



Capacity Allocation on European Gas Transmission Networks

Pilot Framework Guideline – Initial Impact Assessment –

**Ref: E09-GNM-10-06
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INFORMATION PAGE

Abstract

This document contains ERGEG's impact assessment on the Pilot Framework Guideline on Capacity Allocation on European Gas Transmission Networks (Ref: E09-GNM-10-05).

On 22 September 2009 the Commission invited ERGEG to draft a pilot framework guideline on capacity allocation in gas transmission networks. In the context of the pilot project, ERGEG declared its readiness to assume the role assigned to the Agency under Article 6 (2) of Regulation (EC) 715/2009 ("Gas Regulation") and to submit a non-binding framework guideline within 6 months of receipt of the Commission's notification.

This pilot framework guideline is based on ERGEG's previous work on capacity allocation and congestion management. ERGEG has published in August 2009 the results of the public consultation on its principles and proposals for capacity allocation and congestion management published in January 2009 (the 'ERGEG consultation').¹

Target Audience

Energy suppliers, traders, gas/electricity customers, gas/electricity industry, consumer representative groups, network operators, Member States, academics and other interested parties.

If you have any queries relating to this paper please contact:

Mrs. Fay Geitona

Tel. +32 (0)2 788 73 32

Email: fay.geitona@ceer.eu

Related Documents

CEER/ERGEG documents

- "ERGEG principles on Capacity allocation and congestion management in European gas transmission networks", ERGEG, December 2009, Ref. E09-GNM-10-03
- "Pilot Framework Guideline on Capacity Allocation on European Gas Transmission Networks", ERGEG, December 2009, Ref. E09-GNM-10-05
- "Recommendations for Guidelines adopted via comitology procedure on Congestion Management Procedures on European Gas Transmission Networks", ERGEG, December 2009, Ref. E09-GNM-10-07
- "Recommendations for Guidelines adopted via comitology procedure on Congestion Management Procedures on European Gas Transmission Networks – Impact Assessment", ERGEG, December 2009, Ref. E09-GNM-10-04

¹ ERGEG E08-GFG-41-09 (15 Jan 2009) and ERGEG E09-GNM-07-03 (24 August 2009)

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A PROBLEM IDENTIFICATION AND REQUIREMENTS ON CAPACITY ALLOCATION MECHANISMS

1. BACKGROUND

On request of the European Commission, the European Energy Regulators have agreed to use the so-called interim period until the Agency for Cooperation of Energy Regulators (ACER) becomes fully operational to simulate the development of framework guidelines according to the provisions of the 3rd Package. The European Commission, GTE+ and ERGEG agreed that ERGEG develops a pilot framework on capacity allocation in gas transmission networks. Subsequently GTE+, as the pre-successor of ENTSOG will prepare a pilot network code on CAM.

ERGEG and GTE+ agreed that a close cooperation of both organisations is necessary to ensure a high quality outcome. The goal of the pilot framework guideline on capacity allocation and the subsequent network code is to harmonise capacity products and allocation procedures at interconnection points in order to foster the integration of markets and hub to hub trading as well as to optimise the use of network capacity across borders.

This pilot framework guideline is based on ERGEG previous work on capacity allocation and congestion management. ERGEG has published in August 2009 the results of the public consultation on its principles and proposals for capacity allocation and congestion management published in January 2009 (the 'ERGEG consultation').²

ERGEG is also developing alongside the pilot project proposals to amend, via direct comitology, the guidelines³ on capacity allocation and congestion management attached to the Gas Regulation. Together, these projects represent the opportunity for ERGEG to establish a clear direction for a European reform in this crucial area.

2. PROBLEM IDENTIFICATION

Competition in natural gas markets is based on opening essential facilities to all suppliers in a transparent and non-discriminatory way. Rules for third party access are therefore a key element of market functioning, in particular as far as transmission is concerned. Transmission capacity is indeed a scarce resource which must be shared among market participants in a way that promotes competition and security of supply.

Establishing common rules at a European level has been a challenge due to the differences existing between national gas systems. This situation has justified the principle of progressive market opening in the European Union, first by defining limits to the eligibility of consumers and, second, by implementing regulations offering enough freedom to national authorities to look for rules adapted to their initial market situation.

However, after ten years, the liberalisation process requires further development. Regulatory and contractual obstacles to cross-border gas flows remain a major barrier to market integration at a European level. Capacity products and allocation mechanisms differ widely from one

² ERGEG principles: Capacity allocation and congestion management in natural gas transmission networks - an ERGEG Public Consultation Document – Ref: E08-GFG-41-09 - 15 January 2008 and ERGEG principles: Capacity allocation and congestion management in natural gas transmission networks - An ERGEG Evaluation of Comments Paper - Ref: E09-GNM-07-03 - 24 August 2009

³ Amendment of Regulation (EC) No 1775/2005 on conditions for access to the natural gas transmission networks and/or REGULATION (EC) No 715/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005

country to another and sometimes even from one TSO to another within the same country. This is a source of capacity mismatches at many interconnection points which represents a major obstacle to cross-border gas trading and lead to sub-optimal use of infrastructure.

On top of that, DG Competition's report on its energy sector inquiry rightly sets out some of the problems in accessing gas transmission capacity on key European pipelines. It highlighted contractual congestion, whereby the capacity is fully booked up by contracts but not being fully used, and presented evidence of this occurring on a number of key pipelines. ERGEG believes that the capacity products offered and capacity allocation procedures currently used by many European TSOs does not allow coping in a proper, i.e. transparent, fair and non discriminatory way with these contractual congestions.

Furthermore, despite obligations on TSOs to provide non-discriminatory⁴ access to networks and to maximise commercially available capacity being in place, more firm capacity could be offered to the market in some cases. Thus new entrant shippers have very limited access to network capacity.

ERGEG, therefore, have decided to develop its approach to capacity allocation and to propose ways of improving and harmonising capacity allocation. The proposals are based on enhancing the current existing approaches to capacity allocation rather than proposing a fundamentally different approach.

3. REQUIREMENTS OF CAPACITY MANAGEMENT PROCEDURES

All market players have expectations of the procedures for allocating and using capacity; however, these cannot all be lumped together. Thus it is important to know what the different expectations and individual aims are so as to make the right decisions.

All the requirements should be taken into proper consideration in drafting new capacity management standards in framework guidelines.

3.1. Requirements of capacity management from the shippers' point of view

Shippers need to book capacity that matches their trading and supply activities. This concerns both the question of whether capacity should be firm or interruptible and the question of duration and lead times.

- Shippers concluding transactions for a number of years need to secure transport of the gas acquired for the same number of years by means of firm bookings. Yet the experience of some countries and of the electricity sector with limiting the duration of bookings shows that securing transport in this way is not absolutely necessary for the conclusion of long term business.
- Shippers interested in short term cross-border activities in the markets need to be able to book capacity at short notice. Here, both the duration of the contract and the booking lead time is short. In these cases capacity is booked for the period of a profit option only at a time when the option can be seen. As the profit margins are usually very small, added risks can only be priced in to a limited extent. It follows that such capacity cannot be booked on an interruptible basis.
- Interruptible capacity is a suitable instrument in special cases. This is for example the case so when the use of gas by the final consumer is interruptible (e.g. dual-fuel cus-

⁴ REGULATION (EC) No 1775/2005 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 28 September 2005 on conditions for access to the natural gas transmission networks - Article 5.

tomers who can change to oil or a gas fired peak-load power plant that offers electricity only when and as long as gas price is not too high). Interruptible contracts can also be successful if both the expected frequency of interruption and the payments for imbalances resulting from the interruptions are low. If firm capacity at interconnection points is fully booked and regularly fully used, interruptible contracts are not a viable instrument of market integration from the shippers' point of view.

The interests of the shippers that have already booked capacity are very different from those shippers which capacity requests have not been fully satisfied or have not been able to book the amount of capacity they requested.

- The former shippers, which are generally the incumbent players, are looking to use their capacity with a minimum of restrictions; the interests of the new entrants can interfere with this.
- The new entrants need access to capacity. Hence they want existing capacity to be released or additional capacity to be provided in cases where incumbents have fully booked the existing capacity.

For shippers, in particular for new entrants, it is crucial that all the rules at interconnection points are stable, transparent, predictable and non-discriminatory.

- Shippers must be able to know with certainty whether capacity is available and for what price.
- They must be able to take part in transparent procedures to request and obtain this capacity.
- The procedures for capacity allocation must not disadvantage smaller and financially weaker players.
- The effort needed for obtaining and using capacity must be appropriate.

It follows that shippers are keen to have rules at interconnection points that are harmonised or at least compatible. As the pipeline through which the gas is carried is not relevant to trading itself, it is in the shippers' best interests that TSOs cooperate closely.

Moreover, close cooperation among the TSOs generally leads to more capacity being offered, which is also beneficial for shippers.

3.2. Requirements of capacity management from the TSOs' point of view

It is important for TSOs as well as shippers that the capacity management rules are stable and predictable. TSOs as well have an interest in the rules being as simple and as clear as possible to avoid disputes with the regulatory authority and the shippers about their interpretation and application.

In many regulatory regimes TSOs have an economic interest in keeping the costs incurred for applying the capacity management rules low and in being able to pass them to the shippers. In a regulated environment TSOs are subject to supervision by the regulatory authority which in many countries puts pressure on the TSOs to lower the costs of providing the transport service. It then makes best economic sense for these TSOs to allocate capacity to as few shippers as possible, for as long a duration as possible. Thus the economic interest of the TSOs runs counter to the interest of creating an internal market, crucial to which is participation by a large number of shippers and the possibility of short term activity.

Additionally, it is necessary to make optimising the access conditions economically attractive for TSOs, by providing the right incentives.

TSOs must guarantee the stability of their network in each and every situation. They must take account of the technical environment of their own network and the regulations of their country as regards technical issues. Account must also be taken of liability issues regarding curtailment of firm capacity rights and how responsibilities should be allocated between shippers, TSOs and regulatory authorities.

In some regulatory regimes TSOs have an economic interest in keeping their cost for cooperation obligations with adjacent TSOs at a low level. Moreover, whenever an obligation can be met only in cooperation with another company the economic success of the one company is dependent on the behaviour of the other.

3.3. Requirements of capacity management from the point of view of the regulatory authorities

There are two fundamental aspects of the duties of regulatory authorities.

- The regulatory authorities must guarantee non-discriminatory access to infrastructures for current and potential shippers.
- They must oversee the economic and technical efficiency of the use of infrastructures so as to avoid that shippers are charged inefficiently incurred costs, and that TSOs earn unjustified revenues.

Pursuing these two fundamental aims requires the regulatory authorities to weigh matters carefully. In doing so they should consider the following aspects concerning the rules that should be applied on the interconnections between the entry-exit systems.

- The rules must be set in such a way that the market can develop optimally. The aim should be for markets to benefit from the liquidity of neighbouring markets when this is not prevented by physical congestion. Hence the rules must be drawn up to match the rhythms of the gas market. When the markets become more dynamic, they will probably contain more short term elements. Therefore, less developed markets require mandatory short term capacity markets.
- The regulatory authorities must make sure that the rules on access to gas networks are non-discriminatory. They must seek a balance between incumbent shippers, who often have a powerful position in the market, and new and potential shippers. This is a peculiarly complex task because the regulatory authorities have to anticipate the needs of potential shippers and design market rules accordingly.
- Long term gas and supply contracts are currently the backbone of supply in most Member States. Honouring these contracts in an appropriate manner must be taken into account in setting up a capacity management system. The development of competition must be in equilibrium with security of supply. However, in this context it should not be forgotten that next to long term contracts competition, when developed, is itself a valuable contribution to security of supply.
- In every Member State, the regulatory authorities are involved in one way or another in decisions on expanding and upgrading the networks. It is their duty to see that such measures are carried out with a view to the progress of the internal market. At the same time they must make sure that no unnecessary expansion and upgrading is done, to

save uneconomic costs. Typically, these measures should be carried out only to remove physical congestion. Contractual congestion stems from organisational problems which should not be solved by expansion projects. Thus a capacity management system is expected to generate signals when physical expansion is needed.

- As all the other rules on access to the gas networks, the rules on capacity management must result in efficient use of existing infrastructure. Given the congestion at many interconnections between the European entry-exit systems this means, that the cross-border links should chiefly be used to transport constant non fluctuating gas flows, which, overall, provide greater technical capacity. Short term, especially intraday, flexibility can then be obtained by the shippers within the particular entry-exit system.

3.4. The relationship between liquidity and capacity allocation

There is a close relationship between liquid markets and capacity allocation.

First, capacity must be used with a view to linking markets. If shippers are to respond to the price signals of the various traded markets, they must have the transport capacity to do so. If only the established shippers that have already booked capacity can respond, there will not be sufficient competitive pressure to carry out the arbitrage needed for effective linkage. Thus despite the existing price differences the supply and demand needed to converge prices is absent on both markets.

Second, liquid markets replace some of the demand for capacity. If the markets themselves are liquid enough to satisfy an appreciable part of gas demand, there is no reason to meet this demand by using capacity to ship gas from adjacent markets. This applies, for instance, when it is a matter of covering peak requirements for only a few hours a year. If these requirements can reliably be met by the "domestic" market, the capacity booked at the border can be reduced by the amount of this peak.

There is a third, indirect, connection between liquidity and capacity management. Currently, liquidity is reduced by the fragmentation of the European market into a large number of hubs. Gas is currently traded at interconnection points as well as physical and virtual hubs. Some of these have been created as a transparent (physical) hub, while most of the others are not transparent, for the most part. This fragmentation can be countered by uniting capacity management on both sides to form a common cross-border capacity. Then all the trading activities would be concentrated on the virtual trading points, which is likely to greatly boost their liquidity.

4. INCONSISTENT RULES BETWEEN MEMBER STATES

Technically, markets meet at border points. Yet these points should not act to separate the markets, but to join them together as closely as possible. However, to date, regulations in Europe have been developed with regard to national contexts. As a result, capacity products and allocation mechanisms differ widely from one Member State to another and sometimes even from one TSO to another within the same member state. This is a source of capacity mismatches at many interconnection points which represents a major obstacle to cross-border gas trading and lead to sub-optimal use of infrastructure. Compatible rules on both sides of the border are very important if cross-border transport services are to be efficiently provided. The train cannot continue easily, if the track gauge changes at the border.

Differences are greater in some aspects of access to the gas networks than in others – as in other fields, too. For instance the rules for supplying domestic customers are only important

for cross-border competition in so far as shippers operating in several markets must be familiar and comply with a greater number of rules.

Therefore compatibility is one of the most urgent requirements for allocation mechanisms. This is also particularly important because for small players the effort and risks involved in mastering the differences are simply too big in many cases.

4.1. Harmonisation stages

The capacity management rules can be harmonised in three stages, whereby the third stage can possibly be achieved with just one change to the rules.

Stage 0: Non-harmonised, different rules

Stage 1: Compatible rules

Stage 2: Fully harmonised rules

The first stage is characterised by compatible rules. The rules already have a good 'fit'; for instance the rhythms match. Admittedly, details may still be different, but this will hardly affect the transport of gas. The development of compatible rules is only possible if the TSOs are willing to engage in close cooperation with each other. This will also be necessary in respect of determining available capacity.

The second stage is characterised by fully harmonised rules and by minimum effort for the shippers. Achieving this may be asking a lot of the players concerned (TSOs, regulatory authorities), because both sides will need to adapt the rules they have applied in the past and will need to take account of the regulatory framework of the other side as well.

4.2. Possible obstacles on the way to harmonised rules

For competition to unfold, it is absolutely necessary that compatible rules apply on both sides of every interconnection point. Adjacent TSOs responsible for the particular entry-exit systems must establish consistent rules, approved by their national regulatory authority, so that market integration is held up as little as possible by capacity management problems.

Moreover, it is clear that identical rules at every cross-border point between the European gas markets will minimise the shippers' transaction effort and maximise access transparency and efficiency. Uniform rules at every point would also mean uniform rules on both sides of every point.

However, it is not a simple to achieve uniform arrangements at all the points. The following reasons impede unifying the capacity management rules in a first step:

- For the time being, regional differences in market design are likely to persist and the completion of the single market for natural gas will be a gradual process involving converging complex rules.
- European markets still operate in different ways and have their own problems. Arrangements that foster competition at one interconnection point will not necessarily do so at another point.
- In some aspects, the arrangements that individual Member States have in place are very advanced. In these cases, unifying the rules at every border might mean making a step backwards.

- Drawing up suitable rules is a complex issue of weighing up their positive and negative effects. It will not always be possible to provide for optimal rules right at the beginning. It may prove advantageous to try out rules whose details differ, at different interconnection points and only to harmonise them at a later date.

Summing up, it can be said that there are substantial arguments for harmonising capacity allocation rules step by step. This does not change the fact that harmonised rules at every interconnection point would have big advantages – if these rules would really support for cross-border short and long term competition in the gas sector.

In some areas related to capacity allocation, introducing new arrangements in a single step would be very challenging for TSOs and shippers alike. Specifically, existing differences between markets, which are quite considerable in some cases, would not be taken into proper consideration. It is appropriate and recommended that in some areas, the changes in capacity allocation shall be introduced in two steps, with the first step preparing and leading to implementation of the second.

4.3. Target model approach

The initial ERGEG principles on CAM and CMP proposed a ‘toolbox’ approach in order to cope with the differences between national gas systems. However, a large majority of respondents to the public consultation criticised this approach and requested ERGEG to be more prescriptive with regard to capacity allocation. This is why a target model approach has been developed. This approach relies on a long term vision of the EU gas market and focuses on interconnection points. While setting a long term aim, it allows for a progressive and pragmatic implementation of the target model.

This approach is necessary because uniform arrangements for every interconnection point across Europe might not be appropriate at the beginning.

The background concept of the proposed target model is that at each European interconnection point, the same capacity products should be simultaneously offered and allocated. On the two sides of interconnection points, the same capacity allocation should be used. In order to be able to offer sufficient amount of capacity, the set of capacity products should be reasonably small.

In the target model, capacity at interconnection points should be allocated as bundled products via auctions. However, before the implementation of this target model, interim steps could be used in order to meet the conditions for a full implementation of the target model. Thus, in given circumstance, capacity could be offered as combined exit-entry capacity and allocated via pro rata mechanism.

The framework guideline proposed today on capacity allocation consists in arrangements allowing a stepwise approach.

It is indeed appropriate to keep options tailor-made to specific situations open and to define targets to be pursued in order to harmonise European allocation mechanisms. This is why some of the proposed arrangements of the target model will be applied only if certain conditions are met.

Compared to today’s situation, the approach to define a target model and possible interim steps allow reducing the number of options for TSOs and NRAs. The choice will then be to apply the target model or to allow for interim solutions. The room for different solutions is thereby strictly reduced to a minimum.

The national regulatory authorities (NRAs) will have a key role with regard to the decisions that need to be taken. When allowing interim steps, the NRAs will prepare the TSOs for the implementation of the target model, namely the application of fully harmonised arrangements all over Europe.

5. PILOT FRAMEWORK GUIDELINES

The Third Energy Package requires the Agency for the Cooperation of Energy Regulators (ACER) to submit framework guidelines to the European Commission, setting out clear and objective principles for the development of network codes by ENTSO-G. These detailed arrangements will then be submitted to the Agency. When agreed by the Agency, the arrangements will be submitted to the Commission, which can then give legal force to it through the comitology procedure.

These arrangements will enter into force and the Agency will be operational in spring 2011.

At the 16th Madrid Forum, the European Commission invited ERGEG to employ the procedures foreseen under the 3rd Package. The European Commission sent ERGEG an official invitation to draft a pilot framework guideline on capacity allocation in gas transmission networks. This pilot follows a dual goal. First, it shall prepare the implementation of the 3rd Energy Package by applying the package's provisions during the interim period before their actual applicability. Secondly, it must foster substantial progress in the area of gas capacity management.

ERGEG has been invited by the Commission to assume the role assigned to the Agency under Article 6 (2) of Regulation (EC) No 715/2009 and to submit a non-binding framework guideline within six months of receipt of the Commission's notification letter.

According to the Commission's letter inviting ERGEG and GTE+ to trial the new regulatory process the "...goal of the Framework Guidelines and Network codes on Capacity is to optimise the use of network capacity across borders, the integration of markets and enhancement of hub-to-hub trading through harmonisation of the way capacity is offered and marketed at interconnection points." The scope of the pilot Framework Guidelines has been agreed between the Commission, ERGEG, and GTE+ at the meeting on 6 July 2009 and confirmed in the Commission's letter, cf. Appendix.

The pilot framework guidelines at hand sets out detailed proposals on each item mentioned in the Commission's invitation. The proposed arrangements aim to promote cross-border harmonisation and to remove barriers to market integration. These are the arrangements that cannot be implemented without close cooperation between TSOs and NRAs in neighbouring countries.

B INITIAL IMPACT ASSESSMENT OF THE PROPOSED FRAMEWORK GUIDELINE ON CAPACITY ALLOCATION

Below is the initial impact assessment for a proposed set of new arrangements which will significantly improve the allocation of gas transport capacity in Europe. On the basis of the Commission's letter, ERGEG has drafted a proposal for improving and harmonising capacity allocation procedures based on the problems identified and requirements set out in Part A. Essentially, this proposal consists of the following elements:

- Definition of capacity products
- Capacity allocation mechanisms

This document contains a detailed discussion and an initial impact assessment for each proposed arrangement.

- The problems for which solutions have been drawn up are depicted exhaustively.
- The most important findings of the consultation are summarised for each proposed arrangement.
- Possible options to tackle the problems are set out and analysed. Options that ERGEG ultimately rejected are also described. The choice made between these options is justified, among others in light of the responses to ERGEG's public consultation document E08-GFG-41-09 published in August 2009.

1. SCOPE OF THE ARRANGEMENTS

1.1. Proposed arrangement

F1 General rules

F1.1 Scope

The rules in these Guidelines apply to cross-border interconnection points between two or more Member States as well as interconnections between adjacent entry-exit-systems⁵ within the same Member State, insofar the points are subject to booking procedures by users. Exit points to end consumers and distribution networks, entry points from LNG-terminals, and entry/exit points to or from storage facilities are not subject to these Guidelines.

This framework guideline applies to capacity as calculated by transmission system operators.

The network code adopted according to these Guidelines will be applied by transmission system operators taking into account possible public service obligations and without prejudice to the regulatory regime for cross border issues pursuant to Article 42 of Directive 2009/73/EC and of the responsibilities and powers of regulatory authorities established according to Article 41 paragraph 6 of Directive 2009/73/EC.

1.2. Problem

There are various points at which shippers may need to book capacity: (i) entry or exit point at the interconnection between entry-exit systems⁶, (ii) in some countries exit points to distribution networks (“city gates”), (iii) to supply-only transmission networks or to industrial customers or end consumers, (iv) entry and exit points to and from storage facilities and (v) entry points from storage LNG terminals.

There are significant differences between the types of points. While physical congestion does normally not occur for most of these points and contractual congestion occurs only under certain conditions, it is proved to regularly happen at interconnection points between entry-exit systems.

The points within the scope of the proposed arrangements must be defined.

1.3. Options for the scope of the framework guideline on capacity allocation in European Gas transmission networks

1.3.1. All bookable points subject to the Framework Guideline

Including all the bookable points in the scope of the Framework Guideline on capacity allocation is not a desirable option. Given that the aim of this Framework Guideline is to foster trading between virtual hubs and the integration of European markets, the points within entry-exit systems are not relevant. Thus, the procedures for booking exit points to end consumers or

⁵ As provided for by recital 19 and art. 13 (1) al. 4 of Regulation (EC) 715/2009

⁶ As provided for by covenant 19 and art. 13 (1) al. 4 of Regulation (EC) 715/2009

distribution grids, entry and exit points to and from storage facilities and exit points from LNG terminals may thus continue to follow country specific procedures. They must nevertheless satisfy the general requirements of efficient, non-discriminatory and transparent access.

1.3.2. Only interconnection points between entry-exit systems

With regard to the integration of European markets, this option has the following advantages:

- Shippers can operate in every market without having to observe specific arrangements at each side of each interconnection point. Thus the transaction effort for the shippers would be significantly minimised.
- The scope of the proposed arrangements ensures a level playing field all over Europe, with the same products and procedures applied the same in all countries.

For proposals particularly referring to capacity allocation it is not suitable to apply them only in case of actual or potential congestion. An exemption from the general scope is not necessary.

1.3.3. Only congested interconnection points between entry-exit systems

Efficient, non-discriminatory and transparent capacity allocation procedures are particularly needed in case of congested interconnection points. Thus, the scope of the framework guideline on capacity allocation could be limited to points which experience congestion or are likely to do so. This might be recommended considering that regulatory intervention is to be limited.

However, limiting the scope of this framework guideline to congested interconnection points only would impede the harmonisation of capacity allocation procedures across Europe. This would result in heterogeneous access conditions. However, it does not exclude that adjustment to specific situations can be achieved by setting application conditions in the respective arrangements (cf. target model and possible interim steps).

1.3.4. Immediate implementation of uniform arrangements

This option seems to be neither appropriate nor feasible in the short term.

1.3.5. Target model and interim steps

Before implementing the target model, interim steps might be needed at some interconnection points.

1.4. **Public consultation findings**

Most of the responses of the market players to this consultation question were clearly in favour of uniform rules at all the cross-border interconnection points. The reasons given were typically transparency, reduced transaction effort and the simplification that would result. For the same reasons, some respondents proposed to extend the rules to LNG and storages, too.

Only a few respondents pointed out that unifying the rules at points that currently had good arrangements could also lead to deterioration.

For further details of consultation cf. ERGEG Evaluation of Comments E09-GNM-07-03.

1.5. Selected options and changes in light of the public consultation

From the possible options, ERGEG has chosen to extend the scope of the proposals to all interconnection points between entry-exit systems. This decision was reached after weighing up the interests of the shippers in having at least compatible rules at all interconnection points and the option to implement interim steps only where necessary.

1.6. Impact of the proposed arrangements

The scope of the proposed arrangements will result in changes to capacity allocation procedures and some more general arrangements at all interconnection points.

2. EXISTING CONTRACTS

2.1. Proposed arrangement

F1.2 Existing contracts

Following the adoption of a legally binding network code, transmission system operators shall amend all relevant clauses in capacity contracts existing prior to the application of this code in line with the implemented provisions within 6 months after entering into force of the code. Expiring contracts shall not be subject to tacit extension.

2.2. Problem

Changing the rules of the game will bring changes only if the rules are also applied to existing contracts. Problems of congestion management derive crucially from the fact that:

- existing contracts are interpreted in a way that makes it difficult, or even prevents new competitors from entering the market,
- many existing contracts contain evergreen-clauses that extend the related problems,
- capacity is largely, if not fully, booked and insofar bound to existing contracts.

The levels of capacity booked under the current system are higher than they are expected to be under the proposed regime for a number of reasons. This is why considerable problems could arise for the shippers if they did not have the possibility during the transition to adapt their contracts in respect of levels and duration. The reasons for high bookings under the current system are given below:

- Use of a continuous allocation process means that shippers have to decide very quickly whether to book capacity suddenly becoming available. A shipper not doing so will find himself empty-handed later on. Bookings have to be made without time for consideration, which leads to substantial safety margins being built in.
- In some Member States bookings are still taken in units of volume (m³/h). Account therefore has to be taken of fluctuations in calorific value.
- At present, short term capacity is hardly available. Thus, there is as good as no opportunity to offset peaks by booking additional capacity. A shipper's own booking must cover the theoretical maximum flows.
- The liquidity of the virtual hubs is underdeveloped in nearly every European country. Short term improvements are not possible through trading but only through the scope of the "own" booking.
- To date, storage facilities have very rarely been used for arbitrage. It follows that the storage facilities, provided they are not used for technical operation of the networks, are part of the supply chain of those shippers that were able to book storage capacity. Other shippers cannot make use of this flexibility tool at the moment and have to transport their flexibility across the borders.

In case when some or all of these reasons no longer apply, shippers will have overbooked capacity. There will be a necessity for reducing the bookings.

2.3. Options

2.3.1. Complete reallocation of capacity and limiting contract duration

If all the network users have to annul their contracts and return capacity, all the capacity could be reallocated under the new procedures. This would also give TSOs the opportunity for recalculation and optimisation, so that they might then offer changed capacity structures.

Such reallocation would be optimal for the gas market, since new solutions could be sought, free of the restrictions of the old contracts.

This would be most promising if capacities were not reallocated just once when the system was introduced, but once a year or once every two years. This equates to limiting the duration of a capacity contract to a maximum of two years.

The advantages of this option are as follows:

- greater probability of the price signals of possible auctions indicating the existence of physical congestion and not of contractual congestion,
- bookings would better reflect the real transportation intentions, as bookings would be made closer in time to actual use,
- Auctions no longer be held for a small part of the product but for the complete product, Hence they would not produce distorted outcomes anymore,.

2.3.2. Adapting existing contracts after the proposed arrangements take effect

A clear, complete solution to the question of existing contract adaptation would be full adaptation of all the contracts at a suitable time after the amended guideline have taken effect. At the end of the framework guidelines process there will be a legally binding set of rules, entering into force. This means that, if needed, the relevant clauses of existing contracts would be amended if they contradict the new legally binding set of rules.

2.3.3. Enabling contract adaptation during the period of change

The introduction of new capacity allocation mechanisms will crucially change the calculations on which booking is based. In many cases, restructured capacity allocation is likely to cause a desire for reduction of bookings. It is only right to give shippers the possibility of responding by adapting their contracts accordingly.

Indeed, shippers would be able to put contracted capacity no longer needed onto the secondary market. However, there is no guarantee that they would find a buyer.

2.4. Public consultation findings

In their comments, shippers mostly opposed the amendment of existing contracts. There was broad agreement in the consultation as a whole that changes to the rules were necessary and there was also agreement on many of ERGEG's proposals, but this consensus came to an abrupt end at the question of adapting existing contracts. At least long transitional periods were recommended.

However, this common opinion is due to the fact that there was hardly one respondent not being party in existing contracts.

For further details of consultation cf. ERGEG Evaluation of Comments E09-GNM-07-03.

2.5. Selected options and changes in light of the public consultation

ERGEG has decided to keep to the proposed arrangement despite the concerns raised in the consultation and to propose that all the existing contracts be adapted in order to reflect the new capacity management arrangements.

2.6. Impact of the proposed arrangement

The proposed arrangement makes sure that the capacity allocation mechanisms will be applied not just to the small part of the capacity for which new contracts have been signed but will at the end cover the entire area of booked and available capacity.

Another possible effect is that capacity holders will rethink their portfolios and return appreciable amount of capacity to the TSOs, enabling TSOs to reorganise their offer and provide primary capacities.

3. TSO COOPERATION

3.1. Proposed arrangement

F1.3 Cooperation

The network code shall set out that transmission system operators cooperate with adjacent transmission system operators and shall specify the necessary procedures. The network code shall clearly assign responsibilities of transmission system operators in promoting efficient cross-border trade and efficient network access. It shall define how transmission system operators:

- exchange relevant data,
- harmonise capacity products and capacity allocation, including their timing,
- harmonise their maintenance in order to optimise network access,
- cooperate in the area of capacity calculation and maximisation.

Capacity calculation and maximisation

The network code shall set out how transmission system operators cooperate with regard to capacity calculation and maximisation in order to maximise the capacity they offer. Transmission system operators shall make their methodologies for capacity calculation transparent.

In order to maximise available capacity, the network code shall set out how transmission system operators exchange information when planning day-to-day network operation, including forecast entry and exit flows as well as the availability of network components, of capacity buy-back mechanisms, if any, and of system balancing energy. .

3.2. Problem

In comparison to the electricity sector, close cooperation in the gas sector technically is not necessarily required because of technical demands of network operation. The operation of gas networks is considerably less critical, thanks to the storage capacity of the pipelines (line pack). In the gas sector there are for example no constraints such as keeping frequencies available.

The cooperation between TSOs is not fine-tuned in the same way as it is in the electricity sector. Unless dictated by the development of the markets, this should not change. Conversely, the situation should be improved wherever the lack of cooperation has a negative effect on completion of the internal market.

This is particularly true when the networks are situated in different EU Member States. Then heterogeneous rules apply to network access, which proves disadvantageous at many borders for capacity management, too.

An example of such a barrier is the lack of synchronisation of the gas days in the Member States. Most Member States define their gas day in accordance with the EASEE-gas Common Business Practice "Harmonisation of Nomination and Matching Process" CBP 2003-002/01 from 5:00 to 5:00 hours UTC. Examples of deviations from this largely uniform ruling

can be found, for instance, in Spain where the gas day runs from 23:00 to 23:00 hours UTC and in Poland, where it runs from 21:00 to 21:00 hours UTC. Further inconsistencies result from the time differences in the UK and Portugal and from the use of summer time. If the gas markets are to operate increasingly on a short term basis and daily and weekly capacities are to play a greater part, action must be taken to unify the gas day. On the other hand, different gas day are not a significant problem on the French-Spanish border where capacity is now jointly allocated, although the gas day differ.

A second example is the important area of reciprocal provision of data, where TSOs cite confidentiality requirements as hampering efficient cooperation in managing the networks.

The differences of access systems currently in place also hamper cooperation between TSOs. Efficient cooperation and harmonisation of rules will be easier when the arrangements proposed are applied at interconnection points.

3.3. Options

3.3.1. Detailed specification of all cooperation duties

An option to list in detail all the cooperation requirements in the Guidelines annexed to Regulation (EC) 1775/2005 cannot be ruled out. However, this would exceed the depth of regulation of the Annex.

Also, as time passes, the requirements may change and widen.

However detailed requirements are possible for particular areas and are a meaningful option for arrangements that need to be harmonised if capacity management processes are to make a successful contribution to opening the market. This is especially the case when synchronising operations in adjacent markets.

There are two synchronisation options: general synchronisation of all capacity management procedures at every interconnection point, or case-by-case synchronisation at a particular interconnection. However, since the duration for which capacity is booked for short term transactions, defines the term of the in particular spot gas contracts, it would be necessary to harmonise capacity duration generally. Otherwise, the short term products on the gas market would not be compatible. This would lessen their tradability, and would be detrimental to the liquidity of the traded markets. For these reasons for example a border-related alignment of the gas days is not a plausible option.

3.3.2. Limiting requirements to the aim of cooperation

It would be possible to stipulate just the aims of cooperation: facilitating cross-border competition and reducing the shippers' transaction effort. However, this would simply be repeating the rules of Article 5 of Regulation 1775/2005 and would not provide any further specification.

3.3.3. Specifying basic elements of coordination

The proposed arrangement could list elements that require cooperation and coordinated processes and could eliminate major barriers. This comprises data exchange, joint capacity calculation and maximisation and congestion management.

Another area of close cooperation is the option to enhance network stability and security.

3.4. Consultation findings

None of the respondents denied the need for close cooperation between TSOs. Some TSOs declared that there already was an adequate level of cooperation already.

For further details of consultation cf ERGEG Evaluation of Comments E09-GNM-07-03

3.5. Selected options and changes in light of the consultation

ERGEG has decided to propose a combination of the previous options in its framework guideline:

- The proposed arrangement states the fundamental aims: efficient cross-border trade and efficient network access.
- Cooperation is to be effected by clearly assigned responsibilities, facilitating the regulatory authority's function of monitoring compliance with the requirements.
- Central areas of cooperation are to be named without the cooperative activities being specified: coordinated capacity calculation and maximisation, timing and congestion management measures.
- The problem of sub-optimal data exchanges between TSOs is to be eliminated by an obligation to supply data.

3.6. Impact of the proposed arrangement

Cross-border cooperation and coordinated TSO activities are essential if the European markets are to be fully integrated. However, much of the cooperation between adjacent TSOs will not be directly triggered by a simple obligation to implement compatible or harmonised rules. The requirement to cooperate will bear fruit only if it is sufficiently concrete in form of binding network codes.

One of the improvements caused by close TSO cooperation will be the ability to further maximise the firm capacity offered to the market. This is not directly part of allocation mechanisms, but indirectly linked to this. Cooperation is required for optimal allocation and in the same time allows for enhanced capacity calculation.

Aligning the timing between adjacent TSOs means, among others, to harmonise gas days across Europe. This will require a considerable effort in those countries in which current practice needs to be changed. However, it will also make it easier for them to be part of the internal market, and the great improvements in energy policy that this alignment will bring for them will be particularly clear.

This requirement does not result from this proposal only. It is implied in harmonised usage procedures, joint product definitions and allocation procedures as well.

4. CONTRACTS, CODES AND COMMUNICATION PROCEDURES

4.1. Proposed arrangement

F1.4 Contracts, conditions and communication

As regard capacity allocation, the network code shall define the harmonised content of transportation contracts and conditions of access to capacity.

The network code shall set out the relevant data to be published at every interconnection point. It shall standardise communication procedures that are applied by transmission system operators to exchange information between themselves and with their users. Coordinated information systems and compatible electronic on-line communications shall be utilised particularly for capacity booking and transfers of capacity rights between network users.

4.2. Problem

There is still a need for full standardisation of contracts, codes and communication procedures, even in the national perspective. In the European-wide perspective, it is still a colourful picture and contracts, codes and communication procedures are far from being harmonised. For shippers this means that they have to understand all the specialties of any country they want to trade or supply in.

As with all the other arrangements, harmonisation is the all-important issue regarding data exchange with TSOs to simplify network access. This holds for particular entry-exit systems and a fortiori for cross-border issues. Missing standardisation and differences between systems increase the transaction effort and act as barriers to market entry.

Electronic communication has now become the norm in practically all interaction between shippers and TSOs. It should be set up as soon as possible at any place where this is not the case.

4.3. Options

4.3.1. No new arrangement on harmonised procedures

It could be quite possible not to introduce a new ruling here as substantial progress has been made over the last few years in procedures for exchanging data. Communication between market players is now predominately electronic anyway. Implementing the procedures that are necessary is not a problem for modern data processing, so that an arrangement on this could be forgone.

However, the arrangements proposed do not aim only at implementing online systems, but to do it in a standardised and harmonised way. If the procedures are to be unified cross-border, their underlying processes like bookings or nominations will also have to be revised and aligned. Further, drawing up these procedures presupposes TSO communication and cooperation in many areas of third party access.

The application of uniform procedures throughout Europe will greatly facilitate the development of compatible procedures at every border, for questions of data format and data quality

are crucial to any such alignment. If there is uniformity, it will be that much easier to align the contracts and codes.

4.3.2. Standardisation of contracts, codes and communication procedures

Non-discriminatory third party access requires standardised contracts, codes and communication procedures to be applied by the TSOs. Standardised contracts, codes and communication procedures will mean a significant improvement to shippers' daily action.

4.3.3. Requiring TSOs to apply uniform communication procedures

The basic idea of having a European internal gas market is linked to a simple pre-requisite, namely having uniform access rules to all the European networks. It is without an alternative to develop and implement uniform communication procedures regarding any area of network access.

4.4. **Public consultation findings**

Uniform rules in any respect were a clear vote of nearly all respondents to the consultation. Many respondents explicitly encouraged ERGEG to be more prescriptive and to extend the scope of the proposals to all bookable points.

For further details of consultation cf. ERGEG Evaluation of Comments E09-GNM-07-03.

4.5. **Selected options and changes in light of the public consultation**

The TSOs should be required to apply harmonised contracts, codes and communication procedures under the regime of codes developed under the proposed framework guidelines. This comprises in particular to apply on-line tool for any access-related activities.

4.6. **Impact of the proposed arrangement**

Harmonised communication procedures and contracts will reduce the shippers' transaction efforts. There is no need for them to become familiar with many different procedures and shippers who are able to enter one market can easily enter all European markets. Harmonised contracts and communication procedures are always based on harmonised rules and conditions. Thereby the application of harmonised contracts and communication procedures ensure that all shippers are treated in a non-discriminatory manner.

5. CAPACITY PRODUCTS

5.1. Proposed arrangement

F2 Third party access

F2.1 Capacity products

The network code shall set out that, at each interconnection point, transmission system operators determine the firm and interruptible capacity⁷ they jointly offer.

Network codes shall foresee that transmission system operators offer firm and interruptible capacity at any interconnection point in both directions; at unidirectional points, non-physical backhaul capacity shall be offered at least on an interruptible basis. The published available firm capacity shall be binding on the transmission system operator.

The network code shall define a small set of standardised firm and interruptible capacity products of different durations and starting dates. The same set of products shall be offered at every interconnection point. The capacity product design shall aim at developing of competitive gas markets. It shall regularly be subject to proper consultation with network users.

The capacity offered shall be expressed in energy units per unit of time. The offer and use of separate capacity for transit purposes shall be forbidden.

5.2. Problem

At present, capacity products characteristics are neither defined in advance nor published in the majority of Member States. Neither the duration of access rights nor the starting dates of capacities are defined or standardised in advance. This causes major problems regarding the access to capacity for many shippers, some of which are described in the following paragraph (B-7.2):

- Synchronised capacity allocation is rendered impossible which is causing time-related fragmentation of capacity markets.
- Capacities that become available are allocated immediately, which creates huge monitoring effort for shippers, causes contractual congestion (cf. B-7.2.1) and exacerbates the disadvantages of information asymmetries.

In some Member States, capacity offers are subdivided into transit capacities and supply capacities. This fragmentation keeps shippers who have opted for transit capacity out of domestic markets. By limiting the purpose of usage, it also subdivides capacity markets that are fragmented anyway.

5.2.1. Problem area involving the lack of backhaul capacity

One obstacle that is hampering the integration of European markets is the fact that capacities are not being offered in both directions at all borders. At border points between entry-exit systems which can be only operated in one direction for technical reasons, interruptible ca-

⁷ As defined in art. 2 (20) of the Regulation (EC) 715/2009

capacity can certainly be offered on a long-term basis at least. Nonetheless, firm backhaul capacity can also be offered at short notice as far as historical flow data serve as a basis for making calculations.

If this offer of backhaul capacity is not available, shippers are unable to respond to short-term price signals in the backhaul direction. This means market integration will remain both incomplete and unilateral which will abet unintentional or deliberate distortion of price signals.

5.2.2. Problem area involving the booking of volume units

In some Member States, capacity is offered in volume units (m³/h) rather than energy units (kWh/h or MWh/h). This means that it is the shippers who bear the calorific value risk, generally without being able to influence the calorific value of gas transported. The use of volume units is therefore to be seen as a symptom of the incomplete separation of network operators' and shippers' spheres:

- From the shippers' perspective, the calorific value is almost irrelevant as long as the final customers whom they are supplying do not experience any technical problems with the combustion properties of the gas. The only aspect that is important to shippers is the transported energy as it represents the content of their supply contracts.
- For TSOs, by contrast, it is only the volume that is important. For them, it is practically irrelevant whether the gas is also suitable for combustion purposes.

This places the issue of calorific value at the very competency interface between shippers and TSOs, although it has to be allocated to one of the two in a binding manner. TSOs are the ones to take the competence in this issue, because- technically speaking- TSOs are able and obliged to interfere in the calorific values of the gas by mixing or blending gases of different calorific values into their systems and sometimes also by actively converting the gas quality.

Network usage on the basis of volume units leads to all shippers having to take the calorific value risks into account when they book capacity which prompts them to book slightly higher capacities. This increases contractual congestion. Vice versa, performing booking in energy units slightly contributes to a reduced contractual congestion.

5.3. Options

5.3.1. Financially firm capacities

Separating the spheres of the TSOs and the shippers means that commercial gas flows and technical gas flows will also have to be kept distinct. Ultimately then, it will not matter whether or not there is a physical flow. The shipper intends to do business and the core of this business is the shipper's intention to generate profit.

Thus it is conceivable from the shipper's point of view to reduce the gas flows in their entirety to the commercial aspect: the shipper will not have transportation rights but solely the right to have flows carried or to receive compensation. In this respect transportation will no longer be technically firm but only financially firm.

This approach will give the TSOs considerably greater freedom in handling capacity. Technical safety would be much less of a strict criterion. There would be economic benefit from the TSO's point of view: the TSO would have to decide between technical safety on the one

hand and compensation payments on the other and would thus be able to act correctly in economic terms, i.e. to use the network only as much as necessary.

However, these advantages of financially firm capacities are largely theoretical at the moment, as they are based on requirements which are not currently met in the gas market in any way.

- It must be possible to assess the level of compensation payments clearly. It must be possible to establish for every transportation order, precisely and objectively, how high the financial loss would be if transportation is not carried out. The basis for doing so is lacking, however: there is no generally accepted gas price. Nor is there a uniform balancing regime whose prices would also have to be factored into an assessment of the level of compensation payments in cases where the missing liquidity does not allow to buy or sell the not transported gas volumes.
- Border-crossing capacities are no longer physically firm in the financially firm capacities model. Thus the shipper can no longer say in advance in the destination market whether he is in possession of gas or "just" money. This will only not make a difference if the shipper can convert the money to gas again in this market at any time. It is necessary to be able to do so because in every transaction there is a shipper at the end of the chain who has to transport the gas physically to the final consumer or physically to a storage facility. It follows that the financially firm capacities model will be applicable only if the markets on both sides have reliable liquidity at all times. The capacity management procedures proposed in this guideline aim to achieve this liquidity. However, the proposals must not presuppose the existence of liquidity,.

5.3.2. Definition of capacity durations for capacities

In order to develop the internal market for natural gas and to better satisfy markets needs, it is essential that the capacity products are enhanced and harmonised. This would also improve capacity allocation. The first step with regard to the enhancement and harmonisation of capacity would be a clear and publicly known definition of the capacity products offered to the market and their characteristics.

As such, a suitable small set of duration suitably staggered must be defined. For example daily, weekly, monthly, quarterly and yearly capacities can be offered. To define capacity products the relevant starting date also needs to be defined. One of the products offered according to this proposal is "capacity May 2009". A monthly capacity from May 15 to June 15 will then not be offered. The duration and starting dates should be defined in a way that timely overlap of contracts of the same duration is avoided.

In addition to market needs, the intervals, lead times and processes of capacity allocation must also be taken into account.

5.3.3. Offering capacity in energy units

In principle, capacities are to be booked, nominated, traded and invoiced in energy units in all respects. This corresponds to the appropriate separation of the spheres of network operators on the one hand and network users on the other.

Managing capacity in volume units leads to inefficiencies and exacerbates contractual congestion.

5.3.4. Regular consultation on product definitions

Product definitions have major implications for shippers. Unsuitable product definitions can create major barriers to market entry. For instance, the requirement of having to book firm daily capacity several days in advance inevitably leads to daily capacities being rendered completely useless.

Product definitions can give preference or disadvantage to individual business models vis-à-vis others. Even if the differences are small and concealed, they could potentially still have a major impact on the development of the gas market.

Vice versa, certain definitions might be meaningful in current conditions prevailing on the gas market, that may be less meaningful under other conditions. This may make it necessary to formulate different product definitions at various borders. Certainly, it requires adapting them over time.

For these reasons, it is necessary to involve shippers as extensively as possible into decision-making related to capacity durations and starting dates.

5.3.5. Settling NRA involvement

Defining capacity products is key to the development of the national and cross-border gas market. Hence regulatory oversight of the product definition is imperative. The arrangements could therefore specify NRAs be involved in the relevant decisions. These would be decisions not just of product definition but also of the exact nature of the proposed consultations.

Although the involvement of the NRAs is crucial, it does not appear necessary to draw up an arrangement to this effect, as other arrangements are in place that provide sufficient scope for NRAs to be closely involved and to intervene if necessary.

- NRAs have a direct obligation to oversee the network codes drawn up on the basis of the framework guideline and to reject them, if needed. This gives the NRAs the opportunity to help shape the capacity products and consultations.
- Article 41 of Directive 2009/73/EC shows that the regulatory authorities have general responsibility with regard to the application of network access rules. This responsibility makes it unnecessary to write any additional involvement into the proposed arrangements of the framework guideline.

5.4. **Public consultation results**

Most of the respondents indicated that they thought defining capacity products would improve the situation and proposed to restrict the offer to a limited number of products. Only a small minority were in favour of maintaining FCFS mechanism because this gives the possibility to fulfil transport wishes immediately by booking capacity.

Consulting the market for product definitions was unanimously welcomed. Several respondents pointed out that it would not be sufficient to arrange consultation when the new rules are introduced but that consultations would have to be organised on a regular basis.

The respondents did not comment in detail on intra-day capacity offers in their answers to the consultation. This confirms the assumption that the gas market is currently not focusing on extremely short-term transactions.

In response to the question which allocation mechanism should be used, individual respondents pointed out that the principle “first-come, first-served” should at best only be used for intra-day capacities.

For further details of consultation cf. ERGEG Evaluation of Comments E09-GNM-07-03.

5.5. Option chosen and changes made in the light of the public consultation

ERGEG requires TSOs to define capacity products themselves on the basis of intensive consultations. In the light of the consultation results, ERGEG expanded the proposed regulation to the effect that consultations on product definitions are to be held on a regular basis and it was explicitly foreseen to define only a small set of products.

In its proposals, ERGEG seized the existing options of offering and allocating firm capacity immediately that becomes available within the day.

5.6. Impact of the proposed arrangement

The proposed arrangement will reduce the fragmentation of the capacity markets in terms of the schedule. It will then be clear what capacities are available for what durations owing above all to the combined effect of this regulation with the proposed regulations on capacity offers and on the capacity allocation mechanisms.

This is of paramount importance for the transparency and the ability to plan the availability of capacity.

The proposed arrangement on the use of capacity that becomes available within the day is unlikely to have a strong immediate impact on the development of the internal market. Rather it will become apparent just how important this proposal is when the markets have gained more complexity and speed.

6. INTERRUPTIBLE CAPACITY PRODUCTS

6.1. Proposed arrangement

F2.2 Interruptible capacity products

The network code shall set out that transmission system operators offer harmonised interruptible capacity products at every interconnection point in both directions.

Adjacent transmission system operators shall implement procedures, including the definition of interruption lead times, to ensure that interruptions take place in a coordinated manner.

The network code shall define the possible reasons of interruption, classes of interruptibility, the sequence how interruptions take place and the methodology to calculate the likelihood of interruption.

Registered network users are entitled to submit nominations on an interruptible basis at any time. This entitlement shall not restrict the allocation of firm capacity by transmission system operators.

6.2. Problem

Practices among TSOs regarding interruptible capacity are extremely heterogeneous. This applies with regard to the availability of interruptible capacities and to the allocation, interruption, indication of the interruption probability and to pricing.

There are two types of interruptible capacity:

- Unlimited interruptible capacity. This capacity is interrupted on a “last come, first interrupted”, i.e. the interruption probability is higher and also less predictable for the last shippers having booked interruptible capacity.
- Interruptible capacities sold in limited amount. In this case, shippers are interrupted on a pro rata basis. Contractual congestion may also occur in the area of interruptible capacities.

Some TSOs divide the offered interruptible capacity into classes of different probability of interruption.

These differences between interruptible capacity products lead to different interruption patterns for shippers holding interruptible capacities on each side of an interconnection point. This is problematic as capacity which can be used on one side but which is interrupted on the other side is useless for a shipper seeking to transport gas from one market zone to another. There is therefore a need to harmonise, as far as possible, the interruptibility of this capacity on each side of interconnection points.

In the present market situation, interruptible capacities actually have considerable potential for kick starting competition.

- The number and size of new entrants relying on interruptible capacities is low.
- The vast majority of actual flows does not follow gas price signals but allows to fulfil long-term cross-border supply obligations.

- Competition still exists, in relation to final customers for whom the network design ensures that non-interruptible supply is technically feasible.

All things considered, these facts mean that at least in the current market situation physical congestion is the exception rather than the rule and that interruptible nominations are rarely interrupted.

However, interruptible capacity is not suitable as a tool for longer-term market opening. If the number and size of shippers wishing to use interruptible capacities increases and if more shippers respond actively to price signals, physical congestion will become more frequent. This means interruptions will become the rule rather than the exception. As interruption probability grows, interruptible capacities will become increasingly unsuitable for gas transport. Additionally, as written before (cf. above B-9.3.8) the margins are expected to decrease as markets evolve. This is a fact that will reduce shippers' acceptance of risks of interruption.

Furthermore, very large shippers with firm capacities are also able to handicap actively and deliberately their competitors with interruptible capacities. This is particularly true as long as the renomination rights are granted unlimited.

Controversially to the before mentioned problems interruptible capacity is so far not a suitable tool for instant reaction of all shippers. Only those who had booked interruptible capacity in advance can use the systems' remaining flexibility. In these cases a very short term contractual congestion arises: there is shipper that wants to flow gas, the system is able to fulfil this demand, but it could not be realised for contractual reasons.

The use of interconnection points should be limited, if possible, to daily unstructured flat gas transports. If full utilisation of physical capacity is needed to meet the transport requirements of the market, it will be difficult to do so if shippers simultaneously want to transport flows that change on an hourly basis as this renders it impossible to fully exhaust capacity.

On the other hand, there is huge untapped capacity available in the pipelines at many times during the year to which the argument used above does not apply. During these times, shippers could be permitted to transport fluctuating gas flows even across interconnection points.

At present, the rules on network usage are such that shippers who have been able to book capacity within the framework of the current allocation mechanisms have the option of using it both for continuous supply and for the supply of changing flows.

However, technical capacities remain untapped in the short-term in virtually all flow scenarios. At present, not all shippers have the option of using this remaining capacity which happens to be available; this usage is contingent on the longer-term conclusion of interruptible capacity contracts, too. This means it is not realistically possible for shippers to use the remaining capacities on an interruptible basis for short-term trading options.

This obstructs market integration in particular despite the short-term flexibility. At present, shippers cannot use gas offers at short notice on gas markets outside their own market in a non-discriminatory way. Only shippers who have made at least an interruptible booking on both sides of the relevant border can avail themselves of any such gas offers.

6.3. Options

6.3.1. Setting out comprehensive details of interruptible capacity products

It would be possible to standardise and specify the application of interruptible capacities within the framework of these proposals by issuing minimum requirements and clear regulations. Specific regulations would have to be incorporated alongside the various aspects mentioned in the above-mentioned problem description.

What mitigates against this option is that although ERGEG considers interruptible capacities to be an important optimisation tool, it does not consider them to be a basic integration tool for the internal market for natural gas. The use of interruptible capacities is suitable for fully exhausting previously unknown unused part of the capacity. The more efficient the management of firm capacity is, the smaller the scope.

Very different reasons are possible for the existence of unused scope in the technical capacity. These reasons differ due to the underlying activities of the capacity holders:

- Supply chain: in cases where shippers use the capacity for cross-border supply of end consumers, scope is created if the offtake by final customers is low and if this is reflected by reducing the import flows. Gas storage facilities facilitate a steadier flow, but they do not change the overall effect. In supply chains, shippers respond rarely, if ever, to current price signals.
- Arbitrage: scope can also develop in a shipper's behaviour that is dominated by competition if the price differences between adjacent markets are minor and can be eliminated by comparatively few transports (additional demand on cost-effective markets pushes up the prices on these markets whereas additional offers on expensive markets brings the prices down).

Interruptible capacities may represent a usage option in both types of scope; however, they are not suitable in either case for supporting the mentioned types of business: they neither create the possibility of reliable supply for final customers nor do they facilitate participation in market arbitrage, because both require firm contracts.

While both types of business exist in parallel, interruptible capacities have the ability to steady gas flows as both types of scope occur in the capacities; arbitrage can take place in the scope offered by supply chains, whereas supply chains with interruptible capacities can be developed in the scope offered by arbitrage.

However, this is only possible for small sections of the market. Having a large section of the market switching to interruptible capacities is not an option. For this reason, the option of setting out the details with the aim of enhancing the usability of interruptible capacities is not a concept that is viable in the long term regarding the integration of the internal market.

6.3.2. Creating the possibility of nominating interruptible capacity at any time

Above and beyond offering firm capacities that become available within the day, TSOs can also give shippers the option of using any point at the border by releasing an interruptible nomination. This option is not confined to intra-day activities but can also be used subject to more advance notice.

This option represents a departure from the principle that all network access must be contractually prepared by booking capacity and opens up gas networks for access of registered shippers without capacity booking. However, this nomination is limited to the use of every last remaining kWh/h that can be transported in the networks. The planning certainty for shippers is low.

6.3.3. Harmonising interruptible capacities

In the longer run there is a need to fully harmonise the offer, allocation, use and interruption of interruptible products. As interruptible products serve as a last option for using still unused capacity they need be easy to handle. Only then, interruptible capacity will play a role of optimising network use, because otherwise the transaction effort of shippers is too high. Shippers will compare the effort to the one of buying gas on the virtual hubs that are expected to grow in liquidity.

Interruptible capacity products thus need alignment in charging, use and interruption. TSOs shall therefore apply the same rules and mechanisms of interruption. Ideally, they interrupt:

- based on a common decision that interruption is necessary,
- the same shippers (that means that the TSOs apply the same interruption sequence: e.g. first committed, last interrupted or pro rata),
- to the same degree,
- with the same lead time and
- for the same duration.

The charges of interruptible capacity must be based on the probability of interruption.

6.4. **Public consultation results**

Few respondents emphasised that interruptible capacities represent the ideal tool for liberalising the market for natural gas. Other respondents pointed out that interruptible capacity can only contribute to integrating European gas markets as long as the interruption probability is low.

A large number of respondents voiced criticism about the last-committed-first-interrupted approach. Holders of old contracts can expect, under these conditions, never to experience interruptions whereas new market players will face a particularly high risk of interruption.

No respondent came up with suitable suggestions. Some respondents suggested interrupting capacity on a pro rata basis. It remains however unclear whether the basis of proportionality refers to interruptible capacities or to nominations.

For further details of consultation cf. ERGEG Evaluation of Comments E09-GNM-07-03.

6.5. **Option chosen and changes made in the light of the public consultation**

In the light of the consultation ERGEG decided to foster the usability of interruptible capacity in the longer run. Harmonisation at interconnection points shall take place according to ERGEG's proposals.

In its proposals, ERGEG seized the option of interruptible nomination at all interconnection points without prior booking. To be clear, only registered network users shall have the right to submit interruptible nominations at any time.

6.6. **Impact of the proposed arrangement**

As long as the market structure facilitates the use of interruptible capacity, interruptible capacity products can and should contribute towards opening up the markets. On the other

hand, the present rules ensure that preference continues to be given to firm capacities which are more important for long-term, viable market development, than interruptible capacity.

The harmonisation of interruptible capacities is suitable for the explained reduced importance of those. Even in a perspective situation of fully developed congestion management, interruptible capacities might have their specific function. There might be several circumstances which call for using this type of capacity. The arrangement proposed aims at reducing the transaction effort for shippers involved.

The low level solution of interruptible nominations at any point might be a useful tool for shippers optimising their portfolio. The proposed arrangement opens up the possibility of directly integrating flexible markets. On the basis of the proposed arrangement flexibility markets might merge independently from other markets and might hence develop independent liquidity.

7. BREAKDOWN AND OFFER OF CAPACITY PRODUCTS

7.1. Proposed arrangement

F2.3 Breakdown and offer of capacity products

Depending on the market needs and conditions, transmission system operators shall determine the breakdown of available capacity between the different long and short term capacity products. A reasonable percentage of the available capacity shall be set aside for firm short term capacity products. The amount of capacity for each capacity product shall be aligned between adjacent transmission system operators and approved by national regulatory authorities for each interconnection point. It shall be published and subject to regular consultations.

The network code shall set out the procedures followed by transmission system operators to offer all available capacity in a transparent and non-discriminatory manner as firm and interruptible long and short-term capacity products. The transmission system operators shall offer the firm capacity available plus:

- any remaining firm capacity not previously allocated,
- any capacity from previous allocations surrendered by capacity holders and
- any unused capacity released through use-it-or-lose-it mechanisms.

7.2. Problem

7.2.1. Problem area involving fragmented capacity offers

The system that is currently in place in many Member States of capacity being offered on a more or less continual basis represents a clear barrier to market entry. Capacity can become available any moment and those who request capacity at the right time stand to benefit hugely. Obviously, information asymmetries can have a major impact.

TSOs frequently offer shippers the option of checking whether it is possible to book capacity above and beyond the capacities published on an individual basis. This gives shippers who are unable to book capacity on a regular basis the option of booking the desired capacity after all. This option represents major discrimination as well as a significant market fragmentation. What is more, offering capacity based on individual demand will limit the actual capacity offers which are supposed to encompass all available capacities and be binding for all parties.

Capacity markets are being fragmented even further by the fact that capacities are not integrated into cross-border capacity products.

All things considered, the offers available on capacity markets are completely fragmented in time-related and organisational terms.

7.2.2. Problem area involving static capacity offers

At present, in several Member States, capacities are being offered and allocated without any predefined rhythms of allocation and without predefined durations. In many countries, ship-

pers have the option of booking capacity at any time for any duration provided there is capacity available in the first place. Shippers do so, on the basis of the technical capacity published, which does not make any distinction between durations and starting dates.

Considering the varying actual maximum of technical capacity would allow increasing the capacity offer during a great part of the year, in particular for short-term products and short lead times. It is therefore inappropriate to publish one single steady figure when indicating the technical capacity.

7.2.3. Problem area involving reciprocal blocking of capacity bookings

The fact that most capacity products sold in the past, or even today in many cases, and which are characterised by a long duration, e.g. over 10 years, allows for capacity hoarding. Therefore separate rules need to be issued to prevent a blockade of capacity bookings of longer durations. In some Member States, lead times are such that they limit the booking of short-term capacity and the duration of firm contracts as a whole or that they contain other limitations in order to avoid reciprocal blocking.

If the option of being able to book capacity at any time is abandoned in favour of defined products and defined allocation durations, it must be ensured at the same time this does not lead to the reciprocal blocking of capacities of varying durations and lead times.

These types of regulations can greatly hamper the handling of cross-border transports, above all if they differ on both sides of the border. This might require trading at the border which in turn has a negative impact on trading at the virtual trading points.

7.3. Options

7.3.1. Dispensing with arrangements governing capacity offers

In current practise, shippers have to deal with various methods of offering capacity, allocation mechanisms and other procedures. It is presumed that in the majority of cases, market entry was not unsuccessful because the methods used to offer capacity were not suitable, but because there was simply no capacity available. In many cases, market entry was indeed successful.

Offering capacity on a continuous basis has the benefit that capacity can be bought immediately. Once the transport request has been found out, the transport can be booked immediately. However, this benefit only applies if there is sufficient free capacity available, which is regularly only the case at uncongested borders.

Nonetheless, these positive aspects can not justify a decision not to modify the methods used to offer capacity. Market development up to now is not deemed complete for a large number of reasons. The methods used to offer capacity and the subsequent methods of capacity allocation are just some of the barriers to market entry. They need to be standardised and oriented more effectively than has been the case so far to the needs of shippers and to the possibilities of TSOs.

7.3.2. Specifying the procedures for offering capacity

The method used to offer capacity needs to fit together with the capacity products available. It is appropriate to offer firm capacities at firm times for definite durations because this results in as few demand and supply times as possible. This would concentrate the time-related dimension of the capacity market and reduce the fragmentation of this market accordingly.

It is proposed that these allocation times for firm capacity take place on a regular basis and that the products offered are harmonised. Only then can demand be pooled and only then can an allocation mechanism be used that takes the interests of various shippers into account.

7.3.3. Definition of capacity offers

All offers of capacity products are designed in such a way that the maximum available volume of each capacity product is offered. This is without prejudice for the proposed reservation of the part of the technical capacity to be set aside for capacity products of specific durations.

Offers are defined in a way that ensures the most comprehensive use is made of technical capacity which varies at least from season to season. For instance, capacity offered during the winter months is normally higher than capacity offered during the summer months (cf. above B-7.2.1). Additionally, the results of the various methods used to calculate capacity which can lead to higher technical capacities with short lead times must be taken into account accordingly in the offer.

If firm capacities of a certain duration are not sold, the TSOs subdivide them into the next shortest duration and add them to the relevant offers.

7.3.4. Avoiding the reciprocal obstruction of booking different durations

The proposed arrangements on capacity management must also prevent or at the very least minimise the reciprocal obstruction of booking different durations.

There are a number of options available for doing so:

- Define maximum lead times for bookings ensure that bookings of short capacity durations do not prevent longer-term capacity contracts from being concluded. In order to do so, capacity for a three-month period, could be booked for instance, in the previous quarter at the earliest.
- Define minimum lead times in conjunction with limiting maximum durations could also straighten out bookings. For instance this means long-term bookings would need to be made at least two years in advance, whereas the duration of all other bookings would end after two years at the latest.
- Define percentages of technical capacity that would be allocated to the various pre-defined durations and start times.

The third option combines the first two options as it encompasses specifying both the minimum and maximum lead times as well as the possibility of limiting maximum capacity durations.

7.3.5. Reserving capacities for short-term booking

Reserving capacities for certain durations is an integral part of product definitions. It is also possible to reserve part of the capacity explicitly for short-term bookings. Against the background of the above mentioned importance of product definition, it is an important to set aside a part of the technical capacity for short term bookings. In order to meet the market's needs the detailed auction design shall be subject to regular consultation and shall be subject to review by the respective regulatory authorities..

7.3.6. Integration of surrendered capacity

In order to concentrate capacity markets as much as possible in organisational terms, TSOs should be instructed not only to offer their primary capacities, but also capacities surrendered by shippers for this purpose. This should be done in a manner that allows for easy coupling of primary and surrendered capacity.

7.3.7. TSO's obligation to offer capacities in both directions

For points at which gas can be transported in both directions, there is no problem publishing the relevant capacities in both directions. However, TSOs should also offer capacities in both directions at points at which gas only flows in one direction for technical reasons. These frequently involve interruptible capacities in the backhaul direction, although TSOs should also endeavour to offer firm capacities in this direction. As far as TSOs calculate the capacity offers on the basis of actual available information and historical data this can be achieved very often.

This improvement is indispensable for the integration of markets and for price signals to develop their full potential.

7.4. **Public consultation results**

As with all proposals that were aimed at standard practise, the parties participating in consultation backed this by a clear majority.

No comments were submitted on the more technical aspects of backhaul capacity and the use of energy units, which in this case can probably be rated as approval.

The aspect of fragmented capacity markets was referred to by a large number of respondents, albeit mostly in answering the question whether the "first-come, first-served" allocation system might be suitable.

For further details of consultation cf. ERGEG Evaluation of Comments E09-GNM-07-03.

7.5. **Option chosen and changes made in the light of the public consultation**

ERGEG has decided to select the most far-reaching option in order to avoid reciprocal obstruction and to integrate the relevant requirements into the product definitions.

With respect to capacity offers - except for the option of fully dispensing with a regulation - hardly any decision was made between the various options; rather, all the available options must be used. This corresponds to the agreement of respondents in the consultation process.

- Firm capacities must be offered in maximised form on a regular basis for all capacity products of differing durations.
- At the very least interruptible but, if possible, firm capacities are to be offered in both directions at all border points.
- The fragmentation of capacity markets will be prevented by the requirement to offer capacity on a regular basis, by prohibiting separate transit capacities and by integrating offers of surrendered capacity.

7.6. Impact of the proposed arrangements

The proposed arrangements are suitable to sharply reduce the shippers' efforts in capacity booking. It improves the visibility of the capacity available for shippers. Regular offers of all available capacity will enable them to book according to their needs.

This is not just of major importance in situations in which shippers wish to book a specific capacity and are able to do so without having to search for any length of time or undertake frequent attempts. This is also important for the preparatory planning of commercial transactions. If shippers are able to obtain a full picture of capacity availability effortlessly, they will be able to adapt their market behaviour much more effectively to the conditions. They might then be able to rely on short term capacity markets and avoid booking up to their expected maximum peak load.

However, there is an indirect effect which is expected to be very important for market integration, too: The proposed arrangements are likely to raise the offer of technical capacity particularly in times of peak load, which in itself should greatly ease the situation.

Furthermore, the arrangements are aimed at integrating the liquidity of capacity markets to the greatest possible extent in both time-related and organisational terms as far as this can be achieved.

The requirement that all capacities must be offered in energy units means that offers will become more transparent and that contractual congestion will be slightly reduced. This requirement will also make it easier for TSOs to reach cross-border agreement on basic technical issues.

Taking into account all above-mentioned issues, the regulations on capacity offers will contribute to reduce contractual congestion without having used an actual congestion management system. Efficient allocation of capacities can be developed on the basis of such a concentrated offer.

As also demonstrated by the consultation results, there is rational to assume that these regulations have the potential to significantly reduce capacity congestion. This applies all the more so against the background of there still being a small number of shippers active in most markets. If the number of shippers increases further owing to the boost in competition, these measures alone will not be sufficient to ensure points currently affected by congestion can be used.

In this regard, setting out the details of capacity offers adequately is hugely important for market integration.

8. CROSS-BORDER PRODUCTS

8.1. Proposed arrangement

F2.4 Cross-border products

F2.4.1 Combined products

The network codes shall set out that the transmission system operators jointly offer combined capacity products at every interconnection point. The combined products include the exit capacity from one zone and the entry capacity into the adjacent zone. This requires the adjacent transmission system operators to cooperate closely. In order to achieve the aim of offering combined products transmission system operators shall at least agree that one of them allocates all available entry and exit capacity jointly offered. National regulatory authorities may decide that combined products may not be transferred separately or nominated differently.

F2.4.2 Bundled products

The network code shall foresee that in case capacity offers, products, allocation and utilisation mechanisms are harmonised transmission system operators offer bundled capacity products. The exit and entry capacity at every point connecting adjacent entry-exit systems shall be integrated in such a way that the transport of gas from one system to an adjacent system is provided on the basis of a single allocation procedure and single nomination.

Bundling capacity comprises integrating exit and entry capacity at a given interconnection point into one single product in such a way that the transport of gas from one entry-exit zone to an adjacent zone is provided through a single allocation procedure and single booking.

The network code shall also set out that capacity at two or more points connecting the two same adjacent entry-exit systems is integrated into one single capacity product representing one single contractual interconnection point. Transmission system operators shall calculate the entire technical capacity of the bundled product and shall make their methodologies for the capacity calculations transparent.

The network code shall lay down an action plan to realise bundled products and to replace combined products. This plan shall include a timetable.

8.2. Problem

There are several problems associated with separate bookings on the two sides of the borders:

- With unbundled capacities, shippers have to address the technical issue of which pipeline to use for their transport. This reflects incomplete separation of the spheres and leads to inefficient network management.
- Unbundled capacities facilitate gas trading at the border which raises the number of European trading hubs. The more trading hubs there are, the lower the liquidity of each individual point.

If a shipper wishes to transport gas from one market into an adjacent market using the current booking system, he needs the exit capacity from one market and the corresponding entry capacity in the other market in order to do so. Both capacity bookings must refer to the same physical pipeline. This leads to the situation on a regular basis that shippers can book the exit capacity from their source market at one pipeline and the entry capacity of their target market at another pipeline. As neither refers to the same pipeline, this is worthless to shippers.

The construction of individual bookings on both sides referring to specific pipelines currently enables shippers to make a pipeline useless to other shippers by booking one side of the point, at least in theory. Indeed booking only the other side of the point would not enable any shippers to transport gas.

The gas access rules of some TSOs already provide for individual measures that are intended to lessen reference being made to individual pipelines. In accordance with these regulations, shippers can shift their bookings or nominations temporarily or permanently between points. However, this does not rule out the underlying problem of insufficient separation of spheres.

Cross-border bundling is so far only implemented in very few cases.

In many cases a reduction of transaction efforts of shippers does not require full bundling of capacities. Instead, organisational simplifying the process of crossing borders is considered sufficient, but so far no mechanism is available for this.

A clear distinction needs to be made between bundling of capacities of different TSOs at both sides of a particular border from the bundling of capacities of one network operator at several borders or across several borders. Some TSOs are actually offering this. Although this bundling represents a reduction in transaction costs, it would actually convert capacity booking into transit capacity in practical terms. This has severe disadvantages and would come under eliminating the possibility of transit capacity as per the proposed provisions.

8.3. Options

8.3.1. Allowing unlimited booking on one side of an interconnection point

In many cases, a different amount of technical capacity is offered at the two sides of an interconnection point. In these cases, firm capacity can be offered and allocated on the side with the greater technical capacity with no restrictions on volume because no shipper would be able to nominate more gas than could be accommodated by the capacity available on the other side of the point. Physical congestion can never occur on the side that has more technical capacity.

Similar reflections can be made on interconnection points with the same technical capacity on either side. Then it does not matter which of the two sides offers and allocates capacity without restrictions on volume.

This arrangement constitutes a first step towards looking at the two sides of a border together and optimisation with reference to the whole. It will enable restrictions to be lifted that result from looking at just the one network but which are not necessary if the two are taken together. Operational processes in the one network will be safeguarded through the booking restrictions in the adjacent network.

However this approach has two drawbacks:

- It becomes problematic if the capacity offer is widened in any way on the restricted side. If a wider offer reverses the situation, i.e. if the side with less capacity suddenly becomes the side with more capacity, an infinite volume would then have to be offered on the other side. All the contracts on the previous "infinite" side would have to be terminated. For this reason, only relatively short term capacities could be allocated with this approach.
- The approach presupposes trading at the border. Only when this happens it will make sense for a shipper to book capacity on the "infinite" side that cannot be matched on the other side. The fact that trading at interconnection points is detrimental to the liquidity of the trading points is set out above.

8.3.2. Integrating capacities on both sides of a point

Capacity booking that enables gas to be transported from one market to an adjacent market can be referred to as cross-border capacity. It enables gas bought at a virtual hub to be offered at a virtual hub of an adjacent market.

Such cross-border integration of capacity products greatly reduces transaction costs incurred by shippers. Above all, it eliminates the risk of only being able to buy capacities at one side of a border and ultimately not being able to realise the transport.

Furthermore, cross-border integration of capacity products rules out the possibility of gas being traded at the border. Any booking of cross-border capacities extends from one market right into the other market. Commercial transactions can only be implemented at virtual hubs of both adjacent markets. For this reason, shippers who book and wish to use cross-border capacities need to be active in both markets. In order to do so they regularly need to comply with balancing arrangements in both markets.

There are five models available for the handling of cross-border integration:

- Agent system: shippers commission one of the TSOs to book the required capacities in their name.
- Voucher: only one of the two capacities at a border can be booked freely without having to meet any requirements. Any second bookings made are linked to the prerequisite that shippers can furnish proof of the initial booking made. To enable them to do so, shippers are furnished with vouchers for all bookings made which they must submit when they book the corresponding capacity.
- Combined products: at each border shippers only book the entry capacity in the entry-exit system into which they wish to transport gas. TSOs add the required exit capacity in the entry-exit system where the gas comes from. TSOs can perform this booking in the neighbouring system in aggregated form for all contracts. The model can also be applied vice-versa.
- Combined products including one single nomination: in addition to the aforementioned model network users flow gas into the adjacent market on the basis of only one single nomination to both TSOs.
- Full bundling: capacities of both sides are fully integrated in any aspect into only one single product.

The first three options do not require TSO cooperation. As far as TSOs accept the method's implications the practical execution of the options is possible without any contact. On the

contrary, the fourth option (full bundling) requires close TSO cooperation as it integrates the booking procedure of both TSOs. Depending on the concrete design, the fourth option is likely to transfer the competence of booking from the TSOs to a special body like the proposed booking platform.

The first two bundling models mentioned above (agent and voucher) are characterised by the fact that with all capacity, it is the shipper who is the contracting party of the TSOs. Shippers' nomination obligations are likely to apply vis-à-vis both TSOs in these systems, too.

With the agent system, although the shippers' transaction costs are reduced, this does not affect their ability to book the point. With the voucher system, the ability to book the other side is more effectively ensured because both capacities at the border are obviously interconnected. In order to really bundle capacities for just one shipper, it would have to be ensured that the voucher is non-transferable and that the voucher regulation also applies to secondary markets.

The first two above-mentioned options (agent and voucher) do not prohibit gas trading at the border either. If two shippers book roughly the same capacities on both sides of a border on the basis of the non-transferable voucher regulation, they can hand over the gas at the border as before because the bookings themselves are made separately with these two options.

By contrast to the first two options, the third model (combined products) represents one step more of integration. The shippers only book one side and are not involved in booking the other side of the border. The TSOs' payment obligation for the exit capacity will be passed on the charges for combined entry-capacities.

In the fourth option the nomination obligation only applies to one side of the border. The model of combined products including one single nomination effectively rules out gas trading at the border as the capacity leads directly from one virtual trading point to the next virtual trading point. The aggregation of bookings for the other side by the TSO in this system means that efficiency potential in network usage is heightened. Simultaneity effects contained in the booking and use of capacities by shippers are reduced by the fact that bookings on one side of the border are aggregated. By the same token, capacity allocation measures only need to be implemented on one side of the border (and the same is true for congestion management, too). Firm day-ahead capacity can be allocated and used efficiently via combined products, because only one booking is necessary.

However, only full bundling is the option to achieve a comprehensive separation of spheres and efficiency effects of integration of both sides. Booking and nomination of bundled products does no longer refer to physical points but to virtual interconnection points. Both sides are managed in balanced form for all the shippers active between the two adjacent markets. This option therefore requires close cooperation as well in operational as in technical issues:

- All existing contracts have to be migrated into bundled contracts.
- TSOs have to decide together on the division of physical flows on the pipelines.
- The distribution of incomes is one of the questions that need cooperative solutions.

In case cross-border capacity is auctioned surplus revenues will be generated. There might well be cases where the surplus revenue is generated on the congested side of the border. Workable solutions have to be found how these revenues are to be distributed between the adjacent TSOs. This should be done by the TSOs and regulators involved on a case-by-case basis taking national provisions into account rather than at European level.

8.3.3. Existing contracts

The integration of capacity products into cross-border capacity does – like any other proposed arrangement – only have fundamental changes in case it is applied to the entire technical capacity including existing contracts. Regarding cross-border capacity, a step-by-step solution seems to be an appropriate intermediate:

- In a first step a lower level integration concept of combined capacity products is applied to all newly concluded capacity contracts. Available capacity is offered as combined product.
- In a second step full bundling of all capacity contracts will be implemented.

8.3.4. Eliminating reference being made to specific pipelines in bookings

At present, capacity contracts always refer to specific interconnection points. This means they refer directly to an individual pipeline. However, many entry-exit systems are interconnected by more than one interconnection point.

The TSOs on both sides of a border can integrate their technical capacities into one single capacity, hence eliminating reference to a specific pipeline. From the shippers' perspective, although this integrated capacity is no longer localised, it does enable them to implement the gas transport.

Combining several technical interconnection points into integrated capacity offers the benefit that the proportion of individual shippers in the booking as a whole tends to diminish. This also reduces the influence individual large shippers have on the concrete usability of interruptible capacities besides eliminating confidentiality problems that are more likely to arise at individual points.

If the bookings and nominations of shippers no longer refer to one individual pipeline, the TSOs must divide them into the individual technical interconnection points. As such, TSOs need to agree on the technically most effective distribution. In some entry-exit systems, more than one TSO is active. In these cases, it needs to be ensured when bundled capacities are built from physical points that the technical and financial interests of the respective TSOs are being adequately represented.

The integration of capacities from several points into one bundled product is therefore seen as an element of the full-bundling option and can probably not be achieved via agents, vouchers or combined products.

Implementation of combined products needs few preparations. The offer of capacity has to be changed and the booking of capacity in the adjacent network needs to be done before a combined product can be offered. The most complex issue is to calculate the necessary aggregated capacity that has to be booked. On this basis, the charge of the combined product needs to be recalculated as it includes a part of the exit charge of the aggregately booked capacity. All this can be done quickly.

Shippers need to prepare themselves for the new kind of product and particularly get ready to be active on both markets.

Full bundling is more complex than offering combined products. Bundling requires a comprehensive integration of any part of the capacity management. In particular the booking procedure needs to be integrated between two TSOs. Technical issues are to be dealt with,

such as TSOs have to implement decision processes on the agreed use of specific pipelines. Last but not least, they have to agree on the distribution of income.

Summarised this means that a public and binding action plan helps to achieve the aim of full bundling in a way comfortable for any party involved and to avoid delay.

8.4. Public consultation results

ERGEG's proposals on cross-border capacity prompted a large number of responses. Only a few shippers naturally assumed that trading at border points would continue to be possible. The vast majority of the respondents indicated that cross-border capacity would rule out this possibility and supported this idea. Respondents acknowledging that bundling would reduce transaction costs approved wholeheartedly of the proposal. Some respondents asked ERGEG to clearer specify possible methods of capacity integration; others referred to examples of steps in the direction of integrated capacity, namely the voucher and the agent solution.

For further details of consultation cf. ERGEG Evaluation of Comments E09-GNM-07-03.

8.5. Option chosen and changes made in the light of the public consultation

In the proposed regulation, ERGEG defines two steps how to integrate capacity products into bundled products. Firstly, a lower level of integration is envisaged by implementing simple combined products. Secondly, full bundling of capacity into only one single product is proposed as a longer-term goal. ERGEG restricts to setting out the details of bundled capacities but does not issue a detailed regulation for the system to be used: when booking capacities, shippers are to be able to book the capacities from one market into an adjacent market. With this objective in mind, all points and both sides are to be integrated by means of full bundling.

The few responses submitted by shippers who gave preference to capacities only being booked on one side and who wish to maintain a system of trading at the borders were not taken into account because this would certainly have serious implications on the liquidity of gas markets and hence for the development of the internal market.

ERGEG has designed the development of combined products as a new option answering to the respondents' request for clear rules on how to integrate both sides of a border.

8.6. Impact of the proposed arrangement

The impact of the proposed arrangements depends on the stage of application. The full impact will only be realised when full bundling is applied. As long as only the lower level solution of combined products is implemented, some advantages of full bundling are missing.

Both, combined and bundled capacities result in cross-border capacity. The impact this proposal will in the end have on the development of the internal market cannot be overestimated. The positive effect will be interconnection points being limited in their function as trading hubs.

- As far as only combined capacity is offered, the integration will not apply to legacy contracts. Thus, it only applies to a very small but growing share of the market. The relevance of border points as trading points will apparently slowly decrease.
- If the proposal of fully bundled capacity applies, the liquidity that is currently fragmented to hundreds of trading points (border points) will be concentrated at a few virtual trading points. With the integration of the European gas market the number of virtual trading points will be further reduced further.

The application of this arrangement will be a major change for shippers because in order to engage in cross-border activities, they will be compelled to become active in both markets themselves, and at least to conclude balancing group contracts or equivalent. This alone will greatly raise the number of shippers operating in the international arena. This in turn is likely to exert noticeable pressure on the further convergence of network access rules applying in the EU.

TSOs will experience a slight expansion of their role. Instead of only concentrating their activities to their own network it is proposed that they bear responsibility to facilitate cross-border transports. From the TSOs' perspective, implementing combined products or full bundling is important because they no longer sell independent products to shippers.

The interdependency is rather low as regards combined products but even this model results in a situation where the exit capacity is no longer offered and sold directly to shippers. With a full bundling solution applied, the integration applies to many TSO activities carried out vis-à-vis to shippers.

The proposed forms of bundling will not only increase liquidity at the virtual hubs but also the liquidity of capacity markets. The integration of capacity to cross-border capacity will ensure that all capacity suitable for transporting gas from A to B will be offered on one market only (cf. also above B-7.2.1).

The arrangements proposed will reduce transaction costs for shippers. They will have to spend less time for booking transport capacity because they will only need to keep an eye on one capacity market. This simplification for shippers is of importance for short-term markets in particular. The shorter the duration of a capacity, the greater the impact of transaction costs on the overall price in business management terms will be. Day-ahead capacity and intra-day capacity will only be able to play the role of stimulating the market development in an optimum manner if the needed capacity is integrated.

For TSOs the proposal of fully bundled capacity means that there will be a need for further intensive cooperation. On the other hand, the proposed regulation means that TSOs will be able to manage their networks more freely than has been the case up to now. No shipper will "throw a spanner in the works"; instead all network-related decisions will be taken by the

TSOs. Above all, this applies to deciding which interconnection point is the most suitable for the netted transports of all shippers' nominations. This also creates additional direct possibilities of shifting the points in time for the gas to be transported:

- If shippers have submitted uneven nominations, TSOs can ensure the technical flows are steady when managing their networks.
- If TSOs need the actual flows to be realised at different points in time in order to safeguard network stability, they can implement this in cooperation with each other regardless of the nominations submitted by shippers.

9. CAPACITY ALLOCATION

9.1. Proposed arrangement

F3 Capacity Allocation

The network code shall set out how transmission system operators offer capacity on a regular basis for all firm products. The network code shall define a number of regular points in time for the allocation of firm capacity products. Each of these points in time shall be appropriate with regard to the duration of the capacity product offered at this allocation date. The longer the capacity product duration, the longer its allocation lead time (i.e. the time between the allocation of the capacity and its use). Each allocation procedure shall contain a time window during which capacity is requested.

The network code shall set out that, for the same capacity product, the allocation procedures are timely coordinated at every interconnection point in Europe.

Capacity allocation procedures shall be designed with regard to market conditions and shall be regularly reviewed and revised if necessary.

The network code shall set out that adjacent transmission system operators apply harmonised allocation mechanisms. It shall require that transmission system operators publish the detailed procedure as well as the capacity offered, its lead time and its duration sufficiently in advance.

Capacity allocations shall not take place outside the standard allocation procedures as applied according to these guidelines.

F3.1 Auctions

The network code shall set out that firm capacity products are allocated via auction. The network code shall set out the principles and possible options of anonymous and transparent online-based auction procedures. The network codes shall not impede implicit auctions. The auction design shall be subject to review by the regulatory authorities concerned and to regular market consultations.

Auction revenues exceeding the regulated tariffs (or values determined by the national regulatory authority) shall be used for different aims in accordance with national provisions, such as lowering network tariffs, removing congestion by investments or providing incentives to the transmission system operators to offer maximum capacity.

The network code shall not impede potential allocation by means of implicit auctions.

F3.2 Pro rata

The network code shall set out that pro rata allocations may be applied during an interim period, when conditions are not met for efficient and fair auctions. This might in particular be the case where auctions would result in distorted bidding behaviour. It will be up to the competent regulators to decide whether the conditions are met or not⁸.

According to the pro rata mechanism, every shipper is allocated a portion of capacity equal to the proportion of its capacity demand related to the total capacity demanded by shippers during the allocation procedure.

F3.3 First come first served

The network code shall set out that transmission system operators jointly offer and allocate any firm capacity becoming available after allocation of day-ahead firm capacities according to the first come first served principle or via an auction. Transmission system operators shall agree on appropriate common mechanisms for doing so. With the possible exception of intraday capacity, transmission system operators shall not allocate any capacity according to the first come first served principle.

9.2. Problem

The continuous “first come, first served” allocation of capacity is suitable in entry-exit systems, in which contractual congestion can never occur. At the moment capacity is published as being free, it can be booked by any shipper. It is not established whether other shippers are also interested in it.

In any system, in which contractual as well as physical congestion is a practical problem to cope with, continuous allocation results in serious problems.

With the proposed discontinuous allocation mechanism, contractual congestion may occur because the demand for a capacity product may exceed the capacity available. A practical allocation mechanism needs to be available in this case.

It has already been outlined in detail above that allocating capacities on a continuous basis hampers network access and may have discriminating effects in terms of product design (cf. above B-5.2 and B-7.2.1). Obviously, this also applies to the allocation mechanism itself.

At present, capacities are allocated according to the “first come, first served” principle in the majority of Member States. The benefits of this system lie in its ability to respond quickly and in the fact that the TSO always allocate the capacities at pre-defined rates. Nonetheless, the disadvantages of this system described above are serious:

- Capacity markets are fragmented in temporal terms,
- Shippers incur high transaction costs because they have to continuously monitor capacity markets,
- There is an incentive to book any capacity as soon as it becomes available without necessarily needing it.

⁸ According to art. 41 (6)c and 9 of the Directive 2009/73/EC: “[T]he regulatory authorities shall be responsible for fixing or approving sufficiently in advance of their entry into force at least the methodologies used [...] establish the terms and conditions for: [...] access to cross-border infrastructures, including the procedures for the allocation of capacity

9.3. Options

9.3.1. Standard procedure of capacity allocation

In ERGEG's view there should be a standard allocation procedure. Even if some exemptions are granted for specific situations, this does not mean that there is room for other mechanisms of allocation. In particular the allocation of capacity on shippers' request shall not take place, because this method has a considerable risk of discrimination. Furthermore, it splits the market of capacity (cf. above 7.2.1).

All capacity available shall be offered to the market and allocated through one single transparent mechanism.

In order to fully benefit from the standardisation of the allocation procedures, these procedures should take place in a timely coordinated way at every interconnection point in Europe. The optimum would be that the capacity products of the same type and duration are allocated at the same time all across Europe, in order to reduce shipper's transaction efforts to the minimum. As this might not be possible from the beginning, European TSOs should at least coordinate the timing of their respective allocation of products of the same type and duration.

9.3.2. Developing a discontinuous allocation system

If, as it was suggested above, a range as limited as possible of firm capacity products of different durations and with different starting dates shall be developed, a suitable allocation system needs to be designed for capacity allocation as well.

Instead of allocating capacities on a continuous basis, the TSOs must indicate in advance when the firm capacities will be allocated. During a defined period prior to the allocation, network users have the opportunity to express their interest in booking capacity. Available capacity can be allocated for all shippers requesting capacity at the end of this period using a standard allocation methodology.

As shippers express their interest in booking capacity in a binding way during this time, the level of capacity requested is hence a valid sign whether contractual congestion exists.

9.3.3. Defined allocation deadlines for firm capacity products

Discontinuous allocation means that one allocation time needs to be specified and published for each capacity product, i.e. for each combination of duration and starting date. In order to minimise the time-related fragmentation of capacity offers, it is appropriate to offer each capacity product just once using the allocation system.

Together with the decision on the range of capacity products and of the scope of the respective offer, it must also be ensured by making the right choice of allocation times that the various capacity products are brought into line with each other in a way that meets the market needs in an optimum manner.

9.3.4. Definition of a target model for capacity allocation

The procedures of capacity allocation are the core element of these proposals. Market integration and harmonisation of procedures require a definition of the best suitable instrument in this respect and a general observation here is that fragmentation of allocation mechanisms,

with different ones applying under different circumstances, leads to a more complex regime. Auctions are considered the best suited target model. Progressively, capacity allocation in Europe should take place by means of auctions. However there are justified reasons for deviating from the general rule in special situations:

- Intra-day capacity needs to be allocated immediately. These capacities shall be allocated “first-come-first-served” or via auctions.
- Instead of auctions, there might be an option for applying for some time a pro-rata mechanism. This option should be limited to situations with highly concentrated markets.

Of course, there is a need to agree the application of this mechanism between the adjacent TSOs.

9.3.5. Allocation by means of an auction

If the demand for a capacity product exceeds the capacity available, capacity can be auctioned off among those interested in buying it. This means the financial value of capacity can be reflected in shippers’ willingness to pay which, in addition to establishing that congestion exists can also be an objective indication of the importance of this capacity from the shippers’ perspective.

As the details of the auction mechanism itself still need to be set out, the proposed arrangement has been kept open in this respect. It shall be subject to regular consultation and shall be subject to review by the regulatory authorities concerned.

The disadvantage of any auction consists in the fact that the financially strongest market player has the greatest influence on the price of capacities. A practical example for this fact is as follows: Parties who have already booked substantial amounts of capacity at the point in question may participate in the auction. In order to slightly increase their booking, they can accept a much higher price than new entrants who wish to buy this capacity the first time.

In this regard, there are certainly some problematic aspects to auctioning off capacities in a market in which players of very different sizes are operating. On the other hand, out of all the conceivable mechanisms, auctions are certainly the most market based and competitive mechanisms and therefore set as the standard procedure.

9.3.6. Use of auction revenues

If capacity is allocated by auction, the shippers may have to pay more for it than with “first-come, first-served” or pro rata allocations. These higher prices are a valuable signal of congestion, but should not be an instrument with which TSOs generate additional benefits. Appropriate use of the proceeds must therefore be secured.

Essentially, there are three approaches for the use of auction revenues:

- Lowering use of system charges. Auction revenues should be used to lower the use of system charges. In the case of allocation by auction this would mean primarily a lowering of the basic auction fees. There are several ways of treating this so that it is the same in every contract. One way is to design the auction as a surplus auction: shippers pay the regular price for the capacity they have won and a surplus which is established during the auction. If the auction revenues lead to a reduction in the use of system charges, these shippers will pay a lower regular price, but the surplus will remain constant.

- Use for investments. If the auction results signal congestion, the revenues could be used for investments to remove the congestion. Even if this approach is undisputedly accurate in principle, it is still highly theoretical. It is not clear whether the result of the auction really does stem from physical congestion or from contractual congestion. Network expansion/upgrading will never be a remedy for contractual congestion. Thus it is entirely conceivable that the revenues be used for investments, but it should not be stipulated that this money be used entirely for this purpose, nor should it be stipulated that more investments should not be made in a given case. Investment decisions should be taken independently of the auction revenues.
- Use for incentives. TSOs should be given incentives to offer maximum capacity. This does not prevent the auction revenues from being used for the incentive regime, however.

The proposals on the use of auction revenues should not focus exclusively on one of the three approaches, as the approach must be consistent with the charges regulation regime of the particular Member State.

9.3.7. Allocation on a pro-rata basis

Pro-rata allocation of capacities is another option when demand for capacity products exceeds availability: every shipper is allocated a portion of capacity equal to the proportion of its specific interest related to the total interest of all shippers in the open subscription. This mechanism offers three benefits vis-à-vis auctions:

- All shippers interested in booking capacity are actually allocated capacity. This raises the number of shippers active at a point.
- The payment ability of shippers does not directly determine their ability to participate in cross-border gas trading.
- It is much easier to apply a pro-rata mechanism than to develop an auction mechanism.

However, these benefits are juxtaposed by the following disadvantages in comparison to auctions:

- No shippers receive the capacity they need if and when congestion occurs. Once the capacity has been allocated, shippers may still need additional capacity and, for instance, may then need to take part in the next allocation for capacity products of shorter duration. Alternatively, shippers must adapt their commercial transactions to the reduced capacity.
- Every pro-rata mechanism harbours the risk of overbidding because shippers anticipate that their capacity request will not be fully satisfied. Overbidding weakens the congestion signal created by the capacity requests. It is not visible whether contractual congestion actually exists or whether it will come about because of the anticipated reduction in actual demand.
- The likelihood of exaggerated demand means shippers' ability to pay plays an indirect role: large market players are more likely than small market players to bear the financial risk of being allocated more capacity than they actually want to book when there is an exaggeration of demand.

- The system of pro-rata allocation does not contain any congestion signals that could come from shippers' willingness to pay as the latter is of reduced relevance with this system.

9.3.8. Option not to issue an arrangement for intra-day capacity allocation

Intra-day capacity demand submitted on the gas day currently plays a subordinate role in the gas sector. Intra-day activities take place at best when portfolios that are not developing as anticipated are adjusted. Many shippers do not have algorithms that would enable them to optimise their portfolios to include intra-day capacity or even to react on imbalance data.

Against this background, it could be deemed unnecessary to develop arrangements for intra-day capacity allocation. In actual fact, however, the proposed arrangements should also be suitable for a market that is continually developing. One aspect of this further development may consist in requirements made on shippers to balance their portfolios as accurately as possible during the gas day.

Even if these requirements are not tightened, the costs which shippers incur from balancing effort may gain momentum in the future as the profit margins of the individual shippers are likely to shrink in markets that are still unfolding. Avoidable costs that may be incurred if shippers are unable to optimise their portfolios on an intra-day basis will become more relevant.

9.3.9. Offering remaining firm capacities within the gas day

If TSOs become aware of remaining firm capacity becoming available on the gas day, they may be able to allocate it to shippers. This presupposes that there is a suitable handling mechanism available to offer, allocate and nominate these capacities in the first place.

It is necessary to coordinate these regulations very closely on both sides of the border, to standardise them and to integrate capacity offers and allocations because it would be unreasonable to expect that shippers keep a look out for any such capacities on separate capacity markets given the short timeframe available. This is possible by offering them within day capacity as combined products or as bundled capacity. If there were different mechanisms for offering, allocating and nominating within-day capacity on each side of a border, shippers would have to nominate capacity for one side without being certain that they could implement the transport on the other side of the border.

Besides reactions to unexpected behaviour of end consumers, intra-day activities on the gas day itself may result if interruptible transports are actually interrupted. If gas is to be supplied across several borders and if it was only possible to book interruptible capacity for any of these borders, the interruption may involve the intra-day redirection of gas flows. For any such processes, booking firm capacity that becomes available the same day immediately may be a suitable response.

9.3.10. Immediate allocation of capacities that become available within the day

Firm capacities that become available during the gas day cannot be subject to a complex allocation mechanism. They have to be both offered immediately after publication and sold immediately. For these capacities, "first-come, first served" is the only acceptable allocation mechanism available although it is no longer to be used for the allocation of longer term capacity.

9.4. Public consultation results

With very few exceptions, all of the respondents agreed that the continuous allocation system (“first-come, first served”) is discriminatory and needs to be replaced by discontinuous systems. The proposal to introduce open subscription periods was explicitly welcomed by some respondents.

The vast majority of shippers advocated introducing capacity auctions. Only a small minority was in favour of using a pro-rata mechanism. The arguments raised have been incorporated into the descriptions of the two options outlined above.

The respondents agreed that further alignment of procedures, mechanisms and codes is required for the overall goal of an integrated European gas-market. They encouraged ERGEG in proposing a clear set of rules to be applied.

For further details of consultation cf. ERGEG Evaluation of Comments E09-GNM-07-03

9.5. Option chosen and changes made in the light of the public consultation

All capacity products are to be sold at a specific time. This time is to be published in advance so that all shippers have the opportunity to express their interest in this product during a defined period in advance. These open subscription periods are also designed as allocation mechanisms provided that the capacity is not affected by congestion.

Auctions are the preferred method for allocating capacity wherever feasible and appropriate, for both existing and new capacity and are seen as target model for Europe. They are the most efficient means of allocating scarce capacity, and reveal the value of the capacity. Through auctions, the capacity is allocated to those shippers who value it most. Auctions are also the preferred method for re-allocating unused capacity freed up through UIOLI provisions. Any issues arising from market structure and behaviour of participants (such as vertical integration or market dominance) largely exist regardless of the allocation method, and can in principle be addressed in part through the detailed auction design. In order to meet the market’s needs the detailed auction design shall be subject to regular consultation and shall be subject to review by the regulatory authorities concerned.

However, pro-rata allocation will be possible during an interim period in cases when conditions are not met for efficient and fair auctions. This might in particular be the case where auctions would result in distorted bidding behaviour. Under pro rata, shippers are likely to acquire amounts of capacity allocated that bear little or no resemblance to their actual requirements and how they value the capacity. It will be up to the competent regulators to decide whether the conditions are met or not. Over time pro rata allocation will be phased out.

“First-come first-serve” will be disallowed at points where actual or potential congestion occurs.

9.6. Impact of the proposed regulation

As with the standardisation of capacity products (cf. above B-5), the standardisation of allocation times will greatly enhance the visibility of capacity offers for shippers. This will reduce the temporal fragmentation of the sales process which is eliminated when the rhythms are harmonised.

This is of paramount importance for capacity management.

Changing the allocation system to one of the two non-discriminatory allocation mechanisms, namely auction or pro-rata, rounds off the proposed overall procedure encompassing the duration-based determination of capacity, the product definitions i.e. durations and starting dates, the division of technical capacity into these products and the offering of capacity right up to allocation. All elements in this overall procedure follow a logical modular structure and are closely related.

All things considered, they greatly enhance the transparency of capacity allocation. They offer all shippers better and equal opportunities.

10. RE-MARKETING BOOKED CAPACITY

10.1. Proposed arrangement

F3.4 Secondary markets

The network code shall set out how transmission system operators facilitate trade of capacity rights on the secondary market. The network code shall define harmonised firm secondary capacity products and anonymous procedures for offer and allocation in line with those on the underlying primary capacity market. The network code shall define further methods to facilitate secondary trading of capacity. Transmission system operators shall be entitled to split and combine offered and unsold secondary capacity products into products of shorter duration for the subsequent allocation.

10.2. Problem

Secondary markets need to be designed in a way that sorts out negative aspects that follow from their current design. Obviously shippers do not use secondary markets, yet. This might be caused by the poor design of secondary markets. However, the major obstacle to secondary markets as permanent solution for a functioning capacity market is that in the end shippers have to offer their capacity to their competitors. In particular the fact that offering shippers provide evidence that they have too much capacity in terms of quantity and point in time and that buying shippers show their capacity needs reduces their willingness of to make use of secondary markets.

This cannot be solved via the design of secondary markets.

The missing interaction of primary and secondary market and the relative high transaction effort necessary might be another problem of secondary capacity trading.

10.3. Options

10.3.1. Aligning primary and secondary capacity allocation

Primary and secondary capacity should be allocated identically, otherwise strong distortion could result. Thus the same products should be offered on the secondary as on the primary market.

For instance anyone booking annual capacity can resell this as quarterly capacity on the general allocation dates given in the ruling on open subscription periods, and with the same durations and different starting and allocation dates.

The primary and secondary capacity markets will become more integrated as a result of this arrangement. The possibility of getting round the abolition of the continuous allocation is thereby sorted out.

Significant design options that can improve usability of the secondary markets for buyers and sellers are:

- Anonymity of buyers and sellers of capacity

- Capping the price of secondary capacity by the price of the primary capacity (if a factor is used for capacity charges of more than one day, it may be necessary to be more restrictive with the cap so as to avoid speculation with capacities.)
- Closest possible integration of the primary and secondary market.

10.3.2. Harmonisation of secondary products

In order to concentrate liquidity in capacity markets and to avoid abuse of the secondary markets, capacity products need to be harmonised on the basis of the underlying primary market. As these shall be subject to harmonisation then secondary capacities need to be harmonised, too.

10.3.3. TSOs slice and dice secondary offers

One important feature of the integration of primary and secondary markets is the opportunity for TSOs to split and combine secondary offers and to combine them with primary offers. Only then the market disintegration between the two markets can come to an end.

Obviously this requires to clearly set out detailed rules about the payment passed on to the initial capacity holder.

10.4. Public consultation findings

Some respondents came to the conclusion that secondary markets were important, particularly if there were better incentives for capacity holders to sell their capacity and if the design of the markets was improved. Most notably it was proposed that capacity holders should only be able to sell the same products on the secondary markets as on the primary markets.

For further details of consultation cf. ERGEG Evaluation of Comments E09-GNM-07-03

10.5. Selected options and changes in light of the public consultation

In response to the comments received, ERGEG decided to widen the original ruling by including the aim proposed by the respondents of aligning allocation practice on the primary and secondary markets.

10.6. Impact of the proposed arrangement

The proposed design of the secondary market will reduce the transparency regarding the individual shippers' situation. The integration with primary markets will reduce shippers' transaction efforts. Both elements together will increase the liquidity of secondary markets.

As far as according to this document's intention at least a small amount of primary capacity products is always offered, capacity holders will under no circumstances see a benefit in withholding their unused capacity from the market. In this case it will be needed to have a working secondary market in place.

11. BOOKING PLATFORMS

11.1. Proposed arrangement

F3.5 Booking platforms

The network code shall set out that adjacent transmission system operators establish joint, anonymous, web-based platforms for primary capacity allocation and secondary capacity trading. All capacity connecting their systems is to be allocated via this platform, unless allocated by means of implicit auctions. Primary and secondary capacity products shall be offered and allocated jointly on these platforms.

The network code shall lay down an action plan to reduce the number of platforms. This plan shall define interim steps and shall include a timetable.

11.2. Problem

Primary capacity is currently offered and allocated by each TSO for the capacity in his particular network. Secondary capacity is allocated independently of this either directly by the capacity holder or on secondary platforms. The shippers must therefore keep an eye on several capacity offers. At the same time, the capacity on offer is spread among many offers so that liquidity of capacity markets is reduced.

Particularly as regards the allocation of capacity on both sides of a border, the current practice of the two adjacent TSOs allocating the capacity is a great barrier to the development of cross-border competition.

A further barrier to market entry results from the fact that at present there are several separate markets for capacities even on one side of an individual point. Anyone who wants to buy capacity for a border point has to begin by going on the competent TSO's website. If there is no capacity available, there is the option of buying secondary capacity. This means to guess what shippers are likely to have booked capacity at this point and may be willing to sell it as secondary capacity. There is a lack of self-contained procedures for buying secondary capacity in many Member States.

Combining this secondary capacity with capacity that was booked previously or subsequently with the TSO as primary capacity represents at least an additional administrative procedure.

11.3. Options

11.3.1. Joint, anonymous online booking platforms for adjacent TSOs

So that capacity can be allocated as efficiently as possible it makes sense to centralise the booking procedures needed to transport gas over a border. This is similar in organisational terms to the bundling of the capacities of every point and both sides of a border.

Setting up booking platforms thus complements the bundling of capacity, or paves the way for it. But booking platforms are not a substitute for bundling: bundling decouples the physical and economic processes, whereas creating booking platforms is an organisational concentration.

Booking platforms also facilitate an anonymous form of allocation, which is particularly important when secondary capacity is offered on the platform.

11.3.2. Parallel allocation of primary and secondary capacity

Booking platforms should handle every kind of capacity allocation. It must not be possible for shippers to exchange secondary capacity without using the booking platform.

With parallel but separate allocation of primary and secondary capacity, shippers always know whether they have bought primary or secondary capacity. In the first case, a contract is concluded with the TSO. In the second case, the contract is concluded with the capacity holder. Shippers' knowledge that the capacity is secondary may affect their willingness to pay, therefore anonymity must be guaranteed when secondary capacity is allocated separately.

With separate allocation too, capacity must be allocated on the same day for both types with the same duration and the same starting dates. The auction procedure should also have the same design to prevent either of two allocation procedures having an organisational advantage.

Depending on how a separate allocation of secondary capacity is designed, shippers providing capacity can or cannot determine the price they want for it. These two possibilities are given for such design:

- Shippers can determine the price for their unused capacity. This price is in most cases supposed to be different from the primary price that TSOs publish and apply.
- Shippers cannot determine the price for their capacity and the price is set by the TSO just as high as the primary price.

11.3.3. Integrated allocation of primary and secondary capacity

Integrating the allocation of primary and secondary capacity into a single process is only a small step from parallel allocation but one that has the advantage of bringing together the liquidity of the two parts of the market and one in which anonymity is better secured. Shippers wanting to book capacity no longer know whether it is primary or secondary capacity on offer.

So that these markets can be integrated, both types of capacity must be offered and allocated for the same price. Hence there is no more scope for selling shippers to set their own price.

The order in which capacity is allocated must also be determined: first of all, primary capacity should be allocated and only when this has all been booked secondary capacity should be allocated. This order is correct because resale compensates those who have booked capacities of longer duration beforehand without actually needing them.

11.3.4. Auctions of day-ahead capacity

The booking platform is well suited for allocating firm day-ahead capacity resulting from capacity maximisation or from applying short-term UIOLI. Particularly important in this procedure, is the lower transaction effort and the integrated allocation of the capacity of both sides of a border, as there is a very tight timeframe in the allocation of day-ahead capacity.

11.3.5. Implicit auctions

In a departure from the general ruling that all capacity be allocated via the platform, there is the option of an implicit auction for day-ahead capacity. In this case, capacity is not awarded directly to the shipper.

11.3.6. Mandating a Europe-wide booking platform

Concentrating all booking transactions on a single European platform would greatly facilitate access for the shippers. They would not need to be registered on different platforms and would have an overall view of all the capacity available, without a great transaction effort. Coordinating multi-border flows would be easier.

Setting up such a Europe-wide booking platform represents a great challenge for the TSOs, who would have to standardise all their booking processes and additionally to agree on the platform itself.

A gradual solution is preferable.

11.3.7. Action plans to reduce the number of booking platforms

First of all, booking platforms should be set up for every border so that cross-border trade in gas is simplified to the greatest possible extent and thus encouraged. As each of these platforms carries out the same activities, capacity allocation for more than one border can be handled on a joint platform.

The lower the number of platforms in the European internal market is, the easier and the more uniform allocation practice will be.

As for the bundling of capacity, action plans should be drawn up by the TSOs outlining the steps to be taken for the establishment of joint platforms encompassing several borders.

11.4. Public consultation findings

A majority of respondents agreed that establishing a booking platform was a good way of facilitating booking procedures. They made clear that this would necessarily be a joint task for cooperating TSOs.

The concrete design of such platforms was considered important for detailed assessment. For instance, some respondents raised the question whether the use of such platforms should be charged or not.

For further details of consultation cf. ERGEG Evaluation of Comments E09-GNM-07-03.

11.5. Selected options and changes in light of the public consultation

ERGEG regards the integrated allocation of as much capacity as possible on as few platforms as possible as an effective way of facilitating cross-border competition in the longer perspective.

However, this aim cannot be achieved in one step through prescription in the proposals. Instead, ERGEG proposes that capacity be integrated on joint platforms step by step. Initially, primary and secondary allocation markets can co-exist. These two sub-markets should then be integrated in a next step. Reducing the number of platforms will follow afterwards.

11.6. Impact of the proposed arrangement

For the shippers, the creation of platforms will bring simplification and consistency to the process of allocation. The visibility of what is on offer will be enhanced. Under the proposed arrangement, the platforms will - once implemented- be the only place where capacity is allocated. Shippers can therefore be assured of not missing any capacity offered. The greater the number of borders covered by a joint platform, the more this will apply.

Putting together at least the two sides of a border on a common platform will facilitate the booking of cross-border capacity and is the organisational counterpart of bundling capacity.

For secondary trading, centralised and anonymous processes represent a major step forward; some of the disadvantages of secondary trading can thus be avoided.

ANNEX

The European Commission's letter to ERGEG, 22. September 2009:

“Subject: Invitation to draft a pilot framework guideline on capacity allocation in gas transmission networks

Dear Lord Mogg,

ERGEG, GTE+, the stakeholders involved with the European energy market, including those active in the Florence process, and the European Commission all underline the importance of the Framework Guidelines and the Network Codes for the establishment of a European integrated energy market. At the 16th Madrid Forum, we reached agreement to work on a pilot code on gas capacity allocation. This pilot follows a dual goal: It should prepare the implementation of the third package by applying the package's provisions during the interim period before their actual applicability on the one hand, and make substantial progress in the area of gas capacity management on the other.

Therefore, the Commission, ERGEG, and GTE+ agreed to draft a Framework Guideline and subsequent codes on capacity allocation. Based on this agreement, the Commission, ERGEG, and GTE+ decided that the issues to be worked out in a pilot Framework Guideline and Network Code process will be those that require TSO cooperation or joint TSO action, and they primarily address capacity allocation procedures. The document by ERGEG of 15 January 2009 shall therefore serve as the basis for this work.⁹

ERGEG has declared its readiness to anticipate the application of the Third Package rules and to use the transitional period of 18 months for working on Framework Guidelines.

In the context of the intended pilot project, I therefore invite ERGEG to assume the role assigned to the Agency under Article 6 (2) of Regulation (EC) 715/2009 ("Gas Regulation") and to submit a non-binding Framework Guideline within 6 months of receipt of this notification. In order to best facilitate the further trial process and to ensure optimal stakeholder participation, ERGEG is kindly requested to submit a first draft to the Commission at least two weeks ahead of the 17th Madrid Forum.

In developing the Framework Guideline, I would ask you to apply the procedures and obligations as defined in the Gas Regulation as if they were already binding and as if you were the Agency, in particular with regard to transparency and consultation obligations.

The goal of the Framework Guideline and Network Code on Capacity is to optimise the use of network capacity across borders, the integration of markets, and enhancement of hub to hub trading through harmonisation of the way capacity is offered and marketed at interconnection points.

On 06 July 2009, my staff met with representatives from GTE+ and ERGEG in order to define more clearly the scope of the Framework Guideline. It was discussed that the scope of the trial Framework Guideline and Network Code process could be as follows:

⁹ *ERGEG principles: Capacity allocation and congestion management in natural gas transmission networks.* ERGEG has proposed at the 16th Madrid Forum that those remaining issues concerning new measures on congestion management be adopted through comitology directly. It is planning to present a way forward at the next Madrid Forum.

The Framework Guideline should describe general principles and the scope and level of TSO cooperation in capacity allocation. It should indicate more specific fields of TSO cooperation, including in particular the joint/coordinated offering of capacity on interconnection points of borders and/or systems (e.g. nature, and level of bundling of products), the optimisation of available capacity by enhanced operational coordination, the harmonisation of transportation contracts and codes, and relevant communication procedures.

For a reasonably small set of capacity products to be offered to network users, the Framework Guideline should set the framework for harmonisation of the range of capacity products to be developed and applied by all European TSOs, the nature and level of bundling of such products, and the contents, structure, and duration of harmonised capacity contracts, including possible quotas (withhold an amount for shorter term).

Finally, the Framework Guideline should describe the relevant procedures and tools to be applied in the process of contracting capacity (booking procedure), including the timeline to be followed (e.g. number of rounds per product, requesting periods, reaction time), the allocation mechanisms to be applied (e.g. auction, open subscription window, first come first served), and the facilitator (e.g. booking platforms) to be used.

This approach would be agreeable to us. I would be grateful if you would confirm that it is also agreeable to you.

The agreement to work on a pilot code is based on the proactive and cooperative spirit in the Madrid Forum, and in particular of ERGEG and GTE+. I wish all actors involved good success with this ambitious task.

I will send a copy of this letter to all associations present in the Madrid Forum, in order to apply the high standards for transparency the new Regulation requires from the Agency and ENTSO-G to the Commission itself. I look forward to working with you as we enter a new era of European gas market cooperation.

Heinz Hilbrecht”