



TRANSMISSION PROGRAMME

Based on Article 112 of the Royal Decree of 23 December 2010 on the Code of Conduct regarding access to natural gas transmission networks

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DISCLAIMER

This catalogue (the “transmission programme”) describes certain information regarding the transmission model and the related services offered by Fluxys Belgium. Please note that the transmission programme can be amended from time to time pursuant to the code of conduct (Royal Decree of 23.12.2010). In any case, Fluxys Belgium hereby disclaims any and all responsibility for any changes to the services described in the transmission programme which lies outside of its control. Such changes may be the result of *inter alia* financial and regulatory constraints defined by the relevant regulatory authority or may be imposed by the Belgian or European authorities.

In addition, the information in this transmission programme should not be construed as giving rise to any contractual relationship whatsoever between Fluxys Belgium (or any of its affiliated entities) and any interested party.



1 INTRODUCTION

Fluxys Belgium SA has been appointed as the independent operator of the natural gas transmission grid and storage infrastructure in Belgium (as per the Royal Decree of 23.02.2010). Fluxys LNG, its subsidiary, operates the Zeebrugge LNG terminal. The company has developed its infrastructure into the crossroads for international gas flows in North-Western Europe.

Fluxys Belgium' gas transmission activities in Belgium, including tariff aspects, are regulated by the Federal Act of 12 April 1965 on the transmission of gaseous and other products by pipelines (the Gas Act), and supplemented with guidelines on tariffs and on the code of conduct. Fluxys Belgium also abides by the 3rd European Energy Package and has developed its commercial model and services portfolio so as to take into account the obligations associated with this regulation¹.

Access to the grid infrastructure is regulated in Belgium. A code of conduct (Royal Decree of 23.12.2010) establishes the rules governing access to the transmission grid, storage facilities and LNG facilities.

Based on the provisions of this code of conduct, a standard transmission agreement (contractual terms and conditions), an access code for transmission (access rules and procedures) and a transmission programme (this document) are to be developed up by Fluxys Belgium, and approved by the Belgian federal regulator, the CREG. These documents and the regulated tariffs in force for the various regulated services can be found on the Fluxys Belgium website (<http://www.fluxys.com/belgium>).

This transmission programme gives an overview of the services offered by Fluxys Belgium.

Fluxys Belgium and the TSO from Luxembourg, Creos Luxembourg, have worked on the integration of their respective H market as from 1 October 2015. The resulting BeLux zone consists of an entry/exit system with a Virtual Trading Point "Zeebrugge Trading Point" or "ZTP". Grid users don't have to subscribe to capacity services to transport gas between Belgium and Luxembourg (and vice versa). The launch of this BeLux zone still requires the fulfillment of certain obligations under the Belgian legal framework. However, in order to already let grid users and end-users enjoy the benefits of the integration of these two markets from 1 October 2015, Fluxys Belgium and Creos Luxembourg, in collaboration with their respective regulators CREG and ILR, have developed a transitional solution in accordance with the current legal framework. This transitional solution is described in section 2.3.

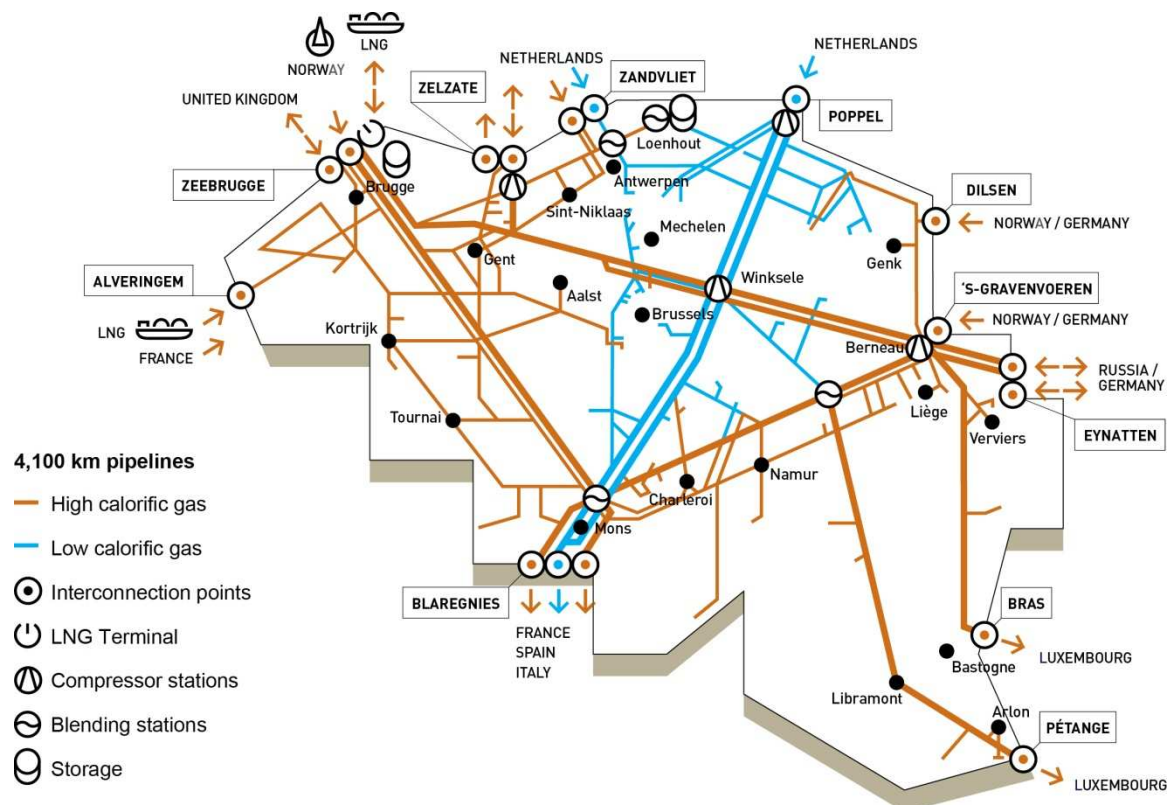
This transmission programme is intended for information purposes and includes information that is set out in detail in the access code for transmission. Parties wishing to subscribe to the services described below may do so by signing the standard transmission agreement.

Detailed information related to the Loenhout storage facilities and Zeebrugge LNG terminal and their associated services can be found in the storage programme and LNG programme respectively on the Fluxys Belgium website.

¹ 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 TRANSMISSION IN BELGIUM

2.1 PHYSICAL TRANSMISSION GRID IN BELGIUM



The Fluxys Belgium transmission grid in Belgium has about 4,100 kilometres of pipelines and 20 interconnection points, opening the Belgian grid to natural gas flows from the United Kingdom, Norway, the Netherlands, Russia and all LNG producing countries. The Fluxys Belgium grid also serves as the crossroads for natural gas transmission flows to the Netherlands, Germany, Luxembourg, France, the United Kingdom and Southern Europe.

Pressure is required to move natural gas through a pipeline network. However, pressure gradually drops due to friction between the natural gas molecules and the pipe walls. The purpose of a compressor station is to maintain pressure in the network. Fluxys Belgium owns and operates 4 compressor stations spread over its transmission grid, located at Weelde, Winksele, Berneau, and Zelzate.

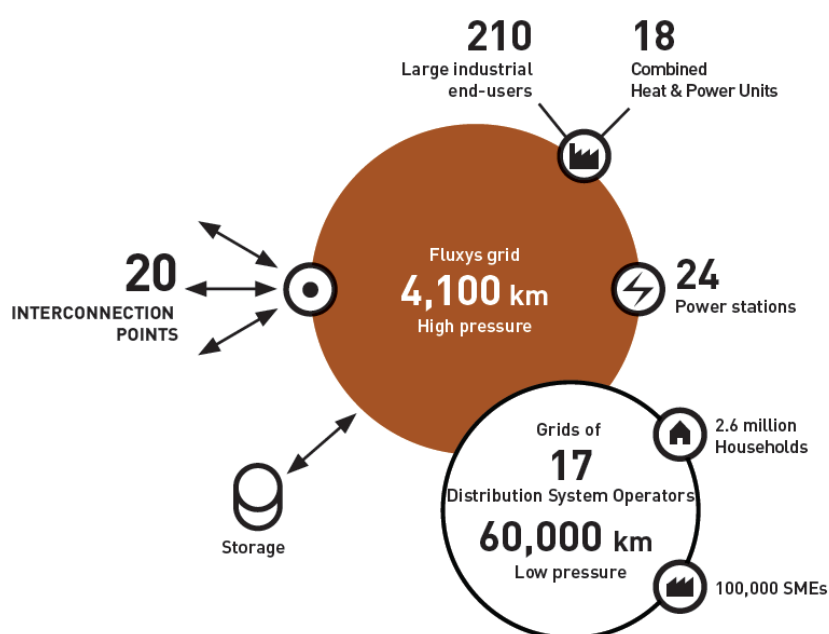
Two different types of natural gas are transported within the Fluxys Belgium grid: high-calorific natural gas (H gas or rich gas), and low-calorific natural gas (L gas or Slochteren gas). Each type of natural gas is transported via dedicated interconnection points and through specific subgrids (dedicated part of the Fluxys Belgium grid), which are operated independently. They are however connected by quality conversion facilities where gas can be transferred from one subgrid to the other, once the gas quality has been adjusted via quality conversion services such as mixing or nitrogen blending.

The Fluxys Belgium transmission grid is also connected to other facilities: the Loenhout underground storage facility operated by Fluxys Belgium, the Zeebrugge LNG terminal operated by Fluxys Belgium's subsidiary Fluxys LNG and the Dunkirk LNG Terminal, connected to the Fluxys Belgium's grid by means of cross border capacity, and operated by Dunkerque LNG.

The Loenhout underground storage facility is an aquifer storage for high calorific natural gas that combines mainly seasonal storage with high flexibility of usage.

The Zeebrugge LNG terminal and the Dunkirk LNG terminal are used to load and unload ships carrying liquefied natural gas (LNG). LNG is temporarily kept in storage tanks at the facility as a buffer before regasifying the LNG and injecting it into the grid for transmission, or loading the LNG back onto LNG ships or trucks (in Zeebrugge LNG terminal only).

2.2 ORGANISATION OF THE BELGIAN GAS MARKET



Many parties are active on the Belgian gas market. These parties fulfil one or more of the following roles.

Fluxys Belgium is the transmission system operator (TSO) that owns and operates the Belgian high-pressure natural gas transmission grid.

A grid user is a company for which Fluxys Belgium transports gas within its high-pressure natural gas transmission grid, using transmission capacities contracted under terms and conditions set forth in the standard transmission agreement which is signed between the grid user and Fluxys Belgium.

A distribution network operator is a company that distributes natural gas at a lower pressure to final customers connected to its grid, including households and small and medium-sized enterprises. There are 17 natural gas distribution network operators in Belgium connected to the Fluxys Belgium grid through some 90 aggregated receiving stations.

A final customer is the ultimate consumer of the gas. Final customers can be directly connected to the Fluxys Belgium grid or connected to a distribution network. There are about 260 companies directly connected to Fluxys Belgium's natural gas transmission grid, referred to as 'end users'. They include industrial companies, cogeneration plants and power stations. Terms

and conditions ruling such physical connections are contractually set forth in the Connection Agreement. On the other hand households and small to medium-sized enterprises connected to a distribution network have no direct contractual relationship with Fluxys Belgium.

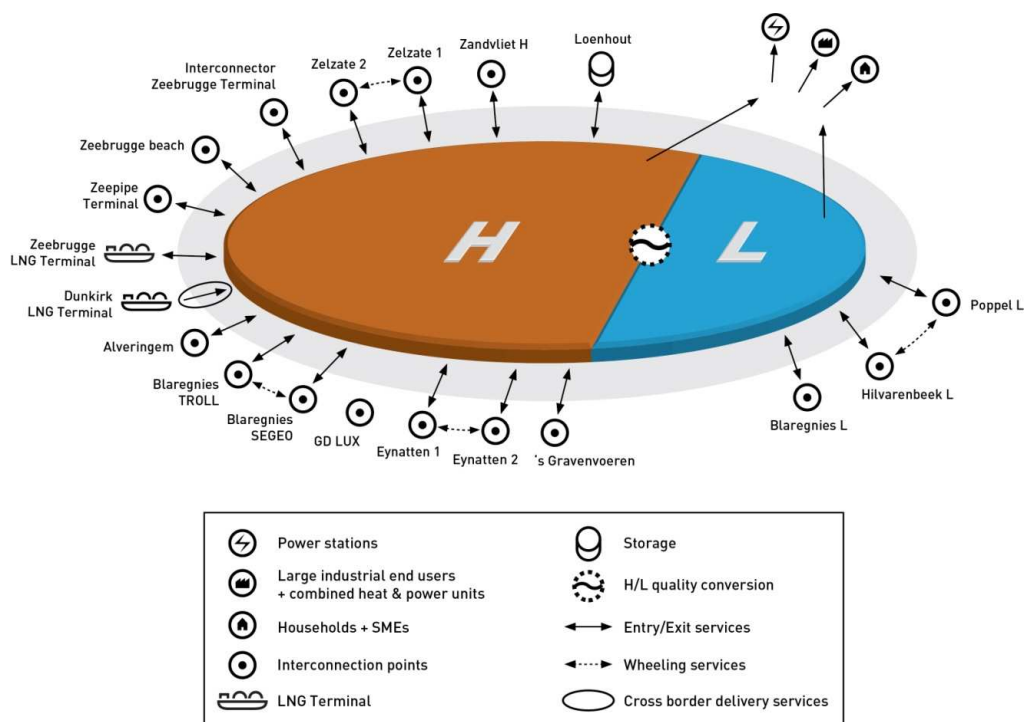
A trader is a party transferring title of gas within the Fluxys Belgium grid thanks to trading services (which can be either notional or physical trading services).

2.3 MAIN CHARACTERISTICS OF THE COMMERCIAL MODEL

An entry/exit model with an H-zone and an L-zone

The model under which Fluxys Belgium offers transmission services to grid users is an entry/exit model. Through this entry/exit model, natural gas enters the Fluxys Belgium grid at an interconnection point, and can either leave the transmission grid at another interconnection point or be consumed by a Belgian final customer at a domestic exit point, or be traded within the grid.

The transmission grid is divided into two entry/exit zones: the H-zone and the L-zone. The H-zone corresponds to the physical H-calorific subgrid and the L-zone to the physical L-calorific subgrid. Entry services enable a grid user to inject a quantity of natural gas at an interconnection point into the considered zone. Exit services enable the grid user to withdraw a quantity of natural gas at an interconnection point or at a domestic exit point from the zone in question. Section 3 contains more information on the entry and exit services.



An *interconnection point* is a type of connection point² linking the Fluxys Belgium transmission grid

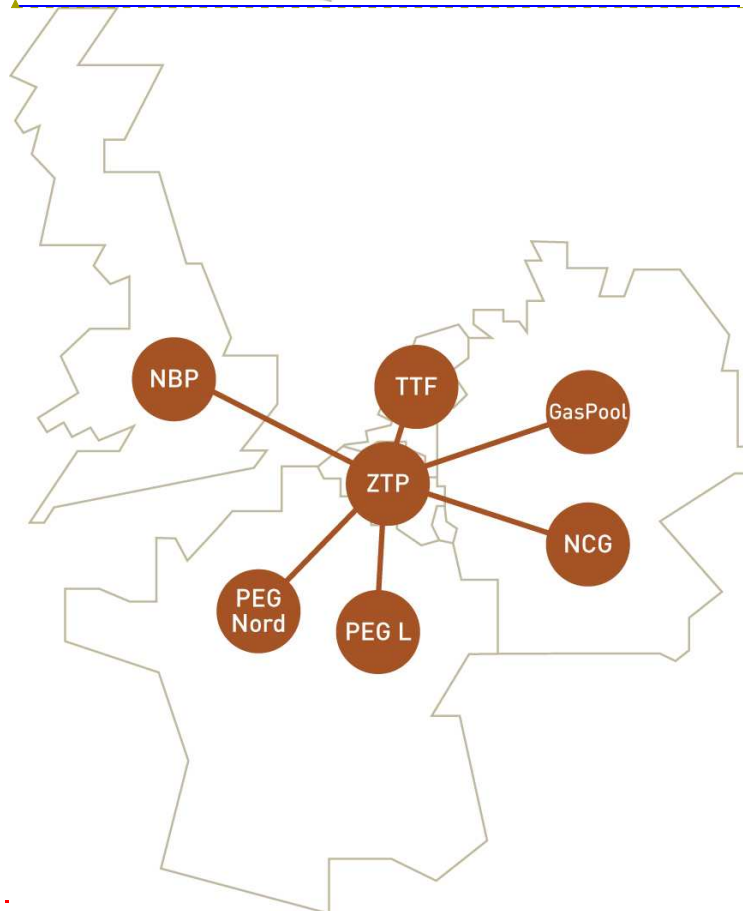
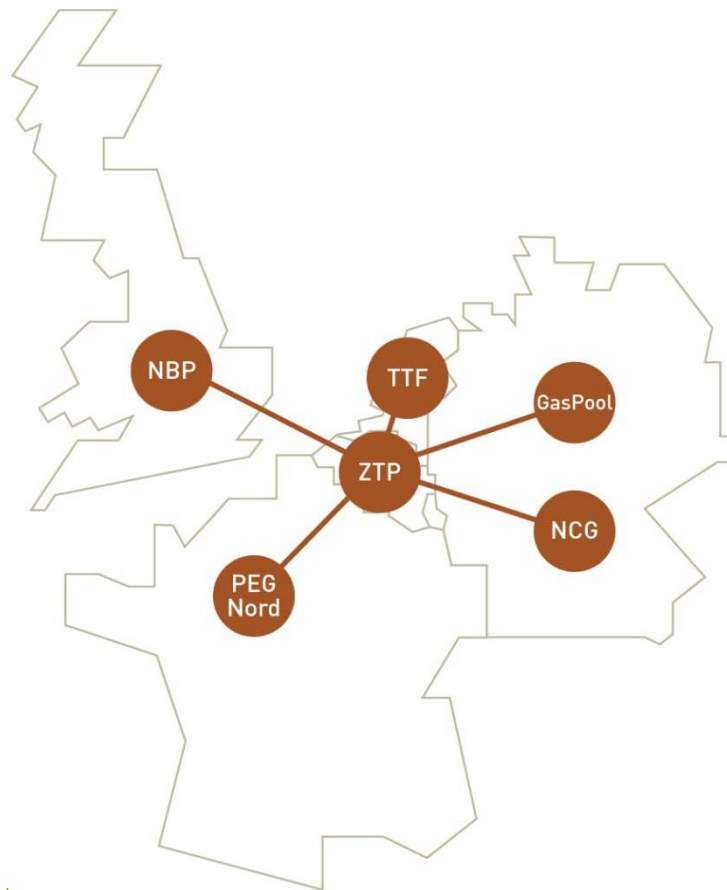
- with the transmission grid of an adjacent TSO or
- with an installation operated by Fluxys Belgium or one of its subsidiaries or with an installation connected to the Fluxys Belgium grid by means of a cross border capacity. Those connection points are the quality conversion facilities, the Loenhout storage facility, the LNG terminal in Zeebrugge and the LNG terminal in Dunkirk, and are called *installation points*.

A *domestic exit point* is a connection point connecting the Fluxys Belgium transmission grid to a final customer, either directly connecting an end user to the transmission grid (*end user domestic exit point*), or via a distribution network (*distribution domestic exit point*).

A model interconnecting the Northwest European market areas and Belgian final customers

The Fluxys Belgium transmission grid enjoys a high level of interconnectivity with adjacent transmission grids, offering extensive access to Northwest European market areas and production facilities, as illustrated below.

² A *connection point* is a physical or a virtual point on the transmission grid, as specified in the access code for transmission, at which grid users deliver natural gas to Fluxys Belgium for the performance of transmission services or at which Fluxys Belgium redelivers natural gas to grid users after having performed such transmission.



Interconnection Points		Adjacent Operator / Market Area	
Interconnection points with transmission grid of an adjacent TSO (H gas)	Alveringem	GRTgaz	PEG Nord
	Blaregnies Segeo		
	Blaregnies Troll		
	Eynatten 1	Gascade	GasPool
	Eynatten 2	Open Grid Europe Thyssengas Fluxys TENP	NCG
	GD Lux	CREOS	-
	IZT	Interconnector UK	NBP ³
	's Gravenvoeren	GasunieTransportServices	TTF
	Zandvliet H		
	Zelzate 1		
	Zelzate 2	Zebra pijpleiding	-
	Zeebrugge Beach	Fluxys Belgium	-
ZPT	Gassco	-	
Interconnection points with transmission grid of an adjacent TSO (L gas)	Blaregnies L	GRTgaz	PEG Nord PEGL
	Hilvarenbeek	GasunieTransportServices	TTF
	Poppel		
Installation Points	Loenhout	Fluxys Belgium	
	Zeebrugge LNG Terminal	Fluxys LNG	
	Dunkirk LNG Terminal	Dunkerque LNG	
	QC - Quality Conversion	Fluxys Belgium	

Trading Services

On the Belgian gas market, Grid users may trade title of natural gas using notional trading services (facilitation of the transfer of title of gas between Grid Users within a Zone: ZTP notional trading services for the H Zone and ZTPL notional trading services for the L Zone) and/or Zeebrugge Beach physical trading services (facilitation of the transfer of title of gas at Zeebrugge) either over the counter through bilateral agreements with third parties, either anonymously on an exchange operated by ICE Endex or Pegas (enabling anonymous trading of natural gas with clearing services).

Commodity trading is facilitated in Belgium by the hub operator, which has developed the necessary notional and physical trading services such as title tracking, nominations, matching, confirmation, or rounding.

The natural gas traded through notional trading services in a zone can be delivered via an entry service on any interconnection point in the relevant zone and can be re-delivered via an exit service to any interconnection point or domestic exit point in that zone.

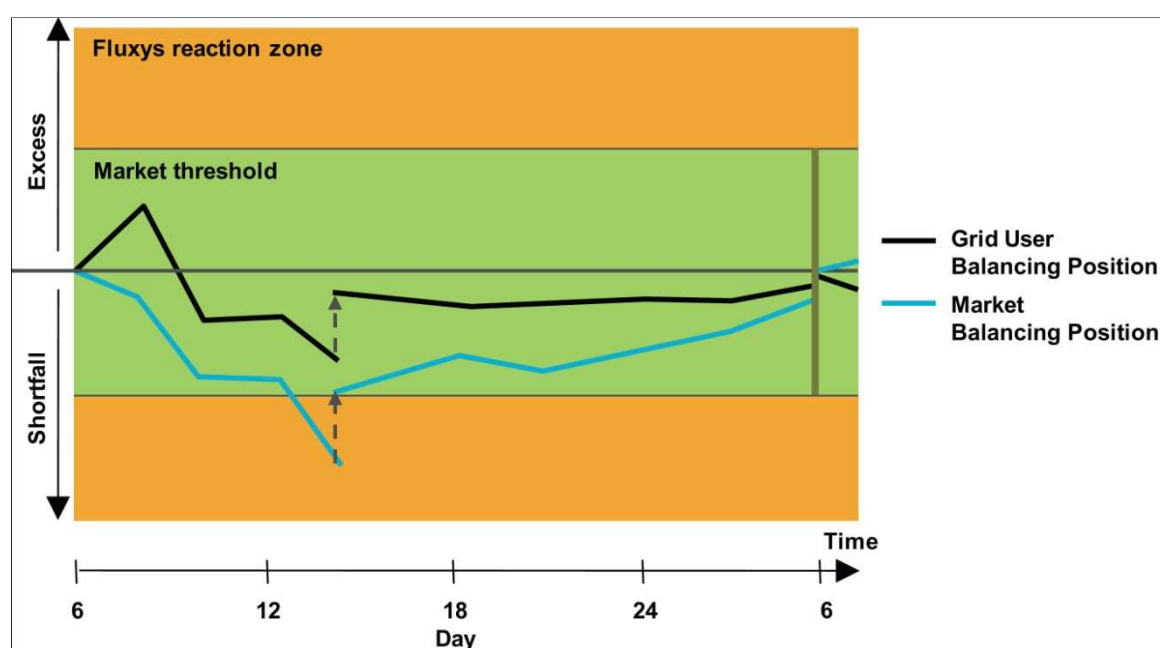
Access to notional trading services of the hub operator is subject to confirmation by Fluxys Belgium that the grid user has a valid signed standard transmission agreement (STA) The net confirmed trades are taken into account for determining the balancing position and indicative forecast balancing position of the grid user in the respective zone, as detailed in section 6.

³ IZT interconnection point connects to the National Grid's NBP through the undersea pipeline Interconnector.

Daily market-based balancing regime

To ensure the reliable and efficient operation of the transmission grid for each zone, the total quantities of natural gas entering the transmission grid must, on a daily basis, be in balance with the total quantities of natural gas leaving the transmission grid or being consumed in Belgium. This balance between entry and exit is monitored on a cumulative basis for all hours of a given gas day via the market balancing position, which is updated on an hourly basis.

During the gas day, as long as the market balancing position remains within the predefined upper and lower market threshold, there is no intervention by Fluxys Belgium. In case the market balancing position goes beyond the upper (or lower) market threshold, Fluxys Belgium intervenes through a sale (or purchase) transaction on the commodity market (see section 6.3.3) for the quantity of the market excess (or shortfall) and settles in cash that quantity with the grid user(s) contributing to such imbalance in proportion of their individual contribution. The price of the transaction done by Fluxys Belgium on the market as well as the Gas price and eventual conversion costs are used for the determination of the price reference used for such settlement, hence reflecting the market value for that residual natural gas at that time.



At the end of each gas day, the difference between the total quantities entering the given zone and the total quantities consumed by grid users' final customers or leaving the zone for an adjacent transmission grid, taking into account the net confirmed trades of the grid user, is settled to zero by a settlement in cash for each grid user. Section 6 contains more details on the balancing model and the residual balancing organisation by Fluxys Belgium.

BeLux market integration

Pending the full implementation of the BeLux market integration, Fluxys Belgium and Creos Luxembourg, in collaboration with their respective regulator CREG, ILR, have developed a transitory solution.

This transition solution includes automatic transfer of the balancing position of the grid user in Luxembourg in its balancing position in Belgium through the interconnection point GDLUX. This makes the virtual trading point "Zeebrugge Trading Point" or "ZTP" since 1 October 2015 the aggregate trading point of the Belgian and Luxembourg markets.

3 SERVICES OFFERED

Entry and Exit Capacity services are available in various capacity types and can be subscribed independently:

- **Firm capacity** is always available and usable under normal operating conditions⁴.
- **Interruptible capacity** means that Fluxys Belgium can interrupt the service due to physical restrictions on its transmission grid.
- **Backhaul capacity** is offered at unidirectional interconnection points, in the opposite direction of the physical gas flow direction and is usable as long as the resulting physical flow remains in the physical direction of the interconnection point.

3.1 ENTRY AND EXIT SERVICES ON INTERCONNECTION POINTS

Entry services are services enabling natural gas to be injected into a zone of the transmission grid at an interconnection point. The table below gives an overview of all interconnection points and the services available on these points.

Interconnection Point		Type of capacity entry service		
		Firm	Backhaul	Interruptible
Interconnection points with transmission grid of an adjacent TSO (H gas)	Alveringem	X		
	Blaregnies Segeo	X	X	
	Blaregnies Troll		X	
	Eynatten 1	X		0
	Eynatten 2	X		0
	IZT	X		0
	's Gravenvoeren	X		0
	Zandvliet H	X		0
	Zeebrugge Beach	X		0
	Zelzate 1	X		0
	Zelzate 2		X	
ZPT	X		0	
Interconnection points with transmission grid of an adjacent TSO (L gas)	Blaregnies L		X	
	Hilvarenbeek L	X		0
	Poppel L	X		0
Installation Points	Loenhout	X		X*
	Zeebrugge LNG Terminal	X		0
	Dunkirk LNG Terminal	X		

- X = Service is offered and can be contracted within indicative availabilities as published on the Fluxys Belgium website
- X* = Operational interruptible capacity that corresponds to capacities that Fluxys Belgium has secured for the operation of the transmission grid and that are made available to grid users on an interruptible basis.
- 0 = Service is optionally offered, depending on firm availability
- Installation points are considered to be a specific type of interconnection point.

Exit services are services enabling natural gas to be withdrawn from a zone of the transmission grid at a domestic exit point or at an interconnection point. The table below shows the services offered at all interconnection points.

⁴ Which are subject to the terms and conditions of the standard transmission agreement.

Interconnection Point		Type of capacity exit service		
		Firm	Backhaul	Interruptible
Interconnection points with transmission grid of an adjacent TSO (H gas)	Alveringem		X	
	Blaregnies Segeo	X		
	Blaregnies Troll	X		0
	Eynatten 1	X		0
	Eynatten 2	X		0
	IZT	X		0
	's Gravenvoeren		X	
	Zandvliet H		X	
	Zeebrugge Beach	X		0
	Zelzate 1	X		0
	Zelzate 2	X		0
	ZPT		X	
Interconnection points with transmission grid of an adjacent TSO (L gas)	Blaregnies L	X		0
	Hilvarenbeek L		X	
	Poppel L		X	
Installation Points	Loenhout	X		X*
	Zeebrugge LNG Terminal		X	
	Dunkirk LNG Terminal			

- X = Service is offered and can be contracted within indicative availabilities as published on Fluxys Belgium website
- X* = Operational interruptible capacity that corresponds to capacities that Fluxys Belgium has secured for the operation of the transmission grid and that are made available to grid users on an interruptible basis.
- 0 = Service is optionally offered, depending on firm availability
- Installation points are considered to be a specific type of interconnection point.

The H→L quality conversion service is the ability to convert H-gas from the H-zone at the installation point "QC" in L-gas for the L-zone. The capacity type can be firm or interruptible. The L→H quality conversion service consists of the ability to convert L gas from the L-zone at the installation point "QC" in H-gas for the H-zone. The capacity type is interruptible.

3.1.1 Definition of the service offer at interconnection points

As long as firm (or backhaul) transmission services are available at an interconnection point or the LNG Terminal installation point, only firm (or backhaul) transmission services are offered at this interconnection point, which are allocated as requested or via auctions, as detailed in section [4.14.1](#).

Interruptible services are offered at an interconnection point, when firm transmission services are available in limited quantity over such a period. The offered quantities are calculated such that the probability of interruption based on historical data does not exceed 5%. This probability is based on historical data and only serves as an indication, without giving any guarantee as to the probability of interruption for the future.

For unidirectional interconnection points, only backhaul services are offered in the reverse direction.

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Operational interruptible capacity is offered at the Loenhout installation point, where Fluxys Belgium has secured capacities for the operation of the transmission grid. In order to maximise the service offer, such operational capacities are made available to grid users on an interruptible basis. This service is offered in addition to firm capacity. These firm and operational interruptible it services are implicitly allocated by Fluxys Belgium to grid users according to the subscribed storage services with Fluxys Belgium at the Loenhout underground storage facility.

3.1.2 Availability for use of each service

Subscribed firm transmission services are, subject to the terms and conditions of the standard transmission agreement, always usable under normal operating conditions. Furthermore, subscribed Entry and Exit transmission services are usable independently of each other⁵.

Interruptible services can be interrupted by Fluxys Belgium if the requested quantities exceed the physical capabilities.

Operational interruptible capacity offered at the Loenhout installation point can be interrupted by Fluxys Belgium in case such capacity is needed to operate the transmission grid.

Backhaul capacity is usable on selected interconnection points as long as the resulting physical flow remains in the physical direction of such unidirectional interconnection point.

3.1.3 Rate type for Interconnection Points

Two types of rates apply for entry service at an interconnection point, depending on the duration of the booked service. If the service period is equal to one calendar year or any multiple of calendar years, the yearly rate type will apply. In other cases (less than one calendar year), a seasonal rate type will apply in proportion to the number of days of the booking. For an exit service at an interconnection point with any service duration, the yearly rate type applies.

This is summarized in the following table:

Capacity services	Service period	Rate type
Entry services	≥ 1 year (*)	Yearly
	1 month $\geq x < 1$ year (*)	Seasonal
	< 1 month (*)	
Exit services	All service periods	Yearly

(*)The service periods for transmission services on interconnection points subscribed through PRISMA are defined by default as yearly, quarterly, monthly, daily and within-day.

⁵ With the exception of Wheeling Services and Operational Capacity Usage Commitments as described in section [3.3.3](#)

3.2 SERVICES AT DOMESTIC EXIT POINTS

Domestic exit services are services enabling natural gas to be withdrawn from a zone of the transmission grid at a domestic exit point.

Connection Point	Firm	Interruptible
End User Domestic Exit Point	X	0
Distribution Domestic Exit Point	X	-

3.2.1 Exit service offer at a domestic exit point

For end user domestic exit points, i.e. connection points between the Fluxys Belgium transmission grid and end users' facilities, exit services have to be subscribed by the grid user. As long as firm exit services are available at an end user domestic exit point, only firm exit transmission services are offered, which are allocated as requested. These services are offered with high pressure, medium pressure and DPRS (pressure reduction at domestic exit point) parameters, if applicable, taking into account the physical characteristics of the end user domestic exit point. For more details on those services, please refer to Section [3.2.4](#).

If no (or no more) firm transmission services can be offered at an end user domestic exit point, interruptible transmission services can be offered upon consultation with, and agreement of, the end user in question in accordance with the access code for transmission and the connection agreement.

For domestic exit capacity to distribution networks, there is no explicit subscription of exit services by the grid user. The peak capacity is calculated based on *inter alia* the methodology agreed with the distribution network operators. Fluxys Belgium allocates this peak capacity on a monthly basis to grid users based on their market share of final customers within each distribution network, taking into account the different final customers profile segmentations.

3.2.2 Availability for use of each exit service

Subscribed firm transmission services are, subject to the terms and conditions of the standard transmission agreement, always usable under normal operating conditions.

Subscribed interruptible transmission services can be interrupted by Fluxys Belgium if the quantities requested to be transported exceed the physical capabilities of the transmission network.

3.2.3 Rate type for domestic exit points

For exit services at end user domestic exit points, four rate types apply, depending on the service period of the booked service. If the service period is equal to one calendar year or any multiple of calendar years (beginning on any date), the yearly rate type will apply. Alternatively the Fix/Flex rate type can apply if such rate type is requested by all grid users active on a given end user domestic exit point for a period equal to one or more calendar years, starting on January, 1st. For a service period which is between 1 or 12 calendar months, the seasonal rate type will apply in proportion to the number of days of the booking. For service with a service period of less than one calendar month, the short term rate type will apply.

For exit services at distribution domestic exit points (towards the distribution network) that are allocated by the TSO, the rate type is always yearly.

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Capacity services	Service period	Rate type
Exit services at End User Domestic Exit Point	≥ 1 year	Yearly
		Fix/Flex
	1 month ≥x<1 year	Seasonal
	< 1 month	Short term
Exit services at Distribution Domestic Exit Point	All service periods	Yearly

The capacity fee under the Fix/Flex rate type consists of a Fix component and a Flex component:

- The Fix component depends on the booked capacity, covering the peak requirements for the considered End User.
- The Flex component depends on the actual usage of the capacity, expressed in running hours (running hours being the allocated quantities divided by the booked capacities).

The Fix/Flex rate type is only available on high pressure firm exit services and cannot be combined with the yearly, seasonal or short term rate type or further subscriptions.

During the start-up and commissioning process, Fluxys Belgium will apply the yearly rate type for a maximum of 6 months if capacity requirements are not on regular basis.

3.2.4 Specific services at the domestic exit point

At domestic exit points, the transmission services always include the high pressure exit service and may include the services of medium pressure, dedicated pressure reduction station and odourisation.

- Via the medium pressure service, Fluxys Belgium transports the gas to a domestic exit point via a medium pressure network.
- Via the dedicated pressure reduction station service, Fluxys Belgium reduces the pressure at a domestic exit point within the contractual minimum and maximum pressure limits.
- Odourisation consists of Fluxys Belgium injecting an odourant in gas at domestic exit points where an odourisation facility is operated by Fluxys Belgium.

When a grid user subscribes to exit capacity services for a domestic exit point (or is implicitly allocated such services in the case of distribution) connected to the medium pressure network, equipped with a pressure reduction facility or equipped with an odourisation facility, the corresponding services of medium pressure, dedicated pressure reduction station or odourisation are automatically applicable.

3.2.4.1–DPRS – Dedicated Pressure Reducing Stations

Via the dedicated pressure reduction service at a domestic exit point, Fluxys Belgium reduces the pressure at an exit point within the contractual minimum and maximum pressure limits. Whether or not the DPRS service is applicable is a characteristic of each domestic exit point and depends on the technical characteristics of the facility at that connection point.

When a grid user subscribes to exit capacity services for a domestic exit point (or is implicitly allocated such services in the case of distribution) equipped with a pressure reduction facility, the DPRS service is automatically applicable if relevant.

3.2.4.2–Odourisation

Odourisation consists of Fluxys Belgium injecting an odourant in gas at domestic exit points where an odourisation facility is operated by Fluxys Belgium. Whether or not the odourisation service is

~~applicable is a characteristic of each domestic exit point and depends on the technical characteristics of the facility at that connection point.~~

~~When a grid user subscribes to exit capacity services for a domestic exit point (or is implicitly allocated such services in case of distribution) which is equipped with an odourisation facility, the odourisation service is automatically applicable if relevant.~~

3.3 WHEELING AND OPERATIONAL CAPACITY USAGE COMMITMENTS (OCUC)

A Wheeling allows the direct transmission of natural gas between two interconnection points located within the same border station without entering the entry/exit zone of the transmission grid.

Wheelings are available between the following interconnection points:

- Between Eynatten 1 and Eynatten 2, and between Eynatten 2 and Eynatten 1
- Between Zelzate 1 and Zelzate 2, and between Zelzate 2 and Zelzate 1
- Between Poppel and Hilvarenbeek, and between Hilvarenbeek and Poppel

Wheelings do not give access either to other entry/exit points of the transmission grid nor to the notional trading services (ZTP & ZTPL). Under a Wheeling, the quantity of entering gas must be equal, on an hourly basis, to the quantity of exiting gas.

Operational capacity usage commitments are operational agreements between a grid user and Fluxys Belgium consisting of a commitment regarding the combined use of a well-defined entry service at an interconnection point with a well-defined exit service at another interconnection point, without access to the market-based balancing model or to notional trading services. As a proactive measure, Fluxys Belgium determines in advance the eligible entry and exit service that can avoid a bottleneck in the transmission grid, and which are currently the following combinations:

- Entry Eynatten 1 or Eynatten 2, with Exit 's Gravenvoeren
- Entry 's Gravenvoeren, with Exit Eynatten 1 or Eynatten 2
- Entry Zelzate 1 or Zelzate 2, with Exit IZT or Zeebrugge Beach
- Entry IZT or Zeebrugge Beach, with Exit Zelzate 1 or Zelzate 2
- Entry Alveringem, Dunkirk LNG Terminal or Blaregnies Troll/Segeo, with Exit IZT or Zeebrugge Beach

3.4 ZEE PLATFORM SERVICE

The aim of the Zee Platform Service is to facilitate transfers of gas in the Zeebrugge area between IZT, ZPT, Zeebrugge LNG Terminal and Zeebrugge Beach interconnection points. The Zee Platform Service enables grid users to transfer natural gas between two or more (at the grid user's choice) of these points without explicit capacity reservation and without any capacity limitation.

Zee Platform transfers are firm, except transfers to ZPT and Zeebrugge LNG Terminal which are backhaul, as ZPT and Zeebrugge LNG Terminal are unidirectional interconnection points. Furthermore, transfers to IZT and Zeebrugge Beach are subject to compliance with UK gas quality requirements.

The Zee Platform service does not give access either to the entry/exit zone of the transmission grid nor to the notional trading services (ZTP & ZTPL). Under the Zee Platform, the quantity of entering gas must be equal, on an hourly basis, to the quantity of exiting gas.

3.5 CAPACITY POOLING

The capacity pooling service at one or more end user domestic exit points allows grid users supplying the same end user to pool and share each other's entire subscribed exit capacity for such end user domestic exit point. Each grid user can therefore use part or all of the pooled capacities on that point.

The pooling of capacity at a given end user domestic exit point implies a specific allocation rule for the measured offtake quantities of gas on which concerned grid users need to agree upon before the start of the capacity pooling service. This allocation agreement is based on a priority ranking between grid users identified as priority allocated grid users, together with the designation of a grid user known as capacity responsible grid user, as detailed in the access code for transmission.

Since any modification to the subscribed exit capacities will automatically be integrated in the pool by Fluxys Belgium, a grid user modifying its subscribed capacities at a given end user domestic exit point must inform the other grid users having subscribed to the capacity pooling service for that end user domestic exit point, with a potential subsequent modification of the allocation agreement between the parties.

3.6 GAS QUALITY CONVERSION SERVICE H → L

As explained above, the Fluxys Belgium grid is composed of 2 independent subgrids which correspond to two zones: H-zone and L-zone. The conversion facilities enable rich gas (H gas) to be converted into Slochteren gas (L gas),

Different quality conversion services H->L exist, namely "peak load", "base load" and "seasonal load"; each with a different tariff structure and different specifications regarding availability of the capacity. The peak load conversion service H→L can only be used from 1st November to 31 March and at cold temperatures. Peak load conversion services is sold in bundles with a part in firm capacity and a part in interruptible capacity. These features make the peak load serving a perfect insurance system to cover increased demand for L gas with H gas at a peak during the cold winter. The H→L base and seasonal load quality conversion services can be used during the whole contract year and are therefore suitable, for example, just for supplying an end customer L gas in with H gas.

These quality conversion services are first sold through an annual subscription window for periods of one or more gas years for the peak load and for periods of one gas year for base load and seasonal load. During the subscription window requests are allocated in proportion to the requested quantities with priority to the longest period. Upon closing of this subscription window any remaining quantities can be allocated as requested subject to explicit prior confirmation by Fluxys Belgium of available necessary logistics contracts and in so far the request covers the remaining period up to 30 September of the next year.

The use of H->L gas quality conversion service does not require the grid user to subscribe to entry or exit services in the L or H-zone respectively.

The part of the subscribed capacity that can actually be used or real capacity of the peak load conversion service (H->L) is dependent on the temperature, the date and the Wobbe of the L-gas. A part of the peak load bundle is also offered on interruptible basis. The real capacity of the seasonal load conversion service depends on the period. Base load conversion capacity is available year round. All conversion capacities are however subject to any necessary maintenance works. This is described in detail in Annex C.3 of the Access Code for Transmission.

3.7 GAS QUALITY CONVERSION SERVICE L → H

The L-inject service consists of the direct injection of L gas into the H gas network, taking into account the gas quality specifications of L gas (in particular the Wobbe specifications). This service is available on an interruptible basis. The use of gas quality conversion service L->H doesn't require the grid user to subscribe to entry or exit services in the H or L-zone respectively.

These quality conversion services are sold on an annual basis for periods of one gas year. The services are offered through a subscription window in which requests covering the upcoming gas year are allocated in proportion to the requested quantities. Upon closing of this subscription window any remaining quantities are allocated as requested provided the requested period is a minimum of one week and does not exceed the end of the gas year. The details of such a subscription window are described in the access code for transmission.

3.8 CROSS BORDER DELIVERY SERVICE

The cross border delivery service is a service that enables the transportation of natural gas between an interconnection point or an installation point located on an adjacent transmission system operator's grid and the transmission system of Fluxys Belgium. A cross border delivery service offered on an interconnection point is always offered together with other transmission services available on such interconnection point. The tariff of the respective transmission system operator shall be applicable for the cross border delivery service, as set out in the regulated tariffs.



4 SERVICE SUBSCRIPTION AND ALLOCATION RULES

4.1 PRIMARY MARKET

In order to subscribe and use transmission services, a party must first register as a grid user, as set out in the code of conduct, which entails signing the standard transmission agreement. The standard transmission agreement is concluded for an indefinite period and service confirmation forms are the legal and contractual form that confirms the subscribed services under this agreement.

Transmission service are offered as follow:

Services		Subscription & Allocation
Entry and Exit Services on Interconnection Points	Alveringem	PRISMA
	Blaregnies Segeo	PRISMA
	Blaregnies Troll	PRISMA
	Blaregnies L	PRISMA
	Eynatten 1	PRISMA
	Eynatten 2	PRISMA
	Hilvarenbeek	PRISMA
	IZT	PRISMA
	Poppel <u>L</u>	Written only
	's Gravenvoeren	PRISMA
	Zandvliet H	PRISMA
	Zeebrugge Beach	PRISMA or EBS or written ⁶
	Zelzate 1	PRISMA
	Zelzate 2	EBS or written
	ZPT	EBS or written
	Zeebrugge LNG Terminal	EBS or written
	Dunkirk LNG Terminal	EBS or written
	Quality conversion	Written only
Exit Services on Domestic Exit Points	Loenhout	Implicit
	End User DEP	EBS or written
Other Services	Distribution DEP	Implicit
	OCUC and Wheeling	Written only
	Zee Platform	Written only
	Cross Border Delivery Service	Written only
	Capacity Pooling	Written only

⁶ The entry and exit transmission services from and towards Zeebrugge Beach will be offered on PRISMA for yearly, quarterly and monthly auctions, and not for daily and within-day auctions. After termination of the monthly auction on PRISMA, transmission services from and towards Zeebrugge Beach can be subscribed on EBS until D-1 at midnight, and their subscription is confirmed instantly.

Services on interconnection points offered on the Prisma capacity booking platform can only be subscribed via auction⁷ on PRISMA (www.prisma-capacity.eu). Other services described in this brochure can be subscribed at Fluxys Belgium either in writing (letter, fax or email), using a transmission service request form (the templates are available in the access code for transmission), or by on-line booking, using an Internet-based electronic booking system accessible via the Fluxys Belgium website (www.fluxys.com/belgium).

4.1.1 Subscription via PRISMA

PRISMA is a joint initiative developed in cooperation with other EU transmission systems operators (e.g. from Austria, Belgium, Denmark, France, Germany, Italy, United Kingdom, Ireland and the Netherlands) with the goal to implement a platform in order to connect the European gas capacity markets according to implementation of the European Network Code for Capacity Allocation Mechanisms ("CAM NC")⁸.

Entry and Exit services at interconnection points can be subscribed in the form of bundled products with the relevant adjacent transmission system operators, as well as unbundled products at the TSO. The products are offered on the PRISMA European Capacity Platform.

On PRISMA, capacity services are marketed in standardized durations, called standard products, which can either be within-day (balance of gas day product), daily (for a duration of one gas day), monthly (from 1st gas day to last gas day of any calendar month), quarterly (starting on the 1st of October, 1st of January, 1st of April or the 1st of July respectively) or yearly (starting on the 1st of October).

If applicable, for interconnection points auctioned on PRISMA, the interruptible services will be offered after the closure of the firm auctions for the same product period. For the remaining interconnection points, interruptible capacities are allocated as requested.

Products offered on PRISMA by TSOs are allocated via auctions in accordance with the following allocation rules:

- For the auctioning of yearly, quarterly and monthly services, an ascending clock auction algorithm is applied.

During consecutive bidding rounds, grid users are invited to submit quantity bids. A quantity bid specifies the amount of capacity that the grid user would like to acquire at the proposed price of such bidding round. The reserve price in the first bidding round is equal to the sum of the reserve prices at each side of the interconnection point, with such reserve price being the regulated tariff for the Belgian part of the bundled products. In subsequent bidding rounds, the price for the bundled products is increased by fixed large price increments until the sum of the submitted bid quantity bids is smaller than or equal to the amount of capacity offered.

At that stage, the price is brought back to the price of the previous bidding round. A new series of bidding rounds is launched, in which the price is subsequently increased by small price increments until the sum of the submitted quantity bids is lower than or equal to the amount of capacity offered. In this case the auction is finished. The capacities are allocated according to the last quantity bids at the premium, equal to the sum of the large price increments and small price increments having led to the last bidding round, to be added to the sum of the respective reserve prices.

⁷ In case PRISMA is not available the TSO keeps the possibility to offer the available capacity on the Electronic Booking System, or in written form, as the case may be, and grid user has the right to send its service request for such service period directly to the TSO in written with the appropriate form.

⁸ Commission Regulation EU (No) 984/2013 (CAM NC) has entered into force after its publication in the Official Journal of the European Union in late 2013 and is applicable since 1 November 2015; the allocation processes on PRISMA are based on this official version of the CAM NC.

For each product the large and small price increments are fixed, defined and published on www.prisma-capacity.eu. The amount of capacities offered is published at www.prisma-capacity.eu before the beginning of each auction and in a timely manner.

- For the auctioning of daily and within-day services, a uniform price auction algorithm will be applied:

Grid users submit their bids or bidding lists during only one bidding round. A bidding list can contain up to 10 bids. Each bid contains the requested capacity amount, the minimum capacity amount and the price at which the grid user would like to acquire this capacity amount, it being understood that the reserve price is equal to the sum of the reserve prices at each side of the interconnection point, with such reserve price being the regulated tariff for the Belgian part of the bundled products.

At the end of the bidding round, capacity is allocated to the bids in function of their price ranking, i.e. the requested capacity amount of the bid with the highest price is allocated first. After each allocation, the remaining unallocated capacity is reduced by the same quantity. Each bid is considered successful if capacity can still be allocated in accordance with the minimum capacity amount requested in the bid. All successful bids are allocated at the price of the lowest successful bid if demand exceeds the offered capacity. In all other cases, all successful bids are cleared at the reserve price.

In accordance with the article 3 paragraph 5 of the CAM NC, competing auctions may be set up. These auctions provide the TSO the ability to offer a limited amount of capacity available in two different auctions, where the market indicates via the auction process which auction is the most requested.. This is the case for the 1-N auctions situation, where N can be the number of TSOs at one side of the border (e.g. Eynatten 2) or can be the number of products available at one side of the border (e.g. IZT).

Example: Fluxys Belgium has 100 MWh/h available exit capacity at Eynatten 2; on the German side, two TSOs each have 75 MWh/h available. Instead of Fluxys Belgium in advance chooses to make a bundled product of the maximum 75MWh/h with TSO 1 and the 25 MWh/h remaining product with TSO 2, the competing auction will generate a range of two auctions of 75 MWh/h with an overall limit of 100 MWh/h.

On PRISMA, auctions are held according to a European-wide agreed calendar which is determined annually and published on ENTSOG website, but reflected on PRISMA and on Fluxys Belgium websites as well.

The auction premium that can result from the auction process applied to allocate the bundled products is split between Fluxys Belgium and the concerned adjacent transmission system operators in accordance with a key subject to approval by the competent regulatory authorities. The part of such auction premium relating to the services subscribed with Fluxys Belgium is invoiced to the grid users by Fluxys Belgium on top of the reserve price being the regulated tariff, according to section 7.

4.1.2 Subscribing services with Fluxys Belgium directly.

Beside the services exclusively offered on PRISMA, other services can be booked at any time in writing or via the electronic booking system (hereinafter EBS). If the requested services via EBS are available both in terms of the service period as the available capacity, then the request will be directly confirmed via EBS. For example, capacity services at domestic exit points can be subscribed via EBS on 24/7 basis.

Services are offered for a minimum period of one day (gas day from 6:00 AM to 6:00 AM) and there is in general no maximum period, except for the services where another period is explicitly determined (interruptible, Fix/Flex rate type, or H/L quality conversion – see section 3).

The Fix/Flex rate type for exit services on end user domestic exit points can only be requested on an annual basis during a window. It can only be attributed per period of 1 or several calendar years, starting on January 1st, for all grid users active on a given end user domestic exit point.

Grid users can also request to operate their subscriptions on an end user domestic exit point according to a calendar day regime (from midnight until midnight, 00:00 AM until 24:00PM the same day) instead of gas day regime (from 6:00 AM to 6:00 AM the following day). The calendar day regime must be chosen by all grid users active on a given end user domestic exit point during a window and remains valid for a period of 1 or several calendar years, starting on January 1st. This option does not affect nomination nor balancing principles in general.

Services not offered on PRISMA, are allocated as requested, with the exception of services offered in a subscription window, implicitly allocated, or through an Open Season process. Fluxys Belgium allocates these services based on the order of receipt of grid users' applications.

The TSO also offers all grid users having entry and exit services the possibility to convert a wheeling or an operational capacity usage commitment with the TSO, under following restrictive conditions:

- only yearly, quarterly or monthly eligible entry and exit services ~~allocated during the yearly, quarterly or monthly auctions on the PRISMA-platform~~ can be converted⁹;
- the grid user has a period of 1 week, after the ~~closure of the annual auctions for yearly and quarterly~~ allocation of its capacities, to send in his request to convert the entry and exit services into a wheeling or an operational commitment usage commitment which must be equal in quantity. ~~I~~ the period remains identical as initially contracted.

The capacity services at the distribution domestic exit points and the Loenhout installation point, which are implicitly allocated by Fluxys Belgium, are described in section 3.

⁹ Except for Dunkirk LNG where OCUC are offered associated with a Cross Border Delivery Service for the same period service which can be shorter than for ~~quarterly~~ monthly capacities.

4.2 TRADING CAPACITY ON THE SECONDARY MARKET

Grid users are legally bound (pursuant to Article 11 of the code of conduct) to make available on the secondary market, the subscribed firm capacity which they no longer need, for a specific period or permanently.

Fluxys Belgium organises the secondary market by enabling grid users to trade capacity services they no longer need on an electronic market platform, Fluxys Belgium uses PRISMA ("PRISMA secondary") for such purpose.

PRISMA secondary allows grid users to trade capacity services among themselves or with the TSO, either anonymously or through registration of over-the-counter transactions.

Aside from PRISMA secondary, transmission services can always be traded on the secondary market by a standard written "over the counter" assignment procedure which is detailed in the access code for transmission.



5 OPERATING RULES

5.1 NOMINATIONS

In order to notify Fluxys Belgium of the quantity of natural gas that will be delivered at each interconnection point, except for the interconnection point GDLux, and each end user domestic exit point, the grid user shall send nominations and, if applicable, renominations to Fluxys Belgium, according to the procedure detailed in the access code for transmission. No nominations have to be sent for distribution domestic exit points.

A nomination is a standardised electronic message issued by the grid user via Edig@ds protocol. It relates to a particular gas day (a gas day begins at 06:00 hours and terminates at 06:00 hours the following day, Belgian time) and to a specific point, and provides for each hour of the relevant gas day the quantities of natural gas, expressed in kWh, that the grid user wishes to inject or offtake under its subscribed services at the relevant point.

The time schedule for the nominations and the renominations cycles for a given gas day are described in the access code for transmission and are based on the EASEE-gas common business practice¹⁰. The first nomination cycle begins at 14:00 hours of the preceding gas day and is composed of the following steps:

- The grid user sends his nominations to Fluxys Belgium
- Fluxys Belgium checks the validity of the message format
- The nominations are processed by Fluxys Belgium (conformity checks and matching with the nominations in the adjacent system)
- Fluxys Belgium computes the quantities that can be confirmed and that are scheduled to be delivered/offtaken to/from the transmission grid
- Fluxys Belgium sends a confirmation message in order to communicate to the grid user the results of the process.

Fluxys Belgium supports both double sided nominations and single sided nominations¹¹. In double sided nominations, matching nominations have to be submitted to both Fluxys Belgium and the Adjacent TSO, while in single sided nominations only one nomination is required with one of the TSOs. The TSOs have to define¹² in which network the grid users will be the active and the passive grid users, whereby the active grid user is sending the nominations as described above towards the active TSO. The passive grid user will have to send only once a declaration notice to the passive TSO. Both grid users will receive, after conducting a capacity check, the confirmation of the active and/or passive TSO.

The grid user may revise its nominations on a day-ahead or intraday basis by sending renominations. During the gas day a renomination is considered valid when received before the applicable minimum renomination lead time and will be processed for confirmation according to the same process as described above. The standard minimum renomination lead time is "full hour + 2". For net confirmed title transfers (NCTT_{h,z}) relating to notional trading services, the notification is accepted until 30 minutes before the considered hour. For other points, Fluxys Belgium plans to reduce this lead time to "full hour + 1"¹³ subject to harmonization on that matter between adjacent TSOs. Fluxys Belgium will inform the grid users accordingly and confirm the start date of such potential change in due course.

¹⁰ EASEE-gas Common Business Practice 2003-002/01 "Harmonisation of the Nomination and Matching Process", as approved on February 18, 2004 (see <http://www.easee-gas.org/cbps.aspx>)

¹¹ Single sided nominations will optionally be made available to Grid Users as from 1 November 2015, provided that the necessary Edig@ds messages have been published by EASEE-gas, taking the necessary implementation time, that the Adjacent TSO has developed the capability to support single sided nominations, that both TSOs have agreed upon their respective role, and that the concerned Grid User(s) have indicated their respective roles.

¹² The information will be published per IP on Fluxys Belgium website, once the necessary agreements on those roles are in place with the respective TSOs

¹³ For quality conversion services, the renomination lead time is and remains "full hour+6".

5.2 METERING AND ALLOCATIONS

The metering procedures are specified in the access code for transmission. Based on the metering services that cover metering at metering facilities, validation of measurements and measurement repatriation, Fluxys Belgium allocates gas quantities at the interconnection points and end user domestic exit points on an hourly basis to the involved grid user(s). The unit used for the allocation is the kWh. In case the grid user has a portfolio in the Grand Duchy of Luxembourg, an allocation equal to the imbalance of the grid user in Luxembourg will be allocated to the grid user via the interconnection point GDLux.

Two types of allocations can be distinguished. The first is the provisional allocation which is based on the hourly provisional measurement and is communicated to the grid user within 30 minutes after the hour to help him steer its balancing position. If the provisional measurement fails, the measurement can be replaced by a best estimate (replacement value) in the provisional allocation. In the second type, the validated allocation which is based on the validated measurements Fluxys Belgium determines at the latest on the 20th day of the month following the month for which the allocations are to be validated and which are used for the final gas settlements between Fluxys Belgium and the grid user.

Two types of gas allocation rules can be distinguished at the interconnection points. First, the “deemed to confirmed nomination” rule where the allocated energy equals the last confirmed energy nominations as confirmed by the adjacent TSO¹⁴. Second, the “proportional to measurement” rule where the allocations will be proportional to the energy measurements.

For the end user domestic exit points, the domestic exit energy allocation allocated to the grid users shall be determined according to the allocation agreement valid for this connection point (agreement between Fluxys Belgium, the end user and the grid users supplying natural gas to the said end user).

For the distribution domestic exit points, the allocation is based on the telemetered value at the connection point with the distribution network, and based on the grid user’s portfolio of final customers on that distribution network, who can be either telemetered final customers or profile-based final customers (SLP). Furthermore, an imbalance smoothing profile, aiming at neutralising, on a daily basis, part of the imbalance caused by the hourly profiled offtake within distribution networks, is allocated to the grid users supplying final customers on the distribution networks. The hourly imbalance smoothing allocations of each grid user are calculated according to the total forecasted offtake of the distribution networks and the provisional allocations for each grid user to the distribution networks, as described in the access code for transmission. They are communicated to the relevant grid users by Fluxys Belgium on a day-ahead basis and indicatively forecasted for the next 3 days.

¹⁴ The difference between the sum of the hourly allocated quantities and the metered quantities will be allocated to an operating balancing account (OBA) held between Fluxys Belgium and its adjacent TSO or any other party

5.3 DATA TRANSMISSION

In accordance with transparency obligations under European regulation and the Belgian code of conduct, Fluxys Belgium publishes information on the operational data of its transmission grid on its website (www.fluxys.com/belgium) where market parties can find a variety of useful information. Data for all relevant parameters are updated hourly or daily as the case may be and users can retrieve customised reports tailored specifically to their needs.

Field Code

The following information (and more) is publically available on our electronic data platform:

- Interconnection Points: capacities, nominations, allocations and flows at the interconnection points with adjacent operators
- Consumption: capacities, nominations, allocations and flows for domestic consumption
- Balancing: operational data for the market to monitor the balancing position
- Secondary market: capacities traded on the secondary market and their average price
- Temperatures: daily equivalent and degree-day temperatures and their forecast
- List of end users connected to the Fluxys Belgium transmission grid
- Pre-defined reports: supply, demand, storage and LNG reports using a predefined selection of criteria in accordance with ENTSOG guidelines (European Network of Transmission System Operators for Gas).

As part of the standard transmission agreement or connection agreement Fluxys Belgium also provides personalised data services via the electronic data platform, yet only privately accessible to grid users or end users, that allows them to visualize, consult or download their own individualised operational data such as:

- hourly measurements including volume, pressure and gross calorific composition of the natural gas at the interconnection points and domestic exit points where they are active;
- hourly allocation data for the interconnection points and domestic exit points where they are active¹⁵;
- individual and market position and their indicative forecast till end of the day, based on the nominations of the grid users¹⁶;
- price information relating to residual balancing actions by Fluxys Belgium; and
- all data required to check Fluxys Belgium invoices.

Fluxys Belgium furthermore offers a real-time data service which can additionally be subscribed by grid users and which provides them with on-line gas flow data (updated every 6 minutes) for selected interconnection points, privately available on the electronic data platform.

¹⁵ Note that allocation data is also provided via standardized electronic messages based on the Edig@s protocol.

¹⁶ Note that balancing information is also provided via standardized electronic messages based on the Edig@s protocol. The data provided via messaging system is deemed to be used by the Grid User as input for steering its balancing position, the data provided via the electronic data platform being provided for information purposes only.

5.4 GAS QUALITY REQUIREMENTS

The Fluxys Belgium web site (www.fluxys.com/belgium) provides the technical specifications in force for all the interconnection points on the Fluxys Belgium grid for gas entering or leaving the grid. Operational rules are explained in the access code for transmission.

Field Code

Furthermore, exits towards IZT and Zeebrugge Beach are subject to compliance with UK gas quality requirements. The access code for transmission details the UK adjustment service, by which Fluxys Belgium will use its reasonable endeavours to bring gas exiting IZT within UK Wobbe specifications, including the possibility to blend Nitrogen with the natural gas. This service implies the possibility for Fluxys Belgium to constraint the exit gas towards IZT and/or Zeebrugge Beach of Grid Users, in proportion of the gas they injected within the transmission grid which was off-specification with regards to UK Wobbe specifications. This service also implies the possibility for Fluxys Belgium to charge grid users with a UK pollution fee (in proportion of the gas they injected within the transmission grid which was off-specification with regards to UK Wobbe specifications), which is however until further notice not applicable.



6 DAILY BALANCING REGIME

6.1 GENERAL PRINCIPLES OF MARKET-BASED BALANCING

Market-based balancing has two objectives:

- Make grid users responsible, on a cumulative basis, for balancing of the network by properly adjusting inputs with regards to offtake, and limit Fluxys Belgium intervention to cases where the market exceeds predefined thresholds.
- Enable market cost reflectivity of residual Fluxys Belgium actions by directly relating the cost of such actions to the actual commodity market prices at the moment of such actions and focusing those costs on responsible parties. This is achieved by Fluxys Belgium thanks to a settlement of the positions when residual actions are necessary and a financial compensation based on the actual Fluxys Belgium Buy or Sell price for such action on the wholesale market.

6.2 MARKET-BASED BALANCING RULES

In order to reliably and efficiently operate the transmission grid, grid users are requested to balance inputs and outputs of natural gas over the period of one gas day, in accordance with the online hourly allocation data supplied electronically by Fluxys Belgium¹⁷.

The grid user balancing position ($GBP_{h,z,g}$) shows, for a given grid user, for a given hour and for a given zone, the delta between the sum of all entry allocations and the sum of all exit allocations for all preceding hours of a given gas day, also taking into account the net confirmed title transfers confirmed by the hub operator for the relevant notional trading services (ZTP and/or ZTPL).

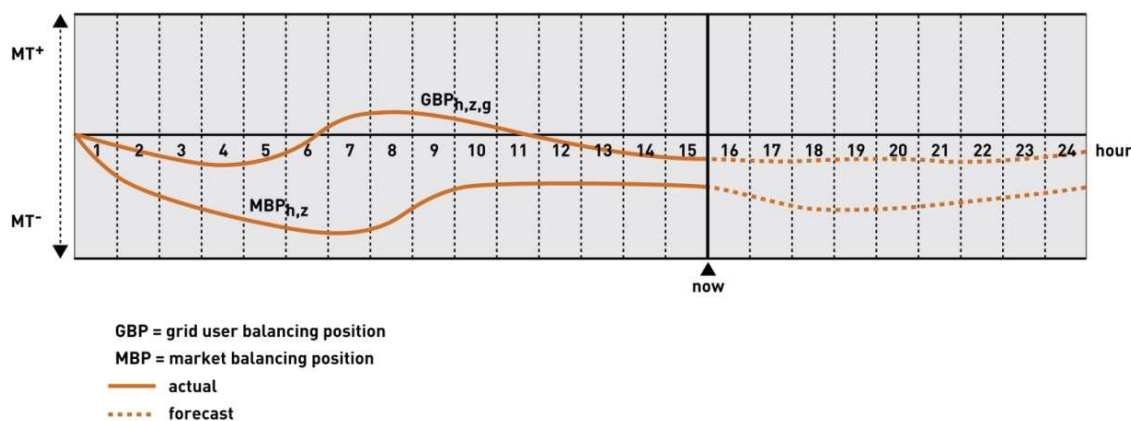
The market balancing position ($MBP_{h,z}$) shows the delta between the sum of all inputs and the sum of all outputs for all preceding hours of a given gas day for all grid users in a given zone. The market balancing position is therefore equal to the sum of all grid user individual balancing positions for the zone in question.

Both the individual grid user balancing position and the market balancing positions are updated on an hourly basis indicating the on-line values for the past hours of the gas day and an indicative forecast¹⁸ of those positions for the remaining hours of the gas day.

¹⁷ Therefore grid users receive hourly allocation messages (in Edig@s protocol and also published on the electronic data platform on www.fluxys.com/belgium), within 30 minutes after the hour, which includes information about:

- The provisional allocated quantity per point, including imbalance smoothing allocations
- The grid user balancing position
- The market balancing position
- The indicative forecast of the grid user balancing position for the remaining hours of the day
- The indicative forecast of the market balancing position for the remaining hours of the day
- The market threshold limits
- The market no-incentive zone limits
- The excess/shortfall settlements for the market and the grid user

¹⁸ The forecasted information published by TSO is for information purposes only. This forecasted information is based among other on the status at one moment in time of the confirmations of the nominations send by the grid users to the TSO and is updated at least on an hourly basis. However, TSO offers no guarantee that the information supplied is complete, accurate, reliable or up-to-date. TSO may in no case be held liable for the use of this information which use is under the exclusive responsibility of the Grid User



There is no intervention by Fluxys Belgium during the day, as long as the market balancing position fluctuates within the pre-defined market thresholds (MT⁺ and MT⁻). These thresholds are defined per zone and can vary on a seasonal basis¹⁹, as described in the access code for transmission. For information, the market thresholds level is determined for each zone based on the peak imbalances of the Belgian market (total final customers connected on the considered zone, either directly or through distribution networks) observed over an historical period of 3 past years and assuming a profiling of the gas entering the transmission grid of 102/96²⁰ for the H zone and 105/90 for the L zone.

For both the H-zone and L-zone, if the market balancing position exceeds the market threshold (upper or lower level), the market excess or market shortfall respectively is instantly settled proportionally in respect of the grid users causing the said market excess or market shortfall via their grid user balancing position. Fluxys Belgium will initiate a sell or buy transaction on the commodity market (see section [6.3.3.3](#)), for the quantity of the market excess or shortfall respectively. The price of the transaction done by Fluxys Belgium on the market as well as the gas price and potential conversion costs are used for the determination of the price reference used for such within-day balancing settlement, hence reflecting the market value for that residual natural gas at that time.

For both the H-zone and L-zone, at the end of the gas day the grid user balancing position at the end of the last hour of the gas day is settled to zero for each grid user by a settlement in cash (see point [6.3.2](#)).

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¹⁹ Fluxys Belgium may modify, at any time acting in accordance with the standards of a Prudent and Reasonable Operator, the effective values of the Market Thresholds in accordance with the transmission system operating conditions (for example but not limited to: in case of high gas demand or as from the Early Warning Level Crisis Level, etc.) according to the conditions described in the access code for transmission

²⁰ XX/YY meaning a profiling within the gas day corresponding with an input of XX% of the daily volume divided by 24 during the first 16 hours of the gas day and YY% the rest of the gas day.

6.3 SETTLEMENTS

6.3.1 Intra-day settlements when reaching the threshold in the H-zone or the L-zone

If the market balancing position exceeds the market threshold (MT⁺ and MT⁻), the market excess or market shortfall is instantly settled proportionally in respect of the grid users causing the said market excess or market shortfall via their grid user balancing position.

Such a settlement is executed in the following 5 steps:

1. Identification of the quantity to be settled: market shortfall [market excess];
2. Identification of grid users causing imbalance (all grid users having at that time an individual balancing position contributing to the market shortfall [market excess]) and their proportional contribution to the market imbalance;
3. Correction of causing grid users balancing position proportional to their contribution to the market imbalance (Fluxys Belgium delivers gas to the grid user in case of shortfall and offtakes gas from the grid user in case of excess);
4. Transaction initiation by Fluxys Belgium for the purchase [sale] of a quantity of gas compensating for the market shortfall or the market excess (see section);
5. A financial settlement at a price calculated in accordance with the Access Code for Transmission.

Steps 1 to 3 are instantly calculated and applied by Fluxys Belgium when determining, on an hourly basis, the latest market and grid user balancing positions. The individual corrections of the positions resulting from the settlement by Fluxys Belgium (residual action) are communicated to the grid users together with their individual position and the market position. The financial settlement is handled during the invoicing cycle.

6.3.2 End-of-day settlement for H-zone or L-zone

At the end of the gas day, each grid user is settled to zero so that the grid user starts the next gas day with a zero position. The end-of-day settlement is done in the following 5 steps:

1. Identification of total quantity to be settled equal to the market balancing position of the last hour of the gas day: market shortfall [market excess];
2. Identification of the quantity to be settled per grid user, for each grid user equal to the grid user balancing position of the last hour of the gas day ;
3. Correction of grid users' balancing position to zero (Fluxys Belgium delivers gas to the grid user in case of shortfall and offtakes gas from the grid user in case of excess);
4. Transaction initiation by Fluxys Belgium for the purchase [sale] of a quantity of gas compensating for the market shortfall or the market excess;
5. A financial settlement at a price calculated in accordance with the Access Code for Transmission.

Steps 1 to 3 are instantly calculated and applied by Fluxys Belgium when determining, on an hourly basis, the latest market and grid user balancing positions. The individual corrections of the positions resulting from the settlement by Fluxys Belgium (residual action) are communicated to the grid users together with their individual position and the market position. The financial settlement is handled during the invoicing cycle.

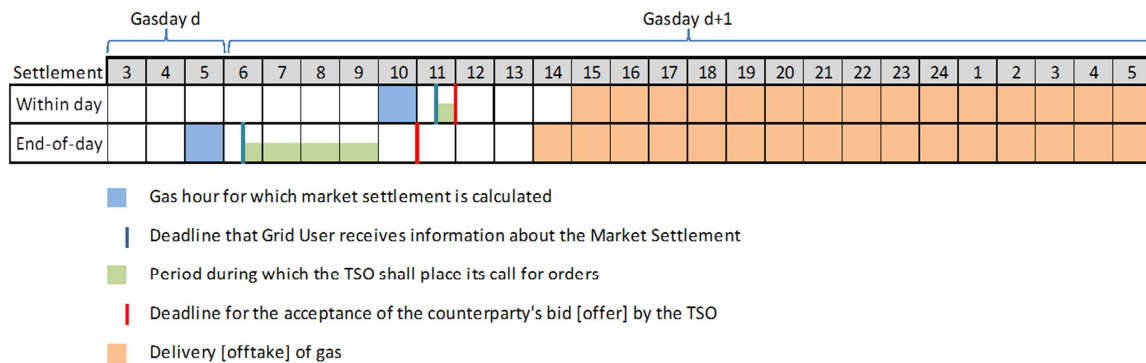
6.3.3 Residual balancing organisation

Fluxys Belgium residual balancing is organised on the wholesale commodity market. When Fluxys Belgium needs, during the gas day - be it within-day or end-of-day - to buy [or sell] gas to compensate a market shortfall [or excess], it will do so by accepting bids [offers] for a notional product or a specific TSO physical product²¹ available on the exchange operated by ICE Endex. Fluxys Belgium will buy [or sell] the needed quantities of gas using the best available prices offered by market participants for the related products at such time according to ICE Endex's matching rules. Once concluded, the transaction(s) will serve to determine the reference price used for the financial compensation of a given settlement action. Such price, together with the related settlement quantities will be published on the electronic data platform as soon as they are determined.

The products will therefore be available for trading on the ICE Endex exchange: one for H-zone and the other one for the L-zone. Both products imply a balance-of-day delivery of the gas to [from] the TSO. Offers [bids] can be placed at all times by grid users registered on the exchange on those products.

When needed for its residual balancing activities, the TSO will use its best efforts to notify the market²² of its intention to buy [or sell] a specific product as soon as possible but not later than 60 minutes after the gas hour for which the within-day market shortfall [or excess] has been detected, or not later than 270 minutes after the gas hour for which the end-of-day market shortfall [or excess] has been detected or when needed based on the forecasted Market Imbalance Position. TSO shall use its reasonable endeavours to make such notification at least 30 minutes before the product expiry on the exchange for the end-of-day settlement.

The TSO will buy [or sell] gas per multiple of a standard lot size of 100 MWh²³ and on a product with delivery to [redelivery from] the TSO starting 3 hours after product expiry.



Before product expiry, the TSO will seek to close the needed transaction(s) according to the price merit order of the offers [bids] available at that time, up to the needed quantity. The price reference for the cash compensation of the settlement with the grid user, called the settlement price, will be determined as the minimum [maximum] of the gas price and the weighted average price of those transaction(s) in case of a market excess [shortfall].

²¹ Grid Users concluding a transaction on a TSO physical product must comply with specific delivery [offtake] obligations detailed in the attachment C1 of the access code for transmission. Generally speaking, there is no specific qualification process for a grid user registered on the exchange to be able to deliver such a product, however grid users offering to trade such product with the TSO are obliged to actually increase [decrease] their delivery of gas via a physical interconnection point or decrease [increase] their offtake of gas via a physical interconnection point or an end user domestic exit point. Such variations are subject to verification by the TSO.

²² Such a notification can happen by posting message calling for bids and/or offers on the exchange.

²³ Multiple of standard lot size of 100 MWh divided by the remaining number of hours in the gasday rounded to the upper MW to be compliant with the Gas Market Instrument Specifications Zeebrugge Trading Point (ZTP) of ICE ENDEX

If, for any reason, the TSO was unable to close the needed transaction(s) on the ZTP for the compensation of L-zone settlements, within 2 hours after its first notification to the market, Fluxys Belgium will post the corresponding notification(s) on the H-zone related product(s) and will seek to close the needed transaction as soon as possible. The settlement price in such case, will be determined as the minimum [maximum] of the gas price and the weighted average price of those transaction(s) in case of a market excess [shortfall], decreased [increased] with a conversion fee in accordance with the applicable regulated tariff for a daily Gas Quality Conversion Service L->H [peak load H->L], corresponding to the hourly peak capacity needed to convert the required quantity of gas.

6.3.4 End-of-month settlement

At the latest the 20th day after the relevant month, the final allocations are compared with the provisional allocations. If the final allocations differ from the provisional allocations, this results in a financial settlement between Fluxys Belgium and the grid user to compensate for the difference between the final and the provisional allocations. This settlement is financially handled during the next invoicing cycle.



7 INVOICING

According to the terms and conditions set forth in the standard transmission agreement, invoices are usually issued monthly by Fluxys Belgium to grid users, on the 10th day of the month. Invoices will be rendered either electronically either by letter or fax. A copy of the invoices and all their related appendices will be made privately available on the electronic data platform. Generally speaking, invoices are due within 30 business days after receipt and failure to respect terms of payment may lead to the provision of financial security by the grid user or the suspension of such services.

As detailed in the attachment A of the access code for transmission, four types of invoice are issued to grid users with respect to the total monthly fee for their subscribed services:

- FIX monthly invoice,
- COM monthly invoice,
- VAR monthly invoice, and
- ADM monthly invoice.

The FIX monthly invoice on the 10th day of a given month M will contain:

- The monthly capacity fees relating to subscribed services, including additional services, for month M and additionally subscribed services in month M-1 and not already invoiced in M-1.
- The monthly capacity fees relating to distribution domestic exit services, provisionally allocated for such month M and the correction for such fees relating to distribution domestic exit services, finally allocated for month M-3.
- The monthly variable flex fee relating to services subscribed on end user domestic exit point with Fix/Flex rate type, based on ~~provisional allocations for M-1 and~~ final allocations for month M-3.

The COM invoice on the 10th of a given month M will cover:

- COM invoice:
 - The monthly commodity fee (relating to interconnection points and end user domestic exit points) for month M-2.
 - The monthly allocation settlement fees in case of purchase for month M-3.
 - The monthly odorisation fee for end user domestic exit points for month M-2.
 - The monthly transmission imbalance fee for month M-2.
 - The monthly commodity fee for peak load quality conversion service H->L for month M-2.
 - The monthly scheduling fees (relating to interconnection points) for month M-2.
 - The monthly commodity fee (relating to distribution domestic exit points) for month M-3.
- COM Self-billing invoice:
 - The monthly allocation settlement fees in case of sale for month M-3.
- COM2 invoice:
 - The monthly balancing settlement fees in case of shortfall for month M-1;
 - The monthly neutrality charge fees (if applicable).
- COM2 Self-billing invoice:
 - The monthly balancing settlement fees in case of excess for month M-1;
 - The monthly neutrality charge fees (if applicable).

The VAR invoice on the 10th of a given month M will cover:

- The monthly incentive fees for month M-3.

The ADM invoice on the 10th of a given month M will cover:

- The monthly administrative fees for month M-1.

A summary of the consolidated invoices by due date will be transferred to the grid user for each month, including a summary note with the balance payable to the TSO or refund to the grid user. Conveniently, the grid user may choose between:

- The payment of the consolidated amounts, as calculated in the summary note or,
- The payment of the total monthly fee(s) to the TSO and the payment of the total monthly self-billing fee(s) of the TSO to the network user.

The grid user will be contacted by TSO for his choice.



8 CONGESTION MANAGEMENT

8.1 PROACTIVE CONGESTION MANAGEMENT POLICY

In accordance with its obligations set out in the code of conduct, Fluxys Belgium applies a proactive congestion management policy aiming to achieve optimal and maximal utilisation of available capacities and prevent congestion. This policy, detailed in the access code for transmission, is based on the following set of measures.

A secondary market is organised by Fluxys Belgium as detailed in section 4.2, via an electronic capacity trading platform, Prisma, enabling grid users to offer the subscribed transmission services they no longer require to other grid users. This allows for the optimal and market-based distribution of transmission services amongst grid users and is supported by the regular publication by Fluxys Belgium of aggregated volumes and average prices of the services traded on the secondary market.

Interruptible capacities are offered at interconnection points and domestic exit points as detailed in section 3 from the moment the level of available firm services becomes limited. Such interruptible services enable the dynamic recycling of unused subscribed firm transmission services to other grid users.

Fluxys Belgium also encourages the utilisation of subscribed transmission services by keeping an electronic register of the utilisation rate of subscribed transmission services for each grid user and for each service. This register is submitted to CREG at least annually, as set out in the code of conduct. Each grid user is also provided with part of the register concerning his individual data.

Furthermore, as another measure to apply a proactive congestion management policy, Fluxys Belgium allows the conversion of entry and exit services into wheeling and/or operational capacity usage commitment under defined conditions (see 3.3 and [4.14.1](#)).

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8.2 CONGESTION MANAGEMENT PROCEDURE

Congestion occurs when a service request for firm transmission services at an interconnection point or an end-user domestic exit point cannot be confirmed due to the lack of available firm transmission services and if none of the proactive congestion management measures detailed in the access code for transmission or any other alternatives envisaged between Fluxys Belgium and grid user have provided for an acceptable solution.

8.2.1 Interconnection Points

In consequence of Annex 1 of the Regulation (EC) No 715/2009 three (3) specific congestion management procedures are applicable on interconnection points in particular:

- “surrender of contracted capacity” in order to bring unused capacity back to the market;
- “long-term use-it-or-lose-it mechanism” in order to bring unused capacity back to the market upon decision of CREG or;
- “capacity increase through oversubscription and buy-back scheme” in order to create additional firm capacity.

8.2.1.1 Surrender of contracted capacity

In case of contractual congestion, grid users have the possibility to post firm transmission services they wish to sell at Fluxys Belgium. Interested grid users are allowed to respond to this offer, either directly or via PRISMA.

8.2.1.2 Long-term use-it-or-lose it mechanism

The “long-term use-it-or-lose-it” procedure is designed to release all or part of the unused subscribed firm transmission services of grid users, upon decision of CREG. The TSO, on behalf

of grid users, shall offer the released services on the primary market per periods of 2 months as foreseen in the code of conduct .

This release will be performed after notification to the relevant grid users of the amounts subject to possible release. In the absence of response from the grid user within the scheduled period, such amounts will be automatically released on the secondary market. However, a response from the grid user will lead to a decision of the CREG on the quantities which are finally released and effective.

8.2.1.3 Capacity increase through oversubscription and buy-back scheme

In order to solve contractual congestion Fluxys Belgium may offer firm transmission services in the framework of oversubscription, on top of the technical capacity. In determining this oversubscription firm capacity, Fluxys Belgium will take into account:

- statistical scenarios for the likely amount of physically unused capacity at any given time at interconnection points;
- technical conditions, such as the gas gross calorific value, temperature and expected consumption; and
- a risk profile for offering this additional firm capacity which does not lead to excessive buy-back obligations.

Where necessary to maintain system integrity, Fluxys Belgium will apply a market-based buy-back procedure in which grid users can offer firm transmission services back to the TSO.

8.2.2 End user domestic exit points and installations points

For end users domestic exit points and installations points, a long-term use-it-or-lose-it can be applied. This mechanism is similar to the mechanism applied for interconnection points in section 8.2.1.2.



9 HOW TO CONTACT US

Any request for additional information or questions in relation to the service offer should be addressed to:

Fluxys Belgium SA/NV

Direction Commercial Regulated

Avenue des Arts, 31

1040 Brussels

Belgium

E-mail: info.transport@fluxys.com or marketing@fluxys.com

NOTES

