Croatian Energy Regulatory Agency

Consultation document on the reference price methodology in accordance with Article 26 of Commission Regulation (EU) 2017/460 establishing a network code on harmonised transmission tariff structures for gas

This document was adopted on 10 April 2025 by the Decision on the consultation on the reference price methodology, pursuant to Article 26 of Commission Regulation (EU) 2017/460 establishing a network code on harmonised transmission tariff structures for gas, Class: 391-21/24-01/3, Reg. No: 371-04-25-10

Zagreb, April 2025

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Disclaimer

According to the Act on the Regulation of Energy Activities (Official Gazette No. 120/12 and 68/18) and Articles 26 and 27 of the Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas (hereinafter: Regulation 2017/460), the Croatian Energy Regulatory Agency (hereinafter: HERA) is conducting consultations with interested parties regarding the process of adopting regulations and methodologies within the scope of its work, and in particular all the information referred to in Article 26 of the Regulation 2017/460.

The purpose of the consultation is to collect information on the interests, opinions and suggestions of the interested parties in order to raise the level of understanding and acceptance of new regulations, as well as to detect weaknesses and disadvantages in the proposed regulation.

The purpose of this document is to conduct a consultation on the proposed methodology for determining the reference price of gas transmission services in accordance with the Regulation 2017/460, where this consultation refers to a new, fourth regulatory period 2026 to 2030.

The purpose of this document is to provide general information on the expected future trends of elements that affect the calculation of the price of contracted gas transmission services. Therefore, the data and parameters contained in this document are indicative and reflect the best possible estimates of the transmission system operator and HERA, and are thus subject to possible changes.

Only those tariff item amounts adopted by HERA through a decision on the tariff item amounts for gas transmission, prior to their application by the transmission system operator in the upcoming tariff period 2026–2030, are considered binding and have legal effect.

Definitions

The terms used in this document shall have the meanings determined by the acts governing the energy sector, the regulation of energy activities and the gas market.

This document uses additional terms, which shall have the following meanings:

1) „auction premium“ means the difference between the clearing price and the reserve price in an auction;

2) „Directive (EU) 2024/1788“ means Directive (EU) 2024/1788 of the European parliament and of the council of 13 June 2024 on common rules for the internal markets for renewable gas, natural gas and hydrogen, amending Directive (EU) 2023/1791 and repealing Directive 2009/73/EC;

3) „allowed revenue“ means the sum of transmission services revenue and non-transmission services revenue for the provision of services by the transmission system operator for a specific time period within a given regulatory period which such transmission system operator is entitled to obtain under a non-price cap regime and which is set in accordance with Article 78(7)(a) of Directive (EU) 2024/1778;

4) „cost driver“ means a key determinant of the transmission system operator's activity which is correlated to the costs of that transmission system operator, such as distance or technical capacity;

5) „homogeneous group of points“ means a group of similar-type of entry and exit transmission system points for which a reference prices are set;

6) „exit from the transmission system“ means a physical or virtual point of the transmission system, which is the subject matter of contracting transmission services for delivering gas to the transmission system of a neighbouring country, distribution system, gas storage system or final customer;

7) „cluster of entry or exit points“ means a homogeneous group of points which are considered as one entry point or one exit point for the application of the reference price methodology;

8) „multiplier“ means the factor applied to the respective proportion of the reference price in order to calculate the reserve price for a respective quarterly, monthly, daily or intraday standard capacity product;

9) „non-transmission tariffs“ means the charges payable by network users for non-transmission services provided to them;

10) „non-transmission services“ means the regulated services other than transmission services or other than services regulated by Regulation (EU) No 312/2014 that are provided by the transmission system operator;

11) „floating payable price“ means an approach to determine the reference price for the regulatory period depending on certain parameters that could be subsequently adjusted during the regulatory period;

12) „reference price“ means the amount of tariff items i.e. the price for a capacity product for firm capacity with a duration of one year, which is applicable at respective homogeneous group of points;

13) „reserve price“ means the reserve price for a non-yearly standard capacity product calculated based on reference price and the respective multiplier and seasonal factor;

14) „flow scenario“ means a combination of an entry point and an exit point which reflects the use of the transmission system according to likely supply and demand patterns and for which there is at least one pipeline route allowing to flow gas into the transmission network at that entry point and out of the transmission network at that exit point, irrespective of whether the capacity is contracted at that entry point and that exit point;

15) „seasonal factor“ means the factor reflecting the variation of demand within the year which may be applied in combination with the relevant multiplier;

16) „tariff period“ means the time period during which a particular level of reference price is applicable, which minimum duration is one year and maximum duration is the duration of the regulatory period;

17) „transmission services“ means the regulated services that are provided by the transmission system operator within the entry-exit system for the purpose of gas transmission;

18) "contracted capacity" means the capacity of the transmission system contracted by the user under the gas transmission contract, which is considered the maximum daily capacity expressed in kWh/day;

19) „Directive (EU) 2024/1788“ means the Directive (EU) 2024/1788 of the European Parliament and of the Council of 13 June 2024 on common rules for the internal markets for renewable gas, natural gas and hydrogen, amending Directive (EU) 2023/1791 and repealing Directive 2009/73/EC;

20) „entry into the transmission system“ means a physical or virtual point of the transmission system which is the subject matter of contracting transmission services for off-take of gas from the transmission system of a neighbouring country, production gas pipeline network, gas storage system or LNG terminal.

1. INTRODUCTION

1.1. Framework and scope of the consultation

According to the Act on the Regulation of Energy Activities (Official Gazette No. 120/12 and 68/18), Articles 26 and 27 of the Commission Regulation (EU) 2017/460 of 16 March 2017 and HERA's decision as of 3 November 2017, HERA is designated for carrying out the consultations on the reference price methodology for a capacity product for firm capacity with a duration of one year, which is applicable at entry and exit points of Croatian transmission system.

In addition, and in accordance with Article 28 of Regulation 2017/460, HERA shall also conduct consultations on discounts, multipliers and seasonal factors with the national regulatory bodies of all directly connected EU Member States and relevant stakeholders, and simultaneously with the final consultancy referred to in Article 26 of the Regulation 2017/460.

Furthermore, according to a decision by HERA of 3 November 2017, Plinacro Ltd as a national transmission system operator is designated as the party that will publish information before the annual auction of annual gas transmission capacities and prior to the tariff period in the Republic of Croatia, all in accordance with Articles 29 and 30 of the Regulation 2017/460. The national transmission system operator shall publish information on the company's website and on the platform of the European Network of Transmission System Operators for Gas (hereinafter: ENTSOG), in accordance with Article 31, paragraph 1 of the Regulation 2017/460.

Regulation (EU) 2017/460, together with Regulation (EU) 2024/1789, emphasizes the necessity of establishing network codes on harmonised transmission tariff structures for natural gas across the entire European Union, with the aim of fostering the development and integration of gas markets while ensuring the security of natural gas supply.

The core of Regulation (EU) 2017/460 is the reference price methodology (RPM), which serves as the basis for determining tariffs for the yearly standard capacity products. This methodology should be assessed against the Capacity Weighted Distance (CWD) methodology which calculates tariffs based on the distance between entry and exit points, weighted by capacity. This assessment also includes an evaluation of the cost allocation related to transmission services.

The purpose of this document is to conduct a regular consultation on the methodology for determining the reference price for gas transmission services, i.e., the tariff items for gas transmission, which will be applied by the transmission system operator in the Republic of Croatia, PLINACRO Ltd, for gas transmission services in the upcoming fourth regulatory period from 2026 to 2030.

The reference price methodology for calculating referent prices must:

- be transparent in all its components, enabling transmission system users to independently calculate the same reference prices and, to a certain extent, predict their future trends;
- take into account the actual costs incurred in providing transmission services, considering the complexity of the transmission network;
- ensure non-discrimination and prevent unjustified cross-subsidisation, taking into account the Cost Allocation Assessment (CAA) between intra-system and cross-system usage of the transmission system;
- ensure that significant volume-related risks associated with the entry-exit transmission system are not borne by end consumers within that system;
- ensure that the resulting reference prices do not distort cross-border trade.

To ensure the application of a consistent and transparent methodology, this document outlines the proposed methodology for determining the reference price for transmission services, which, in its core principles, will not differ significantly from the methodology applied during the third regulatory period (2021–2025).

The proposed methodology should be compared against the results obtained through the application of the Capacity Weighted Distance (CWD) methodology, as Article 26 of Regulation (EU) 2017/460 designates it as the reference methodology for determining reference prices.

The gas transmission system operator PLINACRO Ltd is currently applying tariffs in the ongoing regulatory period based on the Decision on the rejection of the request for a regular review of the second regulatory period 2017–2020 and on the determination of tariff items for gas transmission for the years of the third regulatory period 2021–2025 for the energy undertaking PLINACRO Ltd, Zagreb, Class: 310-45/20-02/65, Reg. No.: 371-04-20-10, dated 28 December 2020 (hereinafter: the Decision for the third regulatory period), and the Decision on tariff items for gas transmission ('Official Gazette', No. 108/22) dated 14 September 2022, which replaced the previous decision ('Official Gazette', No. 147/20) due to the transition to the use of the gross calorific value instead of the net calorific value, as well as the adoption of the euro as the official currency of the Republic of Croatia. The original decision had been adopted by HERA on 28 December 2020.

The total amount of allowed revenues, which serve as the baseline for calculating the reference prices for gas transmission services for the fourth regulatory period (2026–2030), will be determined during 2025 in accordance with the provisions of the methodology in force at that time for establishing gas transmission tariffs. This document presents indicative forecasted amounts of allowed revenues as submitted by PLINACRO Ltd to HERA, serving as the basis for this consultation, in order to provide transmission system users with insight into the likely direction of future transmission tariffs.

The indicative amounts of allowed revenues presented herein do not include the difference between the revised allowed revenues and the realised revenues for the years of the third regulatory period, which will be allocated to the upcoming, fourth regulatory period.

Accordingly, this document sets out only indicative reference prices for transmission services, which are not binding, as they are based on estimated calculations of the transmission system operator's allowed revenues and projections of transmission system booking and usage for the years of the fourth regulatory period.

The consultation will be conducted over a period of two months, in accordance with Article 26 of Regulation (EU) 2017/460. Within one month following the conclusion of the consultation, HERA will publish the received feedback from the interested public and a summary thereof. Concurrently with the launch of this consultation, HERA will forward the consultation documents to the Agency for the Cooperation of Energy Regulators (ACER) so that ACER may assess whether all relevant information under Article 26(1) of Regulation (EU) 2017/460 has been published and whether the proposed methodology meets all the requirements set out in Articles 4 and 7 of Regulation (EU) 2017/460.

Furthermore, pursuant to Article 28 of Regulation (EU) 2017/460, HERA, as the national regulatory authority, is required, in parallel with the RPM consultation, to conduct a consultation with the national regulatory authorities of all directly connected EU Member States and with the interested public on the discounts applicable to specific points of the transmission system, as well as on the multipliers and seasonal factors used for the calculation of reserve prices.

The anticipated deadline for ACER to issue its analysis and conclusions is two months following the completion of the consultation. Based on this, HERA is obliged to adopt a motivated decision

on all components referred to in Article 26(1) of Regulation (EU) 2017/460 within five months after the conclusion of the consultation. Following the publication of the decision, HERA will submit the decision to ACER and the European Commission.

1.2. Information regarding transmission and non-transmission services

1.2.1. Transmission services

According to Article 4 of Regulation (EU) 2017/460, a service is considered a transmission if the following two conditions are cumulatively met:

a) the costs of the service are caused by the cost drivers of both technical or forecasted contracted capacity and distance, and

b) the costs of such service are related to the investment in and operation of the infrastructure which is part of the regulated asset base for the provision of transmission services.

If any of the criteria outlined in points a) and b) are not met, the service may be classified as either a transmission or non-transmission service within this consultation process.

Revenue from transmission services is primarily generated based on tariffs for contracted capacity, although a portion of the revenue may, in exceptional cases and with the approval of the national regulatory authority, be collected through transmission tariffs based on gas flow or gas quantity.

In the current regulatory period, PLINACRO Ltd applies tariffs based on contracted capacity as a straightforward methodology focused on stable revenue generation without the risks associated with the use of contracted capacity.

Therefore, for the upcoming regulatory period 2026–2030, it is proposed to retain contracted capacity as a transmission service to which transmission tariffs will apply.

1.2.2. Non-transmission services

In addition to the gas transmission service, the transmission system operator PLINACRO Ltd provides the following services in accordance with the provisions of the Gas Market Act ('Official Gazette', No. 18/18, 23/20) (hereinafter: Gas Market Act) and the Transmission System Network Code ('Official Gazette', No. 50/18, 31/19, 89/19, 36/20, 106/21, 58/22, 9/24, hereinafter: Transmission System Network Code):

(i) the connection service to the transmission system and the increase of connection capacity, and

(ii) non-standard services.

The Gas Market Act establishes the regulatory framework for these services, with Article 80 of the Act specifying the conditions for connecting to the transmission system. It clearly states that the costs arising from the connection to the transmission system and maintaining the connection are borne by the customer requesting the connection, and such costs cannot be included in the tariff items for gas transmission.

The Gas Market Act also stipulates that the connection rules to the transmission system are to be detailed in the Transmission System Network Code, and the connection fee and non-standard services are subject to separate methodologies.

Their scope and method of calculation are regulated by the Methodology for Determining the Connection Fee for Gas Distribution or Transmission System and for Increasing Connection

Capacity ('Official Gazette', No. 48/18) and the Methodology for Determining the Price of Non-Standard Services for Gas Transmission, Gas Distribution, Gas Storage, LNG Acceptance and Dispatch, and Public Gas Supply Services ('Official Gazette', No. 48/18, 25/19, 134/21, 9/22). These acts regulate the regulatory framework to ensure that revenue from non-transmission services is collected through fees that correspond to incurred costs, thus ensuring that they are non-discriminatory, objective, and transparent, and in compliance with the requirements of Article 4 of Regulation (EU) 2017/460.

Accordingly, connection services to the transmission system, the increase of connection capacity, and non-standard services, which are provided upon the request of the user and whose costs are not related to investment in infrastructure that is part of the regulated assets for the provision of transmission services, are classified as non-transmission services.

2. EXPLANATION OF PARAMETERS RELATING TO THE TECHNICAL CHARACTERISTICS OF THE TRANSMISSION SYSTEM

2.1. Characteristics of the gas transmission system of the Republic of Croatia

The gas transmission system of the Republic of Croatia is owned by and operated by the transmission system operator, the energy company PLINACRO Ltd, whose founder is the Republic of Croatia. PLINACRO Ltd operates as a certified ownership unbundled transmission system operator. The transmission system extends across all counties of the Republic of Croatia, except for the Dubrovnik-Neretva County, and is shown in Figure 1.

Figure1 Croatian natural gas transmission network

Source: PLINACRO Ltd

PLINACRO Ltd operates the pipeline system through which natural gas from domestic production (the northern part of continental Croatia and the northern Adriatic), from the LNG terminal, from underground gas storage and from imports, via interconnections with Slovenia (Zabok – Rogatec) and Hungary (Donji Miholjac – Dravaszerdahely), is received into the transmission system.

Natural gas is delivered from the transmission system to final customers directly connected to the transmission system, to distribution systems managed by 27 distribution system operators, to two exit interconnections and to two exits towards underground gas storage.

By the end of 2024, the gas transmission system reached a high level of development and completeness, with a total of 155 measurement-reduction stations and 2,544 km of pipelines, of which:

- 17 km of pipelines with an operating pressure of 100 bar,
- 954 km of pipelines with an operating pressure of 75 bar,
- 1,573 km of pipelines with an operating pressure of 50 bar.

Table 1 Basic data on the transmission system of the Republic of Croatia

Transmission system of the Republic of Croatia in 2024	
Number of transmission system operators	1
Total length of the gas transmission system pipeline	2.544 km
Interconnections / transmission system operator	Rogatec / Plinovodi Ltd (SLO) Drávaszerdahely / FGSZ Ltd (HU)
Underground gas storage / gas storage system operator	Okoli and Grubišno Polje/ Podzemno skladište plina Ltd
LNG terminal / LNG terminal operator	Omišalj / LNG Hrvatska Ltd
Entry from domestic production / Gas producer	UMS CPS Molve / INA, Plc UMS Etan, Ivanić Grad / INA, Plc UMS Stari Jankovci / Vermilion, Plc UMS Terminal Pula / INA, Plc
Number of connections to the end consumers connected to the transmission system:	34
Number of connections for distribution systems/ distribution systems operators	Connections: 165 Operators: 27
Balancing zones	1
Transported gas volumes (historical data) (IMRS + UGS)	(in GWh) 2024: 38,787 2023: 40,340 2022: 41,040 2021: 35,198 2020: 36,050 2019: 34,194 2018: 32,787

The total technical capacity of all entry points into the transmission system, including the withdrawal capacity from the underground gas storage, amounts to 304 GWh/day and is given in Table 2.

Table 2 Technical and connection capacities on entries and exits in 2024

ENTRIES	Technical capacity (GWh/day)	EXITS	Technical capacity (GWh/day)	Connection capacity (GWh/day)
Interconnections	130	Distribution	128	262
Production	25	Final customers on transmission system	107	182
LNG terminal	85	Interconnections	59	85
Underground gas storage	64	Underground gas storage	45	45
TOTAL	**304**		**339**	**574**

Source: PLINACRO Ltd

The technical entry capacity of the transmission system is determined by PLINACRO Ltd as the hourly or daily quantity of gas that can be delivered through a given entry point to the main consumption centre. Accordingly, the technical capacity is not defined solely by the diameter of the entry pipeline or the installed metering equipment but reflects the capacity that can be offered to system users. The stated total technical exit capacity from the transmission system, for both distribution systems and final customers, is defined by PLINACRO Ltd as the total maximum firm capacity of the transmission system that the transmission system operator can offer to system users, taking into account the integrity and technical capabilities of the transmission network.

For the upcoming regulatory period, PLINACRO Ltd plans to complete ongoing investments under the supply diversification and transmission system efficiency program, specifically the Zlobin–Bosiljevo DN800/100 bar, Bosiljevo–Sisak DN800/100 bar, Kozarac–Sisak DN800/100 bar, and Lučko–Zabok DN700/75 pipelines. Upon their completion and commissioning in 2026, the UMS Omišalj will be capable of receiving 700,000 m^3/h of gas from the LNG terminal and enabling gas transmission toward Hungary and Slovenia.

Through the implementation of these projects, the maximum hourly capacity is expected to increase to up to 400,000 m^3/h at the interconnection with Hungary and up to 170,000 m^3/h at the interconnection with Slovenia.

For these investments, the Government of the Republic of Croatia adopted on 2 January 2025 the Decision on declaring the project 'Supporting Infrastructure for the Strategic Investment Project – LNG Terminal' a strategic investment project of the Republic of Croatia ('Official Gazette', No. 2/25). This decision follows the European Council's approval for financing through the national recovery and resilience program (REPowerEU), whereby PLINACRO Ltd has been allocated EUR 534 million for the construction of the aforementioned pipelines. These pipelines will enable the transport of gas from the LNG terminal on the island of Krk to Slovenia, Hungary, and other Southeast European countries, as illustrated in Figure 2.

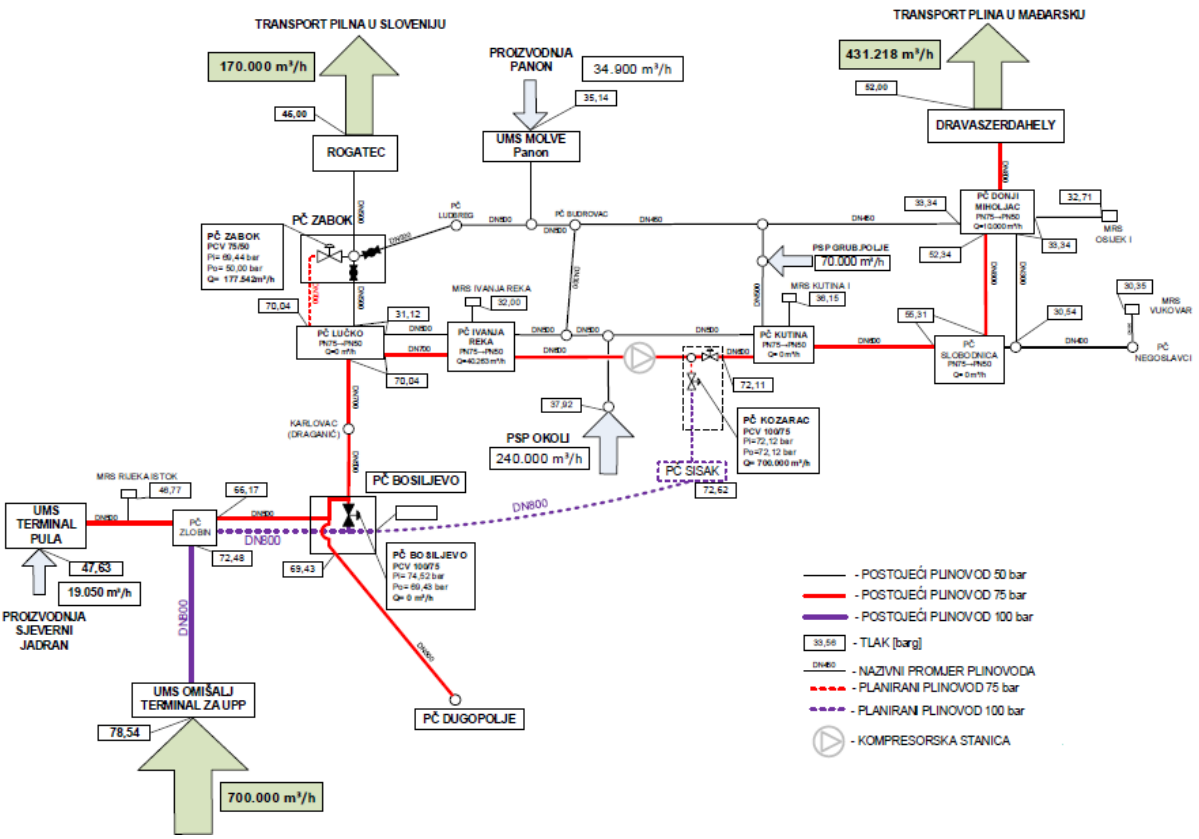

Figure 2 Structural representation of the Croatian transmission system in 2027

Source: Plinacro Ltd, processed by HERA

2.2 Use of the transmission system in the Republic of Croatia

In 2024, a total of 38,773 GWh of natural gas was taken into the transmission system by 15 balancing groups, representing a 4 % decrease compared to 2023, when 40,434 GWh was taken. The largest share of the gas taken into the system 69 % originated from the LNG terminal, while 16 % came from domestic production, 2 % from imports, and 12 % from the underground gas storage, in terms of total entry volumes into the transmission system.

Table 3 Transported gas volumes in 2023 and 2024

	2023 GWh	2024 GWh	Change %
Production	5,592	6,191	11 %
Import	3,275	959	-71 %
LNG terminal	28,082	26,800	-5 %
Underground gas storage	3,394	4,824	42 %
Total entries	**40,343**	**38,773**	**-4 %**

At the same time, in 2024, 18 balancing groups used capacity at the exit points of the transmission system, with a total of 38,787 GWh of gas delivered. Of this amount, 37 % was delivered to final customers connected directly to the transmission system, 28 % to customers on distribution systems, 29 % was exported to neighbouring countries, and 6 % was injected into the underground gas storage.

Table 4 Gas volumes delivered at the exit points of the transmission system in 2023 and 2024

	2023 GWh	2024 GWh	Change %
Distribution systems	11,460	11,778	3 %
Final customers on TS	14,787	13,118	-11 %
Exports	11,852	9,903	-16 %
Underground gas storage	2,241	3,988	78 %
Total exits	**40,340**	**38,787**	**-4 %**

In 2024, the gas transmission service was used by 33 transmission system users grouped into 18 balancing groups. Users contracted transmission system capacity based on requests for yearly, quarterly, monthly, daily, and within-day capacity reservations through the SUKAP system and the auction platforms PRISMA and RBP.

Market conditions and events in the gas sector in both the European Union and the Republic of Croatia influence capacity bookings and usage, particularly at the LNG terminal entry point and at interconnection points. Capacity at interconnection points is predominantly contracted and used on a short-term basis, while on an yearly basis, capacity is more often contracted and used at the LNG terminal entry point and at domestic exit points to meet the consumption needs of final customers connected to the transmission system and customers on distribution systems.

For the period from 1 April 2022 to 30 September 2023, transmission system users contracted, through quarterly capacity product auctions, all available firm capacity at the Donji Miholjac interconnection exit point. As a result, there was no available firm capacity to offer in the monthly auctions for the months from April to September 2023. Therefore, in line with EU gas market regulations, the Donji Miholjac interconnection exit point experienced contractual congestion during the mentioned period.

As a contractual congestion management measure, the 'use-it-or-lose-it' mechanism for firm day-ahead capacity was made available to transmission system users on a daily basis, starting from 31 March 2023, in accordance with Article 14 of Council Regulation (EU) 2022/2576 on enhancing solidarity through better coordination of gas purchases, reliable reference price benchmarks, and cross-border gas exchanges.

Although the 'use-it-or-lose-it' mechanism was applied and interruptible daily capacities were also contracted, the technical capacity was not utilized at 100 % on any given day.

Table 5 Overview of yearly contracted transmission capacities for the 2023

Homogenous group of points	Yearly contracted capacities (kWh/day)		2023 annual weighted
	2023 January-September	2023 October-December	
Entry at interconnection	23,064,840	5,256,000	18,612,630
Entry from production	14,248,690	14,664,150	14,352,555
Entry from the gas storage	12,697,420	19,872,340	14,491,150
Entry from LNG terminal	81,528,760	79,080,190	80,916,618
Exits on interconnections	21,144,000	26,803,944	22,558,986
Exits in Croatia	58,139,720	50,574,920	56,248,520

Source: SUKAP, processed by HERA

Table 6 Overview of yearly contracted transmission capacities for the 2024

Homogenous group of points	Yearly contracted capacities (kWh/day)		2024 Aannual weighted
	2024 January-September	2024 October-December	
Entry at interconnection	5,256,000	1,992,000	4,440,000
Entry from production	14,664,150	14,722,050	14,678,625
Entry from the gas storage	20,459,470	23,127,910	21,126,580
Entry from LNG terminal	79,080,190	74,141,160	77,845,433
Exits on interconnections	26,803,944	8,157,744	22,142,394
Exits in Croatia	50,574,920	42,648,440	48,593,300

Source: SUKAP, processed by HERA

In relation to Council Regulation (EU) 2022/1369 of August 5, 2022, on coordinated measures for reducing gas demand during the period from August 1, 2022, to March 31, 2023, by 15 % compared to the reference gas consumption or the average gas consumption over the previous five consecutive years starting from August 1, 2017, as amended by Council Regulation (EU) 2023/706 of March 30, 2023, the prescribed gas consumption reduction was achieved in the Republic of Croatia during 2023. The greatest impact on the reduction in gas consumption was achieved by final customers on the transmission system, although a reduction in gas consumption was also recorded for final customers on distribution systems.

Looking back over the last 10 years, gas consumption in households has gradually decreased, correlated with temperature changes during the winter months. Gas flows and the balance of transmission have significantly changed when comparing 2023 with 2017, the year which was included in the first consultation on the elements of the methodology for determining the reference price for gas transmission services.

Today, the gas transmission system of the Republic of Croatia is connected to the gas transmission systems of Slovenia and Hungary via bidirectional interconnection pipelines, which are actively used for the import and export of gas. The construction of the LNG terminal on the island of Krk and the export pipelines has ensured a new and diversified supply route for gas, both for the Croatian market and for the markets of other Central and South-eastern European countries, making the Republic of Croatia an important gas hub for enhancing supply security and diversifying gas supply routes in the European Union.

3. ELEMENTS OF THE PROPOSED GAS TRANSMISSION REFERENCE PRICE METHODOLOGY

3.1. Description of the proposed reference price methodology

Reference price methodology is the methodology used for calculation of reference prices for the yearly standard capacity products i.e. the tariff items applied by the transmission system operator to contracted transmission capacities in order to achieve the approved amount of allowed revenue. The resulting tariff items for the contracted annual standard capacity at the entry or exit points of the transmission system represent the reference prices.

The reference price methodology is an integral part of the Methodology for Determining the Tariff Items for Gas Transmission, adopted by HERA in accordance with the provisions of

Article 94 of the Gas Market Act. The Methodology defines the formulas and elements for calculating the allowed revenue of the transmission system operator, the procedure for reconciliation of revenues, the distribution of the allowed revenue, the method, elements, and criteria for calculating the tariff items for gas transmission, i.e., the reference prices, the method for calculating reserve prices, and the method to calculate and settle for fees applied by the transmission system operator for transmission services.

According to the provisions of the Methodology, the regulation of transmission services is based on the method of maximum allowed revenue, which is determined for the transmission system operator, with the application of a floating payable price approach.

The distribution of the allowed revenue and the calculation of the tariff items are based on the entry-exit model, where the revenue from transmission services is collected by applying tariff items based on the standard contracted capacity product, without taking into account the distance between the entry and exit points (the "postage stamp" principle).

The standard capacity product is defined in the Network Rules of the transmission system operator as a specified amount of capacity in a given time period at a specific entry or exit point of the transmission system.

The entry to the transmission system represents a physical or virtual point of the transmission system, which is subject to the transmission service agreement for the following points:

- entry on the cross-border interconnection pipeline (herein: entry on the interconnection), for the intake of gas from the transmission system of a neighbouring country,
- entry from production for the intake of gas from the production pipeline networks,
- entry from the underground gas storage system, and
- entry from the liquefied natural gas (LNG) terminal (herein: entry from the LNG terminal).

The exit from the transmission system represents a physical or virtual point of the transmission system, which is subject to the transmission service agreement for the delivery of gas to the following points:

- exit on the cross-border interconnected with the transmission system of a neighbouring country (exit on the interconnection),
- exit from the underground gas storage system, and
- exit from the transmission system to the distribution system and to the final customers directly connected to the transmission system (exit in Croatia).

In order to ensure consistency in regulation, it is proposed to continue applying the "postage stamp" principle for determining the reference prices for gas transmission services in the following regulatory period. By applying this principle in the methodology, cost-based and non-discriminatory application of transmission service prices for users is ensured, with simplicity and transparency in application.

Due to the specific nature of the transmission system of the Republic of Croatia and the way the system is used by the users, the "postage stamp" principle for setting reference gas price takes into account the allowed revenue of the operator and the forecasted contracted capacity on the transmission entry or exit points, while the distances between the entry and exit points are not considered in the calculation of tariff items.

The distribution of the allowed revenue and the determination of tariff items are based on the entry-exit model of homogeneous points, applying the same tariff item for gas transmission for individual entry and exit measuring points of the same group of homogeneous points, regardless of the length of the transport route.

Key advantages of the proposed Methodology:

- transparency in application;
- simplicity in calculating reference prices using fewer input parameters – the allowed revenue of the operator, the distribution ratio of revenue for entry and exit points, and the expected annual amounts of contracted capacities for each homogeneous point of the transmission system;
- users are able to independently obtain the same calculation of reference prices for current and future tariff periods;
- more accurate projections of future price movements since the methodology does not consider the distance between the exit and entry points as a factor affecting transmission costs, which would aggravate the calculation due to tracking new investments by the operator that change the length of the transmission network. Introducing a new point into the system or changing the distance between existing transmission system points would require recalculating tariffs for all transmission system points;
- non-discrimination among system users by applying homogenization, meaning users pay the same price for a given service;
- encouraging long-term investments in the energy sector due to known regulatory frameworks for the next five years;
- reducing energy poverty and fostering economic progress in less developed and more remote parts of the Republic of Croatia compared to the entry points of the transmission system;
- protecting gas customers and preventing price discrimination for users located in areas distant from the system entry points;
- by applying the "postage stamp" principle, the volume risk associated with gas transports through the entry-exit system is reduced, ensuring that this risk is not borne by the end customers within that entry-exit system;
- all users of the transmission system proportionally benefit from changes in reference prices due to changes in the level of contracted capacities;
- investments in the transmission system are equally shared by all users, regardless of their location, as all users indirectly benefit from the increased use of the system;
- the proposed methodology has contributed to ensuring the security of natural gas supply in the Republic of Croatia and neighbouring EU member states due to strong use of the LNG terminal and gas exports to neighbouring countries.

Table 7 presents an overview of the key elements used for the proposed reference price methodology.

Table 7 Elements used for the proposed reference price methodology

Elements of the reference price methodology	Proposed implementation for the next tariff/regulatory period
Reference price methodology framework (Transmission tariffs)	(1) „floating payable price“ approach for standard capacity products (2) entry-exit model for allocation of allowed revenue and calculation of reference prices. (3) Entry and exit reference prices set for homogeneous groups of points according to the "postage stamp" principle, (4) transmission system revenues are collected based on the contracted capacity, regardless of the usage of the contracted capacity or the distance of the transport route from the entry to the exit points.
Transmission system cost drivers	Forecasted contracted capacities
Transmission services	Gas transmission service
Non- transmission services	(1) Connection service to the transmission system or increase in connection capacity (2) Non-standard services provided by the transmission system operator
Capacity-commodity split of revenues	100 % from contracted capacity
Commodity-based transmission tariffs	Not applicable
Entry / Exit split of revenue	60 % on entry points and 40 % on exit points
Adjustments of tariffs at entry and exit	(1) 90 % discount at the entrance to the transmission system from the storage facilities (2) 100 % discount at the exit from the transmission system to the storage facilities

Regulation 2017/460 defines the reference price as the price for a firm standard capacity product with a duration of one year, which is applicable at entry and exit points, and used to set to set capacity-based transmission tariffs.

The methodology for determining the reference price defines how the allowed revenue of the transmission system operator will be distributed across the system’s entry and exit points. As a result, the tariff item for gas transmission for the contracted firm standard capacity on an annual basis at an entry or exit point in the system, represents the reference price.

Based on the results of simulations conducted according to the elements prescribed by Regulation 2017/460, HERA proposes to maintain the existing. Postage Stamp Methodology as a reference price methodology. This methodology sets reference prices based on forecasted allowed revenues for the operator and the forecasted contracted capacities on entry and exit points, without taking into account the distances between the entry and exit points for the relevant gas flow scenarios.

Due to the specific configuration of the transmission system in the Republic of Croatia, the distances of key entry points into the system and the location of dominant exit points for consumption, a methodology that would take into account both the distance between entry and exit points weighted by capacity would not be acceptable. This would lead to significant deviations in the resulting tariff amounts and could result in cross-subsidization between system users, with the risk of changes in gas flows due to non-competitive tariff rates at certain points. Consequently, there would be a risk to the security of supply and the functioning of the internal gas market, as well as the viability of the transmission system operator due to a lack of capacity contracts at points where the value of reference prices would not be at a competitive level.

The reference price will be published by HERA's decision on the amount of tariff items for each type of tariff item, expressed in the official currency of the Republic of Croatia, EUR/kWh/day, rounded to four decimal places. The reference prices determined and published according to the approved methodology will come into effect on January 1, 2026.

3.2. Homogeneous group of points and system capacities

Regulation 2017/460, in Article 6, prescribes the application of the same methodology for setting the reference price at all entry and exit points of an entry-exit system.

According to the definition in Regulation 2017/460, homogeneous groups of points include a group made up of one of the following types of entry-exit points in the transmission system, which can be included in a homogeneous group to harmonize tariffs for all points in the same group:

- entry interconnection points,
- exit interconnection points,
- domestic entry points,
- domestic exit points,
- entry points to gas storage,
- exit points from gas storage,
- entry points to LNG terminals,
- exit points from LNG terminals, and
- entry points from production facilities.

Accordingly, for the application of the methodology based on the "postage stamp" principle in the gas transmission system of the Republic of Croatia, the homogeneous groups of points defined by the applicable methodology are retained. For these points, tariff items are set as specified in Table 7, ensuring consistency in the regulation of the gas transmission sector.

Due to a 100 % discount applied to exits from the transmission system to gas storage to avoid double charging for gas transmission to and from the storage, no tariff item is determined for this exit point.

When considering the homogenization of points, it is possible to carry out the homogenization of a specific group of closely located entry or exit points that, for the purpose of applying the reference price methodology, are considered as a single entry or exit point. This connection is called a point cluster, creating a certain virtual point within the system.

To reduce the number of entry-exit combinations and simplify the cost allocation model for the calculation of the reference price according to the CWD methodology, as per the obligations in Articles 5 and 8 of Regulation 2017/460, the connection of certain exit points within the same local area in Croatia into a cluster has been carried out. Table 8 presents the analysis of 16 cluster points created by merging certain connection points and provides their technical specifications.

Table 8 Cluster and connection points at domestic exits overview

ID	CLUSTER NAME AND INDIVIDUAL CONNECTION POINTS	CONNECTION CAPACITY (kWh/d)	TECHNICAL CAPACITY (kWh/d)
1253	Baranja	1,973,424	1,074,000
882	Beli Manastir - 3 bar		
728	Mece - 3 bar		
1252	Bjelovar	3,798,840	2,677,296
879	Bjelovar - 3 bar		
852	Nova Rača - 3 bar		
803	Rovišće - 3 bar		
1287	Dugo Selo	3,452,160	1,253,544
1324	Dugo Selo II - 3 bar - Trstenik		
866	Dugo Selo - 3 bar		
1250	Ivanić Grad	2,417,448	1,262,856
891	Graberje - 1,5 bar - Graberje		
869	Ivanić III - 3 bar - Ivanić Grad		
892	Kloštar Ivanić - 2 bar		
845	Novoselec - 2 bar - Križ		
1302	Konjščina	2,266,608	790,056
912	Konjščina - 25 bar - Zlatar Bistrica		
808	Konjščina - 3 bar		
1323	Podrute - 3 bar		
1286	Kutina	7,528,464	1,479,168
838	Banova Jaruga - 3 bar		
820	Kutina I - 3 bar		
821	Kutina II - 3 bar		
871	Lipovica - 3 bar - Ludina		
895	Ravnik Popovača - 5,5 bar		
1259	Međimurje	9,805,440	4,537,104
827	Mihovljan - 4 bar		
906	Mursko Središće - 3 bar		
1184	Nedelišće - 4 bar - Čakovec, Kuršanec, Šenkovec		

ID	CLUSTER NAME AND INDIVIDUAL CONNECTION POINTS	CONNECTION CAPACITY (kWh/d)	TECHNICAL CAPACITY (kWh/d)
1289	Novi Marof	2,565,480	821,760
913	Novi Marof - 3 bar		
757	Tuhovec - 3 bar		
809	Podrute - 5 bar		
1317	Osijek - Đakovo	14,603,328	9,328,560
782	Bizovac - 3 bar		
918	Osijek I - 3 bar		
737	Osijek I - 3 bar - Sarvaš		
739	Osijek III - 3 bar		
760	Đakovo - 3 bar		
834	Đakovo - 6 bar		
835	Strizivojna - 3 bar		
1256	Požega	4,094,856	2,178,648
786	Ferovac - 3 bar		
740	Požega - 3 bar		
1257	Slatina	2,220,120	721,608
940	Sladojevci - 3 bar		
887	Slatina - 3 bar		
915	Čađavica - 3 bar		
1251	Varaždin	14,504,688	8,289,720
798	Cerje Tužno - 3 bar		
800	Jalžabet - 3 bar		
773	Lepoglava - 3 bar		
724	Ludbreg - 3 bar		
804	Varaždin I - 3 bar		
876	Varaždin II - 3 bar		
1318	Virovitica	3,512,712	1,899,480
771	Đolta - 3 bar - Sušare Đolta		
909	Suhopolje - 3 bar		

907	Nedelišće - 4 bar			854	Virovitica - 6 bar		
1319	Našice	2,022,768	1,171,488	1285	Vukovar	5,870,952	1,940,784
860	Našice grad - 3 bar			816	Vukovar - 3 bar		
784	Đurđenovac - 3 bar			864	Vukovar - 6 bar - Borovo		
785	Feričanci - 3 bar						
733	Koška - 3 bar						
1288	Nova Gradiška	5,303,592	1,294,296				
844	Lipovljani - 4 bar						
767	Nova Gradiška - 4 bar						
889	Nova Kapela - 4 bar						

Given the above mentioned, following homogeneous group of transmission system entry-exit points for which separate tariffs will be determined are implemented to transmission system in Croatia, as listed in Table 9.

Table 9 Homogeneous group of transmission system points in Croatia and connected tariff items

Group of entry/exit points	Tariff items
Entry groups in the transmission system	
Entry at interconnections	$T_{U,IN}$
Entry from production	$T_{U,PR}$
Entry from gas storage	$T_{U,SK}$
Entry from LNG terminal	$T_{U,UPP}$
Exit groups from transmission system	
Exits at interconnections	$T_{I,IN}$
Exits in Croatia	$T_{I,HR}$

Operator PLINACRO Ltd in the upcoming regulatory period anticipates the following technical capacities for homogeneous groups of entry and exit points, with the following assumptions:

- the capacities of entry points into the transmission system are planned to be at equal levels for all entry points, except for the entry from the LNG terminal, which in 2026 will be 103,588.6 MWh/day and 181,280 MWh in 2027 due to the expansion of the terminal operated by LNG Croatia Ltd and the planned completion of the transmission system pipelines,
- the exits in Croatia (16 clustered points and 158 individual exit points) will maintain the same technical capacity throughout the entire period at 229,657 MWh/day,
- the exits at interconnections will increase in 2027, due to the expansion of the LNG terminal capacity and the pipelines in the transmission system, from 58,619 MWh/day in 2026, to 145,584 MWh/day in 2027 and remain at these levels until 2030. The planned technical capacities at the interconnections will increase with the construction

of REPowerEU projects, which include the Zlobin – Bosiljevo, Bosiljevo – Sisak, Kozarac – Sisak, and Zabok – Lučko pipelines, enabling an increase in transmission capacity to Slovenia from the current 7,731 MWh to 43,808 MWh and an increase in capacity to Hungary to 101,776 MWh,

- the exit capacities to storage remain at the same capacity, but they do not impact the calculation of tariff items due to the application of a 100 % discount.

The technical capacity is not included as an input parameter in the calculation of indicative reference prices for the upcoming period, as Regulation 2017/460 specifies the forecasted contracted capacity as the valid input parameter for determining the reference price.

The technical capacities at the entry and exit points of the transmission system of the Republic of Croatia are presented in Table 10.

Table 10 Technical capacities at the entry and exit points of the system

in MWh/day	2026	2027	2028	2029	2030
EXITS					
Exits in Croatia	229,657	229,657	229,657	229,657	229,657
Exits at interconnections	58,619	145,584	145,584	145,584	145,584
Exit to gas storage (100 % discount)	45,428	45,428	45,428	45,428	45,428
ENTRIES					
Entries from gas storage	60,571	60,571	60,571	60,571	60,571
Entries from production	18,678	18,678	18,678	18,678	18,678
Entries at interconnections	130,872	130,872	130,872	130,872	130,872
Entry from LNG terminal	85,461	181,280	181,280	181,280	181,280

Existing and planned structure of technical capacities in Croatia in the period 2025–2027:

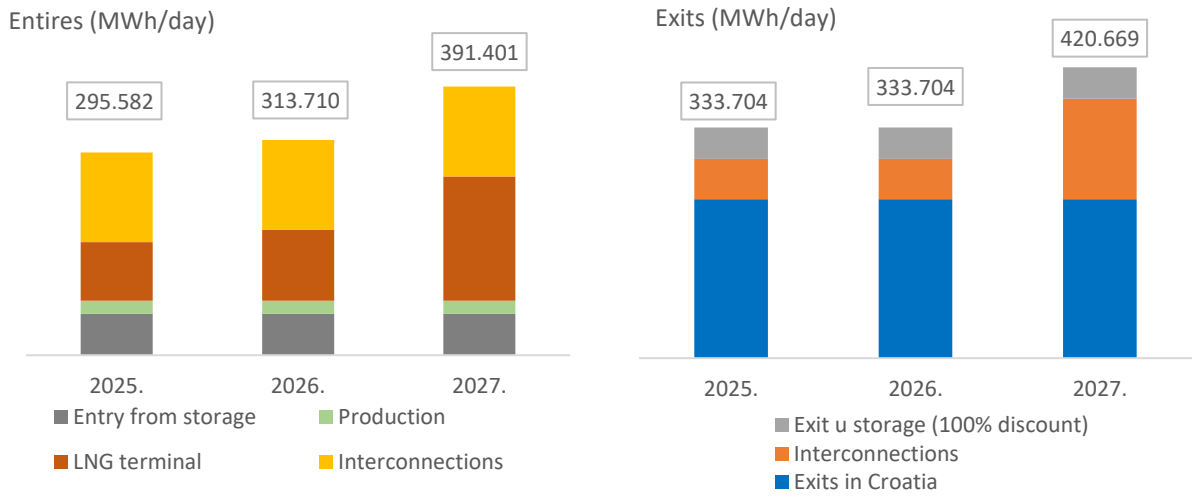

Figure 3 Existing and planned structure of technical capacities in the Republic of Croatia in the period 2025–2027

The planned contracted capacities of homogeneous groups of entry and exit points of the transmission system for the period 2026–2030, which are included in the calculation of indicative tariffs for the upcoming regulatory period, are presented in Table 11, and are based on the following assumptions:

- the planned contracted entry capacity from the LNG terminal is increased due to the expansion of the terminal's maximum regasification capacity, resulting in a forecasted contracted capacity of 103,589 MWh/day in 2026 and 145,025 MWh/day in 2027. It is also planned that this entry point will fully dominate the supply chain, meaning that no gas imports via interconnections are expected during the upcoming regulatory period;
- entry from domestic production is planned to increase in 2026 compared to 2025, due to the exploitation of new fields in Slavonia. However, for the remainder of the period, a projected average annual decline of 10 % is anticipated. Any potential increase in production from new gas fields is estimated to occur after 2030;
- the planned contracted entry capacity from the gas storage facility is projected to remain constant at 34,853 MWh/day for all years of the upcoming regulatory period;
- the planned contracted capacity at exit points on interconnections is expected to increase due to the expansion of technical capacity, starting from 2027. It is planned to contract 16,079 MWh/day at the Rogatec exit point toward Slovenia, and 40,864 MWh/day at the Donji Miholjac exit point toward Hungary;
- domestic exits in Croatia are expected to amount to 104,133 MWh/day in 2026, based on contracted capacities realized in the previous two years, including an increase in contracted capacities by final customers on the transmission system of 18,000 MWh.

Table 11 Planned contracted capacities at entry and exit points of the transmission system for the period 2021–2026

in MWh/day	2026	2027	2028	2029	2030
EXITS					
Exits in Croatia	104,133	104,133	104,133	104,133	104,133
Exits at interconnections	15,848	56,943	56,327	53,016	51,629
ENTRIES					
Entries from gas storage system	34,852	34,852	34,852	34,852	34,852
Entry from production	16,392	16,052	15,436	12,125	10,738
Entries at interconnections	0	0	0	0	0
Entry from LNG terminal	103,589	145,024	145,024	145,024	145,024

3.3. Information on the allowed revenue of the transmission system operator for transmission services and the proposed allocation of allowed revenue

Regulation (EU) 2017/460, Article 8, Paragraph 1, stipulates that, when calculating tariffs using the Capacity Weighted Distance (CWD) methodology, a revenue split of 50:50 between all entry and exit points should be applied. However, this ratio is not prescribed as a mandatory requirement in the final proposed methodology.

Given that the selected methodology for determining transmission tariffs aims, among other objectives, to ensure non-discrimination and to prevent unjustified cross-subsidisation among different system users, HERA considers it appropriate to maintain the current revenue allocation ratio of 60:40. This approach is further substantiated by a lower value of the Cost Allocation Assessment (CAA) index compared to the index resulting from a 50:50 revenue split.

This allocation method - based solely on contracted capacity regardless of the actual volume of gas transported, and the elimination of the discount previously applied to the entry point from

the liquefied natural gas (LNG) terminal (in place over the past five years), significantly mitigates the risk of cross-subsidisation by other system users. This effect is measurable through the resulting values of the CAA index.

A significant increase in cross-border utilisation of the transmission system is expected during the upcoming regulatory period, following the construction of new gas infrastructure. This development will facilitate the contracting of additional capacities toward Central and Eastern Europe. Accordingly, the proposed allocation of entry and exit revenue supports such usage of the network while ensuring a proportional distribution of system costs.

According to the Methodology for Determining the Amount of Tariff Items for Gas Transmission, the planned allowed revenue should cover the justified operating costs incurred in the provision of gas transmission services and ensure a return on regulated assets. For each regulatory year, this is comprised of:

- planned operating costs of the business,
- planned depreciation of regulated assets,
- planned return on regulated assets.

The resulting allowed revenue amount is then further reduced by the planned revenue from connection fees and capacity increase charges, as well as the planned revenue from non-standard services, for which fee amounts are determined according to separate methodologies. Additionally, it is reduced by planned other business revenues not related to the core operations of the operator. At the end of the regulatory period, a reconciliation of revenues (regular revenue audit) is performed, which serves as a corrective mechanism to account for any discrepancies between the actual revenues achieved and the estimated input parameters used for calculating the allowed revenue. Any difference between the actual revenues for the regulatory period and the revised allowed revenues for that period results in an increase or decrease in the planned allowed revenue for the following regulatory period.

For the current, third regulatory period, in accordance with the Methodology for Determining the Amount of Tariff Items for Gas Transmission, HERA, in the process of determining the planned return and planned depreciation of regulated assets as elements for calculating allowed revenue, has conducted an analysis of the economic efficiency of the regulated assets of the transmission system operator, PLINACRO Ltd. As a key parameter for the economic justification of investments in long-term assets, the utilization of contracted capacities in the transmission system was applied. Based on this, the justified amount of depreciation and return on regulated assets in the allowed revenue calculation was determined.

The capacity utilization of all exit points from the transmission system was applied as an indicator of the system's capacity utilization. This was calculated using the achieved values of maximum capacity utilization, contracted capacities, and technical capacities of exit points from the transmission system in previous years. Subsequently, the planned capacity utilization for all exit points was projected for future years based on the planned contracted and technical capacities.

For 2026, the first year of the upcoming regulatory period, the transmission system operator, PLINACRO Ltd, envisages a planned total allowed revenue of €78.2 million, which represents an increase of €23.8 million compared to the approved revenue for 2025, as determined by HERA in 2020 under the Decision for the third regulatory period. This increase is expected due to the alignment of operating costs with actual outcomes, the inclusion of new investments in regulated assets, however without taking into account the element of the economic justification parameter for investments in long-term assets, as well as the reconciliation of revenues between regulatory periods.

When determining the allowed revenue for the years of the next, fourth regulatory period, HERA will consider the application of this approach. Consequently, the indicative allowed revenue amounts, as projected by PLINACRO Ltd in Table 12, do not include the mentioned adjustment nor the amount for revenue reconciliation due to the regular revenue review.

With the application of the aforementioned adjustments, the allowed revenue amounts for the fourth regulatory period 2026–2030 are expected to be lower than the planned indicative amounts listed in Table 12.

The planned indicative amounts of allowed revenue for the transmission system operator for the years 2026–2030 are presented in Table 12, with a revenue distribution ratio of 60 % from system entry points and 40 % from system exit points, as in the current regulatory period.

Table 12 Projected allowed revenue of the transmission system operator based on indicative tariff items for the years 2026–2030, according to the proposal by PLINACRO Ltd

Indicative revenues in 000 EUR	**4th Regulatory Period (2026–2030)**				
	2026	**2027**	**2028**	**2029**	**2030**
Projected Allowed Revenue (AR) in the Regulatory Year	78,193	78,718	79,245	79,777	80,312
Share of AR from Capacity	100 %	100 %	100 %	100 %	100 %
Share of AR from Commodity	0 %	0 %	0 %	0 %	0 %
Share of Revenue from Entries	60 %	60 %	60 %	60 %	60 %
Share of Revenue from Exits	40 %	40 %	40 %	40 %	40 %
Revenue from Entries	46,916	47,231	47,547	47,866	48,187
Revenue from Exits	31,277	31,487	31,698	31,911	32,125

The allowed revenue for the year 2025, as the final year of the current regulatory period, was determined by the decision of HERA from 2020, in the amount of EUR 54,391,927. For the calculation of tariff items, the revenue distribution ratio of 60 % from entry points and 40 % from exit points of the system was also applied.

Regarding the capacity and commodity ratio, in accordance with the provisions of Article 4, Paragraph 3 of Regulation 2017/460, it is proposed that the total allowed revenue for the operator in the upcoming regulatory period be derived exclusively from the contracted standard capacity products. Consequently, a capacity-to-commodity revenue ratio of 100 %: 0 % is proposed, as the suggested methodology does not foresee the application of charges based on gas flow, i.e., the application of transmission tariffs based on commodities.

The share of revenue expected to be generated from all system entry points for the year 2026 is EUR 46.9 million (60 %), while the revenue from exits is expected to amount to EUR 31.3 million (40 %).

The total allowed revenue refers to the revenues the operator generates from the sale of yearly and non-yearly standard capacity products of the transmission system.

The transmission system operator carries out the capacity booking process in accordance with the provisions of Regulation 2017/459 and offers the possibility to contract all envisaged standard capacity products at all points of the transmission system.

3.4. Adjustment of transmission tariffs at entry and exit points of the system

3.4.1. Proposed discounts on storage entry and exit points

In Croatia there is only one natural gas storage facility under the management of the energy company Podzemno skladište plina Ltd.

The storage facility is technologically connected with the main gas pipeline of the Republic of Croatia, with technical capacity of 4.7725 TWh of natural gas, with the primary purpose of ensuring security of gas supply during the heating season and providing seasonal balancing of the gas system.

Gas storage represents a significant interest of the Republic of Croatia, primarily due to its role in enhancing the security and reliability of gas supply through efficient operation and active use of contracted storage capacities In addition to the above, the use of gas storage enables energy entities to efficiently manage their energy products portfolio, which subsequently impacts the cost of gas supply to consumers.

Accordingly, in order to ensure system flexibility and security of supply, for the next regulatory period 2026-2030, it is proposed to keep the amounts of discounts on transmission tariffs at storage entry and exit points as follows:

- 90 % discount for entry into the gas transmission system from gas storage;
- 100 % for exit from the transmission system and entry of gas into the gas storage system, in order to avoid double charging for gas transmission to and from the gas storage system.

3.4.2. Adjustment of transmission tariffs at other points of the system in addition to the adjustment of transmission tariffs at storage entry and exit points

Regulation 2017/460 also provides for the possibility of applying a discount to the corresponding capacity-based transmission tariffs at entry points from LNG facilities, and at entry points from and exit points to infrastructure developed with the purpose of ending the isolation of Member States in respect of their gas transmission systems.

During the years of the third regulatory period, a discount of 15 % was applied to the tariff item for entry from the LNG terminal, thereby compensating the remaining difference up to the amount of planned revenue entry at other entry points of the transmission system (entry from domestic production and entry at the interconnection). Considering that since the start of operation of the LNG terminal, the contracted capacity of LNG terminal has been high and that the existing LNG terminal capacity has been fully booked until the gas year 2036/2037, and that the LNG terminal is currently being upgraded to enable an increase in input capacities into the transmission system, thereby increasing the security of gas supply to Croatia and neighbouring countries, HERA does not find it necessary to continue applying this discount. In addition, the even distribution of transmission costs at all entry points of the transmission system can encourage additional investments in domestic gas production and enable users to optimally manage the short-term portfolio of transmission system capacities, thereby enabling greater flexibility and competitiveness of different supply routes and energy portfolios for entities on the gas market. Finally, the abolition of this discount would completely avoid any cross-subsidization between users contracting capacities at the entry point of the transmission system.

3.5. Cost allocation assessments and cost drivers

The purpose of the cost allocation assessment (CAA) as outlined in Regulation 2017/460 is to determine whether there is cross-subsidization between users of the intra-system and cross-system usage.

Assessment indicates the ratio between expected revenues and corresponding amount of contracted capacity, separate for intra-system and cross-system network use, according to calculations prescribed in Article 5 of Regulation 2017/460.

Article 5 of Regulation 2017/460 provides the option to choose between the following cost drivers that may affect system costs:

i. technical capacity,

ii. forecasted contracted capacity,

iii. technical capacity and distance,

iv. forecasted contracted capacity and distance.

Considering the possible factors mentioned above and the characteristics of the proposed methodology based on the postage stamp principle for determining the reference price, HERA applies the forecasted contracted capacity for the cost allocation assessment for calculation of reference price methodology.

At the same time, technical capacity, due to its relatively low level of utilization (35 % of transported gas quantities at the entry and 31 % at the exit in relation to the total technical capacity on an annual basis), is not considered a relevant factor on costs for application in the reference price methodology and also provides higher levels of the CAA index with the same model parameters.

The results of the cost allocation assessment (CAA) using different input parameters and resulting tariffs are presented below in order to compare and demonstrate the selection of the proposed methodology in a relevant way.

The main parameters for cost allocation assessment on intra-system and cross-system network use by type of input data are submitted in the following Table 13.

Table 13 An overview of factors that affect the allocation of costs for CAA calculation for the year 2026 (according to Article 5(5)(a) of the Regulation 2017/460)

Type of entry	Intra-system capacity weighted average distance	Cross-system capacity weighted average distance	Intra-system forecasted annual contracted capacity	Cross-system forecasted annual contracted capacity
Entry from the gas storage	1,782,513,610	397,214,563	31,992,254	2,860,231
Entry from production	2,072,382,120	926,043,522	13,354,107	2,697,599
Entry at interconnection	0	0	0	0
Entry from LNG terminal	28,086,267,407	2,712,744,793	133,122,418	11,901,657
Total	**31,941,163,137**	**4,036,002,878**	**178,468,779**	**17,459,487**

Given that the transmission system of the Republic of Croatia is characterized by wide dispersion due to the geographically fragmented territory, a methodology that would include both contracted capacity and distance as factors influencing costs would result in a CAA allocation index in 2026 of 12.81 % and a reference price at exit interconnection points of 0.4849 EUR/kWh/day, which is estimated to be too high price level that would negatively impact the ability to book capacities on interconnections and could potentially endanger gas exports from LNG terminal.

Such reference price levels would undermine cross-border trade and the level of cross-system network use that is currently trying to stimulate the existing investment in transmission infrastructure. In addition, due to the plan to make the entry from the LNG terminal the dominant gas entry point into the system, the CWD model results in a tariff amount of 0 EUR at each of the entries at interconnection, which would require the tariff items at these points to be adjusted in accordance with the possibilities set out in Article 6(4) of Regulation 2017/460, either by equalising it with the tariff item for entry from the LNG terminal or entry from production. Regardless of the amount that would be determined, it has no impact on the calculation of cost allocation, given that there is no forecasted contracted capacity at these points. The results of the cost allocation assessment (CAA) and tariffs by contracted capacity and distance are presented in Table 14.

Table 14 Results of the cost allocation assessment (CAA) and tariffs by contracted capacity and distance for the year 2026 according to Article 8 (1)(e) of the Regulation 2017/460

CONTRACTED CAPACITY AND DISTANCE (CWD)				
Capacity based allowed revenue (EUR)	78,193,355			*EUR/kWh/ day*
Revenue from annual capacity (EUR)	70,374,020		Exit tariffs	
Entry ratio	50 %		Exit at interconnection	0.4849
Exit ratio	50 %		Exit in Croatia	0.2641
Revenues from entry (EUR)	35,187,010		Entry tariffs	
Revenues from exit (EUR)	35,187,010		Entry from the gas storage	0.0114
Revenues from entry for intra-system network use (EUR)	33,642,209		Entry from production	0.2559
Revenues from entry for cross-system network use (EUR)	1,544,801	5(5) (c)	Entry at interconnection	0.0000
Revenues from exit for intra-system network use (EUR)	27,502,050	5(5) (b)	Entry from LNG terminal	0.2954
Revenues from exit for cross-system network use (EUR)	7,684,960			
Revenues – intra-system (EUR)	61,144,259			
Revenues – cross-system (EUR)	9,229,761			
Cost drivers (capacity and distance)			Cost allocation index	
Intra-system for entries	25,505,524,155		for intra-system network use	0.00119
Intra-system for exits	25,792,248,410			

Total - intra-system	51,297,772,565			
Cross-system for entries	1,528,747,993		for cross-system network use	0.00135
Cross-system for exits	5,282,145,589			
Total - cross-system	6,810,893,582		**CAA**	**12.81 %**

In the case of a change in the entry / exit ratio in the CWD model from 50:50 to the ratio from the proposed in the postage stamp methodology of 60:40, the cost allocation index results in a value of 3.43 %, but with a significant increase in the amount of tariff items at the entry from the LNG terminal and substantial distortions in the amount of tariff items at exits from the transmission system.

Table 15 Results of the cost allocation assessment (CAA) and tariffs by contracted capacity on postage stamp methodology for the year 2026

CONTRACTED CAPACITY (POSTAGE STAMP METHODOLOGY)				
Capacity based allowed revenue (EUR)	78,193,355			*EUR/kWh/day*
Revenue from annual capacity (EUR)	70,374,020		Exit tariffs	
Entry ratio	60 %		Exit to interconnection	0.2346
Exit ratio	40 %		Exit in Croatia	0.2346
Revenues from entry (EUR)	42,224,412		Entry tariffs	
Revenues from exit (EUR)	28,149,608		Entry from the gas storage	0.0342
Revenues from entry for intra-system network use (EUR)	40,351,570		Entry from production	0.3420
Revenues from entry for cross-system network use (EUR)	1,872,841	5(5)(c)	Entry from interconnection	0.3420
Revenues from exit for intra-system network use (EUR)	24,429,578	5(5)(b)	Entry from LNG terminal	0.3420
Revenues from exit for cross-system network use (EUR)	3,717,975			
Revenues – intra-system (EUR)	64,781,148			
Revenues – cross-system (EUR)	5,590,817			
Cost drivers (capacity and distance)			Cost allocation index	
Intra-system for entries	148,104,454		for intra-system network use	0.22564
Intra-system for exits	138,985,384			
Total - intra-system	287,089,838			
Cross-system for entries	6,729,076		for cross-system network use	0.24763
Cross-system for exits	15,848,146			
Total - cross-system	22,577,223		**CAA**	**9.29%**

The amount of the cost allocation index in 2026, with an entry-exit ratio of 60:40 as applied in the current regulatory period, is 9.29 % which is lower than the threshold of 10 % prescribed by Article 5 of Regulation 2017/460, thus the results of the proposed methodology are adequate.

Given that in 2027 there will be an additional increase of entry capacity from the LNG terminal and of exits capacity on both existing interconnections, with approximately similar amount of planned allowed revenue for 2027, as a result of the increase in forecasted contracted capacity in the proposed postage stamp methodology, there will also be a reduction in tariff items at all points of the transmission system, with a cost allocation index of 3.72 %. By applying the revenue allocation ratio of 50:50, the CAA results in an amount of 19.61 %.

Regulation 2017/460 stipulates that if the proposed methodology results in a cost allocation index lower than 10 %, the correctness of the proposed methodology's application is confirmed.

Table 16 Results of the cost allocation assessment (CAA) and tariffs by contracted capacity on postage stamp methodology for the year 2027

CONTRACTED CAPACITY (POSTAGE STAMP METHODOLOGY)				
Capacity based allowed revenue (EUR)	78,717,621			*EUR/kWh/day*
Revenue from annual capacity (EUR)	70,845,859		Exit tariffs	
Entry ratio	60 %		Exit at interconnection	0.1759
Exit ratio	40 %		Exit in Croatia	0.1759
Revenues from entry (EUR)	42,507,515		Entry tariffs	
Revenues from exit (EUR)	28,338,344		Entry from the gas storage	0.0258
Revenues from entry for intra-system network use (EUR)	38,662,734		Entry from production	0.2583
Revenues from entry for cross-system network use (EUR)	3,844,782	5(5)(c)	Entry at interconnection	0.2583
Revenues from exit for intra-system network use (EUR)	18,316,977	5(5)(b)	Entry from LNG terminal	0.2583
Revenues from exit for cross-system network use (EUR)	10,016,253			
Revenues – intra-system (EUR)	56,979,711			
Revenues – cross-system (EUR)	13,861,035			
Cost drivers (capacity and distance)			Cost allocation index	
Intra-system for entries	178,468,779		for intra-system network use	0.17948
Intra-system for exits	138,985,384			
Total - intra-system	317,454,163			
Cross-system for entries	17,459,487		for cross-system network use	0.18629
Cross-system for exits	56,942,882			
Total - cross-system	74,402,369		**CAA**	**3.72 %**

3.6. Comparison of proposed reference price methodology and CWD methodology

If the proposed reference price methodology is not the CWD methodology described in Article 8 of the Regulation 2017/460, it would be necessary to compare those two methodologies, with reference to the reference prices that are the subject of this consultation.

As this consultation proposes the postage stamp methodology, Table 17 presents a comparison of the input parameters and results of the CWD methodology and the chosen postage stamp methodology for the year 2026.

The comparison results indicate that the application of the CWD methodology would lead to slightly higher levels of cross-subsidisation as reflected in the CAA index of 12.81 % compared to 9.29 % under the proposed postage stamp methodology.

According to the ratio 50:50 of allowed revenue allocation, the CWD methodology results in a reference price at exit interconnection points of 0.4849 EUR/kWh/day, which is assessed as an disproportionately high level that carries a potential risk of (non)contracting capacities at interconnections. This would reduce the level of cross-border network usage, which is intended to be promoted by current investments in the transmission infrastructure.

Table 17 Comparison of CWD methodology and selected postage stamp methodology for the year 2026

Comparison parameters	CWD methodology	Selected postage stamp methodology
I.) Key input		
Regulation method used	Maximum allowed revenue according to building block approach	
Allocation of allowed revenue to entry / exit points	YES	YES
Distance between entry and exit points of TS	YES	NO
Estimated contracted capacity	YES	YES
Commodity rate	NO	NO
Entry and exit revenue distribution ratio	**50:50**	**60:40**
II.) Result of Estimate Costs - Based on Capacities - Article 5 (1)(a) of the Regulation 2017/460		
Factor that affects the costs within the system	51,297,772,565	287,089,838
Factor influencing out-of-system costs	6,810,893,582	22,577,223
Intra-system capacity ratio	0.00119	0.22564
Cross-system capacity ratio	0.00135	0.24763
Cost allocation index	**12.81 %**	**9.29 %**
Forecasted revenue from intra-system network use	250,951,245	258,878,666
Forecasted revenue from cross-system network use	74,652,070	66,726,575
III.) Result of Estimate Costs - Based on Commodity - Article 5 (1)(b) of the Regulation 2017/460	N/A	N/A
IV.) Compliance with Article 7 of the Regulation 2017/460		
Allow network users to independently obtain the same reference price calculation and their exact prediction	NO	YES
Takes into account the actual costs incurred by providing transmission services to the level of complexity of the transmission network	YES	YES

Ensures non-discrimination and prevent unjustifiably cross-subsidization	YES	YES
Ensures that significant volume risk related particularly to transports across an entry-exit system is not assigned to final customers within that entry-exit system	YES	YES
Ensure that the obtained reference prices do not undermine cross-border trade (CAA analysis results)	NO	YES
V.) Comparison of reference prices for year 2026	EUR/kWh/day	EUR/kWh/day
Exit reference prices		
Exits at interconnection	0.4849	0.2346
Exits in Croatia	0.2641	0.2346
Entry reference prices		
Entry from the gas storage	0.0114	0.0342
Entry from production	0.2559	0.3420
Entry at interconnection	0.0000	0.3420
Entry from LNG terminal	0.2954	0.3420

3.7. Assessment of the proposed reference price methodology

The Regulation 2017/460 prescribes that the reference price methodology shall comply with Article 13 of Regulation (EC) No 715/2009, which was replaced by Article 17, paragraphs 1, 2 and 3 of Regulation 1789/2024, and should meet the following requirements:

a) enabling network users to reproduce the calculation of reference prices and their accurate forecast;

By publishing a simplified tariff model, which is an integral part of the consultation documentation published on the HERA website, and which contains the basic elements for calculating tariff items (forecasted allowed revenue, share of revenue collected through contracted annual capacities, forecasted contracted capacities and adjustments for individual points of the transmission system (discounts)), transmission system users are able to obtain a calculation of indicative reference prices. By changing certain parameters, they are also able to model and predict the movement of reference prices depending on changes in certain parameters.

The method of determining the allowed revenue is not the subject of this prescribed consultation, but is prescribed in detail in the Methodology for determining the amount of tariff items for gas transmission, as well as in the related HERA decision determining the amounts of allowed revenue for the next regulatory period.

The amount of the final allowed revenue of the transmission system operator for the years of the fourth regulatory period 2026-2030 will be determined by HERA at the end of the current regulatory period, within the period prescribed by the Gas Market Act.

b) taking into account the actual costs incurred for the provision of transmission services considering the level of complexity of the transmission network;

Despite the fact that the gas market in the Republic of Croatia is relatively small in terms of consumption and flow compared to its immediate surroundings, it is still complex in structure, as it includes its own gas production onshore and offshore, gas storage, an LNG terminal and

two interconnections with neighbouring countries through which gas has been exported from the Republic of Croatia in recent years.

The change in gas flows from southern to central European countries is also supported by Croatia with its LNG terminal capacities and gas pipelines of the transmission system, which contributes to ensuring the security of gas supply not only to the Republic of Croatia, but also to some of the member states of the European Union.

Croatia is currently making additional investments in expanding the capacity of the LNG terminal on the island of Krk and the associated gas pipelines, which will further contribute to the diversification of supply routes to south eastern and central Europe.

The number of final customer connection direct on the transmission system, with large differences in nominal pressure from 1.5 bar to 31 bar, which require significant adjustments to the pressure in the system and the coordination of all components of the transmission system, including the adequacy of compressor stations, also adds to the complexity of the system.

During the past 10 years, the energy strategy of the Republic of Croatia has included significant investment in the modernization and construction of the gas transmission system, which has resulted in increased coverage of the country's gas pipeline system and enabled the use of gas in the less developed regions of Croatia, especially Lika[1] and Dalmatia.

The backbone of this system was the construction of the Bosiljevo-Split main gas pipeline, 292 km long, on which were connected 80 km of regional gas pipelines and 11 MRS. The introduction of natural gas in parts of the country that have the smallest share of GDP in Croatia and with low GDP per capita, had a dual impact. On the one hand, in regions that were dependent on oil, fuel oil and solid fuels, access was enabled to an environmentally friendly energy source, while on the other, the goal was to stimulate economic development of these regions by ensuring a safe and reliable energy source.

The Republic of Croatia is characterized by significant spatial concentration of the economy, which is manifested in the large differences between Croatian regions. With regard to the distribution of GDP, the City of Zagreb, which accounts for most of Croatia's total GDP, achieves almost three times higher GDP than the Lika region, which is characterized by a mountainous landscape and the lowest population density.

In view of the above, in the context of consideration of the application of the cost of transmission related to the real cost of construction of the system through this area (CWD methodology), the same would result in the transmission cost, i.e. gas use, where those regions with the aforementioned degree of development could not economically bear without a further negative impact on GDP. It would also be contrary to the Regional Development Strategy of the Republic of Croatia, which aims to contribute to the establishment of activities needed for strengthening development potential of all Croatian regions, reducing regional disparities, and strengthening and developing undeveloped parts of Croatia and all with the goal of overall growth and economic progress of the Republic of Croatia.

c) ensuring non-discrimination and prevent undue cross-subsidisation including by taking into account the cost allocation assessments set out in Article 5;

The proposed postage stamp methodology based on a 60:40 ratio results in a CAA index lower than 10 %, which indicates that the proposed methodology prevents cross-subsidization between network users, thus ensuring non-discrimination. Furthermore, by removing the discount on the entry from the LNG terminal ensures complete equality of all users who in any

1 *According to the data of the Croatian Bureau of Statistics*

way provide gas at the entry to the transmission system of the Republic of Croatia, as all users bear the cost of transmission services under equal conditions.

d*) ensuring that significant volume risk related particularly to transports across an entry-exit system is not assigned to final customers within that entry-exit system;*

By evenly distributing costs to all users of the transmission system in the same way and within the contracted capacities, all users bear the costs of the transmission system depending on the planned use of the system. The risk of any cross-subsidization, i.e. the burden of some users being borne by others, is proven by performing the cost allocation assessment, as a result of which, due to the results from the proposed methodology which are within the acceptable range, there is no indication that any users of the system bear the risk associated with the activities of other users.

e) ensuring that the resulting reference prices do not distort cross-border trade;

As previously explained in this document, the resulting reference prices in the CWD model in the ratio of 50:50 (but also 60:40) precisely provide the related amounts of tariff items at interconnection points that could disrupt cross-border trade, as a result of which the application of the CWD methodology is not proposed for the next, fourth regulatory period.

Following the above, it is assessed that **the proposed postage stamp methodology is in line with the provisions of Regulation 1789/2024 and that it meets the requirements set out in Article 7 of Regulation 2017/460.**

4. INDICATIVE REFERENCE PRICES ACCORDING TO PROPOSED POSTAGE STAMP METHODOLOGY

4.1. Indicative reference prices for the period 2026 – 2030

Table 18 Indicative amounts of reference price for contracted firm capacity on yearly basis for entries and exits of transmission system for the period 2026 – 2030

Tariff item name	Tariff item	Tariff items according to Regulation 2017/460 for tariff period 2026 - 2030					Unit
		2026	2027	2028	2029	2030	
Tariff item for the entry at interconnection	$T_{U,IN}$	0.3420	0.2583	0.2610	0.2682	0.2723	EUR/kWh/day
Tariff item for the entry from production	$T_{U,PR}$	0.3420	0.2583	0.2610	0.2682	0.2723	EUR/kWh/day
Tariff item for the entry from the gas storage system	$T_{U,SK}$	0.0342	0.0258	0.0261	0.0268	0.0272	EUR/kWh/day
Tariff item for the entry from the LNG terminal	$T_{U,UPP}$	0.3420	0.2583	0.2610	0.2682	0.2723	EUR/kWh/day
Tariff item for the exit at interconnection	$T_{I,IN}$	0.2346	0.1759	0.1778	0.1828	0.1856	EUR/kWh/day
Tariff item for the exit in Croatia	$T_{I,HR}$	0.2346	0.1759	0.1778	0.1828	0.1856	EUR/kWh/day

4.2. Comparison of reference prices applicable in the current tariff period and reference prices for the period 2026 – 2030

In accordance with the proposed reference price methodology based on the postage stamp principle, the transmission tariffs for the tariff period 2026-2030 would change compared to the transmission tariffs applicable in the current tariff period 2021-2025, due to the following changes:

- a significant increase in indicative allowed revenues in 2026 compared to the applicable revenues in the current year. The revenue used here does not include the final adjustment of revenues between regulatory periods or any other potential adjustments, which are expected to reduce the amounts of allowed revenue proposed here,
- the new proposed safety coefficient for entry into the transmission system from LNG terminal kUPP is proposed in the amount of 1.0 compared to the current coefficient kUPP of 0.85, i.e. the removal of the discount for entry from the LNG terminal is proposed,

- new projections of forecasted contracted capacities of the transmission system on an annual and short-term basis, with higher levels of contracted capacities compared to current levels, due to the increase in LNG terminal capacities and the construction of additional gas pipelines that will enable increased gas flows and security of supply of the Republic of Croatia and neighbouring countries. The effects of this infrastructure expansion on reducing transmission costs are expected to become visible starting from 2027, with the full activation of the new infrastructure.

Due to the above changes, according to the proposed postage stamp methodology for determining the reference price, the transmission tariffs in the period 2026-2030 would change compared to the transmission tariffs applicable in the current tariff period 2021-2025 in accordance with the currently applicable Methodology for determining the amount of tariff items for gas transmission, as shown in Table 19.

Table 19 Indicative amounts of reference price for contracted firm capacity on yearly basis for entries and exits of transmission system for the period 2026 - 2030 in relation to the current tariff period

Tariff item name	Tariff item	Reference price in the current tariff period		Reference prices according to Regulation 2017/460 for the period 2026 – 2030 (EUR/kWh/day)					% change
		2024	2025	2026	2027	2028	2029	2030	2026/ 2025
Tariff item for the entry at interconnection	$T_{U,IN}$	0.3245	0.3249	0.3420	0.2583	0.2610	0.2682	0.2723	5%
Tariff item for the entry from production	$T_{U,PR}$	0.3245	0.3249	0.3420	0.2583	0.2610	0.2682	0.2723	5%
Tariff item for the entry from the gas storage system	$T_{U,SK}$	0.0324	0.0325	0.0342	0.0258	0.0261	0.0268	0.0272	5%
Tariff item for the entry from the LNG terminal	$T_{U,UPP}$	0.2758	0.2761	0.3420	0.2583	0.2610	0.2682	0.2723	24%
Tariff item for the exit at interconnection	$T_{I,IN}$	0.1852	0.1844	0.2346	0.1759	0.1778	0.1828	0.1856	27%
Tariff item for the exit in Croatia	$T_{I,HR}$	0.1852	0.1844	0.2346	0.1759	0.1778	0.1828	0.1856	27%

5. NON-TRANSMISSION SERVICES OF TRANSMISSION SYSTEM OPERATOR

The transmission system operator provides additional services and activities to network users that are not included in the operator's allowed revenue, nor are the investments associated with these services included within the scope of regulated assets. These services are governed by separate methodologies and outlined in the Network Rules, and are contracted independently from the contracting of transmission services.

Fees for these services reflect the actual costs of offering such services, and the planned revenues from these services are excluded from the total allowed revenue during the tariff calculation process for the next regulatory period. This is done to prevent cross-subsidization of these services by transmission system users who are subject to transmission tariffs, by ensuring these services are not included in the operational costs included in the operator's allowed revenue.

Below is an overview of the calculation of the operator's allowed revenue and items of other services that are excluded from the revenue that is allocated to the transmission tariffs of system users.

Planned allowed revenue for the operator is calculated according to the formula that clearly separates any potential revenue generated from non-transmission services from the calculation of the allowed revenue distributed to the reference and reserve prices:

$$DP^{P}_{t} = OPEX^{P}_{t} + A^{P}_{t} + PRO^{P}_{t} + PV\delta_{t} - \left(P_{PRIK}{}^{P}_{t} + P_{NU}{}^{P}_{t} + P_{OST}{}^{P}_{t}\right)$$

where is:

- DP^{P}_{t} - planned allowed revenue in regulatory year t (EUR),
- $OPEX^{P}_{t}$ - planned operating expenditures in regulatory year t (EUR),
- A^{P}_{t} - planned depreciation of regulated assets in regulatory year t (EUR),
- PRO^{P}_{t} - planned return from regulated assets in the regulatory year t (EUR),
- $PV\delta_{t}$ - part of the difference between revised allowed revenues and realized revenues in year T-1 and in the previous years of the regulatory period expressed in the regulatory year t (EUR),
- $P_{PRIK}{}^{P}_{t}$ - planned revenues from the connection fee and the increase in the connection capacity in the regulatory year t (EUR),
- $P_{NU}{}^{P}_{t}$ - planned revenues from non-standard services in the regulatory year t (EUR),
- $P_{OST}{}^{P}_{t}$ - other planned operating revenues that does not relate to the core business of the transmission system operator.

5.1. Connection service to the transmission system or increase of connection capacity

The transmission system operator provides a connection service to the transmission system or increases the connection capacity according to the Methodology for determining the connection fees for the gas distribution or transmission system and increases in the connection capacity.[2] This methodology defines: categories of connections to the gas distribution or transmission system, groups of work complexity, methods, elements, and criteria for calculating the connection fees to the gas distribution or transmission system and for increasing connection capacity, the procedure for submitting requests for determining or changing the connection fee, as well as the adoption, publication, and application of the connection fee.
The connection fee is charged directly to the investors at whose request the service initiates, and the fee itself directly depends on the complexity of the work. The methodology defines the categories of connections, the corresponding coefficients, and the required number of working hours to perform the work for each group of work complexity for connecting to the transmission system of each connection category.

The cost of preparatory and finishing works for the regulatory period is determined by the formula:

$$TG = B_{rs} \times JC_{rs}$$

Where is:

TG	cost of preparatory and completed tasks for a particular group of complex work (EUR),
B_{rs}	required number of working hours for work performed for a single complex group, where the connection to the transmission system is established according to Table 2. of Annex 2. of the Methodology (h),
JC_{rs}	unit price of a worker's hour that performs the tasks of a particular complex group (EUR/h).

For each complexity group, the unit price of the working hour is set for the regulatory period according to the following formula::

$$JC_{rs} = PC_{rs} \times k_{kp} \times k_{sr}$$

Where is:

JC_{rs}	unit price of a worker's hour that performs the tasks of a particular complex group (HRK/h),
PC_{rs}	price of average working hour,
k_{kp}	connection category coefficient for connection to the transmission system set out in Table 4. of Annex 2. of the Methodology,
k_{sr}	coefficient of work complexity of connection to the transmission system set out in Table 5. of Annex 2. of the Methodology.

The average price of the working hour is determined and published by the HERA for each regulatory period in accordance with the provisions of the Methodology for determining the price of non-standard services for gas transmission, gas distribution, gas storage, reception and dispatch of liquefied natural gas and public gas supply service.

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2 *The methodology is published in the Official Gazette of the Republic of Croatia at: https://narodne-novine.nn.hr/clanci/sluzbeni/2018_05_48_927.html*

5.2. Non-standard services

Based on the Act on the Regulation of Energy Activities and Article 94. Paragraph 3. of the Gas Market Act HERA adopted in May 2018. the Methodology for determining the price of non-standard services for gas transmission, gas distribution, gas storage, reception and dispatch of liquefied natural gas and public gas supply service[3], with amendments in 2019, 2021 and 2022.

The transmission system operator, the distribution system operator, the gas storage system operator, the liquefied natural gas terminal operator, the public service provider and the last resort supplier are all obliged to use this methodology.

This methodology has identified services that are considered non-standard for groups of energy subjects identified as follows:

- structure of price list non-standard services of the transmission system operator, distribution system operator, gas storage system operator, liquefied natural gas terminal operator and public service provider,
- method, elements and criteria for calculating the price of non-standard services,
- method of calculating the average hourly work price,
- number of worker-hours necessary for execution of a specific non-standard service,
- publication and application of price list non-standard services.

Since the methodology for non-standard services defines the price list structure, the criteria for the calculation of the prices of non-standard services, the method of calculating the average working hour price and the number of worker-hours necessary for execution of a non-standard service, these services are excluded from the Regulation 2017/460.

Revenues from non-standard services represent a lower share in the total operating revenues of the transmission system operator and reflects the actual costs associated with performing a particular service in accordance with the non-standard services price list.

For the current regulatory period revenues are projected at 0.2 % of total operating revenue.

[3] *The methodology is published in the Official Gazette of the Republic of Croatia at: https://narodne-novine.nn.hr/clanci/sluzbeni/2018_05_48_926.html*

Table 20 List of non-standard services of the transmission system operator

	Non-standard services
1.	Issuance of Energy approval for the facility or a part of the facility with one billing metering point and the connection capacity;
2.	Drawing up a study of extraordinary creation of technical conditions in the transmission system;
3.	Approval for the execution of works in the transmission system protective zone;
4.	Supervision for the execution of works in the transmission system protective zone;
5.	Drawing up the positions of the transmission system elements into the maps;
6.	Installation and deinstallation of a gas meter and other measuring equipment;
7.	Installation or deinstallation of the regulation, safety and other equipment;
8.	Installation or deinstallation of gas meters and other metering equipment with increased number of functions, including the module for remote reading;
9.	Dislocation of the billing metering point in case of unauthorised gas consumption;
10.	Dislocation of the gas transmission system elements;
11.	Repair of transmission system elements due to damage or misappropriation which could have been prevented by the user;
12.	Putting gas connection out of function;
13.	Temporary disconnection from the transmission system for carrying out planned maintenance, reconstruction or development of the connected gas system, buildings or facilities;
14.	Reading of a gas meter status on a special request of a gas supplier;
15.	Control testing of the proper operation of a gas meter and other measuring equipment on the request of the user in the authorized service with the expertise of the State Office for Metrology (DZM) or by a legal person authorized for testing gas meters;
16.	Temporary change of the exit pressure on the request of the distribution system operator or the end user connected to the transmission system;
17.	Elimination of liquid technological impurities from a device for the extraction of liquid technological impurities;
18.	Supervision of the elimination of liquid technological impurities from a device for the extraction of liquid technological impurities;
19.	Issuance of the authorisation to a legal or physical person for performing connections to the transmission system for a period of two years;
20.	Preparation-completion time;
21.	Registration of trade for a seller on the secondary market;
22.	Registration of trade for a customer on a secondary market;
23.	Fee for access to the application for a buyer at the secondary market who is not the transmission system user;
24.	Monthly fee for access to the application for a buyer at the secondary market who is not the transmission system user;

6. LIST OF TABLES AND FIGURES

6.1. Tables

6.2. Figures