



Agencija za energijo

## Motivated decision of the Energy Agency laying down the reference price methodology for the natural gas transmission system

on the basis of the fourth paragraph of Article 27  
of Commission Regulation (EU) 2017/460 of 16  
March 2017 establishing a network code on  
harmonised tariff structures for gas

Maribor, February 2022  
[www.agen-rs.si](http://www.agen-rs.si)



## **1 INTRODUCTION**

Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a network code on harmonised tariff structures for gas (OJ L 72, of 17 March 2017, p. 29, hereinafter referred to as Regulation 2017/460) requires from national regulatory authorities that within five months following the end of the final consultation on the reference price methodology acting 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 (OJ L, 211 of 14 August 2009, p. 94) shall take and publish a motivated decision on all items set out in Article 26(1) contained in the document referred to in the consultation procedure.

Regulation 2017/460 provides for a network code laying down rules on harmonised gas tariff structures, including rules on the application of a reference price methodology, the associated consultation and publication requirements as well as the calculation of reserve prices for standard capacity products.

According to Article 26 of Regulation 2017/460 and on the basis of the Energy Agency's Decision No 212-6/2021/1 of 20 May 2021, the gas transmission system operator, the gas TSO, the company PLINOVODI, Cesta Ljubljanske Brigade 11B, 1000 Ljubljana (hereinafter referred to as gas TSO), carried out a public consultation, which ended on 23 September 2021. All documents published during the consultation are available on the gas TSO's website - in Slovene and English. If the Energy Agency in this document refers to an individual document from the TSO's consultation, it will be mentioned in the text below.

After the consultation process, the Agency for the Cooperation of Energy Regulators (hereinafter referred to as ACER) on 19 November 2021, in accordance with Article 27(3) of Regulation 2017/460, published and forwarded its findings (ACER Report – Analysis of the Consultation Document on the Gas Transmission Tariff Structure for Slovenia of 13 December 2018, hereinafter referred to as ACER Analysis). Under Article 27(4) of Regulation 2017/460, the Energy Agency in this document sets out the reasons for its decision, concerning indications from Article 26(1) of Regulation 2017/460 contained in the document in the consultation process.

This document provides reasoned decisions on all the indications referred to in Article 26(1) of Regulation 2017/460. In its decisions, the Energy Agency took into account the document of the TSO published in the public consultation and the ACER Analysis.

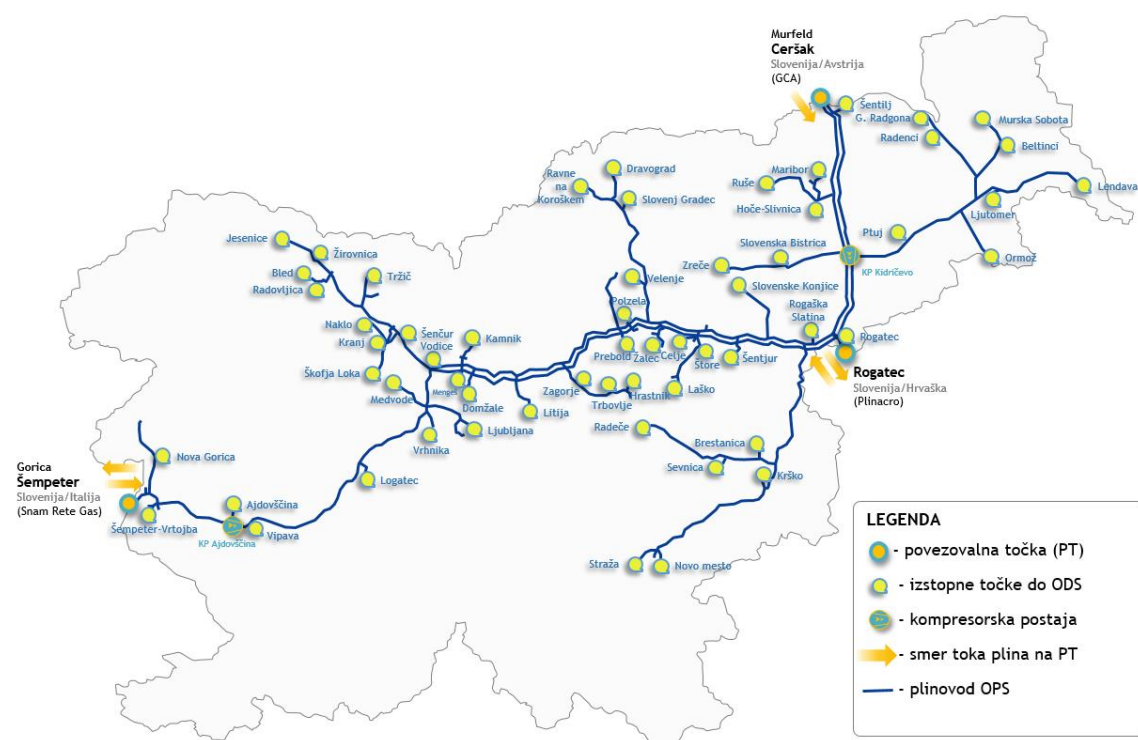
## 2 REFERENCE PRICE METHODOLOGY

To determine network charge tariffs items, already since 2013, the matrix methodology has been applied for entry and exit points of the natural gas transmission system in Slovenia. The matrix methodology was also used in the TSO consultation process and this reasoned opinion.

By using the matrix methodology, the reference prices are determined for each entry and exit point of the transmission system.

A simplified presentation of the Slovenian transmission system is given in Figure 1:

Figure 1: Slovenian transmission system



Entry-exit points linking the Slovenian transmission system with foreign transmission systems are Ceršak, Šempeter pri Gorici and Rogatec. These points represent the points of entry and exit interconnection points. At the Ceršak interconnection point, the reverse flow of gas is not possible, but the flow of gas is possible only in the direction from Austria – Slovenia. The reverse flow is possible at the Šempeter pri Gorici and Rogatec entry and exit points. Booking of capacity is possible at all interconnection points in both directions.

And the end of 2020, 154 users were connected to the transmission system in Slovenia, including 12 distribution system operators, three closed distribution system operators, and 139 final consumers. These exit points within Slovenia represent the domestic exit points and form a homogeneous group of points in accordance with Regulation 2017/460. At the time of publishing this document, there are no entry points within Slovenia or domestic entry points in Slovenia; there is currently no production of natural gas in Slovenia that would inject natural gas into the transmission system.

Table 1: Technical capacity of individual entry or exit points

Entry and exit point		Technical capacity on 1 January 2021 [MWh/day]
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

The transmission system had been providing most of those technical capacities since 2014, when major transmission system investments were completed, allowing for higher transmission capacity at interconnection points than before.

Since the gas year 2017/2018, there has been a significant decline in the booking of transmission capacity for natural gas transmission to other transmission systems or cross-system network use, while capacity leasing by domestic users or intra-system network use has decreased only to a lesser extent. The decline in the booking of transmission capacity has led to lower utilisation of individual transmission system points and has a direct impact on the setting of reference prices and on the level of the comparative index of the allocation of capacity costs between intra-system and cross-system network use. Figures 2–4 show the technical and allocated capacities and transferred gas quantities for the 2016–2021 period.

Figure 2: Technical capacity, allocated capacity and quantities transferred at the Ceršak entry interconnection point

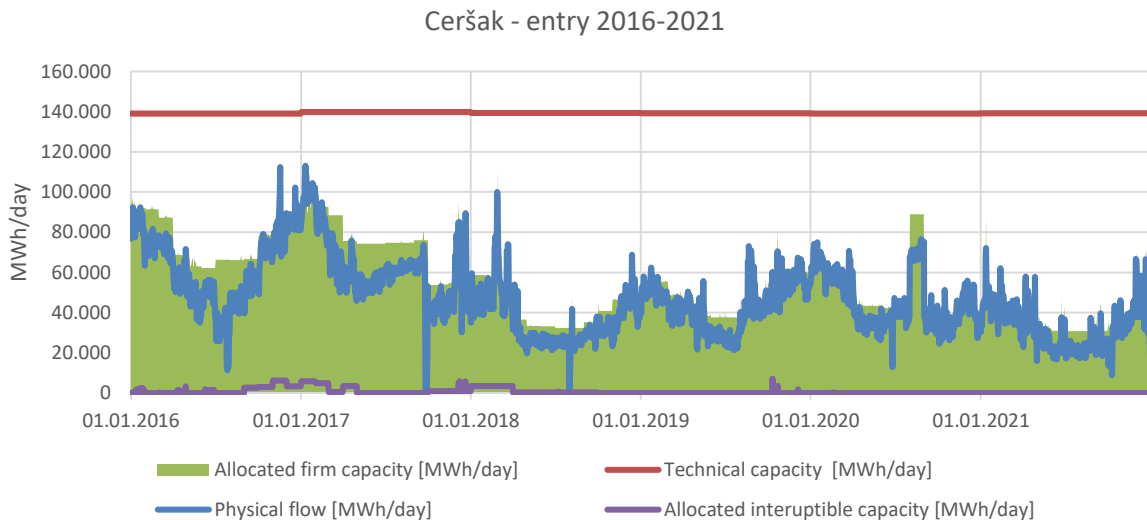


Figure 2: Technical capacity, allocated capacity and quantities transferred at the Rogatec exit interconnection point

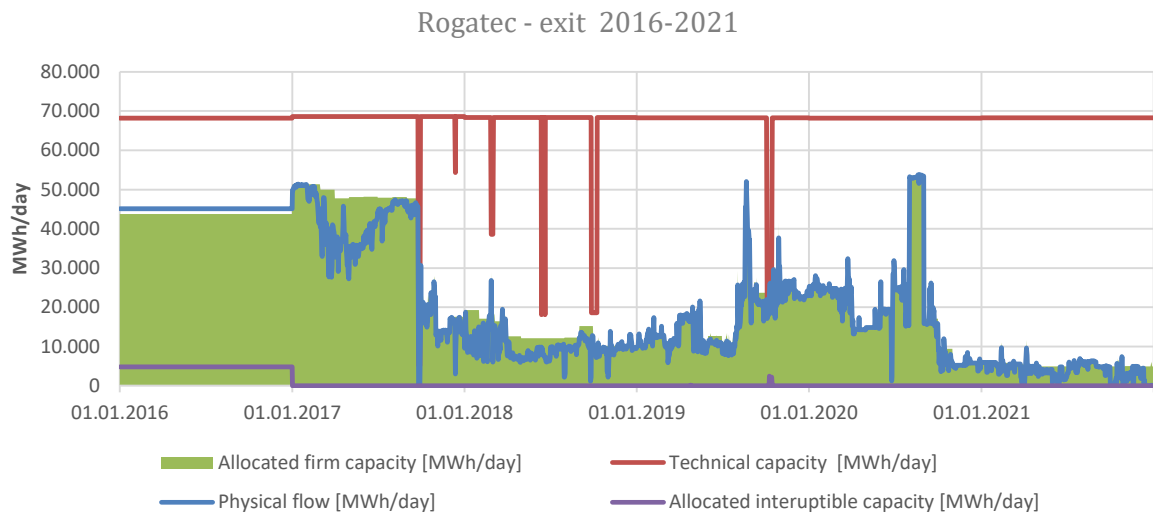
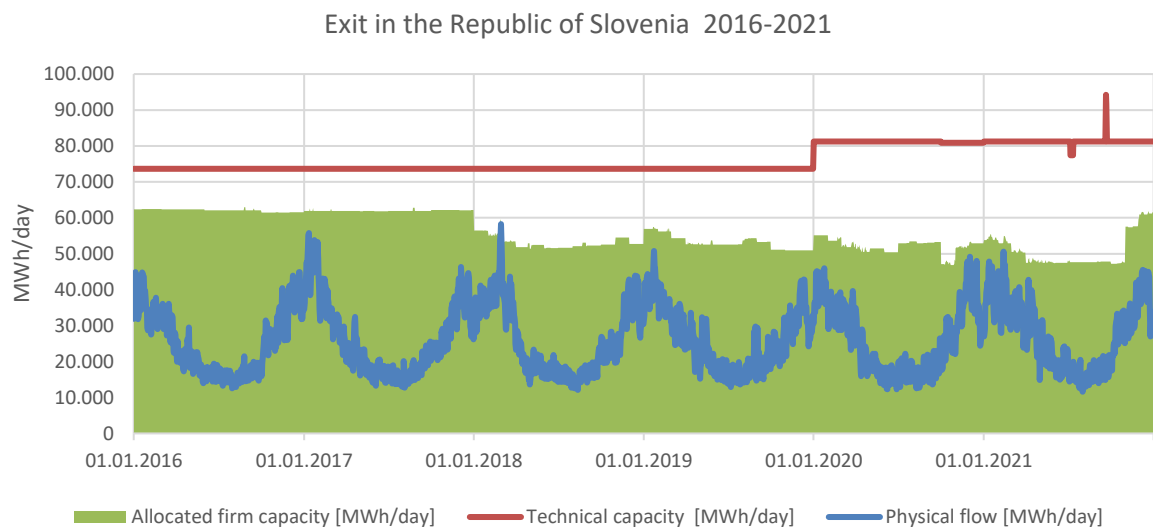


Figure 3: Technical capacity, allocated capacity and quantities transferred at the domestic exit point



The transmission system consists of 1,177 km of gas pipelines, the compressor stations in Kidričevo (10.5 MW) and Ajdovščina (9 MW) and 255 metering/regulating stations or other stations. The floor length of the transmission pipelines according to the diameter of pipe is shown in Table 2.

Table 3: Lengths of transmission pipelines according to diameter on 1 January 2021

	Length in km
DN 800	167
DN 500	162
DN 400	197
DN < 400	651
Total	1,177

Reference prices based on the matrix methodology are determined by taking into account:

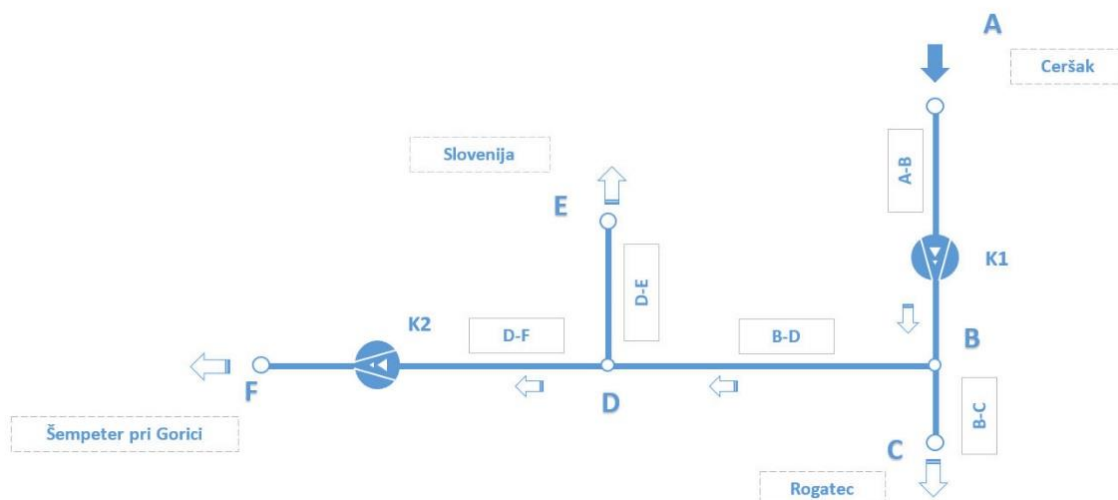
- the replacement value of the transmission system,
- allocation of that part of the eligible costs which relate to capacity-based transmission services; and
- load of individual parts of the transmission system at the occurrence of the peak load of the transmission system.

When setting reference prices using the matrix methodology, these prices are determined with the use of an optimization process, which aims at establishing the minimum differences between the tariffs for individual entry or exit points and the costs inherent to a particular part of the system.

As an input parameter for the determination of reference prices, the replacement value of the transmission system is taken into account. For the transmission system's replacement value, the acquisition price of the transmission system is used. For the year 2022, for which the reference prices are being determined, the replacement value is EUR 757.7 million and is equal to the acquisition price of the transmission system as of 31 December 2020. According to the replacement value of an individual part of the transmission system, the eligible costs for 2022 are determined. Figure 5 shows the division of the transmission system into individual parts.

For determining the reference price for each entry or exit point, the initial and final point of a part of the transmission system with homogeneous characteristics must be identified.

Figure 4: 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 is part of the M1 and M1/1 between the border metering-regulation station (BMRS) Ceršak or the national border and the Rogatec BMRS. Point B represents the junction, from which natural gas can be passed on through the Slovenian transmission system towards the west or towards the Croatian transmission system. This part of the transmission system also includes the compressor station Kidričevo. The costs of this part of the transmission system are reflected in the price of the Ceršak entry point and at other entry or exit points if this part of the route is used to transfer the gas to a user. Since during the day's maximum load of the system, all gas has entered through point A and has been transported to system users at exit points, the costs of the system are also reflected in all reference prices for exit points.

The transmission system between points B and C forms a part of the M1 main pipeline, but only from point B, which constitutes the Rogatec BMRS and is the junction, from which natural gas can be passed on through the Slovenian transmission system towards the west or towards the Croatian transmission system. Point C represents the border point with Croatia. The costs arising from the section B–C are attributed to the reference price of the Rogatec point.

The transmission system section marked B–D between points B and D is the main pipeline M2 and M2/1 between the Rogatec BMRS and the Vodice MRS. In Vodice, the gas flow can be diverted in different directions. In section B–D, the highest consumption of Slovenian consumers is detected and, therefore, the costs related to section B–D are reflected in the reference price for the exit point located within Slovenia and at the reference price of the exit point Šempeter pri Gorici.

In the reference price of the exit point within Slovenia are also included all transmission system costs presented in the scheme as a section between points D and E and include all parts of the transmission system used only by final customers and distribution system operators connected to the exit points within Slovenia, irrespective of their actual location. This part of the transmission system includes, for example, pipelines with a lower diameter or lower pressure, connections (MRP and MP), reducing stations, etc.

The last part of the transmission system represents the M3 pipeline between the MRP Vodice and the Šempeter BMRS or the national border, whereas the point Vodice is marked with the letter D, and Šempeter pri Gorici with the letter F. The costs associated with section D–F are reflected in the reference price of the exit point Šempeter pri Gorici.

All transmission system costs in this part shall be, below, allocated to the individual entry point or exit point in relation to the peak load of that part of the system.

For the determination of the reference prices, data on the estimated leased capacity of the individual points shown in Table 4 are used on the basis of a matrix method.

Table 5: Anticipated booking of an individual entry or exit point

Entry and exit point		Anticipated booking of capacity* [kWh/day]
		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.

The anticipated capacity booking in Table 6 also considers the booking of short-term capacity, where short-term products are adequately taken into account and recalculated to an annual level.

In determining the anticipated contracted capacity for 2022, only annual capacity booking can be considered when setting reference prices, and therefore the anticipated short-term bookings should be calculated to an annual level. The tariff for short-term capacity products also considers the multiplier and seasonal factor, but this cannot be taken into account when setting reference prices. When determining reference prices, it is not possible to take into account the level of exit tariff affecting individual consumption group of the domestic exit point, so the influence of multipliers, seasonal factors, and rate of exit tariff is considered when determining planned capacity booking. The calculated booking of an individual entry or exit point considering multipliers, seasonal factors, and the exit tariff is shown in Table 4. As a result of the significant booking of short-term capacity, the anticipated capacity booking increases significantly, which is reflected in the calculation of the reference prices below.

Table 7: Calculated booking of each entry or exit point by taking into account multipliers, seasonal factors and exit tariff

Entry and exit point		Anticipated booking of capacity [kWh/day]
		2022
Entry point	Ceršak	52,012,099
	Šempeter pri Gorici	1,692,726
	Rogatec	3,466,924
Exit point	Ceršak	0
	Šempeter pri Gorici	0
	Rogatec	6,207,000
	Slovenia – domestic exit point	61,414,974



Data relating to individual sections of the transmission system which are necessary for the establishment of reference prices are shown in the table below:

*Tabela 8: Data needed for the calculation of the reference prices for 2022*

Segment	Length* [km]	Gas flow direction	Peak load** [kWh/day]	Replacement value of assets [EUR]	Present value of assets*** [EUR]	Eligible costs [EUR]
A-B	116,30	A->B	74,254,609	149,742,509	71,532,437	7,790,353
B-C	3,70	B->C	25,125,837	10,764,280	3,753,960	560,012
B-D	217,20	B->D	49,128,772	192,671,828	115,627,155	10,023,751
D-E	100,30	D->E	44,547,539	231,954,865	52,772,008	12,067,451
D-F	739,58	D->F	4,916,431	172,527,829	15,922,541	8,975,760
Total	1.177			757,661,310	259,608,100	39,417,327

\*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

\*\*\*on 31 December 2020

When determining the reference prices according to the matrix methodology, the costs shall be allocated to individual points according to the load on these parts of the transmission system at the time of the peak load.

Table 5 shows, in addition to the replacement value of each segment's assets, also the present segment value, which is not used in the model of determining reference prices.

The determination of the allowed revenue required to set the reference prices is shown in Chapter 4.

Based on the data in Table 4 and Table 5, the following reference prices with the mark I have been calculated using the matrix method:

*Table 9: Reference prices I from the matrix model*

		Tariff [EUR/kWh/day]
Entry point	Ceršak	0.10905
Exit point	Šempeter pri Gorici	1.89866
	Rogatec	0.02085
	Slovenia – domestic exit point	0.67618

Reference prices I are already multiplied by a constant of 1.04 to achieve the allowed revenue of EUR 39,417,327. That mathematical operation is necessary in the model to achieve the allowed revenue through the planned booking of capacity set out in Table 4 and the calculated reference prices.

The matrix method does not determine the tariff for the point in which there is no flow, so the tariffs for Rogatec, Šempeter pri Gorici the entry points and Slovenia (domestic entry point) and the tariff for the Ceršak exit point are not derived from the model. That approach is also applied to the determination of the reference prices since for the regulatory period these tariffs are set at 90% of the flow-oriented tariff, and the tariff for the Slovenia entry point (domestic entry point) is set as the arithmetic average of the tariffs at all border entry points.

For determining network charge tariffs for the following regulatory framework, the Energy Agency will specify in the network charge methodology that the same tariff as the one for the flow direction is considered as the tariff for a direction where there is no flow. This orientation will only be considered for the next determination of reference prices.

Table 10: Reference prices I for all entry and exit points

		Tariff [EUR/kWh/day]
Entry point	Ceršak	0.10905
	Šempeter pri Gorici	1.89866
	Rogatec	0.02085
	Slovenia – domestic entry point	0.67618
Exit point	Ceršak	0.09814
	Šempeter pri Gorici	2.10962
	Rogatec	0.02317
	Slovenia – domestic exit point	0.49362

Reference price I for the Šempeter pri Gorici exit point is uncompetitive compared to other points, and the imposition of such a tariff would result in an even lower capacity booking. The Šempeter pri Gorici exit point is located on the Austria-Slovenia-Italy transport route; the competitive transport route of this route is Austria-Italy. The cost of booking the Austria-Slovenia-Italy transfer route in the case of an annual capacity booking on 9 November 2021, taking into account the published prices for Austria and Italy on ENTSOG's website and reference prices I for Slovenia, would be EUR 2.5287/kWh/day, the cost of renting the Austria-Italy transfer route be and EUR 0.4967/kWh/day. This suggests that this transmission route is highly uncompetitive.

Based on the above results of the analysis in accordance with Article 6(4)(a) of Regulation 2017/460, the Energy Agency decided that the reference price should be closer to the current value, so the reference price for the Šempeter pri Gorici exit point is set at 0.09772 EUR/kWh/day. This ensures the competitiveness of the Austria-Slovenia-Italy transmission route. As the tariff for the Šempeter pri Gorici entry point is set at 90% of the tariff for exit points, it amounts to 0.08795 EUR/kWh/day.

The change in the reference price for the Šempeter pri Gorici point using comparative analysis under unchanged conditions results in lower revenues from capacity-based transmission services, and therefore a calculation of the reference prices has been carried out again, which provides allowed revenue of EUR 39.4 million. To achieve the allowed revenue, reference prices II are already multiplied by the constant 1.127. The final reference prices with mark II are shown in Table 8.

Table 11: Reference prices II for all entry and exit points after the adjustment and benchmarking

		Tariff [EUR/kWh/day]
Entry point	Ceršak	0.11828
	Šempeter pri Gorici	0.08795
	Rogatec	0.02261
	Slovenia – domestic entry point	0.07628
Exit point	Ceršak	0.10645
	Šempeter pri Gorici	0.09772
	Rogatec	0.02513
	Slovenia – domestic exit point	0.53541

The document ACER Analysis on the consultation on the tariff structure for gas transmission in Slovenia imposes an obligation on the Energy Agency to publish a simplified tariff model with all the necessary information to enable users to calculate the tariffs for a valid tariff period and possible variations during the period after that tariff period, therefore, in line with this recommendation, the Energy Agency prepared a model of setting reference prices based on the matrix methodology (Annex 1 of this document). On the basis of the presented input data, the model calculates the reference prices I, which represent basic prices without further adjustments.

Regulation 2017/460 in Article 9 allows adjustment of tariffs at entry points from storage facilities, exit points to storage facilities, at entry points from LNG facilities, and infrastructure ending isolation. The adjustment was not carried out since the Slovenian transmission system currently does not have such points.

### 3 COST ALLOCATION ASSESSMENTS

The cost allocation assessment related to the transmission services revenue covered by capacity-based transmission tariffs in accordance with Article 5 of Regulation 2017/460 is based on the cost drivers of:

- technical capacity; or
- forecasted contracted capacity; or
- technical capacity and distance; or
- forecasted contracted capacity and distance.

Based on the results of the cost allocation assessment, the degree of cross-subsidisation between intra-system and cross-system network use is assessed.

The Energy Agency decided that for the cost allocation assessment as the cost driver are used a forecasted contracted capacity and distance. Table 9 presents the calculation of the capacity cost allocation comparison index between the intra-system and cross-system network use.

*Table 12: Capacity cost allocation comparison index between the intra-system and cross-system network use*

	Reference prices I	Reference prices II
Assessment of revenues for intra-system network use	38,300,989	38,568,751
Assessment of revenues for cross-system network use	1,116,325	848,531
Assessment of the weight of cost for intra-system network use	18,144,086,509	18,144,086,509
Weight of cost assessment for cross-system network use	853,147,808	853,147,808
Ratio for intra-system network use	0.00211	0.00213
Ratio for cross-system network use	0.00131	0.00099
CAA comparison index	46.94%	72.50%

The capacity cost allocation comparison index between intra-system and cross-system network use (CAA comparison index) for reference prices I is 46.94%, and for reference prices II is 72.50%.

Article 5(6) of Regulation 2017/460 determines that if results of the capacity cost allocation comparison index exceed 10 percent, the national regulatory authority shall justify such results.

To clarify the high value of the CAA comparison index, the Energy Agency has done various scenarios for setting reference prices to try to identify the reasons for the high values. It was established that the comparative analysis, which reduces the reference price at the Šempeter pri Gorici exit point, in all cases increases the capacity CAA comparison index since using the comparative analysis, the revenues from cross-system network use decrease and result in higher values of the CAA comparison index. Due to that, the scenarios do not include a reduction in the reference price at the Šempeter pri Gorici exit point. The performed scenarios and the results of the capacity cost allocation comparison index are presented below:

## 1) Scenario I: Peak load on 17 November 2016 and capacity booking in 2016

Table 13: Data used in Scenario 1

Segment	Length* [km]	Gas flow direction	Peak load** [kWh/day]	Replacement value of assets [EUR]	Eligible costs
A-B	116.30	A->B	112,362,000	149,742,509	7,790,353
B-C	3.70	B->C	47,605,000	10,764,280	560,012
B-D	217.20	B->D	64,757,000	192,671,828	10,023,751
D-E	100.30	D->E	39,307,000	231,954,865	12,067,451
D-F	739.58	D->F	25,450,000	172,527,829	8,975,760
Total	1,177			757,661,310	39,417,327

Table 14: Data used in Scenario 1

Entry and exit point		Anticipated capacity booking [kWh/day]
		Scenario 1
Entry point	Ceršak	90,037,165
	Šempeter pri Gorici	4,672,239
	Rogatec	2,494,292
Exit point	Ceršak	0
	Šempeter pri Gorici	885,250
	Rogatec	61,379,547
	Slovenia – domestic exit point	63,793,240

Table 15: Reference prices – Scenario 1

		Tariff – Scenario 1 [EUR/kWh/day]
Entry point	Ceršak	0.07001
	Šempeter pri Gorici	0.46122
	Rogatec	0.01069
	Slovenia – domestic entry point	0.18064
Exit point	Ceršak	0.06301
	Šempeter pri Gorici	0.51246
	Rogatec	0.01188
	Slovenia – domestic exit point	0.46634

	CAA comparison index
Scenario 1	96.03%

Scenario 1 shows the state of use of the transmission system before the decrease in the booking of transmission capacity for the transmission of natural gas to other transmission systems or for cross-system use of the system. Although booking capacity at interconnection points was significantly higher than for reference prices I, the CAA comparison index is 96.03%; the reason is in the calculation of reference prices, which are lower due to the higher peak load per unit.

## 2) Scenario 2: Load peak on 8 January 2020 and capacity booking on the day of peak load

Table 16: Data used in Scenario 2

Segment	Length* [km]	Gas flow direction	Peak load** [kWh/day]	Replacement value of assets [EUR]	Eligible costs
A-B	116.30	A->B	74,254,609	149,742,509	7,790,353
B-C	3.70	B->C	25,125,837	10,764,280	560,012
B-D	217.20	B->D	49,128,772	192,671,828	10,023,751
D-E	100.30	D->E	44,547,539	231,954,865	12,067,451
D-F	739.58	D->F	4,916,431	172,527,829	8,975,760
Total	1,177			757,661,310	39,417,327

Table 17: Data used in Scenario 2

Entry and exit point		Anticipated capacity booking [kWh/day]
		Scenario 2
Entry point	Ceršak	74,649,051
	Šempeter pri Gorici	1,707,005
	Rogatec	1,004,961
Exit point	Ceršak	0
	Šempeter pri Gorici	5,419,988
	Rogatec	25,309,453
	Slovenia – domestic exit point	54,895,282

Table 18: Reference prices - Scenario 2

		Tariff – Scenario 2 [EUR/kWh/day]
Entry point	Ceršak	0.08508
	Šempeter pri Gorici	1.48139
	Rogatec	0.01627
	Slovenia – domestic entry point	0.52758
Exit point	Ceršak	0.07657
	Šempeter pri Gorici	1.64599
	Rogatec	0.01807
	Slovenija – domestic exit point	0.38514

	CAA comparison index
Scenario 2	26.58%

Scenario 2 represents the booking entry and exit points scenario in case of system peak load. That scenario shows the situation as of 8 January 2000 and how reference prices would be constructed in case of maximum utilisation of the network of the last period when there is less gas transmission to neighbouring transmission systems. Due to better utilisation of technical capacity, reference prices would be lower at all points than reference prices I, and compared to scenario 1, would be significantly lower for the domestic exit point. Again, in this case, which represents a higher utilisation of technical capacity by booking capacity for consumption within the Republic of Slovenia, the value of the CAA comparison index would be 26.58%.

### 3) Scenario 3: Purchase value of the Ajdovščina compressor station included in section B-D

Table 19: Data used in Scenario 3

Segment	Length* [km]	Gas flow direction	Peak load** [kWh/day]	Replacement value of assets [EUR]	Eligible costs
A-B	116.30	A->B	74,254,609	149,742,509	7,790,353
B-C	3.70	B->C	25,125,837	10,764,280	560,012
B-D	217.20	B->D	49,128,772	211,539,767	11,005,356
D-E	100.30	D->E	44,547,535	231,954,865	12,067,451
D-F	739.58	D->F	4,916,431	153,659,890	7,994,155
Total	1,177			757,661,310	39,417,327

Table 20: Data used in Scenario 3

Entry and exit point		Anticipated capacity booking [kWh/day]
		Scenario 3
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
	Slovenija – domestic exit point	56,803,358

Table 21: Reference prices – Scenario 3

		Tariff – Scenario 3 [EUR/kWh/day]
Entry point	Ceršak	0.11680
	Šempeter pri Gorici	1.85358
	Rogatec	0.02233
	Slovenia – domestic entry point	0.66424
Exit point	Ceršak	0.10512
	Šempeter pri Gorici	2.05953
	Rogatec	0.02481
	Slovenia – domestic exit point	0.55095

	CAA comparison index
Scenario 3	51.25%

The increase in purchase price of section B-D is reflected in the costs related to section B-D, in the reference price for the exit point within Slovenia, and in the reference price of the Šempeter pri Gorici exit point. The reference price of the domestic exit point is higher, which is reflected in small changes in revenues for intra-system and inter-system use of the network.

It was established that the level of the CAA comparison index is most influenced by the utilization of the technical capacity of the domestic exit point and the replacement value of the assets of the less utilized network. This follows from Scenario 2, which considered the increased utilization of technical capacity at all entry and exit points, and Scenario 3, which considered the lower replacement value of the D-F transmission network section, where low booking of the capacity of the Šempeter pri Gorici exit point is constantly observed.

The Energy Agency considers that, despite the high value of the CAA comparison index, the selection of the reference price method is appropriate, as tariffs are set to reflect the actual transmission system costs incurred in a particular part of the transmission system. The transmission system was built primarily for the supply of domestic users, which is reflected in the higher replacement value of the transmission system, intended only for the supply of Slovenian system users, and in the high reference price for the domestic exit point. At the same time, the high value of the CAA comparison index is strongly influenced by the utilization of exit connecting points, especially the Šempeter pri Gorici exit point. The purchase value of the D-F section is high compared to the booked capacity, which is reflected in the high reference price and low revenues from the booking of this capacity. The high reference price at the Šempeter pri Gorici exit point represents a non-competitive price, so with the help of comparative analysis this reference price is reduced, which further worsens the value of the CAA comparison index.



#### 4 THE INDICATIVE INFORMATION ON THE TRANSMISSION SERVICES REVENUES

Under the Legal Act on the methodology for determining the regulatory framework of the natural gas transmission system operator (Official Gazette of the Republic of Slovenia, No. 21/18, 48/21 in 204/21 – ZOP) the TSO in April 2021 submitted a request to the Energy Agency to give an approval to the regulatory framework, network charge tariffs, and tariffs for other services for the entire territory of the Republic of Slovenia for the regulatory period from 1 January 2022 to 31 December 2024. The Energy Agency on 26 May 2021 issued an approval to the submitted regulatory framework, network charge tariffs, and tariffs for other services for the period from 1 January 2022 to 31 December 2024. The TSO published network charge tariffs for the transmission system in the Official Gazette of the Republic of Slovenia, No 90/21.

Table 19 presents eligible costs, deviations from the regulatory framework, resources to cover eligible costs<sup>1</sup>, and allowed revenue for 2022, arising from the regulatory framework of the TSO.

Table 22: *Eligible costs, deviations from the regulatory framework, sources to cover eligible costs, and allowed revenue for 2022*

	EUR	2022
	<b>Eligible costs</b>	
1	Operating and maintenance costs	20,428,554
2	Depreciation cost	15,853,054
3	Regulated return on assets	12,444,301
<b>4</b>	<b>Eligible costs (4 = 1+2+3)</b>	<b>48,725,909</b>
	<b>Resources to cover eligible costs</b>	
5	Network charge for transmission	39,417,327
6	Network charge for own use	1,654,758
7	Network charge for metering	393,433
8	Other incomes	8,111,320
<b>9</b>	<b>Total revenues (9 = 5+6+7+8)</b>	<b>49,576,837</b>
10	Surplus (-) or deficit (+) of network charges from previous years	6,268,493
11	Planned deficit (+) of network charges for this year	5,417,564
<b>12</b>	<b>Allowed revenue (12=4-8+10-11)</b>	<b>41,456,518</b>
<b>13</b>	<b>Allowed revenue from capacity-based transmission services (13=4-6-7-8+10-11)</b>	<b>39,417,327</b>

<sup>1</sup> Resources for covering eligible costs represent revenues, surpluses (-) or deficits (+) of network charges of previous years and the planned deficit (+) of network charges for an individual year of the regulatory period.

Eligible costs include operating and maintenance costs, depreciation costs, and regulated return on assets. Network charges and revenues cover eligible costs.

Other revenues represent revenues from other services provided by the TSO within the service of general economic interest and revenues from balancing and balancing the system. Other services provided by the TSO are shown in Annex 3. As the TSO is legally responsible for determining and accounting for imbalances and establishing a balancing market, revenues from imbalances are included among other revenues. In accordance with Commission Regulation (EU) No 312/2014 establishing a Network Code on Gas Balancing of Transmission Networks the TSO must respect the principle of neutrality, so the revenues of the TSO related to deviations are equal to the costs associated with imbalances. Costs related to imbalances are part of eligible costs associated with operating and maintenance costs.

Allowed revenue is the sum of revenues from the transmission services and non-transmission services for the provision of TSO's services. Table 19 presents the network charges for transmission (revenues from booking entry and exit points), the network charge for own use, and network charge for metering.

In determining the amount of allowed revenue and allowed revenue from capacity-based transmission services the determined deviations of previous years and the planned network charge deficit of individual years of the regulatory period are taken into account. The deviations of previous years represent a surplus or deficit in network charges in previous years. The surplus of network charges in preceding years occurs when the realized sources for covering the eligible costs of the TSO exceed the eligible costs of an individual year of the preceding regulatory period. The deficit of network charges in previous years occurs when the realized sources for covering the eligible costs of the TSO did not cover all eligible costs of an individual year of the preceding regulatory period. As the TSO must have eligible costs covered, it must take into account the surpluses or deficits in the network charges from previous years when determining the allowed revenues for the current regulatory period. As the TSO in the determining the regulatory framework for the current regulatory period had a deficit of EUR 18.8 million from previous years, which has to be covered through transmission tariffs in years 2022–2024, for the year 2022, the deficit of network charges of EUR 6.3 million is taken into account. In addition, in determining the allowed revenue due to a disproportionate impact on the network charge must be assessed whether or not it is necessary for this regulatory period to determine the planned deficit in the network charge or not. For 2022, it was established that the coverage of eligible costs, including the coverage of the network charge deficit of previous years, would have a disproportionate impact on the network charge for this regulatory period, so the planned network charge deficit of EUR 5.4 million was set for 2022. At the end of each year of the regulatory period, the TSO shall determine the deviation from the regulatory framework by calculating the planned items from the regulatory framework into recognised and, on that basis, identify the realised deviation from the regulatory framework, which is reflected in the established surplus or deficit in the network charge for each year of the regulatory period that will be taken into account in determining the revenues or covered by revenues of the next regulatory period (after 2024).

From the facts mentioned above follows the calculation of the allowed revenue in the amount of EUR 41.5 million and allowed revenue from the capacity-based transmission services EUR 39.4 million.

The allowed revenue from the capacity-based transmission services represents the revenue covered by capacity-based entry and exit tariffs and, for the model, represents the eligible costs covered by the capacity-based transmission tariffs.

Below are presented information referred to in Article 30(1)(b) of Regulation 2017/460 together with the explanation provided. All information relates to 2022 and taken from the regulatory framework for the regulatory period from 1 January 2022 to 31 December 2024.

Basic information for the regulatory year 2022:

1. The allowed revenues covered by transmission and non-transmission services are EUR 41.5 million. The determination of the allowed revenue for 2022 is shown and explained in Table 19.
2. The allowed revenues from the transmission services amount to EUR 41.1 million.
3. The ratio between revenues from capacity-based transmission tariffs and revenues from commodity-based transmission tariffs is 96/4, where:
  - a) revenues from capacity-based transmission tariffs are EUR 39.4 million,
  - b) revenues from commodity-based transmission tariffs are EUR 1.7 million.
4. The ratio between revenues from capacity-based transmission tariffs at all entry points entry and revenues from capacity-based transmission tariffs at all exit points is 14/86, where:
  - a) revenues from capacity-based transmission tariffs at all entry points are EUR 6.5 million,
  - b) revenues from capacity-based transmission tariffs at all exit points are EUR 33.0 million.
5. The ratio between intra-system network use at entry and exit points and revenues from cross-system network use at entry and exit points is 98/2, where:
  - a) revenues from intra-system network use at entry and exit points are EUR 38.3 million,
  - b) revenues from cross-system network use at entry and exit points are EUR 1.1 million.

## 5 COMPARISON OF REFERENCE PRICE METHODOLOGY BASED ON A MATRIX METHODOLOGY WITH CWD METHODOLOGY

As the Energy Agency decided to use a matrix methodology to set reference prices, it is in accordance with Article 26(vi)(a) of Regulation 2017/460 necessary to compare these reference prices with the indicative prices determined by the distance-based methodology.

The reference prices based on matrix methodology, shown in Table 20, equal to reference prices presented in Chapter 2. Reference prices determined by the capacity weighted distance reference price methodology (from now on marked as CWD I and CWD II) are determined with the same input data as the reference prices I based on the matrix methodology (Table 4 and Table 5). In doing so, the reference prices CWD-I are determined in such a way that with the planned bookings, the allowed revenue of EUR 39.4 million is achieved while taking into account the 50/50 ratio between the revenues from capacity-based transmission tariffs at all entry points and the revenues from capacity-based transmission tariffs at all exit points, whereas the CWD-II reference prices are set by applying a calculated ratio of 14/86 from the matrix methodology.

Price determination by applying CWD methodology with the 50/50 ratio is not appropriate for the Slovenian transmission system because the predetermined ratio of 50/50 between the revenues at entry and exit points does not reflect the actual costs related to the gas transmission through the Slovenian transmission system.

It was established that if the CWD methodology and the 14/86 ratio derived from the matrix methodology are used, the CWD methodology becomes more appropriate since the CAA comparison index is 39.20%. Due to the 14/86 ratio, the CWD-II reference prices are also comparable to the reference prices II of the matrix methodology.

*Table 23: Comparison of reference prices based on the matrix methodology with the methodology based on distance [EUR/kWh/day]*

		Matrix methodology		CWD methodology	
		Reference prices I	Reference prices II	Reference prices CWD-I	Reference prices CWD-II
Entry point	Ceršak	0.10905	0.11828	0.35182	0.11258
	Šempeter pri Gorici	1.89866	0.08795	0.26861	0.08595
	Rogatec	0.02085	0.02261	0.27543	0.08814
	Slovenia – domestic entry point	0.67618	0.07628	0.29862	0.09556
Exit point	Ceršak	0.09814	0.10645	0.31664	0.10132
	Šempeter pri Gorici	2.10962	0.09772	0.24175	0.07736
	Rogatec	0.02317	0.02513	0.18524	0.31121
	Slovenia – domestic exit point	0.49362	0.53541	0.30219	0.50768

A comparison of the cost allocation assessment results related to the transmission services revenues, covered by capacity-based transmission tariffs, is shown in Table 21. demonstrates the appropriateness of the chosen method. In both cases, forecasted contracted capacity and distance are as a cost drivers used to assess the cost allocation.

**Table 24:** *Comparison of the results of the cost allocation assessment relating to the transmission services revenue to be covered by capacity-based transmission tariffs*

The compared component	Matrix methodology		CWD methodology	
	Reference prices I	Reference prices II	Reference prices CWD-I	Reference prices CWD-II
Assessment of revenues for intra-system network use	38,300,989	38,568,751	36,127,764	36,801,050
Assessment of revenues for cross-system network use	1,116,325	848,531	3,289,487	2,616,371
Assessment of the weight of cost for intra-system network use	18,144,086,509	18,144,086,509	18,144,086,509	18,144,086,509
Assessment of the cost factor for cross-system network use	853,147,808	853,147,808	853,147,808	853,147,808
Ratio for intra-system network use	0.00211	0.00213	0.00199	0.00203
Ratio for cross-system network use	0.00131	0.00099	0.00386	0.00307
CAA comparison index	46.94%	72.50%	63.78%	40.76%

Given the future unpredictable peak flows, the direction of gas flow, and the booking of an individual entry and exit point of the transmission system, it is not appropriate for the time being to modify the methodology for the determination of reference prices. The Energy Agency believes that the matrix methodology is appropriate since it transparently sets the reference prices that reflect the costs of each part of the transmission system. At the same time, it is established that using the different methodology of establishing reference prices (e.g., the CWD methodology) would also require a comparative analysis of a particular entry and exit points. To properly apply the methodology for determining reference prices for the natural gas transmission system, the Energy Agency will monitor the changing influencing factors of price setting and determine their impact on setting reference prices. If the current reference price methodology is inappropriate, the Energy Agency will propose using another methodology to set the reference prices.

In accordance with the recommendation of the document Analysis - ACER, the Energy Agency publishes, as Annex 2 of this document, the calculation of a comparative capacity cost allocation index based on the matrix methodology and the CWD methodology.

## 6 COMMODITY-BASED TRANSMISSION TARIFFS AND NON-TRANSMISSION SERVICES

### Commodity-based transmission tariffs

The commodity-based transmission tariff is a tariff intended to cover the natural gas consumption for the gas TSO own use for the conditioning of natural gas in metering regulating stations and other stations and heating of these facilities, and for compressors in the compressor stations of Kidričevo and Ajdovščina. The tariff for own use shall be determined in such a way that it covers part of the eligible costs relating to the abovementioned natural gas quantities.

The allowed revenue to be covered by the own-use tariff amounts to EUR 1.65 million and represents 3.99% of the allowed revenue. The own-use tariff for 2022 is 0.03254 EUR/kWh, and it is the same as in 2021.

A tariff item for own use is the same for all users of the transmission system and reflects costs related to own use. The calculated amount of network charge for own use depends on the own-use tariff item and 0.4% of the transferred quantity of natural gas at an individual exit point ( $Q_m$ ). The value of constant 0.4 is determined on the basis of the technical characteristics of compressors units. The transferred quantity of natural gas at each exit point is determined based on the measured quantities at an exit point.

### Non-transmission services:

A basic non-transmission service charged to transmission system users that book exit capacity is a metering service.

The transmission system user, who books the exit capacity, shall be charged for network charges for metering in the form of a metering tariff item ( $C_M$ ) and by taking into account the size of the metering device and the number of reduction steps.

The tariff item for metering is determined in such a way that the network charge for metering covers the part of the eligible costs that arise in relation to the extent of the measurements, and they relate to metering services, the processing of measured data, maintenance, calibration, and periodic replacement of measuring devices under the law.

The allowed revenue covered by the tariff for metering amounts to EUR 393,433 and represents 0.95% of the allowed revenue. The tariff for metering in 2022 amounts to 21.46 EUR /month, and it is 1.5% higher than in 2021.

The gas TSO in the context of the provision of service of general economic interest may also charge transmission system users other services, which represent non-transmission services. Tariffs for non-transmission services are determined by taking into account the actual costs of these services. In the process of determining the regulatory framework, the gas TSO shall also set out the individual tariff items for other services to which the Energy Agency gives its approval and which are not covered by the allowed revenue but by other revenues of the TSO. Other services and tariff items are shown in Annex 3.

## 7 THE INDICATIVE INFORMATION ON TRANSMISSION TARIFFS

The network charges for the transmission system for the regulatory period 2022–2024 were published by the TSO in the Official Gazette of the Republic of Slovenia, No 90/21. The determination of network tariffs for entry and exit points in the new regulatory period 2022-2024 has changed tariffs compared to 2021. Table 22 shows the tariffs for entry and exit points for 2021 and 2022 and the differences in tariffs.

Table 25: Differences in network charges for entry and exit points in 2022 compared to 2021

		Tariff for point [EUR/kWh/day]		Difference 2022/2021 [EUR/kWh/day]	Difference 2022/2021 [%]
		2021	2022		
Entry point	Ceršak	0.11601	0.11937	0.00336	2.90%
	Šempeter pri Gorici	0.08547	0.08795	0.00248	2.90%
	Rogatec	0.02824	0.02906	0.00082	2.90%
	Slovenia – domestic entry point	0.07460	0.07676	0.00216	2.90%
Exit point	Ceršak	0.10440	0.10743	0.00303	2.90%
	Šempeter pri Gorici	0.09497	0.09772	0.00275	2.90%
	Rogatec	0.03137	0.03228	0.00091	2.90%
	Slovenia – domestic exit point	0.51677	0.53176	0.01499	2.90%

Tariffs for entry and exit points increased by 2.9% in 2022 compared to 2021.

Transmission system users that are booking a domestic exit point will be charged the network charge for the exit point by the end of 2024, depending on the network user's classification in the consumer group (CPK1 to CPK8). The exit tariffs shall be phased out as of 2020 so that in 2024 all transmission system users will pay the same tariff for the domestic exit point.

Table 26: Exit tariff rates

Exit capacity of the exit point within the Republic of Slovenia $\Sigma PK_{I(e)}$ (kWh/day)	Consumer group ( $C_{PKi}$ )	Exit tariff rate $k_{I(i=4 \div n)}$ [//]				
		Year 2020	Year 2021	Year 2022	Year 2023	Year 2024
$0 \leq PK < 50\,000$	$C_{PK1}$	1.504	1.378	1.252	1.126	1.000
$50\,000 \leq PK < 100\,000$	$C_{PK2}$	1.296	1.222	1.148	1.074	1.000
$100\,000 \leq PK < 250\,000$	$C_{PK3}$	1.160	1.120	1.080	1.040	1.000
$250\,000 \leq PK < 500\,000$	$C_{PK4}$	1.112	1.084	1.056	1.028	1.000
$500\,000 \leq PK < 1\,000\,000$	$C_{PK5}$	1.056	1.042	1.028	1.014	1.000
$1\,000\,000 \leq PK < 2\,000\,000$	$C_{PK6}$	1.024	1.018	1.012	1.006	1.000
$2\,000\,000 \leq PK$	$C_{PK7}$	1.000	1.000	1.000	1.000	1.000
Distribution	$C_{PK8}$	1.000	1.000	1.000	1.000	1.000

The exit tariff rate cannot be taken into account when calculating the reference prices for 2022. Therefore, the booked capacity of the system user was adjusted to calculate the difference between the rate of exit tariff.

In accordance with Article 28 of Regulation 2017/460 establishing a network code on harmonised gas tariff structures, the Energy Agency conducted a public consultation on the proposal for discount, multipliers, and seasonal factors for the 2022 tariff period, which ran from 29 January to 18 February 2021<sup>2</sup>. In addition to Slovenian stakeholders, the NRAs of directly connected Member States were invited to give their opinions. At its 80th regular session on 18 March 2021, the Energy Agency's Council adopted the proposed seasonal factors, which are published in the Legal Act on the methodology for determining network charges for the natural gas transmission system (Official Gazette of the Republic of Slovenia, No 48/21). Multipliers and seasonal factors are presented in Table 24 and Table 25.

Table 27:: Multipliers for individual standard capacity products:

Standard capacity product	Level of a multiplier
Quarterly ( $M_Q$ )	1.40
Monthly ( $M_M$ )	1.45
Daily ( $M_D$ )	2.75
Intraday ( $M_{ZD}$ )	2.80

<sup>2</sup> <https://www.agen-rs.si/web/en/-/consultation-on-discounts-multipliers-and-seasonal-factors>



Table 28: Seasonal factors for an individual standard capacity product

Gas month ( <i>m</i> )	Seasonal factor for an individual standard capacity product			
	Quarterly $S_{Q(m)}$	Monthly $S_{M(m)}$	Daily $S_{D(m)}$	Within-day $S_{ZD(m)}$
January	1.617	1.617	1.617	1.617
February	1.617	1.527	1.527	1.527
March	1.617	1.228	1.228	1.228
April	0.751	0.765	0.765	0.765
May	0.751	0.748	0.748	0.748
June	0.751	0.712	0.712	0.712
July	0.714	0.657	0.657	0.657
August	0.714	0.982	0.982	0.982
September	0.714	0.717	0.717	0.717
October	1.211	0.878	0.878	0.878
November	1.211	1.143	1.143	1.143
December	1.211	1.211	1.211	1.211

The following Annexes are attached to this Motivated decision on determination of reference price methodology for the natural gas transmission system:

Annex 1: Simplified tariff model

Annex 2: Calculation of the capacity cost allocation comparison index

Annex 3: List of other services presenting non-transmission services

## 8 CONCLUSION

The Energy Agency, with this Motivated decision following Article 27(4) of Regulation (EC) No 2017/460, sets the reference price methodology and reference prices for 2020. Reference prices are set on based on the matrix methodology since with this Motivated decision, it is proved that the use of the matrix methodology is more appropriate for the determination of the Slovenian transmission entry and exit tariffs. The reference prices, determined by the matrix methodology, reflect the eligible costs of individual parts of the transmission system. Using the matrix methodology, the reference prices for an individual entry and exit point of the transmission system are determined by taking into account the replacement value and the peak load of individual parts of the transmission system.

In determining the reference prices for 2022, the Energy Agency, on the basis of Article 6(4)(c) of Regulation 2017/460 revaluated the reference prices in a way that reference prices I at all entry and exit points are multiplied by the constant 1.127. On the basis of Article 6(4)(a) of Regulation 2017/460 the Energy Agency adjusted prices at the Šempeter pri Gorici point so that the transmission route is competitive.

When calculating the CAA comparison index between intra-system and cross-system use of the network, it was found that after the performed analysis of the Šempeter pri Gorici exit point the CAA comparison index is 72.50%. The high value of CAA comparison index is the result of the benchmark of the exit point, which lowered the reference price, as well as the revenues of cross-system use of network. The high value of the CAA comparison index is also the result of the fact that the Šempeter pri Gorici exit point is insufficiently booked along with the high value of the transmission system section, which is reflected in this reference price.

The network charge tariffs charged by the TSO to the transmission system users in 2022 were set in May 2021, when the approval to the regulatory framework for the period from 1 January 2022 to 31 December 2024 was issued.