entsog

european network
of transmission system operators
for gas

CAPACITY ALLOCATION MECHANISMS NETWORK CODE

2025

IMPLEMENTATION AND EFFECT MONITORING REPORT

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1 EXECUTIVE SUMMARY

This report reflects the status of the CAM NC implementation on the 1st of November 2024 while it shows the effect of the CAM NC for the Gas Years (GY) 2022/2023 and 2023/2024. Information included in these reports was collected by ENTSOG from European gas TSOs. The results will also be published in the ENTSOG Annual Report.

The **implementation monitoring** part of this report covers relevant provisions of the CAM NC with focus on changes and updates related to Articles 6, 19 and 32. In the last report we saw high implementation of CAM NC and therefore in this report do not cover articles which are fully implemented, however we want to show changes in areas of interest (e.g. establishment of VIPs, changes to capacity calculation). Chapter V of the CAM NC on the Incremental Capacity Process is monitored in a separate report.

Within the previous and this report it has been demonstrated that the CAM NC has been highly implemented. Since the last report, we saw the implementation of a new VIP "BENE-L" in 2023, which consist of the IPs "Hilvarenbeek" and "Zandvliet" as no separate L-Gas IPs were needed anymore. In relation to Article 6 we can monitor since the last edition of the report two changes to the calculation of capacity. IP Balticconnector has a new virtual capacity calculation principle (GasGrid Finland, Elering) – showing the ongoing process of capacity maximisation and TSOs engagement in this field. Besides this, we monitor that between Portugal and Spain (REN and Enagas) a calculation method for interruptible capacity was agreed on.

In conclusion, we see the CAM NC implementation reaching a current plateau. Potential changes to CAM NC due to revisions or new processes can reopen this question in the future.

The **effect monitoring** part of this report analyses the impact of the CAM NC on the European gas market by means of three indicators which were already used in previous editions. These indicators have been calculated for the GYs 2022/2023 and 2023/2024 and compared with historical data, when available.

By the analysis of the indicator CAM.1, a decrease in the share of bundled capacity allocated in relation to the total capacity allocated on the primary market has been noticed.

Indicator CAM.2 shows that the share of bundled capacity relative to total firm capacity reallocated by secondary market trades has also decreased.

Indicator CAM.2.1 shows that the amount of bundled capacity allocated on the secondary market is volatile compared to the capacity allocated through auctions.

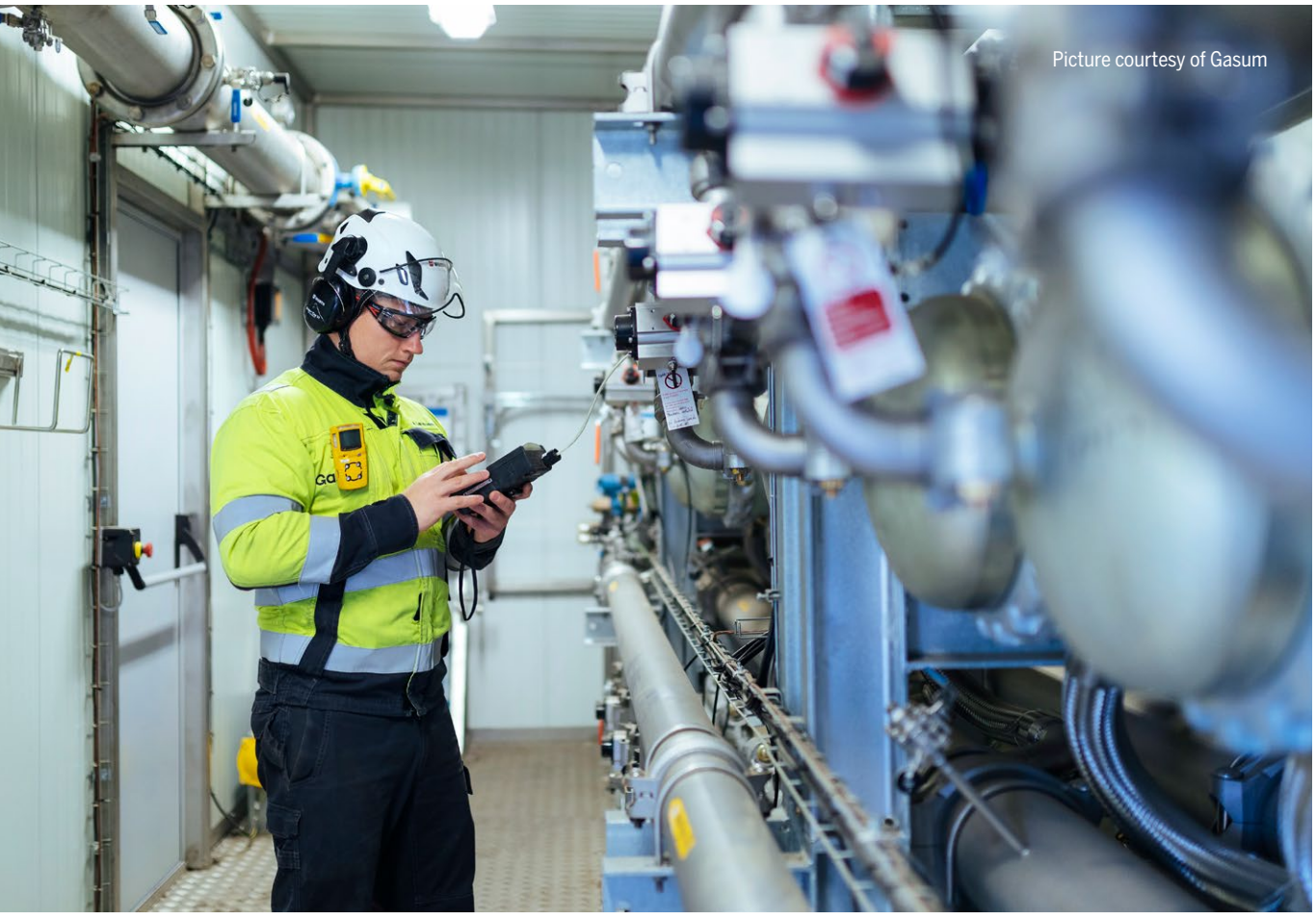
2 INTRODUCTION

On 16 March 2017 the European Commission published the Commission Regulation (EU) 2017/459 establishing a network code on capacity allocation mechanisms (CAM NC) in gas transmission systems and repealing the Regulation (EU) No 984/2013.

This Regulation was adopted with the aim to achieve greater harmonisation of natural gas capacity allocation across the European Union (EU) by setting up a transparent and standard framework for capacity allocation in gas transmission systems for existing and incremental capacity. In addition, the CAM NC also determines how adjacent transmission system operators (TSOs) cooperate for facilitating capacity sales.

According to Article 26(7) of the Regulation (EU) 2024/1789 ("Hydrogen and decarbonised gas market Regulation"), ENTSOG shall *"monitor and analyse the implementation of the network codes and the guidelines adopted by the Commission in accordance with Article 71(13) or Article 74 and their effect on the harmonisation of applicable rules aimed at facilitating market integration. The ENTSO for Gas shall report its findings to ACER and shall include the results of the analysis in the annual report referred to in paragraph 3, point (f), of this Article."* In order to be compliant with the Gas Regulation, ENTSOG will show in this report the implementation status of the CAM NC by the European TSOs and the results of the analysis performed for determining its effect. Moreover, ENTSOG will include the findings shown in this report into the ENTSOG Annual Report.

Since the capacity allocation mechanisms network code (CAM NC) is applied, this is the seventh time ENTSOG monitors its implementation across the EU and the sixth time that it analyses its effect.



Picture courtesy of Gasum

3 IMPLEMENTATION MONITORING OF THE CAM NC

This is the seventh time ENTSOG monitors the implementation of the CAM NC across the EU[1]. The report covers the status of implementation at the 1st of November 2024.

Chapter V of the CAM NC on the Incremental Capacity Process is not included in this report as it is monitored in **a separate process[2]**.

3.1 PARTICIPATING TSOs

In order to produce this report, ENTSOG members were requested to complete a questionnaire to follow up on any changes and developments that could have taken place in their systems since the last report. For that purpose, they were asked to provide answers and updates on the implementation status of the following CAM NC articles: Art. 6 (joint method for capacity calculation), Art. 19.9 (virtual interconnection points), Art. 32 (interruptible capacity). TSOs were also asked to specify which type of interruptible capacity products were offered, if any.

As for the remaining CAM NC provisions, all TSOs have been found fully compliant in the previous report[3] for Article 4, 5, 6, 7, 8, 9, 10, 1–15, 16–18, 21, 32,33,34, 35, 36. Article 19(1), Article 21 and Article 36 have exceptions that are explained in the 2023 report.

The following sections reflect the data collected from 37 TSOs (out of 43 ENTSOG members) and shows the status of TSOs at the end of 2024 on Article 6, Article 19.9 and Article 32.

According to Art. 2(3) of the CAM NC, this Regulation shall not apply to Interconnection Points (IPs) between Member States where one of these Member States holds a derogation on the basis of Article 49 of Directive 2009/73/EC. Art. 49(6)[4] refers to Luxembourg. Creos Luxembourg has been excluded from this analysis as it not only holds derogation but also only has a non CAM-relevant point. Infrastrutture Trasporto Gas, Società Gasdotti Italia, Swedegas AB, and Nowega were excluded as not having CAM-relevant points. ICGB AD was excluded in the previous edition of the report as it has entered into operation on the 1st of October 2022. ICGB is now included in this edition.

A full list of the TSOs participating in this monitoring exercise is shown in Annex 1.

1 Previous reports can be found here: https://www.ENTSOG.eu/monitoring-reports#implementation-monitoring-report-cam-nc

2 More in Incremental Capacity Process Report available at ENTSOG website.

3 See CAM NC monitoring report 2023, Annex 2 for more information.

4 According to Article 49(6) Directive 2009/73/EC "Article 9 shall not apply to Cyprus, Luxembourg and/or Malta". For purpose of the monitoring and consistency with former reports we refer to Directive 2009/73/EC which is now no longer in force – we like to mention that Article 86 in Directive (EU) 2024/1788 now deals with derogations.

3.2 EVALUATION OF TSOs RESPONSES

3.2.1 GENERAL QUESTIONNAIRE

Since the implementation of the CAM NC had reached a high completion status in the last reports, the monitoring this time was focused on collection of updates related to the CAM NC Articles that might have been subject to change. Below the implementation status of Articles 6, 19.9 and 32 by the TSOs is presented:

Article of CAM NC		Description of the Article	Implementation status
Art. 6	Capacity calculation and maximisation	TSOs shall offer the maximum technical capacity, considering system integrity, safety and efficient network operation	Capacity maximisation fully implemented by all 37 TSOs. Since the last edition of the report we see two changes to the calculation of capacity: First, IP Balticconnector has a new virtual capacity calculation principle (GasGrid Finland, Elering). Second, between Portugal and Spain (REN and Enagas) a calculation method for interruptible capacity was agreed on. ICGB which was not included in the last report, as it only entered into commercial operation on 1 October 2022, also complies fully with Article 6 – includes optimizing the technical capacity at Interconnection Points in collaboration with all adjacent TSOs.
Art. 19.9	Creation of VIPs	Where two or more IPs connect the same two adjacent entry-exit systems, the adjacent TSOs affected shall offer the available capacities at one VIP.	'VIP BENE-L' was newly created on 01 April 2023 and consists of the IPs 'Hilvarenbeek' and 'Zandvliet'. VIP TSO is Gasunie Transport services. As a result of the decision to close the Groningen field, foreign L-gas customers will be switched to H-gas. The original plan was for all customers in these countries to have switched by the end of this decade. Belgium has now indicated that it can make the switch five years earlier. This means that Belgium will no longer need L-gas for consumption at domestic exit points from 1 September 2024. The two points were merged into a VIP because separate IPs for L- and H-gas were no longer needed.
Art 32	Allocation of interruptible services	TSOs may only offer standard capacity products for interruptible capacity of a duration longer than one day if the corresponding monthly, quarterly or yearly standard capacity product for firm capacity was sold at an auction premium, was sold out, or was not offered. For daily capacity TSOs shall offer this product in both directions of an IP when the corresponding standard capacity product for firm capacity was sold out day-ahead or was not offered	Out of 37 TSOs: ◢ Yearly standardised capacity product has been offered by 23 TSOs; ◢ Quarterly standardised capacity product has been offered by 24 TSOs; ◢ Monthly standardised capacity product has been offered by 25 TSOs; ◢ Daily standardised capacity product has been offered by 34 TSOs; ◢ Within-day standardised capacity product has been offered by 23 TSOs; ◢ One TSO (Elering) did not offer any interruptible capacity for the given period GY23/24. ◢ 14 TSOs have offered all standardised capacity products;

Table 1: Updates on implementation status on Articles, which may show changes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3.3 CONCLUSIONS

The main aim of the CAM NC is to achieve the harmonisation of capacity allocation at all interconnection points across the European Union and to guarantee a non-discriminatory third-party access to the gas networks as well as to promote the cooperation between adjacent transmission operators. To make that possible, it is essential that EU TSOs fully comply with the CAM NC through the implementation of all the provisions under this regulation.

In relation to this, within the previous and this report it has been demonstrated that the CAM NC has been highly implemented. Since the last report, we saw the implementation of a new VIP "BENE-L" in 2023, which consist of the IPs "Hilvarenbeek" and "Zandvliet" as no separate L-Gas IPs were needed anymore.

In relation to Article 6 we can monitor since the last edition of the report two changes to the calculation of capacity. IP Balticconnector has a new virtual capacity calculation principle (GasGrid Finland, Elering) – showing the ongoing process of capacity maximisation and TSOs engagement in this field. Besides this, we monitor that between Portugal and Spain (REN and Enagas) a calculation method for interruptible capacity was agreed on.

In conclusion, we see the CAM NC implementation reaching a current plateau. Potential changes to CAM NC due to revisions or new processes can reopen this question in the future.

4 EFFECT MONITORING OF THE CAM NC

This section of the report shows the results of the fifth effect monitoring of the CAM NC across the EU and it is focused on evaluating whether the main aims of the CAM NC have been achieved. The periods covered are the gas years (GY) 2022/2023 and 2023/2024 and only IPs which are CAM-relevant on both sides of an IP have been considered. IPs which are CAM-relevant only on one side of the IP (due to NRA's decision) have been excluded from the scope of this report[5].

4.1 PARTICIPATING TSOs

A total of 34 TSOs participated in this monitoring exercise for assessing the effect of the CAM NC. Therefore, this report reflects the data collected for the GY 2022/2023 and 2023/2024 from 34 ENTSOG members. 9 ENTSOG members[6] were excluded from this analysis since they have either used the implicit allocation method, have no interconnection points or the interconnection point is not CAM-relevant on both sides of the point.

The data used in this section was provided by the TSOs with the support of the Booking Platforms. This data already considers the capacity converted from unbundled to bundled according to CAM NC Article 21(3) on the mismatched unbundled capacity conversion service.

5 IPs which are CAM-relevant on one side of the IP due to NRA's decision were included only in the scope of the report covering the GY 2015/2016.

6 ENTSOG members excluded from the scope of the CAM effect monitoring are: Infrastrutture Trasporto Gas SpA, Società Gasdotti Italia S.p.A., Swedegas AB, Gasgrid Finland OY, Nowega GmbH, Creos Luxembourg S.A, AB Amber Grid, Fluxys TENP GmbH, Gastransport Nord.

4.2 EFFECT MONITORING INDICATORS

As explained in the previous effect monitoring reports, ENTSOG's aim is to build historical data by collecting information that allows the calculation of the same indicators to show the evolution of the market development. Except from a new sub indicator (CAM.2.1) that has been introduced in the previous report, ENTSOG has maintained the same indicators used since the first report in 2016.

4.2.1 CAM.1: RATIO OF BUNDLED FIRM CAPACITY ALLOCATED OVER THE TOTAL FIRM CAPACITY ALLOCATED

Description of indicator CAM.1

One of the main achievements of the CAM NC has been the harmonisation of capacity products by bundling capacity contracts to enable the Network Users to book standard capacity products which consist of corresponding entry and exit capacity at both sides of every IP. The bundling principles aimed to eliminate flange trading and improve the alignment of contractual terms and conditions of respective transmission system operators for the offer of bundled capacity.

Therefore, indicator CAM.1 has been used to determine whether the aims of the CAM NC have been achieved and observe if an increase in the bundled firm capacity has been produced.

This indicator shows the ratio of allocated bundled capacity over the total firm capacity allocated (bundled and unbundled firm capacity) per capacity product type (yearly, quarterly, monthly and daily firm capacity products). In order to determine this, the indicator is calculated per standard capacity product type of all TSOs according to the formula below:

$$\text{CAM.1} = \frac{\text{BCA}}{\text{TCA}} \times 100\,\%$$

Where:

CAM.1: Returns a ratio of firm bundled capacity allocated over total firm capacity allocated

BCA: Bundled firm capacity allocated

TCA: Total capacity (bundled and unbundled) allocated

Units: MWh/h/y

Picture courtesy of Interconnector

Results of indicator CAM.1

According to the formula described above, the ratios of bundled capacity allocated over the total capacity allocated have been calculated for the GYs 2022/2023 and 2023/2024 and compared with the data from previous years.

This data is shown in Table 2, which also includes the values of the total bundled firm capacity allocated for each GY and type of product as well as the total firm capacity allocated.

CAM.1: Ratio of bundled capacity allocated relative to the total capacity allocated				
Product	**Yearly**	**Quarterly**	**Monthly**	**Daily**
Year 2015/2016				
Bundled firm capacity	25,369.20	1,054.10	6,408.70	9,056
Total firm capacity	80,892.40	12,937.90	22,999.90	28,425
Ratio	**31.36 %**	**8.15 %**	**27.86 %**	**31.86 %**
Year 2016/2017				
Bundled firm capacity	2,535,733	13,766	16,866	6,182
Total firm capacity	3,358,315	17,944	30,855	36,751
Ratio	**75.51 %**	**76.72 %**	**54.66 %**	**20.24 %**
Year 2017/2018				
Bundled firm capacity	121,026	24,611	56,076	13,868
Total firm capacity	194,987	40,467	88,162	44,125
Ratio	**62.07 %**	**60.82 %**	**63.61 %**	**31.43 %**
Year 2018/2019				
Bundled firm capacity	146,100	61,280	25,363	20,148
Total firm capacity	241,222	75,777	34,956	37,908
Ratio	**61 %**	**81 %**	**73 %**	**53 %**
Year 2019/2020				
Bundled firm capacity	192,521	18,843	17,630	19,330
Total firm capacity	281,001	65,777	42,272	36,424
Ratio	**68.51 %**	**28.65 %**	**41.71 %**	**53.07 %**
Year 2020/2021				
Bundled firm capacity	157,003	34,494	72,396	256,712
Total firm capacity	233,495	61,853	84,233	272,316
Ratio	**67.24 %**	**55.77 %**	**85.95 %**	**94.27 %**
Year 2021/2022				
Bundled firm capacity	451,439	146,436	117,790	835,380
Total firm capacity	491,833	167,202	136,888	859,543
Ratio	**91.79 %**	**87.58 %**	**86.05 %**	**97.19 %**
Year 2022/2023				
Bundled firm capacity	312,811	43,685	29,628	30,758
Total firm capacity	343,193	59,770	39,629	52,861
Ratio	**91.15 %**	**73.09 %**	**74.76 %**	**58.19 %**
Year 2023/2024				
Bundled firm capacity	163,558	22,790	16,550	23,583
Total firm capacity	178,462	32,232	23,475	37,120
Ratio	**91.65 %**	**70.71 %**	**70.50 %**	**63.53 %**

Table 2: Ratio of bundled firm capacity allocated over the total firm capacity allocated in sum MWh/h/y

The information contained in the table can be interpreted as follows:

- Yearly standard capacity products: the ratio of bundled firm capacity to total firm capacity allocated, kept stable in comparison to year 2020/2021 of the previous monitoring.
- Quarterly standard capacity products: the ratio is decreasing in comparison to year 2020/2021 of the previous monitoring.
- Monthly standard capacity products: the ratio decreased in comparison to the previous monitoring.
- Daily standard capacity products: the ratio has decreased in comparison to the previous monitoring.

If the focus is only over bundled firm capacity and therefore unbundled firm capacity is not considered, Figure 1 indicates that the overall quantity of bundled firm capacity allocated has decreased in the last two GYs compared to the GY 2021/2022.

Over the past two years, we have observed a decline in total capacity and bundled capacity allocation, driven by changes in flow patterns and the emergence of new flow directions.

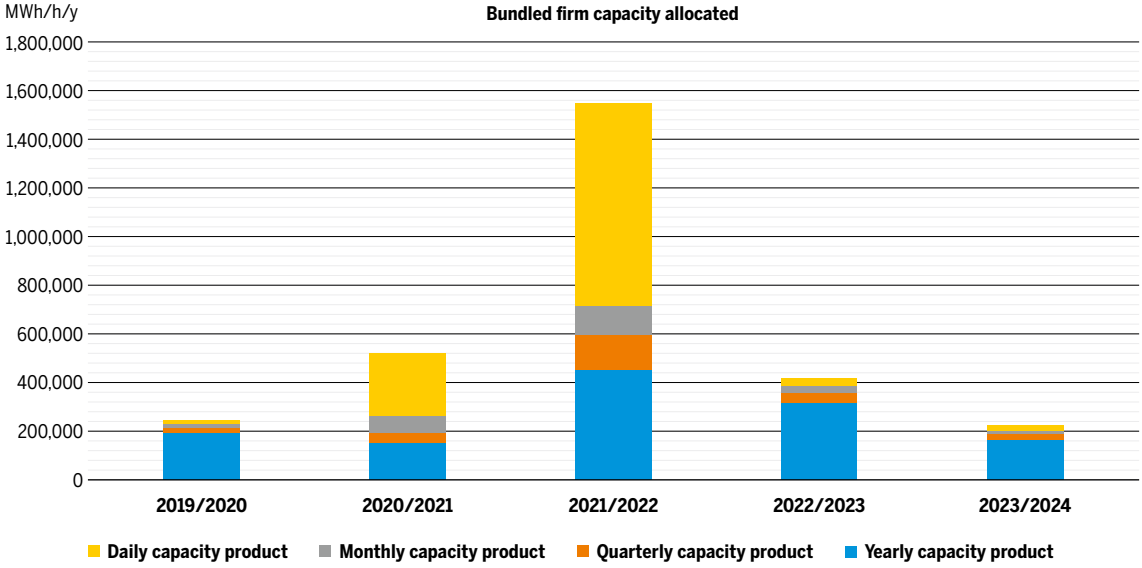

Figure 1: Bundled firm capacity allocated

4.2.2 CAM.2: SHARE OF SECONDARY MARKET-TRADED BUNDLED CAPACITY TO SECONDARY MARKET TRADED TOTAL FIRM CAPACITY

Description of indicator CAM.2

Indicator CAM.2 is used to measure the desired effect of the CAM NC to enhance secondary trading of (bundled) capacity and optimise the usage of the EU network.

This indicator shows the share of bundled firm capacity traded on the secondary market in relation to the total amount of firm capacity (bundled and unbundled) traded on the secondary market.

Indicator CAM.2 is calculated as follows:

$$\text{CAM.2} = \frac{\text{BCTSM}}{\text{TCTSM}} \times 100\,\%$$

Where:

CAM.2: a ratio of total bundled firm capacity traded on the secondary market to total firm capacity traded at the secondary market

BCTSM: bundled firm capacity traded at the secondary market

TCTSM: total firm capacity (bundled and unbundled) traded at the secondary market

Results of indicator CAM.2

Table 3 shows that the share of bundled capacity reallocated by secondary market remained relatively stable in comparison to the previous monitoring period.

CAM.2 Share of secondary market-traded bundled capacity to secondary market traded total capacity in MWh/h/y					
Gas year	**2015/2016**	**2016/2017**	**2017/2018**	**2018/2019**	**2019/2020**
Bundled firm capacity traded	511	13,369	1,835	10,340	9,520
Total firm capacity traded	135,329	2,130,633	463,527	177,729	359,440
Ratio	**0.38 %**	**0.63 %**	**0.40 %**	**5.82 %**	**2.65 %**
Gas year	**2020/2021**	**2021/2022**	**2022/2023**	**2023/2024**	
Bundled firm capacity traded	321,720	96,980	35,470	110,304	
Total firm capacity traded	583,537	194,082	68,564	251,328	
Ratio	**55.13 %**	**49.97 %**	**51.73 %**	**43.89 %**	

Table 3: Secondary market trades

Figure 2 shows the capacity traded in the secondary market. both bundled and unbundled. From these figures. similar ratio of bundled versus unbundled capacity have been traded on the secondary market in comparison to the previous monitoring period.

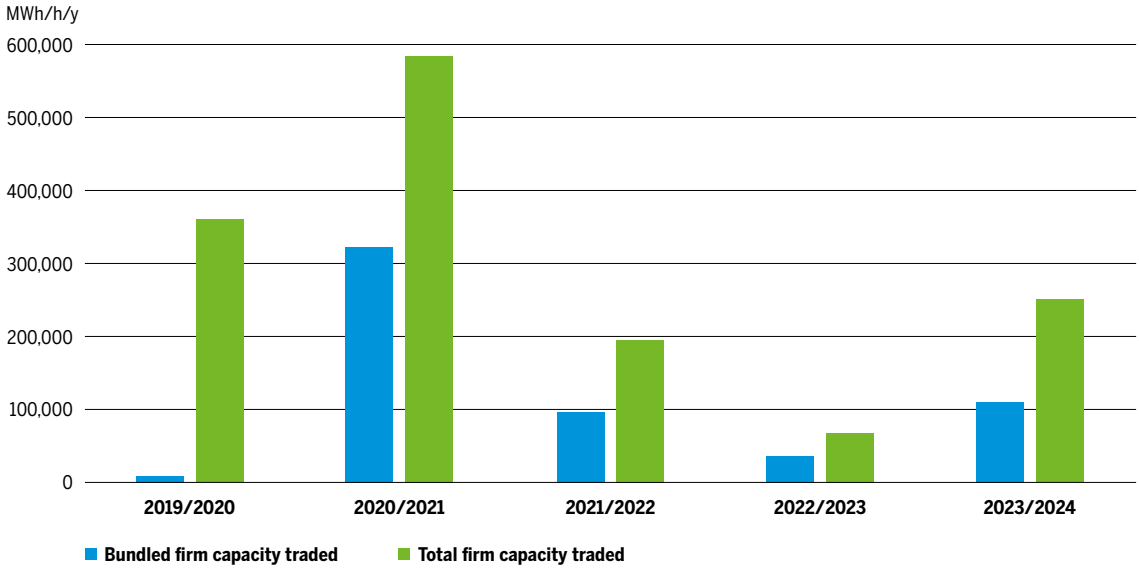

Figure 2: Bundled firm capacity traded on the secondary market related to total firm capacity traded on the secondary market

4.2.3 CAM.2.1: RATIO OF BUNDLED CAPACITY ALLOCATED IN THE SECONDARY MARKET RELATIVE TO THE CAPACITY ALLOCATED THROUGH AUCTIONS

Description of sub indicator CAM.2.1

While the CAM NC aims that EU's gas pipelines are efficiently used. indicator CAM.2.1 is used to assess the total capacity that is allocated through the secondary market and auctions.

Therefore. indicator CAM.2.1 compares the bundled firm capacity allocated on the secondary market in relation to the bundled firm capacity that is allocated in the primary market through auctions.

To calculate this indicator the following formula has been used:

$$\text{CAM.2.1} = \frac{\text{BCTSM}}{\text{BCA}} \times 100\,\%$$

Where:

CAM.2.1: Ratio of total bundled firm capacity allocated on the secondary market relative to the capacity allocated through auctions

BCA: Bundled firm capacity allocated through auctions

BCTSM: Bundled firm capacity traded at the secondary market

Results of sub indicator CAM.2.1

Table 4 shows very low ratios for CAM.2.1 indicating that the total bundled firm capacity that is allocated on the secondary market is minimal compared to the bundled firm capacity allocated through auctions, except for GY 2020/2021 and 2023/2024. When we exclude these GYs, we can still observe continuous increase in the ratio since year 2017.

Ratio bundled firm capacity allocated at the secondary market relative to bundled capacity allocated through auctions					
Gas Year	**2015/2016**	**2016/2017**	**2017/2018**	**2018/2019**	**2019/2020**
Bundled firm capacity allocated through auctions	41,888.00	2,572,547.0	215,581.00	252,891.91	248,323.45
Bundled firm capacity allocated on the secondary market	511.40	13,369.00	1,835.00	10,339.54	9,520.33
Ratio	**1.22 %**	**0.52 %**	**0.85 %**	**4.09 %**	**3.83 %**
Gas Year	**2020/2021**	**2021/2022**	**2022/2023**	**2023/2024**	
Bundled firm capacity allocated through auctions	520,605.05	1,551,044.6	416,882.53	226,481.07	
Bundled firm capacity allocated on the secondary market	321,719.88	96,979.58	35,470.48	110,304.08	
Ratio	**61.80%**	**6.25%**	**8.51%**	**48.70%**	

Table 4: Total bundled firm capacity allocated on the secondary market relative to bundled firm capacity allocated through auctions; capacity in MWh/h/y

4.3 CONCLUSIONS

Based on the results obtained for the different indicators used in this report. the following conclusions can be drawn:

- Bookings for most of the standard bundled firm capacity products for the GY 2022/2023 and GY 2023/2024 related to bookings for unbundled firm capacity are lower to the previous monitoring period.
- The overall quantity of bundled firm capacity allocated through auctions has decreased in the last two GYs compared to the previous monitoring period.
- The share of bundled capacity reallocated by secondary market trades has remained at level of around half of the total amount of firm capacity traded on the secondary market. However, indicator CAM.2.1 shows that the bundled firm capacity allocated using the secondary market remained marginal compared to the capacity allocated through auctions, except for GY 2020/2021 and 2023/2024.

5 ANNEX

5.1 ANNEX 1: LIST OF PARTICIPATING EUROPEAN TSOs

Country	CAM IM (TSOs)	CAM EM (TSOs)
ENTSOG Members		
Austria	TAG GmbH Gas Connect Austria GmbH	TAG GmbH Gas Connect Austria GmbH
Belgium	Fluxys Belgium S.A. Interconnector Fluxys	Fluxys Belgium S.A. Interconnector Fluxys
Bulgaria	Bulgartransgaz EAD ICGB AD	Bulgartransgaz EAD ICGB AD
Croatia	Plinacro d.o.o.	Plinacro d.o.o.
Czech Republic	NET4GAS s.r.o.	NET4GAS s.r.o.
Denmark	Energinet.dk	Energinet.dk
Estonia	Elering AS	
Finland	Gasgrid Finland Oy	
France	NaTran S.A. (formerly GRTgaz S.A.) Teréga S.A.	NaTran S.A. (formerly GRTgaz S.A.) Teréga S.A.
Germany	bayernets GmbH GASCADE Gastransport GmbH Gasunie Deutschland Transport Services GmbH NaTran Deutschland GmbH (formerly GRTgaz Deutschland GmbH) NEL Gastransport GmbH ONTRAS Gastransport GmbH Open Grid Europe GmbH terranets bw GmbH Thyssengas GmbH	bayernets GmbH GASCADE Gastransport GmbH Gasunie Deutschland Transport Services GmbH NaTran Deutschland GmbH (formerly GRTgaz Deutschland GmbH) ONTRAS Gastransport GmbH Open Grid Europe GmbH terranets bw GmbH Thyssengas GmbH
Greece	DESFA S.A.	DESFA S.A.
Hungary	FGSZ Zrt.	FGSZ Zrt.
Ireland	Gas Networks Ireland Ltd.	Gas Networks Ireland Ltd.
Italy	Snam Rete Gas S.p.A.	Snam Rete Gas S.p.A.
Latvia	Conexus Baltic Grid	
Lithuania	AB Amber Grid	
Netherlands	Gasunie Transport Services B.V. BBL Company V.O.F.	Gasunie Transport Services B.V. BBL Company V.O.F.
Poland	GAZ-SYSTEM S.A	GAZ-SYSTEM S.A. GAZ-SYSTEM ISO
Portugal	REN – Gasodutos S.A.	REN – Gasodutos S.A.
Romania	Transgaz S.A.	Transgaz S.A.
Slovakia	eustream a.s.	eustream a.s.
Slovenia	Plinovodi d.o.o.	Plinovodi d.o.o.
Spain	Enagás Transporte S.A.U	Enagás Transporte S.A.U

Table 5: List of participating European TSOs

5.2 ANNEX 2: LIST OF VIPs

VIP	IPs connected and participating TSOs		Implementation date
VIP Ibérico	Tuy. Badajoz Campo Maior IP. Valença do Minho IP	Enagás REN	01/10/2012
VIP Pirineos	Irún. Larrau Biriatou	Enagás Terega	01/10/2014
VIP GCP GAZ-SYSTEM/ONTRAS	Kamminke. Gubin. Lasow	GAZ-SYSTEM. ONTRAS	01/04/2016
VIP Virtualys	Alveringem. Blaregnies Segeo. Blaregnies Troll Alveringem. Taisnières H	Fluxys Belgium GRTgaz	01/12/2017
VIP Brandov	Brandov-STEGAL. Olbernhau II Hora Svaté Kateřiny Brandov-OPAL Deutschneudorf EUGAL Brandov Brandov-OPAL Deutschneudorf	Gascade NET4GAS NET4GAS ONTRAS. GUD. Gascade. Fluxys Deutschland OPAL ONTRAS	01/11/2018
VIP Oberkappel	Oberkappel	OGE. GRTgaz D. Gas Connect Austria	01/03/2019
VIP Waidhaus – NCG	Waidhaus	GRTgaz D. NET4GAS. OGE	01/03/2019
VIP France – Germany	Medelsheim "Obergailbach"	OGE. GRTgaz D. GRTgaz	01/03/2019
VIP Germany – CH	Wallbach	Fluxys TENP. OGE. FluxSwiss	01/07/2019
VIP BENE	s'Gravenvoeren. Zelzate 2 Zelzate 1. Zandvliet H	GTS Fluxys Belgium	01/04/2020
VIP DK-THE	Ellund (GUD) . Ellund (OGE)	GUD. OGE. Energinet.dk	01/10/2021

VIP	IPs connected and participating TSOs		Implementation date
VIP TTF-THE-L	Oude Statenzijl (GTG) Bunde-West (GTG) Oude Statenzijl-L (GUD) Elten (OGE) Tegelen (OGE) Vreden (OGE) Haarnrade (TG) Zevenaar (TG) merger between VIP TTF-NCG-L and VIP-TTF-GASPOOL-L	Thyssengas. GTG. GUD. OGE. GTS	01/10/2021
VIP TTF-THE-H	Oude Statenzijl H (GUD). Bunde (GASCADE). Bocholtz (Fluxys TENP). Bocholtz (OGE). Oude Statenzijl (OGE). Bocholtz Vetschau (TG) (former VIPs: VIP TTF GASPOOL-H. VIP TTF NCG H)	GUD. Fluxys TENP. GASCADE. Thyssengas. OGE. GTS	01/04/2022
VIP THE-ZTP	Eynatten-Raeren (OGE). Eynatten (Fluxys TENP). Lichtenbusch (TG). Eynatten (GASCADE) (former VIP: VIP Belgium – NCG)	OGE. Fluxys TENP. Thyssengas. GASCADE. Fluxys	01/04/2022
VIP Negru Vodă	Ruse-Giurgiu. Negru Voda 1/ Kardam	Transgaz. Bulgartransgaz	Implementation planned at a future point in time – implementation date cannot be estimated at the moment.
VIP BENE-L	IPs "Hilvarenbeek" and "Zandvliet"		01/04/2023

Table 6: List of VIPs

COUNTRY CODES (ISO)

AT	Austria	**IT**	Italy
BE	Belgium	**LT**	Lithuania
BG	Bulgaria	**LU**	Luxembourg
CH	Switzerland	**LV**	Latvia
CY	Cyprus	**MT**	Malta
CZ	Czechia	**NL**	Netherlands, the
DE	Germany	**NO**	Norway
DK	Denmark	**PL**	Poland
EE	Estonia	**PT**	Portugal
ES	Spain	**RO**	Romania
FI	Finland	**RU**	Russia
FR	France	**SE**	Sweden
GR	Greece	**SI**	Slovenia
HR	Croatia	**SK**	Slovakia
HU	Hungary	**UK**	United Kingdom
IE	Ireland		

ABBREVIATIONS

CAM NC	Capacity Allocation Mechanisms Network Code. Commission Regulation (EU) 2017/459
ENTSOG	European Network of Transmission System Operators for Gas as in Article 24 of Regulation (EU) 2024/1789
EU	European Union
GY	Gas Year
INT NC	Interoperability and Data Exchanges Rules Network Code. Commission Regulation (EU) 2015/703
TSO	Transmission System Operator as in Article 2. point 18. of Directive (EU) 2024/1788
VIP	Virtual Interconnection Point as in Article 3. point 23. of Commission Regulation (EU) 2017/459

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