



REPUBLIC OF CROATIA

**CROATIAN ENERGY
REGULATORY AGENCY
Ulica grada Vukovara 14
10000 Zagreb**

**Class: 310-03/18-02/2
Reg. Number: 371-04-19-12
Zagreb, 23 May 2019**

Pursuant to Article 27(4) of the Commission Regulation (EU) 2017/460 of 16 March 2017, establishing a network code on harmonised transmission tariff structures for gas, in accordance with Article 41(6) of Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC and Article 11(1)(9) of the Act on the Regulation of Energy Activities (“Official Gazette”, No. 120/12 and 68/18) Croatian Energy Regulatory Agency has adopted on the 12th session of the Board of Commissioners held on 23 May 2019 the following

DECISION

on the elements of the methodology for determining the reference price for gas transmission services in accordance with Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas

1. The elements of the methodology for determining the reference price of gas transmission services, in accordance with Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas, are being adopted as follows:

<i>Elements of the Methodology for determining the reference price</i>	<i>Implementation in the next tariff / regulatory period</i>
The method of determining the reference price for gas transmission services	(i) applying floating payable price approach for standard capacity products (ii) entry-exit model of split of allowed revenue and determining reference price
The Methodology for determining the reference price of transmission services	Entry and exit tariffs for homogeneous group of points are determined on a “Postage Stamp” principle, where transmission services revenue has to be recovered from capacity-based transmission tariffs, without taking into account the distance of entry and exit points
Transmission system cost drivers	Forecasted contracted capacity
Transmission services provided by the transmission system operator	Gas transmission service

Non-transmission services provided by the transmission system operator	(i) The service of connection to the transmission system or to increase the connection capacity (ii) Non-standard services of the transmission system operator
Revenue of transmission tariffs referred to capacity-commodity, split	100% of the contracted capacity and 0% of the realized gas flow
Commodity-based tariff	Not applicable
Revenue of transmission tariffs referred to entry-exit split	60% at entry points and 40% at exit points

- The elements of the methodology for determining the reference prices referred to in Point 1 of this Decision shall be applied to all entry and exit points of gas transmission system of the Republic of Croatia.
- In accordance with this Decision, an appropriate amendment of the Methodology for determining the amount of tariff items for gas transmission (“Official Gazette”, No. 48/18 and 58/18) shall be made accordingly.
- The elements which are set out in Points 1 and 2 of this Decision shall apply with the beginning of a new tariff period, which starts with entering into force of the Decision on the amount of reference prices, i.e. tariff items for gas transmission, adopted on the basis of amendments to the Methodology for determining the amount of tariff items for gas transmission (“Official Gazette”, No. 48/18 and 58/18) referred to in Point 3 of this Decision.
- Indicative amounts of reference prices, i.e. tariff items for yearly standard capacity products for the period from 1 January 2021 to 31 December 2026, are determined for the energy undertaking PLINACRO Ltd., Savska cesta 88A, Zagreb, and calculated using the elements from Points 1 and 2 of the operative part of this Decision, as follows:

Type of tariff items	Tariff item mark	Tariff item name	Indicative reference prices - tariff items (excluding VAT)						Unit
			2021	2022	2023	2024	2025	2026	
Tariff items for the contracted firm capacity on a yearly basis for the entries into the transmission system	T _{U,IN}	Tariff item for the entry at interconnection	2.0055	1.9075	1.8658	1.8198	1.7889	1.7523	HRK/kWh/day
	T _{U,PR}	Tariff item for the entry from production	2.0055	1.9075	1.8658	1.8198	1.7889	1.7523	HRK/kWh/day
	T _{U,SK}	Tariff item for the entry from the gas storage facilities	0.2006	0.1908	0.1866	0.1820	0.1789	0.1752	HRK/kWh/day
	T _{U,UPP}	Tariff item for the entry from the LNG terminal	1.7047	1.6214	1.5859	1.5468	1.5206	1.4895	HRK/kWh/day
Tariff items for the contracted firm capacity on a yearly basis for the exits from the transmission system	T _{I,IN}	Tariff item for the exit at interconnection	1.3847	1.3166	1.2877	1.2558	1.2345	1.2092	HRK/kWh/day
	T _{I,HR}	Tariff item for the exit in Croatia	1.3847	1.3166	1.2877	1.2558	1.2345	1.2092	HRK/kWh/day

6. This Decision shall be submitted to the Agency for the Cooperation of European Energy Regulators and to the European Commission.
7. This Decision shall be published on the website of the Croatian Energy Regulatory Agency.
8. On the date of entry into force of this Decision, the Decision on indicative amounts of tariff items for gas transmission (“Official Gazette”, No. 56/18) is no longer valid.
9. This Decision shall enter into force on the day of its adoption.

Statement of grounds

The Croatian Energy Regulatory Agency (hereinafter: HERA), as a national regulatory authority acting in accordance with Article 41(6)(a) of Directive 2009/73/EC and a party designated for conducting a regular consultation on the methodology for establishing the reference price for a capacity product for a yearly firm capacity, applicable at entry and exit points of the gas transmission system of the Republic of Croatia (hereinafter: reference price), in accordance with Article 17(1) of the Act on the Regulation of Energy Activities (“Official Gazette”, No. 120/12 and 68/18) and Article 27 of the Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas (hereinafter: NC TAR), adopts a Decision on the elements of the methodology for determining the reference price for gas transmission services (hereinafter: Decision).

This Decision was preceded by a consultation on the proposal of the methodology for determining the reference price, initiated on the basis of the decision, Class: 310-03/18-02/2, Reg. No: 371-04-18-1, which was adopted by HERA at the 30th session of its Board of Commissioners held on 18 December 2018, whose elements and related information are described in the consultation document in a manner and within the scope provided for in Article 26 of NC TAR (hereinafter: final consultation).

The final consultation covers the period from 2021 to 2026, where year 2021 represents a new tariff period in relation to the current Decision on the amount of tariff items for gas transmission for the years of the second regulatory period 2019-2021, Class 310-03/18-28/4, Reg. No. 371-04-18-3, which was adopted by HERA on 7 December 2018, taking into account it is planned for the terminal for the liquefied natural gas on Krk to become operational on 1 January 2021.

With the aim of transparency and providing information to the users of transmission system about the expected changes of the amount of transmission tariffs, final consultation also covered the tariff period from 2022 to 2026, which is the third regulatory period in the gas sector of the Republic of Croatia.

The final consultation process was conducted in the period from 18 December 2018 to 18 February 2019 with the publication of consultation documents on HERA's website in Croatian and English. Within the next month from the day the consultation ended, HERA published the answers received within the consultation and their summary, in accordance with provisions set out in Point 3 of Article 26 of NC TAR.

Additionally, in accordance with Article 28 of NC TAR, HERA as a national regulatory authority is required to conduct a public consultation on discounts, multipliers and seasonal factors with the national regulatory authorities of all directly connected EU Member States and relevant stakeholders, simultaneously with final consultation under Article 26 of NC TAR.

On the basis of the aforementioned, at the 30th session of its Board of Commissioners held on 18 December 2018 HERA also adopted the Decision on initiating a public consultation on discounts, multipliers and seasonal factors, in accordance with Article 28 of NC TAR, Class 310-03/18-02/3, Reg. No. 371-04-18-1, inviting the public and national regulatory authorities of directly connected EU member states to participate in the consultation process held at the same time as final consultation.

Furthermore, according to HERA's decision from 3 November 2017, Plinacro Ltd. as a national transmission system operator was designated as the party responsible for publishing information before the annual auction of yearly gas transmission capacities and prior to the tariff period in the Republic of Croatia, all in accordance with Articles 29 and 30 of the NC TAR. The national transmission system operator shall publish information on the company's website and links shall be accessible through the platform of the European Network of Transmission System Operators for Gas (hereinafter: ENTSOG), in accordance with Article 31(1) of the NC TAR.

In accordance with Article 27 of the NC TAR, HERA forwarded the documents of final consultation to the Agency for the Cooperation of European Energy Regulators (hereinafter ACER) for analysis.

Considering that the Open Season procedure for the lease of capacity of the terminal for the liquefied natural gas (hereinafter: LNG terminal) and for gas transmission capacity from the LNG terminal was being conducted at the time of publication of final consultation, upon conclusion of the Open Season procedure, the calculation of indicative amounts of reference prices for the following tariff periods was adjusted according to the amounts of the received binding bids for the lease of the capacities in the Open Season procedure. The results of this adjustments and their impact on the proposed methodology were delivered to ACER as amendments to the final consultation documentation on 5 March 2019 and on 3 April 2019.

ACER carried out the prescribed analysis of final consultation documentation in order to check out whether all relevant information referred to in Article 26(1) were published and whether the proposed methodology met the requirements set out in Article 4 and 7 of NC TAR. The ACER's analysis was published on the ACER's website and submitted to HERA on 17 April 2019, within the deadline of two months after the end of the final consultation, with the assessment that the information published was complete and that the proposed methodology was compliant with NC TAR, with recommendation that specified other transmission services should be classified as non-transmission services.

When making this Decision, HERA considered the ACER's recommendations as well as the received responses from the participants of public consultation in regard to the published documents and proposed methodology. Therefore, certain elements in the Decision may differ from the statement in the final consultation document, which will be clarified in more detail.

Moreover, in the introductory part of the final consultation document, the essential assumption was set forth for the model of determining the reference price, referring to 1 January 2021 as the date the LNG terminal on the island of Krk is planned to become operational, under the scenario of contracted capacity for gas transmission corresponding to the amount of lease of 1.5 Bcm/year LNG terminal capacities in the Open Season procedure. Final consultation provided the possibility of applying a fixed price if the minimum contracted capacity at the entrance from the LNG terminal was 171,233 cm/h (1,644 MWh/h at NCV) and at the exit at interconnection point 114,155 cm/h (1,096 MWh/h at NCV).

Taking that into account, according to the offers received from the second round of the binding phase of the Open Season procedure, the provided condition for the application of fixed reference price was not fulfilled, therefore the **floating payable price approach is applied** for transmission services at all points of the transmission system. In accordance with the aforementioned, all information referred to in Article 26 of NC TAR which is being published in this Decision, is based on a floating payable price approach, thus completely excluding the application of the fixed payable price approach as was published in the final consultation.

Furthermore, pursuant to Article 11(1)(9) of the Act on the Regulation of Energy Activities and Article 94(1) (5) of the Gas Market Act ("Official Gazette", No. 18/18), in accordance with this Decision, HERA shall amend the Methodology for determining the amount of tariff items for gas transmission ("Official Gazette", No. 48/18 and 58/18) and then determine the amounts of tariff items for gas transmission which will be applicable in the following tariff period.

Acting in accordance with Article 41(6)(a) of Directive 2009/73/EC and Article 27 of NC TAR, HERA shall submit this Decision upon its publication to ACER and to the European Commission.

The information from Article 26 of NC TAR, upon which this Decision is adopted

The elements of the methodology for determining the reference price of gas transmission services reached by this Decision, together with the information for which public consultation was conducted, are listed in Table 1 and briefly elaborated further in this document.

The detailed explanation of the elements and information on the parameters used in the applied methodology, in particular for those relating to the description and usage of the Croatian transmission system, is specified in the final consultation document.

Table 1 Information from Article 26 of NC TAR for which this Decision refers to

<i>Article of NC TAR</i>	<i>The scope of information</i>
26(1)(a)(i)	- the description of the proposed reference price methodology as well as the following items: <ol style="list-style-type: none"> 1. the justification of the parameters used that are related to the technical characteristics of the system; 2. the corresponding information on the respective values of such parameters and the assumptions applied.
26(1)(a)(ii)	- the value of the proposed adjustments for capacity-based transmission tariffs pursuant to Article 9.
26(1)(a)(iii)	- the indicative reference prices subject to consultation.
26(1)(a)(iv)	- the results, the components and the details of these components for the cost allocation assessments set out in Article 5.
26(1)(a)(v)	- the assessment of the proposed reference price methodology in accordance with Article 7.
26(1)(a)(vi)	- where the proposed reference price methodology is other than the capacity weighted distance reference price methodology detailed in Article 8, its comparison against the latter accompanied by the information set out in point (iii).
26(1)(b)	- the indicative information set out in Article 30(1)(b): <ol style="list-style-type: none"> i) the allowed or target revenue, or both, of the transmission system operator; iv) the transmission services revenue; and v) the following ratios for the revenue referred to in point (iv): <ol style="list-style-type: none"> 1. capacity-commodity split, meaning the breakdown between the revenue from capacity-based transmission tariffs and the revenue from commodity-based transmission tariffs; 2. entry-exit split, meaning the breakdown between the revenue from capacity-based transmission tariffs at all entry points and the revenue from capacity-based transmission tariffs at all exit points; 3. intra-system/cross-system split, meaning the breakdown between the revenue from intra-system network use at both entry points and exit points and the revenue from cross-system network use at both entry points and exit points calculated as set out in Article 5.
26(1)(c)(i)	- the following information on transmission and non-transmission tariffs: <ol style="list-style-type: none"> i. where commodity-based transmission tariffs referred to in Article 4(3) are proposed: <ul style="list-style-type: none"> - the manner in which they are set;

	<ul style="list-style-type: none"> - the share of the allowed or target revenue forecasted to be recovered from such tariffs; - the indicative commodity-based transmission tariffs;
26(1)(c)(ii)	<ul style="list-style-type: none"> - where non-transmission services provided to network users are proposed: <ul style="list-style-type: none"> - the non-transmission service tariff methodology therefor; - the share of the allowed or target revenue forecasted to be recovered from such tariffs; - the manner in which the associated non-transmission services revenue is reconciled as referred to in Article 17(3); - the indicative non-transmission tariffs for non-transmission services provided to network users.
26(1)(d)	<ul style="list-style-type: none"> - the indicative information set out in Article 30(2): <ul style="list-style-type: none"> (a) explanation of the following: <ol style="list-style-type: none"> 1. the difference in the level of transmission tariffs for the same type of transmission service applicable for the prevailing tariff period and for the tariff period for which the information is published; 2. the estimated difference in the level of transmission tariffs for the same type of transmission service applicable for the tariff period for which the information is published and for each tariff period within the remainder of the regulatory period. (b) at least a simplified tariff model
26(1)(e)	<ul style="list-style-type: none"> - where the fixed payable price approach referred to in Article 24(b) is considered to be offered under a price cap regime for existing capacity: <ol style="list-style-type: none"> i. the proposed index; ii. the proposed calculation and how the revenue derived from the risk premium is used; iii. at which interconnection point(s) and for which tariff period(s) such approach is proposed; iv. the process of offering capacity at an interconnection point where both fixed and floating payable price approaches referred to in Article 24 are proposed.

1 DECISION FOR DETERMINING THE REFERENCE PRICE FOR GAS TRANSMISSION SERVICES IN THE REPUBLIC OF CROATIA

1.1 *Description of the methodology for determining the reference price of gas transmission services*

The methodology for determining the reference price is defined as a methodology which is applied to the part of the revenue from transmission services collected by capacity-based transmission tariffs in order to calculate reference prices and it is integral part of the methodology for determining the amount of tariff items for gas transmission as a comprehensive act by which HERA, in accordance with the Gas Market Act, among other elements, regulates the method of allocating allowed revenue and the manner, elements and criteria for calculating the amount of tariff items for the energy activity of gas transmission.

The NC TAR defines the **reference price** as a **price for a capacity product for firm capacity with a duration of one year**, which is applicable at entry and exit points and which is used to set capacity-based transmission tariffs.

On the basis of the calculations and analysis carried out, in accordance with the elements provided by the NC TAR, and with conducted public consultation in which energy subjects did not have objections on proposed methodology, HERA adopts a decision on the implementation of the methodology for determining the reference price for gas transmission services based on the “**Postage Stamp**” principle.

Due to the specificity of the Croatian transmission system and the way how the system is being used by its users, when determining the amount of tariff items for gas transmission the “Postage Stamp” methodology takes into account the amount of the allowed revenue of the operator and the planned contracted capacity at entry and exit points of the system, whereas the interdependent distance between entry and exit points for relevant gas flow scenarios is not taken into account when calculating the amount of tariff items.

The final applicable reference prices for transmission services calculated using the elements set out in this Decision, will be adopted by HERA's decision for the amount of tariff items for gas transmission.

Table 2 shows a list of key elements of the methodology for determining the reference price of gas transmission services.

Table 2 Overview of the elements of the methodology for determining the reference price for transmission services

<i>Elements of the methodology for determining the reference price</i>	
The method of regulating gas transmission tariffs	<ul style="list-style-type: none"> i. the maximum allowed revenue of the transmission system operator using the floating price of the standard capacity product; ii. allowed revenue split and determination of tariff items is based on the entry-exit model of the transmission system
Methodology for determining the reference price of gas transmission services	“Postage Stamp” principle - entry and exit tariffs for homogeneous group of points according to the “Postage Stamp” principle, without taking into account the distance between the entry and exit points
Transmission system cost drivers	Forecasted contracted capacity
Transmission services provided by the transmission system operator	Gas transmission service
Non-transmission services provided by the transmission system operator	<ul style="list-style-type: none"> i. The service of connection to the transmission system or to increase the connection capacity; ii. Non-standard services of the transmission system operator
Revenue of transmission tariffs referred on capacity-commodity split	100% of the contracted capacity and 0% of the realized gas flow
Commodity-based tariff	Not applicable
Revenue of transmission tariffs referred on entry-exit split	60% at entry points and 40% at exit points
Tariff adjustments at entry and exit points of the transmission system, which will be determined by a separate decision by HERA	<ul style="list-style-type: none"> i. 90% discount for entry into the gas transmission system from storage; ii. 100% discount for exit from the transmission system and entry in the storage; iii. 15% discount on gas transmission for entry from the LNG terminal

1.2 Amendments of the elements of the Methodology for determining the reference price of gas transmission services in relation to the Methodology for determining the amount of tariff items for gas transmission

This Decision amends the following elements in relation with the valid Methodology for determining the amount of tariff items for gas transmission (hereinafter: Methodology):

- the security coefficients from Article 30 of the Methodology, pertaining to the entry from production and exits in Croatia, are abolished,
- the amount of discount for entry point from the LNG terminal is increased from 10%, i.e. from the amount of security coefficient for entry from the LNG terminal of 0.90 from Article 30 of the Methodology, to the discount of 15%,
- the tariff item for gas quantity from Article 31 of the Methodology is abolished, whereby the distribution of allowed revenue from Article 25 of the Methodology is changed from the ratio 90:10 to the ratio 100:0, i.e. the allowed revenue is allocated exclusively to tariff items for capacity,
- the possibility of applying a separate zone as well as the tariff items for exit into a separate zone is abolished, as the application of the mentioned is not stipulated by NC TAR,
- the ratio of distribution of the allowed revenue on entry and exit points of the transmission system from Article 27 of the Methodology is changed, in a way that 60% of the operator's allowed revenue is collected from the entries at transmission system, compared to the current 70%, whereas 40% of the operator's allowed revenue is collected from the exits from transmission system, instead of the current share of 30%.

HERA considers that all the above-mentioned amendments are necessary to ensure a long-term security of supply of natural gas in Croatia as an energy source which will have a significant strategic role in the transition of the energy sector, with the aim of stimulating the utilization of existing transmission infrastructure and development of the domestic wholesale gas market, in order to contribute to the opening of the domestic market and integration into the common EU market. At the same time, it is important to ensure the application of a cost-oriented objective methodology for determining the reference price of gas transmission services, without any unjustified subsidy between system users.

In addition to the mentioned above, it is important to set out the guidelines of the *Draft of the Energy Development Strategy of the Republic of Croatia from 2030 with a view until 2050* (hereinafter: the Draft Strategy) which in the part concerning gas transmission emphasizes the importance of projects that can increase gas transmission through the Croatian gas transmission system and thus affect its efficiency. For this reason, tariffs for transmission services should also be competitive with transmission tariffs in neighboring countries.

At the same time, in its conclusion on final consultation ACER sets out that the choice of the proposed "Postage Stamp" methodology is fully in line with the requirements of Article 7 of NC TAR, whereby applying the elements of this Decision contributes to the improvement and harmonisation of gas transmission tariffs within the EU.

2 SUMMARY DESCRIPTION OF THE GAS TRANSMISSION SYSTEM OF THE REPUBLIC OF CROATIA

Natural gas transmission is a regulated energy-related activity performed as a public service. The transmission system operator in Croatia is a state owned company PLINACRO Ltd. Zagreb.

The transmission system of the Republic of Croatia consists of international, mainstream, separating and connecting gas pipelines as well as gas pipeline facilities and measuring-reduction stations of different capacities.

PLINACRO Ltd. manages the transmission system consisting of regional gas pipelines through which domestically produced natural gas (the northern part of continental Croatia and the Northern Adriatic) and natural gas from imports via interconnections with Slovenia (Zabok-Rogatec) and Hungary (Donji Miholjac–Dravaszerdahely) is transmissioned to exit measuring-reducing stations (hereinafter: MRS), where the gas is delivered to gas distribution systems and to end (industrial) consumers directly connected to the transmission system.

The total length of the gas transmission system in the Republic of Croatia at the end of 2018 was 2,693 km, of which:

- 952 km of the pipeline with operating pressure of 75 bar and with a diameter ranging from DN 200 to DN 800 mm and
- 1,741 kilometers of gas pipelines with operating pressure of 50 bar and with a diameter ranging from DN 80 to DN 500 mm.

Gas can be received into the transmission system through 9 connectors at entry measuring stations, of which six active connections serve to receive gas from production fields in Croatia, while the two connections are international and serve to receive gas from import routes, while one connector is entry measuring station connected to the underground storage facility Okoli.

Besides the firm permanent physical capacity for gas transmission from Slovenia to Croatia, from January 2019 at the interconnection Zabok - Rogatec there is also a firm physical capacity for gas transmission from Croatia to Slovenia, in the amount of 280,253 kWh/h.

Apart from the firm physical capacity for gas transmission from Hungary to Croatia, at the interconnection of Donji Miholjac - Dravaszerdahely a non-standard service has been provided for the use of interruptible capacity of reduced interruption for gas transmission from Croatia to Hungary, which will be replaced by a permanent physical capacity service from 1 January 2020 by building a compressor station in Velika Ludina, according to the plan of the transmission system operator.

In the final consultation document the characteristics of the gas transmission system have been described in detail, as well as the structural overview of the transmission network specifying the entry and exit points, and the presentation of the points that were merged for the purpose of calculations for the methodology proposal. Therefore, they will not be further elaborated in this Decision.

3 INFORMATION REGARDING TRANSMISSION AND NON-TRANSMISSION SERVICES

3.1 Transmission services

According to Article 4 of the NC TAR a given service is considered as transmission service where both of the following criteria are met:

- a) the costs of such services are caused by the cost drivers of both technical or forecasted contracted capacities and distance;
- b) the costs of such services 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 set in points (a) and (b) are not complied with, HERA may attribute a given service to either transmission or non-transmission services.

Revenue from transmission services is primarily collected on the basis of capacity-based tariffs, and part of the revenue can be obtained with the approval of the national regulatory authority, by collecting the transmission tariffs based on commodity or gas flow, whereby it is important that such reimbursement covers the costs that depend primarily on the amount of gas flow.

Based on the conditions for transmission services defined in this way, the transmission system operator in the Republic of Croatia PLINACRO Ltd. provides the transmission service - gas transmission, for which tariffs for the use of transmission system determined on the basis of Methodology for determining the amount of tariff items for gas transmission are applied.

3.2 *Non-transmission services*

The transmission System Operator PLINACRO Ltd. in addition to the gas transmission service, provides also the following services in accordance with the provisions of the Gas Market Act and the Transmission System Network Code (“Official Gazette”, No. 50/18 and 31/19):

- (i) connection service to the transmission system and increase in the connection capacity, and
- (ii) non-standard services.

Connection services and increase in the connection capacity with non-standard services, are classified as non-transmission services, as those are being performed at the request of the users of transmission system and the costs of these services are not related to the investment in the infrastructure which is part of the regulated asset for providing transmission services.

Their scope and method of calculation are regulated by separate subordinate legislation - Methodology for determining the fee for connection to the gas distribution or transmission system and for increasing the connection capacity (“Official Gazette”, No. 48/18) and by the Methodology for determining the price of non-standard services for gas transmission, gas distribution, gas storage, unloading and send out of liquefied natural gas and public service of gas supply (“Official Gazette”, No. 48/18 and 25/19). The aforementioned acts provide the framework for revenues from non-transmission services to be collected by fees which correspond to the realized costs, thus achieving that the same are non-discriminatory, objective and transparent, and complying with the requirements of Article 4 of NC TAR.

In the analysis of the final consultation, ACER assessed that the method of setting tariffs for these services was objective and non-discriminatory and that avoidance of unjustified subsidies between users of transmission and non-transmission services was achieved, with the recommendation that such services which were in the final consultation categorized as '*Other services of the operator*' should be categorized as '*Non-transmission services of the operator*'. The same proposal was received by the energy utilities in the public consultation process, so HERA has adopted this recommendation with this Decision.

3.3 *Information on the allowed revenue for transmission services*

According to the Methodology for the determination of the amount of tariff items for gas transmission, the planned allowed revenue of the transmission system operator should cover the justified operating costs incurred in carrying out the energy activity of gas transmission and ensure the return on regulated assets, whereas the planned allowed revenue consists of:

- planned operating costs,
- depreciation, and
- return on regulated assets.

The amount thus obtained is further reduced for planned revenues from non-transmission services and other business revenues, which are not related to the core business of the transmission system operator, thereby ensuring that users bear the actual costs incurred by providing transmission services, without undue subsidies.

When approving the allowed revenue for all years of the regulatory period, HERA applies a method of smoothing allowed revenues in order to mitigate large oscillations in allowed revenues between individual years and the resulting amounts of tariff items, which is explained in detail in the Methodology itself.

The smoothed allowed revenues of the transmission system operator for the years 2019 and 2020, which are determined by the valid Decision on the amount of tariff items for gas transmission for the years of the second regulatory period 2019-2021, as of 7 December 2018, as well as the planned indicative smoothed allowed revenues of the transmission system operator for the years 2021-2026, are shown in Table 3. Thereby, the indicative smoothed allowed revenues for the years 2021-2026, in relation to the amounts from the final consultation, are consistent with the results of the lease of the capacities from the binding phase of the Open Season process for the project of construction of the LNG terminal and they include the infrastructure scenario for the development of the gas transmission system - the construction of the Omišalj-Zlobin gas pipeline for the gas supply from the LNG terminal.

Table 3 Planned indicative smoothed allowed revenues of the transmission system operator generated from the indicative tariff for capacity and quantity of gas for the years 2019 - 2026

<i>in 000 HRK</i>	<i>Currently tariff period</i>		<i>Next tariff periods</i>					
	<i>2019</i>	<i>2020</i>	<i>2021</i>	<i>2022</i>	<i>2023</i>	<i>2024</i>	<i>2025</i>	<i>2026</i>
AR _u ^P _t – indicative smoothed allowed revenue (HRK)	386,294	393,847	403,196	387,207	379,690	372,320	365,092	358,004
AR _{CAP} – indicative total allowed revenue based on the tariff item for capacity (HRK)	347,665	354,462	403,196	387,207	379,690	372,320	365,092	358,004
AR _{COMM} – indicative total AR based on commodity based tariff items (HRK)	38,629	39,385	0	0	0	0	0	0

3.4 Homogeneous groups of points of the transmission system

Article 6 of NC TAR prescribes the application of the methodology for determining the reference price at all entry and exit points of an entry-exit system.

The same article lists the following types of entry and exit points of the transmission system, which can be included in a homogeneous group to equalize tariffs for all points of such a group: entry interconnection points, exit interconnection points, domestic entry points, domestic exit points, entry points from gas storage facilities, exit points to gas storage facilities, entry points from LNG facilities, exit points to LNG facilities and entry points from production facilities.

Accordingly, for the application of the methodology based on the “Postage Stamp” principle in the transmission system of the Republic of Croatia, homogeneous groups of points determined by the

valid Methodology are retained, and for them the tariff items are determined as is specified in Table 4, which ensures the consistency in the regulation of energy activity of gas transmission.

Since a discount of 100% is applied at the exit from the transmission system to the gas storage in order to avoid double charging for gas transmission to and from the gas storage, there is no tariff item determined for that exit point.

Table 4 Homogeneous groups of points of the transmission system in the Republic of Croatia and associated labels of tariff items

<i>Entry/exit group</i>	<i>Tariff items mark</i>
Entry groups into the transmission system	
Entry at interconnection	T _{U,IN}
Entry from production	T _{U,PR}
Entry from the gas storage facilities	T _{U,SK}
Entry from the LNG terminal	T _{U,UPP}
Exit groups from transmission system	
Exit at interconnection	T _{I,IN}
Exit in Croatia	T _{I,HR}

3.5 Planned contracted capacity of the transmission system for the period 2021-2026

The key assumption of the planned contracted capacities in the final consultation document was based on the realization of the LNG terminal according to the S1 capacity lease scenario as of 2021, with the expected capacity at entry from the LNG terminal in the amount of 39,452,055 kWh/day for all the years for which the binding lease of capacity of LNG terminal was conducted by Open Season procedure, i.e. for the period 2021-2040, which represents an equivalent of 1.5 Bcm of total gas regasification capacity from the LNG terminal.

In accordance with the results of the Open Season procedure, which are significantly lower than the capacities indicated in the final consultation, HERA adjusted capacity forecasts and applied the following assumptions in calculations for the next tariff/regulatory period from 2021 to 2026:

- the capacity of entry from the LNG terminal in the period from 2021 to 2026 amounts to 13,650,411 kWh/day, corresponding to the capacity of regasification capacity of 0.52 Bcm of gas per year,
- the capacities of entry at interconnections are reduced for the share of entry from LNG terminal and therefore are expected to reach 57,271,966 kWh/day in year 2021,
- the capacity from production is initially planned to be 19,922,550 kWh/day, with less oscillation until the year 2026, when further downturn of domestic production is expected due to the exhaustion of existing production fields, with capacity bookings in the amount of 16,373,957 kWh/day in the year 2026,
- as in the binding phase of the Open Season process, unlike to the non-binding phase, there was no long-term interest for booking transmission capacities at interconnection exits, the planned contracted capacity at these exit points is not planned in the forthcoming period. This assumption is a key change related to the assumptions from the final consultation, taking into account that the lack of capacity at interconnection exit points directly affects the application of the fixed payable price approach, i.e. there is insufficient level of long term lease of capacity as a prerequisite for the possibility of applying a fixed payable price approach - therefore when

calculating the reference price at all points of the transmission system in the forthcoming tariff/regulatory period, a **floating payable price approach** will be applied,

- the capacity at entry from the storage facilities is expected to be at the same levels as in the current regulatory period in the amount of 52,902,040 kWh/day,
- the lease of capacity at exits in Croatia is expected to amount 90,844,927 kWh/day in the year 2021, and 92,369,739 kWh/day in the year 2026, whereby with expected moderate growth of domestic gas consumption by 2030, according to the scenario of moderate energy transition from the Draft Strategy.

Forecasted contracted capacities per homogeneous group of points of transmission system, used for the calculation of indicative reference prices for the period 2021-2026, are shown in Table 5.

Table 5 Forecasted contracted capacities for homogeneous groups of entry and exit points of the transmission system for the period 2021-2026

Forecasted contracted capacity at entry / exit points (kWh/day)	2. regulatory / tariff period	3. regulatory / tariff period				
	2021	2022	2023	2024	2025	2026
Entry at interconnection	57,271,966	57,698,888	57,173,881	58,079,556	58,377,984	62,345,371
Entry from production	19,922,550	20,410,515	21,172,715	20,775,311	20,239,689	16,373,957
Entry from the gas storage facilities	52,902,040	52,902,040	52,902,040	52,902,040	52,902,040	52,902,040
Entry from the LNG terminal	13,650,411	13,650,411	13,650,411	13,650,411	13,650,411	13,650,411
Exit in Croatia	90,844,927	91,759,814	91,997,007	92,505,278	92,268,085	92,369,739
Exit at interconnection	0	0	0	0	0	0

4 JUSTIFICATION FOR SELECTING THE ELEMENTS OF THE METHODOLOGY FOR DETERMINING THE REFERENCE PRICE FOR GAS TRANSMISSION SERVICES

During the final consultation process, HERA had proposed the use of the “**Postage Stamp**” methodology as reference price methodology (further: RPM) for gas transmission services, in order to apply the same reference price for all points in the homogeneous group of entry or exit points.

Allocation of allowed revenue and determination of tariff items is based on the concept of the entry-exit gas transmission system, by applying the same tariff item for each individual entry point and each individual exit point within the same homogeneous group of points, regardless of the length of the transmission route - the principle of “Postage Stamp.”

Principal guidelines of the proposed methodology are as follows:

- transparency in application by enabling network users to reproduce the calculation of reference prices and their forecasts for forthcoming tariff periods,
- simplicity of the model by using less input parameters - allowed revenue of the operator (AR), ratio of AR split on entry and exit points and forecasted contracted capacities,

- taking into account the actual costs incurred for the provided transmission services considering the level of complexity of the transmission services,
- ensuring non-discrimination over applied homogeneous group of points, due to the facts that all users within the homogeneous group bear the same tariffs, regardless of the location of exits compared to entry points within the system, thus reducing energy poverty and encouraging economic progress of the less developed and more distant regions of Croatia,
- providing that resulted reference prices do not distort cross-border trade, which is particularly important for ensuring security of supply, efficiency improvement and competitiveness of the gas transmission system, as main determinants of the development of the Croatian gas transmission system,
- more precise forecasts of future tariff developments given the fact that the selected methodology does not take into account the distance between entry and exit points as cost driver of transmission system, which would in that case significantly increase the complexity in the tariff calculation model, as it would require monitoring of operators investments in new assets incurring change of transmission network length. Moreover, new entry or exit system point would have a different impact on the movement of reference prices for individual entry and exit point of the transmission system,
- encouraging investments in energy sector based on transparent regulatory framework and pre-determined transmission tariffs for the next 5 years,
- the “Postage Stamp” principle ensures that significant volume risk related particularly to transport across an entry-exit system is not transferred to final customers within that entry-exit system,
- investments in the transmission system are consequently shared equally by all system users, regardless of their location, and likewise, all system users gain proportional benefits from reduction of transmission costs due to economies of scale under higher bookings of capacities.

Given all the above listed guidelines, HERA considers the “Postage Stamp” methodology as the most adequate methodology to be applied in the Croatian transmission system. In favour of the choice of the methodology, it is important to note that during the final consultation process, the responding subjects did not have any objections to the proposed type of methodology. Furthermore, by implementing this methodology, the consistency in regulation is ensured, given that the same principle of allocating allowed revenues is also applied in the current Methodology.

In addition, ACER has analysed the consultation documentation on several aspects and had concluded that the methodology itself and its elements are fully aligned with requirements set out in Article 7 of NC TAR. Moreover, the results of the comparison of proposed RPM with the counterfactual Capacity Weighted Distance methodology (further: CWD) shows a reasonable level of cost-reflectivity.

In order to enable network users to calculate indicative reference prices for the next tariff / regulatory periods, HERA has published a simplified tariff model for the years from 2021 to 2040 on its website, allowing users to enter their own forecast scenarios and reproduce the reference prices.

For the remaining years of the current regulatory period from 2019 to 2021, a tariff calculator is used based on the valid Methodology for determining the tariff items for gas transmission and the Decision on the amount of tariff items that the transmission system operator PLINACRO Ltd. has developed within the SUKAP system, available at the following link: <http://www.sukap.plinacro.hr>.

Due to the fact that this document contains an indicative amounts of reference prices, HERA will publish the final amount of the reference prices and associated assumptions and information for the years of the next tariff / regulatory period by a separate Decision, in accordance with the deadlines referred to in Article 32 of NC TAR.

4.1 Allocation of allowed revenues on entry and exit points of transmission system

Provisions of NC TAR in Article 26(1), prescribe that when the proposed reference price methodology is other than the capacity weighted distance price methodology, chosen RPM should be compared against the latter, by using entry-exit split of revenues as 50:50.

Entry-exit split at this scale is not obligatory for chosen RPM, however NC TAR indicates that level of revenue split as targeted for establishing Union-wide harmonised rules.

Accordingly, HERA considers that it is justifiable to apply the breakdown between revenues from capacity-based transmission tariffs at all entry points and all exit points at 60:40 ratio. In this way, together with the elimination of commodity-based transmission tariffs and abolition of existing security coefficients for exit points in Croatia, the risk of cross-subsidization is significantly reduced. Such a decision contributes to the development of the wholesale gas market, enables gas transmission to neighbouring countries and could increase utilization of existing and new infrastructure, thus creating conditions for increasing the efficiency of the system.

Consequently, due to a higher level of contracted capacity, all system users could benefit from the reduction of overall gas transmission costs.

In the next tariff periods it is expected that cross-system use of network will be enabled by investments in new entry and exit infrastructures and system points where new capacities could be contracted. Consequently, by setting entry-exit revenue ratio on the specified level, the costs of the transmission system are distributed in a more appropriate and proportional manner.

Allocation of the allowed revenues on entry and exit points of the transmission system, for the period from 2021 to 2026, is shown in Table 6.

Table 6 Breakdown of operator's allowed revenues between revenues from entry points and revenues from exit points, for the period from 2021 to 2026 – indicative values and comparison with current approved amounts for the 2nd regulatory period

<i>2nd regulatory period (2017 -2021)</i>				<i>3rd regulatory period (2022-2026)*</i>				
<i>in 000 HRK</i>	<i>2019</i>	<i>2020</i>	<i>2021*</i>	<i>2022</i>	<i>2023</i>	<i>2024</i>	<i>2025</i>	<i>2026</i>
Total revenues (AR)	386,294	393,847	403,196	387,207	379,690	372,320	365,092	358,004
AR capacity	347,664	354,462	403,196	387,207	379,690	372,320	365,092	358,004
AR commodity	38,629	39,385	0	0	0	0	0	0
Share of revenues from entries	70%	70%	60%	60%	60%	60%	60%	60%
Share of revenues from exits	30%	30%	40%	40%	40%	40%	40%	40%
Entry revenues	243,365	248,123	241,918	232,324	227,814	223,392	219,055	214,803
Exit revenues	104,299	106,339	161,278	154,883	151,876	148,928	146,037	143,201

* *Indicative revenue amounts*

For 2021, the total allowed revenues of transmission system operator are estimated at 403,196,158 HRK, or 2% more compared to the approved amount for 2020, primarily due to the increase in capital expenditures, that is, the inclusion of the remaining infrastructure required for transmission of gas from the LNG terminal.

In the years 2022-2026 there is a gradual decline in value of allowed revenues as a result of the gradual decrease of regulated assets (depreciation effect). Indicative allowed revenues are in the total amount related to revenues generated from capacity booking products, considering that this Decision

defines no commodity based revenues, while taking into account only revenues from yearly standard capacity products in order to calculate the reference price for gas transmission ($K_{PG,kap}$ indicator from Article 30 of the Methodology), projected according to the historical data for the contracting of such products, in the amount of 78% of the total allowed revenues. The difference to the total amount of allowed revenues is to be collected from non-yearly standard capacity products, with the application of multipliers and seasonal factors, which will be regulated by a separate HERA's decision.

The share of revenues expected to be realized from all entry points of the transmission system for 2021 amounts to HRK 241,918 ths (60%), while exit points are expected to generate revenues in the amount of HRK 161,278 ths (40%).

4.2 Ratio of capacity – commodity split

NC TAR in Article 4 (3) prescribes that the transmission services revenue shall be recovered by capacity-based tariffs.

As an exception, a part of transmission service revenue may be recovered by commodity-based transmission tariffs, i.e. a flow-based charge, under the following criteria:

- levied for the purpose of covering the costs mainly driven by the quantity of gas flow,
- calculated on the basis of forecasted or historical flows, or both, and set in such a way that it is the same at all entry points and the same at all exit points;
- expressed in monetary terms or in kind.

Gas transmission operator in current regulatory period applies the commodity-based transmission tariffs at all exits from the transmission system in Croatia and at the interconnection exits, whereby 90% of the total operator's allowed revenues is realized by applying tariff items for capacity, and 10% by applying a flow-based charge.

Given the fact that NC TAR emphasizes the transparency and simplicity of the calculation and the future forecasts of reference prices, HERA is of the opinion that the elimination of flow-based tariff contributes to the achievement of these two goals, due to the fact that users are not able to predict the quantity of gas flow realized by all system users, while on the other hand, the results of annual auctions and contracting over a longer period of time are available through capacity booking platforms.

In addition, NC TAR in Article 7 defines that in the choice of methodology, the aim should be that significant volume risk related particularly to transmission across an entry-exit system is not assigned to final customers within that entry-exit system. By abolishing the commodity based tariff, the possibility of under-recovery from flow-based charge and passing through these unrealised revenues to capacity transmission tariffs in forthcoming tariff period is eliminated.

During the final consultation process, the responding subjects did not have any objections to the proposed elimination of flow-based charge. Therefore, when reference prices for gas transmission will be set under the elements of this Decision, transmission tariffs will be exclusively capacity-based.

Taking into account the content of this Decision, the capacity-commodity split between the revenues shall be set to the ratio of 100:0.

As a result of the elimination of the flow-based charge, a higher amount of the allowed revenue will be allocated to exit system points, mainly having effect on nominal increase in reference prices at exit points in Croatia, given that the amount of total allowed revenues between the two regulatory periods has not been increased significantly.

4.3 Adjustments of tariffs at entry points from and exit points to transmission system

NC TAR envisages only adjustments of tariffs at entry and exit points connecting storages and at entry points from LNG facilities.

As those adjustments are subject to national regulatory authority and separate consultation process, HERA shall make a separate decision on these elements, while for the purpose of calculating indicative reference prices for gas transmission by this Decision, following discount amounts were applied:

- 90% of discount at entry point to the transmission system from storage facilities,
- 100% of discount at exit point from the transmission system to storage facilities,
- 15% of discount at entry point to the transmission system from LNG facilities.

4.4 Cost drivers and cost allocation assessment for chosen reference price model

The purpose of the cost allocation assessment (CAA) in a manner laid down by NC TAR is to indicate the degree of cross-subsidisation between intra-system and cross-system network users.

Assessment indicates the ratio between expected revenues and related contracted capacity levels, separate for intra-system and cross-system network use, according to calculations laid out in Article 5 of the NC TAR.

The same article specifies that cost allocation assessment relating to revenues recovered by the capacity-based transmission tariffs, shall be based on the cost drivers of:

- i. technical capacity, or
- ii. forecasted contracted capacity, or
- iii. technical capacity and distance, or
- iv. forecasted contracted capacity and distance.

Considering the listed cost drivers and the “Postage Stamp” principle characteristics, when performing cost allocation assessment, HERA applies a **forecasted contracted capacity** as a relevant cost driver, moreover as this element is included in the chosen methodology for determining the reference price for gas transmission services.

Further in this document are shown the results of cost allocation assessment based on several comparable input parameters, together with derived reference prices, all compared with CWD methodology as counterfactual in order to benchmark the chosen “Postage Stamp” methodology in a relevant manner.

Cross-system use of network is forecasted in the amount of 0 kWh and in line with results of the binding Open Season procedure, however in order to perform effective mathematical calculation of the allocation index, for the purpose of eliminating 0 from the denominator, this value was set slightly over 0.

An overview of transmission system cost drivers for providing cost allocation assessment is given in Table 7, whereas intra-system capacity weighted average distance for CWD counterfactual calculations represents the value set in several sequential calculation steps in accordance with Article 8 of NC TAR, combining forecasted contracted capacities in kWh and weighted average distance in km.

Table 7 Overview of cost drivers for calculating CAA for comparison between CWD counterfactual and the chosen “Postage Stamp” methodology

Type of entry point	Intra-system capacity weighted average distance	Cross-system capacity weighted average distance	Intra-system forecasted yearly contracted capacity	Cross-system forecasted yearly contracted capacity
Entry from the gas storage	2,258,486,575	0	52,902,040	0
Entry from production	3,276,610,002	0	19,922,550	0
Entry at interconnection	10,339,094,993	0	57,271,966	0
Entry from LNG terminal	2,878,438,235	0	13,650,411	0
Total	18,752,629,805	0	143,746,967	0

Results of the “Postage Stamp” cost allocation assessment and resulting reference prices derived based on forecasted contracted capacity cost driver are shown in Table 8.

Table 8 Results of the “Postage Stamp” methodology cost allocation assessment and resulting indicative reference prices for the year 2021

Forecasted contracted capacity (“Postage Stamp”)			
Allowed revenue for yearly standard capacity products (HRK)	314,493,003	Indicative reference prices – tariffs	HRK/kWh/day
Entry share	60%	Exit tariffs	
Exit share	40%	Exit at interconnection	1.3847
Entry revenues (HRK)	188,695,802	Exit in Croatia	1.3847
Exit revenues (HRK)	125,797,201	Entry tariffs	
Entry revenues dedicated for Intra-system (HRK)	188,695,802	Entry from gas storage	0.2006
Entry revenues dedicated for Cross-system (HRK) - Article 5(5)(c)	0	Entry from production	2.0055
Exit revenues from Intra-system (HRK) - Article 5(5)(b)	125,797,201	Entry at interconnection	2.0055
Exit revenues from Cross-system (HRK)	0	Entry from LNG terminal	1.7047
Revenue for Intra-system (HRK)	314,493,003		
Revenue for Cross-system (HRK)	0		
Cost drivers (forecasted capacity)		Cost allocation index	
Intra-system for entries	143,746,967		
Intra-system for exits	90,844,927		
Total –Intra-system	234,591,894	Rato for Intra-system	1.340578173
Cross-system for entries	0	Rato for Cross-system	1.179692053
Cross-system for exits	0	CAA	12.77%
Total – Cross-system	0		

CAA index under elements of the chosen “Postage Stamp” methodology results in 12.77%, thus slightly above the NC TAR reference level of 10%. These results confirm that the chosen elements of the reference price methodology and connected tariffs do not encourage undue cross-subsidation between intra-system and cross-system use of the transmission network.

Cost allocation assessment results (CAA) and resulting tariffs based on parameters of forecasted contracted capacity and distance, calculated for CWD counterfactual and adjusted CWD methodologies in order to be comparable to the “Postage Stamp” methodology, are presented in Table 9.

Table 9 Cost allocation assessment results (CAA) and resulting tariffs for CWD counterfactual and adjusted CWD methodologies for year 2021

Forecasted contracted capacity and distance (CWD)					
Allowed revenue for yearly standard capacity products (HRK)	314,493,003		Indicative reference prices – tariffs	HRK/kWh/day	HRK/kWh/day
Entry share	60%	50%	Entry-exit split (%)	60:40	50:50
Exit share	40%	50%	Exit tariffs		
			Exit at interconnection	2.4906	3.1133
Entry revenues (HRK)	188,695,802	157,246,502	Exit in Croatia	1.3847	1.7309
Exit revenues (HRK)	125,797,201	157,246,502	Entry tariffs		
Entry revenues dedicated for Intra-system (HRK)	188,695,802	157,246,502	Entry from gas storage	0.0859	0.0716
Entry revenues dedicated for Cross-system (HRK) - Article 5(5)(c)	0	0	Entry from production	1.9228	1.6023
Exit revenues from Intra-system (HRK) - Article 5(5)(b)	125,797,201	157,246,502	Entry at interconnection	2.0631	1.7192
Exit revenues from Cross-system (HRK)	0	0	Entry from LNG terminal	2.0286	1.6905
Revenue for Intra-system (HRK)	314,493,003	314,493,003			
Revenue for Cross-system (HRK)	0	0			
Cost drivers (forecasted capacity and distance)			Cost allocation index		
Intra-system for entries	18,752,629,805	18,752,629,805			
Intra-system for exits	23,932,566,715	23,932,566,715			
Total – Intra-system	42,685,196,520	42,685,196,520	Rato for Intra-system	0.00736	0.00736
Cross-system for entries	0	0	Rato for Cross-system	0.00590	0.00650
Cross-system for exits	0	0	CAA	22.11%	12.50%
Total – Cross-system	0	0			

Transmission system in Croatia is characterized by a wide dispersion due to geographically indented territory, therefore the methodology that would be driven by cost factors of forecasted contracted capacity and distance under entry-exit split of 60:40 would result in a CAA allocation index of 22.11%.

Moreover, without adjusting the reference prices calculated under CWD methodology, the differences between tariffs for individual intra-system exit points and among Croatian regions would be significant, for instance, the tariff for exit point in Dalmatia would significantly exceed the exit tariff at central Croatia.

As a result of such a scale, when calculating tariffs according to the CWD methodology, HERA applied the adjustment based on the equalisation of tariffs within homogeneous groups of points, thus achieving the same level of tariffs for exits in Croatia, however with significantly higher tariffs at interconnection points, compared to tariffs calculated under the “Postage Stamp” methodology.

In reference 50:50 ratio of revenues entry-exit split, the resulting tariff at interconnection exit points would be 3.1133 HRK/kWh/day, which is considered as high price level that would negatively affect future capacity bookings at interconnections, despite the satisfactory results of the CAA index. Such reference price level would potentially distort cross-border trade and the level of cross-system use of network, while at the same time current investments into transmission infrastructure are aimed at stimulating that use.

Despite the fact that the Croatian gas market, in terms of the amount of consumption and flow, is relatively small compared to the adjacent markets, it is relatively complex, due to the existence of own gas exploitation fields both on land and off-shore, the gas storage and two interconnections with neighbouring countries through which gas inflows to Croatia, while from the beginning of 2019 firm exit capacities were also enabled.

Additional complexity of the gas system arises from number of exit connections of end customers directly connected to transmission system, with large nominal pressure ranges, from 1.5 bar to 31 bar, which require significant system pressure adjustments and compliance of all transmission system components.

Given the current transmission system configuration, domestically produced and imported gas is intended only for intra-system network use, therefore transmission system operator currently does not recover revenue from the cross-system network use.

Neighbouring countries interconnecting with Croatia (Slovenia and Hungary) have secured access to gas sources at gas hubs, so that currently they do not have the need to transport gas through Croatia.

This presumption changes in the context of decreased European gas reserves, when it is expected that transmission route through Croatian gas pipelines will provide additional security of supply to these countries through new supply sources accessible over the future LNG terminal on the island of Krk. Considering the aforesaid and other advantages, the LNG terminal project has been granted the status of the project of common interest of the European Commission (PCI project) for securing gas supply of Central and South-Eastern Europe.

During the past 10 years, the energy strategy of the Republic of Croatia has included significant investment in the construction and modernization of gas transmission system, which has resulted in the increased country's coverage with gas pipelines, enabling the usage of gas in less developed regions of Croatia, especially Lika and Dalmatia.

The backbone of this system was the construction of the Bosiljevo-Split gas pipeline and regional gas pipelines. The introduction of natural gas in regions with smallest GDP share in Croatia and with low-levels of GDP per capita, had twofold impact. On the one hand, these regions, that were dependent on oil, fuel oil and solid fuels, gained access to an environmentally friendly energy source, while on the other, the goal was to foster economic development of these regions by ensuring a safe and reliable energy source.

The Republic of Croatia is specific for its uneven geographic distribution of economic concentration, which results in big differences between Croatian counties. With regard to the GDP distribution, the City of Zagreb, which accounts for one third of total Croatian GDP, has several times higher GDP per capita than Lika region, with mountainous landscape and the lowest population density.

Taking into consideration all of the above, while considering the implementation of the reference price methodology reflecting investments in transmission infrastructure in this region, the implementation of reference CWD methodology for gas transmission services would result in the level of end prices for customers which would be economically unsustainable for these regions, given their current stage of development, and would probably have a further negative impact on their GDP.

This would be also contrary to the Draft Strategy, designed to strengthen the development potential of all Croatian regions, reduce regional disparities and enhance the growth potential of under-developed parts of Croatia, all with the goal of the overall growth and economic progress of the Republic of Croatia.

4.5 Comparison of proposed reference price methodology and CWD methodology

Where the proposed reference price methodology is other than the capacity weighted distance reference price methodology as defined in Article 8 of NC TAR, it is required to compare those two, accompanied by the information of indicative reference prices derived from both methodologies.

In accordance with the above, Table 10 presents the comparison of parameters of chosen “Postage Stamp” methodology and counterfactual CWD methodology, for the year 2021.

Results of comparison indicate that the implementation of CWD methodology would lead to considerably higher level of undue cross-subsidisation – CAA index of 22.11%, compared to 12.77% according to the “Postage Stamp” methodology.

Moreover, the CWD counterfactual methodology results with exit price levels that HERA assess as unfavourable for Republic of Croatia, given all previously stated reasons.

Table 10 Comparison of the proposed “Postage Stamp” reference price methodology and the CWD methodology, under equal elements for the year 2021

<i>Elements of comparison for 2021</i>	<i>CWD methodology</i>	<i>Chosen “Postage Stamp” reference price methodology</i>
I) Input parameters		
Allocation of allowed revenues on entry and exit system points	YES	YES
Distance between entry and exit transmission system point	YES	NO
Forecasted contracted capacity	YES	YES
Amount of gas flows (commodity)	NO	NO
Entry-exit revenue split	60:40	60:40
II) Cost allocation assessments – based on capacity or distance as cost drivers		
Intra-system for entries	18,752,629,805	143,746,967
Intra-system for exits	23,932,566,715	90,844,927
Ratio for intra-system network use	0.00736	1.34057
Ratio for cross-system network use	0.00590	1.17969
Forecasted entry revenues allocated to intra-system	188,695,802	188,695,802

Forecasted exit revenues allocated to intra-system	125,797,201	125,797,201
Cost allocation index	22.11%	12.77%
III) Cost allocation assessments – based on commodity as cost driver	Not applicable	Not applicable
IV.) Assessment in accordance with Article 7 of NC TAR		
Enabling network users to reproduce the calculation of reference prices and their accurate forecast	NO	YES
Taking into account the actual costs incurred for the provision of transmission services considering the level of complexity of the transmission network	YES	YES
Ensuring non-discrimination and prevent undue cross-subsidisation (results of CAA)	YES	YES
Ensuring that significant volume risk related particularly to transport across an entry-exit system is not assigned to final customers within that entry-exit system	YES	YES
Ensuring that the resulting reference prices do not distort cross-border trade	NO	YES
V) Comparison of indicative reference prices for year 2021	in HRK/kWh/day	in HRK/kWh/day
Exit reference prices		
Exit at interconnection	2.4906	1.3847
Exit in Croatia	1.3847	1.3847
Entry reference prices		
Entry from the gas storage facilities	0.0859	0.2006
Entry from production	1.9228	2.0055
Entry at interconnection	2.0631	2.0055
Entry from the LNG terminal	2.0286	1.7047

4.6 Possibility of calculation of reference prices and their forecast

Transmission system users are able to calculate the indicative reference prices for intra-system and cross-system usage for the prevailing tariff period and to estimate their possible evolution, based on the available data on forecasted contracted capacities in the simplified tariff model, published as an integral part of the final consultation documentation on HERA's website.

The amount of the allowed revenue and the method of its calculation is laid out in details by the Methodology for determining the amount of tariff items for gas transmission.

5 INDICATIVE REFERENCE PRICES

5.1 Indicative amounts of reference prices calculated under elements of the “Postage Stamp” methodology

Indicative amounts of reference prices, i.e. tariff items for yearly standard capacity products for the period from 1 January 2021 to 31 December 2026, are determined for the energy subject PLINACRO Ltd., Savska cesta 88A, Zagreb, and calculated by using the elements reached with this Decision, together with forecasted indicative amounts of allowed revenues from Chapter 3.3. and forecasted contracted capacities from Chapter 3.5. of this Decision as shown in Table 11:

Table 11 Indicative amounts of reference prices for yearly standard capacity products for the period from 2021 to 2026, for the energy subject PLINACRO Ltd.

Type of tariff items	Tariff item mark	Tariff item name	Indicative reference prices - tariff items (excluding VAT)						Unit
			2021	2022	2023	2024	2025	2026	
Tariff items for the contracted firm capacity on a yearly basis for the entries into the transmission system	T _{U,IN}	Tariff item for the entry at interconnection	2.0055	1.9075	1.8658	1.8198	1.7889	1.7523	HRK/kWh/day
	T _{U,PR}	Tariff item for the entry from production	2.0055	1.9075	1.8658	1.8198	1.7889	1.7523	HRK/kWh/day
	T _{U,SK}	Tariff item for the entry from the gas storage facilities	0.2006	0.1908	0.1866	0.1820	0.1789	0.1752	HRK/kWh/day
	T _{U,UPP}	Tariff item for the entry from the LNG terminal	1.7047	1.6214	1.5859	1.5468	1.5206	1.4895	HRK/kWh/day
Tariff items for the contracted firm capacity on a yearly basis for the exits from the transmission system	T _{I,IN}	Tariff item for the exit at interconnection	1.3847	1.3166	1.2877	1.2558	1.2345	1.2092	HRK/kWh/day
	T _{I,HR}	Tariff item for the exit in Croatia	1.3847	1.3166	1.2877	1.2558	1.2345	1.2092	HRK/kWh/day

5.2 Comparison of reference prices applicable in current tariff period and reference prices for the period 2021-2026

In accordance with the elements of the “Postage Stamp” methodology for determining the reference price of gas transmission services, the level of transmission tariffs for entry and exit points for the period 2021-2026 shall be changed compared to levels of corresponding tariffs applicable in the prevailing tariff period from 2019 to 2020, due to changes in the following parameters:

- the ratio of distribution of the allowed revenue on entry and exit points of the transmission system changes from current 70:30 to a new ratio of 60:40,
- the tariff item for gas quantity at domestic and interconnection exit points is abolished, whereby 100% of allowed revenue shall be allocated exclusively to tariff items for capacity, compared to current share of 90%,
- cancelation of discounts i.e. the security coefficients related to entry from production,
- increase of the discount amount for the entry point from LNG terminal from 10%, i.e. from the amount of the security coefficient for entry from the LNG terminal of 0.90, to the amount of discount of 15%,
- cancelation of discounts i.e. the security coefficients related to exit in Croatia,

- forecasts of planned allowed revenues and contracted transmission system capacities on a yearly basis, due to the planned start of LNG terminal operations in 2021, compared to the scenario without the LNG terminal, based on which tariffs for the current tariff period were set.

Table 12 Indicative amounts of reference prices for yearly standard capacity products for the period from 2021 to 2026, and for the prevailing tariff period, for the energy subject PLINACRO Ltd.

Tariff item name	Tariff item mark	Reference prices in current tariff period		Indicative reference prices according to NC TAR for the years from 2021 – 2026 (HRK/kWh/day)						% change
		2019	2020	2021	2022	2023	2024	2025	2026	2021/2020
Tariff item for the entry at interconnection	T _{U,IN}	2.0635	1.9425	2.0055	1.9075	1.8658	1.8198	1.7889	1.7523	3%
Tariff item for the entry from production	T _{U,PR}	1.8572	1.7483	2.0055	1.9075	1.8658	1.8198	1.7889	1.7523	15%
Tariff item for the entry from the gas storage facilities	T _{U,SK}	0.2064	0.1943	0.2006	0.1908	0.1866	0.1820	0.1789	0.1752	3%
Tariff item for the entry from the LNG terminal	T _{U,UPP}	-	-	1.7047	1.6214	1.5859	1.5468	1.5206	1.4895	-

Tariff item name	Tariff item mark	Reference prices in current tariff period		Indicative reference prices according to NC TAR for the years from 2021 – 2026 (HRK/kWh/day)						% change
		2019	2020	2021	2022	2023	2024	2025	2026	2021/2020
Tariff item for the exit at interconnection	T _{I,IN}	5.0941	4.2989	1.3847	1.3166	1.2877	1.2558	1.2345	1.2092	-68%
Tariff item for the exit in Croatia	T _{I,HR}	0.7641	0.6448	1.3847	1.3166	1.2877	1.2558	1.2345	1.2092	115%
Tariff item for gas quantity	T _K	0.0015	0.0015	0	0	0	0	0	0	-

CONCLUSION

This Decision, adopted by HERA, the national regulatory authority acting in accordance with Article 41(6)(a) of Directive 2009/73/EC and as a party designated for conducting a regular consultation on methodology determining the reference price for yearly capacity product defines the elements of the chosen methodology in order to complete the implementation process of Commission regulation (EU) 2017/460 of 16 March 2017, establishing a network code on harmonised transmission tariff structures for gas, into the legal framework of the Republic of Croatia.

In accordance with Points 1 and 2 of this Decision, an appropriate amendment of the Methodology for determining the amount of tariff items for gas transmission shall be made accordingly, ending the implementation process of NC TAR, until repeated consultation process that shall occur at least every five years.

According to NC TAR, transmission tariffs should be established and presented in a clear and unbiased manner, taking into account the actual costs incurred by providing transmission services and reflecting the level of complexity of the transmission network. This ensures that network users have an insight into the costs underlying transmission tariffs and the possibility to forecast transmission tariffs for subsequent tariff periods to a reasonable extent.

Throughout this Decision, a reasoning for amendments of the existing Methodology was specified, striving to increase the utilization of the existing transmission network infrastructure and to stimulate the development of domestic wholesale gas market, focusing on opening of the gas market and promoting the integration into the single EU market. At the same time, the important objective is to achieve the goal of long-term security of natural gas supply by increasing the competitiveness of gas infrastructure under objective, transparent and unbiased conditions for all market participants. In this way, the efficiency of transmission system is enhanced, consequently ensuring better quality service to network users, at cost-reflective and competitive prices.

HERA considers that by amending the elements of the reference price methodology as determined by this Decision, a balance will be achieved between challenging objectives of optimal regulation of natural monopolies, at the same time encouraging the development of the energy market and market mechanisms, all with the aim of implementing the EU binding legislation adequately.

Further to the foregoing, it has been decided as in Points 1 to 5 of the operative part of this Decision.

Pursuant to Article 27 of the NC TAR, this Decision shall be sent to ACER and the Commission upon its publication, therefore it was decided as in Point 6 of the operative part of this Decision.

Pursuant to Article 27(9) of the Act on the Regulation of Energy Activities individual decisions taken by the Board of Commissioners of HERA in exercising its public authorities are published on HERA's website, and therefore, it has been decided as in Point 7 of the operative part of this Decision.

**President of the Board of Commissioners
Tomislav Jureković, B.Sc.**

Instruction on legal remedy:

This Decision is enforceable.

This Decision shall not be subject to an appeal, however, it is possible to initiate an administrative action through a lawsuit at the Administrative Court in Zagreb, within 30 days from the day of delivery of this Decision.