Consultation Document in accordance with Article 26 of Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas

JULY 2021

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1. The Purpose of the Consultation Document

Having regard to Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005 (hereinafter referred to as: "Regulation 715/2009"), a network code on harmonised tariff structures for gas was established with Commission Regulation (EU) No 2017/460 of 16 March 2017 establishing a network code on harmonised transmission tariff structures for gas (hereinafter referred to as: "Regulation 2017/460").

Regulation 2017/460 provides that a national regulatory authority, that is, the Energy Agency or the transmission system operator, as determined by the national regulatory authority, shall conduct a consultation on the reference price methodology, which is repeated every five years.

Pursuant to Article 26 and 27 of the Regulation 2017/460 and the decision of the Energy Agency, the public consultation on the methodology for the formation of tariff items for the use of the natural gas transmission system in Slovenia should be performed by the natural gas transmission system operator, i.e. the company Plinovodi d.o.o. (hereinafter referred to as: the "company Plinovodi").

2. Invitation to Participate

The company Plinovodi is publishing the Consultation Document in accordance with Article 26 of the Regulation 2017/460 in the Slovenian and English languages, where in the case of deviations, the Slovenian text prevails. All interested parties are invited to make comments and initiatives on the published consultative document, which they can submit until

23 September 2021

in electronic form on the attached form in Annex 1, to the e-mail address skr@plinovodi.si.

In accordance with the requirements of the Regulation 2017/460, the transmission system operator will publish the responses received on its website after the consultation.

3. Summary

The Slovenian natural gas transmission system has been operating since 1978 and it supplies with natural gas the majority of industrial and urban centres in Slovenia, with the exception of the Obalno-kraška region, Bela Krajina, and a part of Inner and Lower Carniola. The transmission system operator is planning the development of supply in the Obalno-kraška region in the coming years. It is connected to other transmission systems via three cross-border interconnection points: in Ceršak with Austria, in Rogatec with Croatia and in Šempeter with Italy. At the interconnection point Šempeter and at the interconnection point Rogatec, the gas flow is possible in both directions.

12 transmission system operators and 131 direct industrial users are connected to the transmission system. Despite the diversification of the transmission network, the consumption of natural gas is lower than the European average compared to other energy

sources. In the year 2020, the annual quantities transmitted for domestic use have increased slightly or have stabilised and amounted to about 9.6 TWh of natural gas. The amount of natural gas for cross-border transmission is around 7,14 Twh due to the fact that it strongly depends on the market conditions in the neighbouring countries, new gas source at the Krk terminal, as well as temperature conditions and demand for electricity.

In this document, the proposed reference price methodology is an existing matrix method because it is used by the transmission system operator since the entry and exit points have been applied. In determining reference prices, the comprehensive system of parameters is taken into account: the technical capacity and the maximum peak load on the individual sections of the transmission system, the replacement value of the transmission system, the forecast for the booking of transmission capacity, the quantity and direction of the natural gas flow, and the structure or topology of the transmission network. The parameters used provide a more appropriate distribution of the cost of the system use than the reference price methodology based on the capacity-weighted distance (hereinafter referred to as: the "CWD methodology"), since the comparative index of the cost allocation assessment[1], for the case of reference prices I, according to the matrix method is lower than according to the reference price methodology based on the capacity-weighted distance.

The matrix method takes into account the estimated costs and complexity of the transmission system, it is non-discriminatory, and prevents cross-subsidisation. System users can calculate indicative average reference prices for cross-system[2] and intra-system[3] use of transmission capacity on the basis of available data and on the basis of the simplified model published on the website.

The proposed ratio of revenue from capacity-based transmission tariffs at all entry and exit points is based on the specificity of the actual use of the Slovenian transmission system, where the supply of natural gas to final users in Slovenia represents the majority share.

In addition to revenue based on capacity-based tariffs at all entry and exit points, the transmission system operator will realise a part of the revenue from transmission services with a commodity-based transmission tariff, i.e. for its own use of natural gas, and revenues from non-tariff services based on measurement service tariffs. The methodology for determining the reference prices remains the same as before.

We will carefully review the responses received in the form of initiatives and comments, and take them into account.

Marjan Eberlinc

General Manager

Sarah Jezernik

Deputy General Manager

[1] The explanation of the comparative index can be found in Section 4.4.
[2] An explanation of the term can be found in Annex 5.
[3] An explanation of the term can be found in Annex 5.

4. Proposed Reference Price Methodology

Reference: Article 26(1)(a) of the Regulation 2017/460

The transmission system operator uses the matrix method to determine the reference prices and intends to use it in the future period, as well.

4.1 Matrix Method

4.1.1 Description of the Matrix Method

Reference: Article 26(1)(a) of the Regulation 2017/460

The transmission system operator shall determine the entry and exit tariff items by taking into account the maximum load on the individual sections of the transmission system and the entry / exit points of the transmission system and the replacement value of the transmission system, which are reflected in the appropriate distribution of transmission system costs.

The matrix method of calculating tariff items is based on the assumption of the possibility of natural gas transmission from any point on the transmission system to any other point in the transmission system. In this way, an appropriate distribution of the cost of use to the entire transmission system is ensured, regardless of the point at which the transmission system is used, in relation to the technical characteristics of the transmission system, the assets of the transmission system operator, and the intended use of the transmission system by the users.

On the basis of the estimated costs of the transmission system operator defined by the regulatory framework, in accordance with the current Act determining the methodology for setting the regulatory framework for transmission system operator for natural gas, adopted by the Energy Agency and covered by revenues from capacity-based transmission services, the cost per unit of maximum charge is calculated, which represents the basis for the calculation of tariff items, taking into account the forecasts and estimates of future booking of transmission capacity.

The transmission system operator shall determine the entry and exit reference prices in the form of tariff items.

The transmission system operator shall separately determine the entry and exit tariff items for cross-border points and points within the Republic of Slovenia. The indicative reference price is expressed in EUR / kWh / day.

The description of the transmission calculation via transmission system is given in Annex 2.

4.1.2 Explanation of the Parameters and Assumptions Used

Reference: Article 26(1)(a)(i) of the Regulation 2017/460

The matrix method includes the following parameters:

1. Technical capacity at entry and exit points and associated assumptions;
2. Forecast and estimate of the booking of transmission capacity for domestic network users and cross-border transmission for the year 2022;
3. The structural representation of the transmission network with an appropriate level of detail.

Table 1:Technical capacity of an individual entry or exit point in MWh/day

Entry or exit point		Technical capacity as of 1 Jan. 2021
Entry point	Ceršak	139,216
	Šempeter pri Gorici	28,534
	Rogatec	7,731
Exit point	Ceršak	0
	Šempeter pri Gorici	25,940
	Rogatec	68,289
	Slovenia - domestic exit point	81,252

Based on the matrix method, the data on the estimated booked capacity at an individual point are also used to determine the reference prices.

Table 2: Forecast and estimate of the booking of transmission capacity for domestic network users and cross-border transmission for the year 2022 (in kWh/day)

Entry or exit point		Forecast and assessment of the booking of transmission capacity for the year 2022*
Entry point	Ceršak	41,164,560
	Šempeter pri Gorici	1,692,726
	Rogatec	2,253,097
Exit point	Ceršak	0
	Šempeter pri Gorici	0

	Rogatec	5,075,000
	Slovenia - domestic exit point	56,803,358

* Average annual capacity in which short-term products are recalculated to an annual level.

4.1.3 Structural Presentation of the Natural Gas Transmission System in Slovenia

Reference: Article 26(1)(a)(i), 30(1)(a)(iv) of the Regulation 2017/460

The Slovenian natural gas transmission system began its operations in 1978, and was then gradually expanded and upgraded. In the year 2014, the last major investment cycle was completed with the construction of a pipeline from the Austrian border at Ceršak to Vodice near Ljubljana. In addition to providing additional necessary transmission capacity, the safety and reliability of the transmission system operation were improved. With the construction of the Vodice - TE-TOL transmission pipeline in the year 2021, the company will connect a new TE-TOL gas steam unit at the location in Ljubljana. The new transmission connection will provide Ljubljana with a significant reduction of particulate matter emissions and around 70% lower CO2 emissions from the TE-TOL, even higher security of gas supply and the possibility of additional connections in the area of the Municipality of Ljubljana and beyond.

With regular inspections and regular maintenance work, the company Plinovodi as a transmission system operator ensures safe and reliable operation of the transmission system. The status of transmission pipelines is regularly monitored by supervising pipeline routes, by performing internal inspections of gas pipes, by using various methods of external gas pipeline inspection, and by constantly monitoring the operational parameters via the central control system. Based on preventive inspections and maintenance work, we estimate that the gas infrastructure is in very good operating condition; namely, so far, we have not had any operational problems that could not have been managed in the framework of the planned maintenance interventions.

At the time of issuing this document, there are no entry points within Slovenia, meaning nodomestic entry points in Slovenia, and for the time being, the supply of the Slovenian natural gas market is entirely dependent on imports. The supply of natural gas to Slovenia takes place from individual hubs of the European gas market. From Austria, natural gas flows via the Ceršak entry point, and from Italy, via the Šempeter entry point. This year, the first physical gas flow in the amount of 2,408 MWh/day from Croatia was performed. The physical flow of gas was performed over a period of one day, which could happen more often in the future. The predominant gas flow remains in the direction of Croatia.

Pursuant to Regulation 715/2009, the transmission system operator must provide system users the separate use of transmission capacity at all entry and exit points to the system (as per the so-called system of entry and exit points). To ensure successful operation of the entry and exit points system, the transmission system operator must provide appropriate

technical conditions such as the elimination of bottlenecks on the transmission system in order to enable suitable marketing and booking of capacity under this method and to allow the booking of capacity at entry and exit points in various combinations.

The Slovenian gas transmission system comprises almost 1,177 km of pipelines, two compressor stations in Kidričevo and Ajdovščina, and 255 metering and regulation stations or other stations. At key points, the gas transmission system is equipped with devices through which the system can be controlled and maintained. The remote control and monitoring functions are performed by means of an information and telemetry system.

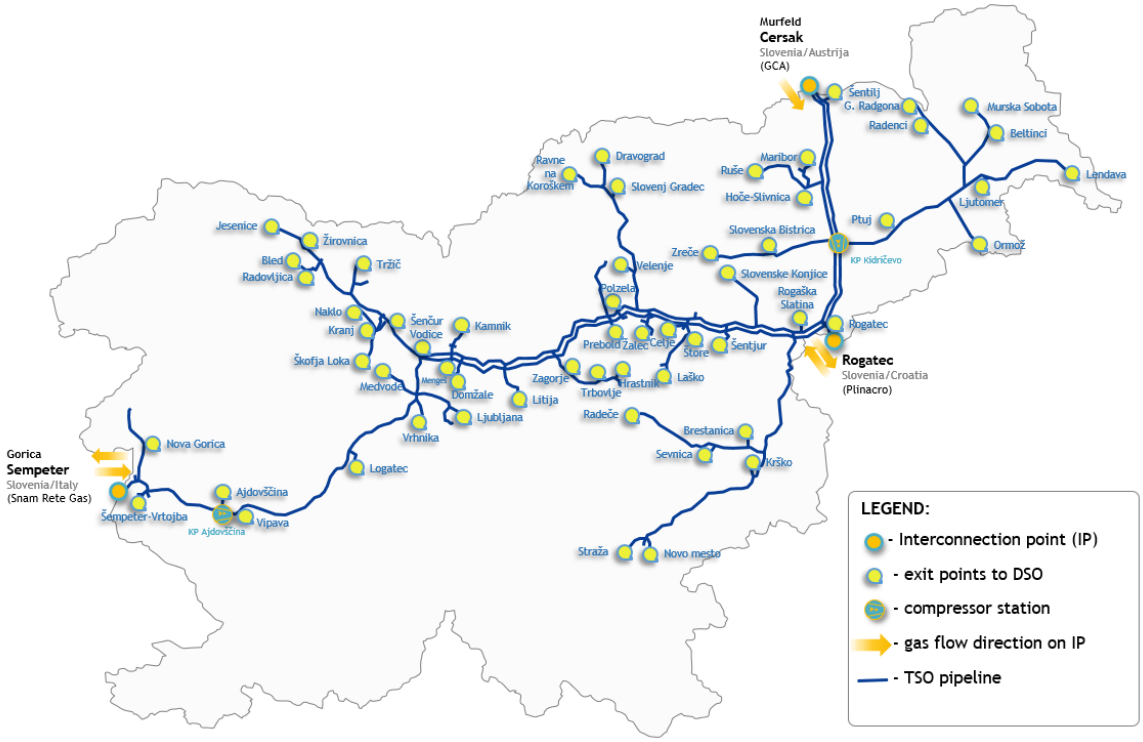
Table 3: Material natural gas transmission system infrastructure in Slovenia

Infrastructure		Status as of 1 January 2021
Gas network	Total	1,177km
	Pipelines with a diameter of 800mm	167km
	Pipelines with a diameter of 500mm	162km
	Pipelines with a diameter of 400mm	197km
	Other pipelines of smaller diameters	651km
Facilities and equipment	Compressor stations, total power	CS Kidričevo 10.5MW, CS Ajdovščina 9MW
	Cross-border stations	Ceršak, Rogatec, Šempeter pri Gorici

The gas transmission system connects most of the industrial and urban centres in Slovenia, with the exception of the Obalno-kraška region, Bela Krajina, and a part of Inner and Lower Carniola.

The gas transmission system is controlled and monitored from the dispatch centre that is connected to the dispatch centres of transmission systems operators of neighbouring countries, as well as to distribution network operators and major consumers of natural gas.

Figure1: Structural presentation of the Slovenian transmission system



In the year 2020, the Slovenian natural gas transmission system transmitted approx. 9.6 TWh of natural gas for domestic consumption and approx. 7.14 TWh for cross-border transmission needs. No acquisition network, natural gas storage facility, liquefied natural gas unit nor biogas production unit is connected to the Slovenian transmission system.

In accordance with the ACER report on the Internal Gas Market in Europe and the role of transmission tariffs , dated 6 April 2020, the definition of regional networks within the Slovenian transmission system as seen by the transmission system operator is given below.

Based on the definitions of the Regulation (EC) No 715/2009 and Directive 2009/73/EC, regional networks are gas pipelines that are primarily used in the context of local distribution of natural gas or for domestic supply and are not used for gas transmission to border points. As can be seen from the diagram in Figure 2, the part of the transmission system, which is used only by the final customers and distribution system operators that are connected to exit points within Slovenia, is presented as a section between points D and E. The length of the section is 739.58km, which represents more than 60% of the total gas transmission system. Using the matrix method in Slovenia, all funds intended for the supply of gas users within Slovenia are allocated to the calculation of the tariff for intra-system use of the transmission system.

4.1.4 Determination of the reference price

The reference prices determined by the matrix method are determined by an optimisation process aimed at determining the minimum differences between the tariffs for individual entry or exit points and the costs attributable to a particular part of the system.

Reference prices based on the matrix method are determined taking into account the following:

- The replacement value of the transmission system,
- The distribution of that part of the eligible costs relating to capacity-based transmission services, and
- The load of individual parts of the transmission system at the onset of the peak load of the transmission system.

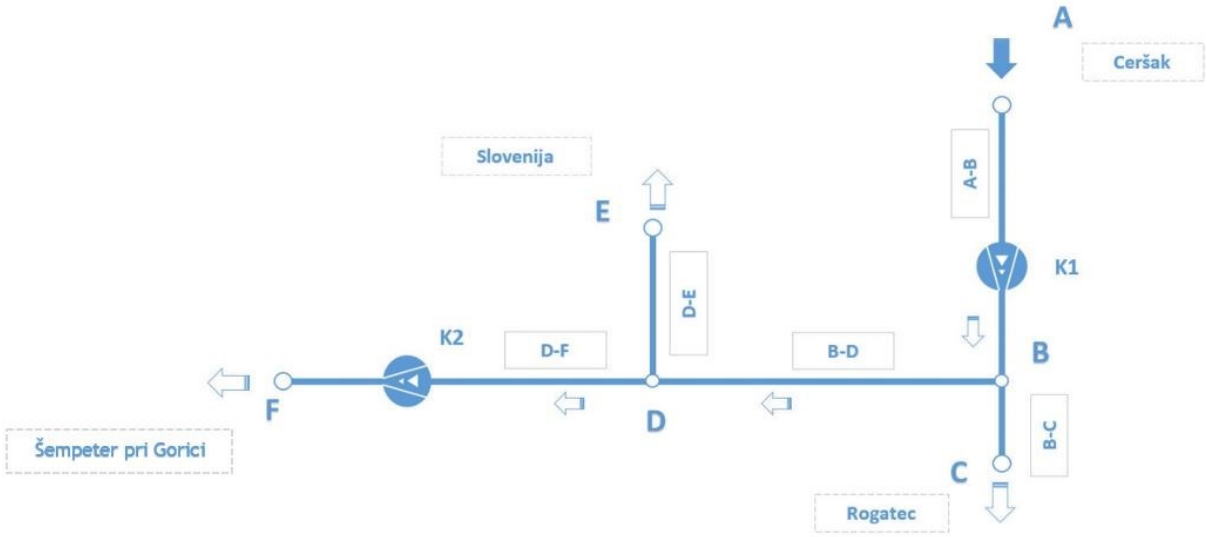
The reference prices determined by the matrix method are determined by an optimisation process aimed at determining the minimum differences between the tariffs for individual entry or exit points and the costs attributable to a particular part of the system.

The lengths of the transmission pipelines according to the diameter of the pipes are shown in Table 3.

The replacement value of the transmission system is taken into account as an input parameter for determining the reference prices. For the year 2022, for which reference prices are set, the replacement value amounts to EUR 757.7 million and is equal to the purchase value of transmission system assets as at 31 December 2020. Depending on the replacement value of each part of the transmission system, the eligible costs for the year 2022 shall be determined.

Figure 2 shows the division of the transmission system into individual parts. For the purpose of determining the reference price of an individual entry or exit point, the start and end points of the part of the transmission system with homogeneous characteristics must be determined. All costs of the transmission system in this part are subsequently attributed to an individual entry or exit point, depending on the peak load of this part of the system.

Figure2: Scheme of the transmission system with parts of the system whose costs are attributed to an individual point



The part of the transmission system between Points A and B represents the part of the main gas pipeline M1 and M1/1 between BMCS[4] Ceršak or the state border and BMCS Rogatec. Point B represents the "junction" from which natural gas can be transmitted further along the Slovenian transmission system to the west or to the Croatian transmission system. This part of the transmission system also includes the Kidričevo compressor station. The costs of this part of the transmission system are reflected in the price of the Ceršak entry point and in other entry or exit points, if this part of the route is used to transmit gas to the user. Since on the day of the maximum load of the system all the gas entered through Point A and was transported to the users of the system at the exit points, the costs of this route are also reflected in all reference prices for exit points.

The transmission system between Points B and C is part of the main gas pipeline M1, but only from Point B, which represents the BMCS Rogatec and represents a "junction" from which natural gas can be transmitted further along the Slovenian transmission system to the west or to the Croatian transmission system. Point C represents the border point with Croatia. Costs incurred on section B-C are attributed to the reference price of the Rogatec point.

The section of the transmission system marked B-D between Points B and D represents the main gas pipeline M2 and M2/1 between the BMCS Rogatec and metering and regulation station Vodice. In Vodice, the gas flow can be diverted in different directions. It is characteristic of the section B-D that the highest consumption of Slovenian customers is detected there; therefore, the costs associated with the section B-D are reflected in the reference price for the exit point within the Republic of Slovenia and in the reference price of the exit point Šempeter.

The reference price of the exit point within the Republic of Slovenia also includes all transmission system costs, which are presented in the scheme as a section between Points D and E and include the transmission system used only by end customers and distribution

[4] BMCS – Border metering and control station

system operators connected to exit points within Slovenia. This part of the transmission system includes, e.g., gas pipelines with lower diameter or lower pressure, connections metering and regulation stations and regulation stations), reduction stations, and the like.

A part of the transmission system is the M3 gas pipeline between the metering and regulation stations Vodice and BMCS Šempeter near Nova Gorica or the state border, where the point Vodice is marked with the letter D and Šempeter with the letter F. The costs associated with section D-F are reflected in the reference price of the exit point Šempeter.

The data relating to individual sections of the transmission system and that are necessary for determining the reference prices are shown in the table below:

Table 4: Data on individual sections of the transmission system

Section	Length [km]	Direction of gas flow	Peak load ** [kWh / day]	Replacement value of assets [EUR million]	Eligible costs [EUR]
A-B	116.30	A->B	74,254,609	149.7	7,790,353.43
B-C	3.70	B->C	25,125,837	10.8	560,011.62
B-D	217.20	B->D	49,128,772	192.7	10,023,751.08
D-E	739.58*	D->E	44,547,535	232.0	12,067,450.92
D-F	100.30	D->F	4,916,431	172.5	8,975,759.63
Total	**1,177**			757.7	39,417,326.69

* The distance between Point D and E represents the length of all pipelines intended only for the transmission of gas to domestic exit points.

** On 8 January 2020.

When determining the reference prices according to the matrix method, the costs are distributed to individual points according to the load of these parts of the transmission system at the onset of the peak load.

For the year 2022, the eligible costs will be covered by transmission tariffs based on capacity of EUR 39.4 million. Depending on the actual distribution of the replacement value of assets to the transmission system sections, the eligible costs that are covered by the capacity-based transmission services shall also be distributed in equal shares. These costs represent the allowed revenue covered by capacity-based entry and exit tariffs.

4.2 Proposed Adjustments for Capacity-Based Transmission Tariffs

Reference: Article 26(1)(a)(ii) of the Regulation 2017/460

The Consultation Document does not include tariff adjustments at entry points from warehouses and exit points to warehouses of at least 50% and the possibility of discounting

at entry points from of liquefied natural gas facilities and from infrastructure developed to eliminate the isolation of Member States from the point of view of their natural gas transmission systems, and at the exit points to this infrastructure, which would be required in accordance with Article 9 of the Regulation 2017/460, due to the fact that the Slovenian transmission system does not currently have the stated points.

4.3 Indicative Reference Prices

Reference: Article 26(1)(a)(iii) of the Regulation 2017/460

Pursuant to Article 12 of the Regulation 2017/460, the reference prices shall be used as reserve prices for yearly standard capacity products for firm capacity. 'Reference price' means the price for a capacity product for firm capacity with duration of one year, which is applicable at entry and exit points and which is used to set capacity-based transmission tariffs. The reserved prices for non-annual standard capacity products for firm capacity are determined in accordance with Chapter No III of the Regulation 2017/460.

The matrix method does not determine the tariff item for the point where there is no flow; therefore, the tariff items for the entry point Rogatec, Šempeter and Slovenia (domestic entry point), as well as the tariff item for the exit point Ceršak do not derive from this model. The tariff items for these connection points are set at 90% of the tariff item in the flow direction, and the tariff item for the Slovenia entry point (domestic entry point) is the average of the tariffs at all entry points.

Based on the data in Tables 2 and 4, the following indicative reference prices with code I are calculated using the matrix method:

Table 5: Reference prices I for entry capacity for the year 2022 in EUR/(kWh/day)

Entry point(s)	Indicative entry reference price for the year 2022
Ceršak	0.11971
Šempeter pri Gorici	2.08430
Rogatec	0.02289
Slovenia - domestic entry point	0.74230

Table 6: Reference prices I for exit capacity for the year 2022 in EUR/(kWh/day)

Exit point(s)	Indicative exit reference price for the year 2022
Ceršak	0.10774
Šempeter pri Gorici	2.31589
Rogatec	0.02543
Slovenia - domestic exit point	0.54188

The indicative reference price I for the Šempeter entry and exit points is uncompetitive compared to other points and the implementation of such a tariff would lead to disinterest of system users and even lower capacity bookings. The Šempeter exit point is located on the transmission route Austria - Slovenia - Italy, which is a competitive transmission route Austria - Italy. The cost of booking the transmission route Austria - Slovenia - Italy for the case of the annual booking of capacity on 1 October 2021 is 0.4513 EUR/kWh/day, and the cost of booking the transmission route Austria - Italy is 0.3502 EUR/kWh/day. If the indicative reference prices I were applied, the cost of booking the transmission route Austria - Slovenia - Italy would amount to EUR 2,5663/kWh/day, which indicates a high level of non-competitiveness of this transmission route. Based on the results of the analysis presented above, in accordance with point (a) of the fourth paragraph of Article 6 of the Regulation 2017/460, it follows that the reference price for the Šempeter exit point should be set at EUR 0.09772/kWh/day and thus ensure better competitiveness of the route Austria - Slovenia - Italy, which is also reflected in the occasional booking of transmission capacity by the system users. This means that after the benchmarking and rescaling, reference prices for the year 2022 will be determined as shown in Tables 7 and 8, which will also ensure the competitiveness of the remaining reference prices on the transmission system. In setting the reference prices II, it was also taken into account that the system users also book short-term products, differently by individual point and in accordance with the respective needs for transmission capacities at each individual point. Namely, the transmission system operator notices an increasing interest of system users in short-term capacities, which is a consequence of optimising the booking capacities. In the forecast and estimate of transmission capacity booking for the year 2022 from Table 2, short-term bookings are taken into account as the total annual average of the assessment of transmission capacity booking, while revenues from short-term capacity booking are also taken into account in determining the reference prices II. The tariff item for the exit point Slovenia - domestic exit point is defined as the basic tariff item, and the system users in Slovenia are classified into 8 customer groups according to the amount of their booked transmission capacity. Consumer groups will be abolished in 2024, so that all users of the system will be classified into a single group. Due to the fact that there is currently no entry point Slovenia - domestic entry point on the transmission system, it is determined as the average of all other entry points. Certain tariff items enable the system users to have competitive access to and use of gas sources, while ensuring that the transmission system operator achieves the allowed revenue.

The reference price II is at the same time the same as the confirmed tariff items for the year 2022.

Table 7: Reference prices II for entry capacity for the year 2022 in EUR/(kWh/day)

Entry point(s)	Reference price for the year 2022
Ceršak	0.11937
Šempeter pri Gorici	0.08795
Rogatec	0.02906
Slovenia - domestic entry point	0.07674

Table 8: Reference prices II for exit capacity for the year 2022 in EUR/(kWh/day)

Exit point(s)	Reference price for the year 2022
Ceršak	0.10743
Šempeter pri Gorici	0.09772
Rogatec	0.03228
Slovenia - domestic exit point	0.53176

4.4 Cost Allocation Assessment

Reference: Article 26(1)(a)(iv) of the Regulation 2017/460

In accordance with the need to define transmission and non-transmission services under Article 4 of the Regulation 2017/460, the Act determining the methodology for charging for the network charge for the gas transmission network (Official Gazette of the Republic of Slovenia, Nos 20/19, 8/20, 85/20, and 48/21) provides that revenue from transmission services, in addition to the revenue from capacity-based transmission tariffs at all entry and exit points, will also include revenue from transmission services with a commodity-based transmission tariff from own use of natural gas in accordance with the provision of Article 4(3) of the same Regulation.

The company Plinovodi performed a cost allocation assessment associated with revenue from transmission services, which are covered by capacity-based transmission tariffs, and the cost allocation assessment associated with revenue from transmission services, which are covered by commodity-based transmission tariffs.

In estimating the distribution of costs related to revenue from transmission services covered by capacity-based transmission tariffs, we used the same input data as the cost generator in the matrix method as in the CWD methodology; namely, the forecasted contracted capacity and distance. The value of the cost allocation comparison index[5] for the case of reference prices I, calculated on the basis of the ratio for intra-system and cross-system use, based on the cost allocation assessment associated with revenue from transmission services, which are covered by capacity-based transmission tariffs in the matrix method, amounts to 48.21%, and in the CWD methodology, 53.62%.

The cost allocation assessment associated with revenue from transmission services, which is covered by commodity-based transmission tariffs, is presented in Point 4.6 of this document.

[5] Calculated in accordance with Article 5 of the Regulation 2017/460.

4.5 Assessment of the Matrix Method

Reference: Article 26(1)(a)(v) of the Regulation 2017/460

4.5.1 Repeat Calculation of Reference Prices and Forecasting

System users can calculate the indicative average reference prices for cross-system and intra-system use of transmission capacities on the basis of available data and on the basis of the simplified model published on the website. Transmission services revenue is determined by the regulatory framework taking into account the Act determining the methodology for setting the regulatory framework for transmission system operator for natural gas. Transmission services revenue for the year 2022 amounts to EUR 39.4 million. The Energy Agency may decide that, for a given regulatory period, a part of the projected revenue from capacity-based transmission services is lower than the allowed income with the aim of preventing the rapid change in tariff items.

4.5.2 Consideration of Actual Costs and Degree of Complexity of the Network

Due to its small size, the natural gas transmission system in Slovenia is complex and sensitive to changes in the transmission of natural gas. Individual and rather large parts of the system serve only for the use of users in the Republic of Slovenia. The transmission system has many direct customers (131). On 1 January 2021, we had 299 active metering points. Many customer outlet points / sites also mean that a large amount of funds of the transmission system operator are engaged for the supply of domestic users.

Additional complexity is brought about by the transmission - pressure conditions in the system, which require a large adjustment of the system with respect to the direction of the gas flow from the neighbouring systems. In most European systems, changes in flows due to commercial conditions mean a change in flows only in a smaller part of the network, and in the case of the Republic of Slovenia, fluctuations in flows can result in changes in flows in the predominant part of the system. Accordingly, all system capabilities, including properly dimensioned compressor stations, must be adapted accordingly.

Although the network is interconnected by the intra-system and cross-system use of the system, the system is not so intertwined and intermeshed that it would be possible to assume the whole system as being a homogeneous network through which gas flows via different routes. In addition to the shared use of the system for intra-system and cross-system purposes, it is also necessary to take due account of the specific transport routes where natural gas flows for the needs of cross-system use.

It follows from the above findings that, in the case of the Republic of Slovenia, the matrix method is a more appropriate reference price method, since it takes into account the geographical distribution of flows, which more accurately describes the situation in the system. This also takes into account the maximum load on each geographical area.

4.5.3 Ensuring Non-Discrimination

The proposed matrix method takes into account individual geographical areas, thus appropriately addressing those areas that are primarily targeted at domestic supply, areas intended for cross-system and intra-system use, and areas that are primarily intended for cross-system use.

The matrix method for the case of reference prices II shows the ratio of revenues of the cross-system / intra-system use of 2.1 / 97.9[6] which is considered appropriate for the situation in the Slovenian system. Namely, the majority of cross-system services take place on a relatively short section of the network in the length of less than 60 km, which means that in the event of cross-system use, the individual parts of the system are not even engaged. The matrix method automatically takes this into consideration; therefore, the share of revenue from cross-system use is relatively small. In calculating the cost allocation assessment covered by capacity-based transmission tariffs, the ratio of revenue from capacity-based transmission tariffs at all entry points in the matrix method for the case of reference prices II, as well as the revenue from capacity-based transmission tariffs at all exit points are calculated equal to 14 / 86. The distribution is calculated according to the input data used; namely, as the sum of the products of the planned bookings of transmission capacities and tariff items separately for entry and exit points.

The CWD methodology does not have such a distribution. The *ex-ante* revenue is divided in the ratio of the entry / exit tariff items for the network use. Due to the specific distribution of the Slovenian system use, the distribution of 50 / 50 would be inadequate for the Slovenian system.

The obtained result of the ratio between input and output revenues reflects the history of system design and construction, which was primarily intended for large domestic industrial users (i.e., intra-system use), and less for the cross-system use of the transmission system. Therefore, the system was geographically optimised for the supply of as many large industrial users as possible in the Republic of Slovenia.

The matrix method is also non-discriminatory within domestic users, because it takes into account geographically rounded areas and their distance from the entry points into the system, as well as the areas through which gas must run to reach the final user.

When using the matrix method, the ratio of cross-system-based revenue to the cost carrier for cross-system use is closer to the ratio of revenue for intra-system use to the cost carrier for intra-system use, as in the case of the CWD methodology. Therefore, the test from Article 5 of the Regulation 2017/460, for the case of reference prices I, shows a better result for the matrix method than for the CWD methodology.

[6] Calculated in accordance with Article 5 of the Regulation 2017/460.

4.5.4 Taking Risks from Cross-System Use

The Energy Agency and the transmission system operator strive for stable and predictable tariff formation, which must the same time reflect the actual market situation and the main features of the Slovenian natural gas transmission system. The matrix method chosen allows tariffs to be set to reflect the actual costs of each part of the transmission system.

We are witnessing a low cross-system use of the transmission system, which is also reflected in the division of cross-system / intra-system use, which is 2.1 / 97.9.

The Act on the methodology for determining the regulatory framework stipulates that possible fluctuations in the use of the system are spread over a longer period of time, which gives domestic users additional protection against the risks of the scope of cross-system use.

4.5.5 Reference Prices Do Not Distort Cross-Border Trading

The matrix method ensures an appropriate distribution of costs between the connecting entry or exit points, so that a single point is not disproportionately burdened with costs and, at the same time, reference prices ensure the competitive performance of the region's natural gas market. As shown in Table 9, the use of the CWD methodology would cause higher reference prices at the interconnection points, which would constitute an additional obstacle to cross-border trade. Moreover, due to the ex-ante distribution of revenues at all entry and exit points in a 50 / 50 ratio, the application of the CWD methodology would not reflect the actual cost of each part of the transmission system. Due to the specific distribution of the Slovenian system use, the distribution of 50 / 50 would be inadequate for the Slovenian system.

4.6 Comparison of the Matrix Method with the CWD Methodology

Reference: Article 26(1)(a)(vi) of the Regulation 2017/460

In the event that the transmission system operator chooses a reference price methodology other than the CWD methodology, the Consultation Document must include a comparison of the proposed methodology with the CWD methodology and the information on the indicative reference prices; therefore, Table 9 is presented below with the comparison of the methodologies:

Table 9: Comparison of Methodologies

	Comparable component	Matrix method for reference price calculation	Methodology CWD
A	**Input variables***		
1	Allowed revenue allocation to an individual point.	YES	YES
2	Capacity booking assessment.	YES	YES

3	Distance between individual points of the transmission system.	YES	YES
4	Ratio between entry and exit.**	22 / 78 and 14 / 86	50 / 50 and 50 / 50
	Comparable component	**Matrix method for reference price calculation**	**Methodology CWD**
B	**Compliance with Article 7 of the Regulation 2017/460***		
1	The methodology enables network users to reproduce the calculation of reference prices and their forecast. ***	YES	YES
2	The methodology takes into account the actual costs incurred for the provision of transmission services considering the level of complexity of the transmission network.	YES	NO
3	The methodology ensures non-discrimination and prevents undue cross-subsidisation, including by taking into account the cost allocation assessments set out in Article 5 of the Regulation 2017/460.	YES	YES
4	The methodology 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
5	The methodology ensures that the resulting reference prices do not distort cross-border trade.	YES	NO
C1	**Cost allocation assessment on the basis of capacity (Article 5(1)(a) of the Regulation 2017/460 for reference prices I)**		
1	Revenue assessment within the system.	38,331,023	36,487,752
2	Revenue assessment outside the system.	1,086,170	2,929,575
3	Cost factor assessment within the system.	15,640,407,933	15,640,407,933
4	Cost factor assessment outside the system.	724,737,380	724,737,380
5	Ratio within the system.	0.00245	0.00233
6	Ratio outside the system.	0.00150	0.00404
7	Comparative index.	48.21 %	53.62%
C2	**Cost allocation assessment on the basis of capacity (Article 5(1)(a) of the Regulation 2017/460 for reference prices II)**		
1	Revenue assessment within the system.	34,756,990	32,878,489
2	Revenue assessment outside the system.	740,749	2,619,493
3	Cost factor assessment within the system.	15,640,407,933	15,640,407,933

4	Cost factor assessment outside the system.	724,737,380	724,737,380
5	Ratio within the system.	0.00222	0.00210
6	Ratio outside the system.	0.00102	0.00361
7	Comparative index.	73.98 %	52.91%
D	**Cost allocation assessment on the basis of commodity (Article 5(1)(a) of the Regulation 2017/460)**		
1	Revenue assessment within the system.	1,252,060	1,252,060
2	Revenue assessment outside the system.	927,856	927,856
3	Cost factor assessment within the system.	26,354,507	26,354,507
4	Cost factor assessment outside the system.	19,530,357	19,530,357
5	Ratio within the system.	0.04751	0.04751
6	Ratio outside the system.	0.04751	0.04751
7	Comparative index.	0.00 %	0.00 %

* Chapters A and B refer to the cost allocation assessment on the basis of capacity (Article 5(1)(a) of the Regulation 2017/460 for reference prices I and II).

* 22/78 ratio among revenue from capacity-based transmission tariffs at all entry and exit points for the case of reference prices I and 14 / 86 ratio for the case of reference prices II are based on the specificity of the actual use of the transmission system, where the supply of natural gas to final users in the Republic of Slovenia represents the majority share.
*** Using a simplified model, network users can calculate indicative average reference prices for cross-system and intra-system capacity utilisation.

The company Plinovodi performed a cost allocation assessment relating to the transmission services revenue, which are covered by capacity-based transmission tariffs in accordance with Article 5(1)(a) of the Regulation 2017/460 by the matrix and CWD methods before and after the benchmarking comparative and rescaling. The transmission system operator shall establish that the presentation of the calculated reference prices before and after the benchmarking and rescaling enables a transparent and impartial comparison of the reference prices determined by different methods of calculating the reference prices.

In the case of the cost allocation assessment based on the CWD methodology, the cost allocation comparison index for the case of reference prices I is 53.62%. While in the case of the cost allocation assessment based on the proposed matrix method, the cost allocation comparison index for the case of reference prices I is 48.21%. The proposed matrix method takes into account the complex system of input parameters in determining the reference prices, which ensures a more appropriate distribution of the cost of use to the entire transmission system, so that the tariff items reflect the actual costs of the transmission service within or outside the system to a greater extent.

In calculating the cost allocation assessment, we have in the matrix method and the CWD methodology taken into account the forecast and estimate of the booking of transmission capacity for domestic users and the cross-border transmission for the year 2022 (Table 2 in the Consultation Document), and the distance between the individual entry and exit points of the transmission system. In the calculation based on the CWD methodology, we took into

account the 50 / 50 ratio of revenue from the capacity-based transmission tariffs at all entry and exit points, and in the case of a matrix method calculation, the ratio was calculated and amounted to 14 / 86 for the case of reference prices II.

Table 10: Comparison of tariff items in EUR/(kWh/day)

	Matrix method	CWD methodology
Title of the point(s)	Tariff items for the year 2022	Tariff items for the year 2022
Entry point Ceršak	0.11937	0.4075
Entry point Šempeter pri Gorici	0.08795	0.01281
Entry point Rogatec	0.02906	0.31373
Slovenija – domestic entry point	0.07674	0.49200
Exit point Ceršak	0.10743	0.28333
Exit point Šempeter pri Gorici	0.09772	0.02108
Exit point Rogatec	0.03228	0.12815
Slovenija – domestic exit point	0.53176	0.30535

The tariff items according to the matrix method from Table 10 are equal to the reference prices II from Tables 7 and 8 and represent the confirmed tariff items for the year 2022. Tariff items according to the CWD methodology are determined by performing a rescaling and benchmarking and covering the revenue in the amount of EUR 35.5 million, due to the fact that the calculation takes into account the average annual capacity bookings, and system users in Slovenia perform more and more short-term bookings, which also represents the remaining revenues to the total allowed revenues.

From the comparison of the indicative tariff items, it is evident that the tariff items for interconnection points, calculated according to the proposed matrix method, are more competitive and promote cross-border trading. The deviation of the tariff item for exit points in the RS reflects the purpose of the construction of the Slovenian transmission system, which is primarily built for domestic users of the transmission system. This is also evident from the forecast for the booking of transmission capacity. The tariff item at the entry and exit point Šempeter pri Gorici is lower in the CWD methodology than in the matrix method, but the competitiveness of the Austria - Slovenia - Italy transmission route is guaranteed in the case of the tariff item used in the matrix method. When calculating tariff items according to the CWD methodology, for the purpose of impartial calculation of tariff items, the same factor was used to reduce the exit and entry tariff item Šempeter pri Gorici as in the matrix method.

The transmission system operator will realise a part of the revenue on the basis of commodity-based transmission tariffs, as defined in Article 4(3)(a) of the Regulation 2017/460. Therefore, it performed a cost allocation assessment relating to the transmission services revenue to be recovered by capacity-based transmission tariffs and based exclusively on the cost drivers.

In calculating the cost allocation assessment associated with the revenue from transmission services covered by commodity-based transmission tariffs, we took into account the volume of gas flow per day in the case of the matrix method and the CWD methodology. For the case of the cost allocation assessment based on the proposed matrix method and the CWD methodology, the cost allocation comparison index is the same.

5. The Indicative Information Referred to in Article 30(1)(b) of the Regulation 2017/460

Reference: Article 26(1)(b) of the Regulation 2017/460

Pursuant to Article 3 of the Regulation 2017/460, the 'allowed revenue' represents 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 41(6)(a) 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.

Reference: Article 30(1)(b)(i) of the Regulation 2017/460

Table 11: Allowed revenue

Allowed revenue	EUR 41.5 million (2022)

Reference: Article 30(1)(b)(iv) of the Regulation 2017/460

Table 12: Transmission services revenue

Transmission services revenue	EUR 41.1 million (2022)

Pursuant to Article 3 of the Regulation 2017/460, the 'transmission services revenue' means the part of the allowed revenue which is covered by transmission tariffs.

Reference: Article 30(1)(b)(v)(1) of the Regulation 2017/460

Table 13: Ratio between revenue from capacity- and commodity-based transmission tariffs

Revenue from capacity-based transmission tariffs	95.97%
Revenue from commodity-based transmission tariffs	4.03%

Reference: Article 30(1)(b)(v)(2) of the Regulation 2017/460

Table 14: Ratio between revenue from transmission tariffs at entry and exit points

Revenue from Capacity-Based Transmission Tariffs at all Entry Points	14%
Revenue from Capacity-Based Transmission Tariffs at all Exit Points	86%

* Calculated ratio according to the matrix method for the case of reference prices II.

Reference: Article 30(1)(b)(v)(3) of the Regulation 2017/460

Table 15: Revenue distribution on intra-system and cross-system use, calculated in accordance with Article 5 of the Regulation 2017/460

Revenue from intra-system network use at entry and exit points	97.91%
Revenue from cross-system network use at entry and exit points	2.09%

6. Information on Commodity-Based Tariffs and Non-Transmission Tariffs

Reference: Article 26(1)(c) of the Regulation 2017/460

6.1 Method of Determining Commodity-Based Tariffs

Reference: Article 26(1)(c)(i)(1) of the Regulation 2017/460

Natural gas for own use is intended for the conditioning of natural gas in metering and regulation stations, where the heating of facilities is also performed, as well as to propel compressors in compressor stations Kidričevo and Ajdovščina, which is one of the conditions for performing reliable natural gas transmission. Natural gas, used in such a way, represents the cost, to which the transmission system operator has no influence. The amount of natural

gas used depends primarily on the activity of the transmission system users and the flow-pressure conditions at the borders of the Slovenian transmission system. An additional variable in determining the amount of the realised cost of natural gas for the needs of its own use is the market conditions on the natural gas markets, due to the fact that the gas transmission system operator purchases the gas for its own use from the most favourable tenderer selected in a transparent and impartial procedure.

The same methodology for determining the amount for own use is envisaged, as is currently valid and which enables long-term sustainable operation of the transmission system operator and ensures the coverage of the realised cost of natural gas for own use, while it is linked to the technical specifications of the compressor stations and the transmission system.

Data on the volume of natural gas flow are prepared on the basis of actually achieved natural gas flows in the transmission system and estimates of the transmission system operator.

Table 16: Amount of gas flow in mio kWh/day

Exit point	Amount of gas flow
Rogatec	19.5
Šempeter	0.075
Slovenia - domestic exit point	26.4

6.1.1 The Share of Revenue Forecasted to Be Recovered from Such Tariffs

Reference: Article 26(1)(c)(i)(2) of the Regulation 2017/460

Revenue from the own use of natural gas represents a minor part of the structure of the revenues of the transmission system operator from transmission services. For the year 2022, this share is around 4.03 %. The transmission system operator charges the natural gas for its own use to system users at the exit points of the transmission system in the manner defined in Annex 3.

6.1.2 Indicative Commodity-Based Transmission Tariffs

Reference: Article 26(1)(c)(i)(3) of the Regulation 2017/460

The tariff item for the use of the transmission system operator for the year 2022 is 0.03254 EUR/kWh. For the purpose of performing the cost allocation assessment related to revenue from transmission services, which are covered by any commodity-based transmission tariffs, the tariff item 0 EUR/kWh was used at the entry points.

6.2 Non-Transmission Services Provided to Network Users

Reference: Article 26(1)(c)(ii) of the Regulation 2017/460

6.2.1 Non-Transmission Service Tariff Methodology Therefor

Reference: Article 26(1)(c)(ii)(1) of the Regulation 2017/460

Pursuant to the Act determining the methodology for charging for the network charge for the gas transmission network, the measurement services are non-transmission services.

The tariff item for measurement services is determined on the basis of the estimated costs of such services and the measurements made according to the technical specifications of each meter. Measurement services are charged to system users who book the transmission capacity, taking into account the technical characteristics of each connection.

6.2.2 The Share of Revenue Forecasted to Be Recovered by Such Tariffs

Reference: Article 26(1)(c)(ii)(2) of the Regulation 2017/460:

Revenue from measurement services represents a minor part of the structure of the revenue of the transmission system operator and reflects the actual costs associated with the implementation of natural gas transmission measurements. For the year 2022, this share is around 0.95%.

6.2.3 The manner in which the associated non-transmission services revenue is reconciled as referred to in Article 17(3) of the Regulation 2017/460

Reference: Article 26(1)(c)(ii)(3) of the Regulation 2017/460:

Revenue from measurement services reflects the actual costs realised for these services. The transmission system operator shall report the amount and type of costs to the Energy Agency on an annual basis and take them into account when determining the tariff item for measurements in the next regulatory period.

6.2.4 Indirect non-transmission tariffs for non-transmission services provided to network users

Reference: Article 26(1)(c)(ii)(4) of the Regulation 2017/460:

The tariff heading for the implementation of measurement services for the year 2022 is EUR 21.45685 / month.

The transmission system operator charges the measurement service to the system users in the manner defined in Annex 4.

7. The Indicative Information Referred to in Article 30(2) of the Regulation 2017/460

Reference: Article 26(1)(d) of the Regulation 2017/460

7.1 Differences in the tariff rate for the year 2022 compared to the year 2021

Table 17: Estimated differences in the tariff rate for the year 2022 compared to the year 2021 in EUR/(kWh/day)

Entry and exit points	Tariff items for the year 2022	Estimated difference 2022 / 2021
Entry point Ceršak	0.11937	+ 0.00336
Entry point Šempeter pri Gorici	0.08795	+ 0.00248
Entry point Rogatec	0.02906	+ 0.00082
Slovenia - domestic entry point	0.07674	+ 0.00214
Exit point Ceršak	0.10743	+ 0.00303
Exit point Šempeter pri Gorici	0.09772	+ 0.00275
Exit point Rogatec	0.03228	+ 0.00091
Slovenia - domestic exit point	0.53176	+ 0.01499

Tariff items for the year 2022 are equal to reference prices II in Tables 7 and 8.

In accordance with the Regulation 2017/460 and the Act determining the methodology for charging for the network charge for the gas transmission network, published in the Official Gazette of the Republic of Slovenia, No. 48/21, customer groups, which determine different levels of the exit item for users as an exit point in the Republic of Slovenia, will be gradually eliminated by the year 2024.

7.2 Estimated differences in tariff rates for the year 2023 compared to the year 2022, and for the year 2024 compared to the year 2023

Table 18: Estimated differences in tariff rates for the year 2023 compared to the year 2022, and for the year 2024 compared to the year 2023 in EUR/(kWh/day)

Entry and exit points	Tariff items for the year 2023	Tariff items for the year 2024	Estimated difference 2023 / 2022	Estimated difference 2024 / 2023
Entry point Ceršak	0.12283	0.12639	+ 0.00346	+ 0.00356
Entry point Šempeter pri Gorici	0.09050	0.09313	+ 0.00255	+ 0.00262

Entry point Rogatec	0.02990	0.03077	+ 0.00084	+ 0.00087
Slovenia - domestic entry point	0.07897	0.08128	+ 0.00225	+ 0.00229
Exit point Ceršak	0.11055	0.11375	+ 0.00311	+ 0.00321
Exit point Šempeter pri Gorici	0.10055	0.10347	+ 0.00283	+ 0.00292
Exit point Rogatec	0.03322	0.03418	+ 0.00094	+ 0.00096
Slovenia - domestic exit point	0.54718	0.56305	+ 0.01542	+ 0.01587

7.3 Simplified tariff model

The simplified tariff model, together with the explanations on the method of use, is published in accordance with Article 30 of the Regulation 2017/460 on the following link: http://www.plinovodi.si/media/5359/simplified-tariff-model_2022.xls

8. Annexes

Annex 1: Comments and Suggestions Form

Annex 2: Description of the Transmission Calculation via Transmission System

Annex 3: Method of Calculating Own Use

Annex 4: Method of Calculating Measurement Services

Annex 5: Table of Terms Used