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**COMMISSION STAFF WORKING DOCUMENT**

**IMPACT ASSESSMENT**

*Accompanying the document*

**Commission Regulation (EU) No .../...**

**establishing a Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems**

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#### **establishing a Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems**

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## 1. INTRODUCTION

Europe is facing increasing competition from rapidly growing economies around the globe. Competitive energy prices for European companies will be crucial in keeping our competitive advantage. Achieving a fully functioning and competitive European electricity and gas market can add an extra 0.6%-0.8% to EU GDP by 2020, create employment and curtail inflation. The EU has committed itself to completing the internal market in electricity and gas by 2014<sup>1</sup>, which means the building of an integrated and interconnected market in gas allowing all market players to compete on a level playing field while creating the framework for securing supplies.

The internal market for energy will ensure that energy is generated, transported, and consumed as efficiently as possible, avoiding losses along the value chain. But in order for our gas market to deliver these benefits, Europe's gas transmission networks need to be able to facilitate trade and accommodate changing flows patterns. The key to a well-connected grid that promotes cross-border trade within the internal market lies at the cross-border interconnection points (“IPs”) of the networks.

Gas generally travels further and crosses more borders than electricity does<sup>2</sup>, but nevertheless European gas markets today remain predominantly national.<sup>3</sup> Reasons for this may be the historic development of the gas market, setting out from the breeding of national incumbents and perpetuated by the policy of producers to negotiate gas supply separately per Member State. For the transmission sector, which today is effectively separated from the trade and supply side<sup>4</sup>, this means that gas is usually transported through one or more Member States up to the final border, where it is handed over to the supplier active in that particular Member State.

Improving competition in natural gas, which is a network industry, hinges primarily on granting access to infrastructure to all suppliers (incumbents and entrants alike) in a transparent and non-discriminatory way. Since it is usually not economical to duplicate gas transport infrastructure – in particular in the case of pipelines with the same origin and destination –, rules for non-discriminatory third party access are a key element of market functioning. Transmission capacity is a scarce resource which must be shared among market participants in a way that promotes competition and security of supply and that is based on equal and fair opportunities.

In large parts of Europe, the equal and transparent access to capacity continues to be a major obstacle for effective competition on the wholesale market to occur. Furthermore national rules continue to differ from one Member State to another which also hampers the creation of an efficient internal market for gas by 2014.

The sub-optimal capacity allocation mechanisms employed in gas transmission across the EU are widely regarded as one of the main barriers to market integration. Inefficient use of and problematic access to Europe's high-pressure gas pipelines lead to sub-optimal market

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<sup>1</sup> The political objective of completing the internal market for electricity and gas is set out in the European Council Conclusions of 4 February 2011.

<sup>2</sup> This is simply due to the fact that the EU imports two-thirds of the natural gas it consumes whereas electricity imports are negligible compared to EU production.

<sup>3</sup> Nevertheless there are clear differences as to the level of progress of market integration between EU regions.

<sup>4</sup> This separation between transmission and supply is being achieved with the unbundling provisions of the Third Energy Package.

outcomes. A more transparent, efficient and non-discriminatory system of allocation of scarce transmission capacities needs to be implemented for Europe's high-pressure gas grids, so that cross-border competition can further develop and market integration can come about. Developing such rules has been consistently supported by essentially all stakeholders.

In the process of developing the harmonized rules for Capacity Allocation Mechanisms (CAMs) there have been numerous and extensive consultations, workshops and studies, aimed at better understanding the nature and extent of the problem and the possible benefits and drawbacks of the various options which could be considered to improve the current EU rules for capacity allocation management in the gas sector.

One key step has already been taken on the road towards improving access to capacity in EU gas networks with the near finalization<sup>5</sup> of the Guidelines for congestion Management Procedures (CMP) in Gas<sup>6</sup>. These will go a significant way in alleviating contractual congestion<sup>7</sup> in EU gas pipelines. Addressing the issue of capacity allocation is thus the next important step.

## **2. PROCEDURAL ISSUES**

### **2.1. Identification**

(1) Lead DG: DG ENER

(2) Associated DGs: COMP, LS, ENTR, EMPL, ECFIN, ENV

(3) Agenda planning/WP references: 2013/ENER/006

### **2.2. Organization and timing**

#### *2.2.1. Drafting process*

This Impact Assessment analyses the effect of the new measures as proposed in the European 'Network Code' (NC) on Capacity Allocation Mechanisms (CAM) to improve existing EU rules on CAMs in the EU gas transmission networks.

European-wide Network Codes are introduced by the Third energy package. Their goal is to set, in specific areas, detailed rules on the coordinated technical or commercial operation of gas and electricity transmission networks. Regulation (EC) No. 715/2009 ("the Gas Regulation") foresees the development of network codes in areas such as capacity allocation and congestion management, balancing, tariffs, etc. Given their highly technical nature they are drafted by different stakeholders at different stages in the establishment process as laid down in the Gas Regulation.<sup>8</sup> In short, three main stakeholders – the Commission and the representative bodies of regulators (ACER<sup>9</sup>) and network operators (ENTSOG<sup>10</sup>) – are subsequently responsible for the text and scrutinize each other's work. Details on the drafting process can be found in the **Annex 1**.

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<sup>5</sup> The CMP Guidelines are currently being scrutinized by the Council and the EP until 11 August 2012 after the Gas Committee has delivered its positive opinion on the measure on 20 April 2012.

<sup>6</sup> [http://ec.europa.eu/energy/gas\\_electricity/codes/gas\\_en.htm](http://ec.europa.eu/energy/gas_electricity/codes/gas_en.htm)

<sup>7</sup> Contractual congestion is a situation where it is not the physical gas flow but (unused) contractual rights that are blocking market players for being granted access to pipeline capacity.

<sup>8</sup> Article 6, 7 and 8(6) of the Gas Regulation

<sup>9</sup> Agency for the Cooperation of Energy Regulators, a Commission Agency established by Regulation (EC) No. 713/2009.

<sup>10</sup> ENTSOG is the acronym for the European Network of Transmission System Operators for Gas

For this process, the Commission invites ACER to develop a so-called framework guideline (FG) within a period of 6 months which remains non-binding. If the Commission considers that the framework guideline contributes to non-discrimination, effective competition and the efficient functioning of the market it may request ENTSOG to submit a network code (NC) which is in line with the relevant the framework guideline to the ACER within a reasonable time not exceeding one year. After submission of the network code by ENTSOG, ACER has to provide a reasoned opinion on whether the network code is in line with the framework guideline. Once ACER is satisfied that this is the case, it shall submit the network code to the Commission and may recommend their adoption.

The Framework Guidelines on Capacity Allocation Mechanisms (CAM FG) were initially developed by ERGEG<sup>11</sup> (see below), along with the Congestion Management Procedures, en route to becoming a single FG for Capacity allocation and Congestion Management.

As ACER has only been established officially on 3 March 2011, ERGEG, its predecessor, as well as ENTSOG have provided numerous inputs to the Impact Assessment and intensive discussions have taken place already in relation to this project. Particular care has been given to assure that the CMP guidelines and the CAM NC are compatible.

ERGEG started off work in this area with a stakeholder consultation<sup>12</sup> in response to the conclusions of the Commission's energy sector inquiry<sup>13</sup> which highlighted the existence of contractual congestion as a major bottleneck to further developing the Internal Energy Market. At the end of 2009, ERGEG presented a version of its principles on CAM and CMP.<sup>14</sup> This version contained proposals for modifying the Annex to the Gas Regulation via a Comitology procedure. In the course of 2010 ERGEG also carried out a monitoring exercise on CAM and CMP at selected IPs in Europe.<sup>15</sup>

After ACER took over from ERGEG, another public consultation was held which led to the adoption of the final CAM FG by August 2011. By then, ENTSOG had already started working on the transposition of the high level principles set by the regulators into the detailed rules of a CAM NC. In total, ENTSOG held four consultations and eight workshops dedicated to specific parts of the CAM NC between February 2011 and March 2012.<sup>16</sup> As a result the

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<sup>11</sup> ERGEG, the European Regulators Group for Electricity and Gas, a forerunner to ACER, was a formal advisory group to the European Commission, created by the Commission in 2003 (Decision 2003/796/EC). With ACER fully operational, ERGEG was dissolved (Commission Decision of 16 May 2011 repealing Decision 2003/796/EC) with effect from 1 July 2011. All past works relating to ERGEG activity (documents, reports, Public Consultations etc.) can be found on the website of the European Energy Regulators ([www.energy-regulators.eu](http://www.energy-regulators.eu)).

<sup>12</sup> ERGEG principles: Capacity allocation and congestion management in natural gas transmission networks. 24 August 2009, available at: [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/CEER\\_PAPERS/Gas/2009/E09-LNG-07-03%20CAM%20CMP%20Evaluation%20of%20Comments\\_final.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/2009/E09-LNG-07-03%20CAM%20CMP%20Evaluation%20of%20Comments_final.pdf)

<sup>13</sup> Communication from the Commission – Inquiry pursuant to Article 17 of Regulation (EC) No. 1/2003 into the European gas and electricity sectors (Final Report) COM/2006/0851 Final ["Energy Sector Inquiry"], also see <http://ec.europa.eu/competition/sectors/energy/inquiry/index.html>

<sup>14</sup> ERGEG principles, Capacity allocation and congestion management in European gas transmission networks. Ref: E09-GNM-10-03, 10 December 2009, available at: [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/CEER\\_PAPERS/Gas/2009/E09-GNM-10-03\\_CAM-CMP-RevisedPrinciples\\_10-Dec-09.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/2009/E09-GNM-10-03_CAM-CMP-RevisedPrinciples_10-Dec-09.pdf)

<sup>15</sup> ERGEG, Monitoring Report 2010 on capacity allocation mechanisms and congestion management procedures at selected IPs Ref: E10-GMM-11-05, 2 February 2011, available at [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/CEER\\_PAPERS/Gas/Tab/E10-GMM-11-05\\_CAM-CMP%20Monitoring%20Report\\_2-Febr-2011.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/Tab/E10-GMM-11-05_CAM-CMP%20Monitoring%20Report_2-Febr-2011.pdf) [hereinafter: "ERGEG Monitoring Report 2010"].

<sup>16</sup> See Annex 1 for a visual overview of ENTSOG's stakeholder involvement.

final CAM NC as adopted by ENTSOG on 6 March 2012 enjoyed a very high degree of stakeholder consensus. ACER in its Reasoned Opinion however concluded that the NC was not entirely in line with its FG, identifying 11 areas of concern. ENTSOG modified the NC accordingly, but in four areas it did not process the amendments as requested by ACER. In reaction, ACER sent a qualified recommendation to the Commission, recommending that the NC be made binding through application of the Comitology process, but that in these four areas changes to the text were necessary.

Building on the work of ERGEG, ACER and ENTSOG work on this Impact Assessment started in March 2012. Key dates in the process were:

- 22/9/2009 – 9/12/2010 ERGEG<sup>17</sup> pilot Framework Guideline development<sup>18</sup>
- 2/3/2011 – 03/8/2011 ACER Framework Guideline development
- 27/1/2011 – 6/3/2012 ENTSOG Network Code development
- 3/2/2011 Informal Member State Meeting on i.a. CAM
- 7/7/2011 Informal Member State Meeting on i.a. CAM
- 14/10/2011 Informal Member State Meeting on i.a. CAM
- 26/1/2012 Informal Member State Meeting on i.a. CAM
- 26/3/2012 1<sup>st</sup> meeting of the Inter-service Steering Group (ISSG)
- 11/5/2012 Informal Member State Meeting on i.a. CAM
- 5/6/2012 ACER Reasoned Opinion not in favour of ENTSOG NC
- 09/7/2012 2<sup>nd</sup> meeting of the ISSG
- 23/7/2012 3<sup>rd</sup> meeting of the ISSG
- 30/7/2012 Submission of the Impact Assessment to the IAB
- 5/9/2012 IAB Meeting and IAB comments received
- 17/9/2012 New ENTSOG Network Code sent to ACER
- 5/10/2012 ACER Qualified Recommendation to Commission

### 2.2.2. *Impact Assessment*

The Impact Assessment has been prepared by DG ENER with input from ACER and ENTSOG in their respective roles as authors of the Framework Guideline and the Network Code. DG ENER also received contributions from an Inter-service Steering Group made up of

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<sup>17</sup> ERGEG, the European Regulators Group for Electricity and Gas, a forerunner to ACER, was a formal advisory group to the European Commission, created by the Commission in 2003 (Decision 2003/796/EC). With ACER fully operational, ERGEG was dissolved (Commission Decision of 16 May 2011 repealing Decision 2003/796/EC) with effect from 1 July 2011. All past works relating to ERGEG activity (documents, reports, Public Consultations etc.) can be found on the website of the European Energy Regulators ([www.energy-regulators.eu](http://www.energy-regulators.eu)).

<sup>18</sup> The CAM FG/NC was categorized as the pilot project for which the Commission first invited ERGEG to start development work before ACER was set up on 3/3/2011. Consequently, in order to expedite the process ENTSOG was invited to start working on the NC on the basis of the pilot FG submitted by ERGEG 9/12/2010.

representatives from the following Directorates General: the SG, LS, DG COMP, DG ENTR, DG EMPL, DG ECFIN and DG ENV.

### *2.2.3. Amendments of the Impact assessment based on the Opinion of the IAB*

The Impact Assessment has been amended in several areas on the basis of the recommendations of the Impact Assessment Board. In particular Chapter 3 ("Problem description") has been modified to better explain the broader legal and practical context in which the new rules on CAM appear and to provide a more detailed overview actual problems that are currently experienced by parties active in the gas market. In addition, Chapter 7 ("Evaluation of Impact") has been restructured along the lines indicated in the Impact Assessment Quality Checklist.

## **2.3. Consultation and expertise**

As described in paragraph 2.2.1., both ACER and ENTSOG have repeatedly solicited input to their work from all segments of the gas sector from the outset and problem identification phase up until the fine-tuning of the detailed technical elements in the final text of the NC.

The consultations included formal written consultations as well as a series of dedicated workshops and bilateral meetings by both ACER (and ERGEG) and ENTSOG. The Commission has separately also organized several bi- and multilateral meetings on this topic.

Further details on all steps in the entire consultation process of this project can be found in Annex 1.

## **2.4. External expertise**

External consultants were used at different stages in the preparation of both the FG and the NC by ACER and ENTSOG respectively. No additional external consultants were used by the Commission in the process of drafting this Impact Assessment. However this Assessment makes use of and points to the conclusions drawn from these reports.

## **3. PROBLEM DESCRIPTION**

The CAM NC focuses on improving access to gas transmission systems. True competition on the European gas markets can only come about when energy companies have equal opportunities in trading gas across the borders with a view to its delivery to customers. . Today, one of the main difficulties shippers face is acquiring access to cross-border transmission capacity, which translates into a sub-optimal functioning of the market. The efficient use of existing transmission capacity is a pre-requisite for a well-functioning internal market. This Chapter seeks to describe the problem related to the allocation of the transmission capacities and to identify its causes.

### **3.1. Context of the problem**

Natural gas is mostly an imported energy source<sup>19</sup>, which reaches the EU either via pipelines or LNG-shipments. The pipeline system is made up of interconnected high-pressure transmission systems and local distribution grids, through which the gas reaches the customers.

In general, the natural gas sector in the EU is made up of the following players:

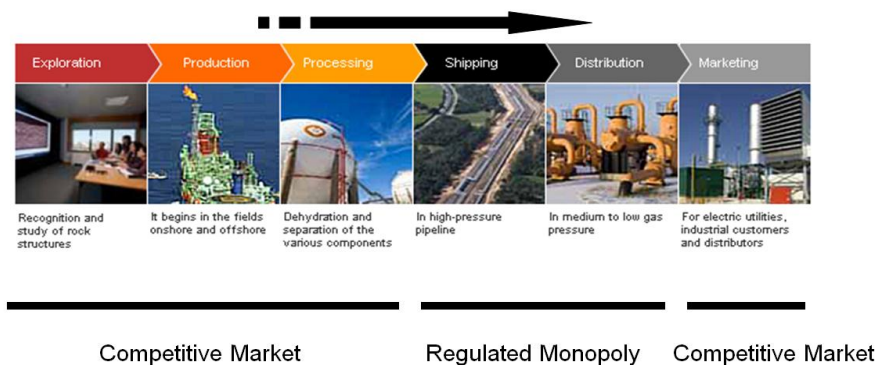
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<sup>19</sup> The EU's energy import dependency is over 70 % which will likely grow further in view of depleting domestic production and growing demand.



- (a) producers/importers, active on the upstream part of the gas market bringing the gas from the production sites to the demand centres;
- (b) Transmission System Operators ("TSOs") who own and operate the high-pressure gas network;
- (c) Distribution System Operators ("DSOs") who own and operate the low-pressure networks;
- (d) shippers or network users, who transport gas through the networks and act on the wholesale level (Shippers can be incumbent gas market players as well as new entrants or, from another perspective, can be supplying final customers or be trading on the wholesale market or a combination of both.);
- (e) traders who do not necessarily take physical ownership of the gas but use the various market places to take positions in different products thereby increasing market liquidity;
- (f) suppliers who are active on the retail segments of the market; and
- (g) customers (industrial, commercial and household), who are active on different levels of the value chain depending on their size and consumption.

**Figure 1:** The gas value chain, Source: Galp Energia



In order to be able to transport gas through the system to the consumers, the shippers have to book capacity in the domestic transmission system<sup>20</sup> and on the interconnection points (IPs). Domestic transmission and distribution systems are natural monopolies with regulated third-party access applying. Each Member State has one national regulatory authority charged with overseeing the gas (and electricity) sectors and regulating the access conditions to the pipeline systems (including tariffs) to ensure that that is done by the TSOs and DSOs in a non-discriminatory manner. Since the implementation of the Third Energy Package, ACER has been established as the EU agency charged with coordinating the activities of national regulators and overseeing cross-border regulatory issues. By reserving capacity in a transmission system, the shipper contracts with the TSO. Capacity contracts can have lengths from less than one day up to thirty years and more. Reservation in the domestic networks is usually an implicit reservation as in general there are no bottlenecks to take the gas from an entry point into the domestic system to an exit point (e.g. from the border to the customer).

The mechanism according to which the capacity is allocated is the central issue in the proposed measures in the NC CAM.

<sup>20</sup> This paper will henceforth only deal with capacity reservations in the transmission system at the intersection of which IPs are located and not the distribution system.

Bringing about true competition between suppliers from inside and outside the EU, requires that they are able to fully benefit from the existing transmission systems to ship their gas from high price areas to low price areas. Only a well-functioning network of interconnected transmission grids offering equal possibilities for access to all allows gas to flow freely across the EU, attracting more suppliers, increasing liquidity at the trading hubs and contributing to efficient price discover mechanisms and consequently fair gas prices that are based on demand and supply fundamentals.

Today however, harmonized, transparent and non-discriminatory access to the essential transmission pipelines in the EU is one of the main barriers on the road to completing the internal market by 2014. The proposed measures in the NC CAM aim to address this issue.

### **3.2. Current regulation – The NC CAM in a broader context**

#### *The Third energy package*

Adopted in 2009, the Third energy package is seen as the final piece of legislation in the stepwise liberalization of the EU's gas and electricity markets. The cornerstone of liberalization is the effective separation (unbundling) of generation and supply departments of vertically integrated utilities from the transmission business. The Third energy package ensures the independence of TSOs through a certification regime of national regulators (NRAs) and the Commission.

Well-regulated, independent TSOs, with a transmission-only perspective, are the key enablers of an open, well-connected and competitive market. The gas TSOs operate the large high pressure gas transmission pipelines in their own region as regulated monopolists. They are regulated by the NRAs in terms of their income (the NRA sets the tariffs) but also in terms of their behaviour; there are high level European rules laid down in the Gas Directive and the Gas Regulation, but there are also more detailed rules aimed at safeguarding the technical and operational aspects of the transmission of natural gas. These latter rules are usually laid down in grid codes.

The obligations concerning the allocation of capacities are mainly to be found in the Gas Regulation of the Third energy package, which specifically deals with conditions for access to Europe's transmission grids. Recitals (10) and (11) stress the need for a common minimum set of third party services whilst acknowledging that at present there are obstacles to the sale of gas on equal terms. Article 16 sets principles that TSOs shall apply in relation to the allocation of capacity in order to ensure that the maximum capacity is offered to the market in a transparent and non-discriminatory manner. In particular, Article 16.2(a) determines that CAMs shall provide economic signals for the efficient and maximum use of technical capacity, shall facilitate investment in new infrastructure and facilitate cross-border exchanges in natural gas. Article 16(2)(b) and (c) furthermore stipulates that CAMs shall be compatible with the market mechanisms including spot markets and trading hubs, while being flexible and capable of adapting to evolving market circumstances; and be compatible with the network access systems of the Member States. The Gas Regulation also contains a specific chapter on capacity allocation in its Annex I. Chapter 2.1 of the annex contains similar principles as those mentioned in Article 16.

Even though the principles currently laid down in the Gas Regulation thus aim at realizing market based allocation procedures by all TSOs, they do not prescribe the mechanism as such. The principles stem from the previous Gas Regulation (EC) nr. 1775/2005 and have not been amended. The reason is that the European legislator expects more detailed rules on capacity allocation to be laid down in a Network Code according to Article 8.6(g) of the Gas

Regulation.<sup>21</sup> These rules will replace the current rules laid down in Annex I.2.1 to the Gas Regulation: "Guidelines on Principles of capacity-allocation mechanisms and congestion-management procedures concerning transmission system operators" and repeal this Annex.

In other words, while the baseline scenario of the Gas Regulation and the general market trends do in themselves undoubtedly make significant progress in the way gas markets function there are two important aspects to consider: i) The CAM NC has always been seen as an important corollary to the Gas Regulation and it can easily be argued that developments (such as the regional platforms) are taking place because there is significant incentive for market players to implement these measures<sup>22</sup> early on and therefore have first-mover advantages; ii) the capacity access/management situation is yet to improve significantly throughout the EU and the CAM NC, along with the just-adopted CMP rules, are the key to that process.

#### *National and EU Network Codes*

Currently, each TSO operates its own grid on the basis of the national grid code. It is connected to other TSOs in neighbouring Member States (or in some cases in their own country) at so-called interconnection points. In order to ensure the efficient functioning of the entire European transmission grid, it is essential that TSOs across borders intensify their cooperation. The TEP has created the legal basis for a set of detailed network codes at European level. The CAM Network Code is the first of those codes. In the coming two to three years up to a total of ten different Network Codes may be established through the comitology procedure (on the basis of the preparatory work done by ACER and ENTSOG, a process spelled out in detail in Annex I of the IA). Access to capacity has long been seen as the major obstacle to a functioning market in which gas can flow from low price to high price areas. Other areas where work on new Network Codes is on-going are Balancing Rules, Interoperability Rules and Tarification. Future Network Codes may concern trading rules and emergency situations.

Guidelines and Network codes have the same effect of setting binding rules on technical issues through comitology. The only difference is that ACER and ENTSOG are involved in the drafting of Network Codes whereas Guidelines are drafted by the Commission.

#### *The Congestion Management Guidelines (CMP)*

The problem of capacity can be split up into two main parts. On the one hand current allocation procedures result in capacity not being evenly distributed and ending up in the hands of a few, mostly incumbent players. On the other hand, those parties that have capacity are not incentivized to use it in the most efficient way or to make an effort to ensure other interested parties can make use of their unused capacities. The former problem of assuring a non-discriminatory, market-based, harmonized EU-wide allocation procedure is proposed to be dealt with in the CAM NC. The latter is dealt with in the CMP Guidelines, which were adopted on 28 August 2012 and are now incorporated in Annex I of the Gas Regulation.

CMP and CAM are very closely linked as both mechanisms are necessary to arrive at an efficient and effective capacity management mechanism that is necessary for an integrated EU gas market. The statement referring to the fact that "IP's are fully booked" underscores the point that the symptom of contractually booked capacity requires two solutions: CMP and CAM. From an operational point of view CMP was separated from CAM in particular in order to expedite that process as logically it precedes CAM. More specifically, unused

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<sup>21</sup> The process and role of Network Codes has been outlined in more detail in Chapter 2

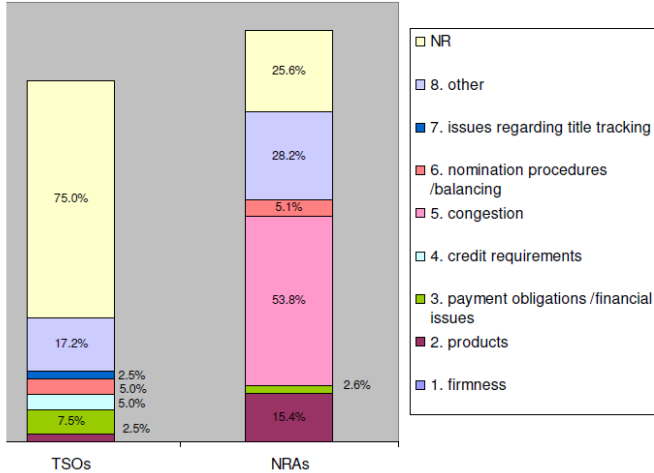
<sup>22</sup> Which otherwise would not happen were the CAM NC not foreseen to be implemented.

contracted capacities that are freed up or added to the market via CMP measures can then be sold via the new CAM measures which will assure that the capacity is allocated in the most efficient manner possible. CMP thus ensures that capacity is liberated, that situations of contractual congestions are limited to a great extent and that extra capacity is made available on the market without having to build new pipelines. However, this extra capacity that is made available needs to be re-offered to the market. This allocation of the capacity is in the remit of CAM, which ensures the allocation takes place in a transparent, objective and non-discriminatory way, e.g. through the application of the auction mechanism. In turn, CAM itself helps alleviate situations of contractual congestion as well: with auctions capacity will end up in the hands of those who need it most and underutilization is expected to occur less frequently. With bundling, the possibility of being 'stuck' with capacity on just one side of an interconnection point belongs to the past.

As such CAM and CMP are closely related and mutually reinforcing mechanisms that together set a new and harmonized capacity regime for Europe. This conclusion becomes clear from the responses to the 2011 ERGEG CAM & CMP Monitoring report, where national regulatory authorities indicated that congestion is the main obstacle for non-functioning CAMs:

**Figure 2: Obstacles to the functioning of CMPs and CAMs**

Fig. 8: Q.2.6 What are potential obstacles to fully functioning CAMs at the IP?



Source: ERGEG, CAM & CMP Monitoring report, 2011

**3.3. Problem definition**

*3.3.1. Access to transmission capacity (transport contracts)*

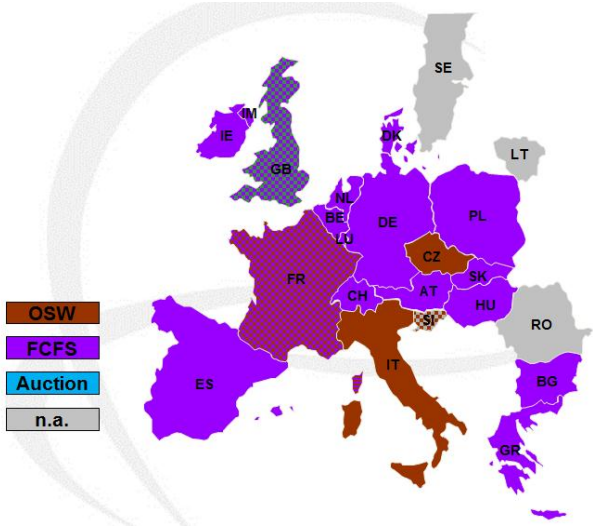
Ideally, access to capacity should not be an obstacle to trade. In practice however, it shown in **Figure 3** below, many IPs are booked for the long term: the longer the darker shades extend into the future, the lower the availability of capacity at the interconnection point concerned. As noted, without access to transmission capacity shippers are unable to trade gas across the border with a view to its delivery to customers which hinders price convergence and the development of an Internal Energy Market. Today many of Europe's important IPs are fully booked and a potentially interested party cannot therefore not flow gas towards that network and correspondingly arbitrate in that market. The result is that the number of players who are able to flow gas into the market remains limited, in some cases even limited to one single dominant party. The absence of competition on the wholesale market has a strong impact on competition on the retail market. In fact, where retail suppliers have no choice but to buy their



were introduced and virtual trading points inside the network were created to enable shippers to make use of the flexibility of the network that they needed to respond to the laws of demand and supply. To enhance competition through liquid wholesale markets for gas, it is vital that gas can be traded independently of its location in the system. The only way to do this is to give network users the freedom to book entry and exit capacity independently, thereby creating gas transport through entry-exit zones instead of along the contractual path.

Where demand for capacity exceeds the amount the TSO has on offer a mechanism for allocation is applied. In the large majority of the European TSOs this is the First-Come-First-Served Method (FCFS): the shipper that is first to demand capacity at a certain entry or exit point is rewarded the capacity as soon as it becomes available. In most EU countries the price of the transmission capacity is set by the national regulatory authority (regulated tariff). In case a shipper wants to flow gas cross-border through an IP, the shipper needs to obtain an exit capacity on one side of the border and an entry capacity at the other side of the border, with two TSOs.

**Figure 4:** Capacity Allocation methods throughout the EU



Source: GTE+ Consultation Document on Capacity Products Coordination, October 2008

3.3.3. The first-come-first-served principle and why it is unfit for Europe

The FCFS mechanism has been subject to criticism for a number of reasons. Firstly, FCFS does not contain a price incentive since the price remains the same and only the factor time is rewarded. It can therefore happen that the actual price (the regulated tariff) is much lower than the actual value (based on where the supply and demand curve meet) of the product. Since transmission tariffs tend to relate to the commodity with a factor of 1:20 or 1:10, shippers may be incentivized to book more than they actually need, simply because it is available and it is unclear when the next chance to book will occur. FCFS is also not a very transparent way of allocation since it is often not clear when capacity will become available. For smaller companies it may also be burdensome to continuously monitor whether or not something becomes available at one of around 60 European interconnection points. As such the FCFS-mechanism has an element of pure chance in it. Finally, the FCFS-principle is prone to discrimination because the economic allocation can be distorted by any person with prior knowledge. Also FCFS does not provide any investment signal.

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Entry-exit systems provide more flexibility to shippers in directing flows and thus are an important element in the creation of competitive, flexible internal market.

From ERGEG's 2009 public consultation<sup>25</sup> it appeared that stakeholders from all over the EU overwhelmingly reject the application of the FCFS mechanism, with the introduction of auctions as the most popular alternative. Shippers and traders have been very supportive of the CAM NC, and for some the mandatory bundling provisions. Both stakeholder groups stand to gain in general from a more market-based capacity allocation mechanism that will allow for more integrated markets. *"EFET [the association of European energy Traders] supports a harmonised approach to capacity allocation and congestion management. We encourage the allocation through auction mechanisms, although its success is highly dependent on the definition of this process and the underlying products. Key to the process is to incentivise the maximisation of firm primary capacity and allow capacity bookings to match the needs of market parties"*<sup>26</sup>. Similarly, Eurogas, the association of EU shippers, *"supports ERGEG and the Commission in harmonizing key market rules to make the integrated European gas market happen! Efficient primary and secondary capacity markets are crucial to deliver this objective! A key prerequisite is the availability of maximum firm capacity rights to enable a competitive level playing field all over Europe!"*<sup>27</sup> Also national regulatory authorities and ACER are in favour of a single, harmonized allocation mechanism, as can be concluded from their Framework Guideline proposal. TSOs have taken up the challenge and have been pro-actively implementing, in view of the imminent adoption of the CAM NC, various pilot projects aimed at the allocation of bundled capacities through auctioning at joint booking platforms. As such, the need and desirability of a single, fair and harmonized allocation mechanism is broadly shared amongst stakeholders.

This is not to say that certain incumbent players may not gain from more competition on their respective markets but such views have – understandably – not been aired during the consultations.

That said, some mid-streamers have indeed argued that the bundling of capacity and in particular the "sunset clause" will favour gas exporters. The Commission's view, strongly supported by ACER, is that the framework of a competitive and integrated gas market needs to be established in the context of the work of network codes emanating from the Third Energy Package in order to reach the political objective of completing the internal market by 2014. This process may indeed affect market dynamics and may therefore lead to certain strategic reorientation within market players. The bottom line however is that these objectives create an internal gas market that allows market players to compete against each other and service customers on an equal footing. Gazprom has consistently been opposed to capacity bundling. It prefers to continue trading at the border which has in the past enabled it to divide markets and extract higher prices in markets with less competition. Gazprom but also the Russian government have also been very vocal against the Third Energy Package. However, it is clearly in the interest of EU citizens and industry to have barriers between markets erased and move forward towards an integrated gas market.

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<sup>25</sup> ERGEG, 'Capacity Allocation on European Gas Transmission Networks , Pilot Framework Guideline, Initial Impact Assessment' Ref: E09-GNM-10-06, 10 December 2009

<sup>26</sup> [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/Pilot\\_Framework\\_Guideline\\_Gas\\_CAM/Public%20Hearings/020210%20EFET%20presentation%20ERGEG%20workshop%20CAM%20CMP%20H%20Franse.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/GAS/Pilot_Framework_Guideline_Gas_CAM/Public%20Hearings/020210%20EFET%20presentation%20ERGEG%20workshop%20CAM%20CMP%20H%20Franse.pdf)

<sup>27</sup> <http://www.eurogas.org/uploaded/ERGEG%20Workshop%20on%20CAM%20and%20CMP%20for%20Gas%20-%2020210%20-%20Ralf%20Presse.pdf>  
[http://acernet.acer.europa.eu/portal/page/portal/ACER\\_HOME/Stakeholder\\_involvement/Public\\_consultations/Closed\\_Public\\_Consultations/PC-02\\_FG\\_Gas\\_CAM/Evaluation\\_of\\_responses/FG%20CAM%20EoC\\_final.pdf](http://acernet.acer.europa.eu/portal/page/portal/ACER_HOME/Stakeholder_involvement/Public_consultations/Closed_Public_Consultations/PC-02_FG_Gas_CAM/Evaluation_of_responses/FG%20CAM%20EoC_final.pdf)



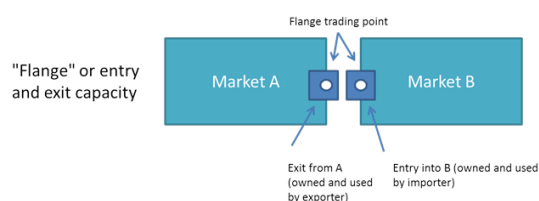
### 3.3.4. Additional problem drivers

A significant part of the inefficient use of pipeline capacities is the result of the plethora of **different allocation mechanisms and different TSO-practices** that are currently applied across the EU (see Annex 2b). The lack of harmonization has created a highly complicated picture of different rules, terms and conditions vis-à-vis capacity products, capacity booking processes and capacity utilization. A shipper willing to bring gas from Denmark to Bulgaria, would need to be familiar with the CAMs of at least six Member States, which are different to such an extent that the administrative or practical burden will prevent him from embarking on this adventure.

Figure 3 provides a good overview of the significant variations between CAMs across the EU today. While for instance most TSOs define their gas day from 6h in the morning on day 1 to 6h in the morning the day after, there are notable exceptions like, Finland, Poland, Slovakia, Slovenia, Spain that have differing time spans. Similarly, products offered differ significantly in terms of their lengths as well. Many TSOs have for instance multi-annual, annual, quarterly, monthly and daily products but several offer a different product portfolio, e.g. not offering multi-annual, or quarterly or daily, etc. Clearly these differences become increasingly problematic when trying to create an integrated market in which the most important rules pertain to capacity access.

The picture is further complicated by the fact that today shippers buy their capacities at interconnection points separately for each side of the border. This results in a capacity contract with both the TSO of the country he is exiting and the TSO of the country he is entering. In the example in Figure 5 below, a shipper producing gas in a first country, transiting through a second country and delivering the gas to a client in a third country, thus has to enter into six different capacity contracts with three different TSOs. However, since the capacities of the TSOs are not necessarily aligned, or even available on a firm<sup>28</sup> basis, at the same time at the same point, chances are high that 'unaligned' contracts are made on both sides of the border. In practice this means that even though some capacities are booked on a firm basis, the capacity holder is not able to use these because he is not in possession of an equivalent amount of firm (or even interruptible<sup>29</sup>) capacity on the other side of the border. The additional fact that TSOs do not offer the same type of capacity products further aggravates this problem. Moreover, often short term products are not available, or they cost much more or they can be obtained on an interruptible basis only.

**Figure 5:** The situation today: Separate booking and different regimes at entry-exit points

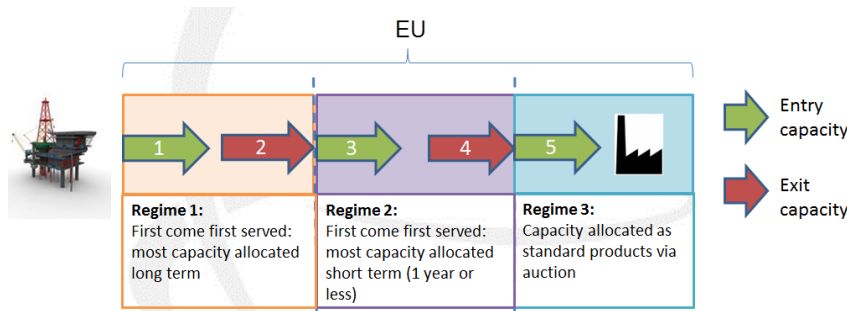


**Figure 6:** The situation today: Separate booking and different regimes at entry-exit points

<sup>28</sup> Shippers usually conclude long term capacity contracts with the TSOs. The capacity they contract for is either *firm* or *interruptible*. Firm capacity stands for the definite obligation of the TSO to ensure that the shipper's contract will not be interrupted in case of physical congestion on the pipeline. Interruptible capacity, sold when firm capacity bookings have reached the technical capacity, allows for the shipper's gas delivery to be interrupted when congestion occurs.

<sup>29</sup> Interruptible capacity is capacity that is offered by the TSO beyond the technical capacity and that can be taken back ('interrupted') by the TSO in case the expected utilization rate of the pipeline is high. It is therefore an inferior product and a discount applies.





Source: ENTSOG

Therefore the problems that have been identified are:

- Shippers have problems to access cross-border markets due to inefficient use of the interconnection capacity
- Intransparent and discriminatory allocation procedures which don't provide investment signals are still applied
- Different TSOs, selling different products with different mechanisms
- EU hubs not used to their full potential

### 3.4. Extent of the Problem

Limited availability of and limited access to capacity is a problem at many of Europe's IPs.

The aforementioned 2011 ERGEG CAM & CMP Monitoring report states that 41% of NRAs estimate that users in the selected network do face problems with contracting capacity.<sup>30</sup> Specifically the Austrian, Dutch and German NRAs commented that users have constraints in booking capacity in the respective networks. In terms of comments from entrants, EnBW, a large German electricity company that is an entrant on the gas market, has analysed 5 German IPs<sup>31</sup> from the point of view of available firm capacity. The conclusion of their analysis was that "there is hardly any available firm capacity at those IPs". That means that EnBW is not able to harness the benefits of the internal market in its area of operation.<sup>32</sup>

This geographical indication is in line with the findings that the situation is most pressing in the North-Western part of Europe, especially the corridor UK/Benelux, through and inside France, Germany and Austria and finally down south interconnection points on the Italian and Spanish border.

TSOs are obliged by law to publish available amounts of capacities on their website. The website of Dutch TSO GTS indeed shows that very little capacity is available at present until as far in the future as 2021.

**Figure 7:** Capacity available in the Dutch (GTS) system

<sup>30</sup> The replies of the NRAs are different from the TSOs who perceived no problems in contracting capacity and were also of the view that contractual congestion is not a problem. Nevertheless, this discrepancy between the assessments of the two groups was likely due to the ambiguity of the question posed.

<sup>31</sup> Überackern, Oberkappel, Waidhaus, Olbernhau, Mallnow.

<sup>32</sup> Cf. Submission of EnBW of 28 July 2011.

Border station (physical entrypoint)	Wobbe label	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
OUDE STATENZIJL (OGE)	51.6	0.1	0	0	0	0	0	0	0	0	0	0
OUDE STATENZIJL (GUD-H)[OBEBH]	51.6	0.1	0	0	0	0	0	0	0	0	0	0
OUDE STATENZIJL (WINGAS-H)	51.6	0.5	0	0	0	0	0	0	0	0	0	0
ZELZATE (FLUXYS)	51.6	0.1	0	0	0	0	0	0	0	0	0	0
EMDEN NPT (GASSCO)	51.6	0.5	0	0	0	0	0	0	0	0	0	0
EMDEN EPT (GASSCO)	51.6	0.5	0	0	0	0	0	0	0	0	0	0
OUDE STATENZIJL RENATO (OGE)	51.6	0.5	0	0	0	0	0	0	0	0	0	0
OUDE STATENZIJL (EWE-H)	51.6	0.5	0	0	0	0	0	0	0	0	0	0
Border station (physical exitpoint)	Wobbe label	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
HILVARENBEEK (FLUXYS)	46.5	0	0	0	0	0	0	0	0	0	0	0
ZEVENAAR (OGE)	46.5	0	0	0	0	0	0	0	0.2	0.2	0.3	1.1
WINTERSWIJK (OGE)	46.5	0	0	0	0	0	0	0	0.2	0.2	0.3	0.6
ZANDVLIET (FLUXYS-G)	44.4	0	0	0	0	0	0	0	0	0	0.1	0.2
OUDE STATENZIJL (EWE-G)	43.8	< 0.05	0.1	0.1	0	0	0	0	0	0	0	0
OBBIJCHT (FLUXYS)	51.6	0	0	0	0	0	0	0	0	0	0	0.3
TEGELEN (OGE)	44.4	0	0	0	0	0	0	0	0	0	0	0
BOCHOLTZ TENP (OGE - ENI)	51.6	0	0	0	0	0	0	0	0	0.2	0.8	1.0
DINXPERLO (RWE)	44.4	0	0	0	0	0	0	0	0	0	0	< 0.05
HAANRADE (RWE)	44.4	0	0	0	0	0	0	0	0	0	0	< 0.05
VLEIEGHUIS (RWE)	51.6	< 0.05	0.2	0.2	0.1	0	0	0	0	0	0	0
S-GRAVENVOEREN (FLUXYS)	51.6	0	0	0	0	0	0	0	0	< 0.05	< 0.05	0.4
OUDE STATENZIJL (GUD-G)[OBEBG]	43.8	< 0.05	0.2	0.2	0	0	0	0	0	0	0	0
OUDE STATENZIJL (OGE)	51.6	0	< 0.05	< 0.05	0	0	0	0	< 0.05	< 0.05	0.1	0.3
OUDE STATENZIJL (GUD-H)[OBEBH]	51.6	0.2	0.1	< 0.05	0	0	0	0	< 0.05	< 0.05	0.1	0.8
OUDE STATENZIJL (WINGAS-H)	51.6	0.2	0.1	< 0.05	0	0	0	0	< 0.05	< 0.05	0.1	0.8
ZELZATE (FLUXYS)	51.6	0	0	0	0	0	0	0	< 0.05	0.1	0.4	0.4
ZANDVLIET (FLUXYS-H)	51.6	0	0	0	0	0	0	0	0	0	0	0
OUDE STATENZIJL RENATO (OGE)	51.6	0.2	0.1	< 0.05	0	0	0	0	< 0.05	< 0.05	0.1	0.8
JULIANADORP (BBL)	51.6	0.1	0	0	0	0	0	0	0	0	0	< 0.05
ZANDVLIET (WINGAS-H)	51.6	0	0	0	0	0	0	0	0	0	0	0
OUDE STATENZIJL (EWE-H)	51.6	0.2	0.1	< 0.05	0	0	0	0	< 0.05	< 0.05	0.1	0.8
BOCHOLTZ VETSCHAU (THYSSENGAS)	51.6	0	0	0	0	0	0	0	0	0.1	0.5	0.5

Long term forecast of available firm capacities in Mm3(n;35.17 MJ)/h.  
When the available capacity is lower than 50,000 m3(n;35.17 MJ)/h then this is indicated with "< 0.05".

Source: Gas transport services (GTS) website, August 2012

This is all the more worrying because there are price differences between gas prices on the Dutch market and the hubs of the neighbouring countries (Belgium, Germany and the UK) and it would make sense from an economic perspective to become active on the market and start trading gas across the border.

Although the problems are most pressing in the North-Western European area as indicated this does not mean the new rules should not be applied. The situation in the Eastern Member States is different. In a large number of cases, the market is still dominated by the incumbent or the single importer. This does not mean however that CAMs and CMPs should not be reformed and aligned with those in the rest of Europe. Quite on the contrary: comments from important stakeholders<sup>33</sup> set out that it is precisely the lack of available capacity that prevents them from entering certain markets in the CEE area. Next to the necessary diversification of supply sources (typically done through investments in infrastructure (LNG<sup>34</sup>, interconnectors and gas storages)), the 'software' ensuring the new and existing infrastructure can be used by all market participants based on a set of fair rules equal to all, will ensure that the mistakes that were made in the North-Western part of Europe are not repeated in other Member States.

Moreover, the very heterogeneous procedures and products that TSOs apply throughout Europe aggravate the situation. This problem is further amplified in view of the fact that gas crosses several borders and shippers are looking to find harmonized measures for capacity allocation. In addition, the important trading routes are to a large extent sold out well into the future, as can be seen from **Figure 3**. Obviously, where entry points into a country are fully booked, no new shippers can flow gas into this market.

<sup>33</sup> E.g. E.ON as regards Poland

<sup>34</sup> It is important to note as regards LNG that it is only different from pipeline gas until it reaches one of the EU regasification terminals where it is then converted back into the gaseous state and mingles with all other gas flowing through the EU's pipelines. Therefore, while LNG provides a strategic sourcing alternative for the commodity gas, including the corresponding alternative supply route via tankers, it cannot provide a solution to the EU's capacity management problems in its internal networks.

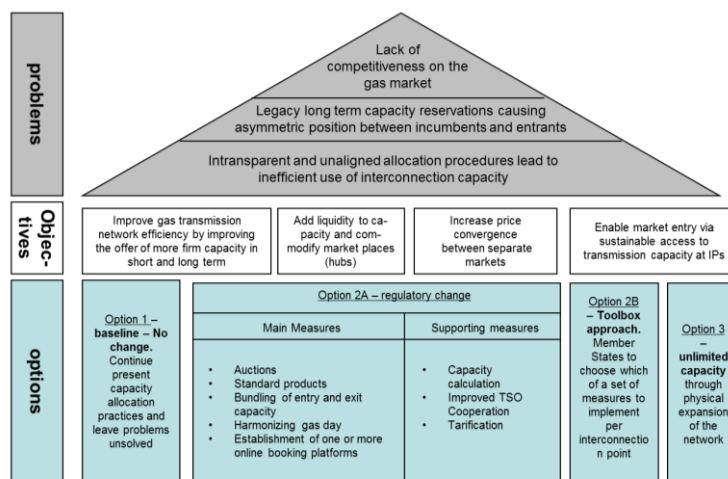
The economic impact of inefficient use of capacity at a selection of European interconnection points has been calculated in a 2010 report by E-bridge, in which the social welfare gains of introducing effective measures in the field of congestion management and capacity allocation were analysed. It appeared that the welfare gains at the four points amounted to an increase in social welfare of between EUR 2 and EUR 10 Million per analysed IP per year.<sup>35</sup>

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<sup>35</sup> E-Bridge, "Macro-Economic Effects Regarding Congestion Management in Europe", 2010, [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/CEER\\_PAPERS/Gas/2010/Macro-Economic\\_Effects\\_Congestion\\_Management\\_in\\_Europe\\_F.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/2010/Macro-Economic_Effects_Congestion_Management_in_Europe_F.pdf)

## 4. OBJECTIVES

*Schematic representation of the problem, objectives and policy options*



### 4.1. General objectives

The general objective is to create the necessary framework for regulation of capacity allocation to achieve the objective of a well-functioning, efficient and open internal gas market. This objective is enhancing the following general EU Treaty goals:

- to establish a functioning internal market in gas, in the spirit of solidarity between the Member States (Article 3(3) TEU; Article 194(1) TFEU);
- to ensure security of energy supply in the Union (Article 194(1)(b) TFEU);
- to promote the interconnection of energy networks (Article 194 (1)(d) TFEU).

### 4.2. Specific objectives

The specific objectives are in line with the EU energy policy objectives, which are outlined in Article 1 of the Gas Regulation:

- Set non-discriminatory rules for access conditions to natural gas transmission systems taking into account the special characteristics of national and regional markets with a view to ensuring the proper functioning of the internal market in gas;
- Facilitate the emergence of a well-functioning and transparent wholesale market with a high level of security of supply in gas and provide mechanisms to harmonise the network access rules for cross-border exchanges in gas;

### 4.3. Operational objectives

The operational objectives of improving CAMs across EU gas transmission systems are to:

- Improving competitiveness in the gas market;
- Increasing firm available capacity (facilitating new shippers to enter the market);
- Improving capacity allocation;
- Harmonizing TSO practices;

- Increasing liquidity at hubs.

This can be achieved through the application of a single European harmonized auction scheme and the instalment of bundling of standardized products.

#### **4.4. Legal base and subsidiarity principle**

The right of the EU to provide a more detailed regulation on CAMs in gas in the form of binding EU NCs is set out in Article 8(6)(g) of the Gas Regulation. The Commission's initiative to replace the current Guidelines on CAM is fully in line with the principle of subsidiarity, as the CAM NC only sets the minimum degree of harmonisation to be met to achieve non-discriminatory and transparent network access conditions in order to facilitate the emergence of a well-functioning and transparent wholesale market.

The Gas Regulation states that NCs shall address cross-border issues affecting cross-border trade. It also determines that market zones shall be designed on the basis of an entry-exit model. Hence, TSOs sell and shippers buy capacity at entry/exit-points. As a result, the problems identified in Chapter 3 appear at these points at the moment shippers want to enter into or exit out of an entry-exit system. Gas can enter such a system either from another system (through an IP) or from a production site, an LNG-terminal or a gas storage. Today, most entry/exit-systems correspond with national markets. It is also possible to create entry/exit-systems that cover a territory larger than a Member State, or to have multiple entry/exit-systems within one Member State. The proposed measures apply where the problems materialize, namely where TSOs and shippers enter into a contractual relationship regarding the capacity.

However, the CAM NC also reflects differences between national gas systems and does not require uniform detailed terms and conditions of third-party access. Especially the scope of the CAM NC is limited to interconnection points between adjacent entry-exit systems, insofar as the points are subject to booking procedures by network users. It is noted that the rules also apply to IPs where currently there is no congestion or where supply is sufficient to satisfy demand. This is justified by the benefits that flow from the application of a harmonized set of rules for acquiring cross-border capacity throughout Europe. Clear and transparent rules facilitate trading and foster competition. Moreover, the rules are not more burdensome for shippers as it is clear where and when capacity auctions will be held. The provisions of CAM NC shall in particular not apply to the capacity allocation issues with regard to exit points to end consumers and distribution networks, entry points from LNG terminals and production facilities, and entry-exit points to and from storage facilities. New infrastructure referred to in Article 36 of Directive 2009/73/EC is also exempted from the provisions of this Network Code. New to be build capacity is subject to some of the rules. Should an interconnection point be expanded or a new IP become operational then the technical capacity shall be offered in the form of bundled products and a percentage shall be set aside for short term trading as prescribed in the CAM NC.

The proposal put forward by the Commission is to a high degree similar to the NC CAM, which is a well-balanced set of effective, efficient and coherent policy measures. As explained below, in two cases the Commission deviates from the NC as received from ACER and ENTSOG. In the case of the four areas of dissenting opinions of both organizations, the Commission has proposed provisions that best reflect market needs and proportionality.

## 5. POLICY OPTIONS AND ENFORCEMENT DESIGN CHOICES

This Chapter aims at identifying and describing the different policy options to address the problems as described in Chapter 3.

When considering the general policy options to tackle the problem of capacity allocation at IPs, there are essentially four main choices:

- **Option 1:** no further EU action (*baseline scenario*)
- **Option 2a:** implement harmonized EU rules on capacity allocation
- **Option 2b:** toolbox approach (Member States to decide on what further capacity allocation rules to apply)
- **Option 3:** (unlimited) capacity investments to solve bottlenecks to allocation of capacity

### 5.1. Option 1: no further EU action (baseline scenario)

This policy option does not foresee any further rules on capacity allocation beyond what has already been enshrined in the Gas Regulation, including what is now being finalized in the context of the Guidelines on CMP (which will become an annex to the Regulation). With the exception of the phrase "*facilitate cross-border exchanges in natural gas*"<sup>36</sup> rules enshrined in the current Gas Regulation are the same as those in the previous Regulation.<sup>37</sup>

This would mean that even in the backdrop of existing general policy aims set out in the Regulation, current practices (as described above) would continue and improvement in the CAMs – if at all – would perhaps take place in a fragmented manner, likely on a national level only, without taking into account the cross-border aspects of efficient capacity utilization.

The baseline scenario builds on the largely organic process of market integration as set out in the high-level principles of the Gas Regulation and Gas Directive but does not build on the stipulations of the former on the need for further binding EU-wide harmonized, technical market rules.

### 5.2. Option 2a: implement new/modified EU rules on capacity allocation

An alternative to the baseline scenario is to follow the stipulations of the Gas Regulation with respect to the drafting of binding EU-wide harmonized, technical market rules. The NC CAM is precisely such a measure. The rules contained therein would, once implemented, lay down a completely harmonized regime of simultaneous capacity auctions for a relatively small set of bundled cross-border capacity products. In practice, for a shipper interested in cross-border gas trade, this means complete information as regards availability of capacity and the timing and the rules of allocation for all of IPs in Europe.

The core measures contained in the CAM NC are:

- (1) Introduction of harmonized auctions
- (2) Harmonization of the gas day and standardizing of products
- (3) Bundling of capacity products

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<sup>36</sup> Article 16(2)(a) of the Gas Regulation  
<sup>37</sup> Regulation (EC) No. 1775/2005

### 5.2.1. Introduction of harmonized auctions

The main problem identified in this assessment is the existing mechanism according to which TSOs allocate capacities to shippers. Currently, the widely applied allocation mechanism, FCFS, is not a transparent one nor does it currently allow simultaneous and aligned cross-border capacity bookings. Who offers what, when, where and under what conditions, is unclear and this creates enormous problems for shippers willing to trade across borders. The FCFS-mechanism has been subject to wide and justified criticism and its replacement by a harmonized allocation method is widely supported.

There are several alternatives to FCFS, most notably pro-rata, the open subscription window (OSW) mechanisms and auctions. In order to determine the appropriate allocation mechanism it is useful to identify suitability criteria. First and foremost, the CAM should be objective, transparent and non-discriminatory in order to safeguard the absolute equality of all aspiring parties. Secondly, it should offer regular opportunities for capacity allocation. Thirdly, from an economic perspective it is important that the mechanism, in case demand is higher than supply, rewards the shipper that values capacity most. As such, the mechanism should allow shippers to identify the relative value of the capacity. These first three criteria are all important especially from a regulatory point of view. From a TSO perspective a fourth element is important, namely that it shall be ensured that the TSO can recoup its costs for operating and maintaining its network through the capacity charges it receives.<sup>38</sup> Ideally, there is a link between the regulated network tariff and the costs of operating the network. The CAM should reflect this principle. Finally, from the perspective of the need for an efficient use of the available cross-border capacity, it is necessary that the mechanism allows for simultaneous booking of aligned capacities across border, i.e. in the systems of two TSOs at the same time.

ENTSOG's proposal for the organization of the auctions is to have simultaneous auctions for all interconnection points per capacity product. Depending on the duration of the capacity, about which we will come to speak in the next paragraph, the most suitable auction procedure, in terms of number of rounds, bidding process and reserve prices, is applied on the basis of extensive consultations and feedback from the market participants.<sup>39</sup>

Different auction models have been assessed depending on the capacity product offered. The reason for this is related in particular to the length of the auction process. Within-day auctions have to be carried out every hour thus this auction requires a particularly simple methodology to be successful whereas auctions for many years in advance need to very carefully gauge supply and demand at various prices. The possible auction methods are thus

- for annual, quarterly and monthly capacity products
- the multiple round ascending clock auction
- single round auction
- for day-ahead and within-day capacity products

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<sup>38</sup> It is for this reason that ENTSOG has included, contrary to ACER's wishes, a provision aimed at limiting potential revenue losses incurred as a result of implementation of the Network Code CAM. Although the Commission agrees with ACER that tariff principles shall and will be laid down in a forthcoming Tariff Network Code, it nevertheless deems it important with a view to enabling the independent functioning of the NC CAM – ahead of the adoption of a NC Tariff – to include a similar provision in the NC CAM.

<sup>39</sup> See Annex 2 for a visualization of the auction design and process as envisaged in the NC CAM.

- single round volume based auctions

For products beyond day-ahead two different auction types can in general be considered. One option is the multiple round ascending clock auctions, with fixed price steps (large and small) that progress until demand after a small price step remain just under supply. An auction methodology similar to this one is being employed in the recently introduced German capacity auctions.<sup>40</sup> Another option is a single round auction with progressive bids which is similar to the auction method currently being used in the UK.<sup>41</sup>

The auction solution considered for short (day and within day auctions) is the single round volume based auction.

Since the NC CAM also foresees longer term capacity sales through the auctioning of seasonal and yearly products, but also shorter than a day through within day<sup>42</sup> trade, it is important that the auction schedule is synchronized throughout the whole year and during the day. It is prescribed that the longer term products are sold before the shorter term products, allowing unsold capacity to flow into the next auction. As can be seen from the Figure below, yearly auctions take place at a given time once a year, seasonal products every season and daily products the day before transport.

**Figure 8:** From long term auctions to short term auctions throughout the year.



Source: ENTSOG

More information and the complete auction schedule can be found in Annex 2.

Today, capacity is offered and allocated by each TSO for its own network. Shippers must therefore monitor the capacity offers of multiple TSOs especially when they want to cross several borders. 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 significant barrier to the development of cross-border competition. The NC CAM prescribes the development of one or more joint booking platforms by cooperating TSOs. The synergies created through the establishment of such online based platforms will greatly enhance the insight of shippers in the availability of cross-border capacity and facilitate the booking process, lowering barriers to participate in the internal gas market. The fewer of these booking platforms there are, the more practical it is for shippers interested in participating in a capacity auction, whilst at the

<sup>40</sup> See the German secondary legislation regarding capacity allocation as laid down in the 'Verordnung über den Zugang zu Gasversorgungsnetzen', from 3 September 2010, [http://www.gesetze-im-internet.de/bundesrecht/gasnzv\\_2010/gesamt.pdf](http://www.gesetze-im-internet.de/bundesrecht/gasnzv_2010/gesamt.pdf)

<sup>41</sup> See 'High Level Explanation of Capacity', UK TSO National Grid at: <http://www.nationalgrid.com/NR/rdonlyres/27E7DB94-844B-4964-9AF9-4D0FD64CEA6D/45550/Capacityexplanation1.doc>

<sup>42</sup> See the next paragraph on 'standardized products'



same time taking into due consideration the prerequisite of full compliance with EU competition rules.

#### 5.2.2. *Harmonization of gas day standardization of products*

The introduction of auctions also requires the alignment of the time schedules governing the gas markets. Capacity markets interact with commodity markets, because in order to trade one needs to have both capacity and gas. As short term trade becomes more important from a competition and a security of supply perspective, so does the alignment of the gas days. The lack of synchronisation of the gas days in some Member States constitutes a barrier to trade. 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, therefore the NC CAM defines the gas day according this option i.e. running from 5:00 to 5:00 UTC<sup>43</sup>.

In some Member States capacity products characteristics, such as the duration or the starting date are neither defined in advance nor published in advance. Instead, as noted above, capacities are allocated immediately. This causes problems for shippers especially when they want to cross borders and find that capacity products are not aligned in terms of quantity and timing, or only available at one side of the border. This results in the essential European cross-border capacities at IPs points to become highly fragmented and used inefficiently.

The inefficient use of IPs, which are so essential for moving towards a better connected and more integrated market, is addressed by two main measures: the introduction of a standardized set of capacity products and the obligation to bundle capacities on two sides of an entry/exit-point.

The set of standardized products that is part of the NC CAM reflects both the needs for long term stability and short term flexibility that gas trading brings about. It consists of yearly, quarterly, monthly, daily and within-day products. The yearly products are offered up to 15 years in advance, allowing shippers to satisfy their projected long term capacity demand. Yearly and quarterly products are in principle interchangeable as is shown by the product suite currently on offer in UK auctions, where no yearly products are replaced by quarters. This also allows players to profile<sup>44</sup> their products over time horizons going beyond a year. Alternatively TSOs on the continent have been predominantly using yearly products for the longer-term products and quarters only for the within year profiling. In recent years however, ever more short term products have been demanded by network users.

From a shipper's perspective, in terms of capacity products both the long term and the short term are important. A classic supply company bases its business model firstly on the secure supply of its customers and secondly on doing so in the most cost-efficient way. To ensure security of supply it ensures the commodity through a long term supply contract and the matching transmission capacity through a long term capacity contract. However, since gas demand is flexible throughout the year and throughout the day, certain flexibility in the contracts is necessary as well. In a market where there are no short and medium term possibilities to buy gas or transmission capacity, shippers have no choice but to organize their flexibility needs in the long term supply and capacity contracts. In other words, current long term capacity contracts reflect the shippers' peak needs, instead of their actual needs. In the past, this situation may have been satisfactory for both producers, shippers and TSOs alike,

<sup>43</sup> This corresponds to 6:00 CET.

<sup>44</sup> Profiling a gas capacity product means getting different capacities for different points in time. This could thus mean increase reservations during the winter months when demand is expected to increase due to heating while reserving lower capacities during the summer.

but in a model where competition is advocated and third party involvement on the market is expected to increase social welfare this model needs replacement.

In its FG, ACER has stipulated the importance of more short term trading possibilities for market participants. The obligation to reserve at least 10% of transmission capacities at IPs for capacity products with duration of less than one year is a result of that.

### 5.2.3. Bundling of capacity products

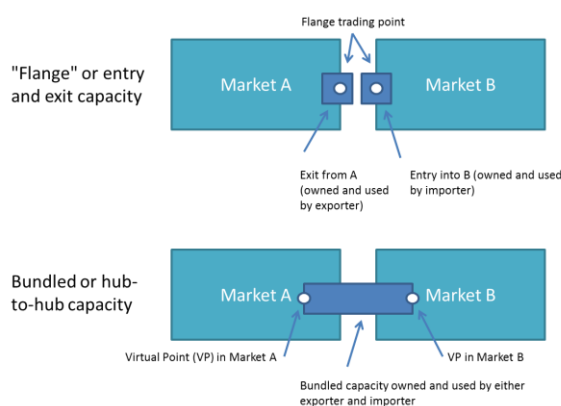
As explained above, today shippers have no choice but to separately book entry and exit capacities (see **Figure 5**) to transport their gas through an IP across a border which often results in unaligned bookings and as a result in inefficient used of the interconnection (see **Figure 2**). The solution to this problem is the bundling of exit- and entry-capacities into one single capacity product with which a shipper can move from one entry-exit system to the next<sup>45</sup>. Simply stated, in one click the shipper can move its gas from anywhere in Member State A to anywhere in Member State B.

This measure thus proposes to move from so-called border-based or flange-based capacity reservations<sup>46</sup> to bundled products that result in moving gas from one entry-exit system to the other. There is no longer a need to separately contract for exiting the gas at the "flange" between the two systems and re-entering it into the adjacent system.

There are four key options to introduce capacity bundling:

- (1) Optional bundling of capacity
- (2) Obligatory bundling of only currently available capacity
- (3) Obligatory bundling of all capacity, including also the capacity that is already allocated (Sunset Clause)
- (4) Obligatory bundling of available capacity with an ancillary best efforts process to bundle already separately allocated capacity.

Figure 9: Schematic representation of capacity bundling for available capacity



<sup>45</sup> The concept of bundling may be compared to the pre-Schengen system of border crossing within the EU where one had separate exit checks out of Member State A and into Member State B.

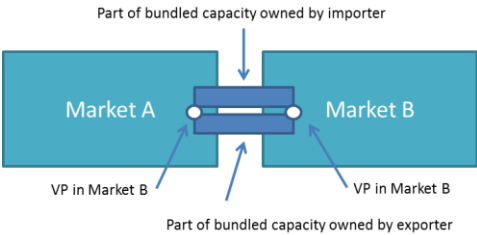
<sup>46</sup> Flanges are the external border points of transmission networks where the entry and exit points are situated.

Currently, capacity is overwhelmingly sold as separate exit and entry capacity products on the two sides of an IP, in an unbundled form. This is an obvious result of national TSOs selling the capacities for their own network only. However, as has been shown above, separate capacity bookings at an IP lead to a range of inefficiencies such as i) regular mismatches of capacity, reducing the overall available capacity to flow through an IP ii) potentially foreclosing capacity bookings on one side of an IP rendering competitors’ attempts at market entry very difficult, and iii) fragmented structures for trading that are not conducive to the development of liquid and efficient wholesale markets.

Bundling of available capacity can be undertaken on the basis of an agreement by the TSOs involved with respect to available capacity on both sides of an IP. In other words, as capacity becomes free/available (due to for example the expiry of contracts or improvements in (coordinated) capacity calculation or investments), the TSOs on the two sides of an IP may decide to pair up their respective exit and entry capacities and market them as a single capacity product. This may be done on a selective, voluntary basis by the TSOs or be part of an obligatory process for available capacity.

Furthermore, in the context of bundling capacity, an important policy question is whether only currently free and available capacity needs to be bundled or whether also capacity that is already bought and allocated in existing contracts (the "sunset clause") needs to be bundled as well. Implementing a sunset clause, implies a legal obligation on the shippers holding the capacity on the two sides of an IP to agree on the split of the bundled capacity within a certain time period; in the CAM NC a period of five years is proposed. Importantly, in case no agreement between the parties holding the capacities can be reached, the sunset clause foresees a so-called default rule which is a 50/50 split of the capacity. As will be shown in the assessment there are important legal and economic considerations to be made when considering existing contracts.

**Figure 10:** Schematic representation of capacity bundling for already allocated capacity (“sunset clause”)



Finally, a middle ground between the above two options of either applying or not applying a sunset clause, is the option of bundling available capacity only, but using a voluntary “best efforts” clause to bundle contracted capacity as opposed to the obligatory sunset clause. These options are analysed in Chapter 6 of this Impact Assessment.

**5.3. Option 2b: Toolbox approach**

Under this approach the measures as described under Option 2a to effectively address the issues identified in Chapter 3 of this Assessment could be introduced in a non-binding way in that Member States or national regulatory authorities can pick and choose from these instruments and implement those measures that in their view address the most important issues on the country’s borders, taking the tool from the toolbox that is the most appropriate in a given situation at a given time. For example, where a Member State receives its gas through one interconnector only and there is ample capacity available in that interconnector, it could

opt for the continued application of the FCFS mechanism and save the costs and efforts of introducing the auction mechanism.

#### **5.4. Option 3: (Unlimited) capacity expansion**

An allocation mechanism is only necessary where demand for a product is expected to be higher than offer. Therefore, a third way of addressing the issues identified in Chapter 3 of this Assessment is by offering an unlimited amount of capacity to the market, making sure that any demand for capacity can always be met.

An analogy with local buses is helpful to explain this option. Here, there is no need to book a ticket ahead, but one can simply get on board and pay the fee for transportation to the desired destination. The bus company knows the relative expected demand and adjusts his capacity accordingly. In busy times, perhaps a second bus operates on the same route in order to satisfy the expected demand.

As to feasibility, this option implying the expansion of Europe's pipeline capacity through the construction of new pipelines to an extent that no congestion is at all conceivable, is a highly hypothetical option with serious economic and environmental implications. The expansion of an interconnection point means that many other existing pipelines, much deeper into the national networks, will have to take place. For new, cross-border pipelines investments will be even larger, not to mention difficult planning and permit decisions. Given the long time horizon of new pipelines (30 to 60 years), significant lock-in risks occur which are potentially incompatible with future policy objectives in the context of i.a. decarbonisation. That said, capacity expansions may not need to be unlimited in order for this option to be viable but nevertheless the description and assessment of the impacts of the options stays the same irrespective of whether one consider unlimited investments or "just" significant investments necessary to solve the congestion capacity access problems in that way.

### **6. IMPACT PER MEASURE**

#### **6.1. Option 1: No further EU action (baseline scenario)**

Existing regulation with regard to CAM has been insufficiently effective in efficiently allocating the capacities in the EU gas network.

As such the problems identified in Chapter 3 will persist and potentially become more serious. The problem is unlikely to swiftly solve itself, since the current patchwork of national systems would require changes in the technical rules in many Member States that would have to result in compatible systems across the border. Thus a high degree of cross-border coordination would be needed which is difficult to achieve without the cooperative framework of the EU. Moreover, it is not just the national regulatory authorities and the European legislator that have called for new rules on capacity allocation in the Third energy package. Also gas traders and network users perceive capacity allocation as one of the main obstacles for true market integration and support addressing this issue before any of the other policy issues as listed in the Third energy package.<sup>47</sup>

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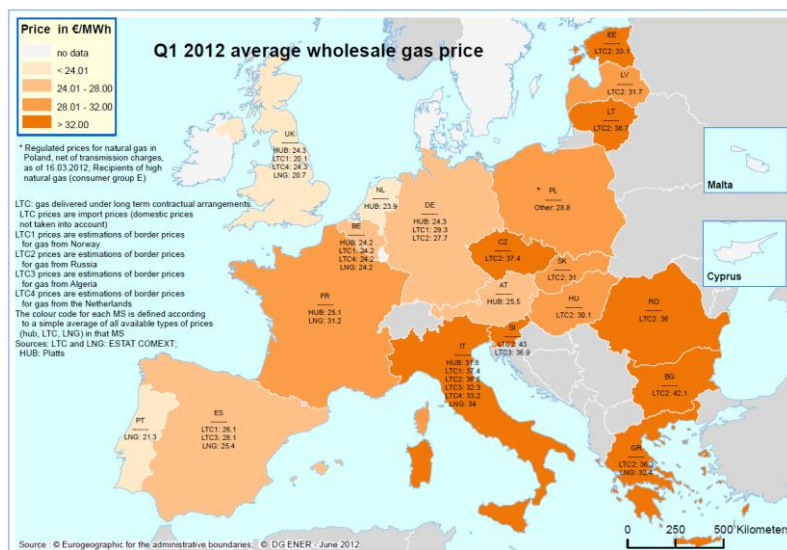
<sup>47</sup> ERGEG, 'Capacity Allocation on European Gas Transmission Networks , Pilot Framework Guideline, Initial Impact Assessment' Ref: E09-GNM-10-06, 10 December 2009 p. 54 concludes "With very few exceptions, all of the respondents agreed that the continuous allocation system ("first-come, first 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

## Economic Impacts

Market rules for gas transmission network are very complex and technical. This in itself would likely inhibit any initiative to improve capacity allocation rules across the EU. As noted, the fact that current high-level rules have essentially been in place for 7 years now without much progress is case in point.

Data show convincingly that where there is a possibility to trade, wholesale gas prices are lower than in areas where obstacles to trade continue to exist (see **Figure 10** below). It goes without saying that CAM-related measures do not suffice to solve the situation shown in the map. Neither is the assertion made that improved CAM measures would not have significant benefits in markets where there is already today relatively liquid trading. The map shows clearly that there still remains a significant divergence in wholesale gas prices across the EU. Reason for this is also the different level of the development of capacity management processes providing shippers vastly different rights to capacity from one Member State to another. There is relatively strong correlation between the level of development of capacity allocation and access rules and the level of competition (and correspondingly the wholesale price level). As mentioned above, access to transmission capacity and efficient capacity allocation procedures are a pre-requisite to for wholesale markets to function efficiently. Therefore, the Commission is of the view that the improvement and harmonization of CAMs is one necessary element to reach the goal of market integration.

**Figure 11:** Average wholesale prices in the first quarter of 2012, Source: DG ENER



As set out in Chapter 5, the CAM rules have not changed significantly since the first Gas Regulation from 2005. Therefore it is not to be expected that a process of EU-wide harmonization will take place in a baseline scenario which assumes a standard development path for the EU gas sector. In order for the 2014 political target of the completion of the internal market to be achieved such a linear development is not sufficient and this is set out both in the 2009 Gas Regulation itself and has also been shown by the broad support for the harmonization and improvement of CAMs across the EU. Specifically because of the

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.”

technically complex and challenging nature of these rules is a step-change not expected in the baseline scenario. That in turn would however render CAMs national or at the very least regional for many years to come which would – in light of the significant role that transmission capacity management plays in the gas sector – retard the envisioned market integration significantly.

This option would therefore hinder a more efficient, transparent and non-discriminatory use of the transmission capacity and therefore hinder the development of competitive energy prices, something that is essential in maintaining the competitiveness for Europe's industries.

#### *Social Impacts*

Social impacts of this option are essentially the opportunity costs of not further developing the internal market in natural gas. The internal gas market is only working to the benefit of Europe's citizens and industries where lower wholesale prices are passed on to gas consumers.

#### *Environmental Impacts*

The Commission Services are not aware and the Public Consultation has not pointed to any environmental impacts that the introduction of harmonized CAMs may have.

#### *Conclusion*

The implementation of the Third Package will, in itself, not solve the problem of inefficient capacity allocation. The Third Package measures enshrine a broad array of new rules for the gas sector, including on unbundling, regulatory oversight or downstream markets. However, they leave several other areas (such as the design of CAMs) to be tackled by further subsidiary legislation. It was explicitly foreseen by the legislator in the third package that the rules had to be further complemented by more technical market design and network operation rules to be developed under the comitology procedure. The proposed measure is part thereof.

### **6.2. Option 2a: Impact of new/modified EU rules on capacity allocation**

As set out in section 2.2.1., in the course of the last three years ERGEG, ACER and ENTSOG have been involved in the drafting of FG and a NC. As these documents were developed numerous measures aimed at facilitating cross-border trade through better access to capacity have been identified, modified, retained or dismissed. The measures that are contained in the CAM NC as adopted by ENTSOG on 6 March 2012 are the result of numerous public consultations and input from all the various types of stakeholders active on the European gas market. As a result, the almost all measures also enjoy a high degree of support from the market participants from all segments of the market.<sup>48</sup>

The introduction of harmonized auctions, standardized capacity products and capacity bundling will ultimately facilitate cross-border trading by instituting market-based allocation processes. Transaction costs will also likely drop due to the harmonization of all such processes across the EU. This will be a clear advantage for shippers and traders across the EU who are expected to become more and more active beyond national borders. Thus, with gas being able to flow to where it is most needed, wholesale prices will lower and social welfare gains will be realized. Where, alongside well-functioning wholesale markets, competitive retail exist, competition will incentivize suppliers to pass on their gains to end-consumers such as households and SMEs. Some indication to such beneficial effects are provided by the aforementioned Frontier study which estimates the economic gains from the

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<sup>48</sup> See ENTSOG's 'Stakeholder Support Process' documentation at: <http://www.entsog.eu/publications/camnetworkcode.html>

introduction of new rules on CAM (along with those on CMP) to be up to 10 million per interconnection point. Moreover, facilitating trading and reducing the risk of the unavailability of capacity makes the gas market a more attractive market to become active in. More suppliers will ultimately lead to benefits for those who consume.

### 6.2.1. Introduction of harmonized auctions

#### Economic impact

Where goods are scarce, they become valuable for those who need them. In a competitive environment the goods will end up in the hands of those who value them most. The auction honours this economic principle as it is a method whereby all contenders are able to participate on equal footing in an effort to ensure the goods and in the end the highest bidder wins.<sup>49</sup>

As a result ACER has determined in its FG that auctions shall be the applied allocation method at every interconnection point taking place according to the same rules at the same time, whilst leaving it to ENTSOG to lay down the technical details of the auction design. An ERGEG Public Consultation held in 2009 to test the market views on a draft version of the later Framework Guidelines showed a wide support for replacing FCFS and among the other proposed capacity allocation methods, such as pro-rata mechanisms, there was a clear preference for auctions, especially among shippers.<sup>50</sup>

In the gas sector, companies profit from supplying their consumers with the quantities these demand at the times they demand it. Unlike electricity, gas is usually produced far away from where it is consumed. The party that is best able to ship the gas from the production to the consumption area or from one market area to the other is the party that can best trade gas across markets and profit from price differences between the different market areas. Given the dependence on pipelines for the transportation of gas, it is relatively easy to block access to a market area. As we have noted above, the FCFS-principle does not give the right price incentives in case demand is higher than supply, which occurs quite often at important cross-border points. Furthermore, the FCFS mechanism is arbitrary and non-transparent and it is often observed that quantities booked by network users are much higher than their actual needs as can be seen in the graph below.

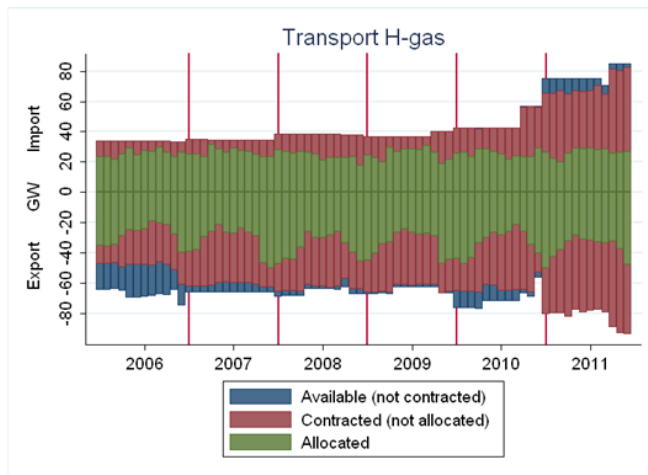
**Figure 12:** Available, Contracted and Used Capacity at the combined Dutch borders, Source: Dutch Office of Energy Regulation

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<sup>49</sup> See also analysis of KEMA/REKK in “Study on Methodologies for Gas Transmission Network” p.99-110 available under following link: [https://ec.europa.eu/energy/gas\\_electricity/studies/doc/gas/2009\\_12\\_gas\\_transmission\\_and\\_balancing.pdf](https://ec.europa.eu/energy/gas_electricity/studies/doc/gas/2009_12_gas_transmission_and_balancing.pdf)

<sup>50</sup> ERGEG, ‘Capacity Allocation on European Gas Transmission Networks’, Pilot Framework Guideline, Initial Impact Assessment’ Ref: E09-GNM-10-06, 10 December 2009





Auctions on the other hand are very transparent and non-discriminatory allocation processes. By their very nature they also enable the discovery of the real price of capacity that would incentivize shippers to not book more than actually needed. An auction mechanism thus allows for the discovery of a price that reflects value. This however does of course in no way impinge on the regulated nature of the transmission business. TSOs are and will stay monopolies as they provide the essential transportation service and hence regulators will continue to scrutinize and cap their incomes. That said, transmission capacity is a regulated product. Therefore, to the extent that an auction clears above the reserve price, which is also typically the regulated price, the developing auction premium sends a signal with respect to the possible need for further capacity. Whereas congestion management measures bring back the contracted but unused capacity to the market, the CAM-measures limit or prevent this problem from occurring in the first place.

In the course of the work of ENTSOG of drafting the NC CAM a key question assessed was with respect to the specific auction algorithm for non-daily capacity products. The two options are the multiple round ascending clock auction as well as the single round auction. While both algorithms would in principle be possible for the design of EU-wide CAMs, simulations with the involvement of stakeholders (shippers, traders, TSOs, regulators) have lead to the conclusion that the multiple round ascending clock auction provides a more robust method of price discovery. In particular the distinctive rounds as well as the lack of the need to apply pro-rata rules at the end stage of the auction were crucial factors in determining stakeholder views on the two auction methodologies. It was in particular seen that while the proposed single round auction has the advantage of simplicity and has been applied with success in the UK (single Member State which is not as meshed as some continental networks), the multiple round ascending clock auction has an algorithm that is just as robust in terms of its price discover but beyond that it is also more suitable to be applied across the highly complex, meshed network of the EU.

Beyond the ‘mere’ impact of the introduction of auctions the proposed measures of the CAM NC also foresee a complete harmonization of the auction process. This involves a fixed auction schedule comprising annual auctions for up to 15 years ahead, quarterly auctions for up to a year ahead, rolling monthly auctions as well as day-ahead and within-day auctions. All auctions take place at the same time in a coordinated manner on central booking platforms across the EU. As compared to the current heterogeneous allocation schedules, such harmonized allocation methods will significantly decrease transaction costs<sup>51</sup> and at the same

<sup>51</sup> E-Bridge, "Macro-Economic Effects Regarding Congestion Management in Europe", 2010, p.58: "Transaction costs of booking and nominating can be relevant, especially in the context of the status



time markedly facilitate shippers' access to capacity across a range of networks. The benefits of harmonization will be most felt by new entrants and smaller competitors who are either trying to establish a presence on the market or do not have the financial means to familiarize themselves with the current myriad of national allocation methods and schedules.

A further benefit of the NC CAM is the objective to set up regional capacity platforms with the view of ultimately creating one single EU electronic capacity platform. At present, a number of online booking platforms already exists and are under development. In Germany, 12 TSOs cooperate to jointly offer their capacities at a single national platform called 'trac-x', which according to German legislation is the only place where capacity products can be offered, predominantly via auctions. It also offers the opportunity of secondary trading, whereby shippers themselves offer unused capacity. Another promising development is the first cross-border booking platform that is set up by 18 TSOs cooperating in the North-West Region. The investment cost of this platform is estimated at roughly EUR 6 million per annum in the first five years.<sup>52</sup> Such measures which have sprung up during the CAM NC drafting process already provide positive feedback with respect to the functioning of auctions as a means to allocate capacities but also go further and underline the benefits all stakeholders will gain from a harmonized approach to conducting them.

In the development of the auction algorithm it showed that a majority of stakeholders preferred the multiple round ascending clock auction before the single round volume based auction. The reason main reason for this was that it provides for a more transparent price formation as it allows shippers to respond to “binding” bid information.<sup>53</sup>

Finally, whereas this option would promote a more efficient, transparent and non-discriminatory use of the transmission capacity and therefore foster the development of competitive energy prices, affordable and more competitive energy prices may come about which is essential in maintaining the competitiveness for Europe's industries.

DG ENER has not been able to identify any particular detrimental impact as regards the administrative burden. On the other hand, it can be said that implementing the proposed measures would actually significantly decrease administrative burden as this option foresees the harmonization of capacity allocation mechanisms across the EU, including the creation of regional and eventually a central capacity platform which will lead to cost efficiency.

Such cost-efficiency will be felt both for shippers and traders who can more easily conduct their trading/supply activities in several Member States as well as for TSOs who will be able to share systems and processes and thus save costs.

DG ENER has not been able to pinpoint any particular effects of the options for SMEs active in the energy sector. In general, companies in the energy sector, even entrants, are relatively large undertakings. That said, it may be contemplated that this option, which clearly aims to foster liquidity at hubs with capacity bundling and auction-based capacity allocation procedures, will be conducive to the market entry of smaller players. In addition, all SMEs are at the same time energy consumers. A competitive wholesale price for gas is ultimately to their benefit as well, in the form of a lower energy bill.

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quo of separate bookings needed for entry and exit capacities and limited public information. Especially if price differences are small, transaction costs become relevant and may hinder price arbitrage because these costs will be reflected in the decisions of the shippers.”

<sup>52</sup> Data ‘NewCo-capacity platform partners’: the 18 TSOs and trac-x, of 18 October 2012

<sup>53</sup> ENTSO, “Summary of responses to the Capacity Allocation Mechanisms (CAM) Network Code – Second formal consultation on new or modified concepts”, 24 November 2011, p. 9.

### *Social impact*

The social impacts of auctions in CAM can be defined indirectly in terms of better access to capacity, leading to more cross-border competition and consequently lower prices on the European gas market.

### *Environmental impact*

The Commission Services are not aware and the various Public Consultations has not pointed to any environmental impacts that the introduction of a standardized auction scheme for CAM may have.

### *Conclusion*

Auctions are a very transparent and non-discriminatory allocation processes. By their very nature they enable the discovery of the real price of capacity and should incentivize shippers to not book more than actually needed. An auction mechanism thus allows for efficient use of transmission capacity. A harmonized auction and allocation mechanism will further more significantly decrease transaction costs while at the same time facilitating the shippers' access to transmission capacity across a range of market areas.

### *Harmonization of the gas day and standardizing of products*

The obligation to use harmonized auction procedures as CAM is not enough for the beneficial effects to occur. There needs to be capacity available as well and the existing administrative obstacles to trade need to be removed in order to facilitate trading. The introduction of standardized products along with a clear mandate to include short term products is such a measure that removes an obstacle and promotes (short term) trade, just as the harmonization of the gas day. This approach is supported by stakeholders.<sup>54</sup>

### *Economic impact*

As currently short term capacities are hardly available and supply companies satisfy their obligations through long term supply contracts with a price that is fixed beforehand and often based on oil-indexation, it is difficult to make profit from short term price differences. The introduction of a reservation of at least 10% of the pipeline capacity for capacity products with a duration of less than a year, makes it likely to expect that on the short term price differences are removed, making the hub prices that remain a reliable indicator for the real value of natural gas at that moment. With hubs showing reliable price signals, long term contracts can increasingly be closed on the basis of a price that is hub-indexed rather than oil-indexed.

Historically the gas sector has been a long-term business. Long term supply contract have underwritten long-term capacity contracts that have in turn respectively been the basis for upstream production activities and the construction of large pipeline systems carrying gas to the EU from outside its borders. Long-term contracts of course still play an important role in the gas sector and are likely to continue such a role for the foreseeable future. That said, in order for markets to integrate certain flexibility needs to be provided for in the structure of the market. The role of mandating the sale of short-term products is an important element to this

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<sup>54</sup> ERGEG, 'Capacity Allocation on European Gas Transmission Networks , Pilot Framework Guideline, Initial Impact Assessment' Ref: E09-GNM-10-06, 10 December 2009 p. 28 concludes "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. Consulting the market for product definitions was unanimously welcomed."

end. It also has an important role to play in avoiding repeated foreclosure of markets by long term contracts.

Therefore setting aside at least 10% of capacity for short term products – as set out in the FG - is a proportionate and necessary measure. Currently there are different practices employed in Member states to promote short term trading as can be seen from Annex 2d.

TSOs today don't just use many different allocation mechanisms, they also have different sets of capacity products on offer. This is problematic from various perspectives. Firstly shippers are not able to create their portfolios in the same manner in various Member States/networks but it also leads to increased capacity mismatches due to the differing product structures. The NC CAM therefore proposes to define a single set of transmission capacity products across the whole EU. This measure will thus further enable shippers, and in particular entrants and smaller competitors, to become active in new market areas. As such, they contribute to the beneficial effects that a more efficient utilization of Europe's cross-border pipelines promises and are expected to become 'liquidity enhancers'.

During the revision process of the Network Code the question has arisen to what extent it is necessary to reserve a further proportion of capacity for the mid-term, available 4 or 5 years ahead. In its Reasoned Opinion on the Network Code of 5 June 2012, ACER indicated that *"auctioning up to 90% of the capacity in just one instance for a period of 15 years raises serious concerns, also voiced by some stakeholders during the public consultation run by ENTSOG, as it carries the risk of long-term contractual congestion and/or of creating barriers for potential new entrants over a significant (15-year) period. Auctioning up to 90% of the capacity in one instance will also run the risk of leaving no room for learning lessons between auctions. If a problem occurred, it could lead to undesirable results potentially impacting the market for the upcoming 15 years. In this respect, the provisions in the Network Code may be detrimental to the completion and well-functioning of the internal market in gas and cross-border trade."* It hence concluded that, in revising the NC, *'the concerns about any potential anti-competitive effects of the provisions contained in the Network Code would be appeased if the Network Code were to envisage that, besides the at least 10% share of the technical capacity set aside for short-term products, a significant proportion (e.g. another 10%) of the capacity allocated through Standard Capacity Products as specified in the Network Code is allocated only over a shorter time horizon (e.g. for the upcoming 4-5 years).'* Although this proposal has not been taken over by ENTSOG in drafting its final Network Code, the Commission is of the view that there is merit in ACER's concerns and subsequent proposal and notes that it enjoys support among a clear majority of market participants<sup>55</sup>. The Commission notes that the risk of foreclosure in gas markets, given recent history, is a substantial threat to market opening. The Commission has pursued foreclosure cases, i.e. on German and French gas markets, which have resulted in decisions decreasing long-term capacity bookings. The Commission considers that in the present case, whereby capacity may be offered up to 15 years ahead of the flow, national regulatory authorities shall consider whether higher quotas may not be necessary in order to avoid foreclosure of retail gas markets in their respective Member States.

As explained in para. 4.4, the question has arisen to what extent *new capacity* coming on the market, e.g. as a result of expansions of existing IPs or newly built pipelines, should be subject to the various rules contained in CAM NC. A relevant question is to what extent the reservation of 20% (10% for the short term and 10% for the mid-term) should be applied to

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<sup>55</sup> Market entrants and industrial customers but also traders (EFET) and other stakeholders strongly support this measure.

new capacity as well. Also here no agreement between ACER and ENTSOG has been found. On the one hand, as ENTSOG argues, there is a risk of over-investment, leading to 'gold-plating' of the network and increasing the risk of stranded assets which in turn lead to higher transmission tariffs to be paid by domestic network users. On the other hand, the complete sell-out of the total amount of capacity forecloses the possibilities for new entrants to acquire capacities and enter the market. Market players were more split on this issue in consultations with entrants and industrial customers being keen on having somewhat more capacity in the network in order to promote competition whereas established players and TSOs have been strongly opposing this proposal. ENTSOG has not been able to quantify any additional costs that may be derived from the effects of this measure.

Some of ENTSOG's arguments have referred to the existence of the CMP rules recently adopted by the Commission which are meant to assure that unused capacity is returned to the market. While this argument is indeed compelling, new capacity is often built at IPs where there is physical congestion and therefore CMP measures are not the most appropriate mechanism to remedy the problem of lack of access to capacity. Furthermore, it has often been argued that new entrants or smaller players may not get access to capacity already at the first incremental capacity auction but could get it at forthcoming ones. While this could potentially hold true, it is unclear precisely what form the offer of new capacity will take and how flexible the process will be.<sup>56</sup>

In the view of DG ENER, in this case the risk of market foreclosure, which has the potential to postpone the occurrence of competition by many years, as well as the goal of assuring that competition can develop, outweighs the risk of not selling out all the capacity at once. This is also in light of the fact already mentioned that the price of capacity is 5-10% of the price of the commodity therefore the cost of adding somewhat more capacity may be compensated by the effects of a lower commodity price derived from a more competitive market environment. The ACER proposal is hence included in the CAM NC.

The harmonization of the gas day is in this context also an important element to further the development of cross-border trade and with it the internal market. Discrepancies in the way the gas day is defined from one network to the other, say midnight to midnight, as is the case in Spain or 22h-22h, as is the case in Poland, and other solutions, clearly make it more difficult for shippers to conduct cross-border trade of gas. As has been set out above, the development of the internal market as well as a change in the supply patterns for the EU (more imports from various sources) will lead to increased cross-border trade. That in turn needs to be facilitated by all regulatory measures that aim at cutting the small and large incompatibilities between networks. Clearly different gas days per se do not in themselves inhibit gas flows from one network to another but they lead to different schedules during the day. To the extent that auction schedules are to be harmonized during the day, a harmonization of the gas day is needed. No TSO from Member States that so far have had different gas days has put forward any substantive argument that the modification of the gas day would lead to disproportionate administrative burdens or costs.

#### *Social impact*

The social impacts of auctions in CAM can be defined indirectly in terms of better access to capacity, leading to more cross-border competition and consequently lower prices on the European gas market.

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<sup>56</sup> CEER (Council of European Energy Regulators) is currently engaged in a process to develop a concept for incremental capacity which will be finalized in 2013.

### *Environmental impact*

The Commission Services are not aware and the various Public Consultations has not pointed to any environmental impacts that the introduction of a standardized auction scheme for CAM may have.

### *Conclusion*

Synchronized allocation through EU-wide auction processes is impossible without having a set of standard European capacity products and alignment of the gas day. The current potpourri of different capacity products is inefficient from an allocation perspective whilst the benefit of a standard set of products is that market participants across the EU can align their transportation process from any Member State to any other. Since they know what is available where and under what conditions, trading across border becomes much easier. This is expected to lead to lower transaction costs and foster cross-border trade leading to more cross-border competition and consequently lower prices on the European gas market.

#### *6.2.2. Bundling of capacity products*

The concept of bundling of cross-border transmission capacities into one product is one of the main pillars in ACER's FG on CAM, because it:

- (1) promotes competition by lowering undue barriers to market entry,
- (2) prevents the fencing off of home markets,
- (3) optimizes the use of interconnection capacity,
- (4) facilitates trade and lowers transaction costs and
- (5) increasing liquidity on the hubs.

At the same time this measure has also been one of the most debated ones and there have been various degrees of support to its different variants.

As set out in Chapter 5 there are four key options to address capacity bundling:

- (1) Optional bundling of capacity
- (2) Obligatory bundling of available capacity only
- (3) Obligatory bundling of all capacity (including also the capacity already allocated separately to network users (Sunset Clause))
- (4) Obligatory bundling of available capacity only with an ancillary best efforts process to bundle existing capacity

### *Economic impact*

#### *- Optional bundling of capacity*

Capacity bundling can be undertaken optionally by cooperating TSOs at a given IP. Some TSOs are already bundling some short term capacity products as alternatives to existing

separate entry-exit capacities.<sup>57</sup> However, such isolated attempts at bundling capacity are not particularly effective as it only has bearing on a limited volume of short-term capacity. While this may indeed focus some liquidity onto the virtual points in systems it does not bring about significant improvement in liquidity and it has essentially no effect on eliminating market foreclosing flange bookings nor does it improve capacity mismatches. Such optional and voluntary bundling is therefore not sufficient to improve capacity management and utilization in the EU and is not effective enough to achieve the completion of the internal market.

*- Bundling of available capacity only*

The bundling of capacity is closely tied to the logic of the establishment of entry-exit regimes. As set out above, entry-exit regimes have as their core principle the possibility to freely move gas within a network on the basis of supply-demand patterns. Typically, every entry-exit regime has a so-called virtual point which serves as the marketplace in the system and where the title of the gas can be transferred (change ownership). Irrespective of the way in which an entry-exit system is designed<sup>58</sup> all exchange of gas ownership within that system is focused onto the virtual point. Therefore, the most efficient manner to “connect” different entry-exit systems with each other is by connecting their virtual trading hubs. This takes away the extra need to undertake trading at the respective border points. The Commission Services as well as ACER have thoroughly investigated the effect of bundling of capacity and have not been presented any arguments by market players pointing towards potential drawbacks of such capacity bundling, neither with regard to competition nor in terms of security of supply. With regard to the latter, it is important to note that, since market liberalisation and the unbundling of the vertically integrated undertakings, the responsibility for the fulfilment of the flow lies entirely with the TSO. Shippers have no influence and no knowledge of the physical flows, but can count on the contractual responsibility of the TSO to carry out the requested transportation, both within and between entry/exit-systems. By removing a contractual step at the border – which is what bundling is essentially about – trading is facilitated for shippers, but also TSOs are given the opportunity to operate their networks more efficiently.

That said, when considering the obligatory bundling of capacity, capacity has to be grouped into two categories: i) available capacity, which TSOs on two sides of an IP can bundle freely on the basis of their joint decision and ii) allocated/existing capacity which is at any given moment still contractually tied to a particular shipper. The current section will investigate the impacts of bundling only available capacity.

To “bundle” the exit and the entry capacities available at the borders into one single product would make only cross border transports possible and would rule out transports up to the border (“flange”). Currently however, the trade is often executed at the flange and as a result neither the upstream (who typically holds only the exit capacity) nor the downstream shipper (who typically holds an equivalent amount of entry capacity) has access to the other market area. Furthermore only downstream shippers that have booked entry capacity can be party to such a trade. Hence, it may be in the interest of an incumbent to keep the status-quo. Bundling the capacity however, would mean that one cannot any longer trade the gas at the “flange” but also that one can no longer be stuck with capacity on only one side of the border, essentially in ‘no man’s land’. Instead gas would be traded inside one of two entry-exit zones. A shipper

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<sup>57</sup> Such bundling is currently undertaken by the French and the Belgian TSO on their CapSquare platform as well as German and Czech TSOs on their GATRAC platform. At the German-Dutch IP of Bunde-Oudestatenzijl currently even an experiment with bundling *and* auctioning is on-going.

<sup>58</sup> Whether the shipper can deliver to the customer’s domestic exit point where title transfer takes place or whether the virtual point in the system is the title transfer point irrespective of whether it is an OTC contract or a trade at the virtual point.

that books exit capacity would automatically book entry capacity and gain access to the adjacent market (the second element). With more parties being able to use capacities to gain access to previously fenced off markets, liquidity at the hubs of those markets is expected to increase.

- *Bundling of all capacity (including the capacity already allocated separately to network users (Sunset Clause))*

The bundling of all capacity is expected to increase the liquidity of the hubs even further because “flange” trading would be ruled out. According to a 2011 analysis by Frontier Economics<sup>59</sup>, this would lead to significant HHI-improvements in the various market areas.

The main reason is because the current trading at the flange is expected to be moved towards the virtual trading points in the entry-exit systems on either side of the border. Once the gas is shipped into an entry exit zone the ownership can be transferred at the virtual trading point. The buyer of gas at a virtual trading point can choose to either exit it directly to its customer in the respective entry-exit system or to sell it again via a title transfer at the virtual trading point. This increases liquidity on the virtual trading point (virtual hub) resulting in downward pressure on commodity prices.

As can be seen in **Figure 3** large parts of existing cross-border capacity are currently not for sale on the market, but locked up in *existing capacity contracts* that end at the flange.<sup>60</sup> That said the figure also shows that a significant share of those long-term capacity contracts will terminate by 2020. Nevertheless some of the largest contracts, such as the ones at Waidhaus, Tarvisio, Baumgarten or Bacton (see **Figure 2** above) will not terminate by that date. This means, to the extent that the delivery points are not modified for these existing contracts, that the benefits of bundling are prevented from materializing for these capacities. It is this problem that the so-called “sunset clause” seeks to address. As set out in chapter 5 the SC creates a default rule after 5 years to split a now-bundled entry and exit capacity between counterparties on two sides of an IP. Therefore existing capacity contracts had to be amended. *Implicitly*, the amendment of these capacity contract forces contracting parties to also amend their underlying supply contracts, otherwise these would become inapplicable and unfeasible. Where existing gas supply contracts foresee a delivery point on the border flange, this delivery point would need to be changed to a (potentially virtual trading) point *within* the entry-exit system of a Member State thus enhancing the liquidity of that market.

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<sup>59</sup> Frontier Economics, ‘*Economic analysis of the sunset clause*’, July 2011, available at: [http://www.acer.europa.eu/Official\\_documents/Public\\_consultations/PC-02\\_Gas\\_Capacity\\_Allocation\\_Mechanisms/Document%20Library/1/RPT%20ne%20Sunset%20clause%20final%20report%2014-Jul-2011%20stc.pdf](http://www.acer.europa.eu/Official_documents/Public_consultations/PC-02_Gas_Capacity_Allocation_Mechanisms/Document%20Library/1/RPT%20ne%20Sunset%20clause%20final%20report%2014-Jul-2011%20stc.pdf)

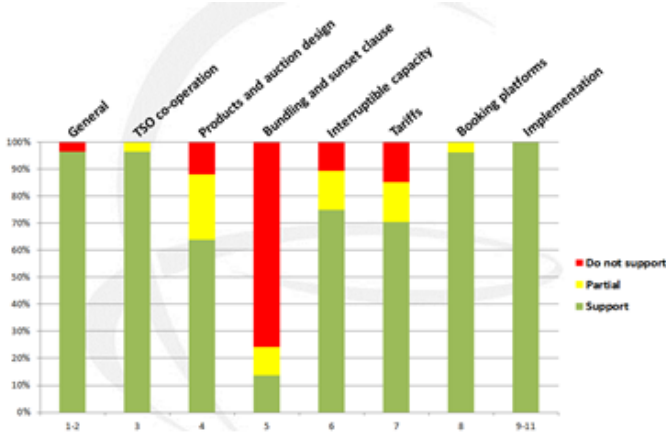
<sup>60</sup> In the Second Gas Directive, pre-existing transit contracts were granted protection from regulation. The resulting non-regulation of transit contracts is today considered by ACER as a major obstacle to the creation of an internal energy market (as stated at the most recent Madrid Forum). In fact, energy companies made use of the period just before entry into force of the new regulatory regime in order to prolong their contracts and get new (very) long contract terms defined as legacy contracts. The issue was identified in the DG Competition report on energy sector inquiry, 10 January 2007, SEC(2006)1724: Paragraph (211): “Pre-liberalisation contracts are the main reason why primary capacity is booked long-term by historical incumbents.” Paragraph (226): “Most prominently, a number of pre-liberalisation transit contracts were prolonged only few months before regulated third party access regimes were to be introduced.”

From the outset opposition against the SC has been fierce.<sup>61</sup> A large majority of stakeholders from all segments of the gas industry and a large number of Member States are concerned that re-determination of delivery points in the capacity contracts between a TSO and a shipper, and with it the corresponding re-determination of the delivery point of the gas supply contract between the upstream and the downstream shipper, might entail re-negotiations on all essential elements of gas supply contracts with upstream producers, including prices, and touches the value of the contract. They fear that in the course of such negotiations producers could be in a stronger negotiation position, enabling them to push further into the European market, and diminishing the importance of national wholesalers (midstream gas companies). In addition, concerns have been expressed that the reduction of the number of available delivery points could make it easier for producers to act in a coordinated manner on the EU market (the opposite upside of this is that trade is concentrated on hubs, making these more liquid).

TSOs in turn are concerned that the obligatory change of the delivery point in the capacity contract is a material enough change of the contract to allow shippers to unilaterally terminate their capacity contract which in turn may lead to significant (uncompensated) revenue shortfalls in the case of some TSOs.

In other words ENTSOG has included the “sunset clause” in its CAM NC but has explicitly done so “under protest” setting out in its supporting document why it does not agree with in particular the “sunset clause”.

**Figure 13: Results of the ENTSOG stakeholder survey**



In order to address those concerns ACER has commissioned a legal analysis of the effects of the Sunset Clause<sup>62</sup> which concludes that bundling of allocated/existing capacity would not have material impact on the gas supply contract and would also not suffice to unilaterally cancel capacity contracts. The findings of this analysis have been strongly contested by many shippers and TSOs.

<sup>61</sup> See See ENTSOG's 'Stakeholder Support Process' documentation at: <http://www.entsog.eu/publications/camnetworkcode.html>, which shows a high level of support for all the measures in the NC CAM except for bundling under a SC.

<sup>62</sup> ' Legal Impact Assessment of the Framework Guidelines on Capacity Allocation Mechanisms for the European Gas Transmission Network', *Raue LL.P.*, [http://www.acer.europa.eu/Official\\_documents/Public\\_consultations/PC-02\\_Gas\\_Capacity\\_Allocation\\_Mechanisms/Document%20Library/1/Legal%20Impact%20Assesment%20of%20the%20Revised%20Pilot%20Framework%20Guideline%20on%20Capacity%20Allocation%20Mechanisms\\_rev.pdf](http://www.acer.europa.eu/Official_documents/Public_consultations/PC-02_Gas_Capacity_Allocation_Mechanisms/Document%20Library/1/Legal%20Impact%20Assesment%20of%20the%20Revised%20Pilot%20Framework%20Guideline%20on%20Capacity%20Allocation%20Mechanisms_rev.pdf)



These practical concerns have been accompanied by legal concerns, the most important of which are proportionality concerns in the way that the proposed measures are potentially affecting fundamental rights such as contractual freedom and right to property. It is argued by the opponents of the SC that it is not possible to conclude that measures affecting fundamental rights not explicitly foreseen by the Gas Regulation would be non-essential elements and could be adopted in the context of a comitology procedure. This does not imply that EU law cannot, in any circumstances, affect previous contractual relations and rights of property, but it implies that a breach of these principles can only derive from an explicit will of the legislator. When the EU legislator has foreseen that such fundamental rights could be affected, it has explicitly stated it, such as recital 21 of the Gas Regulation, which foresees impact on existing contracts but limits it to enabling network users to sublet and resell their capacity and of the TSO to offer unused capacity (such a provision doesn't relate to capacity allocation provisions).

Deleting the SC and in doing so obligating only available capacity to be bundled would mean that the beneficial effects that bundling of capacity would have on the liquidity of hubs and the facilitation of trade would be limited to non-contracted capacity only. As we have seen from *Figure 3*, this is a rather limited proportion at first sight, but it is increasing as of the year 2020.

Keeping the SC would mean that the legal and practical concerns which are shared across all the participants in the gas sector would remain.

In the course of conducting its IA the Commission has evaluated several options relating to capacity bundling from the fully optional approach to bundling of any capacity to bundling all new capacity and existing capacity (after the “sunset clause” period). In evaluating these options we have concluded that we agree with ACER’s proposal to bundle all new capacity. This will, as set out in this IA, assure more efficient capacity allocation, reduce capacity mismatches, avoid potentially harmful market foreclosure and increase market liquidity and with it lower entry barriers for new competitors. However, looking at in particular the legal challenges that implementing the bundling of existing capacity/capacity under contract (“sunset clause”) raise, has concluded that – based on the assessment of impacts – a middle ground between the positions of ACER and ENTSOG as regards capacity bundling would be the most appropriate. Therefore the option to have mandatory bundling for all new capacity, coupled with a “best efforts sunset clause” is in our view the preferred option.

The Commission has received considerable stakeholder support for the amended sunset clause, including the proposal for mandatory bundling, in particular from entrants to the gas market such as EDF. That said, the Network code should clearly set out that also contracted capacity shall be obligatorily bundled as of the effective expiration date of the capacity contract upon entry into force of the CAM NC.<sup>63</sup>

*- Bundling of available capacity with an ancillary best efforts process to bundle capacity*

The third option could be the amendment of the SC, with a view of ensuring that the benefits of bundling to still materialize to the maximum extent, whilst replacing the SC with a less intrusive best-efforts obligation for parties to existing contract to enter into discussions and negotiations with the aim of bundling the capacities concerned. The obligation to move towards bundled capacity products is hence maintained, because from the entry into force of

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<sup>63</sup> Therefore, tacit or explicit renewals of capacity contracts shall not be accepted from that point on as a reason not to bundle.

the NC TSOs will be obliged to offer bundled capacity only (unless there is no matching capacity on the other side of the border available<sup>64</sup>).

With regard to competitiveness it is noted that affordable energy is essential in maintaining the competitiveness for Europe's industries. Today, European energy companies are adapting ever more to increased competition. Facilitating trade between and access to Europe's gas markets through measures such as the bundling of entry- and exit capacity means that foreign energy companies, either from inside or outside of the EU, can more easily become active on these markets, increasing competition between EU and non-EU energy companies.

#### *Social Impacts*

The social impacts of the proposed bundling measure in CAM can be defined indirectly in terms of better access to capacity, leading to more cross-border competition and consequently lower prices on the European gas market. In order for benefits energy companies reap through the lower wholesale prices to trickle down to consumer level, much is dependent on the existence of effective competition on the retail market as well as the extent of government interference in the price setting for example through taxes or by means of price regulation.

The bundling also leads to more liquidity and trading in gas capacity and corresponding commodity markets which improves the competitive landscape and ultimately benefits consumers.

#### *Environmental Impacts*

The Commission Services are not aware and the various Public Consultations has not pointed to any environmental impacts that the introduction of a capacity bundling for CAM may have.

#### *Conclusion*

The option of mandatory bundling of only available capacity with an ancillary best efforts process to bundle capacity takes into account the problems shippers face when they need to align the delivery point of their supply contracts. But mandatory bundling of available capacity is necessary to foster the best use of the available capacity and furthermore to increase the liquidity in the gas markets all over the EU resulting in competition on commodity prices.

### **6.3. Option 2b: Impact of the toolbox approach**

#### **Economic impacts**

Assessing the economic impacts of this approach, according to which Member States or national regulatory authorities can pick and choose which from a set of instruments to implement, is to assess the EU-wide benefits and subsequently assume that each country will do what is in its individual best interest. As such, at an individual level one can expect the observed problems to be solved (albeit at a slower pace). Moreover, the measures contained in the NC CAM are not nearly as effective individually, as they are when implemented together, as a package. For example, auctions will not be facilitating trade if capacity products remain unbundled and separate auctions continue to be needed. Also, bundling of capacity is impossible without the standardization of capacity products at an IP. As such, the measures

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<sup>64</sup> In that case the question arises what happens to the capacity that cannot be bundled and remains unbundled. Here, one of the four dispute areas between ACER and ENTSOG. Whereas the TSOs propose the possibility to continue selling the unbundled products five years ahead, ACER would like to see this period reduced to one month in order to keep the possibility open of bundling in case extra capacity should become available across the border. Here, in order to maximize bundling and at the same time allow TSOs to recover allowed revenues a compromise solution seems appropriate.

contained in the NC CAM form a consistent regime unfit that would lose its effectiveness when a section is lifted out. The tariff provisions demonstrate this interdependency: they were inserted solely because the CAM-system needed them to be able work in practice.

As to competitiveness, affordable energy prices are essential in maintaining the competitiveness for Europe's industries. This option however would not foster a more efficient, transparent and non-discriminatory use of the transmission capacity and therefore hinder the development of competitive energy prices.

#### Social impacts

Where the NC CAM package is not implemented in its entirety, chances are high that Member States and the energy consumers that live in them miss out on the potential economic benefits.

#### Environmental impacts

The Commission Services are not aware and the various Public Consultations has not pointed to any environmental impacts that the introduction of a “toolbox approach of regulator improvements to CAMs may have.

#### Conclusion

A 'Network Code à la carte' approach obviously misses the element of harmonization which is the core of Option 2a. Even though the toolbox approach might be effective under certain circumstances in certain areas of the EU, in the long run the facilitation of market participation through standard rules throughout Europe will outweigh the benefits of regional flexibility. Not applying the toolbox approach however does not mean that there is no longer any room for regional differentiation. The NC CAM provides detailed and specific measures on the high level measures, but many opportunities for specific local action continue to exist in accordance with the principle of subsidiarity.

### **6.4. Option 3: Impact of the unlimited capacity approach**

The building of high pressure cross-border gas transmission pipelines requires large investments, the commitment from multiple public and private parties and a high degree of coordination. The lifetime of a gas pipeline is multiple decennia and capacity is relatively fixed given the fact that expansion is time-consuming and costly. Providing the market with so much capacity that booking procedures become redundant will therefore be economically inefficient. Instead, measures on the demand side are needed.

#### *Economic impacts*

In order to reach its energy and climate agenda goals, Europe needs to invest significantly in energy infrastructure. Funds are scarce and investment projects must be viable and reliable. The option of building unlimited capacity would be very favourable from a trading perspective as it provides maximum flexibility to the market. In fact, it has been argued that TSOs today are relatively conservative and hesitant when it comes to investing in additional pipeline, attributing high value to high utilization rates and long term commitments, which limits short term availability of capacity and flexibility to react to price differences. But obviously the investment in unlimited capacity would come at a cost. To continue the metaphor of the local bus company: having a bus every three minutes would be very practical, but the ticket price would probably discourage people from taking any bus at all. Current regulatory practice is to allow TSOs to recoup the costs for building and maintaining their network. The costs of new pipelines are expected to be amortized over a period of typically

between 30 and 60 years. But tariffs can only be charged to those who use the pipeline. If utilization rates drop, either tariffs rise or the costs have to be recuperated elsewhere.

In order to prevent 'stranded assets' and given the limited availability to realize all the investment that Europe already needs, policy makers and regulators need to be careful in assessing which projects receive a go ahead and which not. Building a small percentage of extra capacity to be reserved for the short term is justified. Building unlimited pipeline capacity to be able to transport according to every possible flow/demand scenario however is not an economically viable option.

With regard to competitiveness, it is noted that additional investments come at a cost and therefore make sense only after the existing capacities are efficiently utilized. Inefficient costs would lead to unnecessary higher prices for energy for Europe's industry. Affordable energy prices are essential in maintaining the competitiveness for Europe's industries. This option would not foster a more efficient use of the transmission capacity but just provide more capacity.

#### *Social impacts*

Building many new pipelines may be a cumbersome exercise from a practical point of view. A high pressure gas pipeline is an example of a development that can cause a NIMBY reaction. As the social costs are will outweigh the benefits, this is not a desirable option from a social perspective either.

#### *Environmental impacts*

Any projects for the expansion of gas network capacity need to go through rigorous environmental impact assessment given possible negative effects such infrastructure may have on the environment. On the other hand, gas is a key energy source and it can only be transported safely and economically in such large volumes in pipelines. That said, it is clear that any additional pipeline projects may have environmental effects.

#### *Conclusion*

The Commission services are of the view that as long as contractual congestion is not coupled with physical congestion, and therefore price signals through CAMs are not called for the building of new capacity (or the expansion of existing capacity) is less efficient from an economic, societal and environmental point of view. That said, as mentioned above, infrastructure investments in general may well be justified from a security of supply or source diversification point of view.

## **7. EVALUATION OF OPTIONS**

**7.1. The table below indicates the scoring of the various options on the desirability criteria. After that, the scoring is explained.**

*Figure 14: Evaluation of options*

<b>Summary Table of Effects</b>				
<b>Option</b>	<b>Effectiveness</b>	<b>Efficiency</b>	<b>Coherence</b>	<b>Competitiveness</b>
1: Do Nothing	--	--	+	--
2a: New harmonized CAM rules	++	+	++	++
2b: Toolbox Approach	+	-	-	+
3 Unlimited Capacity	-	--	+	--

Option 1: "no further EU action"/baseline scenario: the Impact Assessment has shown, in particular on the basis of the will of the legislator in setting out the development of further rules on CAMs and additionally in the replies to the various Public Consultations undertaken by ACER and ENTSOG, that the current measures enshrined in the Regulation for CAM will in general not lead to an improvement of the capacity allocation landscape across the EU and will certainly not lead to the required harmonization that can be the basis for a well-connected and well-functioning internal energy market. This can be clearly evidenced by the plethora of CAMs in play in different networks today as well as the apparent lack of incentive of market players to discipline their capacity bookings via the existing mechanisms, often leading to market foreclosure. In other words the current CAM regimes cannot effectively enforce the principle of efficient and effective capacity use.

Option 3 "(Unlimited) Investment": appears disproportionate to the extent that the problem at hand remains inefficient capacity allocation methods at IPs leading often to contractual congestion but not necessarily physical congestion. The efficient economic solution thus cannot be that of investing into new capacity instead of improving market rules. At the end of the gas value chain, it is the consumer who would need to pay for this extra cost.

Option 2a is the option that is expected to most effectively and efficiently address the issue of transparent, non-discriminatory and objective access to capacities that is now deemed insufficient on all three aspects. The measures proposed in the NC CAM are the result of a balanced and thorough process of preparation by regulators and transmission system operators throughout which the principles of effectiveness, efficiency, coherence and competitiveness have always been leading.

Within Option 2a, the core measures are the introduction of auctions, the standardization of capacity products and the bundling of entry and exit points into a single cross-border product.

*Auctions:* auctions are a *market-based*, transparent and objective way to allocate scarce products, and less prone to discrimination than for example FCFS. Harmonizing the rules and the timing across the EU facilitates trading enormously, as it lowers monitoring and transaction costs for network users. The increase in trade on the capacity market is expected to have beneficial effects on the commodity wholesale market.

*Standardization and bundling:* where products on two sides of one border point differ, chances are high that cross-border capacities cannot be used efficiently, because shipper portfolios do not match. Both measures ensure that cross-border contractual mismatches cannot occur anymore. Together with the CMP measures, this means that scarce EU-transmission capacity will always be used to the benefit of the internal market. The fact that at least 10% of the capacities is reserved for the short term, make sure that shippers can rely on last minute flexibility needs, lowering barriers to entry.

By limiting the obligation on TSOs to bundle capacities across the borders to capacity that has *not* been sold, existing capacity and supply contracts remain untouched, honouring the principle of legal certainty, but nevertheless creating a step-by-step introduction of bundling upon expiry of the existing contracts.

Option 2b: The toolbox approach has the significant disadvantage that the benefits from harmonization and the implementation of a single set of equal rules are prevented from occurring. Even though the solutions may be the correct ones to effectively address a problem when it arises, the lack of coherence creates an uncertainty about what will apply when and where. In an industry that needs long term regulatory certainty given the long term planning

associated with investments in gas infrastructure, this uncertainty has a dissuasive impact on potential market participants, new entrants and existing players alike.

## **7.2. The preferred option**

The Commission services propose to pursue Option 2a, thereby submitting for treatment by the Gas Committee in the context of the comitology procedure, the CAM NC. The Commission proposed to amend the CAM NC 'materially' on one item, namely the replacement of the Sunset Clause by the more moderate and less intrusive alternative of a best-efforts clause to bring existing contracts in line with the bundling requirements.

## **8. MONITORING AND EVALUATION**

Core indicators of progress in the field of improved CAM are:

- The utilization rates of the interconnection points;
- The evaluation and outcomes of the auctions
- The functioning and activity on the booking platform
- The progressive bundling of entry- and exit-capacities
- The implementation of standardized capacity products
- The spot-price development
- Development of hub liquidity
- Increases in the number of active shippers and traders on the market.

Article 9(1) of the Gas Regulation tasks ACER with the monitoring of all the Network Codes. ACER can be assisted by ENTSOG where needed on the basis of article 8(9). The individual TSOs are obliged to cooperate with ENTSOG according to article 4. Article 41 of the Gas Directive 73/2009/EC foresees very broad monitoring rights and duties for NRAs. Consequently, the monitoring and subsequent evaluation of the progress relating to the application of CMP should be made in that framework. ACER could then report to the Madrid Forum annually on this monitoring exercise.

## 9. ABBREVIATIONS

ACER	Agency for the Cooperation of Energy Regulators
CAM	Capacity Allocation Mechanism
CMP	Congestion Management Procedure
ERGEG	European Regulators' Group for Electricity and Gas
FG	Framework Guideline
IP	Interconnection Point
NC	Network Code
NRA	National Regulatory Authority
NWE	North-West Europe
SC	Sunset Clause
TSO	Transmission System Operator

## **10. LIST OF ANNEXES**

Annex 1: Process (Drafting and Stakeholder Participation of the NC CAM)

Annex 2: Technical Annex

2a Visualization of the design and the practical functioning of capacity auctions

2b Different practices with regard to capacity offering by TSOs

2c Different practices with regard to short term capacity products, allocation and tariffication

Annex 3: Minutes of the last meeting of the Impact Assessment Steering Committee



## Annexes

### **Annex 1 – Process (Drafting and Stakeholder Participation of the NC CAM)**

As can be seen from Figure 1, the Commission initiates the process by identifying priority areas from the issue list in article 8(6) of the Gas Regulation. Consequently, the Commission requests the Agency for the Cooperation of Energy Regulators (ACER) to draw up a Framework Guideline (FG) on the selected policy issue, within a timeframe of six months. The FG is there to lay down the high level principles and objectives of the future network code. The Commission controls the FG and when it considers that it contributes to non-discrimination, effective competition and the effective functioning of the market in the particular policy area, it requests ENTSOG to draft a Network Code on the basis of the FG. ACER finalized its FG on 3 August 2011, which was approved by the Commission and sent through to ENTSOG with the request to draw up a Network Code.<sup>65</sup>

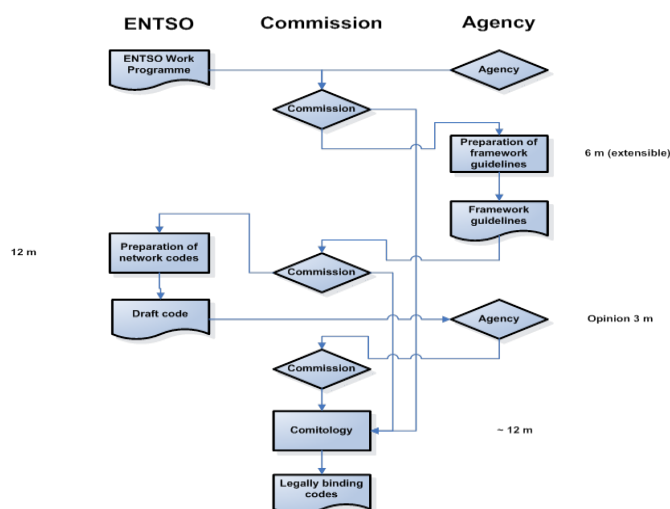


Figure 1: the process of establishing a European network code according to art. 6 of regulation 715/2009

However, ACER's work on the issue at stake, CAM, had started long before the Commission's request to draw up a FG. In response to the conclusions of the Commission's energy sector inquiry<sup>66</sup> which highlighted the existence of congestion in pipelines as a major bottleneck to further developing the Internal Energy Market, and the subsequent adoption of the Third energy package, ACER's predecessor, the European Regulators Group for Electricity and Gas (ERGEG)<sup>67</sup>, had already carried out stakeholder consultations and workshops and published at the end of 2009 its principles on CAM and on congestion management procedures (CMP).<sup>68</sup> This document can be regarded as a first basis for ACER's

<sup>65</sup> ACER's Framework Guideline on CAM is available at: [http://acernet.acer.europa.eu/portal/page/portal/ACER\\_HOME/Activities/FG\\_code\\_development/Gas/F G-2011-G-001%20\(final\).pdf](http://acernet.acer.europa.eu/portal/page/portal/ACER_HOME/Activities/FG_code_development/Gas/F G-2011-G-001%20(final).pdf)

<sup>66</sup> Communication from the Commission – Inquiry pursuant to Article 17 of Regulation (EC) No. 1/2003 into the European gas and electricity sectors (Final Report) COM/2006/0851 Final ["Energy Sector Inquiry"], also see <http://ec.europa.eu/competition/sectors/energy/inquiry/index.html>

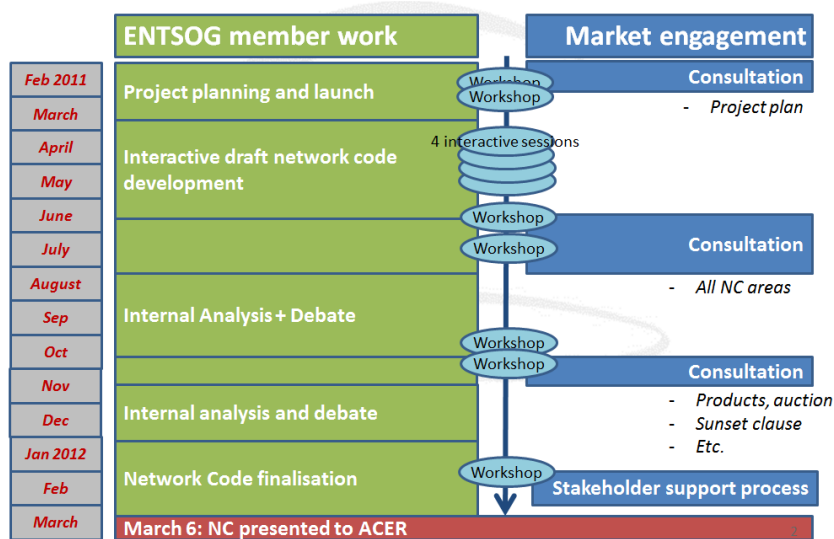
<sup>67</sup> ERGEG, the European Regulators Group for Electricity and Gas, a forerunner to ACER, was a formal advisory group to the European Commission, created by the Commission in 2003 (Decision 2003/796/EC). With ACER fully operational, ERGEG was dissolved (Commission Decision of 16 May 2011 repealing Decision 2003/796/EC) with effect from 1 July 2011. All past works relating to ERGEG activity (documents, reports, Public Consultations etc.) can be found on the website of the European Energy Regulators ([www.energy-regulators.eu](http://www.energy-regulators.eu)).

<sup>68</sup> ERGEG principles, Capacity allocation and congestion management in European gas transmission networks. Ref: E09-GNM-10-03, 10 December 2009, available at: <http://www.energy->

FG and eventually the Network Code that is in front of us today. In view of the adoption and imminent entry into force of the Third energy package and the revised Gas Regulation, ERGEG subsequently re-worked the document into a Framework Guideline that was published in December 2010. After that, ACER took up its duties and formally consulted and established the FG in August 2011.

Having received and approved ACER's Framework Guideline, the Commission subsequently requested the European Network of Transmission System Operators (ENTSO) to draw up a Network Code, using ACER's FG as a basis, within a period of twelve months. Profiting from the possibility to work in parallel with ACER, this process was finalized by 6 March 2012, when ENTSOG presented its final Network Code. The months between December 2010 and March 2012 can be characterized by very intensive stakeholder involvement, through regular meetings, workshops on specific parts and a number of consultations, in the discussion of potential measures and the drafting of the text. This can be seen from *Figure 2* below.

*Figure 2 - CAM Network Code development process (as carried out by ENTSOG)*



As Figure 1 shows, each actor in the process has an ex-post control of the work it initiated. Hence, ACER has reviewed and given a reasoned opinion on ENTSOG's NC with regard to the extent the NC was indeed in line with the FG. On the basis of ACER's reasoned opinion ENTSOG has re-drafted the NC after which ACER declared itself satisfied with the changes made and submitted it to the Commission. The Commission finally launches the Comitology procedure to make the text of the NC a legally binding annex to the Regulation it originated from.

The following parties have participated in one or more of the numerous consultations<sup>69</sup>:

Name Organisation Country of origin

- AEP
- AFG
- BDEW, Germany
- BP, United Kingdom
- British gas, United Kingdom
- BG Italia, Italy

[regulators.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/CEER\\_PAPERS/Gas/2009/E09-GNM-10-03\\_CAM-CMP-RevisedPrinciples\\_10-Dec-09.pdf](http://regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Gas/2009/E09-GNM-10-03_CAM-CMP-RevisedPrinciples_10-Dec-09.pdf)

<sup>69</sup> Please note that this list is not complete

- Borealis
- CEDEC, Association Netherlands
- CEFIC, Association Belgium
- Centrica, Energy company United Kingdom
- CEPSA
- DEPA, Greece
- Distrigas, Belgium
- DONG Energy, Energy company Denmark
- Econgas
- EDF SA, Energy company France
- EDF Energy Energy company United Kingdom
- Edison, Italy
- EDP, Gas Energy company Portugal
- EFET, Association Belgium
- Elengy, France
- EnBW, Energy company Germany
- Endesa, Spain
- Endesa, Ireland Energy company Ireland
- Eni G&P, Energy company Italy
- ENEL, Energy company Italy
- Energie Nederland, the Netherlands
- ENI, Italy
- ENTSOG, Association Belgium
- E.On, Germany Energy company Germany
- ESB, Energy International Energy company Ireland
- Eurelectric, Association Belgium
- Eurogas, Association Belgium
- Europex, Association Belgium
- ExxonMobil, Energy company Netherlands
- UK Gas Forum
- Gas Natural
- Gas Waerme
- Gaslink, TSO Ireland
- GasTerra, the Netherlands
- Gazprom M&T, Energy trading company United Kingdom
- GDF Suez, Energy company France
- GEODE, Association
- GIE
- GSE
- Iberdrola, Spain
- IFIEC, Association Belgium
- National Grid, TSO United Kingdom
- Naturgas Energia Comercializadora (EDP Group), Energy company Spain
- OGP, Association of Oil and Gas producers, Belgium
- Poweo, France
- RWE S&T, Germany
- Sedigas, Spain

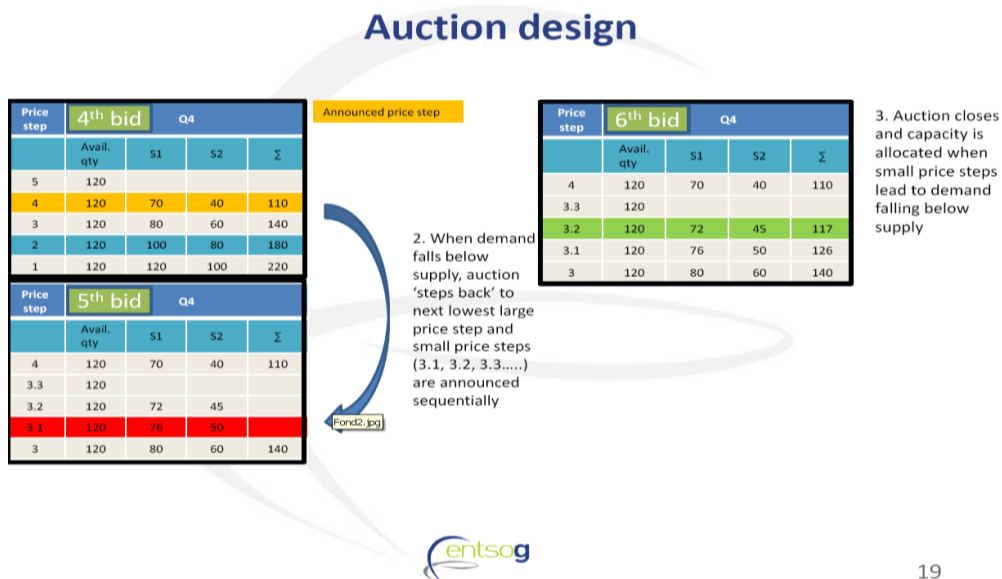
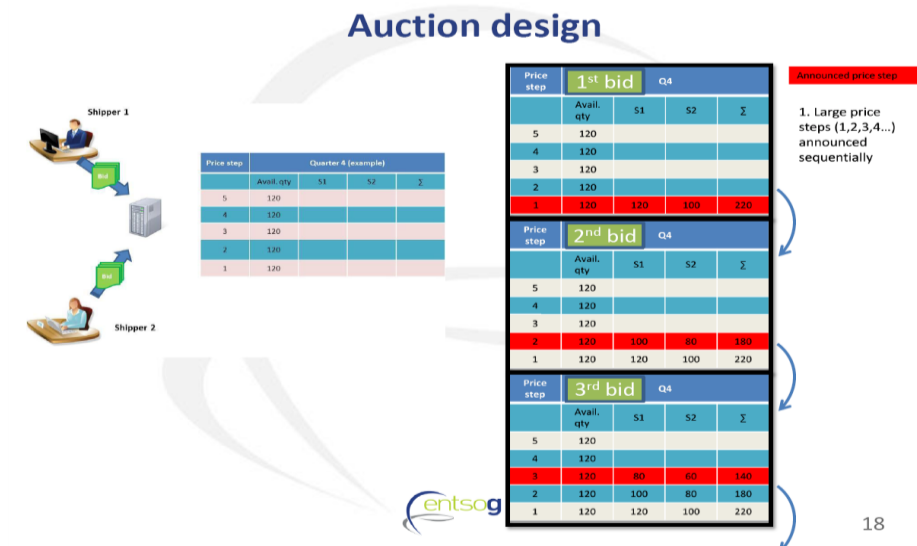
- Societe Generale
- Sorgenia, Energy company Italy
- SSE, Energy company United Kingdom
- STASA
- Statkraft, Norway
- Statoil, Norway
- Storengy
- Swissgas
- Tauerngasleitung
- Total, France
- Direct Energie, Energy company France
- VNG, Germany
- Uprigaz
- Union Fenosa, Energy company Spain
- Verbund, Austria
- VIK (IFIEC)
- VNG, Energy company Germany
- Wartsila
- Wingas, Germany
- Yara

## Annex 2 – Technical Annex

### 2a – Visualization of the design and the practical functioning of capacity auctions

The following figures give an overview of when the harmonized cross-border auctions are envisaged to take place and what auction mechanism shall be applied.

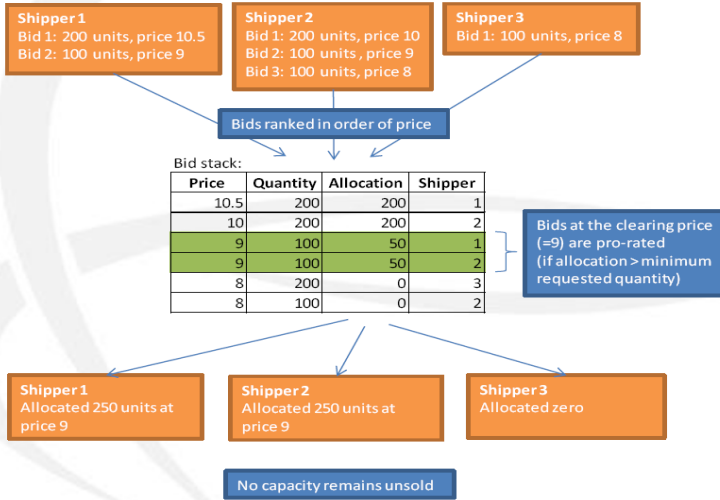
#### The multiple round ascending clock auction



#### The single round short term auction

## For day ahead and within day auctions

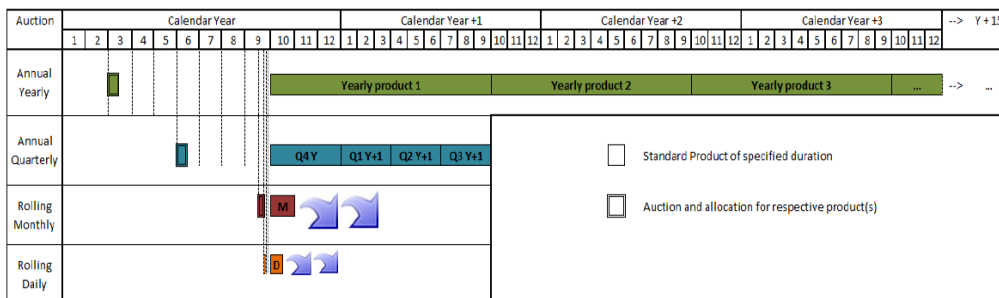
Day-ahead auction: 500 units available



The auction schedule throughout the year: longer term products are offered before shorter term products

## Standard Capacity Products

- Firm auction schedule:



- If interruptible capacity is offered, auction is held after corresponding firm auction.
- Minimum requirement is interruptible day-ahead product if firm capacity is sold out.

## 2b – Different practices with regard to capacity offering by TSOs

TSO Data Collection from the Transparency Platform					
	TSOs	Country	Capacity Products	Gas Day	Capacity Allocation Mechanism
1	Gas Connect Austria	Austria	Multi-annual, annual, half-annual, quarterly, monthly and daily	6-6	First Come First Served (FCFS)
2	BOG	Austria	Multi-annual, annual, half-annual, quarterly, monthly and daily	6-6	FCFS and Open Subscription Window (OSW)
3	TAG	Austria	Multi-annual, annual, quarterly, monthly and daily	6-6	FCFS and Auctions
4	Fluxys	Belgium	Multi-annual, annual, quarterly, monthly and daily	6-6	FCFS and OSW
5	Bulgartransgaz EAD	Bulgaria	No data on the transparency platform	No data on the transparency platform	No data on the transparency platform
6	NET4GAS	Czech Republic	Multi-annual, annual, monthly and daily	6-6	OSW
7	Energinet.dk	Denmark	Annual, monthly and daily	6-6	FCFS and OSW
8	Gasum Oy	Finland	Annual	0-0	FCFS
9	GRTgaz	France	Multi-annual, annual, half-annual, monthly and daily	6-6	FCFS, OSW and Auctions
10	TIGF	France	Multi-annual, annual, monthly and daily	6-6	FCFS and OSW
11	Bayernets GmbH	Germany	Data not available on the transparency platform	Data not available on the transparency platform	Data not available on the transparency platform
12	GASCADE Gastransport GmbH	Germany	Multi-annual, annual, quarterly, monthly and daily	6-6	Auction
13	Gastransport Nord GmbH	Germany	Data not available on the transparency platform	Data not available on the transparency platform	Data not available on the transparency platform
14	Gasunie Deutschland Transport Services GmbH	Germany	Multi-annual, annual, quarterly, monthly and daily	6-6	FCFS
15	GRTgaz Deutschland GmbH	Germany	Multi-annual, annual, quarterly, monthly and daily	6-6	FCFS and Auction
16	Jordgas Transport	Germany	Data not available on the transparency platform	Data not available on the transparency platform	Data not available on the transparency platform
17	Nowega GmbH	Germany	Data not available on the transparency platform	Data not available on the transparency platform	Data not available on the transparency platform
18	Ontras - VNG Gastransport GmbH	Germany	Multi-annual, annual, quarterly, monthly and daily	6-6	Auction
19	Open Grid Europe GmbH	Germany	Multi-annual, annual, quarterly, monthly and daily	6-6	Auction
20	terranelts bw GmbH	Germany	Data not available on the transparency platform	Data not available on the transparency platform	Data not available on the transparency platform
21	Thyssengas GmbH	Germany	Multi-annual, annual, quarterly, monthly and daily	6-6	FCFS and Auction
22	DESFA S.A.	Greece	Multi-annual, annual, half-annual, quarterly, monthly and daily	8-8	FCFS
23	FGSZ Naturel Gas Transmission	Hungary	Multi-annual, annual, quarterly, monthly and daily	6-6	FCFS, OSW and Auction
24	Gaslink	Ireland	Multi-annual, annual, monthly and daily	6-6	FCFS
25	SNAM	Italy	Annual	6-6	OSW
26	Edison Stocaggio SpA	Italy	Data not available on the transparency platform	Data not available on the transparency platform	Data not available on the transparency platform
27	Creos Luxembourg S.A.	Luxembourg	Multi-annual, annual and monthly	6-6	FCFS and OSW
28	GTS	The Netherlands	Multi-annual, annual, quarterly, monthly and daily	6-6	FCFS and OSW
29	Gazsystem	Poland	Multi-annual, annual, half-annual, quarterly, monthly and daily	22-22	OSW
30	REN	Portugal	Data not available on the transparency platform	Data not available on the transparency platform	Data not available on the transparency platform
31	Transgaz	Romania	Multi-annual and annual	6-6	FCFS
32	eustream, a.s.	Slovakia	Multi-annual, annual, half-annual, quarterly, monthly and daily	8-8	FCFS
33	Plinovodi d.o.o.	Slovenia	Multi-annual, annual, half-annual, quarterly, monthly and daily	8-8	FCFS and OSW
34	Enagas	Spain	Multi-annual, annual, half-annual, quarterly, monthly and daily	0-0	FCFS
35	Svenska Kraftnat	Sweden	Data not available on the transparency platform	Data not available on the transparency platform	Data not available on the transparency platform
36	Swedegas AB	Sweden	Data not available on the transparency platform	Data not available on the transparency platform	Data not available on the transparency platform
37	Premier Transmission Limited	UK	Data not available on the transparency platform	Data not available on the transparency platform	Data not available on the transparency platform
38	National Grid	United Kingdom	Multi-annual, annual, half-annual, quarterly, monthly and daily	6-6	Auction
39	Interconnector UK	United Kingdom	Multi-annual	6-6	FCFS

## 2c – Different practices with regard to short term capacity products, allocation and tarification

	TSOs	Country	Offer STC pds. ?	What STC pds are offered?	How are they priced?	Is seasonality applied to the pricing?	Link to short term capacity tariffs or examples of how the short term tariffs work
1	Gas Connect Austria	Austria	Yes, with conditions.	Day ahead capacity booking is possible (subject to certain registration requirements)	Transportation fee for one year and less is between 100% (12 months) to 200% (1 month) of 1/12 of the annual tariff times the number of months. Sub-monthly fees are pro rata temporis of monthly fees.	n/a	<a href="http://www.gasconnect.at/en/Fuer-Kunden/Sales-Transmission/Dienstleistungen/Vorlaufzeiten">http://www.gasconnect.at/en/Fuer-Kunden/Sales-Transmission/Dienstleistungen/Vorlaufzeiten</a>
2	BOG	Austria	Yes	monthly, daily	The monthly payment for the transportation of gas in the WAG is calculated as 1/12 of the sum of (1) the product of the maximum reserved flowrate [RS] (in m <sup>3</sup> /h) and the distance-independent component [EuK], and (2) the product of the reserved maximum flowrate [RS] (in m <sup>3</sup> /h), the transportation distance between the Entry- and Exit Point [TD] (in km), and the distance-dependent component [EaK]. Monthly payment = (RS*EuK + RS*TD*EaK) / 12. For contract duration less than one month, the tariffs for transportation contracts having a duration of one month are equally applied on a pro rata temporis basis.	n/a	<a href="http://www.bog-gmbh.at/index.php?id=94">http://www.bog-gmbh.at/index.php?id=94</a>
3	TAG	Austria	Yes	monthly, daily	The Monthly Transportation fee is based on the committed hourly flow rate (Ship-or-Pay - Concept) and is calculated according to the following formula: For direct flow on firm and interruptible basis: Monthly Transportation Fee in Euro equal to (t1*Q*L+t2*Q)/12 whereas: L refers to the distance between Intake Point and Offtake Point in km, Q refers to the maximum committed hourly flow rate in Nm <sup>3</sup> /h (at 0°C and 1,01325 bar), t1 refers to the distance - based tariff component (depending on the distance between Intake Point and Offtake Point as well as on the maximum committed hourly flow rate) and t2 refers to the tariff component independent of the distance (depending only on the maximum hourly flow rate).	n/a	<a href="http://www.taggmbh.at/allsite_prod1/ContentView/3/FrontEnd?pageid=378">http://www.taggmbh.at/allsite_prod1/ContentView/3/FrontEnd?pageid=378</a>
4	Fluxys	Belgium	Yes	monthly, daily	Coefficients of seasonal capacity tariff: Seasonal tariff = daily tariff of the considered capacity multiplied by a coefficient that varies from one month to the other (see monthly multipliers below) and by the subscribed number of days. The monthly multipliers are January 2.6, February 2.5, March 2.0, April 1.7, May 1.2, June 1.0, July 0.7, August 0.7, September 0.9, October 1.5, November 2.0 and December 2.4.	Yes	<a href="http://www.fluxys.com/en/services/transmission_1/tarifs_1/transmissiontariffs.aspx">http://www.fluxys.com/en/services/transmission_1/tarifs_1/transmissiontariffs.aspx</a>
5	Bulgartransgaz EAD	Bulgaria	Yes	monthly, daily	?	?	<a href="http://www.bulgartransgaz.bg/UserFiles/File/data/services_en.pdf">http://www.bulgartransgaz.bg/UserFiles/File/data/services_en.pdf</a>
6	NET4GAS	Czech Republic		monthly, daily and day ahead	For monthly the price is the reference price (1/12 of the annual firm capacity price) x 1.9. For a contract duration of 11 months the monthly coefficient is 1.2. The daily price is dependent on the duration of the contract.	?	<a href="http://www.net4gas.cz/en/354/">http://www.net4gas.cz/en/354/</a>
7	Energinet.dk	Denmark	Yes	monthly, weekly and daily	The price of a weekly contract covering days falling in two different months is calculated as a weighted average of the price of the two months (rounded to two decimal places). The weights reflect the number of days falling within each month.	Yes, multipliers of less than one are used for the monthly multipliers from May to October	<a href="http://energinet.dk/EN/GAS/Produkter-og-handel/Transmissionstarif-prisblad/Sider/default.aspx">http://energinet.dk/EN/GAS/Produkter-og-handel/Transmissionstarif-prisblad/Sider/default.aspx</a>
8	Gasum Oy	Finland	No	n/a	n/a	n/a	n/a
9	GRTgaz	France	Yes	monthly, daily	Multipliers are applied to the annual tariff	Yes, multipliers of less than one are used for the monthly multipliers for July and August	<a href="http://www.grtgaz.com/en/home/transmission/tariffs/rates/#tableau-6">http://www.grtgaz.com/en/home/transmission/tariffs/rates/#tableau-6</a>
10	TIGF	France	Yes	monthly	Multipliers are applied to the annual tariff, PS mensuel (€/mois) = α x TCS x CJS	Yes, multipliers of less than one are used for the monthly multipliers for July and August	<a href="http://www.tigf.fr/en/what-we-can-offer/transport/prices/current-tariff.html">http://www.tigf.fr/en/what-we-can-offer/transport/prices/current-tariff.html</a>
11	All 11 German TSOs	Germany	Yes	quarterly, monthly, daily	Rule: Prices for ST products sum up to price of next longer product that is made up of them. Day ahead reserve price zero	TSO is free to decide within the rule for ST pricing. Some do not, some do apply seasonality.	<a href="http://www.bayernets.de/start_rastransport_en.aspx?int_name=70612">http://www.bayernets.de/start_rastransport_en.aspx?int_name=70612</a>
22	DESFA S.A.	Greece	Yes	quarterly, monthly, daily	In accordance to the modification of the Ministerial Decree no 4955 / 27.03.06 for the Natural Gas Transmission Tariff and the LNG Re-gasification Tariff (Government Gazette B 747/31.05.2010) are set the following Tariff Coefficients for short-term services: (Total Duration of the Agreement) 1 day - & 90 days =	n/a	<a href="http://www.desfa.gr/default.asp?pid=504&amp;ja=2">http://www.desfa.gr/default.asp?pid=504&amp;ja=2</a>
23	FGSZ Naturel Gas Transmission	Hungary	Yes	monthly, daily	If the monthly capacity booking at the exit/entry point relates to the winter consumption period, then 90 % of the annual transmission capacity fee shall be paid for the first month of the booking, and an additional 10% shall be paid after further months. If the system user books capacity at this entry/exit point at least for three (3) months, such booked capacity shall be used free of charge during the remaining part of the contractual year. If the monthly capacity booking at the entry/exit point relates to the off winter consumption period, then 20 % of the annual transmission capacity fee shall be paid for the first month of the booking, and an additional 5% after further months. If the system user books capacity at this given entry/exit point at least for three (3) months, such booked capacity shall be used free of charge during the remaining part of the contractual year, except in the winter consumption period. If the daily capacity booking at the entry/exit point relates to the winter consumption period, then 1/30th part of 110 % of the annual transmission capacity fee shall be paid after every day of the booking. If the daily capacity	Yes, winter and off winter periods	<a href="http://fgsz.hu/en/content/tariffs-and-fees">http://fgsz.hu/en/content/tariffs-and-fees</a>



24	Gaslink	Ireland	Yes	monthly, daily and within-day	Multipliers are applied to the annual tariff for monthly and daily/within-day	Yes, multipliers of less than one are used for the monthly multipliers from May to September	<a href="http://www.gaslink.ie/index.jsp?p=289&amp;n=180">http://www.gaslink.ie/index.jsp?p=289&amp;n=180</a>
25	SNAM	Italy	Yes	semi annual, quarterly, monthly and daily	The multipliers (applied to the annual fee reduced on pro rata temporis basis) in force for the current regulatory period (2010-2013), as defined by the Regulatory Authority are: 1.1 for semi annual, 1.2 for quarterly and 1.4 for monthly. Daily fees at the entry point of Tarvisio are a pro rata temporis of monthly fees plus a quota depending on the results of the day-ahead capacity allocation procedure on TAG system (reference to AEEG rulings).	No	<a href="http://www.snamretegas.it/export/sites/snamretegas/repository/file/ENG/Thermal_Year_20112012/Transportation_tariffs/Gas_Transmission_Tariffs_and_Metering_service_2012.pdf">http://www.snamretegas.it/export/sites/snamretegas/repository/file/ENG/Thermal_Year_20112012/Transportation_tariffs/Gas_Transmission_Tariffs_and_Metering_service_2012.pdf</a> <a href="http://www.autorita.energia.it/it/docs/12/108-12.htm">http://www.autorita.energia.it/it/docs/12/108-12.htm</a> <a href="http://www.autorita.energia.it/it/docs/12/232-12.htm">http://www.autorita.energia.it/it/docs/12/232-12.htm</a>
28	GTS	Netherlands	Yes	Monthly and Daily	In case of a contract for 12 months or less the tariff for the entire period for which transport capacity is booked will be calculated as follows: The sum of the monthly factors for the individual months (which can never exceed 100%) multiplied by the annual tariff, or, if this is lower (81.25% plus 3% times the number of winter months plus 1.5% times the number of shoulder months plus 0.75% times the number of summer months) times the annual tariff. A daily contract can be booked three months before the starting date of the contract at the earliest. The tariff for daily contracts is 1/15 times the monthly factor multiplied by the annual tariff.	Yes	<a href="http://www.gastransportservices.nl/en/shippers/tariffs/tariffsystem">http://www.gastransportservices.nl/en/shippers/tariffs/tariffsystem</a>
29	Gazsystem	Poland	Yes	semi annual, quarterly, monthly and daily	For semi annual capacity the multipliers are 1.0 for Apr to Sep and 1.8 for Oct-Mar, for quarterly capacity the multipliers are between 1.2 and 3.2 depending on the quarter in question, for monthly capacity the multipliers are between 1.5 and 3.8 depending on the month in question and for daily capacity the tariff is 1/20 of the transmission service fee for a given calendar month.	Yes	<a href="http://en.gaz-system.pl/taryfa/taryfa-i-stawki-oplat/">http://en.gaz-system.pl/taryfa/taryfa-i-stawki-oplat/</a>
31	Transgaz	Romania	Yes	Daily	At this date there is no framework agreement and differential tariffs for the short term services.	No	<a href="http://www.transgaz.ro/en/tarif_transport.php?poz=345">http://www.transgaz.ro/en/tarif_transport.php?poz=345</a>
32	eustream, a.s.	Slovakia	Yes	Monthly and Daily	The duration factor of short term (monthly or daily) contracts ( $I_{m/d}$ ) shall be determined depending on the agreed number of months/days of the gas transmission agreed on the basis of the contract. The duration factor of the short term contracts shall be determined in the following manner: for monthly contracts: $I_m = 0.16 + 0.12 * D_m$ , where $D_m$ – duration of gas transmission under the contract in months. For daily contracts: $I_d = 0.001 + 0.01 * D_d$ and where $D_d$ – duration of gas transmission under the contract in days.	No	<a href="http://www.eustream.sk/files/docs/eng/tariffs_2012.pdf">http://www.eustream.sk/files/docs/eng/tariffs_2012.pdf</a>
33	Plinovodi d.o.o.	Slovenia	Yes	Monthly and Daily	Factor of tariff lines for the transmission of each calendar month $m$ ( $F(m)$ ) is between 0.083 and 0.245. Factor for the transfer of tariff lines for each calendar day $d$ in month $m$ ( $F(Dm)$ ) is between 0.0052 and 0.0175.	Yes	<a href="http://www.uradni-list.si/1/content?id=99180">http://www.uradni-list.si/1/content?id=99180</a>
34	Enagas	Spain	Yes	Monthly and Daily	Tariff charges are calculated on an annual basis, but short-term capacity contracts up to 1 day are allowed. Daily and monthly capacity products are calculated multiplying the capacity charge by a coefficient (commodity charge is the same). The monthly multipliers are either 0.5 or 2.0 and the daily multipliers are either 0.03 or 0.1.	Yes	<a href="http://www.enagas.es/cs/Satellite?cid=1142417697925&amp;language=en&amp;pagename=ENAGAS%2FPAGE%2FENAG_lista_doCombo">http://www.enagas.es/cs/Satellite?cid=1142417697925&amp;language=en&amp;pagename=ENAGAS%2FPAGE%2FENAG_lista_doCombo</a>
35	Svenska Kraftnat	Sweden	n/a	n/a	n/a	n/a	n/a
36	Swedegas AB	Sweden	n/a	n/a	n/a	n/a	n/a
37	Premier Transmission Limited	UK	No	n/a	n/a	n/a	n/a
38	National Grid	United Kingdom	Yes	Quarterly, Monthly, Daily and Within-Day	The prices are dependent on the outcome of the shorter term auctions but there is a 33% discount for day ahead and a 100% discount for within-day capacities.	?	?
39	Interconnector UK	United Kingdom	No	n/a	n/a	n/a	n/a

