

Entry and exit network charge tariffs for the natural gas transmission system in Slovenia

The simplified tariff model represents the matrix model for determination of network charge tariffs and is prepared on the basis of Article 30(2)(b) of the Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a Network Code on Harmonised Transmission Tariff Structures for Gas

Content

Setting the entry and exit network charge tariffs with the use of a matrix methodology

Date of last modification:

23.02.2022

Setting the entry and exit network charge tariffs with the use of a matrix methodology

A user can use a simplified calculation of entry and exit network charge tariffs for an individual entry or exit point on the basis of the entry of an average daily booking in an individual entry or exit point (green coloured fields)

When looking for the appropriate correction factor for entry and exit tariffs to achieve the expected target revenue "Excel Solver" is used, which must be enabled beforehand by the user prior (File → Options → Add-ins → Excel add-ins → Solver)

User Account Process:

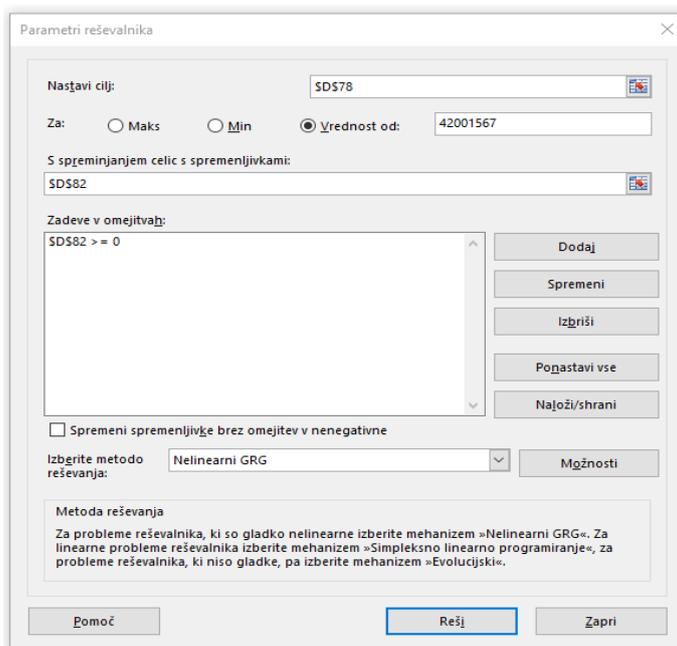
Input of average daily booked capacity in an individual entry or exit point, which must not exceed the technical capacity of an individual point of the transmission system.



Entry/Exit points	Average booking of transmission capacity [kWh/day]	
	Entry capacity [kWh/day]	Exit capacity [kWh/day]
Slovenia	0	53 212 366
Ceršak	44.336.352	0
Rogatec	1.004.773	13.427.254
Sempeter pri Gorici	1.797.658	692.165
Skupaj	47.138.783	67.331.785

Table for the input of average daily booked capacity in an individual entry/exit point

Activation of Excel Solver and setting the target eligible revenue of the TSO (eligible revenue of the TSO for year 20XX is e.g. EUR XX.XXX.XXX). In case if only the average daily booking is changed in a single point, only the command Solver is executed, which calculates the appropriate correction factor - factor of entry/exit tariffs to achieve the expected the target revenue and consequently the calculation of the appropriate entry and exit tariffs.



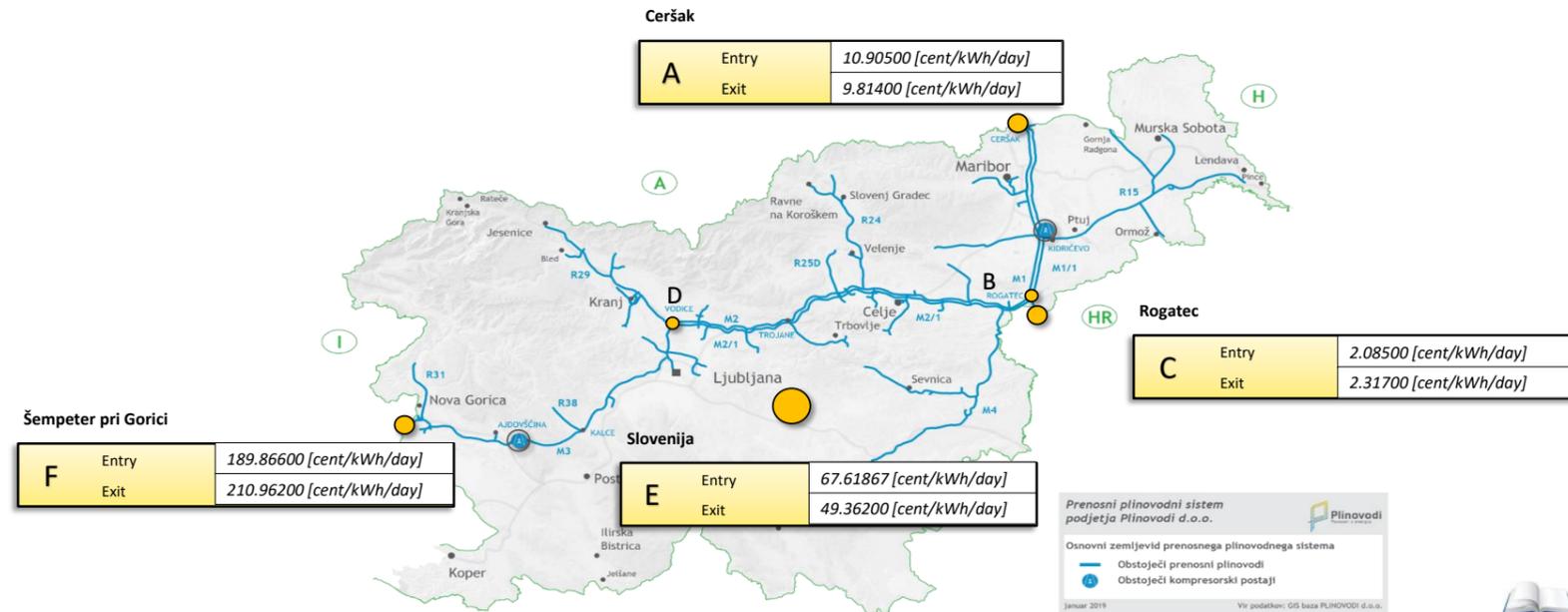
The screenshot shows the "Parametri reševalnika" (Solver Parameters) dialog box. It includes the following fields and options:

- Nastavi cilj:** Set to "SD\$78".
- Za:** Radio buttons for "Maks", "Min", and "Vrednost od:" (selected).
- Vrednost od:** Set to "42001567".
- S spremenjanjem celic s spremenljivkami:** Set to "SD\$82".
- Zadeve v omejitvah:** A list containing "SD\$82 >= 0".
- Buttons:** "Dodaj", "Spremeni", "Izbriši", "Pogastavi vse", and "Najoži/shrani".
- Options:** A checkbox "Spremeni spremenljivke brez omejitev v nenegativne" is unchecked.
- Izberite metodo reševanja:** Set to "Nelinearni GRG".
- Metoda reševanja:** A text box with instructions: "Za probleme reševalnika, ki so gladko nelinearne izberite mehanizem »Nelinearni GRG«. Za linearne probleme reševalnika izberite mehanizem »Simpleksno linearno programiranje«, za probleme reševalnika, ki niso gladke, pa izberite mehanizem »Evolucijski«.".
- Buttons:** "Pomoč", "Reši", and "Zapri".

Excel Solver window

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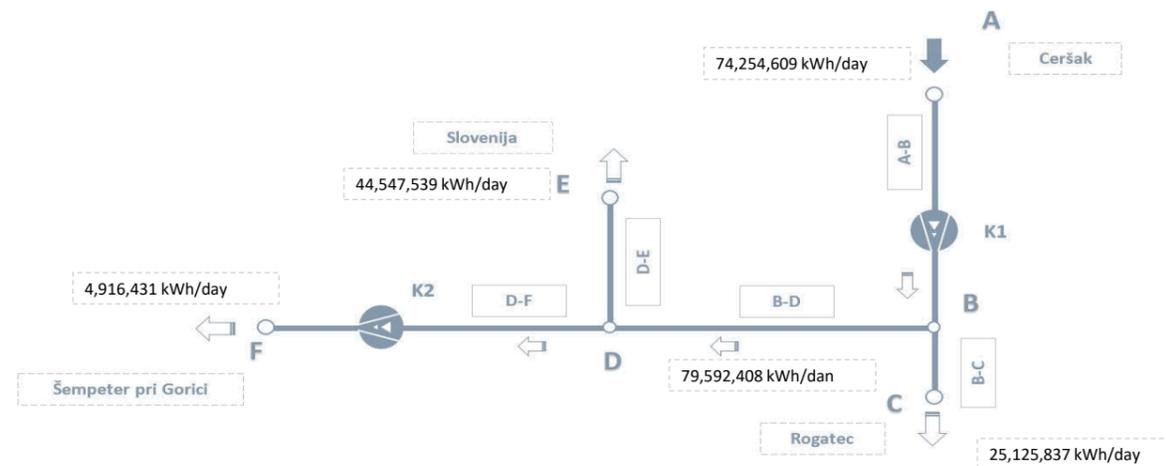


Natural gas transmission system in Slovenia - Entry/Exit in tariffs for the regulatory year 2020

Table 1. Peak load at the occurrence of the transmission system peak load

Consumption of natural gas	Flow [kWh/day]
Consumption in point C (Section B-C)	25,125,837 kWh/day
Consumption in point E (Section D-E)	44,547,539 kWh/day
Consumption in point F (Section D-F)	4,916,431 kWh/day
Total	74,589,807 kWh/day
Supply of natural gas	Flow [kWh/day]
Supply in point A (Section A-B)	74,254,609 kWh/day
Total	74,254,609 kWh/day

Opomba:
Flows at peak load on 26/2/2018



Shema prenosnega sistema porazdeljena po odsekih (na dan 1.1.2019)

Determination of entry/exit tariffs of the transmission system (Entry-Exit tarif)

Entry-Exit tariffs - without taking into account the correction factor of the entry/exit tariffs

Entry/exit tariffs [EUR/(kWh/day)]	90%			Technical capacity of entry/exit points		
	Entry tariffs	Ceršak	Rogatec	Šempeter pri Gorici	Entry capacity [kWh/day]	Exit capacity [kWh/day]
Slovenija	0.4749	0.5798	0.4950	2.3016	0	81,252,000
Ceršak	0.0944	-	0.0944	1.9211	139,216,000	0
Rogatec	0.0223	0.1272	-	1.8490	7,731,000	68,289,000
Šempeter pri Gorici	2.0297	2.1346	2.0297	-	28,534,000	25,940,000

USER CALCULATION (The use of "Excel Solver")

For the user calculation of tariff items is allowed the input of expected average daily booking of transmission capacity at an individual entry/exit point in the calendar 2020.
Expected average daily booked capacity must be within the limits of the technical capacity of an individual entry/exit point!



Entry/Exit points	Average booking of transmission capacity [kWh/day]		Revenues from booking of transmission capacity [€]	
	Entry capacity [kWh/day]	Exit capacity [kWh/day]	Entry capacity [€]	Exit capacity [€]
Slovenia	0	61,414,974	0.00	29,167,165.11
Ceršak	52,012,099	0	5,456,801.13	0.00
Rogatec	3,466,924	6,207,000	69,544.59	138,343.34
Šempeter pri Gorici	1,692,726	0	3,092,147.11	0.00
Skupaj	57,171,749	67,621,974	8,618,492.83	29,305,508.45
			Total revenue (uncorrected)	37,924,001.28

Note:

Indeterminable entry/exit tariffs are determined as 90% value of determinable tariffs.

Entry-Exit tariffs - with taking into account the correction factor of the entry/exit tariffs

Entry-Exit tariffs [EUR/(kWh/day)]	90%			
Entry/Exit points	Entry tariffs	0.1090	0.0208	1.8987
	Exit tariffs	Ceršak	Rogatec	Šempeter pri Gorici
Slovenia	0.4936	0.6027	0.5145	2.3923
Ceršak	0.0981	-	0.1190	1.9968
Rogatec	0.0232	0.1322	-	1.9218
Šempeter pri Gorici	2.1096	2.1305	2.1305	-

Entry/Exit points	Revenues from transmission capacity booking [€]	
	Entry capacity [€]	Exit capacity [€]
Slovenia	0.00	30,315,674.43
Ceršak	5,671,672.44	0.00
Rogatec	72,283.03	143,790.85
Šempeter pri Gorici	3,213,905.94	0.00
Skupaj	8,957,861.40	30,459,465.29
Expected target revenue [€]		39,417,326.69

The calculation of appropriate correction factor of entry/exit tariffs to achieve the expected target revenue is executed with Excel Solver. The expected target revenue should be entered as a value in the field "Value from".

Correction factor of entry/exit points to achieve target revenue

Correction factor of entry/exit tariffs $K_{(EE)}$ **1.0394**

Entry/Exit tariffs - Tariffs table

tbl_Entry-Exit

Entry/Exit tariffs [EUR/(kWh/day)]	Ceršak	Rogatec	Šempeter pri Gorici	Slovenija
Entry tariff	10.90500 [cent/kWh/day]	2.08500 [cent/kWh/day]	189.86600 [cent/kWh/day]	67.61867 [cent/kWh/day]
Exit tariff	9.81400 [cent/kWh/day]	2.31700 [cent/kWh/day]	210.96200 [cent/kWh/day]	49.36200 [cent/kWh/day]