prices for firm capacity. Depending on the

respective definitions of firm and non-firm services, this could imply that non-firm services could be seen as a separate service to firm.

- e) As principle #1 stated, the way in which non-firm capacity is offered in different markets may differ depending on the choice of regulators in relation to market-based or price regulated approaches. These choices will be reflective of different national circumstances, including the development of the market, but should abide by the principles outlined in this paper.
- f) In any case, both the allocation system and price calculation must take into account that **overbooking of capacity** should be allowed. This is possible since the physical capacity of the system may not be reached because network users' portfolio may not be coincident. Where there is overbooking of capacity, this could mean that the non-firm service may effectively be interrupted if the sum of the non-firm capacity allocated exceeds the available capacity minus the nominated and used firm capacity.

PRINCIPLE #3: NON-DISTORTIONARY AND ENSURES COST RECOVERY. Measures to avoid disruptive behaviour by network users and unpredictability of the revenues of the TSO should be effectively incorporated into tariff design and regulatory mechanisms

Measures to avoid disruptive behaviour by network users and unpredictability of the revenues of the TSO should also be envisaged and accommodated. Especially in the transitional period, for example the first year non-firm capacity is offered, there could be a significant (and in some cases unexpected) move from firm to non-firm capacity, in particular in relation to tariff design and the revenues accrued, that could create problems to TSOs and require specific solutions;

PRINCIPLE #4: PROMOTES EFFICIENT USE OF THE NETWORK AND ADEQUATE INVESTMENT. Appropriate incentives on the transmission companies should be provided to ensure an efficient use of their network through an appropriate balance in the supply of firm and non-firm capacity and the particular tariff methodology or market-based solution applied.

- g) appropriate incentives on the transmission companies should be provided for the efficient use of their network. If TSOs, which already recover their costs from the sale of capacity, are allowed to retain part of the appropriate additional revenues from non-firm services, exchanges of capacity among shippers should also be allowed, as these exchanges can exert a competitive pressure on the TSO. The sale of non-firm services can potentially provide a useful signal for the need to invest in new capacity or for the willingness of network users to provide a solution to relieve physical network constraints at peak periods.
- h) Non-firm charges (and potentially other flexibility services) should therefore aim to provide incentives on TSOs to make efficient decisions in relation to network investment in the one-hand, and demand-side

management on the other. Efficient decisions do not contrast with a prudent planning of the network, which should take into account the fact that some system users could ask to switch from non-firm to firm capacity once the interruptions really occur. On the other hand, system users have to be aware that they run a significant risk of being physically interrupted when using non-firm capacity, according to the conditions stipulated in their contracts;

- i) Indeed, in maximising the use of existing infrastructures and providing appropriate investment in the network, it is important that risks of network uncertainty and the availability of transportation capacity on a non-firm basis do not create disincentives on the TSO's to provide a reliable network access on a firm basis, required by the majority of system users (i.e. that the TSO provides too much interruptible capacity). The balance between non-firm and firm capacity should provide appropriate incentives on TSO's to ensure that a reliable service can be offered and that correct investment incentives are in place.

PRINCIPLE #5: ABIDE WITH TRANSPARENCY, CAPACITY AND TARIFF GUIDELINES. Non-firm services should abide by the principles on transparency and CEER guidelines in relation to tariffs for firm capacity and capacity allocation and congestion management rules.

- j) **for non-firm service, the same principles proposed by CEER for firm transmission tariffs should be applied.** Prices should be derived from a robust modelling of the flows and a transparent tariff model and be cost reflective. Non-firm service should typically be provided at a discount relative to firm capacity prices. Discounts should be reflective of the probability of interruption;
- k) **non-firm service should be offered in a transparent and non discriminatory way.** TSOs should offer a number of different non-firm capacity services, reflecting the existing or predictable market demand. In order to increase liquidity in the market, a standardisation of the terms of different non-firm capacity services offered is needed, especially if cross-border trades are involved.
- l) for non-firm service to be transparent, **TSOs should publish timely and detailed information about the use of the system and its capacity;**

Conclusions

Non-firm capacity should be offered not only on the secondary market but also on the primary market by TSOs, as it contributes to competition and efficiency in the gas market. Non-firm capacity should be provided at a discount relative to firm capacity prices, and discounts should be reflective of the probability of interruptions, though market-based methods such as auctions can be applied, where appropriate.

In the light of the current situation, non-firm capacity services should be offered at based on a set of minimum common rules agreed at EU level. For particular forms of non-firm service, it is not necessarily the case that it should only be offered where firm capacity is no longer available.