



CAM and ZIGMA Concept Document

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Industry Consultation

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1. Introduction & Background

1.1 Introduction

This Concept Document has been written by:

- Interconnector (UK) Limited (IUK), the owner and operator of the Interconnector Pipeline between Bacton in GB and Zeebrugge in Belgium
- Fluxys Belgium, the owner and operator of the national high pressure pipeline network within Belgium that connects with the Interconnector Pipeline at Zeebrugge
- National Grid Gas (NGG), the owner and operator of the national high pressure pipeline network within GB that connects with the Interconnector Pipeline at Bacton

IUK has led the development of this document in its role as lead Transmission System Operator (TSO) for this workstream. This document is not exhaustive and is not intended to be legally binding on IUK, Fluxys Belgium or NGG.

This document introduces IUK and Fluxys Belgium's proposed cross-border Entry-Exit zone for natural gas, called ZIGMA (Zeebrugge beach Interconnector Gas Market Area), and sets out:

- The market model and service offer for ZIGMA and its virtual trading point Zeebrugge Beach
- The key concepts for implementing the Capacity Allocation Mechanism (CAM) Network Code¹ across the 3 TSOs
- The key concepts for implementing the Balancing (BAL) Network Code² within ZIGMA

The document covers both the interim period (between 1 November 2015 when CAM will be implemented³ and 30 September 2018 when the existing IUK long-term contracts expire) and the enduring regime (from 1 October 2018 when it is anticipated that all Interconnector capacity will become available, subject to, among other things, the availability of the facilities, contractual terms and conditions and the prevailing regulatory conditions).

It should be noted that the section on the Interconnection Point (IP) at Bacton, between IUK and NGG, has been developed by IUK and NGG; and the sections on the ZIGMA Entry-Exit zone and the various connections in the Zeebrugge area have been developed by IUK and Fluxys Belgium.

A glossary is provided for your information in Appendix 5.

¹http://www.entsog.eu/public/uploads/files/publications/CAM%20Network%20Code/2013/EC_131014_CAM%20NC_Regulation%20984-2013.pdf

²<http://www.entsog.eu/public/uploads/files/publications/Balancing/2013/BAL%20NC%20-%20Commission%20Regulation.pdf>

³It is acknowledged BAL implementation is required by 1 Oct 2015 and CAM implementation by 1 Nov 2015. Given the scale of the changes required, we intend to implement these Network Codes at the same time

1.2 Background

The Third Energy Package (a package of legislative measures) was adopted in 2009 to improve the regulatory framework for a liberal wholesale energy market. The cornerstone of the Package was Ownership Unbundling requiring the separation of production and supply of gas from transmission, and rules aimed at improving harmonisation across the EU.

The Third Energy Package includes Regulation (EC) No 715/2009, which is supplemented by Network Codes. The CAM Network Code is to be implemented by TSOs by 1 November 2015 and the BAL Network Code is to be implemented by 1 October 2015.

1.2.1 Capacity Allocation Mechanism (CAM)

To promote effective competition in the internal gas market Network Users should be able to flexibly use the relevant transmission systems to ship gas according to price signals. CAM introduces rules to ensure efficient, transparent and non-discriminatory access to these infrastructure networks. Specifically, CAM establishes rules relating to:

- How capacity can be offered and allocated, including standard cross-border capacity products and auction rules
- TSO co-operation, in order to facilitate capacity sales, including commercial and technical rules relating to post-auction capacity allocation

Under CAM, adjacent TSOs will jointly offer bundled capacity products to the market at IPs (underpinned by individual contracts within the relevant contractual framework of the respective TSOs). TSOs will make these products available via a joint web-based platform and Network Users may partake in auctions. TSOs may also, if applicable, offer unbundled capacity and interruptible capacity. CAM specifies the auction timing, frequency and methodology, ensuring consistency and ease of securing capacity rights across the EU.

1.2.2 Balancing (BAL)

BAL introduces rules on gas balancing of transmission networks to facilitate gas trading across balancing zones, contributing towards the development of a liquid and competitive internal market. BAL sets out harmonised rules on balancing to give Network Users greater flexibility and greater certainty in relation to their balancing positions across adjacent balancing zones. The rules aim to financially incentivise Network Users to balance their portfolios, via cost-reflective balancing charges, facilitated by trading platforms established by the TSOs. Any residual balancing action required within the balancing zone will be undertaken by the TSO, or an agent, normally via the sale and purchase of short-term standardised products. Within Day Obligations can be introduced where physically small systems require additional measures to avoid emergencies. BAL specifies minimum requirements for information provisions to Network Users and TSOs alike, with the aim of supporting the balancing regime and allowing all parties to better manage risks and opportunities in a cost efficient manner.

2. ZIGMA Market Model Summary

2.1 ZIGMA: Zeebrugge beach Interconnector Gas Market Area

ZIGMA is a proposed cross-border Entry-Exit zone bringing together the Interconnector Pipeline, Zeebrugge area and Zeebrugge Beach trading point.

ZIGMA consists of the following entry and/or exit points⁴:

- IBT, an entry and exit IP connecting ZIGMA with the NBP hub
- OKS⁵, an entry and exit IP connecting ZIGMA with the ZTP hub
- ZZ1, an entry and exit IP connecting ZIGMA with the TTF hub
- ZZ2, an exit point connecting ZIGMA with the ZEBRA market area
- SILK, an entry point connecting ZIGMA with gas production from the SEAL pipeline
- ZPT, an entry point connecting ZIGMA with gas production from Norway
- ZLNG, an entry point connecting ZIGMA with the Zeebrugge LNG Terminal

The Zeebrugge Beach traded market will be incorporated within ZIGMA and will become the Virtual Trading Point (VTP) of the zone. Trades will no longer need to be balanced on an hourly basis and may result in a short or long ZIGMA Balancing Position, in accordance with the ZIGMA balancing model (see further details in section 2.5). Entry and exit services at any ZIGMA point will give access to/from Zeebrugge Beach.

ZIGMA connects with trading markets NBP, ZTP and TTF, provides sourcing possibilities via ZPT via SILK and via LNG and is connected to downstream markets in UK, Belgium and the Netherlands.

It combines Interconnector services offered by IUK, services in the Zeebrugge area offered by Fluxys Belgium and Zeebrugge Beach trading services.

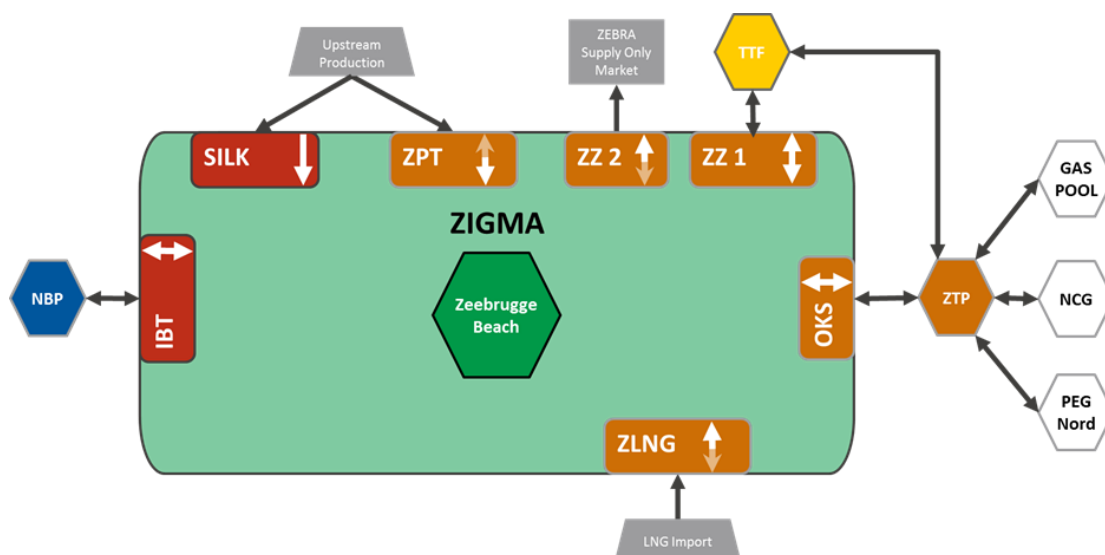


Figure 1: The proposed new cross-border Entry-Exit zone, ZIGMA (Zeebrugge beach Interconnector Gas Market Area)

⁴Note that ZIGMA has no internal consumption apart from own-use consumption for compression and/or heaters

⁵ OKS is a working name. The actual name will be confirmed by Fluxys Belgium

Three IPs (IBT, OKS and ZZ1) are subject to CAM, requiring that standard capacity products are offered, bundled with adjacent TSO capacity and sold via the agreed CAM auction process. Sections 3, 4 and 5, respectively, detail the rules that apply at these IPs. The other points (SILK, ZPT, ZLNG and ZZ2), which connect either to upstream production, an LNG import terminal, or a supply-only market, are not subject to the rules set out in CAM. Section 6 provides more details on these points.

In addition to accessing ZIGMA, the points ZPT, ZLNG, ZZ1 and ZZ2 are also accessible to/from the ZTP. This maximizes the commercial flexibility at these points.

2.2 Service Offer

Services offered within ZIGMA include entry and exit capacity at the relevant connection points⁶, trading at Zeebrugge Beach and balancing services. Other service offerings, such as additional flexibility services, may be developed by IUK or Fluxys Belgium.

ZIGMA Shippers delivering gas of a UK-compliant quality into ZIGMA will receive a firm service from Fluxys Belgium. If the gas delivered is not of a UK-compliant quality, then services similar to the current Fluxys service will apply, see section 7 for more details.

2.3 Roles

Within ZIGMA there are two TSOs (IUK and Fluxys Belgium) operating two specific sets of assets. There will also be a Balancing Agent role (to be undertaken by IUK) receiving information from both TSOs to monitor both individual ZIGMA Shipper and overall market balancing positions. Further details are outlined below.

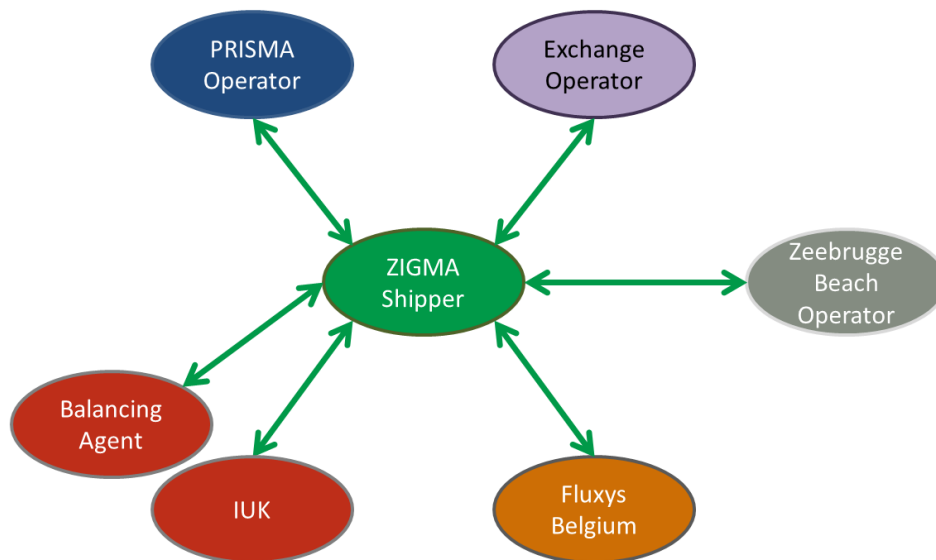


Figure 2: Roles within ZIGMA

⁶ The 'Zee Platform' product offered by Fluxys Belgium will no longer exist. It is intended that access to/from the Zeebrugge Beach virtual trading point will be offered to the market on comparable terms to those currently applicable to/from the Zeebrugge Beach physical trading point

2.3.1 ZIGMA Shipper

Customers contracting services in ZIGMA will be known as ZIGMA Shippers. A ZIGMA Shipper can transport gas into ZIGMA, out of ZIGMA or through ZIGMA by contracting with IUK and Fluxys Belgium and/or trading on Zeebrugge Beach, the VTP of ZIGMA, subject to the signature of the relevant contracts.

2.3.2 TSOs

IUK

Under the ZIGMA model, IUK retains responsibility for maintaining and operating the Interconnector Pipeline and the Interconnector Bacton and Interconnector Zeebrugge Terminals⁷. ZIGMA Shippers may contract with IUK for entry and exit capacity at IBT and entry capacity at SILK. For those points, IUK will receive nominations from ZIGMA Shippers and provide allocations to them.

IUK will cooperate with Fluxys Belgium to ensure that availability of technical capacity within the ZIGMA zone is maximised and maintenance is coordinated.

Fluxys Belgium

Under the ZIGMA model, Fluxys Belgium retains responsibility for maintaining and operating their assets within ZIGMA. ZIGMA Shippers may contract with Fluxys Belgium for capacity at OKS, ZZ1, ZZ2, ZPT and ZLNG. Fluxys Belgium will receive nominations from ZIGMA Shippers and provide allocations to them.

Fluxys Belgium will cooperate with IUK to ensure that the availability of technical capacity within the ZIGMA zone is maximised and maintenance is coordinated.

2.3.3 ZIGMA Balancing Agent

A Balancing Agent will be established, providing balancing positions to ZIGMA Shippers, publishing the market position and taking balancing actions in accordance with the balancing model described in section 2.5. IUK will fulfil this role.

2.3.4 Zeebrugge Beach Operator

The Zeebrugge Beach Operator manages the Zeebrugge Beach. The Zeebrugge Beach Operator receives and handles the nominations for the trades directly from ZIGMA Shippers or via the Exchange Operator (if the trade was performed on the Exchange Platform). The Zeebrugge Beach Operator will communicate shippers' net balance positions to the Balancing Agent. Huberator will fulfil the role of Zeebrugge Beach Operator.

2.3.5 PRISMA Operator

The PRISMA Operator⁸ manages the Capacity Platform on which the capacity available at the CAM-regulated IPs is offered to the market. The PRISMA Operator organises auctions to sell IUK and Fluxys Belgium's available capacity at these points to the ZIGMA Shippers. Where possible the capacity will be offered as bundled capacity with the relevant adjacent TSO.

⁷ Note that the operational border between both TSOs remains Interconnector Zeebrugge Terminal (IZT)

⁸ See <https://www.prisma-capacity.eu/web/start/> for further information

2.3.6 Exchange Operator

The Exchange Operator manages the anonymous Exchange Platform on which standard commodity products are sold. The Exchange Operator nominates the transactions to the Zeebrugge Beach Operator. The Balancing Agent will perform within-day and end-of-day settlement-related commodity transactions on the Exchange Platform.

2.4 Contracts

Figure 3 illustrates the different contracts within ZIGMA. Which contracts a ZIGMA Shipper signs up to will depend on whether it is transporting, trading or both. The contracts required under different scenarios are detailed in Appendix 3.

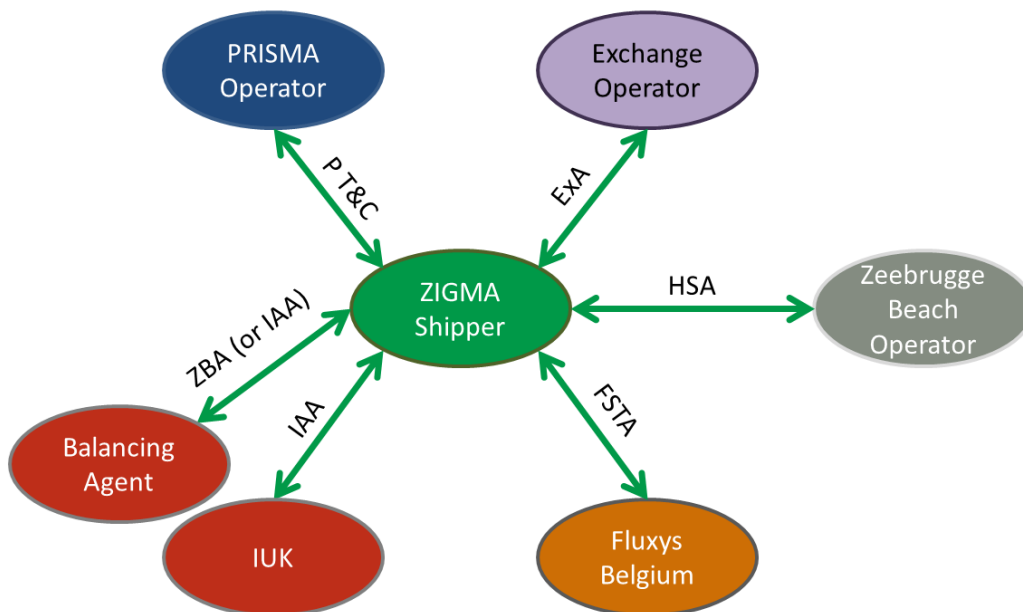


Figure 3: Contracts required for a ZIGMA Shipper for holding capacity and trading

A ZIGMA Shipper signed up to these contracts can perform the following activities:

- Under the IUK Access Agreement (IAA) and associated IUK Access Code (IAC): book capacities at IBT and/or SILK, and make gas flow nominations against those booked capacities
- Under the Fluxys Standard Transmission Agreement (FSTA) and associated Access Code for Transmission (ACT): book capacities at OKS, ZZ1, ZZ2, ZLNG and/or ZPT, and make gas flow nominations against those booked capacities
- Under the Hub Services Agreement (HSA): trade on Zeebrugge Beach
- Under the ZIGMA Balancing Agreement (ZBA): use flexibility services in ZIGMA (Two alternative models are being considered; the ZBA may be a separate contract or integrated into the IAA)
- Under the PRISMA Terms & Conditions (PT&C): book capacities using the PRISMA Capacity Platform

- Under the Exchange Agreement (ExA): trade at the anonymous Exchange on Zeebrugge Beach

2.5 General Principles of ZIGMA Balancing Model

The ZIGMA balancing model has three objectives:

- Make ZIGMA Shippers responsible for balancing of the area by properly adjusting entry with regards to exit
- Limit intervention by the Balancing Agent to cases where the market imbalance exceeds predefined thresholds
- Enable cost-reflective balancing actions, by directly relating the cost of such actions to the actual commodity market prices at the time of such actions and passing these costs onto the responsible parties.

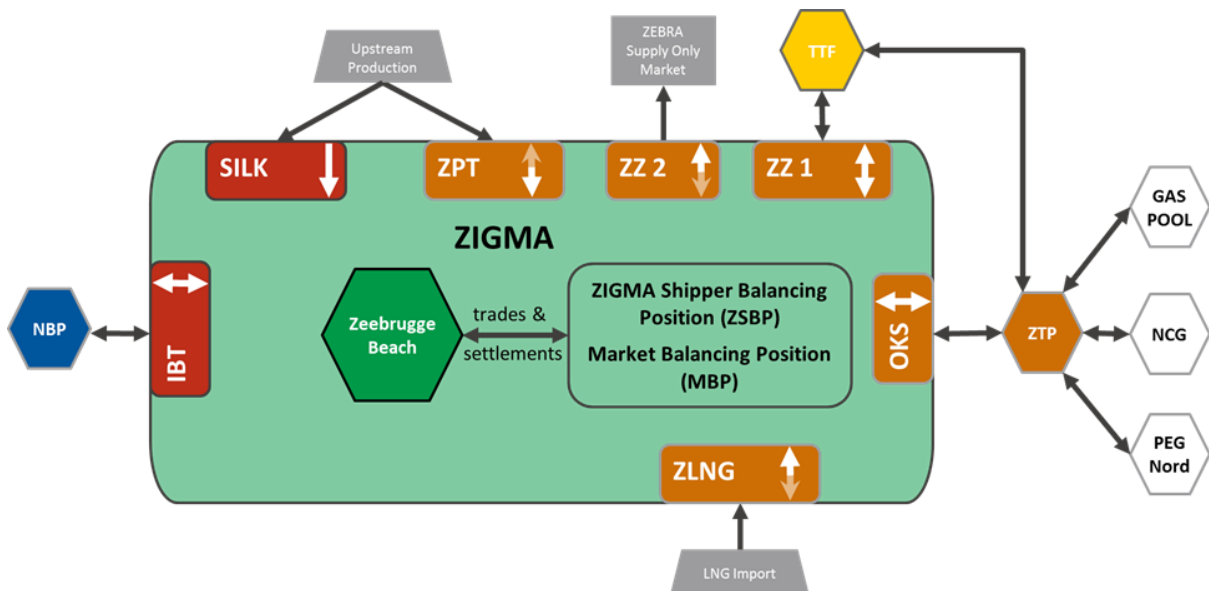


Figure 4: Balancing positions within ZIGMA

The ZIGMA balancing model will be similar to the model currently adopted by Fluxys Belgium for the ZTP zone, however pricing will be in pounds sterling. ZIGMA Shippers' imbalance positions will be determined from their entry to ZIGMA, exit from ZIGMA and their net traded position at Zeebrugge Beach. To maintain the commercial balance, the Balancing Agent will buy/sell gas when the market (i.e. the sum of the individual imbalance positions of all ZIGMA Shippers) moves outside the predefined Market Threshold. Costs associated with these actions will be targeted at those parties who have caused the imbalance.

The Market Threshold is a form of Within Day Obligation (WDO). If there are very high flows then further WDOs may be required as detailed in the section on WDOs in Appendix 4.

If there is a network emergency or the integrity of the system is at risk then gas flows will be constrained.

For a description of the detailed balancing rules, see Appendix 4.

2.6 IUK Contracts During the Interim Period (1 Nov 2015 – 30 Sept 2018)

IUK has existing capacity contracts that extend to 30 September 2018, the IUK Standard Transportation Agreements, or ISTAs.

For the period from 1 November 2015 to 30 September 2018, IUK will offer ZIGMA capacity under the new IUK Access Agreement (IAA), which sits alongside the ISTA. The capacity offered by IUK will include any Over-subscription Capacity (OS Capacity) made available, plus any capacity that has been surrendered by an ISTA Shipper or released through the Long Term Use It Or Lose It (LT UIOLI) mechanism that applies to the ISTA. Further details are outlined below.

2.6.1 IAA: 1 Nov 2015 – 30 Sept 2018

From 1 November 2015, when ZIGMA comes into existence, IUK will offer ZIGMA capacity under the IAA at IBT only. The interface between IUK and Fluxys Belgium, known as the Interconnector Zeebrugge Terminal (IZT), will cease to be a commercial (bookable) point for Shippers under the IAA. Gas will be (re)delivered into (out of) ZIGMA at IBT.

The capacity at IBT will be offered in day-ahead auctions from 1 November 2015 and sold as a bundled product with NGG capacity where available. This is described further in section 3.

2.6.2 ISTA: 1 Nov 2015 – 30 Sept 2018

During this interim period, capacity bought under the existing ISTA will be unaffected. The existing variable inventory regime within the ISTA will remain unchanged and continue to be used for balancing purposes.

As ZIGMA will exist from 1 November 2015, the ISTA Shipper can decide whether or not it wants access to ZIGMA. In both cases, capacity that was bought under the existing ISTA will continue to be nominated at both IBT and IZT.

An ISTA Shipper not wanting to access the ZIGMA zone nor Zeebrugge Beach would not need to sign up to the ZIGMA balancing services. If such Shipper has an entry or exit to/from ZTP with Fluxys Belgium, such entry or exit capacity would remain in place between IZT and ZTP.

An ISTA Shipper wanting to access ZIGMA and/or Zeebrugge Beach would receive capacity to and from ZIGMA (provided that it has signed the Balancing Agreement and the HSA if applicable) corresponding to its capacity rights in the Interconnector Pipeline. If such Shipper has an entry or exit to/from ZTP with Fluxys Belgium, such entry or exit capacity would remain in place between OKS and ZTP.

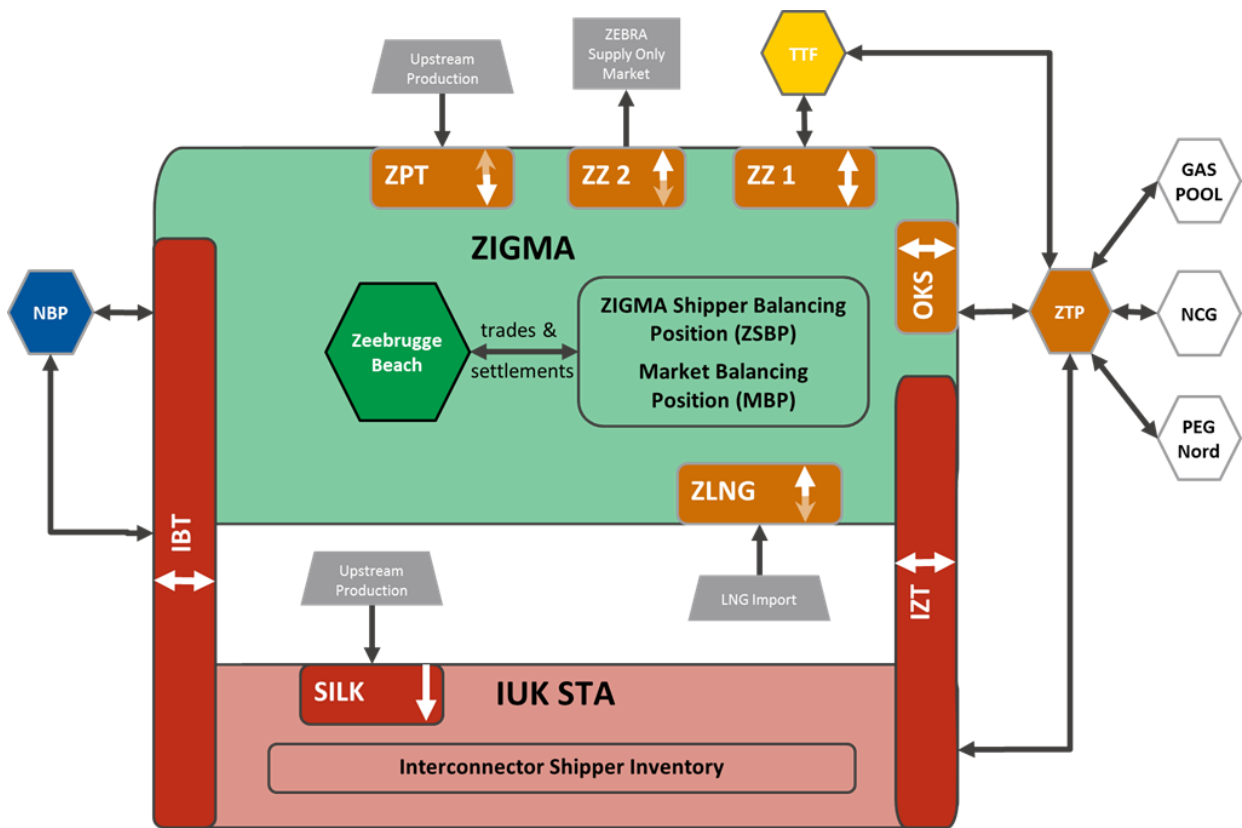


Figure 5: Interim regime from 1 November 2015 to 30 September 2018

2.7 IUUK Contracts: Enduring Regime

From 1 October 2018, it is anticipated that all of the capacity at IBT and SILK will become available, subject to, amongst other things, the availability of the facilities, contractual terms and conditions and the prevailing regulatory conditions. This capacity will be offered under the IAA and the gas will be delivered, or redelivered, into, or out of, the ZIGMA zone at the relevant IP.

Balancing services will be provided by the Balancing Agent and the concept of variable inventory that is currently embedded within the ISTA will no longer exist. Additional flexibility products may also be made available.

Capacity from 1 October 2018 will be offered for sale in the March 2016 annual auction process defined in CAM, subject to timely regulatory approvals being in place.

3. IBT Interconnection Point

Details of how CAM will be implemented at the IBT IP between IUK and NGG follow.

3.1 Summary

At the IBT IP all available capacity from 1 November 2015 will be offered as a bundled product, where possible, e.g. NGG exit capacity at IBT and ZIGMA entry capacity at IBT will be sold together. Unmatched capacity on either side of the IBT IP will be offered as an unbundled product. Shippers will bid for capacity on the PRISMA platform, which implements the auction algorithms defined in the CAM Network Code.

Following a successful bid for bundled capacity, the capacity can be used according to the contract in force with each TSO e.g. if a Shipper bought bundled NGG exit capacity and ZIGMA entry capacity at IBT, then the use of the NGG exit capacity would be subject to the contract signed with NGG whilst the use of the ZIGMA entry capacity would be subject to the contract signed with IUK. A single nomination can be submitted to nominate the flows in both systems (exit from one system and entry to the other system) for a bundled product⁹.

The CAM and BAL Network Codes introduces a common Gas Day across Europe. NGG and IUK will make modifications to their contracts in order to comply with this requirement¹⁰.

3.1.1 Bacton Open Letter

The entry point to the NGG system at Bacton is currently common to two EU interconnectors and to gas arriving from the UK Continental Shelf (UKCS). There has been an Ofgem open letter and industry debate regarding splitting this entry point in order to allow the current UK regime to co-exist at the UKCS entry point alongside the CAM requirements at the IUK and BBL entry/exit points. Once the ongoing debate on splitting Bacton has been concluded, there is the possibility of an aggregated EU IP. Competing Capacity auctions may be introduced to support this and Shippers would need to compete for NGG Bacton NTS entry capacity at EU IP, via auctions on the PRISMA platform¹¹.

3.2 Co-ordination Across the Interconnection Point

There are several areas defined in CAM where IUK and NGG will co-operate:

3.2.1 Co-ordination of Maintenance (CAM article 4 & 7(2))

NGG and IUK shall exchange information and fully cooperate with each other regarding their respective maintenance plans in order to minimise the impact on potential gas flows and capacity at

⁹ It is the intention that single nominations will also be accepted for unbundled capacity as long as the counterparty on both sides of the IP is the same entity. This is subject to further detailed discussion and analysis by the TSOs

¹⁰ NGG has raised UNC Mod 461 to align the Gas Day with Continental Europe. Ofgem has directed that this Mod be made with implementation effective from 1 October 2015

¹¹ Subject to PRISMA Competing Capacity functionality. Competing Capacities are capacities for which the auctions are interdependent if the sum of capacity across 2 TSOs on one side of the IP is greater than the capacity available on the other side of the IP

the IBT IP. The procedure for exchanging data regarding maintenance will be covered in the Interconnection Agreement (IA) between NGG and IUK¹².

IUK's current contractual arrangements with Shippers allow an annual maintenance period of up to 15 Gas Days during which no Interconnector capacity is made available. For this IUK annual maintenance period, IUK consults with NGG, Fluxys, the SILK operator and the wider industry prior to setting the annual maintenance period each year. Maintenance periods will continue to be required when the current contractual arrangements expire and IUK will continue to co-ordinate maintenance plans with NGG and Fluxys as far as practicable. NGG also consults on and publishes maintenance information specific to IPs, consistent with the requirement from European Regulation (EC) 715/2009, on its website¹³.

3.2.2 Technical Capacity: Capacity Calculation and Maximisation (CAM article 6)

NGG and IUK have established a joint process to review technical capacities and maximise the offer of bundled capacity across the IBT IP:

1. IUK will provide NGG with analysis of the technical capacity of the Interconnector Pipeline. The Interconnector is physically bi-directional and currently has a compressor station at IBT for exporting gas from GB and a compressor station at IZT for importing gas to GB. The maximum technical capacity of the entry point at Bacton into the Interconnector from the NGG system is determined by the capacity of the compression station at IBT. The main constraints to the technical capacity at IBT are the compressor station inlet pressure and gas temperature from NGG together with the ambient temperature¹⁴. IUK will state the assumptions regarding gas quality that have been made as part of its analysis to ensure that IUK and NGG's analysis is consistent.
2. NGG uses the terms Obligated Entry Capacity and Obligated Exit Capacity as calculated in accordance with Special Conditions 5F and 5G of its Gas Transporter Licence in respect of the NTS as the technical capacity^{15 16}.
3. NGG may (but in no way is obliged to) also release additional capacity in accordance with its incentive regime, and this could increase the offer of bundled capacity if it matches with capacity offered by IUK.
4. In addition, NGG may exchange information with IUK on a regular basis regarding pressure expectations and this may allow the parties to dynamically evaluate the possibility of increasing the amount of capacity offered.

¹² The current IA is being renegotiated between IUK and NGG to ensure compliance with the new EU Network Codes, in particular the Interoperability Network Code

¹³ <http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=27500>

¹⁴ A description of the maximum technical capacity of the Interconnector can be found at: <http://www.interconnector.com/media/91266/130926%20Maximum%20Technical%20Capacity%20of%20the%20Interconnector%20-%202013.pdf>

¹⁵ For details, please see the link to technical capacity at

<http://www.nationalgrid.com/uk/Gas/Data/EU+Transparency+Requirements/>

¹⁶ In respect of NTS entry capacity this is subject to the current Bacton open letter outcome

Following the initial comparison of analysis, NGG and IUK will meet on an annual basis to review the technical capacity available on either side of the IBT IP. This may also take account of demand and supply scenarios.

3.2.3 TSO to TSO On-going Communication Regarding Available Capacity

On a day-to-day basis, PRISMA will ensure that the maximum amount of bundled capacity is offered based on the amount of available capacity notified by NGG and IUK, any unmatched capacity on either side will be offered as unbundled capacity. In addition, on a yearly basis NGG and IUK will meet to review the amount and duration of capacity booked under any existing contracts which will result in unbundled capacity on either side of the IBT IP. This will allow NGG and IUK to determine the timescales that unbundled capacity can be made available for in the auctions (see Figure 6).

3.3 Allocation Methodology for Capacity (CAM article 5, 8, 11, 12, 13, 14, 15, 16, 17, 18)

Allocation of capacity will be according to the auction rules defined in the CAM Network Code articles 11 to 18, these rules will be applied by the PRISMA platform on which both NGG and IUK will post their available capacity. The requirements to standardise communication relating to a booking platform (CAM article 5 (2)) are met by NGG and IUK both using PRISMA. ENTSOG is carrying out a consultation on the market needs in respect to booking platforms.

The availability of the relevant standard capacity products, if applicable, will be communicated to the market by NGG and IUK via PRISMA in accordance with the CAM rules in articles 11 to 15:

- One month before the annual yearly capacity auction, such amount calculated in accordance with CAM article 11(6)
- Two weeks before the annual quarterly capacity auctions, such amount calculated in accordance with CAM article 12(6)
- One week before the rolling monthly capacity auctions, such amount calculated in accordance with CAM article 13(5)
- At the time the bidding round opens (15:30 UTC (winter time) or 14:30 UTC (daylight saving)) for rolling day ahead capacity auctions, such amount calculated in accordance with CAM article 14(7)
- After closure of the last day-ahead auction for within-day capacity auctions (apart from Interruptible Capacity), such amount calculated in accordance with CAM article 15(8).

3.4 Capacity Offered (CAM article 9, 10 & 21)

CAM defines the standard capacity products that should be offered at auction: yearly, quarterly, monthly, daily and within-day. These cover Firm Capacity and Interruptible Capacity. In addition, CAM states that all Firm Capacity shall be offered as bundled capacity in so far as there is available firm capacity on both sides of the IP. This section details the capacity that will be offered at the IBT IP in accordance with the CAM rules. The capacity offered will be expressed in energy units per unit of time, NGG will offer capacity in kWh/d and IUK will offer capacity in kWh/h and the bundle will be offered in kWh/h¹⁷.

¹⁷ Currently assessing PRISMA capability to automatically bundle capacity offered in different units

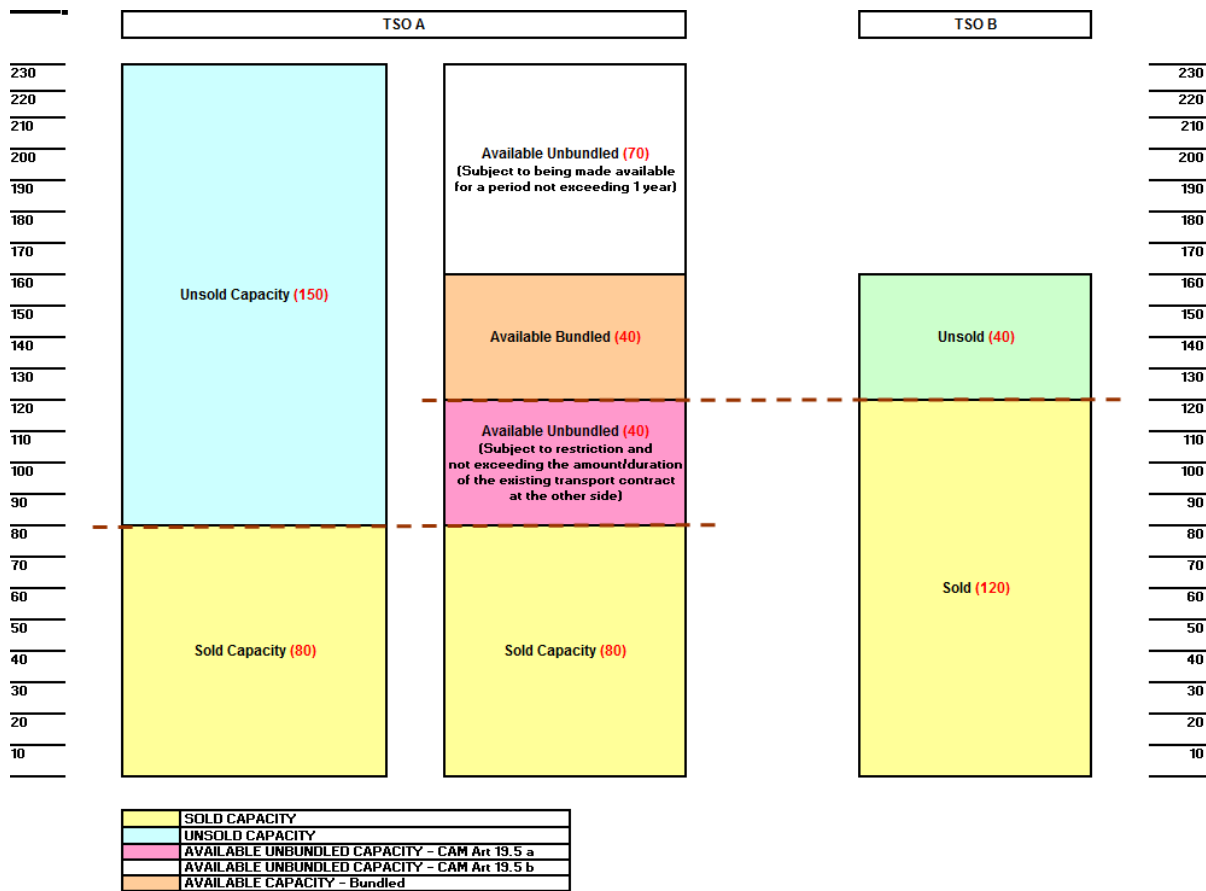


Figure 6: Bundling of capacities

Figure 6 shows how capacity will be bundled. In the example, TSO B has already sold more capacity each year than TSO A for the next few years (120 units compared to 80 units shown in yellow). TSO A will therefore sell capacity up to the quantity booked in TSO B's system on an unbundled basis for the duration of the contracted capacity (shown in pink). Any matching capacity that is available on both sides is sold as a bundled product (40 units shown in orange). In addition capacity that is available but unmatched due to TSO A's technical capacity exceeding TSO B's technical capacity, will be sold on an unbundled basis (70 units shown in white) but only for maximum period of one year (CAM article 19(5)(b)).

3.4.1 ZIGMA Capacity Availability at IBT: Firm

All of IUK's technical capacity is fully booked until 30 September 2018 under the existing ISTA contracts. The only available capacity at the IBT IP until then will be capacity made available through CMP implementation under the IAA contract (OS (potentially up to 15% of the technical capacity of the pipeline), surrender or LT UIOLI). From 1 November 2015, capacity that is available from these mechanisms will, if applicable, be auctioned as standard products on PRISMA and bundled if available obligated capacity exists from NGG. Capacity originating from these mechanisms will be included in the total available capacity that IUK or NGG¹⁸ advises to PRISMA. It will be offered on a bundled basis with any available firm capacity on the other side of the IBT IP originating either from unsold technical capacity or CMP mechanisms.

¹⁸ NGG may offer additional capacity at its own sole discretion above its technical capacity Licence obligation

IUK plans to offer ZIGMA Capacity at IBT from 1 October 2018 for sale as a bundled product in the annual yearly capacity auctions from March 2016. Where capacity has been sold by NGG beyond 1 October 2018 at the revised Bacton EU point¹⁹, IUK will offer this capacity on an unbundled basis in accordance with CAM article 19(5) and 19(6).

3.4.2 ZIGMA Capacity Availability at IBT: IC (CAM article 21, 22, 23, 24, 25)

Where firm capacity is sold out day-ahead (including any capacity made available through CMP mechanisms), IUK will offer a day-ahead interruptible capacity product in both directions at the IBT IP. This will be offered via auction on PRISMA on an unbundled basis according to the timescales detailed within the auction calendar published by ENTSOG. The minimum interruption lead time that will be applied has been jointly decided between IUK and NGG. It will be the default minimum interruption lead time referred to in CAM article 22 which for a given gas hour shall be 45 minutes after the start of the renomination cycle for that gas hour. If IUK initiates an interruption it will notify NGG and apply the interruption based on contractual timestamps. This means that an interruptible capacity contract coming into force earlier shall prevail over a contract coming into force later, and if two or more contracts are ranked in the same priority order and they are not required to be fully interrupted then a pro-rata reduction will apply to these contracts. The reasons for possible interruptions will be detailed in the IAA.

In the event that firm capacity is sold out at the annual yearly auctions, IUK will consider whether it may be possible to make a longer-term IC product available.

3.4.3 NGG Capacity Availability at IBT: Firm

For NTS entry capacity, NGG currently publishes a Long Term Summary Report²⁰ on the NGG website, showing the amount of entry capacity available at each ASEP. Once the outcome of the Bacton open letter has been concluded and subsequently implemented, this report will show the amount of available entry capacity for the new ASEP(s). Therefore, the exact quantity of NTS Entry capacity for the new ASEP(s) cannot be provided at this current time.

For NTS exit capacity, NGG also publishes a Long Term Summary Report²¹ on its website which is detailed at an exit point level. The amount of available NGG prevailing exit capacity for IBT is already published until September 2023. However, as part of the Bacton open letter conclusion there may be a requirement to end date Enduring Annual NTS Exit capacity holdings. Therefore, the exact quantity of NTS Exit capacity at IBT cannot be provided with certainty at this current time.

3.4.4 NGG Capacity Availability at IBT: IC (CAM article 21, 22, 23, 24, 25)

NGG will offer daily interruptible capacity (day-ahead) generated from the Interruptible UIOLI calculation. Firm holders can still utilise their original firm capacity holding and NGG can scaleback any such quantities of any interruptible capacity it chooses to do so. Where all firm capacity is sold

¹⁹ Subject to the outcome of the Bacton open letter

²⁰ <http://www2.nationalgrid.com/uk/industry-information/gas-transmission-system-operations/capacity/entry-capacity-auction/> The following search details should be selected: Auction Type: Long Term Summary, Report Type: Summary Report and the relevant date range entered

²¹ <http://www2.nationalgrid.com/uk/industry-information/gas-transmission-system-operations/capacity/exit-capacity-publication/> The following search details should be selected: Auction Type: Long Term Summary, Report Type: Summary Report and the relevant date range entered

out day-ahead, NGG may also offer, at its sole discretion, additional day-ahead daily interruptible capacity at the IBT IP. NGG may also offer daily interruptible capacity (day-ahead) at its sole discretion if firm capacity is not sold out. This will be offered via an auction on PRISMA on an unbundled basis according to the timescales detailed within the auction calendar published by ENTSOG.

The minimum interruption lead time that will be applied has been jointly decided between IUK and NGG. It will be the default minimum interruption lead time referred to in CAM article 22 which for a given gas hour shall be 45 minutes after the start of the renomination cycle for that gas hour. If NGG initiates an interruption it will notify IUK and apply the interruption based on contractual timestamps. This means that an interruptible capacity contract coming into force earlier shall prevail over a contract coming into force later and if two or more contracts are ranked in the same priority order and they are not required to be fully interrupted then a pro-rata reduction will apply to these contracts. The reasons for interruption will be detailed in the UNC for NGG.

3.4.5 Short-term Set Aside of Capacity at IBT (CAM article 8)

Both NGG and IUK will apply the rules in CAM article 8 regarding setting aside capacity for shorter-term auctions. 20% of technical capacity will be set aside and not be offered in the annual yearly auctions beyond 5 years out; of this 20%, half will be retained for the annual quarterly auctions (i.e. 10% of the technical capacity will be retained for the annual quarterly auctions). This is illustrated in the diagram below and in the chart in Appendix 1.

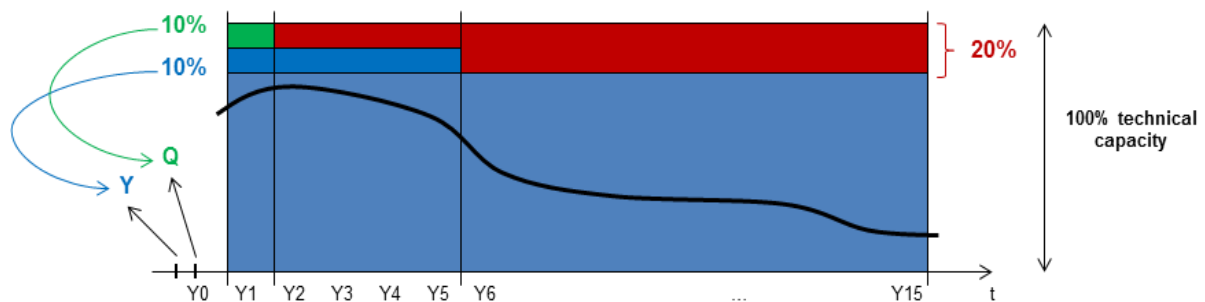


Figure 7: Short-term set aside of Capacity at IBT

3.4.6 Incremental Capacity at IBT (CAM article 8 (8))

If new incremental capacity is requested at the IBT IP prior to new incremental capacity rules that may come into force via future regulation, then the capacity will be offered as a bundled product via a market-based mechanism. 10% of the technical capacity shall be set aside and offered for the first time in the annual quarterly auctions as per CAM article 8(8).

3.4.7 ZIGMA & NGG Bundled capacity at IBT (CAM article 19)

NGG and IUK will jointly offer bundled capacity at IBT in so far as there is available firm capacity on both sides of the IBT IP. The bundled capacity will be offered as standard capacity products on the PRISMA auction platform in accordance with the allocation mechanism defined in CAM. The purchaser must be signed up as an IAA Shipper with IUK and sign the UNC (and have a valid Shipper Licence) to be able to purchase capacity from NGG. The terms and conditions of each TSO's

contracts apply to the relevant capacity purchased. A Shipper will only be able to purchase bundled capacity if it satisfies the credit requirements in both IUK's²² and NGG's²³ contracts.

3.4.7.1 **Auction Price Steps and Revenue Splitting (CAM article 17(10) & 26)**²⁴

Capacity will be offered via PRISMA which allows the CAM requirements regarding auction mechanisms to be met.

The reserve prices for each part of the bundle will be determined independently according to the processes applying to NGG and IUK.

NGG and IUK will each put in place a methodology for determining the large and small price steps to be used in the auction of each bundled capacity product. The price steps will be agreed from time to time by NGG and IUK following discussions and building on best-practice seen in auctions to date. These will be published on PRISMA in advance of the relevant auction.

NGG and IUK will agree from time to time how any premium²⁵ above the reserve price received from the auction of any bundled product will be split between themselves. CAM article 26(5) foresees that if no agreement is concluded before the auction then the auction premium from bundled capacity shall be attributed to the TSOs in equal proportions. The relevant reserve price plus proportion of the auction premium will then be invoiced separately by NGG and IUK under their respective contracts.

3.4.7.2 **Bundling Existing Contracts (CAM article 20)**

In accordance with CAM article 20, Shippers who are party to existing transport contracts should aim to reach an agreement on the bundling of the capacity.

From 1 November 2015 a Shipper holding NGG capacity at IBT (purchased before the introduction of CAM and subject to the implementation of any revised arrangements following the Bacton open letter), can arrange to bundle each of its capacity contracts across the IP as long as it holds matching ZIGMA capacity at IBT under the IAA contract on the other side.

- a) NGG and IUK will participate in discussions regarding the bundling arrangement if the Shipper(s) invites them to
- b) The Shipper(s) then has to inform IUK and NGG of its intention to bundle these capacities
- c) The Shipper(s) also needs to confirm that the relevant capacity holding to be bundled is not part of a future trade
- d) NGG and IUK will treat the relevant capacity as bundled capacity and single nominations can be sent against this capacity
- e) The capacity must remain bundled if it is then subsequently traded on the secondary market
- f) The Shipper, NGG and IUK will jointly inform Ofgem and CREG of the bundling arrangement

²² The credit requirements in IUK's IAA will be reviewed to ensure that they remain suitable, taking into consideration the longer-term nature of the capacity products being sold going forward.

²³ In accordance with UNC (sections B & V)

²⁴ Also, subject to (in parts) the forthcoming Tariff Network Code

²⁵ The difference between reserve and closing price of an auction

To help a Shipper who does not hold matching NGG and ZIGMA capacity at IBT to find another party that would assign the complementary unbundled capacities, IUK has an online bulletin board facility where Shippers can advertise their search to buy matching capacity²⁶.

3.5 Nominations and Exchange of Information (CAM article 5(1) & 7)

NGG and IUK will exchange nomination, renomination, matching and confirmation information at IBT on a regular basis. NGG and IUK are currently working together to coordinate the implementation of compatible electronic online communications compliant with the Interoperability Network Code and agree principles on how this data is treated (CAM article 5(1)).

3.5.1 Single Nomination (CAM article 19(7))

A Shipper who has purchased a bundled product for NGG and IUK capacity will be able to submit a single nomination to cover their nomination of flows on both sides of the bundle. The nomination will be submitted to either NGG or IUK (to be confirmed). The nomination will then be processed and information exchanged between both TSOs resulting in a confirmed nomination in both NGG and IUK's systems. It is the intention that single nominations will also be accepted for unbundled capacity as long as the counterparty on both sides of the IP is the same entity. This is subject to further detailed discussion between IUK and NGG.

3.5.2 Double-sided Nominations

If the counterparty is not the same on both sides of the IP then both parties need to submit nomination matching data to the relevant TSO regarding their capacity. This will then be processed and information exchanged between both TSOs resulting in a confirmed nomination in both NGG and IUK's systems. Shippers can also continue to submit double-sided nominations for bundled capacity as well as unbundled capacity if they wish.

3.5.3 Gas Allocation

The allocation processes will be as defined in IUK and NGG's contracts²⁷ and each TSO will provide allocation statements related to their capacity. IUK and NGG are actively working to agree an Operational Balancing Agreement (OBA) that would mean allocation on both sides of the IP would normally be deemed to equal nominations ("allocate as nominate").

3.6 Application of CMP on Bundled Products at IBT

NGG and IUK have both developed rules for implementing Congestion Management Procedures²⁸ (CMP), which can be found on their respective websites^{29,30,31}. Details of how these rules will be applied to bundled capacity are outlined below.

²⁶ All capacity bundled in this manner will be subject to the applicable terms of the IAA or UNC (as the case may be)

²⁷ To be set out in the IA between NGG and IUK, in accordance with the Interoperability Network Code

²⁸ The Congestion Management Procedures aim to facilitate cross-border trade by preventing the hoarding of capacity. They require Transmission System Operators to optimise and maximise the use of their systems' capacity and outline measures to be implemented in the event of "contractual congestion". <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:231:0016:0020:en:PDF>

²⁹ http://www.gasgovernance.co.uk/sites/default/files/TPD%20Section%20B%20-%20System%20Use%20&%20Capacity_28.pdf

³⁰ <http://www.gasgovernance.co.uk/0449>

3.6.1 OS Capacity and Implications of Buy-back on a Bundled Product

Both NGG and IUK will independently apply their criteria to determine if OS Capacity will be made available at any time. This quantity of OS Capacity (if any) will be included in the amount of available firm capacity that NGG or IUK post on PRISMA. PRISMA will offer this capacity in the relevant auction as either bundled or unbundled capacity as described in figure 6.

IUK and NGG³² will independently at either TSO's sole discretion, consider if a Buy-back process is required if nominations exceed, or are predicted to exceed, physical capability and capacity on their side of the IBT IP. Either IUK or NGG, as applicable, would then publish their requirement to buy back and select capacity offers from Shippers in their physical system, based on each TSO's rules. When a requirement for Buy-back is announced by either TSO it only applies to the relevant TSO's capacity and does not cause a Buy-back of sold firm capacity to be triggered on the other TSO's capacity. NGG's Buy-back arrangements are contained within the UNC and NTS Licence. IUK's Buy-back arrangements were the subject of a previous consultation launched on 30 April 2013³³. IUK is in the process of seeking approval for the arrangements from Ofgem and CREG.

3.6.2 Surrender of a Bundled Product

In accordance with the relevant CMP rules on either side of the IP, a Shipper can offer to surrender a bundled standard capacity product.

The Shipper will inform NGG that it wishes to surrender capacity in NGG's system in accordance with the surrender rules defined in the UNC. Separately it will also inform IUK that it wishes to surrender capacity in IUK's system in accordance with the surrender rules defined in the IAA. NGG and IUK will each increase the amount of available capacity they offer for auction in PRISMA by the amount surrendered. When PRISMA compares the two quantities this means the amount of capacity that can be offered as bundled capacity in the relevant auction will be increased.

Following closure of the auction, PRISMA will inform NGG and IUK separately how much capacity has been sold in each of their systems. NGG and IUK will each individually apply the priority rules in their systems to determine which capacity has been reallocated. The first capacity to be sold will be any unsold technical capacity then, following this, any voluntary surrendered capacity will be reallocated. For cases where several Shippers surrender their capacity, the priority rule will be "first surrendered first reallocated rule" (timestamp). The diagrams in Appendix 2 show examples of how the reallocation depends on the situation on each TSO's system and could result in a Shipper's bundled capacity becoming unbundled.

If the capacity is not reallocated in that specific auction, then the surrender process is finished and the capacity will not be automatically entered into a further auction. If the Shipper wishes to surrender its capacity for inclusion in a further auction, it can then do so.

³¹ <http://www.interconnector.com/about-us/what-we-have-to-say/consultations>

³² Subject to the Licence obligation and incentive scheme and its System Management Principles Statement which can be found at <http://www2.nationalgrid.com/UK/Industry-information/Business-compliance/Procurement-and-System-Management-Documents/>

³³ http://www.interconnector.com/media/63031/130430_iuk_consultation_on_cmp_implementation.pdf

3.6.3 Firm Day-Ahead UIOLI

This mechanism contained within the CMP Regulation is not required at this stage.

3.6.4 Long-term Use-It-Or-Lose-It (LT UIOLI)

NGG and IUK will both individually apply the LT UIOLI rules they have developed to implement CMP to assess the utilisation levels of any capacity held in their system regardless of whether it is bundled or not. If the LT UIOLI mechanism is triggered in the Interconnector Pipeline and if IUK's calculations show that a Shipper's capacity is under-utilised after applying the LT UIOLI criteria and obtaining justification as to why there has been under-utilisation, then the information will be passed to Ofgem and CREG for them to decide whether the capacity should be withdrawn. Ofgem and CREG can then instruct IUK to remove such capacity, if required. IUK will increase the amount of available capacity offered for auction in PRISMA by the amount withdrawn. Following closure of the auction, PRISMA will inform IUK how much capacity has been sold. IUK will apply priority rules to determine which capacity has been reallocated. The first capacity to be sold will be any unsold technical capacity then following this any voluntary surrendered capacity will be reallocated and after this withdrawn capacity may be reallocated.

Similarly, if the LT UIOLI mechanism is triggered in NGG's system, and if NGG's calculations show that a Shipper's capacity is under-utilised after applying the LT UIOLI criteria and obtaining justification as to why there has been under-utilisation, then the information will be passed to Ofgem for them to decide whether the capacity should be withdrawn. Ofgem can then instruct NGG to remove such capacity, if required. NGG will increase the amount of available capacity offered for auction in PRISMA by the amount withdrawn. Following closure of the auction, PRISMA will inform NGG how much capacity has been sold. NGG will apply priority rules to determine which capacity has been reallocated. The first capacity to be sold will be any unsold technical capacity then following this any voluntary surrendered capacity will be reallocated and after this withdrawn capacity may be reallocated.

This may result in bundled capacity becoming unbundled across the IP as described in Appendix 2.

4. OKS Interconnection Point³⁴

4.1 Summary

At the OKS IP, all available capacity from 1 November 2015 will be offered as a bundled product from ZTP to Zeebrugge Beach or from Zeebrugge Beach to ZTP, where possible. Shippers will bid for bundled capacity on the PRISMA auction platform which implements the auction algorithms defined in CAM. Following a successful bid for bundled capacity, the capacity can be used according to the contract in force with Fluxys Belgium. Fluxys Belgium intends to enable a single nomination to nominate the flows in both entry-exit systems (exit from one system and entry to the other system) for a bundled product.

Unmatched capacity on either side of the OKS IP will be offered as an unbundled product.

In accordance with CAM article 20, Shippers who are party to existing transport contracts should aim to reach an agreement on the bundling of the capacity.

4.2 Co-ordination Across the Interconnection Point

There are several areas defined in CAM where coordination is required across the IP:

4.2.1 Co-ordination of Maintenance (CAM article 4 & 7(2))

As Fluxys Belgium is party to the contracts on both sides of the OKS IP, the respective maintenance plans on each side will be coordinated in order to minimise the impact on potential gas flows and capacity at the OKS IP. Fluxys Belgium also publishes maintenance information specific to IPs, consistent with the requirement from European Regulation (EC) 715/2009, on its electronic data platform³⁵.

4.2.2 Technical Capacity: Capacity Calculation and Maximisation (CAM article 6)

Fluxys Belgium will review the technical capacity at the OKS IP on an annual basis. In addition, consideration will be given, potentially on a daily basis, to possibly increasing the amount of capacity offered. Fluxys Belgium publishes its Technical and its Available Capacity on its electronic data platform³⁶.

4.2.3 TSO to TSO On-going Communication Regarding Available Capacity

On a day-to-day basis, PRISMA will ensure that the maximum amount of bundled capacity is offered based on the amount of available capacity notified by Fluxys Belgium either side of the OKS IP, any unmatched capacity on either side will be offered as unbundled. In addition, on a yearly basis Fluxys Belgium will review the amount and duration of capacity booked under any existing contracts which result in unbundled capacity on either side of the OKS IP.

³⁴ The name OKS is a working name. The commercial name will be confirmed by Fluxys Belgium

³⁵ <https://gasdata.fluxys.com/sdp/Pages/Reports/InterconnectionPointMaintenance.aspx>

³⁶ <https://gasdata.fluxys.com/sdp/Pages/Reports/CapacitiesFlows.aspx>

4.3 Allocation Methodology for Capacity (CAM article 8, 11, 12, 13, 14, 15, 16, 17, 18)

Allocation of capacity will be according to the auction rules defined in the CAM Network Code articles 11 to 18, these rules will be applied by the PRISMA auction platform where Fluxys Belgium will post available capacity either side of the OKS IP.

The availability of the relevant standard capacity products, if applicable, will be communicated to the market by Fluxys Belgium via PRISMA in accordance with the CAM rules in articles 11 to 15:

- One month before the annual yearly capacity auction, such amount calculated in accordance with CAM article 11(6)
- Two weeks before the annual quarterly capacity auctions, such amount calculated in accordance with CAM article 12(6)
- One week before the rolling monthly capacity auctions, such amount calculated in accordance with CAM article 13(5)
- At the time the bidding round opens (15:30 UTC (winter time) or 14:30 UTC (daylight saving)) for rolling day ahead capacity auctions, such amount calculated in accordance with CAM article 14(7)
- After closure of the last day-ahead auction for within-day capacity auctions (apart from Interruptible Capacity), such amount calculated in accordance with CAM article 15(8)

4.4 Capacity Offered (CAM article 9, 10 & 21)

CAM defines the standard capacity products that should be offered at auction: yearly, quarterly, monthly, daily and within-day. These cover Firm Capacity and Interruptible Capacity. In addition, CAM states that all Firm Capacity shall be offered as bundled capacity in so far as there is available firm capacity on both sides of the IP. This section details the capacity that will be offered at the OKS IP in accordance with CAM rules. The capacity offered will be expressed in energy units per unit of time, kWh/h.

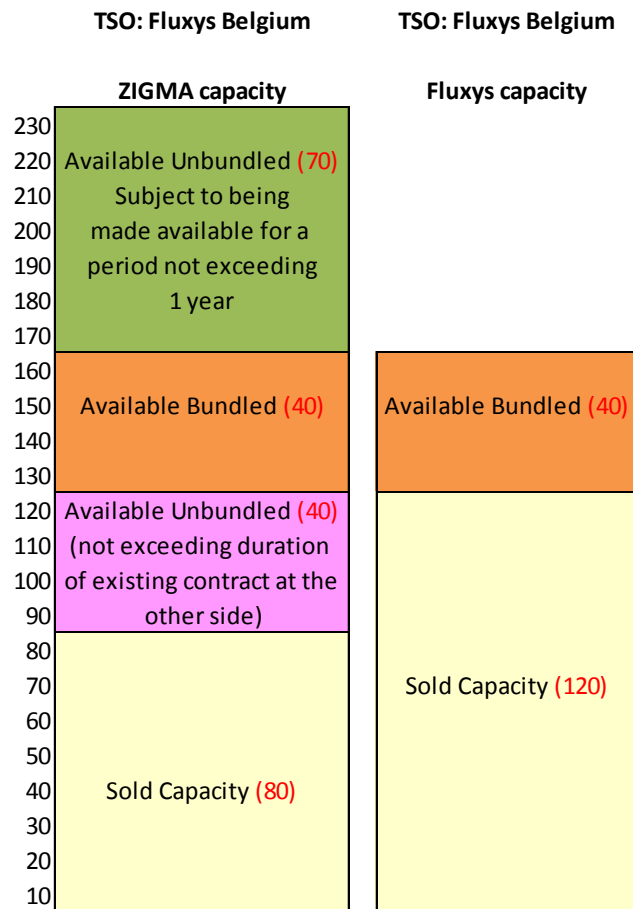


Figure 8: Bundle of capacities

Figure 8 shows how capacity will be bundled. In this example, on the OKS IP, Fluxys Belgium has already sold more Fluxys capacity each year than ZIGMA capacity for the next few years (120 units compared to 80 units, shown in yellow above). Fluxys Belgium will therefore sell ZIGMA capacity at OKS up to the level of Fluxys capacity on an unbundled basis for the duration of the contracted capacity (shown in pink). Any matching capacity that is available on both sides is sold as a bundled product (40 units shown in orange above). In addition capacity that is available but unmatched due to a technical capacity being higher at either side of the IP, will be sold on an unbundled basis (70 units shown in green above) but only for a maximum period of one year (CAM article 19(5)(b)).

4.4.1 ZIGMA and Fluxys Bundling and Capacity Availability at OKS: Firm

Fluxys Belgium intends to offer bundled capacities between ZTP and Zeebrugge Beach in the annual yearly capacity auctions from March 2016. Where capacity has been sold on one side of the OKS IP, the capacity on the other side of the OKS IP will be offered on an unbundled basis in accordance with CAM article 19 (5 & 6). The purchaser must be signed up to the FSTA.

4.4.2 ZIGMA and Fluxys Capacity Availability at OKS: IC (CAM article 21, 22, 23, 24, 25)

Fluxys Belgium will at least offer a daily capacity product for interruptible capacity in both directions on either side of the OKS IP where firm capacity has been offered and fully allocated day-ahead. This

will be offered via auction on PRISMA on an unbundled basis according to the timescales detailed within the auction calendar published by ENTSOG.

The minimum lead time that will be applied will be the default minimum interruption lead time referred to in CAM article 22 which for a given gas hour, which shall be 45 minutes after the start of the renomination cycle for that gas hour.

If Fluxys Belgium initiates an interruption it will apply the interruption based on contractual timestamps. This means that an interruptible capacity contract coming into force earlier shall prevail over a contract coming into force later and if two or more contracts are ranked in the same priority order and they are not required to be fully interrupted then a pro-rata reduction will apply to these contracts.

4.4.3 Short-term Set Aside of Capacity at OKS (CAM article 8)

Fluxys Belgium will apply the rules in CAM article 8 regarding setting aside capacity for shorter-term auctions. 20% of technical capacity will be set aside and not be offered in the annual yearly auctions beyond 5 years out; of this 20%, half will be retained for the annual quarterly auctions (i.e. 10% of the technical capacity will be retained for the annual quarterly auctions). This can be seen in the diagram below and in the chart in Appendix 1.

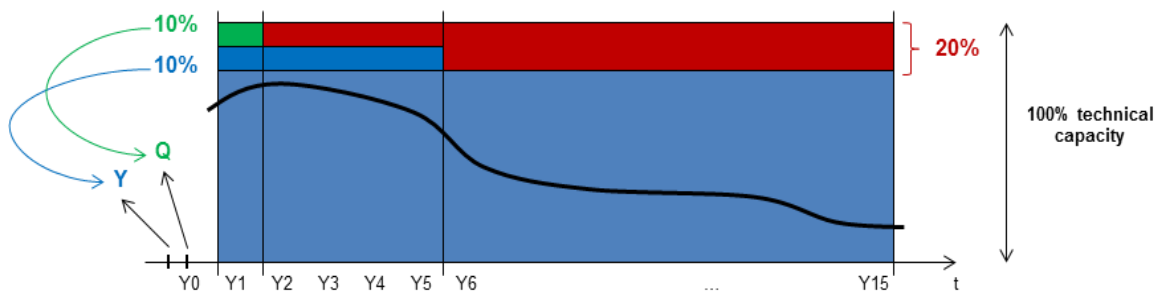


Figure 9: Short-term set aside of capacity at OKS

4.4.3.1 Auction price steps and revenue splitting (CAM article 17(10) & 26)

Capacity will be offered via PRISMA which allows the CAM requirements on auction mechanism to be met.

The reserve price for each part of the bundle will be determined independently according to the processes applying to either side of the OKS IP.

The large and small price steps to be used in the auction will be detailed by Fluxys Belgium building on best-practice seen in auctions to date. These will be published on PRISMA in advance of the relevant auction.

Fluxys Belgium will decide from time to time how the premium above the reserve price received from the auction of any product will be split between ZIGMA Capacity and Fluxys Capacity. The relevant reserve price plus proportion of the auction premium will then be invoiced by Fluxys Belgium under the relevant contracts.

4.4.3.2 **Bundling Existing Contracts (CAM article 20)**

In accordance with CAM article 20, Shippers who are party to existing transport contracts should aim to reach an agreement on the bundling of the capacity.

A Shipper holding ZIGMA capacity at the OKS IP can arrange to bundle each of its capacity contracts across the IP as long as it holds matching OKS capacity under Fluxys Belgium's STA contract on the other side.

- a. Fluxys Belgium will participate in discussions regarding the bundling arrangement if the Shipper(s) invites them to
- b. The Shipper(s) has to then inform Fluxys Belgium of its intention to bundle these capacities
- c. The Shipper(s) also need to confirm that the relevant capacity holding to be bundled is not part of a future trade
- d. Fluxys Belgium will treat the relevant capacity as bundled capacity and single nominations can be sent against this capacity
- e. The capacity must remain bundled if it is then subsequently traded on the secondary market
- f. The Shipper and Fluxys Belgium will jointly inform CREG of the bundling arrangement

4.5 **Nominations and Exchange of Information (CAM article 5(1) & 7)**

4.5.1 **Single Nomination (CAM article 19(7))**

A Shipper who has purchased a bundled product for ZIGMA and Fluxys Belgium capacity will be able to submit a single nomination to cover their nomination of flows on both sides of the bundle. The nomination will be processed by Fluxys Belgium and result in a confirmed nomination for both the ZIGMA and the Fluxys part. It is the intention that single nominations will also be accepted for unbundled capacity as long as the counterparty on both sides of the IP is the same entity. This is currently being further analysed.

4.5.2 **Double-sided Nominations**

If the counterparty is not the same on both sides of the IP then both parties need to submit nomination matching data to the relevant TSO regarding their capacity. This will then be processed and information exchanged will result in a confirmed nomination at each side of the IP. Shippers can also continue to submit double-sided nominations for bundled capacity as well as unbundled capacity if they wish.

4.5.3 **Gas Allocation**

The allocation process will be defined in Fluxys Belgium's contract, and allocation data will be provided related to the capacity. Allocation on both sides of OKS will be deemed to equal confirmed nominations.

4.6 Application of CMP on Bundled Products at OKS

Fluxys Belgium has developed rules for implementing Congestion Management Procedures (CMP)³⁷, which can be found in its FSTA and Access Code for Transmission as published on its website³⁸. Details of how these rules will be applied to bundled capacity are outlined below.

4.6.1 OS Capacity and Implications of BB

Fluxys Belgium will independently apply the criteria to determine if OS Capacity will be made available at either side of the IP at any time. This quantity of OS Capacity (if any) will be included in the amount of firm ZIGMA and Fluxys capacity available that Fluxys Belgium posts on PRISMA. PRISMA will offer this capacity in the relevant auction as either bundled or unbundled capacity as described in Figure 8.

When a requirement for Buy-back is announced by Fluxys Belgium on either side of the IP (ZIGMA or Fluxys Belgium) it only applies to the relevant side of the IP and does not cause Buy-back to be triggered on the other side of the IP.

Fluxys Belgium's Buy-back criteria can be found in its ACT.

4.6.2 Surrender of a Bundled Product

In accordance with CMP, a Shipper can surrender a capacity product.

The Shipper will inform Fluxys Belgium that it wishes to surrender ZIGMA capacity and Fluxys capacity at OKS in accordance with the surrender rules defined in the ACT. Fluxys Belgium will increase the available capacity it offers for auction in PRISMA for both the ZIGMA capacity and the Fluxys capacity by the amount surrendered. When PRISMA compares the two quantities this means the amount of capacity that can be offered as bundled capacity in the relevant auction will be increased.

Following closure of the auction, PRISMA will inform Fluxys Belgium how much ZIGMA capacity and how much Fluxys capacity has been sold in each of their systems. Fluxys Belgium will apply the priority rules for each entry-exit system to determine which ZIGMA capacity and which Fluxys capacity has been reallocated. The first capacity to be sold will be any unsold technical capacity then following this any voluntary surrendered capacity will be reallocated. For cases where several Shippers surrender their capacity, the priority rule will be "first surrendered first reallocated rule" (timestamp). The diagrams in Appendix 2 show examples of how the reallocation depends on the situation on each entry-exit system and could result in a Shipper's bundled capacity becoming unbundled.

³⁷ The Congestion Management Procedures aim to facilitate cross-border trade by preventing the hoarding of capacity. They require Transmission System Operators to optimise and maximise the use of their systems' capacity and outline measures to be implemented in the event of "contractual congestion". <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:231:0016:0020:en:PDF>

³⁸ Attachment E of the following document relates to CMP: http://www.fluxys.com/belgium/en/Services/Transmission/Contract/~media/Files/Services/Transmission/TermsConditions/version1/Fluxys_AccessCodeTransmission_EN.ashx

If the capacity is not reallocated in that specific auction, then the surrender process is finished and the capacity will not be automatically entered into a further auction. If the Shipper wishes to surrender its capacity for inclusion in a further auction, it can then do so.

4.6.3 Firm Day-Ahead UIOLI

This mechanism contained within the CMP Regulation is not required at this stage.

4.6.4 Long-term Use-It-Or-Lose-It (LT UIOLI)

Fluxys Belgium will apply the rules it has developed to implement CMP to assess the utilisation levels of any capacity held in their system regardless of whether it is bundled or not. If the LT UIOLI mechanism is triggered in the ZIGMA Entry-Exit zone, and if Fluxys Belgium's calculations show that a Shipper's ZIGMA capacity is under-utilised after applying the LT UIOLI criteria and justification, then the information will be passed to CREG to decide whether the ZIGMA capacity should be withdrawn. Similarly if the LT UIOLI mechanism is triggered in Fluxys entry-exit system and if Fluxys Belgium's calculations show that a Shipper's Fluxys capacity is under-utilised after applying the LT UIOLI criteria and justification then the information will be passed to CREG to make a decision as to whether the Fluxys capacity should be withdrawn. This may result in bundled capacity becoming unbundled across the IP.

5. ZZ1 Interconnection Point

At the ZZ1 IP, the standard CAM rules will apply. Where possible, capacities will be bundled, linking ZIGMA and TTF. Following a successful bid for bundled capacity, the capacity can be used according to the contracts in force with Fluxys Belgium and with GTS.

6. ZPT, LNG, ZZ2 and SILK

Fluxys Belgium will offer ZIGMA Entry Capacity at ZPT, ZLNG and ZZ2 (backhaul) and to offer ZIGMA Exit Capacity at ZZ2, ZLNG (backhaul) and ZPT (backhaul). The processes for selling these capacities are not subject to the CAM Network Code. The default allocation rule applied by Fluxys Belgium for such capacities will be first committed first served. Capacities sold at these points may influence the availability of ZIGMA entry and/or exit capacity at the OKS IP.

IUK will offer ZIGMA entry capacity at SILK from 1 October 2018. The process for selling this capacity is not subject to the CAM Network Code and will be the same as for Fluxys Belgium's non-CAM points described above. ZIGMA entry capacity sold at SILK will reduce the availability of ZIGMA entry capacity at the IBT IP in subsequent auctions.

7. Quality Compliance Service

Under ZIGMA, the gas quality specifications in the NGG, IUK and Fluxys systems will remain unchanged with network users responsible for the quality of the gas they deliver to the networks. Similar to today, Fluxys Belgium will continue to offer the Quality Compliancy Service, allowing for network users, under certain circumstances, to enter non-UK compliant gas in the system, while making sure to exit compliant gas to UK (via IZT).

The Quality Compliancy Service works as follows:

- The natural gas entering ZIGMA from a Fluxys Belgium point has to be compliant with the IUK requirements
- The Natural Gas that is already in ZIGMA (e.g. Natural Gas in a ZIGMA Balancing Account or Natural Gas that is traded on Zeebrugge Beach) will be considered to be compliant with the IUK requirements
- Non UK-compliant gas may be accepted by Fluxys Belgium on those entry points. In this case, Fluxys Belgium will make the natural gas entering ZIGMA compliant with the IUK requirements on a reasonable endeavour basis, by means of operational swaps
- In case such operational swaps would be insufficient to make the natural gas UK compliant, Fluxys Belgium will start the Nitrogen Ballasting plant, and will charge the Nitrogen Ballasting Fee to the causing ZIGMA Shippers, if applicable³⁹
- As last resort, Fluxys Belgium has the right to interrupt causing ZIGMA Shippers entering natural gas in ZIGMA at Fluxys Belgium points

In case of Nitrogen Ballasting or in case of interruption for quality reasons, causing ZIGMA Shippers will be identified as follows:

- For each hour, the net entry for a ZIGMA Shipper is calculated as the delta between ZIGMA exit and ZIGMA entry on Fluxys Belgium points. In case a ZIGMA Shipper's ZIGMA exit is higher than their ZIGMA entry for these points, the net entry for the ZIGMA Shipper is considered to be zero
- For each hour, the part of net entry for a ZIGMA Shipper that is compliant with the UK Wobbe requirements is determined⁴⁰ ("Compliant Entry"). This part will be exempted from any Nitrogen Ballasting Fee and from any interruption
- If Net Entry for ZIGMA Shipper is higher than their Compliant Entry, the ZIGMA Shipper will be considered as a causing ZIGMA Shipper for the remaining part

³⁹ Cfr. Fluxys Belgium's currently published tariffs: note that such fee is approved, but currently not applied. CREG and Fluxys Belgium can decide to activate the tariff in the course of the regulatory period on the basis of the variable costs generated by the usage of the Nitrogen Blending plant.

⁴⁰ The Quality for OKS is calculated as a weighted average Quality of all Fluxys Belgium points with a physical incoming flow towards the ZTP for the considered hour.

APPENDIX 1: Timeline of auctions and quantities

AUCTIONS HELD:	= capacity offered in auction		= no capacity available to offer in auction																																					
	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18			
Annual Yearly Auction																																								
Annual Quarterly Auction																																								
Rolling Monthly Auction																																								
Rolling Day Ahead Auction																																								
Within Day Auction																																								
CAPACITY OFFERED:	Note these are the maximum capacities that could be offered, the amount will be reduced if capacity is already sold in a previous auction																																							
Annual Yearly Auction	07/03/2016										06/03/2017										05/03/2018																			
	90% of technical capacity for GasYear 2018/19										90% GasYear 2018/19										90% GasYear 2018/19																			
	90% GasYear 2019/20										90% GasYear 2019/20										90% GasYear 2019/20																			
	90% GasYear 2020/21										90% GasYear 2020/21										90% GasYear 2020/21																			
	80% GasYear 2021/22 -GasYear 2032/33										90% GasYear 2021/22										90% GasYear 2021/22																			
											80% GasYear 2022/23 -GasYear 2033/34										90% GasYear 2022/23																			
																					80% GasYear 2023/24 -GasYear 2034/35																			
Annual Quarterly Auction	(Auctions could be held during this time if quarterly capacity is surrendered by STA Shippers or made available through LT UIOLI)																				04/06/2018																			
																					100% of technical capacity for Q1, Q2, Q3, Q4 2018/19																			
Rolling Monthly Auction	(Auctions could be held during this time if monthly capacity is surrendered by STA Shippers or made available through LT UIOLI)																				17/09/2018			15/10/2018			19/11/2018													
																					100% Oct 2018			100% Nov 2018			100% Dec 2018													
Rolling Day Ahead Auction	01/11/2015			02/11/2015			03/11/2015			(CMP capacity refers to OS, LT UIOLI or surrendered capacity made available under the IAA)																														
	100% CMP capacity for 2/11/15			100% CMP capacity for 3/11/15			100% CMP capacity for 4/11/15																																	
Within Day Auction	(capacity offered if applicable)																																							

APPENDIX 2: Examples of bundled capacity becoming unbundled



Figure 10: Capacities uploaded to PRISMA by each TSO to generate an auction

TSO A has sold 40 units of bundled capacity (i.e. capacity that is bundled with capacity from TSO B) to Shipper 1, and has 40 units of unbundled primary capacity.

TSO B has only sold 40 units of bundled capacity to Shipper 1.

Shipper 1 notifies both TSO A and TSO B that it would like to surrender its capacity.

TSO A notifies PRISMA that it has 80 units available for auction. TSO B notifies PRISMA that it has 40 units of capacity available for auction.



Figure 11: Results from auctions provided by PRISMA to each TSO and reallocated by each TSO

If 30 units of bundled capacity is sold then TSO A will meet this from its primary capacity and notify Shipper 1 that 0 of its units have been reallocated.

TSO B will notify Shipper 1 that 30 units of his capacity in TSO B's system have been reallocated. Shipper 1 now has 30 units of unbundled capacity and 10 units of bundled capacity in TSO A's system.

APPENDIX 3: Contracts needed for each type of ZIGMA Shipper

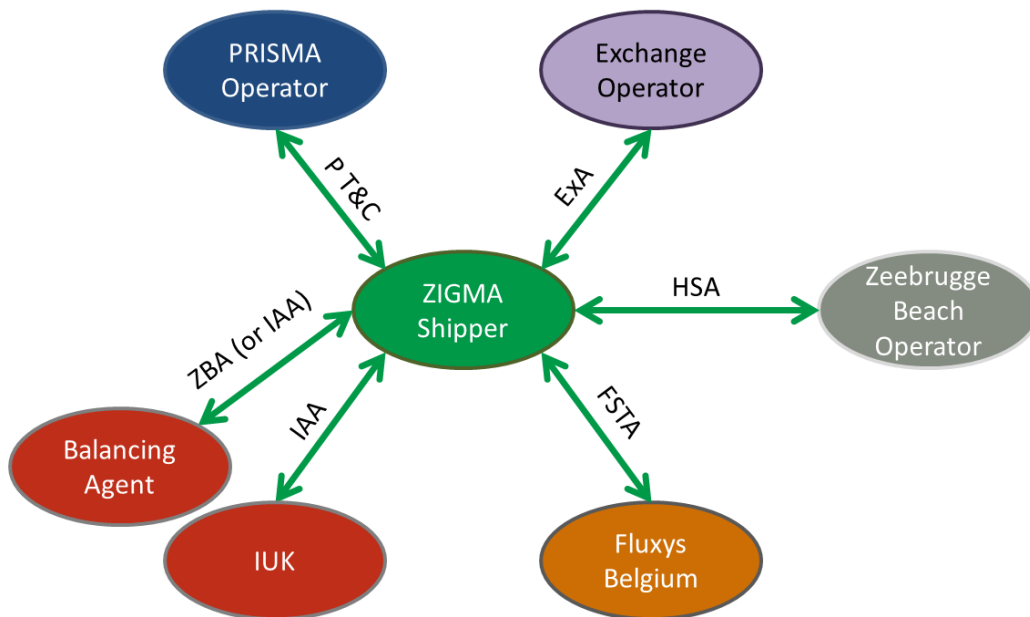


Figure 12: Contracts within ZIGMA

(a) Contracts needed to own capacity and to trade in ZIGMA

A party that takes the role of both Shipper and Trader in ZIGMA must sign an IAA or an FSTA (depending on which IPs the Shipper will be active), a ZBA with the Balancing Agent and an HSA with the Zeebrugge Beach Operator.

After signing these contracts, the ZIGMA Shipper can then perform the following activities:

- Under the IAA: book capacities at IBT and/or SILK and make gas flow nominations
- Under the FSTA: book capacities at OKS, ZZ1, ZZ2, ZLNG and/or ZPT and make gas flow nominations
- Under the ZBA: use flexibility services in ZIGMA (the ZBA may be incorporated within the IAA)
- Under the HSA: trade on Zeebrugge Beach

This ZIGMA Shipper may also choose to sign the PT&C and/or the ExA, allowing them to perform the following activities:

- Under the PT&C: book capacities via the PRISMA Capacity Platform
- Under the ExA: access the anonymous trading exchange for Zeebrugge Beach

(b) Contracts needed to own capacity in ZIGMA

A party that takes the role of Shipper but not Trader in ZIGMA must sign an IAA or an FSTA (depending on the point(s) on which he wants to be active) and a ZBA with the Balancing Agent.

After signing these contracts, the ZIGMA Shipper can then perform the following activities:

- Under the IAA: book capacities at IBT and/or SILK and make gas flow nominations
- Under the FSTA: book capacities at OKS, ZZ1, ZZ2, ZLNG and/or ZPT and make gas flow nominations
- Under the ZBA: use flexibility services in ZIGMA (the ZBA may be incorporated within the IAA)

This ZIGMA Shipper may also choose to sign the PT&C in order to book capacities via the PRISMA Capacity Platform.

(c) Contracts needed to trade in ZIGMA

A party trading on Zeebrugge Beach but with no capacity must sign an HSA and a ZBA.

After signing these contracts, the ZIGMA Shipper can then perform the following activities:

- Under the HSA: trade on Zeebrugge Beach
- Under the ZBA: use flexibility services in ZIGMA (the ZBA may be incorporated within the IAA)

This ZIGMA Shipper may also choose to sign the ExA in order to access the anonymous trading exchange.

APPENDIX 4: Balancing Principles

ZIGMA Balancing Rules

In order to reliably and efficiently operate the ZIGMA zone, ZIGMA Shippers are requested to balance inputs and outputs of natural gas by the end of each gas day, as indicated by the online hourly allocation data supplied electronically by the Balancing Agent.

The ZIGMA Shipper balancing position shows, for each ZIGMA Shipper, and each hour (h), the difference between the sum of all entry allocations and the sum of all exit allocations for all preceding hours for that gas day, taking into account the net confirmed title transfers, provided by Zeebrugge Beach⁴¹ operator. The market balancing position shows the difference between the sum of all inputs and the sum of all outputs for all preceding hours for that gas day for all ZIGMA Shippers. The market balancing position is therefore equal to the sum of all ZIGMA Shipper individual balancing positions.

Both the individual ZIGMA Shipper balancing position and the market balancing position are updated on an hourly basis indicating the values for the past hours of the gas day and an indicative forecast of positions for the remaining hours of the gas day.

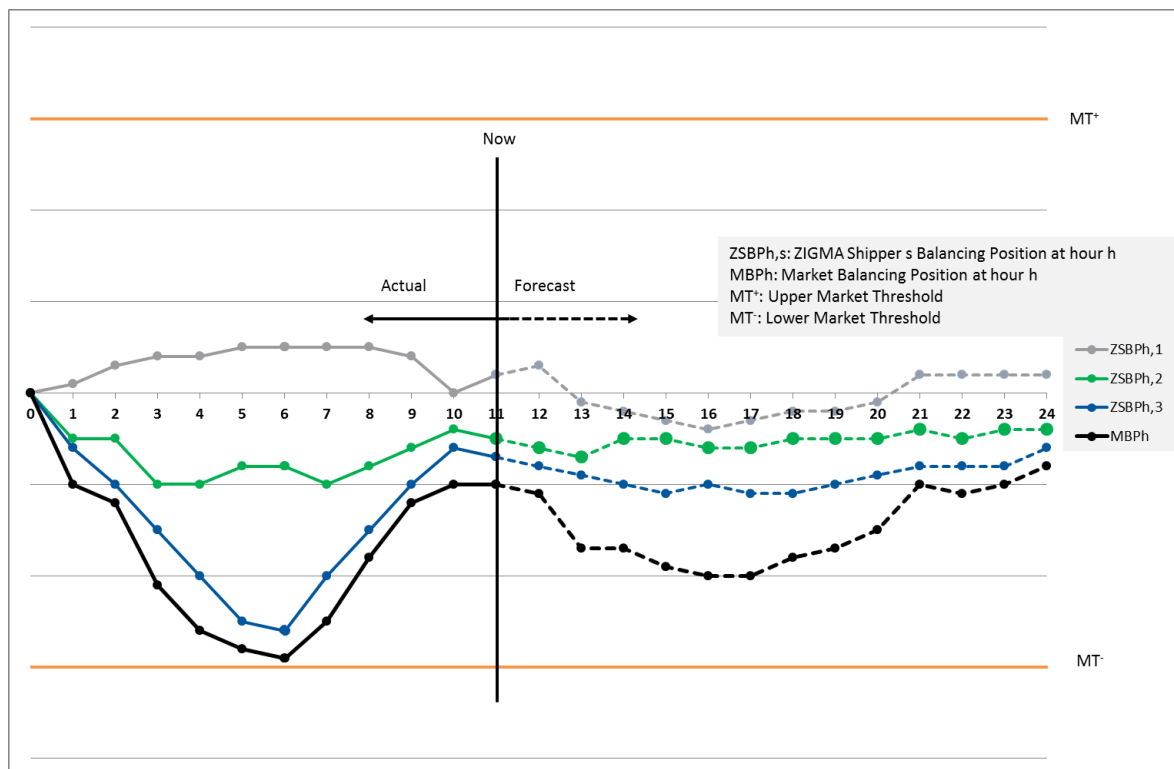


Figure 13: ZIGMA Market and Users Balancing Positions

⁴¹ Trade on Zeebrugge Beach is virtual: each transaction is independent from each other and short/long selling is possible. A trade consists of an exchange of title on a certain quantity of gas. It can be considered as a pair of nominations (exit quantity for the seller and entry quantity for the buyer), that have to be matched. Trades can be accounted in the balancing position of both buyers and sellers like regular allocations. (The balancing position is impacted by the trade when it is not balanced. The gas is then taken/supplied from/to the balancing position of the ZIGMA Shipper.)

The Balancing Agent will not intervene during the day, as long as the market balancing position is within the pre-defined Market Threshold.

If the market balancing position exceeds either of the Market Thresholds, the market excess or market shortfall is instantly settled proportionally in respect of the ZIGMA Shippers causing that excess or shortfall via their ZIGMA Shipper balancing position. The Balancing Agent will initiate a sell or buy transaction on the commodity market for the quantity of the market excess or shortfall. This transaction, once concluded, will set the reference price used at that time for refunding or charging ZIGMA Shippers who caused the market imbalance, taking incentives into account.

At the end of the gas day, each ZIGMA Shipper's balancing position is reset to zero by a settlement in cash taking an incentive into account.

Such a system necessarily involves the de-coupling of the physical linepack position and the market balancing position, as the gas from the transaction on the market will take some time to be delivered. The information provision to Shippers, and other transparency obligations, is therefore based on allocated quantities and positions, rather than physical linepack position.

Settlements

Intra-day settlements when reaching the threshold

If the market balancing position exceeds the Market Threshold, the excess or shortfall will be instantly settled proportionally in respect of the ZIGMA Shippers causing that excess or shortfall via their ZIGMA Shipper balancing position.

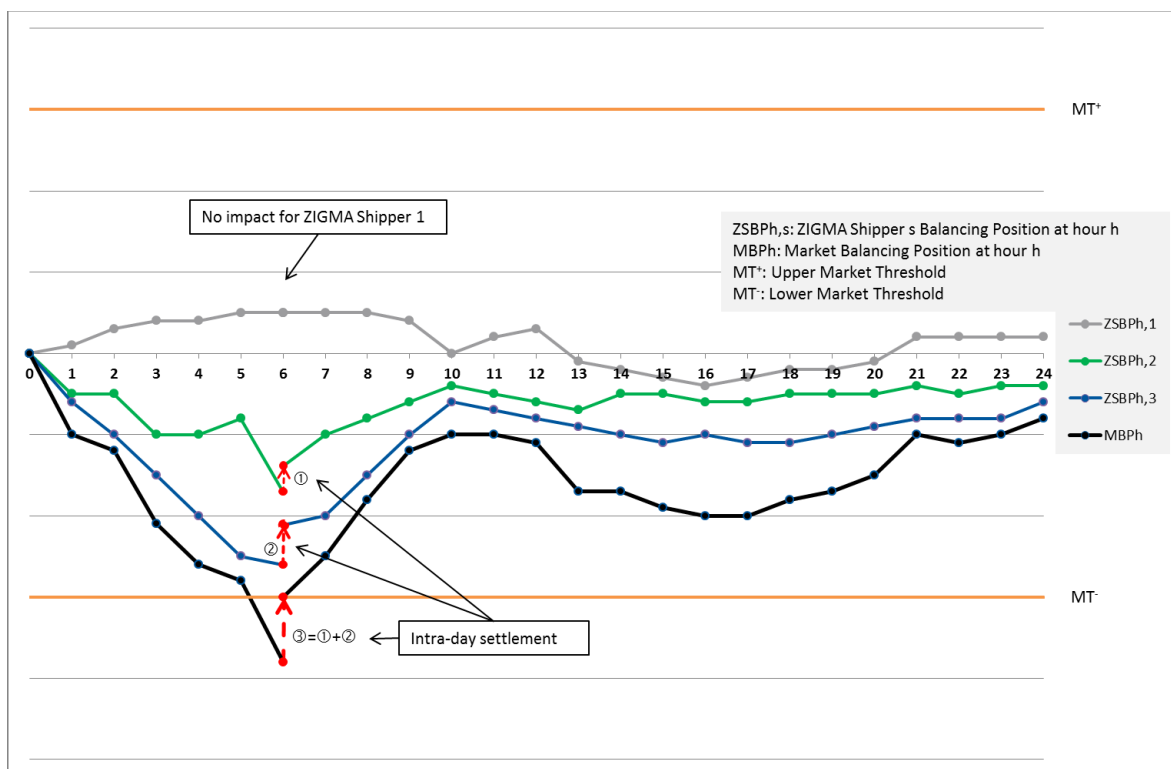


Figure 64: Intra-day settlements

Such a settlement will be executed in the following 5 steps:

1. Identification of the quantity to be settled: market shortfall or excess to restore the market position to be at the Market Threshold
2. Identification of ZIGMA Shippers causing imbalance, i.e. identification of all ZIGMA Shippers with an individual balancing position contributing to the market shortfall or excess, and their proportional contribution to the market imbalance
3. Correction of causing ZIGMA Shippers balancing position proportional to their contribution to the market imbalance (the Balancing Agent delivers gas to the ZIGMA Shipper in case of shortfall and offtakes gas from the ZIGMA Shipper in case of excess)
4. Transaction initiation by the Balancing Agent for the purchase or sale of a quantity of gas compensating for the market imbalance
5. A financial settlement in respect of ZIGMA Shippers who received or provided gas during the process, in proportion to such quantity, and the minimum or maximum between the gas price and the weighted average price of the corresponding transaction(s) concluded by the Balancing Agent (as initiated in point 4) in case of market excess or shortfall. An incentive is applied to the financial settlement.

Steps 1 to 3 are instantly calculated and applied by the Balancing Agent when determining, on an hourly basis, the latest market and ZIGMA Shipper balancing positions. The individual corrections of the positions resulting from the settlement by the Balancing Agent are communicated to the ZIGMA Shippers together with their individual position and the market position. The financial settlement is handled during the invoicing cycle.

End-of-day settlement

At the end of the Gas Day, each ZIGMA Shipper's balancing position is reset to zero, so that they begin the next Gas Day balanced.

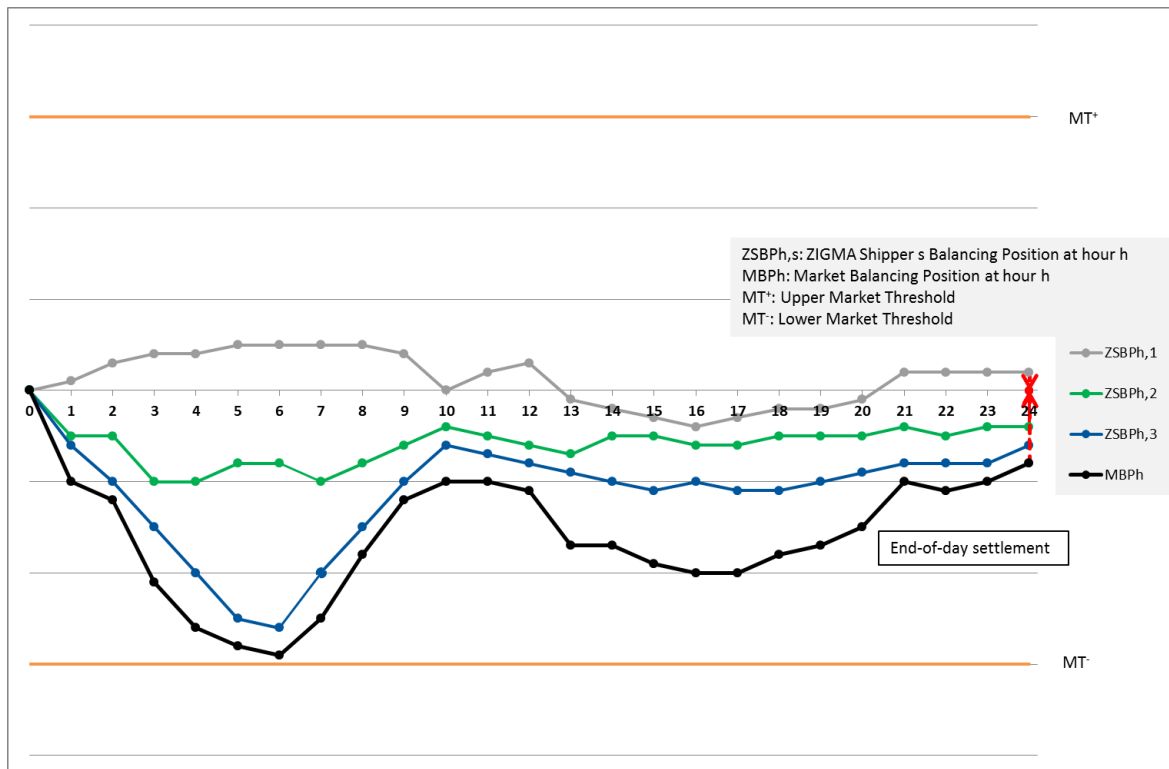


Figure 15: End-of-day settlement

The end-of-day settlement comprises 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 or excess
2. Identification of the quantity to be settled per ZIGMA Shipper. For each ZIGMA Shipper this will be equal to the ZIGMA Shipper balancing position of the last hour of that Gas Day
3. Correction of ZIGMA Shippers' balancing position to zero (the Balancing Agent delivers gas to the ZIGMA Shipper in case of shortfall and offtakes gas from the ZIGMA Shipper in case of excess)
4. Transaction initiation by the Balancing Agent for the purchase or sale of a quantity of gas compensating for the market shortfall or excess
5. A financial settlement in respect of ZIGMA Shippers who received or gave a quantity of gas during the process, in proportion to such quantity, and the minimum or maximum between the gas price and the weighted average price of the corresponding transaction(s) initiated by the Balancing Agent (point 4) in case of market excess or shortfall. An incentive is applied to the financial settlement.

Steps 1 to 3 are instantly calculated and applied by the Balancing Agent when determining, on an hourly basis, the latest market and ZIGMA Shipper balancing positions. The individual corrections of the positions resulting from the settlement by the Balancing Agent are communicated to the ZIGMA Shippers together with their individual position and the market position. The financial settlement is handled during the invoicing cycle.

Balancing organisation

Balancing Agent balancing is organised on the wholesale commodity market. When the Balancing Agent needs to buy or sell gas to compensate for a market shortfall or excess, it will do so by accepting bids or offers for a notional product or a specific physical product available on a predefined Exchange. The Balancing Agent will buy or sell the necessary quantities of gas using the best available prices offered by market participants for the relevant products according to the Exchange's matching rules. Once trades are concluded, the transaction(s) will serve to determine the reference price used for the financial settlement to ZIGMA Shippers for the balancing action. The price and related settlement quantities will be published as soon as they are determined.

Balancing products will therefore be available for trading on the Exchange. The product implies a balance-of-day delivery of the gas to or from the TSO. Offers or bids can be placed at all times by ZIGMA Shippers registered on the Exchange for those products.

When required for its residual balancing activities, the Balancing Agent will use its best efforts to notify the market of its intention to buy or sell a specific product as soon as possible.

A price reference for the cash settlement with the ZIGMA Shipper, called the "Settlement Price", will be determined.

Within Day Obligations (WDOs)

The Market Threshold is a form of Within Day Obligation (WDO). The within-day cash-out prices will be set to ensure that there is a clear incentive for the overall market to keep within the Market Threshold. The end of day cash-out prices will be set to mitigate any incentives to have imbalances between adjoining entry/exit systems.

The operational rules related to these settlements will be designed in such a way that the transactions are conducted at a fair market price. The Balancing Agent will take appropriate measures to avoid market manipulation.

The Balancing Agent will seek physical flexibility from IUK and Fluxys Belgium to ensure that the Market Threshold can be applied at all times. However, when physical demand through the ZIGMA Entry-Exit zone is very high the delay between the Market Threshold being breached and the Balancing Agent taking a balancing action on the market which physically corrects the imbalance may be too great. In such circumstances, the Balancing Agent may notify the market that should the Market Threshold be breached then the causing Shippers would have their nominations curtailed to restore the ZIGMA balancing position to be back within the Market Threshold. The notification would be made in advance of the amended rules being applied and the amended rules would only be in force during the period of very high physical demand.

Network Emergencies

If one or more Shippers' imbalance position(s) risks the integrity of the ZIGMA Entry-Exit zone their gas flows will be constrained as appropriate to ensure that their imbalanced positions do not put the physical integrity of the system at risk nor undermine the delivery of services to the other Shippers.

If there is a network emergency gas flows will be constrained.

APPENDIX 5: Glossary of Terms and Abbreviations

Term or Abbreviation	Description
Access Code for Transmission (ACT)	Technical part of the contract between the Shipper and Fluxys Belgium governing the transmission of gas on the Fluxys Belgium grid
ASEP	“Aggregated System Entry Point”
Backhaul	Capacity offered at uni-directional Interconnection Points in the opposite direction of the physical flow, subject to a resulting net flow in the direction of the physical flow
Bacton	Area in East of England where the Interconnector Pipeline and various other gas pipelines land
BAL	“Balancing” EU Network Code which introduces rules on gas balancing to facilitate trading across balancing zones
Balancing Agent	Party responsible for information provision to Shippers and taking appropriate balancing actions within ZIGMA
Balancing regime	The model and rules governing the balancing of the ZIGMA zone
Bundled capacity	A standard capacity product offered on a firm basis which consists of corresponding entry and exit capacity at both sides of an Interconnection Point
Buy-back	Mechanism whereby capacity sold by a TSO may be bought back from Shippers by the TSO
CAM	“Capacity Allocation Mechanism” EU Network Code which introduces rules on access to capacity at Interconnection Points in gas transmission networks
CMP	“Congestion Management Procedures” EU Network Code. Developed with the objective of outlining principles that may lead to an increase in the availability of unused capacity within gas transmission systems across Europe
Competing capacity	Capacities for which the auctions are inter-dependent as the sum of capacity across 2 TSOs on one side of the IP is greater than the capacity available on the other side of the IP
CREG	La Commission de Régulation de l'Electricité et du Gaz - the National Regulatory Authority for gas and electricity for Belgium
Entry Capacity	Capacity into an Entry-Exit zone or gas transportation system
Entry-Exit zone	A market area in which gas transmission is governed by the principle stated in Regulation (EC) No. 715/2009 (in particular Recital 19 and Article 13)
Exchange	A company providing the ability for parties to trade standard spot and future gas commodity products anonymously on a Virtual Trading Point
Exit Capacity	Capacity out of an Entry-Exit zone or gas transportation system
Firm capacity	Capacity that is not subject to interruption procedures defined by the Transmission System Operator
Fluxys Belgium	The owner and operator of the gas transmission system in Belgium that connects with the Interconnector Pipeline at Zeebrugge
FSTA	“Fluxys Standard Transmission Agreement”. The contractual agreement between each Fluxys Belgium Grid User and Fluxys Belgium, which sets out the rights and obligations of the parties in respect of the provision of transmission services

Gas Day	Period from 06:00 until 06:00 on the following day. This is currently UKT in NGG's transmission system and at IBT; CET in Fluxys Belgium's transmission system and at IZT
Hourly Imbalance	An hourly value, expressed in kWh, calculated for a ZIGMA Shipper for all ZIGMA points as the sum of all hourly entry allocations, all hourly exit allocations (negative values), and title transfers (tradings) on Zeebrugge Beach
HSA	"Hub Services Agreement". The contractual agreement between ZIGMA Shippers and the Zeebrugge Beach Operator, which sets out the rights and obligations of the parties in respect of the provision of trading services
IAA	"IUK Access Agreement" – a contract for ZIGMA Shippers to access Interconnector capacity
IBT	"Interconnector Bacton Terminal", the landing point in the UK for the Interconnector pipeline
IBT IP	The ZIGMA IP connecting the Interconnector pipeline with the NTS
Incremental Capacity	Refers to the provision of additional capacity through investment in pipelines and/or compressors and similar equipment between existing systems that are already interconnected or other arrangements that allow increase in technical capacity
Interconnection Point	As defined in CAM Network Code: A fixed or virtual point connecting adjacent entry-exit systems or connecting an entry-exit system with an interconnector, in so far as these points are subject to booking procedures by network users
Interconnector or Interconnector pipeline	The pipeline owned and operated by IUK spanning the southern North Sea from Bacton, UK, to Zeebrugge, Belgium
Interim period	From 1 November 2015 to 30 September 2018. The period during which ISTA will run in parallel with the IAA
Interruptible capacity	Capacity on the transmission grid that can be interrupted by the TSO, at its sole discretion
IP	"Interconnection Point"
ISTA	"IUK Standard Transportation Agreement". The contractual agreement between each IUK Shipper and IUK, which sets out the rights and obligations of the parties in respect of the provision of transportation services
IUK	"Interconnector (UK) Limited"
IZT	"Interconnector Zeebrugge Terminal" The landing point in Belgium of the Interconnector Pipeline.
LNG	"Liquefied Natural Gas"
LNG terminal	A gas facility that is used to receive, unload, load, store, transport, gasify, or process Liquid Natural Gas
LT UIOLI	Long Term Use It Or Lose It. Process by which underutilised capacity may be withdrawn from Network Users and made available on the secondary market
Market Balancing Position	An hourly value, expressed in kWh, calculated by taking the sum of the Balancing Position all Shippers for the considered hour
Market Threshold	The upper and lower limit, expressed in kWh, within which the Market Balancing Position can fluctuate without intervention of the Balancing Agent

NBP	“National Balancing Point”, is the Virtual Trading Point of the UK market area
Network Codes	A set of rules and procedures developed to ensure implementation of particular elements of the Third Energy Package
NGG	“National Grid Gas”. The owner and operator of the gas National Transmission System (NTS) in GB that connects with the Interconnector Pipeline at Bacton
NTS	“National Transmission System”. The gas transmission system in GB, operated by NGG
NTS Shipper	A shipper active on the NTS
OBA	“Operational Balancing Agreement”. Agreement between adjacent TSOs that enables gas allocations to be equal to nominations
Ofgem	Office of Gas and Electricity Markets – the National Regulatory Authority for Great Britain
OKS	The IP connecting the ZIGMA market area with the Fluxys Belgium market area
OS Capacity	Over-subscription capacity
Over-subscription Capacity	Firm capacity that is made available by a TSO in addition to the technical capacity
PRISMA	The European Capacity Platform on which capacity can be offered for sale
Shipper	An organisation that is party to a contract with IUK, Fluxys Belgium or NGG that provides a right (or a potential right) to deliver and redeliver gas to/from their system
SILK point	The ZIGMA point connected to upstream North Sea gas sources via the SILK pipeline
SILK Pipeline	“Seal Interconnector Link Pipeline”. Pipeline at Bacton that can deliver upstream gas directly to the IUK system from SEAL (Shearwater Elgin Area Line)
Standard Capacity Products	Capacity Products with the characteristics defined in the CAM Network Code
Surrender	One of the CMP measures implemented to avoid contractual congestion of the gas market
Third Energy Package	Directive 2009/73/EC and Regulation (EC) No. 715/2009. A legislative package aimed at creating a single internal gas market in the EU
Trading Point	A point at which trades are located
TSO	“Transportation System Operator”. A party that operates a pipeline network for the transportation of natural gas
TTF	“Title Transfer Facility”, is the Virtual Trading Point of the Netherlands market area
UNC	“Uniform Network Code”, NGG’s contract for access to their transmission system
Upstream production	Gas fields connected to the market area via pipelines
VTP	“Virtual Trading Point”
WDO	“Within Day Obligations” as referred to in BAL
ZBA	“Zeebrugge Balancing Agreement”, the contractual agreement between each ZIGMA Shipper and the Balancing Agent, which sets out the rights and obligations of the parties in respect of the provision of

	balancing services
ZEBRA	The IP of the ZIGMA market area connecting ZIGMA and the ZEBRA Dutch grid
Zeebrugge	Area in North-West of Belgium where the Interconnector Pipeline and various other gas pipelines and LNG land
Zeebrugge Beach Operator	Operator of Zeebrugge Beach
ZIGMA	“Zeebrugge beach Interconnector Gas Market Area”
ZIGMA Shipper	Any client of the ZIGMA Balancing Agent
ZIGMA Shipper Balancing Position	The daily aggregated Hourly Imbalances of the ZIGMA shipper, expressed in kWh
Zeebrugge Beach	The point at which trades are located within ZIGMA
ZLNG point	The ZIGMA point connecting the Fluxys Belgium Zeebrugge LNG Terminal to ZIGMA (ZLNG also exists as a connection point in the Fluxys Belgium Market Area)
ZPT point	The ZIGMA point connecting Norwegian gas fields to ZIGMA via the GASSCO Zeepipe Terminal located in Zeebrugge (ZPT also exists as a connection point in the Fluxys Belgium Market Area)
ZTP	“Zeebrugge Trading Point”, is the Virtual Trading Point of the Belgian market area
ZZ1 IP	“Zelzate 1”, the IP connecting the ZIGMA market area with the TTF market Area (ZZ1 also exists as a connection point in the Fluxys Belgium Market Area)
ZZ2 point	“Zelzate 2”, the point connecting ZIGMA market area with the ZEBRA market Area (ZZ2 also exists as a connection point in the Fluxys Belgium Market Area)