

**Publication of information according to Article 30 of Commission
Regulation (EU) 2017/460 of 16 March 2017 establishing a network code
on harmonised transmission tariff structures for gas**

1 December 2022

Fluxys Belgium SA

Introduction

In the framework of the implementation of the Network Code on Harmonised Transmission Tariff Structures for Gas ('TAR NC') Fluxys Belgium publishes hereby the information related to Article 30.

The present publication is for year 2022 based on the Fluxys Belgium 2020-2023 tariff proposal as approved by the Belgian NRA, CREG ("Commission de Régulation de l'Electricité et du Gaz"), in its decision (B)656G/40 of 7 May 2019 and which was taken in accordance with the tariff methodology set by the CREG in its decree (Z)1110/11 of 28 June 2018.

This tariff methodology stipulates that the budgeted figures in the tariff proposal have to be updated ex-post based on the actual figures in a yearly settlement and then defining the effective over/-under recovery amount and its impact on the regulatory account.

The figures given hereunder (except when specified) are for 2023 hence they are budgeted figures except for the over/-under recovery amounts and the amount of the regulatory account which are the last actual ones as approved by CREG, i.e. 2021.

Art. 30 (1) (a) – Information on parameters used in the applied reference price methodology related to the technical characteristics of the transmission system

The following information related to Art. 30 (1) (a) is for year 2023.

- (i) Technical capacity at entry and exit points and associated assumptions

The technical capacities for entry and exit points are given hereunder while they are not directly used in the reference price methodology (RPM).

Entry and exit points	Entry	Exit
Blaregnies L	backhaul	10,49
Dunkerque LNG	10,39	-
Eynatten 1	9,95	11,3
Eynatten 2	10	11,3
Hivarenbeek L	26,95	backhaul
IZT	7,5	6,88
Loenhout	5,65	2,83
's Gravenvoeren	16,61	backhaul
Virtualys	3,96	32,21
Zandvliet H	1,98	backhaul
Zeebrugge	29,3	29,85
Zeebrugge LNG		backhaul
Zelzate 1	16,95	13,7
Zelzate 2	backhaul	4,12
ZPT	14	backhaul

Technical Capacity per IP – 10⁶ kWh/h – rounded to 2 decimals

(ii) Forecasted contracted capacity at entry and exit points and associated assumptions

The forecasted contracted capacities at entry and exit points used in the RPM are given in the table hereunder.

IP	Entry	Exit
Blaregnies L	-	10,2
Dunkerque LNG	10,1	-
Eynatten ½- VIPBE-THE	10,9	4,3
Hivarenbeek L	17,9	-
Loenhout	1,8	-
VIP BENE	18,6	7,4
Virtualys	2,3	25,4
Zandvliet H	-	-
Zeebrugge	43,7	20,0
IZT		
Zeebrugge LNG		
ZPT		
Incl. OCUCs for	17,6	

Forecasted contracted capacities per point (in 10⁶ kWh/h)

Domestic exits	
H capacity	58,0
L capacity	14,0

Forecasted contracted capacities for domestic exit points (in 10⁶ kWh/h)

(iii) The quantity and the direction of the gas flow for entry and exit points and associated assumptions, such as demand and supply scenarios for the gas flow under peak conditions

When defining the tariffs for the 2020-2023 tariff period the forecasted contracted capacities are assumed for the whole period. They were based on some assumptions and a methodology that is explained hereunder and are estimated, per category of services.

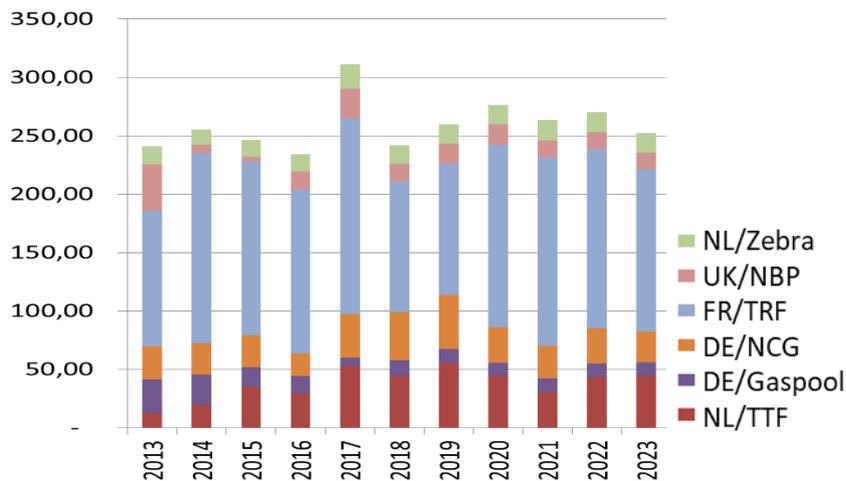
Methodology

The forecasted contracted capacities can be split into two parts. On the one hand, the capacity subscriptions that are already concluded at the date of the tariff proposal for the period 2020-2023, considered as “booked”. On the other hand, an estimation of additional volumes was added when making the tariff proposal based on assumptions with regards to supply, demand and possible contract renewal per transmission service (Entry/Exit on Interconnection Points, domestic households, industry, Power Plants,...), taking into account the specificities of each related market segment. Flow patterns have changed since the beginning of the Ukrainian crisis which led to additional bookings on the VIP BENE and VIP THE-ZTP Interconnection Points. The revenues from these additional sales are compiled in the regulatory account as foreseen in CREG’s tariff methodology and in EU network code for tariffs.

Exit capacity at Interconnection Points

Forecasted Exit contracted capacities at IPs result of an estimation based on supply, demand, production, infrastructure development and transmission pricing, in the concerned neighbouring countries and the possible role Belgium is and could be playing in the future, in supplying those markets through transit.

The following graph illustrates the basis assumption for yearly exported volumes towards the different neighbouring markets. For the period 2020-2023, the average export assumption is around 260 TWh/y, with year on year variations driven by several factors, including also L/H conversion in neighbouring markets.



Estimation of yearly exports to neighboring markets - TWh/y

Those volumes are translated into forecasted contracted capacities, using (i) historical seasonality and volatility of the flows through those Interconnection Points, (ii) already contracted capacities on the respective Interconnection Points and presumed booking pattern (short term vs long term / Entry/Exit vs short haul services) of network users.

Exit capacity on domestic points

The Belgian domestic market is split into 3 different segments: distribution, industrial clients and Power Plants. For each end users in these segments, grid users have to subscribe (implicitly or explicitly) firm domestic Exit transmission services.

The assumption relating to distribution segment is that there will be no growth in the peak capacity required to supply the Belgian market. However, the L/H conversion operation, based on latest Synergrid plan, will progressively shift L capacity towards H zone.

For industry and Power Plants, we estimate that the current level of capacity will remain stable over period 2020-2023. We have today limited insights on confirmed new connections in the period, neither obviously on potential future disconnections.

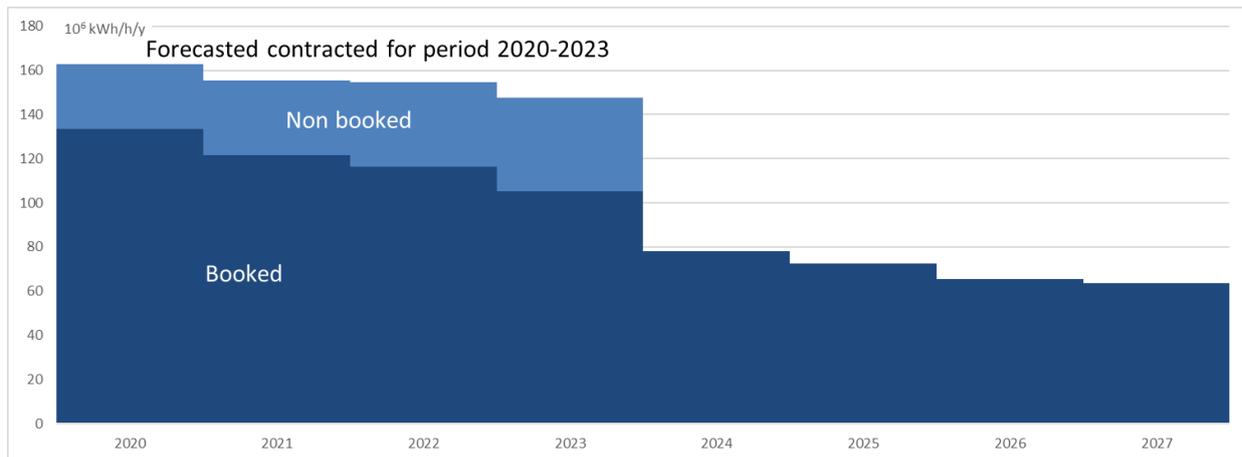
Entry capacity

In an Entry/Exit model, network users can use their Entry capacity either to supply the domestic market or to supply the neighbouring markets. Therefore, a synergy effect can be observed where a single quantity of Entry capacity is used for both purposes, but not at the same time.

Based on the level of synergy observed in the past, one can expect that forecasted contracted capacity relating to the domestic market (Distribution, Industry and Power Plants) or Exit capacity at Interconnection Points will up to a certain level also trigger additional Entry capacity.

Summary

The following graph illustrates the projections of forecasted contracted capacities for the above-mentioned services at Interconnection Points over the years. For the period 2020-2023, a distinction is made between the capacity that is already booked and the capacity that is assumed to be further booked. For the sake of clarity, it is important to underline that these numbers are estimates which are more and more difficult to make in a market moving to short term and for sure with the Ukrainian crisis.



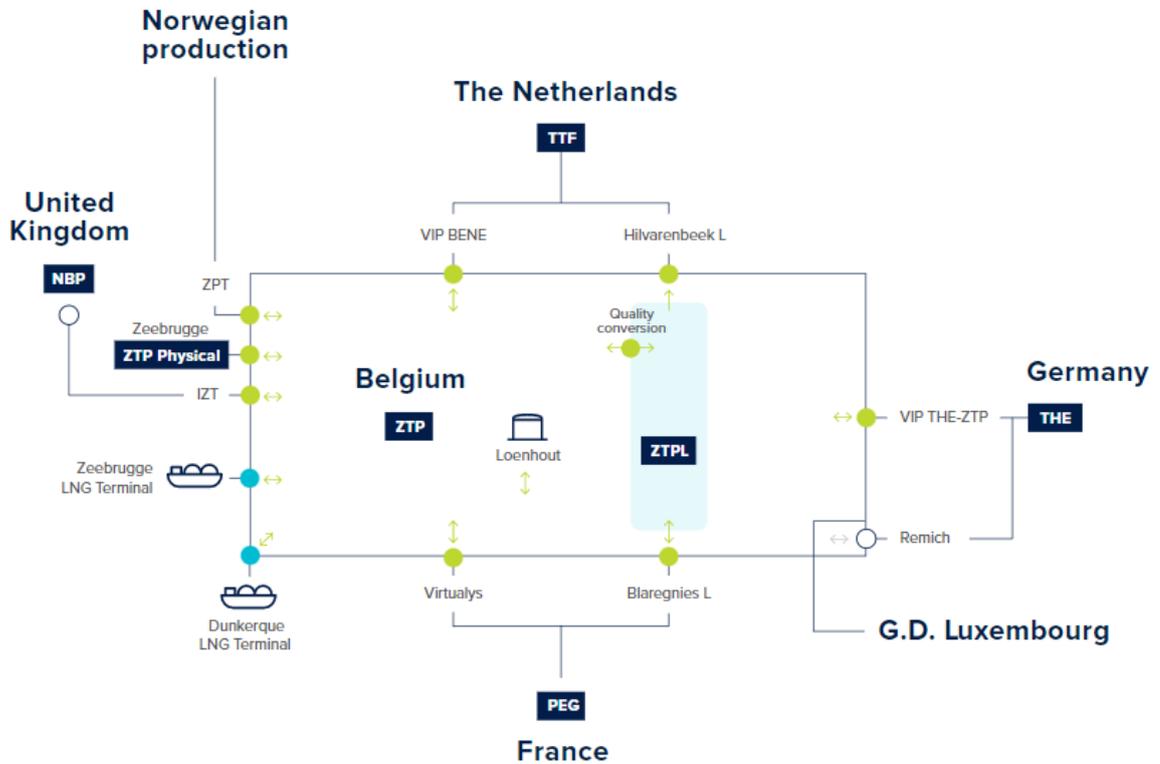
Overview of forecasted contracted capacities on IPs – 10⁶ kWh/h

- (iv) The structural representation of the transmission network with an appropriate level of detail

Natural gas transported and distributed in Belgium, including renewable gases to be produced locally, originates from various sources. The chemical composition of those different gases is not necessarily the same, in particular gross calorific value and Wobbe index may significantly differ. Most of those are however “rich” gases, can be substituted with one and another and are transported together, blended as H gas. Low calorific gas (L gas), produced in The Netherlands, either from the Groningen fields, either synthetically using Nitrogen blending installations, is however sufficiently specific (contains up to 14% of Nitrogen) to be transported in a separated infrastructure. Fluxys Belgium network is therefore divided into 2 sub grids, operated separately, also on a commercial level.

There are 18 physical connection points, interconnecting Fluxys Belgium network with neighbouring countries/markets/TSOs. Since the inclusion of Zelzate 2 in the VIP BENE and the

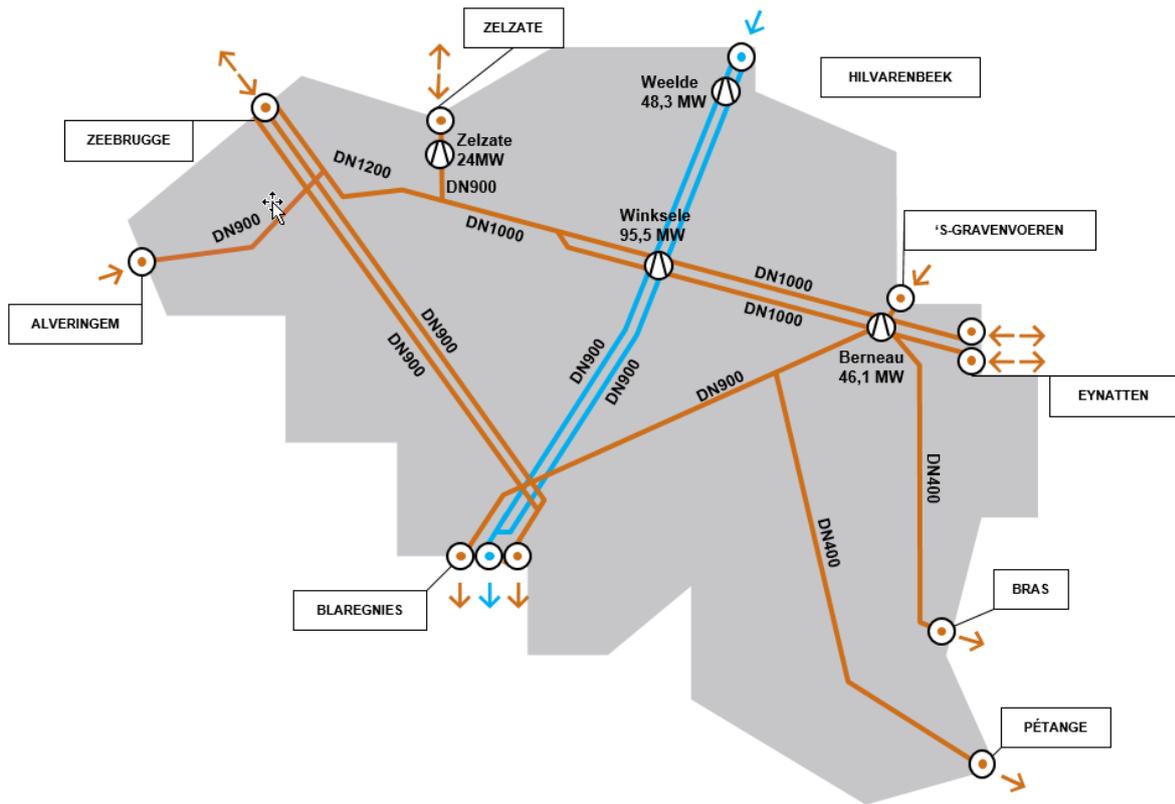
merger of Eynatten 1 and Eynatten 2 in the VIP BE-THE the number of commercial interconnection points has further reduced.



Schematic representation of BeLux Entry-Exit system and related IPs

(v) Additional technical information about the transmission network

The network of Fluxys Belgium is developed along several main axes supporting East-West and North-South flows, composed of pipes of at least DN400. The flow of gas throughout the network is assured using 4 compressor stations, located in Berneau, Weelde, Winksele and Zelzate.



Main pipelines & Compression stations

The following table details the mapping between physical connections and commercial (virtual) Interconnection Points:

Physical Points	Neighbouring TSO	Market Area	IP (commercial)
Eynatten	Gascade	THE	VIP THE-ZTP
	OGE		
	Thyssengas		
	Fluxys TENP		
Zelzate 1	GTS	TTF	VIP BENE
Zelzate 2			
's Gravenvoeren			
Dilsen			
Zandvliet			
Hilvarenbeek			
Alveringem	Dunkerque LNG	-	Dunkerque LNG term.
Blaregnies	GRTgaz	TRF	Virtualys (VIP)
			Blaregnies L
Zeepipe Terminal	Gassco	-	ZPT
Loenhout Storage	Fluxys Belgium	-	Loenhout
Zeebrugge LNG	Fluxys LNG	-	Zeebrugge LNG term.
IZT	Interconnector UK	NBP via National Grid	IZT
			Zeebrugge

Mapping Physical – Commercial (V)IPs

Art. 30 (1) (b) (i) – Information on the allowed and/or target revenue

The 2023 budgeted allowed revenue, as per the tariff proposal approved by CREG on 16 April 2019, amounts to 298,2 MioEUR (after use of the regulatory account). Considering the 10% tariff reduction introduced in July 2022 and applicable until end 2023, the allowed revenue has been further reduced with 30M€. This amount is subject to ex-post settlement depending on the 2023 actuals for all components of the allowed revenue (i.e. RAB, WACC, depreciations, OPEX,...) as foreseen in the tariff methodology. The yearly allowed revenues over the 2020-2023 tariff period are quite stable as resulting from one single tariff methodology set by CREG for the 4 years.

Art. 30 (1) (b) (ii) – Information related to changes in the revenue

The allowed revenue decreased in 2020 compared to 2019 mainly because of the planned use of the regulatory account in the 2020-23 tariff proposal as approved by CREG on 7 May 2019 which is higher than in the previous tariff period. An additional use of the regulatory account of 30M€ in 2023 has led to a decrease of the allowed revenue by the same amount. Except for the additional use of the regulatory account the budgeted allowed revenue in 2023 is comparable to the allowed revenues of the previous years of the regulatory period as they are within the same tariff period hence based on the same assumptions.

The allowed revenue 2023 is still budget based and will be actualized ex-post in the yearly settlement to be approved by CREG. The differences are compiled in the actual regulatory account at end 2023. These figures will be known in the course of 2024.

Art. 30 (1) (b) (iii) – Information related to the following parameters: types of assets included in the RAB and their aggregated value, cost of capital and its calculation methodology, capital expenditures, operational expenditures, incentive mechanisms and efficiency targets, inflation indices

(1) Types of assets included in the RAB and their aggregated value

The assets include about 4000km of pipelines, 18 physical interconnection points with their metering stations, 4 compression stations, gas quality conversion stations, administrative and operational buildings, ...

The regulated asset base considered amounts to 1.966,1 MioEUR. This figure is the budgeted mid-2023 amount as foreseen in the tariff proposal and subject to ex-post settlement.

(2) Cost of capital and its calculation methodology

The budgeted pre-tax Weighted Average Cost of Capital (WACC) considered for the tariff calculation is of 4,79% (budget 2023) and will be reviewed ex-post in the tariff settlement depending on the 2023 actual value of the financial parameters influencing it.

The calculation methodology for the WACC is defined in the CREG’s decree (Z)1110/11 of 28 June 2018. It is based on the Capital Asset Pricing Model including as main parameters the risk free rate based on the 10 year OLO, the Market Risk Premium (MRP) fixed at 3.50%, the Bêta (β) fixed at 0.65, an illiquidity premium (α) of 20%, a Debt Risk Premium of 0.7% and an S-factor reflecting the equity/RAB ratio.

If $S > 33\%$,

$$WACC = \frac{(OLO + MRP \times \beta)}{1 - Taxes} \times 33\% \times (1 + \alpha) + \frac{(OLO + DRP)}{1 - Taxes} \times (S - 33\%) + \text{Cost of Embedded Debt}$$

Certain specific infrastructures benefit from a more favourable level of fair margin.

(3) Capital expenditures (CAPEX)

The 2022 CAPEX as budgeted in the tariff proposal as approved by CREG on 7 May 2019 amounts to 29 MioEUR.

The initial value of the assets was evaluated based on reports from independent experts and auditors upon CREG request. The end 2012 RAB amounted to 2.223,6 MioEUR as set in the CREG’s tariff methodology decree of 18 December 2014.

Revaluations of the assets were calculated based on the difference with the booked value when the initial RABs were approved by the CREG.

The end year RAB increases with the CAPEX made in the year and decreases with the depreciations included in the tariffs and value reductions of the year. Possible subsidies are deducted as well. The revaluation is not depreciated in the tariffs.

The depreciation periods are: 50 years for pipelines, 33 years for compression stations, pressure reduction stations, metering and blending stations; 33 years for industrial buildings and 50 years for administrative buildings; 10 years for tools and furniture; 5 years for small equipment and IT softwares. However some other methods can apply based on the tariff methodology. The total depreciation amount included in the tariff budgeted in 2023 is of 71,5 MioEUR.

(4) Operational expenditures (OPEX)

The budgeted total OPEX for 2023 as approved by CREG in its 7 May 2019 decision amounts to 191,4 MioEUR (commodity excluded).

(5) Incentive mechanisms and efficiency targets

In the CREG’s tariff methodology decree (Z)1110/11 of 28 June 2018 an incentive mechanism is put in place based on several targets.

The incentives and targets are listed hereunder:

- Incentive on manageable operational expenditures: 2020 budgeted OPEX are based on 2017 actual OPEX but anticipatively include an efficiency of respectively 4, 6, 8 and 10M€ for years 2020, 2021, 2022 and 2023 compared to 2017 OPEX. 50% of the difference between the approved budgeted OPEX and the realized OPEX can remain with the TSO while the other 50%

remain with the regulatory account hence the tariffs. This applies up to respectively 3, 5, 7 and 9M€ for years 2020, 2021, 2022 and 2023. In case of OPEX reduction higher than these thresholds the ratio of efficiency the TSO can keep reduces to 25% and then to 20% above respectively 5, 7, 9 and 11M€ for years 2020, 2021, 2022 and 2023. The remaining amount (75% for the second tranche and 80% for the last tranche) remain to the benefit of the tariffs.

- Other incentives are set by the tariff methodology to promote market integration and security of supply, new developments in the energy transition, the quality of service and the sales:
 - Incentives on reductions of methane emissions
 - Incentive related to conversion from Low-Cal gas to Hi-Cal gas
 - Incentive on energy efficiency of gas heaters
 - Incentive on the integration of “new gases”
 - Incentive on the availability of services
 - Incentive on the availability of capacities
 - Incentive on additional sales

More details can be found in the CREG’s tariff methodology decree (Z)1110/11 of 28 June 2018 which is published on CREG’s website.

(6) Inflation indices

The assumptions regarding the inflation indices for the budget were taken from the publications by the Belgian Federal Planning Bureau early 2019 by the time of the tariff proposal which was approved by CREG on 16 April 2019. The budget value at that time was 1,70% for 2022 and 2023. The current forecasts are much higher than these budgeted values. The tariff methodology foresees that the ex-post settlement will take into account the actual figures for inflation indices as well. In the same way tariffs for year 2023 were indexed with the actual inflation as foreseen in the approved tariffs by CREG.

Art. 30 (1) (b) (iv) – Transmission services revenue

The 2023 budgeted transmission revenue amounts to 229,3 MioEUR. Considering the 10% reduction in tariff it will reduce to 204 MioEUR.

Art. 30 (1) (b) (v) – Following ratios for the revenue referred to in point (iv): capacity-commodity split, entry-exit split and cross-border–domestic split

Based on the budgeted figures for 2023 from the 2020-23 tariffs as approved by CREG the capacity/commodity split, meaning the breakdown between the revenue from capacity-based transmission tariffs and the revenue from commodity-based transmission tariffs is ~92%/8%.

The entry/exit split, meaning the breakdown between the revenue from capacity-based transmission tariffs at all entry points and the revenue from capacity-based transmission tariffs at all exit points is 33%/67%.

The intra-system/cross-system split, meaning the breakdown of the revenue from intra-system network use at both entry points and exit points and the revenue from the cross-system network use at both entry points and exit points as set out in Article 5 of NC TAR is 0,95 for 2023.

Art. 30 (1) (b) (vi) – if non-price cap regime, following information related to the previous tariff period regarding reconciliation of the regulatory account: (1) the actually obtained revenue, the under- or over-recovery of the allowed revenue and the part thereof attributed to the regulatory account and, if applicable, sub-accounts within such regulatory account; (2) the reconciliation period and the incentive mechanisms implemented

The regulatory account and the under- or over-recovery for 2023 is not yet known as they are based, by definition, on the actuals 2022 that are not yet available. The figures given hereunder are therefore for the latest available year approved by CREG (i.e. 2021).

(1) Evolution of the regulatory account in 2021:

The 2021 contribution to the regulatory account amounted to 26,4 MioEUR. The uses of the regulatory account amounted to 76,4 MioEUR which were returned to the tariffs in 2021.

The net evolution of the regulatory account in 2021 was then of -50,0 MioEUR. This 2021 settlement was approved by CREG in its decision (B)656G/47 on 16 June 2022 and is published on CREG's website.

(2) Reconciliation period and the incentive mechanisms implemented

The approved tariffs in May 2019 budgeted a use of the regulatory account over 2020-2023 of 255 MioEUR to the benefit of the tariffs. In addition 45M€ are returned to the tariffs over the July 2022 to end 2023 period to remain on the regulatory decreasing profile set by the CREG in its tariff methodology.

The incentive mechanism in place is given under (iii) (5) here above.

Art. 30 (1) (b) (vii) – The intended use of the auction premium

The auction premiums are shared 50/50 between Fluxys Belgium and the adjacent TSOs where relevant. The Fluxys Belgium share of the collected auction premiums is then accumulated in the auction premia account which was less than 1M€ at end 2021. The intended use of the auction premia account is to support the tariffs or the investments as foreseen in the NC for tariffs.

Art. 30 (1) (c) (i) – Commodity-based transmission tariffs

Fluxys Belgium applies a commodity fee (the so-called Energy In Cash) which is charged to reflect the variable costs related to gas transmission. This fee amounts to 0,08% of the allocated quantities at the Gas Price Reference, as published on Fluxys Belgium website.

Art. 30 (1) (c) (ii) – non-transmission tariffs for non-transmission services

Non-transmission services considered as such in accordance with Article 4. The main non-transmission services are the following:

- RPS - Reduced Pressure Service;
- Odorization;
- Quality Conversion;
- Zeeplatform;
- Wheelings;
- Hub services.

The applied Tariff methodology is a costs based methodology and is the identical to the one that applies for current tariffs: each service receives its relevant part of each types of the regulated costs. The non-transmission services revenue is reconciled as set out in Article 17.3 of TAR NC. Over- or under-recovery of the non-transmission services comes together with the over- or under-recovery of the transmission services in the regulatory account.

Art. 30 (1) (c) (iii) – reference prices and other prices applicable at points other than those referred to in Article 29 of NC TAR

All reference prices and all tariffs applicable for all services were published according to Article 29 and at the same time. The same reference price methodology is used for the points not falling under Article 29 of NC TAR as for those falling in the scope of this Article 29.

Art. 30 (2) (a) (i) – explanation of the difference in the level of transmission tariffs for the same type of transmission service applicable for the prevailing tariff period and for the tariff period for which the information is published.

Compared to 2019, 2020 tariffs evolution is mainly the result of the change in reserve price methodology. Indeed it shifted to the NC TAR reference price methodology (i.e. Capacity Weighted Distance). The use of CWD method leads to a slight increase of the Entry capacity tariffs, a decrease of the Exit capacity tariffs and a small decrease of tariffs for HP Domestic Exits as presented in the tables hereunder.

Last column in the table below shows a comparison of the reference prices for 2023 with 2022 tariffs.

ENTRY		Tariffs in €/kWh/h/year		2023 tariff vs 2022
Border with	Interconnection Point	Jan 2022	2023	
France	Virtualys	0,786	0,766	-2,5%
Germany	VIP THE-ZTP	0,786	0,766	-2,5%
The Netherlands	VIP BENE	0,786	0,766	-2,5%
	Hilvarenbeek L	0,873	0,851	-2,5%
United Kingdom	IZT	0,786	0,766	-2,5%
Zeebrugge Area	Zeebrugge	0,786	0,766	-2,5%
Norway	ZPT	0,786	0,766	-2,5%
LNG Terminals	Dunkirk LNG Terminal	0,786	0,766	-2,5%
	Zeebrugge LNG Terminal	0,786	0,766	-2,5%
Storage	Loenhout	0,393	0,383	-2,5%

Comparison of Entry tariffs in current and next tariff period

EXIT		Tariffs in €/kWh/h/year		2023 tariff vs 2022
Border with	Interconnection Point	Jan 2022	2023	
France	Virtualys	1,287	1,254	-2,5%
	Blaregnies L	1,423	1,387	-2,5%
Germany	VIP THE-ZTP	1,489	1,451	-2,5%
The Netherlands	VIP BENE	0,959	0,935	-2,5%
United Kingdom	IZT	0,798	0,778	-2,5%
Zeebrugge Area	Zeebrugge	0,798	0,778	-2,5%
Storage	Loenhout	0	0	-

Comparison of Exit tariffs in current and next tariff period

OCUC	Tariffs in €/kWh/h/year		2023 tariff vs 2022
Interconnection Points	Jan 2022	2023	
VIP BENE - IZT/Zeebrugge	1,034	1,008	-2,5%
IZT/Zeebrugge - VIP BENE	1,034	1,008	-2,5%
Dunkirk LNG Terminal/Vitruualys - IZT/Zeebrugge	1,188	1,158	-2,5%
VIP BENE - Eynatten ½/VIP BE-THE	0,854	0,833	-2,5%
Eynatten 1/2/VIP BE-THE - VIP BENE	0,854	0,833	-2,5%

Comparison of OCUC tariffs in current and next tariff period

OTHER TRANSMISSION SERVICES	Tariffs in €/kWh/h/year		2023 tariff vs 2022
	Jan 2022	2023	
Domestic HP H-grid	1,067	1,040	-2,5%
Domestic HP L-grid	1,184	1,154	-2,5%

Comparison of other transmission services tariffs in current and next tariff period

Art. 30 (2) (a) (ii) – explanation of the difference in the level of transmission tariffs for the same type of transmission service applicable for the tariff period for which the information is published and for each tariff period within the remainder of the regulatory period.

The 2020-23 regulatory period is one unique tariff period meaning tariffs are set for 4 years. This allows a smooth evolution of the tariffs even if there are differences in the inputs to the tariff methodology (e.g. evolution of the forecasted contracted capacities, evolution of costs, use of the regulatory account,...).

The actual inflation is calculated in May of each year for the next year (based on the April to April N-1 inflation) to allow publishing all tariffs early June, one month before the annual yearly capacity auction.

2023 is the last year of the tariff period. A consultation on 2024-2027 proposed tariffs is running in accordance with the EU network code for tariffs.

Art. 30 (2) (b) – simplified tariff model

A simplified tariff model is provided on Fluxys Belgium website on the following link. It is updated from time to time.

[Fluxys Belgium - Transmission tariffs](#)

Art. 30 (3) – information on points excluded from the definition of relevant points

This information is provided for these points (also known as “*non-CAM points*”) as it is done for the relevant points in the previous sections of this document. Reference is then made to the previous sections.