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**NON CONFIDENTIAL
VERSION**

COMMISSION FOR ELECTRICITY AND GAS REGULATION

STUDY

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on

*'the development of a new model for gas
transmission'*

This document does not contain any viewpoint of CREG

Carried out on the basis of Article 15/14, §2, second lid,
2°, of the law of 12 avril 1965 regarding the organisation
of the gas market

27 January 2011

INTRODUCTION

The present study presents an overview of the actual situation related to the development of a new model for the transmission of natural gas¹.

On August 13, 2010, CREG launched a consultation on its proposed principles for a new transmission model for the transmission of natural gas. CREG thus published a consultation paper² on its website and invited all market players to provide in a succinct note their thoughts, comments and suggestions concerning these proposed basic principles for a new transmission model and to come explain those ideas orally.

Several market players responded positively to CREG's initiative. In total, from late September to mid-December 2010, 43 consultation meetings were held with individual consumers (2) shippers / suppliers (19), traders (4), the Stock Market facilitator (2) and TSOs (3) as well as with the umbrella organizations and / or representatives of consumers (1), shippers / suppliers (1) and distribution network operators (2).

The basic principles for a new transmission model proposed by CREG in its consultation paper were also presented and discussed at several work meetings with regional regulators (3) and the transmission system operator Fluxys SA, hereafter "Fluxys" (6).

The study consists of five parts. In the first part the context and the legal framework related to the development of a new transmission model are pointed out. The second part describes the present model and its restrictions. The third part contains an overview of the remarks as formulated by market parties during the consultation. In the fourth part CREG provides an overview of attention points to be taken into consideration when developing a new transmission model. In the fifth part CREG details the steps to be taken to implement the new transmission model.

The present study has been approved by the Committee of Directors of CREG in their meeting of 27 January 2011.

¹ This is the « natural gas transmission » mentioned in Article 1, §2, 72°, of the Royal Decree of 23 December 2010 concerning the code of conduct in terms of access to the natural gas transmission network, to the natural gas storage facility and to the LNG facility and amending the Royal Decree of 12 June 2001 concerning the general terms and conditions of natural gas supply and the granting conditions for the natural gas supply authorisations (Belgian Official Gazette of 5 January 2011): <http://www.creg.info/pdf/MB/MB.05012011.pdf>, that is to say the « gas transmission through the natural gas transmission network, namely the internal routing and the transit ». The CREG chooses however to use the term « transmission » mentioned in Article 2.3 of the Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC and Article 2.1.1) of the Regulation (EC) no 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) no 1775/2005.

² See CREG website: http://www.creg.be/nl/opinionong_nl.html or http://www.creg.be/fr/opinionong_fr.html Consultation on the basic principles for an optimized transmission model for natural gas.

1. CONTEXT AND LEGAL FRAMEWORK

On 16 July 2009, CREG sent its proposal for a new code of conduct to the Minister of Climate and Energy.³ This proposal was prepared in consultation with all market players based on several public consultations. All market players and their advocacies were given the opportunity at the various stages of the project to formulate comments and concerns, both through the use of public consultations and through multilateral and bilateral contacts with CREG.

The proposed Royal Decree was submitted on 20 April 2010 by the Minister to the legislative department of the State Council. On 1st June 2010, the State Council handed down its favourable opinion⁴ to the Minister of Climate and Energy, with a number of formal remarks. On 4 November 2010, the Minister requested a second opinion from the legislative department of the State Council. On 22 November, the State Council sent its advice⁵ to the Minister of Climate and Energy. On 5 January 2011, the code of conduct Royal Decree was published in the Belgian Official Gazette.⁶

The new code of conduct ([see appendix to this consultation paper](#), non binding translation of the code of conduct: <http://www.creg.info/pdf/MB/MB.05012011EN.pdf>) stipulates among other things that the operator of the natural gas transmission system draft a standard natural gas transmission contract (*articles 77 and 109*), a standard connection contract (*article 96*), an access guide (*articles 29 and 111*) and a natural gas transmission programme (*articles 81 and 112*) composing.

The **standard contracts** constitute the "entry ticket" to the transmission, transmission services and all information platforms offered by the operator of the gas transmission system. Both for shippers (*standard gas transmission contract*) as well as customers (*standard connection contract*).

The **access guide** includes a detailed description of the transmission model applied, all operating rules and procedures for access to and subscription of gas transmission services, the allocation rules, the procedure for nomination and re-nomination, the provisions applicable to reductions and interruptions, the rules on net balancing, procedures for the congestion management, the maintenance terms, the prescriptions on pressure and quality, the procedures regarding the measurement of quantities and qualities of the natural gas and all rules concerning functioning of the secondary market and access to the hub.

The **natural gas transmission programme** provides a user-friendly description of the transmission model and is first and foremost the catalogue of the gas transmission services offered by the operator. Furthermore, it describes how the natural gas transmission services can be reserved on the primary market and gives information on actual congestion management and functioning of the secondary market.

³ See CREG website: <http://www.creg.info/pdf/Voorstellen/C882NL.pdf> or <http://www.creg.info/pdf/Propositions/C882FR.pdf> Proposal (c)090716-CDC-882 of 16 July 2009 from CREG

⁴ Opinion 48.150/3 of 1st June 2010 of the legislation department of the State Council

⁵ Opinion 48.900/3 of 22 November 2010 of the legislation department of the State Council

⁶ Royal Decree of 23 December 2010 on the Code of Conduct on access to gas transport, storage facility for natural gas and LNG facilities and amending the Royal Decree of 12 June 2001 on general conditions for supply of natural gas and the conditions of supply licenses for natural gas (Belgian Official Gazette of January 5, 2011): <http://www.creg.info/pdf/MB/MB.05012011.pdf>; <http://www.creg.info/pdf/MB/MB.05012011EN.pdf>

The **standard gas transmission contract, the standard connection agreement, access guide** and **gas transmission programme** must be submitted by the natural gas transmission system operator to CREG for approval. These key documents are created after consultation with the market players concerned. To that end, the operator establishes a consultation platform (*article 108 of the Code of Conduct*) for the purpose of consulting with network users in a regular and structured manner.

The basis for preparation of those documents is naturally the **transmission model** used by the operator. The code of conduct stipulates that the operator of the natural gas transmission system design a transmission model under which efforts are made to achieve independent reservation of entry and exit capacity, use of one balancing zone, promotion of the functioning of the secondary market for natural gas transmission services and promotion of the liquidity of the natural gas market (*article 113*). The operator develops the associated natural gas transmission services to that end.

2. THE CURRENT TRANSMISSION MODEL

The current natural gas transmission model which was introduced in its first version in April 2004 and was modified and adapted a number of times over the years, is described in the 2010-2011 Indicative Transport Programme.⁷ This transmission model has a number of specific features that many market players today value as limiting both for the transport and for the trading of natural gas:

- coupling of entry and exit points in the reservation of transmission services;
- set of complex allocation rules with clauses on matching and, in case of congestion, allocation based on priorities;
- the existence of 4 balancing zones;
- inefficient use of same entry points;
- lack of a proactive and transparent congestion management;
- limited access to the L-gas market and insufficient coupling between the H-gas and L-gas markets;
- quality conversion with restrictions both for the reservation of this service and for its use;
- limited secondary market for transit (**Capsquare**) and for domestic transmission only supply of information (bulletin board) without operator intervention;
- possible only on physical natural gas trading business via the Zeebrugge Hub.

These restrictions should be removed in order to further develop both the market for transmission services and the market for trade in natural gas. The current transmission model is no longer suitable to meet the needs of suppliers, shippers and buyers. Moreover, these restrictions directly affect the electricity market. The rapid evolution in terms of decentralized generation, the increasing importance of solar and wind power and the role of natural gas as a backup make simple, convenient and easy access to the natural gas market (*both transport and trade*) an absolute requirement.

As mentioned in section 1, one of the important objectives included in the new code of conduct is the obligation to evolve to meet the needs of the modified gas transmission model. The current transmission model for natural gas has certainly proved its worth but has since been rendered no longer workable by the evolution of the market for natural gas transmission and the revised European and Belgian regulatory context. Adjustments and improvements made over the course of the years to the transmission model, which resulted in successive Indicative Transport Programmes, are no longer sufficient to respond to changing market conditions. If Belgium intends to continue to guarantee the security of its supply and its position as a major round about for the trade of natural gas in North-western Europe in the coming year, remodelling of the transmission market for natural gas is without doubt a priority.⁸ The introduction and implementation of a new transmission model is a key element and an absolute prerequisite for this objective.

⁷ See the Fluxys website, the Services-Transmission-Services and Models section: http://www.fluxys.com/nl-BE/Services/Transmission_1/ServicesAndModels_1/DomesticTransmissionModel.aspx

⁸ See CREG website: <http://www.creg.info/pdf/Adviezen/ARCG100714-049NL.pdf> Opinion AR100714-049 of 14 July 2010 from the General Council of CREG:

CREG is fully aware that this will have an enriching impact on the functioning and organization of the operator of the natural gas transmission system. This is a comprehensive project that will require the necessary preparation and thus regular meetings.

In preparation of this project, CREG submitted proposed basic principles to the market players for consultation. Section 3 summarizes the basic principles proposed by CREG in its consultation paper along with the thoughts, comments and suggestions offered orally and/or in writing by the market players to CREG before, during and after the consultation meetings. Section 4 of this report contains the conclusions and section 5 contains a proposition of step by step implementation of the new transmission model.

3. RESULTS CONSULTATION ON THE BASIC PRINCIPLES FOR THE NEW GAS TRANSMISSION MODEL

The following comments and concerns were raised by the various market players who took part in the consultation during the many bilateral consultation meetings. Some market players also provided their comments in the form of a letter or a presentation in writing to CREG.

CREG has chosen to group these comments, remarks and concerns together by item for concern. For reasons of readability, for each concern, the basic principles for the new transmission model as they were included in CREG's consultation paper are presented first. Thereafter, under the heading "market reaction", follows a summary of the comments expressed by the consulted market players on the proposed basic principles.

During the discussions, multiple points for concern that fall outside the scope of the consultation paper were brought forward by several market players. These points were grouped together under the heading "3.7. Other considerations".

3.1 Offer of transmission services

3.1.1 Proposed basic principles:

- Independent reservation of entry and exit capacity;
- Removal of the distinction between transit and domestic mission;
- Allocation of entry capacity through simple and transparent allocation rules (*including auction*).
- Development of new services (*interruptible exit points, crisis management...*)

3.1.2 Market response: CONFIDENTIAL

3.1.3 *Comments and concerns of market players on CREG's proposed basic principles (text for non-confidential report)*

Independent reservation of entry and exit capacity.

Removal of the distinction between transit and domestic transmission.

- Many market players agree on the urgent need to adapt the existing transmission model in order to upgrade it to the level of the neighbouring markets. Fluxys must transform its current Enhanced / Entry / Exit system into an Entry / Exit system in which no distinction is made between transit and domestic transmission.
- The market players are in favour of independent reservation of entry and exit capacity. The current allocation rules are restrictive for newcomers on the market. Moreover, the separation between transit and domestic transmission is inefficient, giving rise to the over-reservation of entry capacity. An Entry / Exit system whereby the reservation of entry and exit capacity is no longer coupled and no distinction is made between transit and domestic transmission will remove a number of barriers to access to the natural gas market.
- The decoupling of entry and exit capacity is crucial for the proper functioning and development of the market. The German and Dutch markets have developed more rapidly in recent years than the Belgian market. A customer-friendly transmission model that is adapted on a regular basis and in consultation with market players makes these markets attractive to new players. The absence of a transmission model adapted to market needs is a missed opportunity for Belgium, which has an excellent basic infrastructure and strategic location.
- The introduction of a new transmission model is crucial for the functioning of the liberalized market. The introduction of a new transmission model is undoubtedly a necessity to remove the limitations of the current transmission model that first and foremost complicates access for newcomers.
- By introducing the new transmission model, the European context shall not be forgotten. The transmission services should preferably be allocated in accordance with the proposed Framework of Guidelines on Capacity Allocation of ERGEG.
- The distinction of transit and domestic transmission should be eliminated. Under the current system, there is up to now no regulated framework (contracts and services) for transit because the hitherto existing code of conduct does not apply to transit. The proposed new code of conduct of CREG must thus be applied immediately. Despite the lack of publication of the new code of conduct, the TSO must follow the provisions on standard contracts, access guide and service programmes included in the draft code of conduct of CREG as rapidly as possible, and in consultation with the concerned market players.
- The current method of service subscription and the corresponding allocation rules hamper a flexible and optimal allocation of entry capacity. It is clear that there should be no distinction between subscription of entry capacity for transit and domestic transmission. The subscription of entry and exit capacity regardless of the desired destination (Belgian customer, HUB, portfolio optimization, transit ...) gives network users the ability to adapt to the changing demand and supply patterns of the market.
- If a network user wishes to subscribe entry capacity for short or long term periods, and can provide the necessary financial guarantees, then the TSO needs ask no further questions about the reasons behind this subscription. The network user endorses the capacity and uses it at its own discretion. The cost of this service will encourage the network user to use the services subscribed in the best manner possible. The TSO needs only ensure that abuse is avoided by an appropriate proactive congestion policy.
- The independent reservation of entry and exit capacity is a major step forward for network users. This should not however lead to reduction of available firm capacity and may likewise not lead to the

offering of less capacity than the maximum technical capacity, to the offering of a greater share of capacity in the form of interruptible capacity and the introduction of other barriers for network users.

- Some market players argue that adequate availability of infrastructure (both upstream and downstream) will provide the opportunity to:
 - diversify the primary sources and thus to improve security of supply;
 - allow for sufficient competition on the wholesale market.

They argue therefore that the basic infrastructure (networks, LNG terminals, storage) be extended as long as the cost thereof is offset by a lower energy price, so as to optimize the social benefit. For them, competition is the best guarantee of security of supply. In that context, the TSO must invest in additional infrastructure to stimulate both upstream and downstream competition and the necessary measures must be taken to allow the markets to work as efficiently as possible. These market players argue for a permanent monitoring of security of supply, with a long-term warning system if security becomes threatened.

- Several market players advocate for an adaptation of the existing transmission model with special attention given to prevent over-investment in the transmission model that would increase the total cost of natural gas as major source of energy and thus reduce the competitiveness of natural gas over other sources of energy. If the decoupling of the reservation of entry and exit capacity is associated with significant additional investment, this will lead to rising costs and thus higher transmission rates to be passed on to consumers.
- In that respect, the offering of interruptible transmission services at the entry points, where the risk of interruption is clearly identified, is an important condition to avoid over-investment in transmission. A market player accepts the principle that the sum of the subscribed entry capacity be equal to x times the sum of the subscribed exit capacity (where x equals a number between 0.7 and 1).
- Transit and domestic transmission are two different services and although no distinction is made at the time of reservation, these services will continue to coexist. The removal of the distinction between transit and domestic transmission for reservation tariffs should not lead to reduction of the available firm capacity and / or a substantial increase in tariffs. From the viewpoint of security of supply, special attention should be given to the risk that transit flows could lead to the reduction of capacity available for domestic transmission.
- A market player argues that the main restriction for network users is the distinction between transit and domestic transmission. This distinction is artificial because the same pipelines, the same entry points and the same equipment is used. Furthermore, the TSO advocates in the current transmission model for transit capacity to be transformed into capacity for domestic transmission if the latter is not available at the entry point in question. This immediately proves that no actual distinction need be made for operational reasons. Instead of striving for the maximum synergy between transit and domestic transmission, it is thus better to immediately eliminate any distinction.
- The automatic upgrade of interruptible into firm capacity must be avoided once firm capacity again becomes available. The TSO offers interruptible transmission services and takes into account the evolution of its known and expected subscriptions from all market players.
- A market player endorses the limitations summarized by CREG in its consultation paper of the existing transmission model. The restrictions listed constitute a barrier for new players on the market. The existing transmission model is no longer adapted to the changing market conditions. The transition to a new transmission model will undoubtedly improve access to Belgium's natural gas transmission system. It will enhance transparency and meet the obligations imposed by European legislation. The removal of the distinction between transit and domestic transmission will allow Belgian end-users to fully enjoy the benefits of a liberalized European gas market.
- The introduction of this new transmission model with the decoupling of the reservation of entry and exit capacity brings together players in a virtual marketplace and thus facilitates access to a liquid

gas market. The transition to a new transmission model where entry and exit capacity can be subscribed independently must be made as soon as possible.

Allocation of entry capacity through simple and transparent allocation rules (including auction).

- The access rules to the Belgian gas transmission system are complex, inadequate and archaic compared with those applicable in the Netherlands, France and Germany.
- The current transmission model that links the reservation of entry and exit capacity and distinguishes between transit and domestic transmission is outdated and forms a barrier to newcomers on the market. The introduction of a new transmission model is thus urgent and must be carried out as soon as possible. The matching rule used by the TSO should be lifted.
- A market party argues that the allocation rules should be simple and transparent to simplify access to the natural gas transmission system for newcomers.
- A market party calls for transparent allocation rules without priorities. Long term reservations are required to enable long-term supply contracts and thus guarantee security of supply (SOS).
- Some players argue that transparent and simple allocation rules imply the use of standardized transmission services, preferably in the form of bundled products (in a transitional phase, combined products) where both the entry and exit capacities are offered together through a single allocation process. A supplementary condition is the requirement to concentrate the purchase and sale of natural gas at the respective hubs and exclude trading on the flange.
- The allocation of bundled (in the transition phase, combined) transmission services should take place through auctions. Auctions are less suited for the subscription of long term transmission services and an Open Season Procedure based on regulated tariffs should be preferred. At any point, there is only one TSO acting as a counterparty and responsible for all transactions.
- A number of market players is in favour of offering bundled products at the border points.
- A market party argues that the implementation of auctions as an allocation system is premature since the market is not mature enough for this system. Here, the security of supply should not be overlooked and we should take into account the fact that supply contracts are coupled to the reservation of entry capacity over the longer term.
- A newcomer to the market suggests that the subscription of transmission services be carried out preferably through an online electronic platform. Allocation takes place in auctions. This guarantees transparent and non-discriminatory allocation. Smaller players have equal access to the transmission market and no longer suffer the disadvantage of "asymmetric information" where the larger players repeatedly seem to have more and better knowledge of the existing system.
- A market party argues that the TSO should switch to the offering of combined transmission services in consultation with the neighbouring TSOs, where the characteristics and duration of the services as well as the allocation rules are aligned. Exclusive use of bundled products is not appropriate because this prevents trade on the flange.
- Most of the market players have a strong preference for the use of auctions as an allocation mechanism. They refer in this context to the EFET paper published on 27 July 2010 "capacity allocation characteristics".⁹ If you switch to auctions, then all existing capacities must be auctioned.
- Some market players feel that open seasons should be integrated into the auction mechanism. The use of open seasons is a good procedure to gauge long-term capacity needs and avoid congestion.

⁹ See the EFET website: <http://www.efet.org/GetFile.aspx?File=4556>: capacity allocation characteristics

- If the auctions are based on a solid, well thought concept, this transmission service allocation method is the best practice for matching supply and demand. Allocation of entry capacity and capacity at the exit points situated on the borders of the natural gas transmission system must take place via auctions. Exit capacity at the end customers' supply points directly connected to the transmission system is owned by the end customer and therefore no longer needs to be subscribed by the shipper or supplier. Thus, allocation rules are also no longer needed for such capacity.
- A market party argues that the rules may differ for the allocation of entry capacity according to whether or not there is congestion. If there is no congestion, no allocation rules are necessary. In that case, it is not even necessary to speak of First Come First Served. The network user requests the transmission services that are best suited to its needs. In the event of congestion, the TSO must auction the capacity, where both short and long term products are offered. Auctions are a good basic principle for the allocation of transmission capacity. It is important that the auction and associated congestion management be conducted so that market players do not have the ability to purchase all capacity and then hold it back (partially). Congestion interest rates are a signal for the TSO to invest in the transmission system in order to eliminate congestion. Additional revenue generated by auctioning should therefore be used for investment and / or to reduce transmission tariffs. If there is no congestion, there is no need for auctions and the current allocation rules (First Come, First Served) are maintained.
- All players argue that surplus revenue from the TSO should be used for investment and / or lowering transmission tariffs. Congestion interest rates are a signal for the TSO to invest. Revenues beyond the total regulated income of the TSO resulting from congestion should therefore be used to invest and / or reduce tariffs.
- A market party argues that surplus income generated by the auctions in the event of congestion be used for investment in the transmission system under the strict supervision of the regulator.
- A shipper / supplier argues that the offering and the nature and characteristics of the transmission services offered to the market players by the neighbouring TSO should be aligned. Until now, this has not been the case at many interconnection points, giving rise to the creation of a barrier to entry for newcomers that must try to understand the different rules on both sides of the border point and compose the required services package by aligning differing (both in nature and timing) offers on both sides of the border points. In this respect, the shipper / supplier is in favour of combined products and, where possible, bundled products for the border points in Europe. At border points on Europe's external borders, the current system of separate reservation of entry and exit capacity must be preserved. The bundling of capacities between European networks and networks outside Europe that are not accessible on a transparent and non-discriminatory basis will lead to market dominance by a limited number of producers which in turn could threaten the security of supply in Europe.
- For a market player, auctions must meet the following conditions:
 - The allocation of transmission services should take place in different time intervals: e.g. 65% for long term (more than 4 years), 15% for medium term (1-4 years) and 20% for short term (less than 1 year)
 - The auction should take place within normal working hours (09:00 to 18:00)
 - The procedure is identical for all capacity products
 - Minimum amount of capacity is 1 MWh / h
 - The reserve price is the regulated rate (approved by the regulator)
 - Auction takes place in several phases
 - Only parties participating from the first round can participate
 - If supply is below demand, a next round starts with the price increased e.g. by 5 cents / kWh / h
 - In case of supply exceeding demand, the quantity not allocated is offered in subsequent auctions for products of shorter duration: e.g. unsold annual capacity is divided into monthly and / or daily capacity.
 - A shipper who has interruptible capacity and has been allocated firm capacity can convert the interruptible into firm capacity.

- Some market players argue for a limited and clearly defined offering of standardized transmission services. This should prevent this market from becoming fragmented and thus remaining illiquid. In line with ERGEG's draft Framework Guidelines on Capacity Allocation Mechanisms, the following items should be included in the service programme:
 - Intraday capacity
 - Day ahead capacity
 - Monthly capacity
 - Quarterly capacity
 - Annual capacity (minimum 1 year to 15 years)

- Auctions are the only real market-based mechanism for allocation of transmission services. Auctions are preferred as an allocation method for reasons of transparency and non-discrimination of market players. Auctions are preferred for the allocation of transmission services at border points (entry and exit points). They give the right price signals to market players and the TSO and any congestion interest rates should be used by the TSO for investment in new infrastructure. According to this market player, the auction model takes into account:
 - Offers in Euros / MW and volumes in MW (e.g. x Euro / MW per y MW)
 - Participants in the auction can make multiple bids for each product / auction
 - Fill-or-kill option: the network user should be able to align its request for capacity with its long-term supply contract
 - Reserve price = approved regulated tariff
 - Final price = clearing price

- For the allocation of primary transport capacity, a market player proposes evolution towards a “gas lake” system in which only supply volumes need be nominated. Based on this, the TSO organizes the balancing of the transmission system. The necessary investments in transport and storage capacity should be made as quickly as possible.

- Many market players have clear opinions about the use of bundled products. The offering of transmission services through auctions is a step forward for the proper functioning of the primary gas transmission market. Offering bundled products as additional product and part of a wide range of transmission products is a good thing. The obligation to exclusively offer bundled products at the interconnection points, both for existing and new capacity, is strongly discouraged and will not benefit the market:
 - When bundled products are mandatory and imposed on existing contracts, this results in the simultaneous renegotiation of numerous transmission contracts throughout Europe;
 - The shift from a physical to a virtual supply point involves changing contractual arrangements relating to nominations, allocation of natural gas, operating rules, taxation, transmission costs ...;
 - Re-opening of existing transmission contracts has an impact on supply contracts, that must take place on the basis of the relevant clauses in the contracts, many of which were negotiated in recent months in the context of linking gas to oil and / or the spot market.

According to this market player, there is no evidence that the mandatory imposition of the use of hub-to-hub products will increase the liquidity of the gas market:

- Bundled products are useful to supplement the existing mix of transmission services and an answer to the needs for trading on spot markets. This product has value only for short-term trading;
- The imposition of the obligation to exclusively offer bundled products at the interconnection points will not increase the long-term liquidity of the gas market. This might only favour upstream producers;
- Bundled products may incite some market players to reduce their trading activities, if administrative and financial obligations to trade on the hub instead of the flange are not economically justified or if this does not correspond to the commercial strategy of these companies.

- A large majority of market players in the natural gas market do not accept the exclusive imposition of bundled products and want the choice to not be restricted. The concerned market players will make their own choice based on market needs. The freedom of choice will help to increase liquidity and improve functioning of the market as a whole.
- Combined products are preferred over exclusive bundled products. These products are equivalent in terms of usage and ensure easy access to the market at limited transaction costs. The use of combined products should be encouraged and implemented across Europe including through Gas Regional Initiatives and for a period of five years. Sound monitoring and evaluation should take place before switching to the mandatory imposition of bundled products.

Development of new services (interruptible exit points, crisis management...)

- The TSO should re-evaluate, adjust and adapt its services package to the needs of the market.
- The service offering consists of an array of short, medium and long term products.
- The TSO is developing a services package tailored to the gas market and in particular to supply contracts.
- The introduction of a new transmission model will, in principle, have little effect on the known physical flows and the known load on the transmission system. Therefore, it should be ensured that the amount of firm capacity offered is not adversely affected due to the introduction of an entry / exit system. If necessary, the TSO should develop additional services (interruptible capacity, operational agreements (flow commitments), counterflow (backhaul) ... to keep the offering of firm capacity at sufficiently high levels.
- The services programme needs to be adjusted and should contain new products, such as operating agreements (flow commitments).
- The TSO must calculate the available capacity based on a fixed set of parameters in consultation with neighbouring operators.
- The offering of interruptible services will help to limit any congestion caused by the decoupling of entry and exit capacity.
- Regarding the development of new services, the TSO should perform a rigorous cost-benefit analysis in advance. Natural gas must remain a competitive source of energy.
- New services are developed and introduced in consultation with the concerned market players.
- The TSO must make its information platform customer-friendly and more accessible. It is recommended to develop a reliable information system that continuously provides all relevant data (allocated capacity, available capacity, network status) to the network user through simple web applications. The costs of development and operational maintenance of the auction and data platforms should be included in the transmission tariffs.

3.2 Secondary market and congestion policy

3.2.1 Proposed basic principles:

- Effective organization of the secondary market¹⁰ by the gas transmission system operator for the trading of transmission services;
- Proactive congestion management¹¹ on the basis of the predetermined non-discriminatory and transparent rules.

3.2.2 Market response: CONFIDENTIAL

3.2.3 Comments and concerns of market players on CREG's proposed basic principles (text for non-confidential report)

Effective organization of the secondary market by the gas transmission system operator for the trading of transmission services.

- Almost all market players are in favour of a secondary market organized by the TSO (Secondary Market Platform - SMP), which is particularly the case for most of the shippers as they are legally obliged by the new code of conduct to offer unused capacity on the secondary market.
- A well-functioning secondary market is crucial for a properly functioning gas market.
- The TSO must take responsibility for organization of the secondary market. The most obvious way to do this is to present the offering of primary and secondary capacity on the same platform using the same procedures and rules. In this way, contractual congestion can be prevented.
- As the TSO is best experienced in offering transmission services, it is best positioned to organize the secondary market.
- The TSO will organize and encourage the secondary market in the form of an online electronic platform and thus make the secondary market more accessible and transparent. European TSOs shall cooperate to use the same trading platform (e.g. trac-x platform used by several TSOs in Germany).
- The TSO should facilitate this market without limiting the freedom of trading.
- The secondary market will be stimulated by strict application of the UIOSI principle.

¹⁰ Secondary market: see articles 17 to 20 of the Code of Conduct Royal Decree of 23 December 2010 (Official Gazette of 5 January 2011).

¹¹ Congestion policy: see articles 10 to 16 of the Code of Conduct Royal Decree of 23 December 2010 (Official Gazette of 5 January 2011).

- The TSO has an important role to play in terms of organization and trade on the secondary market. The way this business works, how, where and when and at what transaction price is completely free to be defined between the negotiating parties. The same market party recognizes that the use of standard products and concentrated liquidity in an easily accessible marketplace constitute a natural environment for the secondary capacity market.
- There is as yet only limited interest from shippers for transactions on the secondary market. New mechanisms will only modestly encourage this interest. The success of a platform for the secondary market by the TSO is highly dependent on the preparedness of the shippers to use the platform. Most shippers prefer bilateral trade.
- Some participants in the consultation are in favour of the requirement that all trade be carried out via this SMP. They point in this context to the recent initiative of Fluxys and GRT called **Capsquare**. This requirement is necessary to establish a liquid and transparent secondary market for transmission services. It should be guaranteed that the entry costs are minimal.
- Some market players find that, in addition to trade on the SMP managed by the TSO, bilateral trade and / or OTC must remain possible provided notification of transactions to the TSO who then can report globally via the SMP to all market players. The transfer of capacity between network users must be possible at no cost and on very short notice. OTC trading should always remain possible.
- The functioning of the secondary market cannot be separated from that of the primary market. The question is not whether the secondary market should be organized by the TSO, but how the primary and secondary market can be integrated. Initiatives such as **Capsquare** are certainly useful but insufficient. Moreover, the supply of services through **Capsquare** by Fluxys and GRT is not sufficiently aligned.
- The secondary market should be complementary to the primary market of standardized products. The best guarantee for this is for the secondary market to be left to the market players without restrictions in terms of prices. As the TSO cannot accept any products that deviate from the standardized primary products in its system, the fear of inconsistency between the secondary and primary markets is unfounded. Sellers must however be able for example to offer their long-term products subscribed on the primary market as short-term products and / or to offer their firm capacity as interruptible. There should be no price restrictions and abuses must be prevented by strict monitoring and anti-hoarding rules.
- A number of market players suggest that prices in the secondary market be not much higher than those applied on the primary market.
- Integration of the primary and secondary market can, according to one market player, be best achieved by creating a mechanism for resale. So it should be possible for the shipper to offer its subscribed unused capacity through the system of successive auctions, together with the offering of the TSO. The shipper receives the market price minus the fee for the TSO.
- A market party suggested that the operation of such a platform not be a regulated activity and can best be done by a specialized commercial organization. The important role of the TSO starts after completing the commercial transaction when the parties inform the TSO of their agreement. The TSO must facilitate this process in a transparent, efficient and simple manner. The regulatory process should first focus on this aspect.
- A market player argues that there is no need for regulating the secondary market and therefore this needs not be part of the access guide (network code).
- A participant in the consultation suggests that the TSO organizes the secondary market. The TSO does not have to do this itself, but must ensure that a secondary market be made possible and that the right conditions be met.

Proactive congestion management on the basis of predetermined non-discriminatory and transparent rules.

- The development of a liquid secondary market and the introduction of congestion management rules are important building blocks for the further opening of the gas market. An important prerequisite, however, is ensuring the proper functioning of the primary market and a prudent investment policy by the TSO and this in consultation with market players. Once the primary market functions well, there will be less need for strict congestion management rules and the development of the secondary market will follow.
- At various interconnection points in Europe, there is contractual congestion that leads to suboptimal use of available transmission capacity and lies at the basis of the eventual high price differentials between hubs. This is due to the incoherent product offer and the total lack of harmonization between the neighbouring TSOs.
- The auction rules will play a major role in preventing contractual congestion. Congestion is prevented by adapting the product offer (long, medium and short term) and allocation rules (auctions) in the primary market to the needs of network users.
- Besides a coherent product offer on the primary market, the best congestion management policy is a market oriented investment policy by the TSO. A market player noted that the introduction of a decoupled Entry / Exit system entails the risk that the supply of available firm capacity decreases, which in turn may lead to congestion.
- Almost all market players are in favour of compulsory provision of unused capacity (fixed and interruptible) on the secondary market. The UIOSI principle should be applied:
 - Obligation for all shippers to offer unused capacity on the secondary market;
 - Ability to do this on a daily basis;
 - This system requires the shipper to optimize its portfolio, unlike the UIOLI where the shipper is fined which is impractical in practice.
- Regarding un-nominated transmission capacity, a number of market players are of the opinion that all capacity that is not actually nominated be automatically and immediately offered on a secondary trading platform. Application of use-it-or-lose-it (UIOLI) or use-it-or-sell-it (UIOSI) is essential. Not nominated capacity must be offered ex officio and as soon as possible on the secondary market.
- A number of market players support the congestion management rules stipulated in the code of conduct (articles 10 to 16).
- Almost all market players agree that, besides the UIOSI principles, unused capacity can be provided by the TSO (fixed and interruptible). Some market players believe that intra-day capacity would be best offered as a bundled product. The TSO must use a UIOLI service over the short term. This will only work well if they offer this service as a bundled product.
- Unused within-day capacity can be used by the TSO for market coupling with neighbouring hubs.
- The development of an effective congestion management policy for preventing and resolving temporary contractual congestion is a key building block for the proper functioning of the market. The best way to promote the use of capacity is to require the TSO to sell more firm capacity than can be physically transported. The TSO has the best overview and has the correct data on historical and future flows. It thus has a good view of the use of subscribed capacities and can bring to the market the unused capacity subscribed by network users on a fixed basis through the rolling auction process. It must cover the risk of interruption through a buy-back mechanism.
- The above-mentioned mechanism of "overselling and buy back", combined with allocation through auctions, a regularly recurring market survey on capacity needs (new investments) and sound

screening of the use of subscribed services to prevent any abuse and to track the parties who abuse the system, should suffice to guarantee optimal use of available capacity on the market.

- The provision of interruptible services, where a shipper is not interrupted as long as it uses agreed entry point(s), will help to limit any congestion caused by the decoupling of entry and exit capacity.
- A number of market players are also in favour of rigorous application of the backpack principle, where transmission capacity automatically goes to the new supplier in the event of an exchange.
- A number of market players furthermore advocate for abolishing the system of long-term reservations, which too often result in contractual congestion and thus prevent market efficiency. The role that long-term reservations have played in the past to facilitate investments in large natural gas infrastructures must be included in the new regulatory system through a proper return on capital invested.
- A market party argues that the introduction of UIOLI rules undermine the firmness of capacity and increase the degree of uncertainty, and therefore are not required.
- The re-nomination rights of shippers should be guaranteed and may not be restricted. This is to guarantee the shipper being able to adjust its gas flows during the day and thus ensure its net balance in this way.
- Nearly all participants agree that no restrictions should be imposed on the re-nominations on days D-1 and D. Restrictions on re-nominations have negative effects on trade and liquidity off the market. Moreover, these restrictions have undesirable effects on the nomination behaviour of network users: the network user will send its nominations taking account of the imposed restrictions to retain maximum flexibility. Nominations thus lose their signalling function towards TSOs.
- If the re-nomination rights nevertheless are restricted, the shipper should be guaranteed it can continue to re-nominate within the 10% to 90% range of its subscribed capacity.
- Such restrictions cannot possibly be implemented without prior consultation between the adjacent TSOs. If the nomination and re-nomination rules on both sides of the interconnection point differ, this can lead to inappropriate behaviour on the part of network users.

3.3 Net balance

3.3.1 Proposed basic principles:

- Market-oriented¹² balancing model;
- Decoupling offer and subscription of capacity and flexibility services as a function of access to storage services;
- Daily balancing;
- Creating one single balancing zone.

3.3.2 Market response: CONFIDENTIAL

3.3.3 Comments and concerns of market players on CREG's proposed basic principles (text for non-confidential report)

Market-oriented balancing model.

- For all market parties, a market-based balancing system is the key condition to foster an accessible and competitive gas market. A balancing model based on daily balancing is preferred and will contribute to the efficient operation of the natural gas network. Thus following items should be considered:
 - One balancing zone;
 - Daily balancing;
 - No restrictions within day;
 - Obligation to be in balance at the end of the day (commercial or physical);
 - Cash-out at the end of the gas day;
 - Natural gas for the net balance must be purchased by the TSO on the wholesale market, preferably on the intra-day spot market.
- A market party claims that a market-based balancing system can only work if there is an easily accessible and liquid gas market between entry and exit points. This market party considers that until now the market has not been sufficiently transparent and efficient to allow for a successful market-based balancing system. Only when the natural gas market is sufficiently liquid, transparent and competitive, moving away from a regulated balancing system can be considered.
- Balancing rules must be non-discriminatory, transparent and market based. The TSO will provide the necessary information about the individual shippers' positions on entry and exit points as well as the overall position of the transmission system. Imbalance charges shall be cost reflective and include appropriate incentives for the network user to balance its entry and exit flows.

¹² Net balance: see articles 42 to 45, articles 118 to 120 and articles 128 to 132 of the Code of Conduct Royal Decree of 23 December 2010 (Official Gazette of 5 January 2011). Also see article 21, point 1 of Regulation (EC) no. 715/2009 on the conditions for access to natural gas transmission networks of 13 July 2009.

- The role of the TSO is limited to the safe and secure operation of the natural gas network. The TSO will, to that end, purchase balancing services on a transparent and non-discriminatory basis through the use of market mechanisms. If pipeline buffer is not sufficient to guarantee a net balance of the system, then the TSO should be able to rely on other resources and in the most economically efficient manner.
- Some players are in favour of a market-based balancing system in which users are given the incentive to stay in balance. The network user has an obligation to keep its own entry and exit gas flows in balance and this for its global portfolio without distinction between transit and domestic transmission.
- For a number of market players, the goal model should be a market-balancing system with daily balancing, cash-out at the end of the day without hourly restrictions. The balancing model of Fluxys, if adjusted, can rapidly fit with this target model.
- Most market players want a balancing system without hourly restrictions. If for reasons of system integrity hourly restrictions are needed, they would only be required to allow large customers to quickly start-up or shutdown and for power plants. Instead of opting for hourly restrictions at the level of the shipper's portfolio, it is recommended, if necessary, to impose these hourly restrictions at the supply points of the above mentioned group of end customers.
- If hourly restrictions need be imposed as a transitional measure, the TSO must provide information to the shipper several times within the hour so that it is able to respect its balance within the hour.
- All market players who participated in the consultation propose that the shippers be responsible for balancing their portfolio by making (physical) adjustments within the day and / or selling (physically and / or commercially) their position at the end of the day. The shipper is primarily responsible for the balance of its gas portfolio. The TSO is responsible for residual balancing. The shipper can help the TSO by supporting the system.
- Many market players propose that the shippers and the TSO buy and sell on the spot market to balance the natural gas transmission system.
- A number of market players argue that the balancing system and charges for imbalances and flexibility services must provide rules to discourage speculative activities by network users. To this end, regulations stipulate the necessary rules to prevent abuse and rules of good conduct that are included in the shipper and supply licenses.
- One market player proposes that the financial guarantees and criteria for the creditworthiness of the network user constitute means of protection of other network users and of the TSO against the financial consequences of market players that no longer pay the costs allocated to them for imbalances. These rules must be balanced and may not constitute a barrier to market access.

Decoupling offer and subscription capacity and flexibility services, in light of access to storage services.

- The TSO should offer flexibility services that allow for absorption of physical imbalances that result from the difficulty to predict offtake patterns of customers connected to the Belgian natural gas network.
- A number of market players suggest that the TSO offer a base amount of flexibility that allows shippers to absorb imbalances within the day. The quantity offered takes into account the length of the balancing period (1 day).
- The TSO should maximize its flexibility offer at reasonable cost. It will take into account system load: lower load implies more flexibility.

- The TSO should always offer the unused flexibility.
- Analysis of needs and the offer of flexibility services should be done at a European level to avoid over-investment. Flexibility services should be provided by the TSO that can do this at the lowest cost.
- A number of market players are not in favour of decoupling capacity and flexibility given the fact that access to storage services is reserved to suppliers of distribution customers.
- One market party proposes the TSO provide for the basic flexibility allowing for intraday imbalances and allowing shippers to manage imbalances and their balancing actions at the end of the day. In this sense, the decoupling of flexibility services and subscription of supply capacity should be avoided.
- The TSO should preferably use the pipeline buffer for the flexibility needs of domestic end customers. Loenhout storage may be added by retaining the priority right for suppliers with customers connected to the distribution system. This would sharply reduce the current complexity of use of Loenhout and promote the use of underground storage. Flexibility services (pipeline buffer and possible storage services) must be offered at regulated tariffs based on actual costs. The use of buffer management service and flexibility in the form of Virtual Storage must remain at a competitive tariff taking into account the product's restrictions on nominations and interruptibility compared to ACIT / ADIT.
- The TSO must allow shippers to subscribe additional flexibility services to be able to cover the balancing risks directly linked with the unpredictable behaviour of endusers (difference between nomination and allocation of natural gas at the supply points) both within-day and at the end of the day.
- One market party wishes to make very clear its opposition to the decoupling of flexibility services and supply capacity.
- Imbalances that cannot be mitigated by the flexibility services offered by the TSO must be absorbed by the market.
- Some market players argue that ex post balancing services can be provided optionally.
- Some market players argue that the separate subscription of capacity and flexibility services gives shippers the possibility to optimize their portfolios. Thus, the costs of flexibility are allocated to the parties using the flexibility services offered by the TSO. In order to respect its net balance, the shipper will have the choice between various services: LNG, storage, supply contracts, flexibility services offered by the TSO, ...

Daily balancing.

- Many players are very much in favour of daily balancing with cash out at the end of the day and a single balancing zone without distinction between H and L gas. Network users will have enough time to adjust their imbalance position and optimize their portfolio, which contributes to market liquidity.
- A market party states that daily balancing can provide improvement, but not at the expense of a reduction in the offer of firm capacity. If the introduction of daily balancing requires additional investment, the impact on the tariffs of transmission services should be monitored closely.
- A market party claimed that the introduction of daily balancing must not give rise to "gaming" to the detriment of the TSO and the other network users.
- One shipper is very much in favour of daily balancing but argues that the new balancing system as it will be used by GTS (TSO Netherlands), where the TSO only intervenes if the global net balance is

at risk instead of a daily cash-out, is not a good system. This system provides no guarantee to individual shippers and makes them dependent on the behaviour of the other players on the transmission system.

- Another market player is however indeed in favour of the Dutch system, the TSO provides a system of ongoing balancing and does not intervene unless system integrity is threatened. This market player prefers this system over daily balancing and closing at the end of the day.
- Yet another market party is not asking for daily balancing. Hourly balancing keeps the shipper aware of the limitations of the transmission system.
- All players agree that daily balancing is possible only if the necessary information about the individual gas flows of the shippers is provided in a timely and repeated manner. Belgium has invested rapidly and significantly in the supply of information on an hourly basis and is besides the UK the only country that is ready to implement a daily balancing market-based balancing system. Without proper information, the introduction of a market oriented balancing model on a daily basis is not possible. Belgium has a big lead in this area and must use this advantage to implement an attractive transmission model.
- The TSO provides the shipper with regular information about its gas flows at entry points and at the supply points of its final customers connected to the transmission system. Besides this information, the TSO also provides information on the overall position of the system.
- The TSO will provide information to the shippers on their individual balance and that of the global system. The information is given at the highest possible frequency, at least on an hourly basis and if possible in real time. This makes it possible for the network user to adjust its position during the day if necessary. The TSO provides information as close as possible to the actual position of the shippers and the position of the system. Without adequate regular information during the day, daily balancing is not possible.
- The TSO provides the network users with the information needed to adjust their balance position in an efficient manner. Network users need user-friendly online access to information about:
 - Their own balance position based on real time information on entry and exit flows (measurement data and allocation of gas) and the cumulative differences;
 - The overall position of the network and the maximum and minimum limits for the TSO to take action;
 - Information about the volumes and prices of the operations of the TSO for balancing the transmission system;
 - Reliable information on off take of SLP customers, both in real time and ex-post. The TSO will cooperate closely with the DSOs connected to the transmission system;
 - After the balancing period, network users receive as soon as possible a detailed statement of any imbalances and their associated costs.
- Re-nominations during the gas day are encouraged with the response time kept as short as possible up to a maximum of 30 minutes.
- The procedures for nominations and re-nominations and access to flexibility services are designed to allow the network user to adjust its individual net balance position based on information provided by the TSO. Re-nominations should be possible during the whole day to allow network users to control their balance. This improves the liquidity of the within-day gas market. The response of the TSO should be as short as possible.
- The balancing system uses existing standard procedures such as the CBPs by EASEE-GAS. A common gas day for Europe is recommended to this effect.
- The TSO shall, when establishing its balancing model consider the link between gas and electricity markets. Nominations and re-nominations on the electricity and gas market are matched to each

other. If electricity production can lead to unpredictable variations in demand for natural gas, the TSO provides the necessary flexibility to allow for the transition to the new system.

- The settlement of imbalances at the end of the balancing period is carried out based on a market mechanism that reflects the market-based cost of balancing.
- Imbalances may not lead to fines. Only the costs incurred may be passed on to the shipper and / or customer.
- When the shipper exceeds its subscribed CIT and the global system is in balance (within certain predetermined limits) then the TSO may not impose penalties on the shipper.
- A market party claimed that the use of tolerances should be avoided. Actors should only bear costs actually incurred by the TSO to keep the system in balance. No unnecessary penalties may be imposed.
- Shippers that support the overall net balance should be rewarded while shippers that compromise the overall net balance should be penalized.
- Natural gas that must be purchased by the TSO to keep the overall system in balance should be purchased with market parties and, this as much as possible on the short-term market or on a bid price ladder.
- The TSO's costs for the balancing of the network should be fully borne by the shippers that cause these costs. Both deficits and surpluses incurred by the TSO that cannot be individually assigned must be divided on a monthly basis among the individual shippers who use the system and on the basis of the sum of their physical entry and exit flows.
- The TSO should be encouraged to effectively manage these costs: balancing costs due to the purchase of balancing gas must always be within a certain margin above the wholesale price. If the TSO does not respect the margin, it may not pass on costs to shippers. If the TSO does respect the margin, it should be rewarded.
- A market party suggests the following principles regarding the cash-out price:
 - The cash-out price should be asymmetrical to give the shippers the necessary incentive to respect the net balance;
 - The cash-out price should be based on marginal cost: marginal purchase price (highest price) and marginal sale price (lowest price) of the TSO;
 - Shippers who are deficient shall pay the marginal purchase price and shippers who have too much gas will receive the marginal sale price;
 - If the TSO does not need to take action, then the standard marginal sale price is determined by the average system price (average price of all sales and purchasing operations) + / - 10 to 15%. If no actions are recorded in the day, then the actions of the previous day are used.
- The TSO buys and sells balancing gas on the within-day gas market that is also used by network users to adjust their individual positions during the day. The TSO ensures that the cost of balancing its transmission system is as low as possible. An incentive system can be used for this.
- Another market party claims that daily balancing of cash out of the imbalances at the end of the day should be designed so as to encourage network users to support the overall balance of the transmission system. The supplier that causes the imbalances shall bear the costs. Shippers who can contribute to the net balance are rewarded.
- A market party argues that the tariffs for imbalances should preferably be based on the marginal price of the local spot or balancing market. If the TSO cannot rely on the within-day gas market, it should develop an alternative system in consultation with market players such that the cost of maintaining the net balance is as low as possible.

- The TSO shall lay out clear and detailed procedures regarding how and when the network users will be billed for their imbalances. This procedure and the different tariffs used must be approved by the regulator, after consultation with market players.

Creating one balancing zone.

- All market players argue that the merger of balancing zones should facilitate access to the Belgian gas market for newcomers. Both the operational management and the subscription of transmission services will thus be greatly simplified. The TSO must convert its multi-bap system into a system with a single balancing zone. Merging the current balancing zones is crucial for the further development of the Belgian gas market. For balancing, there should be no distinction between transit and domestic transmission.
- A large number of market players are in favour of the combination of the L- and H-gas zone. This will facilitate access to end customers in the L gas zone. The combination of the H and L gas zones in the Netherlands is already a fact and is strongly considered in France. Belgium cannot miss this opportunity. Quality conversion is a system service provided by the TSO whose costs should be socialized.
- Compared with the Netherlands, France and Germany, it is incomprehensible that Belgium has 4 balancing zones. In the long run, for a number of market participants, it should be examined whether or not it would be appropriate to combine the balancing zones in the Netherlands, Belgium and France. Balancing zones should be as large as possible and, where possible, adjacent TSOs should decide in consultation with the regulators to merge balancing zones.
- The creation of one single balancing zone for Belgium is needed to achieve a liquid and flexible gas market by developing a virtual hub that can be used by network users for their needs with respect to their individual net balance and by the TSO for the overall balance of the transmission system.
- Merging the 3 balancing zones for H-gas into 1 zone is a major step forward in further simplifying access to the Belgian gas market. This market party is in favour of two balancing zones: one for L-gas and one for H-gas.
- The implementation of one balancing zone should be carefully studied. A proper cost-benefit analysis is required and the potential impact on transmission service tariffs should be minimized.

3.4 Supply capacity on GOS for SLP customers

3.4.1 Proposed basic principles:

- Determining the amount of supply capacity on GOS for SLP customers by the operator of the natural gas transmission system based on the criteria of security of supply (-11°Ceq a.o.) in consultation with the distribution system operators;
- Allocation of the supply capacity on GOS for SLP customers by the operator of the gas transmission system to shippers based on their customer portfolio with periodic review;
- Nominations on GOS for SLP customers by the operator of the gas transmission system.

3.4.2 Market response: CONFIDENTIAL

3.4.3 Comments and concerns of market players on CREG's proposed basic principles (text for non-confidential report)

Determining the amount of supply capacity on GOS for SLP customers by the operator of the natural gas transmission system based on the criteria of security of supply (-11°Ceq a.o.) in consultation with the distribution system operators.

Allocation of the supply capacity on GOS for SLP customers by the operator of the gas transmission system to shippers based on their customer portfolio with periodic review;

- Almost all market players support these principles. The capacities on GOS can be automatically assigned based on the portfolio of the shipper and / or supplier. These are regularly adjusted upwards or downwards depending on the evolution of the customer portfolio.
- The TSO must, in close cooperation with the DSO, determine the amount of capacity on GOS for SLP customers and allocate that quantity on a monthly basis to the shipper on the basis of its customer profile. When an end customer changes supplier the accompanying capacity on GOS automatically moves with the customer.
- The standard profile in combination with the annual consumption and temperature is the data that the TSO must use to control the gas flows.
- Some market players go a step further: the ideal would be that the TSO calculates, in consultation with the DSO, all supply capacity for SLP customers on the various GOS and then allocates in an aggregated manner. The same principle can also be used for the allocation of gas. Aggregation increases the accuracy.
- One market participant wishes the subscription of supply capacity on GOS for SLP customers to remain a matter for the shipper. It is the responsibility of the shipper to reserve sufficient capacity to take into account any extreme circumstances that statistically can occur every few years. In addition, the shipper / supplier shall offer interruptible supply contracts so that the global demand for capacity can be reduced, which in turn can avoid over-investment. The procedure for subscription of supply capacity on GOS for SLP customers should however be simpler and faster than is the case currently.

Nominations on GOS for SLP customers by the operator of the gas transmission system.

- Almost all market players who participated in the consultation support this principle. If nominations are made by the TSO then the shipper will not be charged imbalance fees.
- One market player does not know the Belgian system for supplying end customers at the distribution level, but refers to what is happening in France, where capacity on GOS is automatically calculated and allocated based on the customer portfolio of the shipper. The control of the nominations can be greatly improved based on historical and recent information from the overall pattern of supply known to the TSO.
- Another market player claims that nominations for SLP end customers are not required.
- The market party that proposed that the subscription of supply capacity on GOS for SLP customers should remain a matter for the shipper, argues that, given that the shipper is responsible for control and management of its portfolio, it is up to the shipper to estimate the supply and use this information to manage the balance in its gas portfolio through nominations.

3.5 Supply capacity of telemetered end customers

3.5.1 Proposed basic principles:

- The end customer owns the supply capacity at its supply point (for telemetered end customers on the distribution network, this is the capacity allocated on its behalf on the GOS indicated by the distribution system operator);
- The end customer determines, reserves and pays for this supply capacity along with other services (pressure, quality ...) provided by the operator of the gas transmission system;
- The end customer transfers this capacity to the shipper of its choice.

3.5.2 Market response: CONFIDENTIAL

3.5.3 Comments and concerns of market players on CREG's proposed basic principles (text for non-confidential report)

The end customer owns the supply capacity at its supply point (for telemetered end customers on the distribution network, this is the capacity allocated on its behalf on the GOS indicated by the distribution system operator).

The end customer determines, reserves and pays for this supply capacity along with other services (pressure, quality ...) provided by the operator of the gas transmission system.

- Almost all participants in the consultation support these principles. They add that the rules should allow multiple shippers to use the supply capacity of the end customer.
- In the current system, it is difficult for the end customer to determine the appropriate supply capacity and the associated services (RF, ARF). If the end customer becomes the owner of its supply capacity, it is appropriate that the transmission services offered at the supply point be simplified.
- The TSO is responsible for what happens with the gas on its network. The TSO is therefore responsible for the pressure and quality at the supply point. The shipper delivers natural gas that meets the specifications of pressure and quality at the entry point and is in no way responsible for what happens later on the net.
- The supply capacity of end customers connected to the transmission system is contracted and paid by the end customer. The TSO concludes a connection agreement with the end customer that contains the necessary provisions.
- A market party argues that allocation of supply capacity to the end user should not be an obligation. If the end customer so desires, it should be possible for the shipper to reserve the supply capacity.

- Another market party would like for the subscription of supply capacity to remain a matter for the shipper, in consultation with the end customer.
- A market participant also noted that with regard to the exit capacity at border points the same principles as those applicable to the entry points should apply.

The end customer transfers this capacity to the shipper of its choice.

- This principle is supported by all market players that participated in the consultation, with the exception of the market party that would like for the subscription of supply capacity to remain a matter for the shipper.
- The end customer may transfer the capacity (from the virtual trading point to the supply point) to its shipper. A number of market players would like for it to be possible for this capacity to be managed by the end customer itself in direct relationship with the TSO.
- A market party argues that the shipper will not always be the supplier. In that case, the end customer transfers its supply capacity to the supplier instead of the shipper.
- A market party argues that the end customer owns its supply capacity and that it should also be possible for the end customer to be the shipper. To this end adequate and simplified regulations are required:
 - the requirement to hold a supply license is no longer imposed for example as long as the end user only wants to supply its own sites;
 - the administrative and financial obligations should be restricted.
- The end customer must have the ability to combine its multiple sites (pooling) and to cooperate with different suppliers / shippers who supply these sites. In this context, it should be examined whether or not the TSO can provide appropriate flexibility services and / or be responsible for the net balance.
- If the end customer assumes the shipper's role, it should be adequately informed on incoming and outgoing gas flows.

3.6 Virtual trading point for natural gas

3.6.1 Proposed basic principles:

- Decoupling of entry (*access to transmission system for the shipper*) and exit (*offtake by the end user*) requires a virtual transfer point of natural gas on the transmission system;
- A virtual trading point for natural gas on the transmission system allows for trading of natural gas between shippers, between shippers and customers and between customers themselves;
- A virtual trading point can also be used for balancing purposes.

3.6.2 Market response: CONFIDENTIAL

3.6.3 Comments and concerns of market players on CREG's proposed basic principles (text for non-confidential report)

Decoupling of entry (access to transmission system for the shipper) and exit (offtake by the end user) requires a virtual transfer point of natural gas on the transmission system.

- Most participants in the consultation argue that the creation of a virtual marketplace is an important prerequisite and a key element for the proper functioning of the natural gas market. For this to work, the following prior conditions must be met:
 - the introduction of an entry / exit system;
 - no distinction between transit and domestic transmission;
 - simple and transparent allocation rules;
 - the creation of one balancing zone and use of a daily balancing system;
 - the supply capacity is owned by the end customer.
- The creation of a virtual marketplace will make Belgium an attractive market that is easily accessible with direct access for end customers. The current limitations of the transmission model have restricted natural gas trading to mainly bilateral trade (OTC) between historical players. Compared to other European countries, the Belgian market is not attractive to newcomers. The current transmission model hinders the development of attractive and sophisticated products, whether or not financial, that allow for risk management of natural gas portfolios.
- A number of market players suggest that the regulation should foster a virtual trading point. Once the preconditions are met, the market will respond to this and deliver the products needed. The preconditions are:
 - decoupled entry/exit system;
 - daily balancing;
 - a single balancing zone.

- A market party argues that physical hub market prices are not 'market representative'. Moreover, a physical hub is limited in liquidity and wholly dependent on the market players on the entry pipelines. A virtual hub is definitely preferable. Moreover, a virtual hub is easily accessible to end users. End users willing to subscribe get access to a multiple party platform offering various services: purchase and sale of natural gas, flexibility services, temporary storage of surplus gas, ...
- Another market player agrees and argues that experience shows:
 - that liquidity on a physical hub is limited by the physical limitations of the entry;
 - market dominance is concentrated with a limited number of players who control access to the physical hub;
 - any maintenance effort at one of the connected pipelines gives rise to disproportionate price fluctuations.
- Some players are in favour of developing a virtual transfer point for natural gas similar to the Dutch TTF. The introduction of a virtual trading point (VTP) as a result of introducing a new transmission model and the transition to an entry / exit system is a key element for access to the Belgian gas market. The current Zeebrugge hub suffers the associated physical limitations. This hub is a de facto satellite hub of the NBP and access to and accessibility of this hub are too complex.
- Some players are in favour of a virtual transfer point to replace the physical Zeebrugge hub. The virtual hub should coincide with the existing physical Zeebrugge hub.
- Some players argue that the Zeebrugge hub should be linked to the domestic market so as to be a real marketplace.
- Still other market participants argue that the decoupling of entry and exit capacity can be achieved by connecting them via a hub. It does not matter whether this hub is physical or virtual.
- Some players minimise the impact on the existing supply contracts of decoupling of entry and exit capacity and the creation of a virtual trading point in between. The principle of sanctity of contracts is essential for a stable regulatory regime and to guarantee the investments of the TSO and the long-term security of supply to end customers.
- A market party claims that the decoupling of entry and exit capacity needs not necessarily coincide with the creation of a virtual transfer point. The decoupling of entry and exit capacity will allow for the trade and/or transfer of natural gas at three locations:
 - at the entry point: trade on the flange;
 - on the HUB through a structured and liquid trading platform, the Hub can be virtual (TTF, NGC, PEG ...) or physical (Zeebrugge);
 - the supply point: selling to the end customer.
- The costs for developing and operating the VTP should preferably be included in the transport cost or allocated to market players based on a fixed fee and not based on volumes traded.

A virtual trading point for natural gas on the transmission system allows for trading of natural gas between shippers, between shippers and customers and between customers themselves.

- The virtual trading point for natural gas is the place where the shippers, suppliers, agents and end customers meet. In the current transmission model, this is not possible. This is, according to a number of market players, a very serious limitation for the further development of the natural gas market in Belgium and compromises Belgium's role as a hub in Europe.
- Access to markets (OTC, Spot market, Hub) for end users is difficult due to a lack of information and transparency. More specifically, the functioning of the Zeebrugge hub is not very transparent for non-

members. Some players insist on monitoring by the regulator and request the creation of a more flexible model to promote the entry of non-shippers in the spot market.

- Further market integration with neighbouring countries (e.g. the Netherlands) is vital and will ensure that the virtual hub remains viable and liquid over the long term. According to a number of market players, this market integration can be achieved through mergers, partnership agreements, cooperation in network management, inter-TSO collaboration ... Once the virtual hub and the decoupled entry / exit module are operational, this trading point must be linked with neighbouring hubs through joint offering by the neighbouring TSOs of combined and / or bundled transmission services.
- Many players claim that, for the trade of natural gas, no restriction should be imposed on the market players in terms of choice of the marketplace: market players have the choice and the evolving market conditions and circumstances will trigger market preference. The choice of one and / or multiple locations for trade of natural gas will correspond to the business model and risk profile of a particular market player. Restrictions will only result in non-activity of some market players.

A virtual trading point can also be used for balancing purposes.

- Some players argue that the current Zeebrugge hub is difficult to access, even for players with extensive experience in natural gas trading. Moreover, the Zeebrugge hub is virtually inaccessible to Belgian end users. The Zeebrugge hub is therefore unsuitable for balancing the transmission system. The current subscription procedure (matching rule, duration of the procedure ...) for transmission services makes spot trading unattractive for newcomers and impossible for market players who do not own transit capacity.
- The introduction of a virtual trading point gives the shipper the option to use this market for balancing its portfolio. All market players argue that the virtual trading point must allow for both natural gas trading (short, medium and long term) and balancing (within day).

3.7 Other considerations

3.7.1 Additional considerations of market players: CONFIDENTIAL

3.7.2 Comments and concerns of market players on CREG's proposed basic principles (text for non-confidential report)

- Some players argue that any transmission model should be based on the needs of the gas market. The transmission model should be the basis of a well-functioning market and a guarantee of security of supply. Natural gas must be and should remain a competitive fuel. When developing a (new) Belgian transmission model, the European context, and in particular the Framework Guidelines and Network Codes currently being developed at the European level, should not be overlooked.
- A number of market players find that the measures proposed in the code should be introduced as soon as possible. The TSO should start the development of standard contracts, access guides and the natural gas transmission programme as soon as possible. These documents should be transparently available for consultation by network users. These documents must be based on the new basic principles stated in the consultation paper by CREG. This was clearly not the case for consultation of the transport contracts by Fluxys in August 2010.
- The TSO adapts its transmission model in agreement with the network users based on frequent consultations, including a.o. standard contracts, access guides, services offered, information ... Currently, consultation is virtually inexistent and completely lacks structure. Almost all players who participated in the consultation argue that the TSO must structure consultations with market players. The regulator should take the lead here.
- The regulator should oblige the TSO to organize the consultation process in a structured manner. This consultation process should at least consist of the following steps:
 - a description of the problem and the reason for the consultation;
 - the solution proposed by the TSO and a clear consultation document;
 - a consultation period of at least 4 weeks;
 - a consultation paper by the TSO which clearly explains why or why not to take into account the response of network users, and this prior to submission of this document to regulatory approval;
 - active monitoring of the consultation process by the regulator.
- Implementation of a structured consultation process guarantees for the TSO a clear overview of market needs and demands and prevents useless and repeated consultation for the network users and the TSO. The TSO should as soon as possible create a consultation structure (users' group).
- The TSO should build a transparent, structured and on-going dialogue with the various market parties and should actively involve them in the decision process, as is done in the Netherlands through the User Consultative Energy Networks. This means that all parties are allowed to introduce items on the agenda. Input from the market players and the TSO's response are transparently communicated to participants and the regulator.
- According to a number of market players, the following priority issues should be addressed in this consultation structure:
 - the introduction of a new transmission model;
 - the new standard contracts;
 - the offer of new services and the applicable tariffs;
 - a review of the existing allocation rules;

- the impact of the new code of conduct;
 - transparency rules;
 - the recent EU legislation on security of supply (SOS);
- In addition to specific issues which have a direct impact on the functioning of the gas market, according to a number of market players, the consultation structure should be a forum where the players and the TSO can exchange ideas on strategic issues:
- the position of Belgium and the international gas markets;
 - the relative position of Fluxys with respect to European developments and implementation of EU legislation;
 - the strategy of the TSO over the medium and long term.
- A large number of market players demand that the TSO provides a simple and customer-friendly web based platform that allows for the handling of all administrative procedures and this in a fast, environmentally friendly, simple and customer-friendly manner (e.g. ISIS). The TSO is expected to provide an up-to-date system to predict daily consumption by customer type (power plants, industry, SLP customers).
- A number of market players demand that the list of supply points and the associated end customers be published by the TSO together with the associated data on pressure, quality and peak capacity. Failure to publish such a list is discrimination towards newcomers as the historical players do have this historical data. Request of individual data from the TSO is time consuming and is an obstacle for newcomers when preparing business plans and marketing campaigns.
- To simplify subscription, nomination and assignment, according to most participants in the consultation, it is recommended to switch from a volume unit (m³ / h) to an energy unit (kWh / h or MWh / h).
- A number of market players demand that the TSO adapt the nomination system and limit the time needed to adjust nominations at Loenhout, LNG terminal, transformers, ... to an absolute minimum. In principle, all re-nominations for these points should apply directly.
- According to many market players, storage services should be offered to shippers in a non-discriminatory and transparent manner and not be reserved exclusively and by priority for the residential market. The needs of both markets, industry and households, are fundamentally different: short term versus seasonal storage. The TSO must respond to this and adjust its services offer.
- One crucial element when introducing a single balancing zone is elimination of the difference between H gas and L gas. Almost all market players argue that the TSO take on this task through quality conversion and / or purchase of services from suppliers and / or conclusion of agreements with neighbouring TSOs.
- Some players argue that it would be best to cover the cost of integration with the transmission tariffs. The integration of the L-gas and H-gas market by the TSO, with socialization of the costs of quality conversion and / or the necessary other services, is a step in the right direction and will encourage market functioning. The purpose of this integration is to promote access to the L-gas market.
- Some players find that the costs for integration of L- and H-gas zones by the TSO be allocated to the end customers of the market segment benefiting by integrating them into the tariff for the supply capacity of end users in the L-gas market.
- Regarding the problems associated with L-gas, a number of market players argue that:
- the conversion of end users in the L-gas zone to H-gas is inevitable in the long term;
 - the priority for this conversion must be industry and power stations connected to the L-gas network;
 - the conversion must be carried out in a cost-effective manner.

Integration of the H-gas zone with the L-gas zone will reduce demand and relieve the urge to convert the L-gas zone, a process that will probably cost a lot of money.

- The TSO must solve the quality problems at the border points in consultation with the neighbouring TSOs concerned. In particular, the problem of the Wobbe index at the offshore platform interconnection point (Belgium / UK) and any future problems relating to odorisation at the Blaregnies interconnection point (Belgium / France).
- Some market players argue that combination of the Belgium zone with the Dutch zone should be considered due to the complementarity, the possible synergies and the associated benefits for network users.
- A market player furthermore insists on measures that could promote transparency of the market and pricing on the wholesale market:
 - the occurrence of one single contract for transport and supply makes it virtually impossible to determine the relationship between costs and prices charged;
 - there is no clear picture of the actual cost of flexibility;
 - shippers may enjoy advantages or encounter disadvantages according to the size and diversity of their customer portfolio;
 - take-or-pay and / or take-or-sell clauses are considered as very disturbing, like oil-linked contracts;
 - it is often unclear whether congestion is physical or contractual;
 - the functioning of the Zeebrugge hub lacks transparency for non-members;
 - there is a need for monitoring by the regulator and a more flexible system for participation of non-shippers on the spot market;
 - while multi-site contracts are possible, it is unclear to what extent the portfolio benefit reverts to the customer;
 - multi-supplier contracts are not widely accepted by Fluxys and suppliers;
 - where possible, storage should also be accessible for industrial consumers. They have a greater need for short-term flexibility and not seasonal flexibility. It is not clear whether the Virtual Storage Agreement currently proposed by Fluxys meets this need.
- On security of supply, end users argue that healthy competition is the best guarantee. The end users also wonder about the concrete interpretation of the new regulation regarding security of supply:
 - who will assume the role of CA?
 - what is the impact on the use of existing infrastructure (transport, storage, LNG)?
 - what measures need to be taken?
 - what is the role of the various market players?
 - what is the impact of this on the cost of natural gas?

4. CONCLUSION

Over the course of the consultation process, CREG received many important and useful suggestions, proposals, comments, observations and information from the participating market players.

The concerns listed below will be included by CREG in future negotiations with Fluxys on the implementation of the new transmission model.

These negotiations will result in new access guides taking into account the provisions contained in the Royal Decree of 23 December 2010 on the code of conduct on access to the gas transmission system, the storage facility for natural gas and the LNG plant which has since been published in the Belgian Official Gazette of 05 January 2011 (see appendix to this consultation paper).

The TSO will draft the access guides and the other related documents such as the standard contract and the natural gas transmission programme in consultation with the market players and will subsequently submit them to CREG for approval.

4.1 *Offer of transmission services*

- All market players who participated in the consultation would like for the current transmission model to be adapted. The introduction of a new transmission model is an urgent necessity and must eliminate the restrictions that first and foremost complicate access to the natural gas market for newcomers and end users.
- All players are in favour of an entry / exit system with the possibility to subscribe entry and exit capacity independently.
- The distinction between transit and domestic transmission should be eliminated.
- The transition to a new transmission model may not give rise to a reduction of available firm capacity. The offering of firm capacity must be guaranteed through a thoughtful combination of additional investments and the provision of new transmission services (including operating agreements), taking into account the potential impact on rates.
- The introduction of the new transmission model should take account regulatory developments at the European level.
- The Royal Decree of 23 December 2010 on the code of conduct on access to the gas transmission system, the storage facility for natural gas and the LNG plant has since been published in the Official Gazette of 5 January 2011 (see appendix to this consultation paper). The provisions contained in the code of conduct should be implemented as soon as possible.
- The current product offer with the associated allocation rules is a barrier to newcomers on the market. One single standardized product offer together with transparent allocation rules on both sides of the border points will facilitate market access.
- In this regard, the introduction of auctions as an allocation method may be seen as a potential improvement of the current system that is restrictive and non transparent.
- TSOs should organise regular coordinated auctions at their entry and exit points (daily for day-ahead cap, weekly for weekly, yearly for annual capabilities ...) offering the same standardized services (duration, firm, interruptible ...) on both sides of the border. This will greatly improve access to the gas market. Currently this is not the case and each TSO has its own product offer and its own system of allocation (FCFS, FBFS, pro rata, matching, auction, open season ...). (Only) a few large market players that know the systems or have people to study the systems manage to coordinate

services and reservations on both sides of the border point. Auctions will thus help to create a level playing field.

- The introduction of auctions must be done carefully. The product offer must be coordinated with neighbouring TSOs taking into account how the market players purchase, offer, trade and sell natural gas.
- A number of market players formulated constructive proposals during the consultation on product offer, auction rules, the procedure to be followed, pricing and the role of auctions as a signal for investment in the transmission system.
- Auctions imply rules that must be endorsed by CREG through approval of the access guide. Auction Procedures and rules should prevent possible abuses.
- Many players are strongly opposed to the imposition of the requirement to offer only bundled transmission services at border points and the obligation to limit trade in natural gas to the hub.
- All market players ask for a customer-friendly and easily accessible internet platform for both the subscription of transmission services and for requesting and providing information and the handling of administrative tasks.

4.2 Secondary market and congestion policy

- An important precondition for preventing congestion and for proper functioning of the secondary market is a well-functioning, transparent primary market. Under current circumstances, a market party having at its disposal border point capacity (such as a market party employing the people and having the resources to understand the complex systems of the concerned TSOs on both sides of the border point) may use it at its own discretion. Therefore this market player could force a counterparty in a nearby gas market without access to make swaps, thus collecting a portion of the margin. Also a market player that has capacity at the border point could sell it on the secondary market at higher prices. In the present context, the market party can use the opaque offer of services and corresponding allocation rules to take market-distorting positions. The operation of the secondary market cannot be separated from a well-functioning primary market.
- All participants in the consultation are in favour of a secondary market organized by the TSO (SMP), especially if the players are legally obliged to offer unused capacity on the secondary market (UIOSI).
- Some players are in favour of the requirement that all trade take place via the SMP. This requirement is necessary to establish a liquid and transparent secondary market for transmission services. In this context, care should be taken to ensure that entry costs are minimal.
- Other market players find that in addition to the SMP, bilateral trade and / or OTC must remain possible provided notification of the transactions to the TSO, which in turn provides overall information on traded volumes and prices to all market players via the SMP.
- Still other players believe that trade on the secondary market should be completely free without restrictions.
- A market party suggests making the resale of previously subscribed transport capacity possible through offering of that capacity in successive auctions on the primary market.
- The regulator should monitor the functioning of the secondary market and abuses must be prevented by strict market rules.
- One of the main causes of congestion is the lack of coordinated products and allocation rules at the entry / exit points. If the services offer at both sides of the border points is not aligned, this can lead to artificial congestion ("reservation congestion") and this greatly hinders access to both markets. Aligning offer and the type of services and timing of this offer is crucial to streamline access to the respective markets and to avoid "reservation congestion", caused e.g. by the fact that capacity is available on one side but on the other side not until the following open season. As for the proper functioning of the secondary market, a good functioning primary market is a condition sine qua non for the prevention of congestion.
- Auctions and auction design will play an important role in preventing contractual congestion. Congestion can be prevented by matching product offer and the allocation rules to the needs of market players.
- Congestion interest rates resulting from the auction process should be used for investment and / or the reduction of transmission tariffs.
- Almost all market players who participated in the consultation support the legal obligation to offer unused transmission services on the secondary market.
- Everyone agrees that not-nominated capacity must be offered by the TSO (firm and interruptible) on the primary market.
- Daily capacity that was not subscribed is offered as a bundled product.

- The TSO should be able to offer more firm capacity than physically feasible. In addition, the TSO will offer interruptible transmission services.
- Almost all participants in the consultation agree that no restrictions should be imposed on renominations on days D-1 and D. Restrictions on renominations have negative effects on trade and the liquidity of the spotmarket. Moreover, these restrictions have undesirable effects on the nomination behaviour of network users, the network user will send its nominations as a function of the imposed restrictions to retain maximum flexibility. In this way, nominations lose their signalling function towards the TSO. Moreover, such restrictions would be impossible to implement without prior consultation between neighbouring TSOs. If the nomination and renomination rules on both sides of the interconnection point differ, this can lead to inappropriate behaviour of network users. Restrictions on renominations may not in any case be applicable to the daily capacity subscribed by shippers.

4.3 **Net balance**

- Based on the consultation, it is clear that there is broad support from the various players on the basic principles for the new market-oriented balancing model:
 - daily balancing with cash out at the end of the day;
 - the role of the TSO is limited to maintaining system integrity and residual balancing;
 - the network user is responsible for the balance between its incoming and outgoing gas flows;
 - no (hourly) limits within day;
 - one single balancing zone;
 - the TSO provides real-time information about the individual position of each shipper and the position of the global transmission system;
 - the TSO has sufficient resources to absorb the imbalances within-day and makes them available to network users in the form of flexible services whether or not coupled to the supply capacity of the end customer;
 - network users have access to the within-day spot market for easy adjustment of imbalances;
 - the TSO buys and sells gas for balancing purposes on the spot market;
 - the balancing activities of the TSO are cost neutral;
 - a transparent system of incentives that encourage the network user to avoid imbalances at the end of the balancing period is necessary.

- It is clear that the market players opt for a simple and easily accessible model. The current balancing model used by the TSO provides a good basis, but must be adapted on a number of items.

- In a first step, the 3 balancing zones for H-gas must be merged into one zone.

- The combination of the H-gas zone with the L-gas zone is already under consideration, and CREG will ask the TSO to prepare a cost-benefit analysis and a step-by-step plan.

- The creation of one single balancing zone is needed to develop a liquid and easily accessible gas market.

- Furthermore, no distinction may be made anymore in the future between transit and domestic transmission.

- The current model imposes hourly restrictions (HIT) within the day and at the level of the network user's portfolio. The consultation shows that the network users no longer want such restrictions. This is a choice that is easy to understand in terms of simplicity and lower thresholds for market access and is also preferred by CREG. To prevent threats to system integrity, connection contracts will impose restrictions on end customers for whom it is possible to substantially adapt the production process during the day (power plants, large customers using natural gas as a raw material in their production process, end users with bi-fuel, ...). A number of rules will also be necessary in terms of gas flows within the day to exit points on the borders of the transmission system. In this way, restrictions at portfolio level will be avoided, and these restrictions will be imposed on eligible end customers and / or exit points.

- One of the strengths of the current model is the information provided to the individual network user. The user receives information each hour on its incoming and outgoing flows during the previous hour. Without this information, it is not possible to implement a daily balancing model. Indeed, it makes no sense to impose an obligation on shippers to be in balance at the end of the day if the network users do not have the necessary information about their balance position within the day. Without this information, the network user is unable to adjust by relying on its supply contracts, flexibility services, the within-day spot market ... As for providing network users with information, the current balancing model meets the needs of network users. CREG will ask the TSO for additional information on the overall position of the transmission system.

- To guarantee system integrity and cope with imbalances of network users within the day, the TSO should have sufficient resources (pipeline buffer, storage, LNG services, purchases / sales of gas within the day ...). These resources make it possible for network users to take positions within the day that can be adjusted at their own discretion during the day with the goal of achieving a balance at the end of gas day. Some market players argue that the costs of resources used by the TSO for this should be socialized, and therefore must be taken into account when determining the tariff (entry and / or exit capacity). Other players believe that these costs should be attributed to the perpetrator. CREG believes that given the fact that the TSO has the correct information during the day and that the TSO always knows the individual position of each network user on an hourly basis, it is easy to trace the perpetrator. The network user who uses offered flexibility to manage its net balance under optimal conditions will therefore bear the costs. The TSO is developing a flexibility service that can be purchased by the network user at a regulated tariff approved by CREG. The network user willing to delay the purchase of additional gas on the spot market for a few hours, is offered the possibility to purchase additional flexibility during the day to manage imbalances under optimal conditions.
- When developing a transparent system to incentivise the network user to meet the balancing requirements at the end of the balancing period, an imminent and timely decision has to be made: one either opts for rules supporting the overall system balance or for rules striving for an individual balance by each individual network user. If in the former option for example, the transmission system is short and the network user is long, the network user will receive the marginal price for its natural gas at the end of the day. Indeed, it supports the system. In the latter option, it will receive an average gas price because it is not in balance. A number of players proposed various possible good basic rules in this context.
- The TSO buys and sells natural gas for the balancing of the transmission system within the day and if necessary at the end of the day (cash out) on the spot market. The TSO shall ensure that the costs for balancing the transmission system are as low as possible.

4.4 Supply capacity for SLP customers

- The market players who participated in the consultation support the principles proposed by CREG:
 - the TSO calculates in consultation with the DSOs the supply capacity of transmission services for SLP customers, a.o. on the basis of security of supply criteria;
 - the TSO allocates these services to shippers / suppliers based on their customer portfolio;
 - the TSO will transfer nominations to the shippers / suppliers based on the information in its possession and its knowledge of the supply profiles.
- Some players want to go a step further: the ideal would be for the TSO to calculate all supply capacity for SLP customers on the various GOS in consultation with the DSO and then allocate that capacity in aggregated form. The same principle can also be used for the allocation of the gas. Aggregation increases the accuracy. Breakdown by GOS is no longer necessary as the existence of multiple balancing zones has been lifted.

4.5 Supply capacity of telemetered customers

- The market players who participated in the consultation support the principles proposed by CREG in terms of end users directly connected to the network:
 - the end customer owns its supply capacity;
 - the end customer directly subscribes to the supply capacity with the TSO;
 - the end customer allocates this capacity to the shipper(s) of its choice.
- A number of market players add that it be made possible for the final customer itself to assume the transport of natural gas. Simple and appropriate rules should be developed if the end customer is only supplying its own site(s).

4.6 *Virtual trading point for natural gas*

- The creation of a virtual marketplace is an important prerequisite for the proper functioning of the natural gas market. The virtual trading point for natural gas is the platform where the shippers, suppliers, agents and end customers meet. The current transmission model is not able to provide this service. This is, according to a number of market players, a very important impediment for the further development of the natural gas market in Belgium and compromises Belgium's role as a hub in Europe. The following preconditions must be met:
 - the introduction of an entry / exit system entailing independent reservation of entry and exit capacity;
 - no distinction between transit and domestic transmission;
 - simple and transparent allocation rules based on auctions;
 - the creation of a single balancing zone endorsed by a market-oriented daily balancing system;
 - the supply capacity is owned by the end customer
- Some players are in favour of a virtual transfer point to replace the physical Zeebrugge hub. Other players say that the Zeebrugge hub should be linked to the domestic market so as to be a real marketplace. Still other market participants argue that the decoupling of entry and exit capacity can be achieved by connecting them via a hub. It does not matter whether this hub is physical or virtual.
- The virtual trading point gives the shipper the opportunity to use this market to balance its portfolio. All market players argue that the virtual trading point should be used for both natural gas trading (short, medium and long term) and for balancing (within-day).
- Once the virtual hub and the decoupled entry / exit system have been started up, this trading point must be linked with neighbouring hubs through joint offering by the neighbouring TSOs of combined and / or bundled transmission services.
- A large number of players do not want any restrictions regarding the choice of the marketplace. Restrictions will only prevent some market players from entering the gas market. The decoupling of entry and exit capacity will allow for the trade and/or transfer of natural gas at three locations:
 - at the entry point: trading on the flange
 - on the HUB through a structured and liquid trading platform, the Hub can be virtual (TTF, NGC, PEG ...) or physical (Zeebrugge)
 - on the supply point by selling to the end customer
- Enhanced market integration with neighbouring countries is vital and will ensure that the virtual hub remains viable and liquid in the long term. According to a number of market players, this market integration can be achieved through mergers, partnership agreements, management of networks as a whole, inter-TSO collaboration ...

4.7 Other considerations

- All participants in the consultation call for a structured dialogue between the various players and the TSO. A large number of constructive comments and suggestions during the consultation process were submitted to CREG (see above).
- A large number of players are asking for a customer-friendly web platform that enables the handling of all administrative procedures in a fast, simple and environmentally-friendly manner. This platform can be used for information purposes, subscription of transmission services in the primary market and coupling with the secondary market.
- Many players insist on the following specific issues:
 - conversion of the transport capacity from volume (m³ / h) to energy (MWh / h);
 - a list of end customers connected directly to the transmission system;
 - reduced response time for renominations to transport facilities directly connected to the transmission system (storage, LNG, ...);
- Almost all players are in favour of the merging of the H-gas and L gas zones. Further they made a number of valuable propositions.
- Some players ask for an adaptation of the allocation rules for storage services.
- The end users have questions regarding the concrete implementation of the new regulation on security of supply.

5. WAY FORWARD

- In response to this consultation of market parties regarding a new gas transmission model, Fluxys and CREG agreed to start a project to introduce a new gas transmission model by the end of 2012.
- Under this project, the issues mentioned in section 4 of this study will be discussed by Fluxys and CREG to determine how they can be incorporated in the new gas transmission model. This first step will allow a roadmap being developed by the end of February 2011 leading to the implementation of the new model.
- In application of art 108 of the code of conduct, Fluxys will implement a consultation platform during the first quarter of 2011. This consultation platform will offer participants the opportunity to quickly take notice of the new transmission model's proposals and the various new documents that need to be drafted by Fluxys in application of the code of conduct prior to submission to CREG for approval.
- The first major consultation on the standard gas transmission contract, based on the new transmission model, will start at the beginning of the second quarter of 2011.
- During the second half of 2011, consultations regarding the access guide for gas transmission, the connection agreement and the gas transmission services programme based on the new transmission model, will be started.

For the Commission for Electricity and Gas Regulation :



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