

# CEE GRIP

## Annex A : Country Profiles

January 2012

## Introduction

The following Country Profiles provide an overview of the existing gas infrastructure in each of the CEE GRIP countries as of November 2011. In case of Germany, only observing TSOs are included.

Most of the information was supplied by the respective TSOs. The overview of Current Publication indicates the specific reports such as National Development Plan, Winter or Summer Outlook which are published by the respective TSO.

## Content

Austria.....	3
Bulgaria.....	6
Croatia .....	8
Czech Republic.....	12
Germany .....	15
Hungary.....	18
Poland .....	20
Romania.....	22
Slovakia.....	24




## Austria





Existing Gas Infrastructure	
Number of TSO's	3
Total length of transmission network(s)	approx. 1,600 km
Total compressor power	573 MW
Inter-TSO connections where capacity is marketed (incl. upstream operators)	
<b>GAS CONNECT AUSTRIA</b>	<ul style="list-style-type: none"> <li>Baumgarten / Eustream (SK)</li> <li>Mosonmagyaróvár / FGSZ (HU)</li> <li>Petržalka / eustream, a.s. (SK)</li> <li>Murfeld / Geoplin plinovodi (SI)</li> <li>Überackern / Bayernets (DE)</li> <li>Überackern / Wingas Transport (DE)</li> </ul>
<b>BOG</b>	<ul style="list-style-type: none"> <li>Oberkappel / Open Grid Europe (DE)</li> <li>Oberkappel / GRTgaz Deutschland (DE)</li> <li>Baumgarten / Eustream (SK)</li> </ul>
<b>Trans Austria Gasleitung</b>	<ul style="list-style-type: none"> <li>Baumgarten / Eustream (SK)</li> <li>Tarvisio-Arnoldstein / Snam Rete Gas (IT)</li> </ul>
LNG Terminals	
	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Storage facilities	
<b>Interconnected DSOs</b> <i>(All storage facilities are connected to the DSO network (except Haidach, which is connected to German networks). Domestic market capacity is managed by Austrian Gas Grid Management AG (AGGM) in its function as Manager of the Control Area East.)</i>	<ul style="list-style-type: none"> <li>Schönkirchen Reyersdorf / GAS CONNECT AUSTRIA</li> <li>Tallesbrunn / GAS CONNECT AUSTRIA</li> <li>Thann / GAS CONNECT AUSTRIA</li> <li>Puchkirchen / RAG</li> <li>Haidach 5 / RAG</li> <li>Haidach / RAG/Wingas/Gazprom Export</li> </ul>



Production facilities	
<b>Interconnected DSs</b> <i>(All production facilities are connected to the DSO network.)</i>	<ul style="list-style-type: none"> <li>• 1 virtual entry point from OMV Austria Exploration &amp; Production</li> <li>• 1 virtual entry point from RAG</li> </ul>
Directly connected customers	
<b>Interconnected DSs</b> <i>(All production facilities are connected to the DSO network.)</i>	<ul style="list-style-type: none"> <li>• Total: 0</li> <li>• Gas-fired power plants</li> <li>- Number: 0</li> </ul>
Distribution systems SOs and total number of DSOs in the country	
<b>GAS CONNECT AUSTRIA</b>	<ul style="list-style-type: none"> <li>• Number of physical TS-DS connections: 1</li> <li>• Number of DSOs: 1</li> </ul>
<b>BOG</b>	<ul style="list-style-type: none"> <li>• Number of physical TS-DS connections: 6</li> <li>• Number of DSOs: 1</li> </ul>
<b>Trans Austria Gasleitung</b>	<ul style="list-style-type: none"> <li>• Number of physical TS-DS connections: 10</li> <li>• Number of DSOs: 1</li> </ul>
<b>Physical hubs and Virtual Trading Points</b>	<ul style="list-style-type: none"> <li>• CEGH / CEGH</li> </ul>
<b>Number of balancing zones</b>	7
Demand	
<b>Historical annual gas demand of the national market (final customers)</b>	<ul style="list-style-type: none"> <li>• 2010: 102,016 GWh</li> <li>• 2009: 91,542 GWh</li> <li>• 2008: 93,228 GWh</li> <li>• 2007: 88,418 GWh</li> </ul>
Network Overview	
<p>Austria is one of the main transit countries for Russian gas dedicated to Europe. The main recipients have been Germany and western Europe, which are connected via the WAG and Penta West pipelines, Italy and Slovenia, which are connected via the TAG pipeline (and SOL pipeline respectively) and Hungary, connected via the HAG pipeline.</p> <p>The main IP of Baumgarten acted as a distribution platform, where gas coming along the Ukraine corridor from Slovakia, was transferred towards South-West and West. Also a major part of the Austrian inland demand used to be covered with Russian gas. At this time, the physical flow was east-west along the WAG respectively east-south along the TAG.</p> <p>Starting in 2005, the WAG pipeline was step by step upgraded to physical reverse-flow ability, and finally in 2011, triggered by the disruption in January 2009, a physical exit capacity towards Slovakia of 700.000 m<sup>3</sup>(n)/h has been made available, thanks to a co-financing of the European Union (EEPR programme). In the same year the Penta West was also made reversible in direction Germany towards Austria.</p> <p>Also in 2011, the TAG pipeline has been upgraded to (partial) reversibility in order to be able to import North African gas via Italy in 2011.</p> <p>Since the end of spring 2009, the reversibility of the WAG was used increasingly and gas flow direction changed from mainly being east-west oriented towards having a neutral point along the WAG pipeline, due mainly to increased imports of cheaper gas from German market (LNG price differential and development of hub trading).</p> <p>Although the Ukraine corridor is still a substantial physical supply source for Austria, the dependency of Austria on it has been reduced, not only serving Austrian interests, but also taking into consideration the supply situation of adjacent countries like Slovakia, Hungary or Slovenia in case of a new crisis.</p>	

<b>GAS CONNECT AUSTRIA GmbH</b>		 <b>GAS CONNECT AUSTRIA</b>
<b>Website</b>	<a href="http://www.gasconnect.at">www.gasconnect.at</a>	
<b>Current Publications</b>	N/A	
<b>Total length of the transmission network (this excludes distribution)</b>	170 km Operated: approx. 1,600 km	
<b>Total compressor power</b>	22 MW	
<b>Total transported energy (in gas) in 2010</b>	87,931 GWh	

<b>BOG GmbH</b>		
<b>Website</b>	<a href="http://www.bog-gmbh.at">www.bog-gmbh.at</a>	
<b>Current Publications</b>	N/A	
<b>Total length of the transmission network (this excludes distribution)</b>	320.5 km	
<b>Total compressor power</b>	121 MW	
<b>Total transported energy (in gas) in 2010</b>	108,415 GWh	


<b>Trans Austria Gasleitung GmbH</b>		 <b>Trans Austria Gasleitung GmbH</b>
<b>Website</b>	<a href="http://www.taggmbh.at">www.taggmbh.at</a>	
<b>Current Publications</b>	N/A	
<b>Total length of the transmission network (this excludes distribution)</b>	approx. 1,140 km	
<b>Total compressor power</b>	approx. 430 MW	
<b>Total transported energy (in gas) in 2010</b>	270,877 GWh	

## Bulgaria



Existing Gas Infrastructure	
Number of TSO's	1
Total length of transmission network(s)	2,645 km
Total compressor power	Transmission: 263 MW Storage: 10 MW
Inter-TSO connections where capacity is marketed (incl. upstream operators)	
Bulgartransgaz	<ul style="list-style-type: none"> <li>Negru Voda I &amp; II / Transgaz (RO)</li> <li>Kula/Siderokastron / DESFA (GR)</li> <li>Malkoclar / BOTAS (TK)</li> <li>Zidilovo / Makpetrol (MK)</li> </ul>
LNG Terminals	
	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Storage facilities	
Bulgartransgaz	<ul style="list-style-type: none"> <li>UGS Chiren / Bulgartransgaz</li> </ul>

Production facilities	
	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Directly connected customers	
Bulgartransgaz	<ul style="list-style-type: none"> <li>Total: 262</li> <li>Gas-fired power plants               <ul style="list-style-type: none"> <li>Number: 0</li> </ul> </li> </ul>
Total gas-fired generation power	<ul style="list-style-type: none"> <li>580 MW</li> </ul>
Distribution systems SOs and total number of DSOs in the country	
Bulgartransgaz	<ul style="list-style-type: none"> <li>Number of physical TS-DS connections: 65</li> <li>Number of DSOs: 17</li> </ul>
Physical hubs and Virtual Trading Points	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Number of balancing zones	1
Demand	
Historical annual gas demand of the national market (final customers)	<ul style="list-style-type: none"> <li>2010: 27,709 GWh</li> <li>2009: 25,745 GWh</li> <li>2008: 33,970 GWh</li> <li>2007: 34,717 GWh</li> </ul>

<b>Bulgartransgaz EAD</b> (A single member joint-stock company)	
	
Website	<a href="http://www.bulgartransgaz.bg">www.bulgartransgaz.bg</a>
Current Publications	N/A
Total length of the transmission network (this excludes distribution)	2,645 km
Total compressor power	Transmission: 263 MW Storage: 10 MW
Total transported energy (in gas) in 2010	154,213 GWh

## Croatia




Existing Gas Infrastructure	
Number of TSO's	1
Total length of transmission network(s)	2,643 km
Total compressor power	N/A
Inter-TSO connections where capacity is marketed (incl. upstream operators)	
Plinacro	<ul style="list-style-type: none"> <li>Rogatec / Geoplin plinovodi</li> <li>Donji Miholjac / FGSZ</li> </ul>
LNG Terminals	
	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Storage facilities	
Plinacro	<ul style="list-style-type: none"> <li>Podzemno Skladište Plina Okoli</li> </ul>
Interconnected DSs	<ul style="list-style-type: none"> <li>N/A</li> </ul>





Production facilities	
Plinacro	<ul style="list-style-type: none"> <li>• CPS Molve/Đurđevac /INA</li> <li>• CPS Etan/Ivanid- Grad/ INA</li> <li>• offshore platforms/Pula terminal/ INA</li> </ul>
Directly connected customers	
Plinacro	<ul style="list-style-type: none"> <li>• Total: 23</li> <li>• Gas-fired power plants</li> <li>- Number: 5</li> </ul>
Distribution systems SOs and total number of DSOs in the country	
Plinacro	<ul style="list-style-type: none"> <li>• Number of physical TS-DS connections: 151</li> <li>• Number of DSOs: 38</li> </ul>
Physical hubs and Virtual Trading Points	• N/A
Number of balancing zones	1
Demand	
Historical annual gas demand of the national market (final customers)	<ul style="list-style-type: none"> <li>• 2010: 31,271 GWh</li> <li>• 2009: 29,135 GWh</li> <li>• 2008: 33,000 GWh</li> </ul>

<b>PLINACRO d.o.o.</b> d.o.o. = Limited Liability Company	 <p><b>plinacro</b> L.T.D  GAS TRANSMISSION SYSTEM OPERATOR</p>
Website	<a href="http://www.plinacro.hr">www.plinacro.hr</a>
Current Publications	5-year Network Development Plan
Total length of the transmission network (this excludes distribution)	2,643 km
Total compressor power	N/A
Total transported energy (in gas) in 2010	35,706 GWh

### Network Overview

At the beginning of the new millennium, in compliance with EU Directive, the reform of the energy sector (and consequently, of the gas sector) in the Republic of Croatia started. On February 1, 2001 Plinacro Ltd was founded as a company for natural gas transmission and trade, at the beginning as a member of INA Group and 100 percent owned by INA.

In July 2001, the Government of the Republic of Croatia brought the package of energy acts, necessary for further reform of the energy sector. In compliance with new acts, primarily with the Energy Act, the gas transmission becomes an energy activity performed as a public service. On March 11, 2002 Plinacro became a 100 percent state-owned company. By establishing Plinacro Ltd, an organisation for introducing natural gas market liberalisation in compliance with EU Directive requirements was founded, providing its consumers with the possibility to choose from different suppliers and free access to the gas transmission system. The Committee for regulation of energy activities by their decision dated December 10, 2003 (class: UP/034-02/03-08/01, reg. no. 371-02/03-04), issued to Plinacro the licence for performance of energy activity – gas transmission, and thereby the company acquired all necessary preconditions for the performance of its main activity.

Since necessary preconditions for the implementation of the open energy market are development and infrastructure building, in April 2002, Plinacro prepared the Plan of Development, Construction and Modernisation of the Gas Transmission System of the Republic of Croatia from 2002 to 2011. The Plan was made on the basis of the Strategy of Energy Development of the Republic of Croatia approved by the Croatian Parliament in 2002.

The Plan of Development, Construction and Modernisation of the Gas Transmission System of the Republic of Croatia until 2011, implemented by Plinacro, is the largest investment project in the energy infrastructure. So far Plinacro invested EUR 210 million in the gasification project, with new 523 km of gas transmission system. The planned investment in the second investment phase amount to EUR 444 million, and more than 920 km of high-pressure gas transmission system will be constructed, as well as 25 measuring-reduction stations. Thereby the set goal of the Croatian Government will be achieved: entire Croatia will be covered by the gas infrastructure so that all its regions may use natural gas – environmentally and economically the most favourable energy source, increased reliability of the gas transmission system, direct connection of North Adriatic gas fields with the onshore part of Croatia, security of new access to the gas transmission system and creation of necessary conditions for equally successful implementation of the second investment phase of the Plan, from 2007 to 2011.

The most important project of Plinacro in this construction period is a construction of the interconnection gas pipeline Croatia-Hungary. By putting this interconnection gas pipeline into operation the Republic of Croatia gained another natural gas supply route. On the Croatian side this project includes gas pipelines Slobodnica – Donji Miholjac and Donji Miholjac – Dravaszerdahely in the total length of 80.5 km, and on the Hungarian side gas pipelines Dravaszerdahely – Bata – Városfold in the total length of 210 km. It was constructed as an integral gas pipeline of the capacity 6.5 bcm/y and operating pressure of 75 bar and with the possibility of a bidirectional gas flow.

The construction of the gas pipeline system of Lika and Dalmatia, from Bosiljevo to Split, has been continued in this period as well. The backbone of this system is a main gas pipeline Bosiljevo-Split of the total length 292 km, diameter 500 mm and the operating pressure 75 bar, the route of which has been divided into four sections. The first three sections have already been completed and put into operation, while the last one, from Benkovac to Split, in the length of 90 km will be completed by mid-2012.

Due to the long-term security of supply of consumers, Plinacro has been designing and developing its transmission system in such a way so it can be connected to and included in the international gas pipeline grid. Therefore significant means have been invested in the construction of the interconnections which are to connect the Croatian gas transmission system with the gas transmission systems of the neighbouring countries and in that way provide the diversification of supply and possibility for the transit of gas for these countries. Interconnections with Slovenia and Italy are of the great significance for Croatia, first of all for the scope/volume of the gas transit from the future LNG terminal on the island of Krk. Also a few possible interconnections with Bosnia and Herzegovina towards Bosanski Brod, Bihać and Mostar, as well as those with the Republic of Serbia through the corridor of the interconnection Sotin–Bačko Novo Selo have been active.



**Network Overview (continued)**

At the same time, experts of Plinacro have been preparing two very important international development projects the implementation of which is to enable actual diversification of supply sources and guaranty energy independence of the Republic of Croatia as well as the security of supply with natural gas of both Croatian and European consumers. The most important development project is the Ionian Adriatic Pipeline – IAP through which the Croatian gas transmission system would be connected to the Trans Adriatic Pipeline project via Montenegro and Albania. At the same time Plinacro has been working intensely on the development of LNG RV (Regasification Vessels) project as well, that is, on the construction of the facility for the reception of LNG RV and their connection with the Croatian gas transmission system.

During 2010 capacities of the connections at the exits from the gas transmission system were used by 38 gas suppliers, one of which (Prirodni plin d.o.o.) booked the capacities for the needs of industrial buyers at the gas transmission system, while the other 37 suppliers booked the capacities on the connections towards the distribution systems for the needs of the buyers on those systems.

At the beginning of 2011 Plinacro operates 2643 km of gas pipelines, 10 entry (2 of them are international import points) and 167 exit measuring-reduction stations. In 2010 maximum capacity of the system was  $1.2 \times 10^6$  m<sup>3</sup>/h, and the total capacity of the transmission system was 14,568,000 m<sup>3</sup>/day (app. 5.3 bcm/y).

Plinacro acquired 100% share in the company the main activity of which is underground storage of gas - UGS Okoli on 30 April 2009.

In 2010 Croatia imported only 32% of natural gas quantities for the needs of its market, while 68% was from a domestic production.




## Czech Republic



Existing Gas Infrastructure	
Number of TSO's	1
Total length of transmission network(s)	3,640 km
Total compressor power	297 MW
Inter-TSO connections where capacity is marketed (incl. upstream operators)	
NET4GAS, s.r.o.	<ul style="list-style-type: none"> <li>Brandov/ Wings Transport GmbH (DE)</li> <li>Cieszyn /GAZ-SYSTEM (PL)</li> <li>Hora Svaté Kateřiny – Sayda / Ontras – VNG Gastransport GmbH (DE)</li> <li>Hora Svaté Kateřiny – Olbernhau / Wings Transport (DE)</li> <li>Lanžhot / Eustream, a. s. (SK)</li> <li>Waidhaus / GRTgaz Deutschland GmbH (DE)</li> <li>Waidhaus / Open Grid Europe GmbH (DE)</li> </ul>
LNG Terminals	
	<ul style="list-style-type: none"> <li>N/A</li> </ul>

Storage facilities	
NET4GAS, s.r.o.	<ul style="list-style-type: none"> <li>UGS Háje / RWE Gas Storage, s.r.o.</li> <li>UGS Dolní Bojanovice/ SPP Bohemia, a.s. (currently used for Slovakia only)</li> <li>UGS Dolní Dunajovice / RWE Gas Storage, s.r.o.</li> <li>UGS Lobodice / RWE Gas Storage, s.r.o.</li> <li>UGS Štramberk / RWE Gas Storage, s.r.o.</li> <li>UGS Třanovice / RWE Gas Storage, s.r.o.</li> <li>UGS Tvrdonice / RWE Gas Storage, s.r.o.</li> <li>UGS Uhřice / MND Gas Storage, a.s.</li> </ul>
DSO - RWE GasNet, s.r.o.	<ul style="list-style-type: none"> <li>UGS Háje / RWE Gas Storage, s.r.o.</li> </ul>
DSO - JMP Net, s.r.o.	<ul style="list-style-type: none"> <li>UGS Lobodice / RWE Gas Storage, s.r.o.</li> <li>UGS Tvrdonice / RWE Gas Storage, s.r.o.</li> <li>UGS Dolní Dunajovice / RWE Gas Storage, s.r.o.</li> <li>UGS Uhřice / MND Gas Storage, a.s.</li> </ul>
DSO - SMP Net, s.r.o.	<ul style="list-style-type: none"> <li>UGS Lobodice / RWE Gas Storage, s.r.o.</li> <li>UGS Štramberk / RWE Gas Storage, s.r.o.</li> <li>UGS Třanovice / RWE Gas Storage, s.r.o.</li> </ul>
Production facilities	
DSO - JMP Net, s.r.o.	<ul style="list-style-type: none"> <li>1 virtual entry/Moravské naftové doly</li> <li>1 virtual entry/ Česká naftařská společnost</li> </ul>
Directly connected customers	
NET4GAS, s.r.o.	<ul style="list-style-type: none"> <li>Total: 6</li> <li>Gas-fired power plants <ul style="list-style-type: none"> <li>- Number: 0</li> <li>- Total generation power (in MW): 0</li> </ul> </li> </ul>
Distribution systems SOs and total number of DSOs in the country	
NET4GAS, s.r.o.	<ul style="list-style-type: none"> <li>Number of physical TS-DS connections: 81</li> <li>Number of DSOs: 6</li> </ul>
Physical hubs and Virtual Trading Points	<ul style="list-style-type: none"> <li>virtual trading point is operated by OTE, a.s.</li> </ul>
Number of balancing zones	1
Demand	
Historical annual gas demand of the national market (final customers)	<ul style="list-style-type: none"> <li>2010: 95,138.4 GWh</li> <li>2009: 86,216.2 GWh</li> <li>2008: 91,673.1 GWh</li> <li>2007: 91,290.2 GWh</li> </ul>

<b>NET4GAS, s.r.o.</b> s.r.o. = Limited Liability Company	
Website	<a href="http://www.net4gas.cz">www.net4gas.cz</a>
Current Publications	National 10-year Network Development Plan
Total length of the transmission network (this excludes distribution)	3,640 km
Total compressor power	297 MW
Total transported energy (in gas) in 2010	331,925 GWh

### Network Overview

NET4GAS, s.r.o. is the transmission system operator in the Czech Republic and ensures natural gas transmission over and into the Czech Republic.

The company was founded in accordance with the requirements of Directive 2003/55/EC which was implemented into the Energy Act. As of January 1, 2006, employees, assets, and activities related to the natural gas transmission were transferred from RWE Transgas, a.s. into the company.

The transmission system consists of gas pipelines with a total length of 3,640 km with nominal diameters from DN 80 to DN 1400 and with nominal pressures from 4 to 8.4 MPa. The required gas pressure in the pipelines is ensured through compressor stations with a spacing of approximately 100 km. On the northern branch there are CS Kralice nad Oslavou and Kouřim, on the southern branch CS Břeclav, Hostim, and Veselí nad Lužnicí. The total installed output power of the CS is 297 MW. The individual gas pipeline branches are interconnected at the key junction points Malešovice, Hospozín and Rozvadov.

At the entry to and the exit from the CZ the gas is being taken and handed over, i.e. metered volume- and quality-wise at the border transfer stations between the CZ and the Slovak Republic at Lanžhot between the CZ and Germany at Hora Svaté Kateřiny - Sayda, Hora Svaté Kateřiny - Olbernhau, Waidhaus and from October 2011 at Brandov. From September 2011 gas is handed over at the BTS Cieszyn between the CZ and Poland.

From the transmission system the gas is further supplied to the distribution systems, underground storage facilities and to the facilities of directly connected customers over 94 transfer stations. All transfer stations are equipped with commercial metering for natural gas volumes. Gas quality (gross calorific value) is measured at 15 node points within the system.




# Germany




Existing Gas Infrastructure	
<b>Number of TSO's</b>	12
<b>Name of TSO's<sup>[1]</sup></b>	bayernets Eni Gas Transport Deutschland Erdgas Münster Transport EWE Netz Gasunie Deutschland (GUD) <b>GRTgaz Deutschland</b> GVS Netz <b>ONTRAS – VNG Gastransport</b> <b>Open Grid Europe</b> Statoil Deutschland Transport Thyssengas <b>WINGAS TRANSPORT</b>
<b>Total length of transmission network(s)</b>	Approx. 37,500 km
<b>Total compressor power</b>	Approx. 2,000 MW
<b>Number of IP's</b>	82
<b>Total Transported Energy in 2009</b>	1,116,300 GWh
<b>Total Demand in 2010</b>	942,000 GWh


Network Overview
<p>In the recent years market participants in the German gas transmission industry have seen fundamental change taking place. The European parliament has accelerated the process of change with its third European internal energy market package. The first transitions from formerly Vertically Integrated Undertakings towards the first Independent Transmission Operators took place in Germany, and the first period of revenue regulation for the gas sector has begun. Because multiple gas transmission system operators are active in Germany by contrast with most other EU Member States, a large number of market areas has been established. In the past years the merging of market areas under cooperation agreements continued to advance. The six market areas of 2010 (three for H-Gas and L-Gas each) have been merged in two gas quality compounding market areas (Gaspool, NetConnect Germany) by the end of 2011.</p> <p>Germany is depending on imported supplies. The major import suppliers to the market are Russia with a share of 33 % in 2010, Norway (29 %) and the Netherlands (22 %). The domestic gas production accounted for 11 % of the gas supply mix in 2010. According to published data of producers the production of L-Gas in Germany is supposed to cease in the following years.</p>


<b>GRTgaz Deutschland GmbH</b> (Limited Liability Company)	
<b>Website</b>	<a href="http://www.grtgaz-deutschland.de">www.grtgaz-deutschland.de</a>
<b>Current Publications</b>	Determination of the long-term capacity demand <a href="http://www.grtgaz-deutschland.de/content/netz-veroeffpflichten/langkapbedarf/index.php">http://www.grtgaz-deutschland.de/content/netz-veroeffpflichten/langkapbedarf/index.php</a>
<b>Total length of the transmission network (this excludes distribution)</b>	1,134 km (pipe in pipe model with Open Grid Europe)
<b>Total compressor power</b>	288 MW (pipe in pipe model with Open Grid Europe) (ISO, including emergency units)
<b>Total transported energy (in gas) in 2010</b>	81,165 GWh

[1] in bold blue the observing member of the CEE GRIP



<b>ONTRAS – VNG Gastransport GmbH</b> (Limited Liability Company)		
<b>Website</b>	<a href="http://www.ontras.com">www.ontras.com</a>	
<b>Current Publications</b>	Evaluation of the long-term capacity demand (only in German): <a href="http://www.ontras.com/cms/fileadmin/Dokumente_Transparenz/110330_Langfristige_Kapazitaetsermittlung_zum_1-4-11_H-Gas.pdf">http://www.ontras.com/cms/fileadmin/Dokumente_Transparenz/110330_Langfristige_Kapazitaetsermittlung_zum_1-4-11_H-Gas.pdf</a>	
<b>Total length of the transmission network (this excludes distribution)</b>	7,228 km	
<b>Total compressor power</b>	<i>confidential</i>	
<b>Total transported energy (in gas) in 2010</b>	177,100 GWh	

<b>Open Grid Europe GmbH</b> (Limited Liability Company)		
<b>Website</b>	<a href="http://www.open-grid-europe.com">www.open-grid-europe.com</a>	
<b>Current Publications</b>	Assessment of the Long-Term Transmission Capacity Requirements <a href="http://www.open-grid-europe.com/cps/rde/xchg/SID-98F8C0B1-7621FCC6/open-grid-europe-internet/hs.xml/907.htm?rdeLocaleAttr=en">http://www.open-grid-europe.com/cps/rde/xchg/SID-98F8C0B1-7621FCC6/open-grid-europe-internet/hs.xml/907.htm?rdeLocaleAttr=en</a>	
<b>Total length of the transmission network (this excludes distribution)</b>	11,551 km	
<b>Total compressor power</b>	993 MW	
<b>Total transported energy (in gas)</b>	2009: 658,551 GWh	


<b>WINGAS TRANSPORT GmbH</b> (limited partnership with a Limited Liability Company as general partner)		
<b>Website</b>	<a href="http://www.wingas-transport.de">www.wingas-transport.de</a>	
<b>Current Publications</b>	Evaluation of the long term capacity demand: <a href="http://www.wingas-transport.de/fileadmin/downloads/kapazitaetsplanung/Langfristige_Kapazitaetsbedarfsermittlung_17_GasNZV.pdf">http://www.wingas-transport.de/fileadmin/downloads/kapazitaetsplanung/Langfristige_Kapazitaetsbedarfsermittlung_17_GasNZV.pdf</a>	
<b>Total length of the transmission network (this excludes distribution)</b>	2,198 km	
<b>Total compressor power</b>	411 MW	
<b>Total transported energy (in gas) in 2010</b>	355,529 GWh	

## Hungary



Existing Gas Infrastructure	
Number of TSO's	1
Total length of transmission network(s)	5,783km
Total compressor power	231 MW
Inter-TSO connections where capacity is marketed (incl. upstream operators)	
FGSZ	<ul style="list-style-type: none"> <li>Beregdaróc/ Ukrtransgas (UA)</li> <li>Mosonmagyaróvár/ GAS CONNECT AUSTRIA (AT)</li> <li>Kiskundorozsma/ Srbijagas (RS)</li> <li>Csanádpalota/ Transgaz (RO)</li> <li>Drávaszerdahely/Plinacro (HR)</li> </ul>
LNG Terminals	
	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Storage facilities	
FGSZ	<ul style="list-style-type: none"> <li>Zsana / E.ON Földgáz Storage</li> <li>Hajdúszoboszló / E.ON Földgáz Storage</li> <li>Pusztaderics / E.ON Földgáz Storage</li> <li>Kardoskút / E.ON Földgáz Storage</li> <li>Szóreg-I / MMBF</li> </ul>

Production facilities	
FGSZ	<ul style="list-style-type: none"> <li>• Algyő III "O" point / MOL</li> <li>• Babócsa "O" point / MOL</li> <li>• Endrőd "O" point / MOL</li> <li>• Hajdúszoboszló "O" point / MOL</li> <li>• Karcag II (Bucsa) "O" point / MOL</li> <li>• Pusztaederics "O" point / MOL</li> <li>• Szank "O" point / MOL</li> <li>• Kardoskút regional/ MOL</li> <li>• Kenderes II inert "O" point / MOL</li> <li>• Babócsa regional/ MOL</li> <li>• Tiszavasvári II "O" point/ HHE North</li> </ul>
Directly connected customers	
FGSZ Ltd.	<ul style="list-style-type: none"> <li>• Total: 40</li> <li>• Gas-fired power plants               <ul style="list-style-type: none"> <li>- Number: 14</li> </ul> </li> </ul>
Distribution systems SOs and total number of DSOs in the country	
FGSZ Ltd.	<ul style="list-style-type: none"> <li>• Number of physical TS-DS connections: 356</li> <li>• Number of DSOs: 9</li> </ul>
Physical hubs and Virtual Trading Points	<ul style="list-style-type: none"> <li>• MGP I / FGSZ</li> <li>• MGP II / FGSZ</li> </ul>
Number of balancing zones	1
Demand	
Historical annual gas demand of the national market (final customers)	<ul style="list-style-type: none"> <li>• 2010: 124,629 GWh</li> <li>• 2009: 116,901 GWh</li> <li>• 2008: 135,683 GWh</li> <li>• 2007: 138,556 GWh</li> </ul>

<b>FGSZ Ltd.</b> (Natural Gas Transmission Company Limited by Shares)		 <p>NATURAL GAS TRANSMISSION MEMBER OF THE MOL GROUP</p>
Website	<a href="http://www.fgsz.hu">www.fgsz.hu</a>	
Current Publications	<ul style="list-style-type: none"> <li>• 10-year Network Development Plan (voluntary)</li> <li>• Winter Outlook (voluntary)</li> <li>• Summer Outlook (voluntary)</li> </ul>	
Total length of the transmission network (this excludes distribution)	5,783 km	
Total compressor power	231 MW	
Total transported energy (in gas) in 2010	167,895 GWh	

## Poland



Existing Gas Infrastructure	
Number of TSO's	1
Total length of transmission network(s)	9,768 km – transmission network 680 km – Yamal-Europe pipeline
Total compressor power	140.6 MW
Inter-TSO connections where capacity is marketed (incl. upstream operators)	
GAZ-SYSTEM	<ul style="list-style-type: none"> <li>Lasów / Ontras (DE)</li> <li>Cieszyn / NET4GAS (CZ)</li> <li>Drozdowicz / Ukrtransgaz (UA)</li> <li>Wysokoje / Bieltransgaz (BY)</li> <li>Tietierówka / Bieltransgaz (BY)</li> <li>Kondratki / Bieltransgaz (BY)</li> <li>Mallnow / Wingas Transport (DE)</li> </ul>
In country	<ul style="list-style-type: none"> <li>Lwówek / GAZ-SYSTEM</li> <li>Wrocław / GAZ-SYSTEM</li> </ul>
LNG Terminals	
	<ul style="list-style-type: none"> <li>N/A</li> </ul>

Storage facilities	
GAZ-SYSTEM	<ul style="list-style-type: none"> <li>• Swarzów / PGNiG</li> <li>• Strachocina / PGNiG</li> <li>• Brzeźnica / PGNiG</li> <li>• Husów / PGNiG</li> <li>• Wierzchowice / PGNiG</li> <li>• Mogilno / PGNiG</li> <li>• Daszewo (Low-Methane Gas) / PGNiG</li> <li>• Bonikowo (Low-Methane Gas) / PGNiG</li> <li>• Mikstat / DPV Service Sp. z o.o.</li> </ul>
Interconnected DSs:	• 15
Production facilities	
GAZ-SYSTEM	<ul style="list-style-type: none"> <li>• Sanok / PGNiG</li> <li>• Zielona Góra / PGNiG</li> <li>• Odolanów / PGNiG</li> </ul>
Directly connected customers	
Chemical Industry	• Number: 18
Gas-fired central heating and power plants	<ul style="list-style-type: none"> <li>• Number: 11</li> <li>- Power of gas-fired power plants connected to TS: 770 MW</li> </ul>
Other industrial customers	• Number: 43
Distribution systems SOs and total number of DSOs in the country	
GAZ-SYSTEM	<ul style="list-style-type: none"> <li>• Number of physical TS-DS connections: 876</li> <li>• Number of DSOs: 17 (6 of them belong to PGNiG)</li> </ul>
Physical hubs and Virtual Trading Points	1
Number of balancing zones	2
Demand	
Historical annual gas demand of the national market (final customers)	• 2010: 15.1 bcm (166,100 GWh) <sup>[2]</sup>

Operator Gazociągów Przesyłowych GAZ-SYSTEM S.A.  
(Gas Transmission Operator GAZ-SYSTEM plc)



Website	<a href="http://www.gaz-system.pl">www.gaz-system.pl</a>
Current Publications	N/A
Total length of the transmission network (this excludes distribution)	9,768 km – transmission network 680 km – Yamal-Europe pipeline (GAZ-SYSTEM fulfils the function of ITO)
Total transported energy (in gas) in 2010	15.1 bcm (166,100 GWh)


[2] under assumption 1cm = 11 kWh, total gas transported volume with also Transmission to the UGS and transmission of the Low-Methane Gas recalculated to the High-Methane Gas

## Romania



Existing Gas Infrastructure	
Number of TSO's	1
Total length of transmission network(s)	13,000 km
Total compressor power	30 MW
Inter-TSO connections where capacity is marketed (incl. upstream operators)	
TRANSGAZ	<ul style="list-style-type: none"> <li>• Csanadpalota / FGSZ (HU)</li> <li>• Isaccea I / Ukrtransgaz (UA)</li> <li>• Isaccea II / Ukrtransgaz (UA)</li> <li>• Isaccea III / Ukrtransgaz (UA)</li> <li>• Isaccea IV / Ukrtransgaz (UA)</li> <li>• Mediesu Aurit / Ukrtransgaz (UA)</li> <li>• Negru Voda I / BULGARTRANSGAZ (BG)</li> <li>• Negru Voda II / BULGARTRANSGAZ (BG)</li> <li>• Negru Voda III / BULGARTRANSGAZ (BG)</li> </ul>
LNG Terminals	
	<ul style="list-style-type: none"> <li>• N/A</li> </ul>

Storage facilities	
TRANSGAZ	<ul style="list-style-type: none"> <li>Sarmas / SNGN Romgaz</li> <li>Balaceanca / SNGN Romgaz</li> <li>Bilciuresti / SNGN Romgaz</li> <li>Cetatea de Balta / SNGN Romgaz</li> <li>Ghercesti / SNGN Romgaz</li> <li>Urziceni / SNGN Romgaz</li> <li>Tg. Mures / DEPOMURES</li> <li>Nades- Prod - Seleus / TENGAZ</li> </ul>
Interconnected DSs:	<ul style="list-style-type: none"> <li>39</li> </ul>
Production facilities	
TRANSGAZ	<ul style="list-style-type: none"> <li>110 entry points / SNGN Romgaz</li> <li>42 entry points / OMV Petrom</li> <li>5 entry points / Amromco Energy</li> <li>1 entry point / Raffles Energy</li> <li>1 entry point / Lotus Petrol</li> </ul>
Directly connected customers	
TRANSGAZ	<ul style="list-style-type: none"> <li>Total: 249</li> <li>Gas-fired power plants               <ul style="list-style-type: none"> <li>Number: 18</li> </ul> </li> </ul>
Total gas-fired power generation	10,988 MW
Distribution systems SOs and total number of DSOs in the country	
TRANSGAZ	<ul style="list-style-type: none"> <li>Number of physical TS-DS connections: 805</li> <li>Number of DSOs: 39</li> </ul>
Physical hubs and Virtual Trading Points	N/A
Number of balancing zones	N/A
Demand	
Historical annual gas demand of the national market (final customers)	<ul style="list-style-type: none"> <li>2010: 146,762 GWh</li> <li>2009: 122,830 GWh</li> <li>2008: 146,721 GWh</li> <li>2007: 152,218 GWh</li> </ul>

<b>Societatea Nationala De Transport Gaze Naturale</b> <b>"TRANSGAZ" SA.</b> (Societate pe Actiuni; Joint Stock Company)		
Website	<a href="http://www.transgaz.ro">www.transgaz.ro</a>	
Current Publications	1-year Network Development Plan (voluntary)	
Total length of the transmission network (this excludes distribution)	13,000 km	
Total compressor power	30 MW	
Total transported energy (in gas) in 2010	131,005 GWh	


## Slovakia



Existing Gas Infrastructure	
Number of TSO's	1
Total length of transmission network(s)	2,270 km
Total compressor power	1,000 MW
Inter-TSO connections where capacity is marketed (incl. upstream operators)	
Eustream	<ul style="list-style-type: none"> <li>• Velké Kapušany / Naftogas</li> <li>• Lanžhot / NET4GAS</li> <li>• Baumgarten / Baumgarten-Oberkappel Gasleitungsgesellschaft m.b.H</li> <li>• Baumgarten / GAS CONNECT AUSTRIA GmbH</li> <li>• Baumgarten / Trans Austria Gasleitung GmbH</li> </ul>
LNG Terminals	
	• N/A
Storage facilities	
Eustream	<ul style="list-style-type: none"> <li>• Láb / NAFTA a.s.</li> <li>• Dolní Bojanovice / SPP Bohemia a.s.</li> </ul>
SPP – distribúcia, a.s.	• Láb / NAFTA a.s.



Production facilities	
	<ul style="list-style-type: none"> <li>• NAFTA a.s.</li> </ul>
Directly connected customers	
Eustream	<ul style="list-style-type: none"> <li>• Total: 0</li> <li>• Gas-fired power plants               <ul style="list-style-type: none"> <li>- Number: N/A</li> </ul> </li> </ul>
Distribution systems SOs and total number of DSOs in the country	
Eustream	<ul style="list-style-type: none"> <li>• Number of physical TS-DS connections: 5</li> <li>• Number of DSOs: 49</li> </ul>
Physical hubs and Virtual Trading Points	N/A
Number of balancing zones	1
Demand	
Historical annual gas demand of the national market (final customers)	<ul style="list-style-type: none"> <li>• 2010: 56,253 GWh</li> <li>• 2009: 52,356 GWh</li> <li>• 2008: 56,561 GWh</li> <li>• 2007: 57,131 GWh</li> </ul>

eustream, a.s.	
Website	<a href="http://www.eustream.sk">www.eustream.sk</a>
Current Publications	N/A
Total length of the transmission network (this excludes distribution)	2,270 km
Total compressor power	1,000 MW
Total transported energy (in gas) in 2010	743,869 GWh



© Image courtesy of Plinacro, s.o.o.

## CEE GRIP

c/o NET4GAS, s.r.o.  
 Na Hřebenech II 1718/8  
 140 21 Praha 4  
 Czech Republic  
 EML: [ceegrip@net4gas.cz](mailto:ceegrip@net4gas.cz)