

## **Rules for the use of the data on gas quality and calorific values for the calculation of the energy of delivered gas**

Rules for the use of the data on gas quality and calorific values for the calculation of the energy of delivered gas at the transmission system exits have been determined by the applicable Transmission System Network Code and Amendments to the Transmission System Network Code ("Official gazette" nos. 50/18, 31/19, 89/19, 36/20, 106/21, 58/22 i 9/24, hereinafter MPTS).

By this document the data are publicly announced in compliance with article 106 of MPTS stipulating that the transmission system operator publishes on its website, and regularly updates the following contents concerning the use of the data on gas quality:

- a) list of all sampling locations
- b) list of all connections with associated primary and replacement relevant sampling locations
- c) rules for the use of data on gas quality and calorific values for the calculation of the energy of delivered gas, determined at sampling locations.

### **a) A list of all gas sampling locations on the transmission system, art. 106 (5) a) MPTS**

A list of all gas sampling locations on the transmission system is in Table 1.

The table contains all sampling locations on the transmission system equipped with process gas chromatographs, regardless of whether the device belongs to the transmission system operator or the owner of the connected plant, and 3 locations on which, due to their low capacity, samples are occasionally taken manually and gas analysis is carried out in an accredited laboratory.

One chromatograph installed at one location can have several sampling locations. Sampling location code consists of location (plant) number at which the chromatograph has been installed and the sample number on the same chromatograph separated by dash. In a similar way the name of the sampling location consists of the name of the location (plant) at which a chromatograph is installed and the name of the pipeline direction on which the device for automatic sampling is installed.

**Table 1 – A list of all sampling locations on the transmission system**

Sampling location code	Sampling location name	Sampling location type	Operator
001-1	MRS/PČ Ivanja Reka - MRS Ivanić Grad (stream 1)	Kromatograf	Plinacro
001-2	MRS/PČ Ivanja Reka - MRS Zagreb-Istok (stream 2)	Kromatograf	Plinacro
001-3	MRS/PČ Ivanja Reka - MRS Zagreb-Zapad (stream 3)	Kromatograf	Plinacro
001-4	MRS/PČ Ivanja Reka (stream 4)	Kromatograf	Plinacro
002-1	MRČ Zabok - MRS Rogatec (stream 1)	Kromatograf	Plinacro
002-2	MRČ Zabok - MRS Zagreb-Zapad (stream 2)	Kromatograf	Plinacro
002-3	MRČ Zabok - MRČ Ludbreg (stream 3)	Kromatograf	Plinacro
003-1	MRS Straža stream 1	Kromatograf	Plinacro
004-1	MRČ Bjelovar	Kromatograf	Plinacro
005-1	MRČ Budrovac - MRS Varaždin (stream 1)	Kromatograf	Plinacro
005-2	MRČ Budrovac - MRS Ivanić Grad (stream 2)	Kromatograf	Plinacro
005-3	MRČ Budrovac - MRČ Donji Miholjac (stream 3)	Kromatograf	Plinacro
005-4	MRČ Budrovac - CPS Molve (stream 4)	Kromatograf	Plinacro
006-1	MRČ Špišić Bukovica - MRČ/MRS Kutina (stream 1)	Kromatograf	Plinacro
006-2	MRČ Špišić Bukovica - MRČ Budrovac (stream 2)	Kromatograf	Plinacro
006-3	MRČ Špišić Bukovica - MRČ Donji Miholjac (stream 3)	Kromatograf	Plinacro
007-1	MRS Đurđevac stream 1	Kromatograf	Plinacro
008-1	MRČ/MRS Kutina - MRS Virovitica (stream 1)	Kromatograf	Plinacro
008-2	MRČ/MRS Kutina - MRS Ivanić Grad (stream 2)	Kromatograf	Plinacro
008-3	MRČ/MRS Kutina - MRS Slavonski Brod (stream 3)	Kromatograf	Plinacro
008-4	MRČ/MRS Kutina - Kolektor (stream 4)	Kromatograf	Plinacro
009-1	PČ Ludina stream 1	Kromatograf	Plinacro
010-1	MRS Varaždin I stream 1	Kromatograf	Plinacro
011-1	MRS Nova Gradiška stream 1	Kromatograf	Plinacro
012-1	MRS Požega stream 1	Kromatograf	Plinacro
013-1	MRS Vinkovci stream 1	Kromatograf	Plinacro
014-1	MRČ Ludbreg - MRČ Zabok (stream 1)	Kromatograf	Plinacro
014-2	MRČ Ludbreg - DN 500 Budrovac (stream 2)	Kromatograf	Plinacro
014-3	MRČ Ludbreg - DN 300 Budrovac (stream 3)	Kromatograf	Plinacro
014-4	MRČ Ludbreg - MRS Varaždin I (stream 4)	Kromatograf	Plinacro
016-1	MRS Dobrovac stream 1	Kromatograf	Plinacro
018-1	MRS Slavonski Brod stream 1	Kromatograf	Plinacro
019-1	MRS Zagreb Zapad stream 1	Kromatograf	Plinacro
020-1	MRS Zagreb Jug stream 1	Kromatograf	Plinacro
021-1	Terminal Pula stream 1	Kromatograf	Plinacro
022-1	MRS Osijek I stream 1	Kromatograf	Plinacro
023-1	PČ / MRS Benkovac stream 1	Kromatograf	Plinacro
024-1	MRČ Donji Miholjac - MRČ Budrovac (stream 1)	Kromatograf	Plinacro
024-2	MRČ Donji Miholjac - MRS Beničanci (stream 2)	Kromatograf	Plinacro
024-3	MRČ Donji Miholjac - MRS Bokšić (stream 3)	Kromatograf	Plinacro
024-4	MRČ Donji Miholjac - MRS Osijek (stream 4)	Kromatograf	Plinacro
025-1	UIMS Donji Miholjac stream 1	Kromatograf	Plinacro
026-1	MRS Rijeka Istok stream 1	Kromatograf	Plinacro
029-1	PČ Omišalj	Kromatograf	Plinacro
032-1	MRS Sisak stream 1	Kromatograf	Plinacro
033-1	UMS Stari Jankovci (stream 1)	Kromatograf	Plinacro
035-1	PČ Bosiljevo	Kromatograf	Plinacro
101-1	CPS Molve	Kromatograf	INA d.d.

102-1	UMS Etan (Ivanić Grad) stream 1	Kromatograf	INA d.d.
201-1	PSP Okoli stream 1	Kromatograf	PSP d.o.o.
301-1	UPP Terminal	Kromatograf	LNG d.o.o.

## b) A list of all connections with associated primary and replacement relevant sampling locations

A list of all exit connections of the transmission system is indicated in Table 2.

The enclosed table lists separately exits towards distribution systems and exits towards final customers connected directly to the transmission system. In the first part of the table with exits towards distribution systems joint exits to which sampling locations are not associated are marked by yellow background (MPTS, art. 32), while physical exits included in a separate joint exit are marked by green background in the table. For them, the codes of the associated sampling locations are also indicated.

**Table 2 - List of all connections with associated primary and replacement relevant sampling locations, art. 106 (5) b) MPTS**

No.	Exit code	Exit name	Sampling location name (tabel 1)							
			primary	II	III	IV	V	VI	VII	VIII
<b>Dystrubution system exit</b>										
1	837	Badlješina - 3 bar - Badlješina	016-1	004-1	005-2	101-1	008-4	006-2		
	1253	Baranja								
2	882	Beli Manastir - 3 bar - Beli Manastir	024-4	022-1	012-1	011-1	018-1	025-1	006-3	
3	728	Mece - 3 bar - Mece	022-1	024-4	012-1	011-1	018-1	025-1	006-3	
4	729	Bedekovčina - 3 bar - Bedekovčina	002-3	003-1	019-1	014-1	010-1			
5	781	Belišće - 2,2 bar - Valpovo	024-4	022-1	012-1	011-1	018-1	025-1	006-3	
6	1292	Benkovac - 3,5 bar - Benkovac	023-1	026-1	021-1	008-3	011-1	025-1	029-1	301-1
7	1294	Biograd - 3,5 bar - Biograd	023-1	026-1	021-1	008-3	011-1	025-1	029-1	301-1
	1252	Bjelovar								
8	879	Bjelovar - 3 bar - Bjelovar	004-1	005-2	101-1	016-1	008-4	001-1		
9	852	Nova Rača - 3 bar - Bjelovar	016-1	004-1	005-2	101-1	008-4	006-2		
10	803	Rovišće - 3 bar - Bjelovar	004-1	005-2	101-1	016-1	008-4	001-1		
11	833	Bokšić - 3 bar - Bokšić	024-3	022-1	012-1	011-1	018-1	025-1	006-3	024-2
12	812	Bokšić - 3 bar - Crnac	024-3	022-1	012-1	011-1	018-1	025-1	006-3	024-2
13	818	Brezine - 3 bar - Brezine	016-1	004-1	005-2	101-1	008-4	006-2	101-1	
14	901	Budrovac staklenici - 2 bar -	007-1							

No.	Exit code	Exit name	primary	II	III	IV	V	VI	VII	VIII
15	874	Cerje Tužno - 3 bar - Sela (IVKOM)	010-1	014-4	005-1	002-3	019-1			
16	806	Čabdin - 3,5 bar - Jastrebarsko	026-1	021-1	008-3	011-1	025-1	029-1	301-1	
17	732	Čačinci - 3 bar - Čačinci	024-3	022-1	012-1	011-1	018-1	025-1	006-3	024-2
18	850	Čepelovac - 2 bar - Čepelovac	005-2	004-1	006-2	101-1				
19	790	Daruvar - 3 bar - Daruvar	016-1	004-1	005-2	101-1	008-4	006-2		
20	865	Dobrovac - nova - 3 bar - Lipik	016-1	004-1	005-2	101-1	008-4	006-2		
21	819	Dobrovac - nova - 3 bar - Poljoprivreda Lipik	016-1	004-1	005-2	101-1	008-4	006-2		
22	768	Doljani - 3 bar - Doljani	016-1	004-1	005-2	101-1	008-4	006-2		
23	748	Donje Međimurje - 12 bar - Prelog	014-2	101-1	005-1	010-1	002-3	003-1		
24	824	Donje Međimurje - 3 bar - D.Dubrava	014-2	101-1	005-1	010-1	002-3	003-1		
25	783	Donji Andrijevci - 3 bar - Donji Andrijevci	013-1	018-1	012-1	022-1	024-2	025-1	011-1	
26	1311	Donji Andrijevci - 3 bar - HEP	013-1	018-1	012-1	022-1	024-2	025-1	011-1	
27	813	Donji Miholjac - 3 bar - Donji Miholjac	024-1	022-1	012-1	011-1	018-1	025-1	006-3	
28	716	Draganac - 4 bar - Draganac	004-1	005-2	101-1	016-1	008-4			
29	1306	Drniš-3,5 bar_Drniš	023-1	026-1	021-1	008-3	011-1	025-1	029-1	301-1
30	730	Dubrovčan - 3 bar - Dubrovčan	002-3	003-1	019-1	014-1	010-1			
	1287	Dugo Selo								
31	1324	Dugo Selo - 3 bar - Trstenik	001-1	020-1	019-1	019-1				
32	866	Dugo Selo - 3 bar - Dugo Selo	001-1	020-1	019-1	019-1				
33	825	Đurđevac - 2 bar - Đurđevac	007-1	005-2						
34	902	Ferdinandovac - 2 bar - Ferdinandovac	007-1	005-2						
35	761	Ferovac - 3 bar - Pleternica	012-1	024-2	011-1	025-1	022-1			
36	867	Gaj - 3 bar - Gaj	016-1	004-1	005-2	101-1	008-4			
37	840	Garešnica - 3 bar - Garešnica	008-1	006-1	016-1					
38	799	Gola - 3 bar - Gola	014-3	005-1						
39	1325	Gospić - 3,5 bar - Gospić	001-3							
40	881	Gradec - 3 bar - Farma Gradec	004-1	005-2	101-1	016-1	008-4	001-1		

No.	Exit code	Exit name	primary	II	III	IV	V	VI	VII	VIII
41	727	Gradec - 3 bar - Gradec	004-1	005-2	101-1	016-1	008-4	001-1		
42	788	Gradečki Pavlovac - 3 bar - Asfaltna baza	004-1	005-2	101-1	016-1	008-4	001-1		
43	868	Grubišno Polje - 3 bar - Grubišno Polje	016-1	004-1	005-2	101-1	008-4	006-2		
44	841	Haganj - 6 bar - Haganj	004-1	005-2	101-1	016-1	008-4	001-1		
45	1316	Hampovica – 3bar - Hampovica	005-2	101-1						
46	722	IP Kalinovac 5 - 3 bar - Sesvete	007-1	005-2						
47	903	Ivanec - 3 bar - Ivanec	010-1	014-4	005-1	002-3	019-1			
	1250	Ivanić Grad								
48	891	Graberje - 1,5 bar - Graberje	001-1	004-1						
49	869	Ivanić III - 3 bar - Ivanić Grad	001-1	004-1						
50	845	Novoselec - 2 bar - Križ	001-1	004-1						
51	878	Ivankovo - 3 bar - Ivankovo	013-1	018-1	012-1	022-1	011-1			
52	807	Ivanja Reka - 6 bar - Iv. Reka, Sesvete	001-4	020-1	019-1					
53	731	Jakovlje - 3 bar - Jakovlje	002-2	019-1	003-1					
54	801	Kalinovac - 2 bar - Kalinovac	007-1	005-2	005-2					
55	777	Karlovac - 4 bar - Karlovac	026-1	021-1	008-3	011-1	025-1	029-1	301-1	
56	753	Klanjec - 3 bar - Klanjec	002-3	003-1	019-1	014-1				
57	802	Kloštar Podravski - 2 bar - Kloštar Podravski	005-3	006-2	101-1	004-1	002-3			
58	1296	Knin - 5 bar - Knin	023-1	026-1	021-1	008-3	011-1	025-1	029-1	301-1
59	743	Končanica - 3 bar - Končanica	016-1	004-1	005-2	101-1	008-4	006-2		
	1302	Konjščina								
60	912	Konjščina - 25 bar - Zlatar Bistrica	002-3	003-1	019-1	014-1	010-1			
61	808	Konjščina - 3 bar - Konjščina	002-3	003-1	019-1	014-1	010-1			
62	1323	Podrute - 3 bar - Konjščina	002-3	003-1	019-1	014-1	010-1			
63	904	Koprivnica II - 6 bar - Koprivnica	014-2	005-1	007-1	101-1	002-3	010-1		
64	778	Krapina - 3 bar - Krapina	003-1	002-1	019-1					
65	905	Križevci - 3 bar - Križevci	004-1	005-2	101-1	016-1	008-4	001-1		

No.	Exit code	Exit name	primary	II	III	IV	V	VI	VII	VIII
66	715	Kršan - 6 bar - Potpićan	021-1	026-1	008-3	011-1	025-1			
67	893	Kukunjevac - 3 bar - Kukunjevac	016-1	004-1	005-2	101-1	008-4	006-2		
68	754	Kumrovec - 3 bar - Kumrovec	002-3	003-1	019-1	014-1	010-1			
	1286	Kutina								
69	838	Banova Jaruga - 3 bar - Banova Jaruga	008-4	016-1	009-1					
70	820	Kutina I - 3 bar - Kutina	008-4	016-1	009-1					
71	821	Kutina II - 3 bar - Kutina	008-1	006-1	016-1					
72	871	Lipovica - 3 bar - Ludina	032-1	008-4	016-1	009-1				
73	1308	Popovača - 3bar - Popovača	008-2	032-1	016-1	009-1				
74	750	Legrad - 3 bar - Legrad	014-2	005-4	010-1	101-1	002-3	003-1		
75	762	Magadenovac - 3 bar - Magadenovac	024-2	022-1	012-1	011-1	018-1	025-1	006-3	
76	916	Marijanci - 3 bar - Marjanci	024-2	022-1	012-1	011-1	018-1	025-1	006-3	
	1259	Međimurje								
77	827	Mihovljan - 4 bar - Mihovljan	010-1	014-4	005-1	002-3	019-1			
78	906	Mursko Središće - 3 bar - Mursko Središće	010-1	014-4	005-1	002-3	019-1			
79	1184	Nedelišće - 4 bar - Čakovec, Kuršanec, Šenkovec	010-1	014-4	005-1	002-3	019-1			
80	907	Nedelišće - 4 bar - Nedelišće	010-1	014-4	005-1	002-3	019-1			
81	774	Molve selo - 2 bar - Molve	005-2	004-1	101-1	006-2				
82	872	Narta - 3 bar - Narta	004-1	005-2	101-1	016-1	008-4	001-1		
	1319	Našice								
83	860	Našice grad - 3 bar - Našice	024-3	022-1	012-1	011-1	018-1	025-1	006-3	024-2
84	784	Đurđenovac - 3 bar - Đurđenovac	024-3	022-1	012-1	011-1	018-1	025-1	006-3	024-2
85	785	Feričanci - 3 bar - Feričanci	024-3	022-1	012-1	011-1	018-1	025-1	006-3	024-2
86	733	Koška - 3 bar - Koška	024-3	022-1	012-1	011-1	018-1	025-1	006-3	024-2
87	764	Negoslavci - 3 bar - Opatovac	013-1	018-1	012-1	011-1	018-1	025-1	006-3	
	1288	Nova Gradiška								
88	844	Lipovljani - 4 bar - Lipovljani	016-1	008-4	009-1					

No.	Exit code	Exit name	primary	II	III	IV	V	VI	VII	VIII
89	767	Nova Gradiška - 4 bar - Nova Gradiška	011-1	008-3	025-1					
90	889	Nova Kapela - 4 bar - Nova Kapela	011-1	008-3	025-1					
	1289	Novi Marof								
91	913	Novi Marof - 3 bar - Novi Marof	014-1	002-3	003-1	010-1				
92	757	Tuhovec - 3 bar - Tuhovec	014-1	002-3	003-1	010-1				
93	809	Podrute - 5 bar - Podrute	014-1	002-3	010-1	003-1				
94	1245	Ogulin - 3 bar - Ogulin	026-1	021-1	008-3	011-1	025-1	103-1	029-1	301-1
95	744	Okoli - 3 bar - Okoli	201-1	009-1						
96	736	Orahovica - 3 bar - Orahovica	024-3	022-1	012-1	011-1	018-1	025-1	006-3	024-2
	1317	Osijek-Đakovo								
97	782	Bizovac - 3 bar - Bizovac	022-1	024-4	012-1	011-1	018-1	025-1	006-3	
98	918	Osijek I - 3 bar - Osijek	022-1	024-4	012-1	011-1	018-1	025-1	006-3	
99	737	Osijek I - 3 bar - Sarvaš	022-1	024-4	012-1	011-1	018-1	025-1	006-3	
100	739	Osijek III - 3 bar - Osijek	022-1	024-4	012-1	011-1	018-1	025-1	006-3	
101	760	Đakovo - 3 bar - Đakovo	013-1	018-1	012-1	022-1	024-2	025-1	011-1	
102	834	Đakovo - 6 bar - Đakovo	013-1	018-1	012-1	022-1	024-2	025-1	011-1	
103	835	Strizivojna - 3 bar - Strizivojna	013-1	018-1	012-1	022-1	024-2	025-1	011-1	
104	795	Pakrac I - 3 bar - Pakrac	016-1	004-1	005-2	101-1	008-4	006-2		
105	894	Pakračka Poljana - 3 bar - Pakračka Poljana	016-1	004-1	005-2	101-1	008-4	006-2		
106	853	Pitomača - 3 bar - Pitomača	006-2	005-3	024-1	101-1				
107	1244	Poreč - 4 bar - Poreč	021-1	026-1	008-3	011-1	025-1			
	1256	Požega								
108	786	Ferovac - 3 bar - Ferovac	012-1	024-2	011-1	025-1	022-1	K2-1		
109	740	Požega - 3 bar - Požega	012-1	024-2	011-1	025-1	022-1	K2-1		
110	766	Pula - 12 bar - Pula	021-1	026-1	008-3	011-1	025-1			
111	1274	Rijeka Istok – 4 bar – Rijeka	026-1	021-1	008-3	011-1	025-1			
112	888	Rijeka zapad - 16 bar - Rijeka	026-1	021-1	008-3	011-1	025-1			
113	815	Rijeka zapad - 4 bar - Rijeka	026-1	021-1	008-3	011-1	025-1			
114	1243	Rovinj - 4 bar - Rovinj	021-1	026-1	008-3	011-1	025-1			

No.	Exit code	Exit name	primary	II	III	IV	V	VI	VII	VIII
115	896	Sirač - 3 bar - Sirač	016-1	004-1	005-2	101-1	008-4	006-2		
116	745	Sirač - 4,5 bar - Kamenolom Sirač	016-1	004-1	005-2	101-1	008-4	006-2		
117	797	Sisak - 6 bar - Sisak	032-1	009-1	008-2					
	1257	Slatina								
118	887	Slatina - 3 bar - Slatina	006-3	024-1	025-1	101-1	005-1	005-3		
119	915	Čađavica - 3 bar - Čađavica	024-1	022-1	012-1	011-1	018-1	025-1	006-3	
120	861	Slavonski Brod - 3 bar - Sl. Brod	018-1	013-1	012-1	011-1	024-2			
121	1300	Split - 3,5 bar - Split	023-1	026-1	021-1	008-3	011-1	025-1	029-1	301-1
122	1301	Split - 12 bar - Split	023-1	026-1	021-1	008-3	011-1	025-1	029-1	301-1
123	755	Straža - 3 bar - Pregrada	003-1	002-1	K1-1					
124	787	Strizivojna - 3 bar - Vrpolje	013-1	018-1	012-1	022-1	024-2	025-1	011-1	
125	908	Suha žbuka - 4,5 bar - Suha žbuka	007-1	005-2						
126	756	Sv. Ivan Zelina - 3 bar - Zelina	002-3	003-1	019-1	014-1	010-1			
127	1295	Šibenik - 12 bar - Šibenik	023-1	026-1	021-1	008-3	011-1	025-1	029-1	301-1
128	830	Tuheljske Toplice - 3 bar - Tuheljske Toplice	002-3	003-1	019-1	014-1	010-1			
129	1222	Umag - 4 bar - Umag	021-1	026-1	008-3	011-1	025-1			
	1251	Varaždin								
130	798	Cerje Tužno - 3 bar - Cerje Tužno	010-1	014-4	005-1	002-3	019-1			
131	800	Jalžabet - 3 bar - Jalžabet	014-4	010-1	005-1	002-3				
132	773	Lepoglava - 3 bar - Lepoglava	010-1	014-4	005-1	002-3	019-1			
133	724	Ludbreg - 3 bar - Ludbreg	014-2	005-1	010-1	101-1	003-1	002-3	019-1	
134	804	Varaždin I - 3 bar - Varaždin	010-1	014-4	005-1	002-3	019-1			
135	876	Varaždin II - 3 bar - Varaždin	010-1	014-4	005-1	002-3	019-1			
136	747	Veliki Grđevac - 3 bar - Veliki Grđevac	016-1	004-1	005-2	101-1	008-4	006-2		
137	725	Veliko Trojstvo - 3 bar - Veliko Trojstvo	004-1	005-2	101-1	016-1	008-4	001-1		
138	789	Viljevo - 3 bar - Viljevo	024-1	022-1	012-1	011-1	018-1	025-1	006-3	
139	863	Vinkovci - 3 bar - Vinkovci i okolica	013-1	018-1	012-1	022-1	024-2	025-1	011-1	
140	752	Virje - 3 bar - Novigrad	005-1	014-3	101-1					

No.	Exit code	Exit name	primary	II	III	IV	V	VI	VII	VIII
141	726	Virje - 3 bar - Virje	005-1	014-3	101-1					
	1318	Virovitica								
142	771	Đolta - 3 bar - Sušare Đolta	006-2	005-3	024-1	101-1				
143	909	Suhopolje - 3 bar - Suhopolje	006-3	024-1	025-1	005-3	101-1			
144	854	Virovitica - 6 bar - Virovitica	006-3	024-1	025-1	005-3	101-1			
145	848	Vrbovec - 6 bar - Vrbovec	004-1	005-2	101-1	016-1	008-4	001-1		
	1285	Vukovar								
146	816	Vukovar - 3 bar - Vukovar	013-1	018-1	012-1	022-1	024-2	025-1	011-1	
147	864	Vukovar - 6 bar - Borovo	013-1	018-1	012-1	022-1	024-2	025-1	011-1	
148	735	Negoslavci - 3 bar - Negoslavci	013-1	018-1	012-1	011-1	018-1	025-1	011-1	
149	885	Zabok - 10 bar - Donja Stubica	002-3	014-1	003-1	010-1				
150	914	Zabok - 3 bar - Zabok	002-3	014-1	003-1	010-1				
151	1241	Zadar - 5 bar - Zadar srednji tlak	023-1	026-1	021-1	008-3	011-1	025-1	029-1	301-1
	1249	Zagreb								
152	780	Zagreb istok - 6 bar - Zagreb	001-2	020-1	019-1					
153	858	Zagreb jug - 6 bar - Zagreb	020-1	001-3	019-1	002-2				
154	810	Zagreb zapad - 6 bar - Zagreb	019-1	002-2	020-1	014-1	003-1			
155	829	Zagreb zapad - 25 bar - Samobor	019-1	002-2	020-1	014-1	003-1			
156	884	Zagreb zapad - 3,5 bar - Sv. Nedjelja	019-1	002-2	020-1	014-1	003-1			
157	886	Zaprešić - 6 bar - Zaprešić	019-1	002-2	020-1	014-1	003-1			
158	776	Žabno - 3 bar - Žabno	004-1	005-2	101-1	016-1	008-4	001-1		
159	817	Županja - 3 bar - Gradište	013-1	018-1	012-1	022-1	024-2	025-1	011-1	
160	890	Županja - 3 bar - Županja	013-1	018-1	012-1	022-1	024-2	025-1	011-1	

Exits towards end customers connected to gas transmission system										
No.	Exit code	Exit name	primary	II	III	IV	V	VI	VII	VIII
1	759	Belišće - 2 bar - Tvornice Belišće	024-4	022-1	012-1	011-1	018-1	025-1	006-3	
2	763	Cementara Našice - 3 bar - Cementara Našice	024-3	022-1	012-1	011-1	018-1	025-1	006-3	024-2
3	849	Cerje Tužno - 3 bar - Ciglana C.Tužno	010-1	014-4	005-1	002-3	019-1			
4	839	Dobrovac - nova - 3 bar - Staklana Lipik	016-1	004-1	005-2	101-1	008-4	006-2		
5	1248	Dugo Selo - 30 bar - Plin-lift	001-1	020-1	019-1					
6	792	Graberje - 1,5 bar - Ind. krug Graberje	001-1	004-1						
7	826	IP Kalinovac 5 - 2,5 bar - INA - IP Kalinovac	007-1	005-2						
8	911	Ivanja Reka - 30 bar - TE-TO Zagreb	001-4	020-1	019-1					
9	855	Konjščina - 25 bar - TE Jertovec	002-3	003-1	019-1	014-1	014-1	010-1		
10	772	Križevci - 3 bar - Ciglana Križevci	004-1	005-2	101-1	016-1	008-4	001-1		
11	946	KS Stružec - 3 bar - KS Stružec	032-1	008-2	009-1					
12	717	Kutina I - 30 bar - Petrokemija Kutina	008-4	016-1	009-1					
13	843	Lipovica - 3 bar - KPD Lipovica	032-1	008-4	016-1					
14	1195	Lipovljani - 18 bar - INA Lip.-Jam.	016-1	008-4	009-1					
15	859	Magadenovac - 3 bar - Farma Magadenovac	024-2	022-1	012-1	011-1	018-1	025-1	005-3	
16	734	Našice grad - 3 bar - Ciglana Našice	024-3	022-1	012-1	011-1	018-1	025-1	005-3	024-2
17	945	OS Beničanci - 30 bar - OS Beničanci, plinski lift	024-2	022-1	012-1	011-1	018-1	025-1	005-3	
18	738	Osijek I - 15 bar - TE-Os1	022-1	024-4	012-1	011-1	018-1	025-1	005-3	
19	765	Osijek I - 15 bar - TE-Os2	022-1	024-4	012-1	011-1	018-1	025-1	005-3	
20	917	Osijek I - 3 bar - HEP Kotlovnica	022-1	024-4	012-1	011-1	018-1	025-1	005-3	
21	1322	Punionica SPP - Slavonski Brod	018-1							
22	1198	Rijeka Istok - 45 bar - Rafinerija Urinj	026-1	021-1	008-3	011-1	025-1			
23	721	Sisak - 6 bar - TE Sisak	032-1	009-1	008-2					

No.	Exit code	Exit name	primary	II	III	IV	V	VI	VII	VIII
24	846	Sisak - 6 bar - TO Sisak	032-1	009-1	008-2					
25	1297	Sisak - 31 bar - TO Sisak	032-1	009-1	008-2					
26	746	Sisak - 9 bar - Gavrilović	032-1	009-1	008-2					
27	796	Sisak - 9 bar - Željezara Sisak	032-1	009-1	008-2					
28	1321	Slobodnica - 25 bar - Slobodnica	011-1	018-1						
29	856	Straža - 3 bar - Staklana Straža	003-1	002-1						
30	751	Šenkovec - 3 bar - Ciglana Šenkovec	010-1	014-4	005-1	002-3	019-1			
31	910	Veliko Trojstvo - 15 bar - KS Šandrovac	004-1	005-2	101-1	016-1	008-4	001-1		
32	857	Zagreb jug - 25 bar - EL-TO Zagreb	020-1	001-3	019-1	002-2				
33	758	Zaprešić - 20 bar - Pliva	019-1	002-2	020-1	014-1	003-1			
34	836	Županja - 3 bar - Šećerana Županja	013-1	018-1	012-1	022-1	024-2	025-1	011-1	

### **c) Rules for the use of the data on gas quality and calorific values for the calculation of the energy of delivered gas**

The result of the process chromatograph operation are the data on chemical composition of gas and physical properties calculated from chemical composition of gas whereas the determining of chemical composition of natural gas is carried out in compliance with “HRN EN ISO 6974 – Natural gas – Determination of composition and associated uncertainty by gas chromatography” standard. Pursuant to the Network Code of the Transmission System, standard reference conditions for all metering and calculations of natural gas volume and energy are as follows: - for calculating the volume it is the temperature of 288.15 K (15°C) and pressure of 101.325 kPa (1.01325 bar(a)) – for calculating the calorific value, energy and Wobbe index it is the referent temperature of combustion of 288.15 K (15°C). Conversion of values to other reference conditions is carried out with conversion factors in compliance with “HRN EN ISO 13443 – Natural gas – Standard reference conditions” standard.

The calculation of delivered gas energy at the exit transmission system connections is carried out automatically in the SUKAP information system by multiplying the value of hourly measured gas volume by the average daily gross calorific value for the appropriate gas day, for the appropriate sampling location. Hourly measured volume is in this case expressed in a measuring unit of standard cubic meter (Sm<sup>3</sup>) at a standard pressure (1.01325 bar (a)) and temperature of (15°C) rounded to an integer.

Gross calorific value is expressed in kWh/m<sup>3</sup>, also at the same standard conditions for volume and for temperature of products of combustion of 25°C and gas temperature 0°C rounded to 3 decimal places. The result of multiplying is a quantity of energy for the observed hour expressed in kWh, rounded to an integer without decimal places.

Average daily gross calorific value for the sampling location for a gas day is the arithmetic mean value of the results of analyses of all individual gas samplings within the observed gas day.

For an individual connection with gas volume measuring, a relevant sampling location is a sampling location physically placed on the transmission system closest to the observed connection and the sample is taken from the same gas stream without mixing with gases from other sources.

In case of unavailability of data from an individual device, that is, a malfunction of a device, and in case of significant changes in the regime of gas flows through gas pipelines, the transmission system operator may temporarily or permanently assign another, replacement sample, to a gas volume exit metering point. The replacement sample is a sample that meets the same conditions as the primary one (the sample is taken from the same gas stream) but its distance from the connection is larger than the one of the primary relevant sample. In cases when not even the data from the replacement sample are available for use, the last valid data from the relevant sample will be used.

#### Note:

By introducing daily calorific values for calculations at the transmission system-level, the current practice of half-monthly manual sampling and gas analysing in an accredited laboratory has been abandoned so half-monthly reports on laboratory gas quality analyses are no longer available.

The data on the gas composition at all sampling locations are available on the web page of the transmission system operator in tabular form.

Moreover, calculated weighted gross calorific values for exits from the transmission system towards distribution systems for half-monthly and monthly billing periods are published on the web page.