



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 in Belgium 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 conduct¹. 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 these regulations².

Based on the provisions of the 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 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 Trading Point "Zeebrugge Trading Point" or "ZTP". Network 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 network 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.

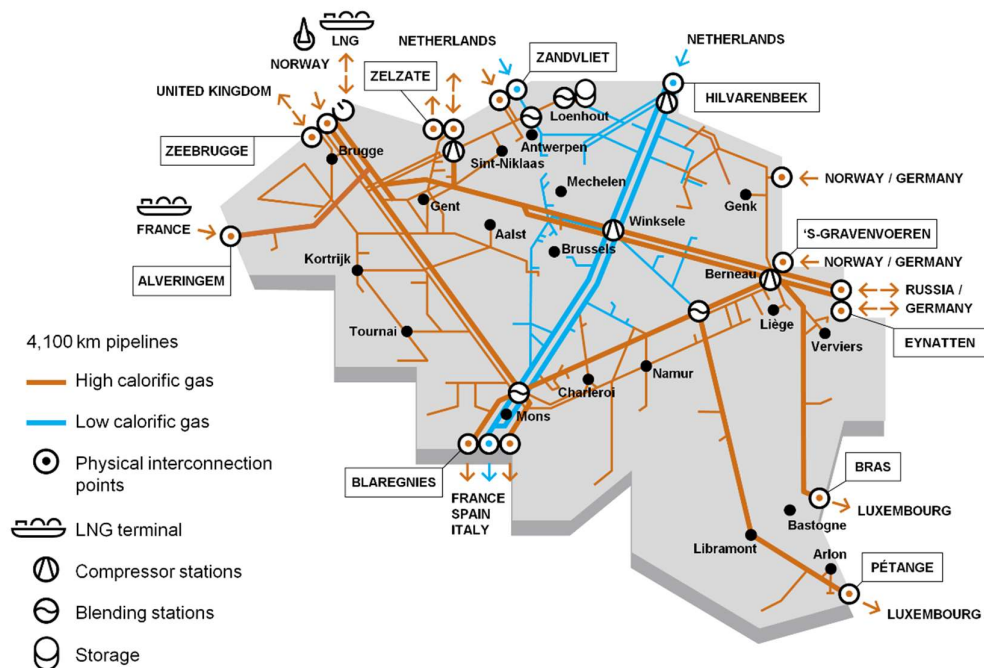
Detailed information related to the Loenhout storage facilities and Zeebrugge LNG terminal and their associated services can be found in the storage programme and LNG programme respectively on the Fluxys Belgium website.

¹ A code of conduct (Royal Decree of 23.12.2010) establishes the rules governing access to the transmission grid, storage facilities and LNG facilities

² 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 several physical connections, opening up 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 connection 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 mixing or nitrogen blending.

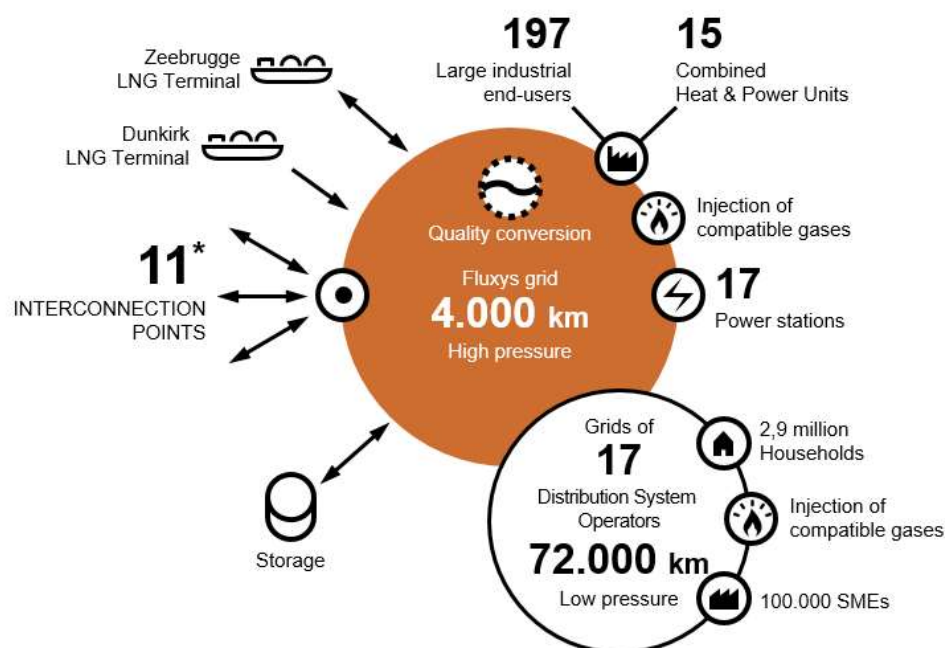
The Fluxys Belgium transmission grid is also connected to other facilities: the Loenhout underground storage facility operated by Fluxys Belgium, the Zeebrugge LNG terminal operated by Fluxys Belgium's subsidiary Fluxys LNG and the Dunkirk LNG Terminal, connected to the Fluxys Belgium's grid by means 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 seasonal storage for up to 700 MCM of workable volume 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).

With the emergence of green gases from renewable origin (biomethane, green hydrogen, ...), a producer can inject these gases on the transmission network, either directly or via the distribution.

2.2 ORGANISATION OF THE BELGIAN GAS MARKET



* Virtual Interconnection Point to The Netherlands included (cf. 2.3.2)

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 network 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 network 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 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 and a producer can inject gas into the network. Final customers and producers can be directly connected to the Fluxys Belgium grid or connected to a distribution network. There are about 230 companies directly connected to Fluxys Belgium's natural gas transmission grid, referred to as 'end users'. They include industrial companies, cogeneration plants, power stations and local gas producing plants (such as biomethane or hydrogen).. Terms and conditions ruling such physical connections are contractually set forth in the Connection Agreement. On the other hand households, small to medium-sized enterprises and production points connected to a distribution network have no direct contractual relationship with Fluxys Belgium.

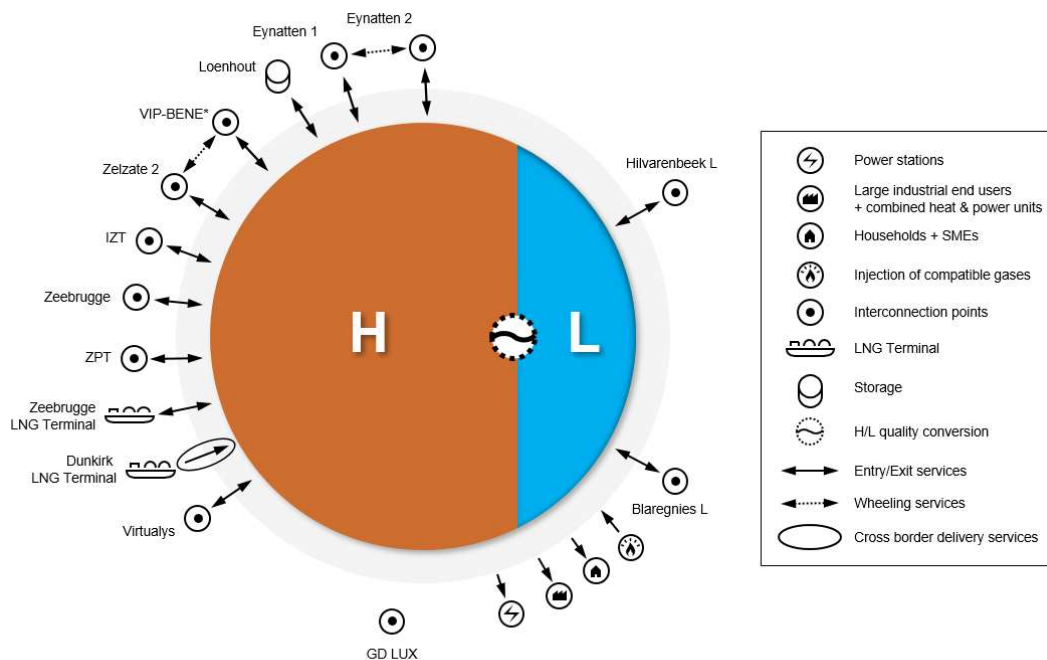
A trader is a party transferring title of gas within the Fluxys Belgium grid thanks to ZTP trading services (which can be either ZTP notional or ZTP physical trading services).

2.3 MAIN CHARACTERISTICS OF THE COMMERCIAL MODEL

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

The model under which Fluxys Belgium offers transmission services to network users is an entry/exit model. Through this entry/exit model, natural gas enters the Fluxys Belgium grid at a connection point, and can either leave the transmission grid at another connection 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 network user to inject a quantity of natural gas at a connection point into the considered zone. Exit services enable the network user to withdraw a quantity of natural gas at a connection point from the zone in question. Section 3 contains more information on the entry and exit services.



* Replaces 's Gravenvoeren, Zelzate 1 and Zandvliet H after the introduction of VIP-BENE

An interconnection point is a type of connection point³ linking the Fluxys Belgium transmission grid with the transmission grid of an adjacent TSO.

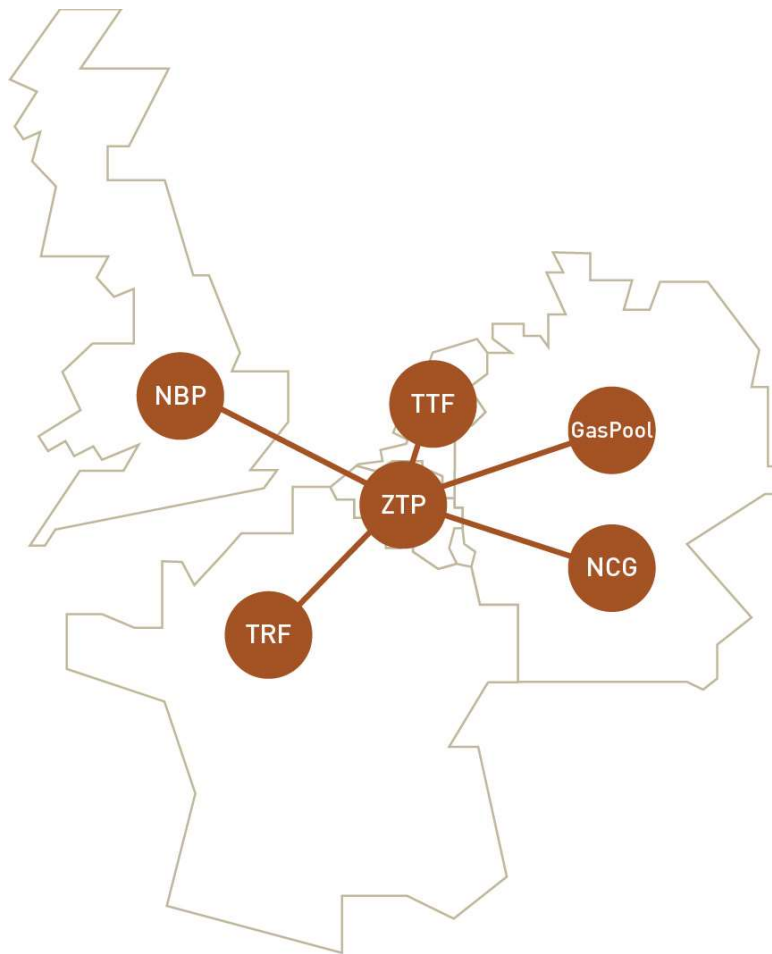
An installation point is a type of connection point linking the Fluxys Belgium transmission grid with an installation operated by Fluxys Belgium or one of its subsidiaries or with an installation connected to the Fluxys Belgium grid by means of a cross border capacity. Those connection points are the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

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

2.3.2 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.

³ A connection point is a physical or a virtual point on the transmission grid, as specified in the access code for transmission, at which network users deliver natural gas to Fluxys Belgium for the performance of transmission services or at which Fluxys Belgium redelivers natural gas to network users after having performed such transmission.



According to EU Commission Regulation 2017/459 (CAM NC), transmission system operators shall offer the available capacities at different Interconnection Points connecting the same two Entry/Exit systems at a Virtual Interconnection Point (VIP). In Q1 2020 (subject to a pre notice of 8 weeks), Fluxys Belgium will introduce a VIP with GTS, between ZTP-H and TTF which will combine the Interconnection Points 's Gravenvoeren, Zandvliet H and Zelzate 1. ZTP-L and consequently also Hilvarenbeek L is hereby excluded of this VIP.

Interconnection points and installation points			Adjacent Operator / Market Area	
Interconnection points (H gas)	Virtualys		GRTgaz	TRF
	Eynatten 1		Gascade	GasPool
	Eynatten 2		Open Grid Europe Thyssengas Fluxys TENP	NCG
	GD Lux		CREOS	-
	IZT		Interconnector UK	NBP ⁴
	's Gravenvoeren	VIP BENE ⁵	GasunieTransportServices	TTF
	Zandvliet H			
	Zelzate 1			
	Zelzate 2		Zebra pijpleiding	-
	Zeebrugge		Fluxys Belgium	-
	ZPT		Gassco	-
Interconnection points (L gas)	Blaregnies L		GRTgaz	TRF
	Hilvarenbeek L		GasunieTransportServices	TTF
Installation points	Loenhout		Fluxys Belgium	
	Zeebrugge LNG Terminal		Fluxys LNG	
	Dunkirk LNG Terminal		Dunkerque LNG	
	QC - Quality Conversion		Fluxys Belgium	

2.3.3 ZTP Trading Services

On the Belgian gas market, Network users may trade title of natural gas using ZTP trading services, ZTP notional trading services for the facilitation of the transfer of title of gas between Network users within a Zone (ZTP notional trading services for the H Zone and ZTPL notional trading services for the L Zone) and/or ZTP physical trading services for the 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 platform (enabling anonymous trading of natural gas with clearing services).

Commodity trading is facilitated in Belgium by Fluxys Belgium which has developed the necessary ZTP trading services such as title tracking, nominations, matching, balance check and confirmation.

Access to ZTP trading services is subject to the subscription of these ZTP trading services, provided in the framework of the standard transmission agreement (STA). The net confirmed title transfer is the net quantity of natural gas transferred to the balancing position of the network user in order to have balanced ZTP trading services. These net confirmed title transfers are taken into account for determining the balancing position and indicative forecast balancing position of the network user in the respective zone, as detailed in section 6.

2.3.4 Daily market-based balancing regime

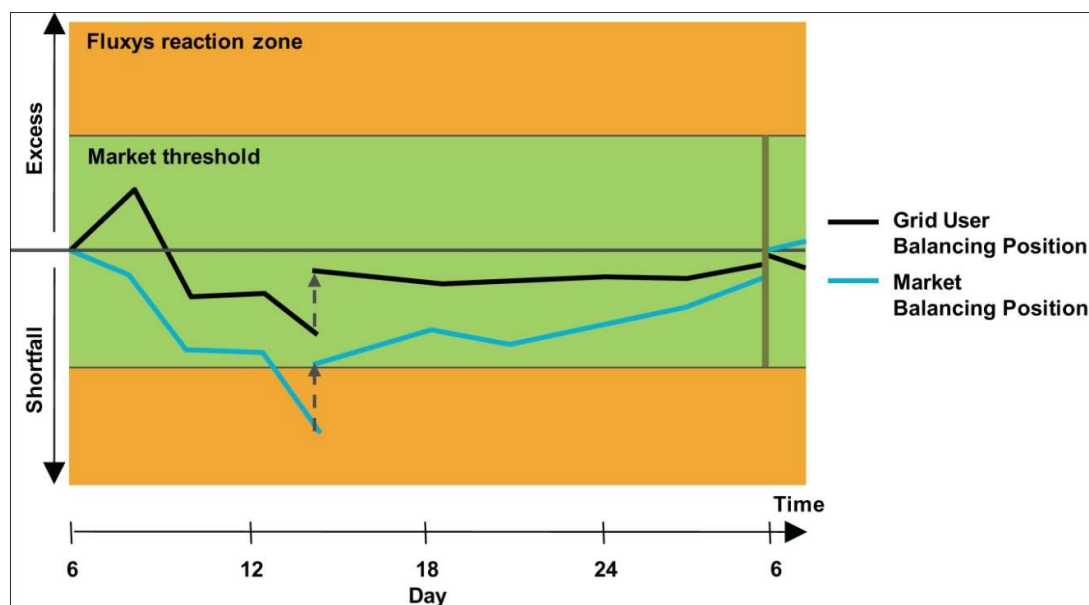
To ensure the reliable and efficient operation of the transmission grid for each zone, the total quantities of natural gas entering the transmission grid must, on a daily basis, be in balance with the total quantities of natural gas leaving the transmission grid or being consumed in Belgium. This balance 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

⁴ IZT interconnection point connects to the National Grid's NBP through the undersea pipeline Interconnector IUK.

⁵ As from Q1 2020 (subject to a pre notice of 8 weeks)

through a sale (or purchase) transaction on the commodity market (see 6.3.3) for the quantity of the market excess (or shortfall) and settles in cash that quantity with the network 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 or produced by network users' final customers or leaving the zone for an adjacent transmission grid, taking into account the net confirmed ZTP notional trades⁶ of the network user, is settled to zero by a settlement in cash for each network user. Section 6 contains more details on the balancing model and the residual balancing organisation by Fluxys Belgium.

2.3.5 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 network user in Luxembourg in its balancing position in Belgium through the interconnection point GDLUX. This makes the trading point "Zeebrugge Trading Point" or "ZTP" since 1 October 2015 the aggregate trading point of the Belgian and Luxembourg markets.

⁶ Net Confirmed Title Transfer for ZTP Physical Trading Services are considered as net Entry or Exit Allocations at Interconnection Point Zeebrugge

3 SERVICES OFFERED

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

- Firm (F) capacity is always available and usable under normal operating conditions⁷.
- Interruptible (I) capacity means that Fluxys Belgium can interrupt the service due to physical restrictions on its transmission grid.
- Backhaul (BH) capacity is offered at unidirectional connection 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 connection point.

3.1 ENTRY AND EXIT SERVICES ON CONNECTION POINTS AND INSTALLATION POINTS

Entry services are services enabling natural gas to be injected into a zone of the transmission grid at a connection 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 a connection point.

The table below shows the services offered at interconnection points and installation points.

Interconnection points and installation points		Entry service			Exit Services		
		F	BH	I	F	BH	I
	Eynatten 1	X		0	X		0
	Eynatten 2	X		0	X		0
	IZT	X		0	X		0
	's Gravenvoeren	X		0		X	
	VIP-BENE ⁸	X		0	X	X**	0
	Virtualys	X		0	X		0
	Zandvliet H	X		0		X	
	Zeebrugge	X		0	X		0
	Zelzate 1	X		0	X		0
	Zelzate 2		X		X		0
	ZPT	X		0		X	
Interconnection points (L gas)	Blaregnies L		X		X		0
	Hilvarenbeek L	X		0		X	
Installation Points	Loenhout	X		X*	X		X*
	Zeebrugge LNG Terminal	X				X	
	Dunkirk LNG Terminal ⁹	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 network users on an interruptible basis.
- X** = Only for contracts concluded before launch of the VIP
- 0 = Service is optionally offered, depending on firm availability

3.1.1 Definition of the service offer at interconnection points and installation points

As long as firm (or backhaul) transmission services are available at an interconnection points or LNG Terminal installation points, only firm (or backhaul) transmission services are offered at this interconnection points or installation points, which are allocated as requested or via auctions, as detailed in section 4.1. Subscribed firm transmission services are, subject to the terms and

⁷ Which are subject to the terms and conditions of the standard transmission agreement.

⁸ As from Q1 2020 (subject to a pre notice of 8 weeks)

⁹ With the subscription of Dunkirk LNG Terminal the associated Cross Border Delivery Service will be implicitly allocated meaning that they are matched in quantity, time and Capacity Type as described in ACT – Attachment A.

conditions of the standard transmission agreement, always usable under normal operating conditions. For unidirectional interconnection points and installation points, only backhaul services are offered in the reverse direction. Backhaul capacity is usable on selected connection points as long as the resulting physical flow remains in the physical direction of such unidirectional connection point.

Interruptible services are offered at an interconnection point or installation points, 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 10%. 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. Interruptible services can be interrupted by Fluxys Belgium if the requested quantities exceed the physical capabilities.

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 network users on an interruptible basis. This service is offered in addition to firm capacity. These firm and operational interruptible services are implicitly allocated by Fluxys Belgium to network users according to the subscribed storage services with Fluxys Belgium at the Loenhout underground storage facility. 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.

3.1.2 Rate type for Interconnection points and installation point

Two types of rates apply for entry service at an interconnection point or installation 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 and installation 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 or multiple of 12 calendar months	Yearly
	1 month $\geq x < 1$ year	Seasonal
	< 1 month	
Exit services	All service periods	Yearly

3.2 SERVICES AT DOMESTIC POINTS

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

	Connection Point	Firm	Backhaul	Interruptible
Entry services	End User Domestic point	X	-	0
	Distribution Domestic point	X	-	-
Exit services	End User Domestic point	X		-
	Distribution Domestic point	-	X	-

3.2.1 Exit service and entry service offer at a domestic exit point

For end user domestic points, i.e. connection points between the Fluxys Belgium transmission grid and end users' facilities, exit services and/or entry services have to be subscribed by the network user. As long as firm exit services or entry services are available at an end user domestic point, only firm transmission services are offered, which are allocated as requested. These services are offered with high pressure, medium pressure and DPRS (pressure reduction at domestic point) parameters¹⁰, if applicable, taking into account the physical characteristics of the end user domestic 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 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 capacity to/from distribution networks, there is no explicit subscription of exit and entry services by the network user. The peak capacity is calculated based on inter alia the methodology agreed with the distribution network operators. Fluxys Belgium implicitly allocates this peak capacity on a monthly basis to network users based on their market share of final customers within each distribution network, taking into account the different producers and final customers profile segmentations.

3.2.2 Availability for use of each exit and entry 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 points

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

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

¹⁰ From 2020 onwards, the medium pressure and Dedicated Pressure Reduction Station service will be replaced by the reduced pressure service (RPS). This service will reduce the pressure at a domestic point within the contractual minimum and maximum pressure limits.

Capacity services	Service period	Rate type
Exit services at End User Domestic point	= 1 year of a multiple of 12 months	Yearly
		Fix/Flex
	1 month $\geq x < 1$ year	Seasonal
	< 1 month	Short term
Entry services at End User Domestic point	year	Yearly
Exit services at Distribution Domestic point	All service periods	Yearly
Entry services at Distribution Domestic point	year	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 point

At domestic points, the exit transmission services always include the high pressure exit service and may include one or more of the following:

- Via the medium pressure service, Fluxys Belgium transports the gas to a domestic point via a medium pressure network.
- Via the dedicated pressure reduction station service, Fluxys Belgium reduces the pressure at a domestic point within the contractual minimum and maximum pressure limits¹¹.
- Odourisation consists of Fluxys Belgium injecting an odorant in gas at domestic exit points where an odourisation facility is operated by Fluxys Belgium.

When a network user subscribes to exit capacity services for a domestic 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.

For two specific case of end users located in Belgium but near a border and directly connected to the transmission grid of an adjacent TSO or to the grid of a foreign distribution network operator, the service allowing this is the dedicated direct line service.

¹¹ From 2020 onwards, the medium pressure and Dedicated Pressure Reduction Station service will be replaced by the reduced pressure service (RPS). This service will reduce the pressure at a Domestic Point within the contractual minimum and maximum pressure limits.

3.3 SHORT HAUL SERVICES

3.3.1 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 do not give access either to other entry/exit points of the transmission grid nor to the ZTP 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.

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

OCUCs are operational agreements between a network 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 ZTP 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
- Entry IZT or Zeebrugge, with Exit Zelzate 1 or Zelzate 2
- Entry Dunkirk LNG Terminal or Virtualys, with Exit IZT or Zeebrugge

3.3.2 Zee platform service

The aim of the Zee Platform Service is to facilitate transfers of gas in the Zeebrugge area between IZT, ZPT, Zeebrugge interconnection points and Zeebrugge LNG Terminal installation point. The Zee Platform Service enables network users to transfer natural gas between two or more (at the network 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 connection points. Furthermore, transfers to IZT and Zeebrugge 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 ZTP 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.

3.4 GAS QUALITY CONVERSION SERVICE

As explained above, the Fluxys Belgium grid is composed of 2 independent subgrids which correspond to two Entry-Exit zones: H-zone and L-zone. Several conversion facilities enable rich gas (H gas) to be converted into Slochteren gas (L gas) or the other way around, combined as a single "virtual" installation point Quality Conversion H/L.

3.4.1 Gas quality conversion service H → L

The quality conversion services H→L enable the transportation of H gas into the L gas zone.

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 network 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.

3.4.2 Gas quality conversion service L → H

The quality conversion service L→H service enables the transportation of L gas into the H gas zone. This service is available on an interruptible basis. The use of gas quality conversion service L→H doesn't require the network user to subscribe to entry or exit services in the H or L-zone respectively. Gas quality conversion services L→H are allocated as requested for as long as they are available and with a minimum period of one gas day.

3.5 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 or an installation point is always offered together with other transmission services available on such interconnection point or installation 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.

3.6 ZTP TRADING SERVICES

Fluxys Belgium offers (physical and notional) ZTP trading services enabling network users to exchange title of gas through either notional or physical services. The ZTP trading services include title tracking, nomination, matching, balance check, confirmation and imbalance transfer services. The details on these services are described in the access code for transmission.

3.6.1 Imbalance transfer service

The imbalance transfer service ensures that net confirmed title transfers for ZTP physical trading services are automatically transferred to/from the network user balancing position. The transmission capacities at the interconnection point Zeebrugge required to perform such transfer are eventually implicitly allocated.

The implicit allocation mechanism is based on the hourly quantities transferred under the imbalance transfer service, insofar the network user does not hold in its portfolio sufficient unused (e.g. non nominated) transmission services¹² to realize the transfer. The implicit allocation – if any – results in a subscribed within-day transmission service (entry or exit - always till the end of the gas day).

This service is part of the trading services and must not be subscribed by network users. It is performed by the TSO for each network user using the ZTP physical trading service, as long as firm transmission services are available on Zeebrugge, IZT, Zeebrugge LNG Terminal and ZPT in the same direction.

3.6.2 Imbalance pooling service

The imbalance pooling service allows network users to pool their hourly imbalance or the hourly net confirmed title transfer for ZTP physical trading services by transferring the hourly imbalance or the hourly net confirmed title transfer for ZTP physical trading services from one network user to another.

The pooling of the hourly imbalance or hourly net confirmed title transfer for ZTP physical trading services implies a transfer network users need to agree upon before the start of the imbalance pooling service by means of an imbalance pooling form. The imbalance pooling service is based on the designation of a role between two network users, where for one network user known as the imbalance transferor its hourly imbalance or hourly net confirmed title transfer for ZTP physical trading services are automatically transferred to another network user also known as the imbalance transferee, as detailed in the access code for transmission.

3.7 SUBSTITUTION SERVICES

3.7.1 Capacity conversion service

The capacity conversion service enables network users holding unbundled capacity at one side of an interconnection point to convert this capacity into bundled capacity. This service is offered free of extra charge according to the conditions set forth in the access code for transmission.

3.7.2 L/H capacity switch service

In the framework of the physical conversion of the L-gas network into the H gas network, the L/H capacity switch service, offered once a year after the yearly auctions on PRISMA, enables network users holding unbundled entry capacity at an L-gas interconnection point to transfer part of that

¹² The entry or exit services taken into account for the calculation of such implicit allocation are the hourly subscribed transmission services at interconnection points IZT, ZPT, Zeebrugge and Zeebrugge LNG Terminal installation point, including the implicitly allocated transmission services at Zeebrugge till the end of the same gas day under the imbalance transfer service for (a) previous hour(s) of the same gas day.

capacity into (un)bundled capacity at a H-gas interconnection point or installation point in accordance with the conditions set forth in the access code for transmission.

3.7.3 Diversion service

The diversion service, enables network users holding unbundled entry or exit capacity at specific interconnection points or installation point to transfer (part of) that capacity to another interconnection point or installation point at the same grid location (Zeebrugge, Zelzate or Eynatten) in accordance with the conditions set forth in the access code for transmission.

3.8 ANCILLARY SERVICES

3.8.1 Real-time data measurement service

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



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 network 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:

Sales channel ¹³	Allocation method	SERVICES		Duration ¹⁴
PRISMA	Auction	Entry and Exit Services on IPs, VIPs & LNG Terminals	Blaregnies L	Y, Q, M, DA, WD
			Eynatten 1	
			Eynatten 2	
			Hilvarenbeek L	
			IZT	
			's Gravenvoeren ²⁹	
			VIP-BENE ¹⁵	
			Virtualys	
			Zandvliet H ²⁹	
			Zelzate 1 ²⁹	
	FCFS	Entry and Exit Services on IPs, VIPs & LNG Terminals	Zeebrugge ¹⁶	Any duration
			Zelzate 2	
			ZPT	
			Zeebrugge LNG Terminal	
			Dunkirk LNG Terminal ¹⁷	
			Capacity Conversion Service (unbundled to bundled)	Y, Q, M, DA
			Conversion into Short haul Services (OCUC and Wheeling)	Y, Q, M, DA ¹⁸
			Quality Conversion Service L→H	Min 1 GD
			Exit Service for End Users Domestic point	Min 1 GD
			Entry Service for End Users Domestic point	Y

¹³ Written procedure can be activated by Fluxys Belgium as fall-back mechanism, should PRISMA or EBS platforms be unavailable. Entry and Exit Services on IPs, VIPs and LNG Terminals, Quality Conversion Services and on domestic points can also be implicitly allocated by Fluxys Belgium to network users in case overnomination is being activated for such connection point. Overnomination will be activated when all Firm Transmission Services are sold after the Firm Day-Ahead auction and after the Interruptible Day Ahead auction if any or as a fall-back mechanism when PRISMA platform should be unavailable.

¹⁴ (Y)= Yearly, (Q)= Quarterly, (M)= Monthly, (DA)= Day-Ahead, (WD)= Within-Day, (B-o-Y)= Balance of Gas Year, (GD)= Gas Day, (B-o-D) = Balance of Gas Day.

¹⁵ Available capacity of 's Gravenvoeren, Zandvliet H and Zelzate 1 will be aggregated and offered on VIP-BENE before the launch of this VIP in Q1 2020 (subject to a pre notice of 8 weeks)

¹⁶ Implicit allocation of Transmission Services at Zeebrugge also possible in the framework of the Imbalance Transfer Service.

¹⁷ With the subscription of Dunkirk LNG Terminal entry capacity the associated Cross Border Delivery Service will be implicitly allocated meaning that they are matched in quantity, time and Capacity Type as described in ACT – Attachment A. No capacity will be allocable for a service period shorter than 1 gas day.

¹⁸ Except for Short haul Services Wheeling and OCUC for which both interconnection points are sold via FCFS, the conversion into Short haul Services can be done for a Service Period of any duration.

Implicit		Zeebrugge		B-o-D
		Entry and Exit Services on Loenhout		Any duration
		Exit Service for Distribution Domestic point		Any duration
		Entry Service for Distribution Domestic point		Y
Written only	Pro rata and FCFS	Quality Conversion Service H→L ¹⁹		Multi Y, Y and B-o-Y
	Not applicable	Other Services	Zee Platform	Not applicable
			ZTP Trading Services	
			Imbalance Pooling Service	
			L/H Capacity Switch Service	
			Diversion Service ²⁰	

Services on interconnection points offered on the PRISMA capacity booking platform (www.prisma-capacity.eu) can be subscribed via auction, on a first-committed-first-served basis or by converting already subscribed entry and exit services into a Wheeling or OCUC. Other services described in this brochure can be subscribed at Fluxys Belgium either in writing (letter or email), using a transmission service request form (the templates are available on the Fluxys Belgium website), or by on-line booking, using an Internet-based electronic booking system accessible via the Fluxys Belgium website (www.fluxys.com/belgium) or via an implicit allocation.

4.1.1 Subscription via PRISMA

PRISMA European Capacity Platform 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 joint platform implementing of the European Network Code for Capacity Allocation Mechanisms ("CAM NC")²¹.

On PRISMA, entry and exit services at interconnection points can be subscribed in the form of bundled products with the relevant adjacent transmission system operators, or in the form of unbundled products with Fluxys Belgium.

On PRISMA, entry and exit services can either be subscribed using the first-committed-first-served principle or in auctions. Fluxys Belgium offers as well the possibility to convert entry and exit services into short haul services through the registration of such conversion via PRISMA.

On PRISMA, the unbundled capacity services offered using the first-committed-first-served principle can be booked at any time taking into account a minimum leadtime of 120 min and this on 24/7 basis. Services are marketed in non-standardized durations, which can either be within-day products (balance of gas day product) or products with a minimum period of 1 day and for which there is no maximum period. These capacity services are allocated in the order as they have been requested, for as long as capacity services are available.

On PRISMA, capacity services offered in auctions 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

¹⁹ First subscription window (written only), for which Year and/or Multi-Year products are allocated pro rata request (Base and Seasonal), with a priority for longest period for Peak product. After subscription window (written only) Balance of Gas Year products are allocated via FCFS principle and are subject to availability and to the required logistics (e.g. with nitrogen suppliers)

²⁰ The possibility to use PRISMA to subscribe Diversion Service is being developed. The start date will be confirmed by the TSO at least 4 weeks in advance. Until then, the procedure to subscribe Diversion Service remains manual.

²¹ 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.

(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 services 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.

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 ENTSG 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 network users by Fluxys Belgium on top of the reserve price being the regulated tariff, according to section 7.

On PRISMA, auctions are held according to two possible algorithms:: ascending clock or uniform price.

4.1.1.1 Ascending Clock

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

During consecutive bidding rounds, network users are invited to submit quantity bids. A quantity bid specifies the amount of capacity that the network 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.

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.

4.1.1.2 Uniform Price

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

Network 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 network 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.

Beside the services offered on PRISMA through auctions or through a first-committed-first-served principle, Fluxys Belgium offers as well the possibility to convert Entry and Exit services into short haul services through the registration of such conversion via PRISMA. All network users having newly acquired²² firm and/or backhaul entry and exit services in the last 15 days on the primary market eligible for wheeling and OCUCs, will have the possibility to convert these entry and exit services into a wheeling or an OCUC.

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 points can be subscribed via EBS on 24/7 basis, until 2 hours before the start of the service.

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 0).

The Fix/Flex rate type for exit services on end user domestic 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 network users active on a given end user domestic exit point.

In general, services are allocated as requested, with the exception of services offered in a subscription window, implicitly allocated, through an Open Season process or Incremental Process. Fluxys Belgium allocates these services based on the order of receipt of network users' applications.

²² For the avoidance of doubt newly acquired services in the framework of substitution services are not eligible for the conversion to a Wheeling or an Operational Capacity Usage Commitment

4.1.3 Services implicitly allocated by Fluxys Belgium

There are 3 types of services implicitly allocated by Fluxys Belgium, where the network user has no need to subscribe capacity for using services.

For domestic exit and entry capacity at distribution networks, Fluxys Belgium implicitly allocates the peak capacity on a monthly basis to network users based on (i) for exit capacity: their market share of final customers within each distribution network, taking into account the different final customers profile segmentations (see section 3.2.1) and (ii) for entry capacity their market share of producers.

The firm and operational interruptible services at Loenhout are implicitly allocated by Fluxys Belgium to network users according to the subscribed storage services with Fluxys Belgium at the Loenhout underground storage facility (see section 3.1.1).

To perform the imbalance transfer service (see section 3.9.1), Fluxys Belgium will implicitly allocate entry or exit transmission services at the interconnection point Zeebrugge if the network user has no more unused entry or exit capacity in its portfolio²³.

Interruptible or backhaul services are implicitly allocated by Fluxys Belgium to network users in case overnomination is being activated for such connection point and insofar network users are requesting interruptible services by sending nominations which exceed their subscribed capacity.

4.1.4 Incremental capacity and Open Seasons

Fluxys Belgium can assess the market potential for new capacity to be developed by means of Open Seasons or Incremental Capacity Process as defined in the Access Code for Transmission. At least every odd year, and at the latest 16 weeks after the start of the annual yearly auctions, Fluxys Belgium will, jointly with its Adjacent TSOs, publish a Demand Assessment Report, analysing the market demand and potential for new or incremental capacity at interconnection points, and concluding on the need – nor absence thereof – to further proceed with incremental capacity projects.

4.2 TRADING CAPACITY ON THE SECONDARY MARKET

Network 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 network 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 network 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.

²³ Being the sum of subscribed capacities on connection points Zeebrugge, ZPT, IZT and Zeebrugge LNG Terminal.

5 OPERATING RULES

5.1 NOMINATIONS

In order to notify Fluxys Belgium of the quantity of natural gas that will be delivered at each connection point, except for the interconnection point GDLux, , the network 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 points.

A nomination is a standardised electronic message issued by the network 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 network 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 practice²⁴. The first nomination cycle begins at 14:00 hours of the preceding gas day and is composed of the following steps:

- The network 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 network user the results of the process.

Fluxys Belgium supports both double sided nominations and single sided nominations²⁵. 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 define²⁶ in which network the network users will be the active and the passive network users, whereby the active network user is sending the nominations as described above towards the active TSO. The passive network user will have to send only once a declaration notice to the passive TSO. Both network users will receive, after conducting a capacity check, the confirmation of the active and/or passive TSO.

The network 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 (NCTTN_{h,z}) relating to ZTP 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”²⁷ subject to harmonization on that matter between adjacent TSOs. Fluxys Belgium will inform the network users accordingly and confirm the start date of such potential change in due course.

²⁴ 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>)

²⁵ Single sided nominations will optionnally be made available to Network 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 Network user(s) have indicated their respective roles.

²⁶ 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

²⁷ 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 connection points on an hourly basis to the involved network user(s). The unit used for the allocation is the kWh. In case the network user has a portfolio in the Grand Duchy of Luxembourg, an allocation equal to the imbalance of the network user in Luxembourg will be allocated to the network 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 network 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 network 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 TSO²⁸. Second, the “proportional to measurement” rule where the allocations will be proportional to the energy measurements.

For the end user domestic points, the domestic energy allocation allocated to the network users shall be determined according to the allocation agreement valid for this connection point (agreement between Fluxys Belgium, the end user and the network users supplying natural gas to or injecting from the said end user). The pooling of capacity is possible at end user domestic points to allow network users supplying the same end user to pool and share each other’s entire subscribed exit capacity for such end user domestic point. The pooling of capacity needs to be described in the specific allocation rule at the given end user domestic point on which concerned network users need to agree upon in the allocation agreement, as detailed in the access code for transmission.

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

²⁸ 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 (<http://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.

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 network 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 connection points where they are active;
- hourly allocation data for the connection points where they are active²⁹;
- individual and market position and their indicative forecast till end of the day, based on the nominations of the network users³⁰;
- 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 network 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.

5.4 GAS QUALITY REQUIREMENTS

The Fluxys Belgium web site (<http://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. Furthermore, exits towards IZT and Zeebrugge are subject to compliancy with UK gas quality requirements. Fluxys Belgium will use its reasonable endeavours to bring gas exiting IZT within UK Wobbe specifications. If taken measures prove insufficient, Fluxys Belgium has the possibility to constraint the exit gas towards IZT and/or Zeebrugge of Network users, in proportion of the gas they injected within the transmission grid which was off-specification with regards to UK Wobbe specifications.

²⁹ Note that allocation data is also provided via standardized electronic messages based on the Edig@S protocol.

³⁰ 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 Network user as input for steering its balancing position, the data provided via the electronic data platform being provided for information purposes only.

6 DAILY BALANCING REGIME

6.1 GENERAL PRINCIPLES OF MARKET-BASED BALANCING

Market-based balancing has two objectives:

- Make network 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, network 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 Belgium³¹.

The network user balancing position ($GBP_{h,z,g}$) shows, for a given network 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 for the relevant ZTP notional trading services³² (ZTP and/or ZTPL) and the hourly transferred imbalance(s) for the considered zone or the net confirmed title transfer for ZTP physical trading services under the imbalance pooling service .

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 network users in a given zone. The market balancing position is therefore equal to the sum of all network user individual balancing positions for the zone in question.

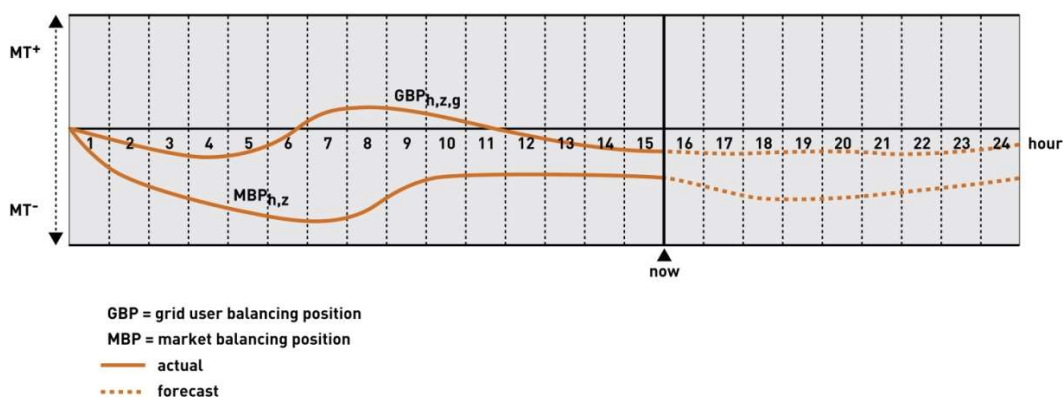
Both the individual network user balancing position and the market balancing positions are updated on an hourly basis indicating the on-line values for the past hours of the gas day and an indicative forecast³³ of those positions for the remaining hours of the gas day.

³¹ Therefore network users receive hourly allocation messages (in Edig@ds 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 network user balancing position
- The market balancing position
- The indicative forecast of the network 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 network user

³² Net confirmed title transfer for ZTP physical trading services are considered as net entry or exit allocations at interconnection point Zeebrugge

³³ 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 network 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 Network 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 basis³⁴, 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 102/96³⁵ 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 network users causing the said market excess or market shortfall via their network user balancing position. Fluxys Belgium will initiate a sell or buy transaction on the commodity market (see section 6.3.3), 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 network user balancing position at the end of the last hour of the gas day is settled to zero for each network user by a settlement in cash (see point 6.3.2).

³⁴ 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

³⁵ 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 network users causing the said market excess or market shortfall via their network 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 network users causing imbalance [all network 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 network users balancing position proportional to their contribution to the market imbalance (Fluxys Belgium delivers gas to the network user in case of shortfall and offtakes gas from the network 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 network user balancing positions. The individual corrections of the positions resulting from the settlement by Fluxys Belgium (residual action) are communicated to the network 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 network user is settled to zero so that the network 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 network user, for each network user equal to the network user balancing position of the last hour of the gas day ;
3. Correction of network users' balancing position to zero (Fluxys Belgium delivers gas to the network user in case of shortfall and offtakes gas from the network 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 network user balancing positions. The individual corrections of the positions resulting from the settlement by Fluxys Belgium (residual action) are communicated to the network users together with their individual position and the market position. The financial settlement is handled during the invoicing cycle.

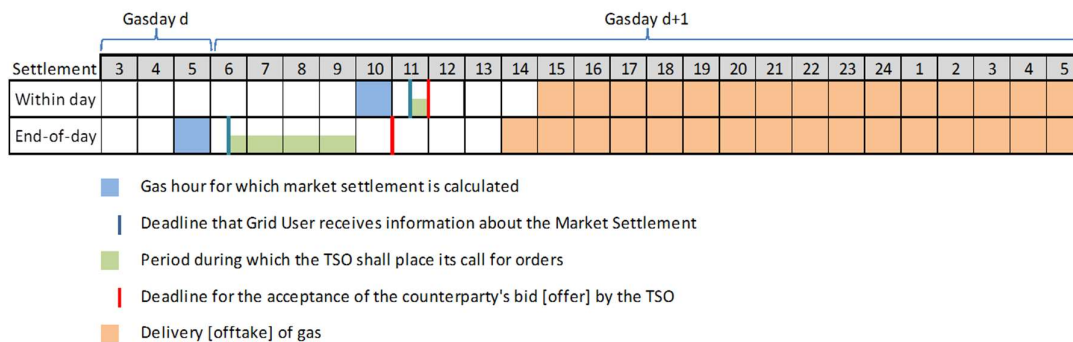
6.3.3 Residual balancing organisation

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 product³⁶ available on an exchange platform as mentioned on the Fluxys Belgium website. 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 the exchange platform 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 exchange platform: 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 network 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 market³⁷ 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 MWh³⁸ 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 network user, called the

³⁶ Network 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 network user registered on the exchange to be able to deliver such a product, however network 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.

³⁷ Such a notification can happen by posting message calling for bids and/or offers on the exchange.

³⁸ 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 an exchange platform as mentioned on the Fluxys Belgium website.

settlement price, will be determined as the minimum [maximum] of the gas price and minimum [maximum] price of those transaction(s) in case of a market excess [shortfall].

If, for any reason, the TSO was unable to close the needed transaction(s) on the ZTP notional trading services for the compensation of L-zone settlements, the TSO 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 on either the L-zone or the H-zone taking into account the conversion fee. The settlement price in such case, will be determined as the minimum [maximum] of the gas price and minimum [maximum] 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 network 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 network 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 days after receipt and failure to respect terms of payment may lead to the provision of financial security by the network 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 network users with respect to the total monthly fee for their subscribed services:

- Monthly invoice,
- Monthly self-billing invoice,
- Monthly COM 2 invoice, and
- Monthly COM2 self-billing invoice.

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

- The monthly capacity fees relating to subscribed or implicit allocated 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 services, provisionally allocated for such month M and the correction for such fees relating to distribution domestic services, finally allocated for month M-3.
- The monthly variable flex fee relating to services subscribed on end user domestic point with Fix/Flex rate type, based on final allocations for month M-3.
- The monthly fix fees relating to the ZTP trading services for the month M.
- The monthly commodity fee (relating to the concerned connection points) for month M-3.
- The monthly allocation settlement fees in case of purchase for month M-3.
- The monthly odourisation fee for end user domestic points for month M-3.
- The monthly transmission imbalance fee for month M-3.
- The monthly commodity fee for peak load quality conversion service H->L for month M-3.
- The monthly commodity fee (relating to distribution domestic points) for month M-3.
- The monthly variable fee relating to ZTP trading services for month M-3.
- The monthly incentive fees for month M-3.
- The monthly administrative fees for month M-3.

The monthly self-billing invoice on the 10th of a given month M will cover:

- The monthly allocation settlement fees in case of sale for month M-3.

The monthly COM2 invoice on the 10th of a given month M will cover:

- The monthly balancing settlement fees in case of shortfall for month M-1;
- The monthly neutrality charge fees (if applicable).

The monthly COM2 self-billing invoice on the 10th of a given month M will cover:

- The monthly balancing settlement fees in case of excess for month M-1;
- The monthly neutrality charge fees (if applicable).

For the sake of convenience a summary of the consolidated invoices by due date will be transferred to the network user for each month, including a summary note with the balance payable to the TSO or refund to the network user.

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 network users to offer the subscribed transmission services they no longer require to other network users. This allows for the optimal and market-based distribution of transmission services amongst network 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 connection 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 network 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 network user and for each service. This register is submitted to CREG at least annually, as set out in the code of conduct. Each network user is also provided with part of the register concerning his individual data.

Network users have furthermore the possibility to post firm transmission services they wish to sell at Fluxys Belgium (surrender of contracted capacity). Interested network users are allowed to respond to this offer, either directly or via PRISMA.

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 4.1).

8.2 CONGESTION MANAGEMENT PROCEDURE

Congestion occurs when a service request for firm transmission services at connection 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 network 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” as congestion measure against contractual congestion, in order to bring unused capacity back to the market, as described in section 8.1;
- “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 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 network users, upon decision of CREG. The TSO, on behalf of network 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 network users of the amounts subject to possible release. In the absence of response from the network user within the scheduled period, such amounts will be automatically released on the secondary market. However, a response from the network user will lead to a decision of the CREG on the quantities which are finally released and effective.

8.2.1.2 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 network users can offer firm transmission services back to the TSO.

8.2.2 End user domestic points and installations points

For end users domestic 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 8.2.1.1.



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

