

NEW RELEASE

Russian Gas on Global Markets:
Potential, Strategies
and Outlook

March 2008





RUSSIAN GAS ON GLOBAL MARKETS: POTENTIAL, STRATEGIES AND OUTLOOK

Russia is the world's largest holder, producer and exporter of natural gas and Gazprom is its sole gas supplier to international markets. Traditionally, Gazprom's has been selling gas to Europe and the FSU, with revenues used to finance large-scale upstream and transportation projects domestically, as well as to invest in gas distribution in other countries.

Today, Gazprom has set ambitious goals to grow and globalize gas exports. 2008 will witness first LNG deliveries to the Asia-Pacific region from the Sakhalin-2 project in which Gazprom has recently acquired a majority stake. This will also be the first year when Gazprom will exercise its stronger management role in Wingas (following the recent build-up of its stake to 50% less 1 share); gas prices on markets of the Baltic states will reach average European levels; the South Stream project will take its first steps aimed at bringing Russian gas to South Eastern Europe circumventing the traditional transit countries.

Having delivered its first trial LNG shipment to the US market back in 2005, Gazprom now expects to open steady LNG supplies from the Shtokman project to North America after 2014. On European markets, the company is progressing with gaining direct access to end consumers and pushing forward the Nord Stream and South Stream projects that will deliver piped gas through the Baltic and Black Seas bypassing transit countries. Gazprom is developing gas storage capacity in the European Union and creating new trading companies across various countries. This in turn triggers counter-measures and developments that include stronger efforts at gas supply diversification, legislation aimed at controlling Gazprom's expansion, as well as tighter gas consumption and more investment into domestic gas production by certain FSU countries anxious to decrease reliance on supplies from Russia.

In light of the above, some of the most important issues are: What is the potential behind Gazprom's ambitious plans to expand across the global natural gas market and

would be the reaction of other players to the strengthening presence of the Russian company?

Russian Gas on Global Markets: Potential, Strategies and Outlook delivers a comprehensive analysis of the gas balance and supply chain of Gazprom, and provides an outlook for the company's impact on international markets with **three scenarios** for the development of Gazprom's capability of a global gas player. It goes beyond the facade of official statements by government officials and corporate executives and examines key factors and trends influencing and shaping the world's largest gas company's international business.

Key questions addressed in the study:

- What are the priorities of Gazprom's strategic development?
- How will anticipated domestic developments influence Gazprom's export-bound liabilities?
- How does internal decision-making at Gazprom influence export priorities?
- How do international markets react to Gazprom's export ambitions?
- What is Gazprom's position in countries that import Russian natural gas?
- What are the key strengths and weaknesses that shape Gazprom's positions on international markets?
- What are the economics of Gazprom's supplies to individual markets?
- Is Gazprom capable of reaching its global objectives?
- What strategies could strengthen the role of Russian gas on global markets?

Key blocks of issues analyzed:

- Gas **reserves** of Russia and Gazprom
- Outlook for Gazprom's **production** capability, development prospects for traditional and new gas provinces
- Gas **transportation** system: condition, plans for developing new export routes
- **Decision-making** factors and practices at government and corporate level



The study examines Gazprom's positions on current and prospective international markets providing detailed **profiles of 42 importer countries**, complete with operations of Gazprom's international and joint ventures. The unique element of the study is the **analysis of netbacks for Gazprom's exports** to each European export market.

Key data in each country profile covers:

- Current balances of **primary energy sources**
- Current, developed and projected gas **infrastructure and sources**
- Historic and present gas **consumption** and share of gas **exports** from Russia
- Gazprom's **counterparts** and interactions with them
- **Locally operating** Gazprom's subsidiary and affiliated companies
- Factors and trends shaping **increase/decrease** of volumes supplied by Gazprom
- Outlook for Gazprom's **exported gas volumes** (physical and monetary) to 2020
- **Netbacks** to the Russian border forecasted to 2020

Russian Gas on Global Markets: Potential, Strategies and Outlook develops **three scenarios** for Gazprom's exports in 2008-2020 based on:

- Demand for natural gas in Europe, CIS, North-East Asia, North America
- Gazprom's contracted and supplied export volumes, current and projected
- Projected gas prices on export markets
- Status of Gazprom's current and prospective E&P and midstream projects
- Transportation costs for Russian gas supplies and export tax payments

The scenarios take into account recent developments in gas transportation including the South Stream project.

The study also contains a ranking of countries importing Russian natural gas according to their strategic value for Gazprom (in terms of sales and transit volumes), that suggests the priorities in Gazprom's export policy.

Russian Gas on Global Markets: Potential, Strategies and Outlook is an essential analytical support tool for:

- energy policy-makers
- gas producers
- utilities and other gas consumers
- gas transportation, distribution and trading companies
- financial and investment institutions
- contractors and equipment suppliers

**Russian Gas on Global Markets:
Potential, Strategies and Outlook**

Release: March 2008

Language: English

Volume: 402 pages, more than 300 charts, graphs and maps

Price: 5,800 EURO

***See enclosed detailed table of contents and sample profile of importer country
To order the study, please fill in the order form on the last page.***

Other RPI's studies and reports focused on Russian/FSU/European gas:

- Oil and Gas of Uzbekistan (2007)
- Russian LNG Projects: Reality and Prospects (2007)
- Oil and Gas of Eastern Siberia and Russian Far East (2007)
- South Eastern Europe in the Big Eurasian Gas Game (2007)
- Kazakhstan's Oil and Gas Upstream (2006)
- The Independent Gas Producers in Russia (2006)

CONTENTS

Author	3
1. Russia and the Global Natural Gas Market.....	19
Executive summary	19
2. Russian Gas Reserves.....	33
2.1. Overview of Russian gas reserves.....	33
2.2. Onshore and offshore gas reserves relevant for gas exports	35
2.3. Gazprom’s proved gas reserves.....	37
2.4. The struggle for most important gas reserves: Gazprom vs the independents 2002-2007 .	45
2.5. Conclusions	48
3. Russian gas production: current situation and future development	50
3.1. Production in Russia: from the start of development of gas fields in Western Siberia to 2001	50
3.2. Gazprom’s production development from 2001 to 2006	54
3.3. Gazprom gas production in future: goals, investment needs and opportunities of realization	57
Yamal	62
Eastern Siberia and Far East	67
Shtokmanovskoye field	73
3.4. Conclusion.....	78
4. Russian gas pipeline transportation system	80
4.1. The United Gas Transmission System of Russia	80
4.2. Gazprom’s future export transportation projects	95
4.2.1. Nord Stream	95
4.2.2. South Stream.....	101
4.2.3. Altai	106
4.2.4. Export gas pipelines of Eastern Siberia and Far East	107
4.2.5. Caspian Coastal Gas Pipeline (Pre-Caspian pipeline)	113
4.2.6. Baltic LNG	114
4.3. Conclusions	118
5. Current and Prospective Country Markets for Russian Gas	120
5.1. Western Europe	120
5.1.1. Belgium	120
5.1.2. France.....	125
5.1.3. Germany.....	133
5.1.4. Italy	142
5.1.5. The Netherlands	153
5.1.6. Portugal.....	159
5.1.7. Spain.....	161
5.1.8. Switzerland	165
5.1.9. United Kingdom	169
5.2. Northern Europe.....	176
5.2.1. Denmark	176
5.2.2. Finland.....	180
5.2.3. Sweden.....	185
5.3. Central Europe	188
5.3.1. Austria	188

5.3.2. Czech Republic	195
5.3.3. Slovakia	200
5.3.4. Poland	205
5.4. South Eastern Europe	213
5.4.1. Albania	213
5.4.2. Bosnia and Herzegovina	215
5.4.3. Bulgaria	219
5.4.4. Croatia	225
5.4.5. Greece	230
5.4.6. Hungary	236
5.4.7. Macedonia	243
5.4.8. Montenegro	246
5.4.9. Romania	248
5.4.10. Serbia	254
5.4.11. Slovenia	259
5.4.12. Turkey	263
5.5. FSU	271
5.5.1. Armenia	271
5.5.2. Azerbaijan	277
5.5.3. Georgia	283
5.5.4. Belarus	291
5.5.5. Ukraine	297
5.5.6. Moldova	304
5.5.7. Latvia	310
5.5.8. Lithuania	316
5.5.9. Estonia	322
5.6. North-Eastern Asia	328
5.6.1. China (PRC)	328
5.6.2. Japan	335
5.6.3. South Korea	343
5.6.4. Taiwan	350
5.6.5. United States	354
6. Russian exports up to 2020: the scenarios	364
6.1. Key trends in development	364
6.2. Russian gas export scenarios out to 2020	371
6.2.1. The 'White' scenario with oil prices above US\$ 70 per barrel	371
6.2.2. The 'Blue' scenario with oil prices ranging from US\$ 55 to US\$ 70 per barrel	382
6.2.3. The 'Red' scenario with oil prices ranging from US\$ 40 to US\$ 55 per barrel	392
6.3. Conclusion	402

MAP

Map 3.1.	Nadym-Pur-Taz region – the main source of Russian gas production.....	52
Map 3.2.	Yamal peninsula gas fields.....	63
Map 3.3.	Gas fields of Eastern Siberia.....	68
Map 3.4.	Gas fields of Sakhalin	71
Map 4.1.	The United Gas Transmission System (UGTS).....	81
Map 4.2.	High loads of the gas transportation system in 2005-2010.....	87
Map 4.3.	High loads of the gas transportation system in 2011-2015.....	90
Map 4.4.	Central Asia-Center pipeline system.....	91
Map 4.5.	Yamal-Europe pipeline system	93
Map 4.6.	Nord Stream pipeline route	99
Map 4.8.	Routes of gas deliveries by “South Stream”	105
Map 4.9.	East Siberian gas transport options (option West).....	109
Map 4.10.	East Siberian gas transport options (option Center).....	110
Map 4.11.	East Siberian gas transport options (option East)	111
Map 4.12.	Deliveries of gas to the Baltic LNG plant from the Unified Gas Supply System.....	115
Map 5.1.1.1.	Belgium's gas transportation system.....	121
Map 5.1.2.1.	France' gas transportation system	126
Map 5.1.2.2.	Megal gas pipeline, through which supplies to France will be undertaken....	129
Map 5.1.3.1.	Gas transportation system of Germany	134
Map 5.1.4.1.	Italy's gas transportation system.....	144
Map 5.1.5.1.	The Netherlands' gas transportation system.....	155
Map 5.1.6.1.	Portugal's gas transportation system	160
Map 5.1.7.1.	Spain's gas transportation system	162
Map 5.1.8.1.	Switzerland's gas transportation system	166
Map 5.1.9.1.	United Kingdom's gas transportation system	170
Map 5.2.1.1.	Denmark's gas transportation system	177
Map 5.2.2.1.	Finland's gas transportation system	182
Map 5.2.3.1.	Sweden's gas transportation system	186
Map 5.3.3.1.	Austria's gas transportation system.....	189
Map 5.3.2.1.	Czech Republic's gas transportation system.....	196
Map 5.3.3.1.	Slovakia's gas transportation system.....	201
Map 5.3.4.1.	Poland's gas transportation system	206
Map 5.4.1.1.	Albania's gas transportation system.....	213
Map 5.4.2.1.	Bosnia and Herzegovina's gas transportation system	215
Map 5.4.3.1.	Bulgaria's gas transportation system.....	221
Map 5.4.4.1.	Croatia's gas transportation system	226
Map 5.4.5.1.	Greece's gas transportation system.....	231
Map 5.4.5.2.	Turkey-Greece-Italy gas pipeline.....	233
Map 5.4.6.1.	Hungary's gas transportation system	238
Map 5.4.7.1.	Macedonia's gas transportation system	243
Map 5.4.8.1.	Montenegro's gas transportation system	247
Map 5.4.9.1.	Romania's gas transportation system.....	249
Map 5.4.10.1.	Serbia's gas transportation system	255
Map 5.4.11.1.	Slovenia's gas transportation system.....	260
Map 5.4.12.1.	Turkey's gas transportation system	266

Map 5.5.1.1.	Armenia’s gas transportation system	273
Map 5.5.2.1.	Baku–Tbilisi–Erzurum gas pipeline	279
Map 5.5.2.2.	Azerbaijan’s gas transportation system	280
Map 5.5.3.1.	Georgia’s gas transportation system	286
Map 5.5.4.1.	Belarus’ gas transportation system.....	294
Map 5.5.5.1	Ukraine’s gas transportation system	300
Map 5.5.6.1	Moldova’s gas transportation system.....	305
Map 5.5.7.1	Latvia’s gas transportation system.....	313
Map 5.5.8.1.	Lithuania’s gas transportation system	320
Map 5.5.9.1	Estonia’s gas transportation system	325
Map 5.6.1.1	China’s gas transportation system.....	330
Map 5.6.2.1	Japan’s gas transportation system.....	338
Map 5.6.2.2.	Distances between Sakhalin and consumer markets	341
Map 5.6.3.1.	South Korea’s gas transportation system	344
Map 5.6.4.1.	Taiwan’s gas transportation system.....	351
Map 5.6.5.1.	USA’s gas transportation system.....	357
Map 5.6.5.2.	The gas flow in the Atlantic part of the USA and regional prices compared to Henry Hub (dollars per million BTU)	359

CHARTS

Figure 1.1.	World gas reserves in 2006	19
Figure 1.2.	World gas production in 2006	20
Figure 1.3.	Gas consumption in Russia by sector in 2006	21
Figure 1.4.	Gazprom market capitalization growth 2001-2007 (US\$ billion)	22
Figure 1.5.	Direct government equity ownership in Gazprom (%).....	22
Figure 1.6.	Gas supplies to Europe from Gazprom and other sources 1989-2006 (bcm)	23
Figure 1.7.	Importance of gas exports for Gazprom in 2004 and 2006	24
Figure 1.8.	Priorities of Gazprom's gas business development.....	25
Figure 1.9.	Russian gas sales to FSU countries and export gas prices in 2000 - 2006.....	26
Figure 1.10.	Russian gas sales to Europe (excluding FSU) and export gas prices in 2000-2006.....	28
Figure 1.11.	Diversification of Gazprom's export activity	29
Figure 1.12.	Scenarios for exports of gas produced in Russia in 2006, 2010, 2015 and 2020	30
Figure 1.13.	Three forecast scenarios for oil price changes out to 2020 (US\$ per barrel)	30
Figure 1.14.	Euro to dollar exchange rate dynamics in 2008-2020	32
Figure 2.1.	Proved gas reserves in Russia as of Dec 31, 2006.....	33
Figure 2.2.	Proved gas reserves of Eastern Siberia and Far East of Russia as compared to proved reserves of the Asia-Pacific countries (tcm)	36
Figure 2.3.	International audit of Gazprom's gas reserves in comparison with Russian reserve system (tcm)	38
Figure 2.4.	Territory distribution of Gazprom's gas reserves in Russia, as of Dec 31, 2006 (ABC1 reserves, tcm).....	39
Figure 2.5.	Gazprom's largest gas fields (ABC1 reserves, tcm).....	40
Figure 2.6.	Reserves replacement by Gazprom in 1997-2006 (bcm)	43
Figure 2.7.	Exploration expenditures and growth of proved gas reserves at Gazprom	44
Figure 2.8.	Gazprom's efforts to increase its resource base in 2001-2006 and near-term prospects	49
Figure 3.1.	Gas production during the Soviet period in Russia 1970-1991 (bcm).....	51
Figure 3.2.	Russian gas production during the period of reforms (1991-2006) (bcm).	53
Figure 3.3.	Gazprom gas production and investment in production since between 2000 and 2006	55
Figure 3.4.	Gas wells in Gazprom in 2001-2006 (wells in operation and constructed new wells)	56
Figure 3.5.	Feasibility of Gazprom's priority projects in respect of possible destined consumers markets in 2005 and 2007 in agreement with current gas prices.....	60
Figure 3.6.	Gasprom gas production in old gas provinces between 2007 and 2020.....	61
Figure 3.7.	Possible gas production in Yamal Peninsula the first 10 years of production and up to the maximal level at 250 bcm per year	65
Figure 3.8.	The maximum gas production in Eastern Siberia and Far East up to 2020 bcm.....	72
Figure 3.9.	Gas production volumes growth up to the level of 67.5 bcm and 90 bcm.....	76
Figure 3.10.	Potential distribution of gas supply from the Shtokmanovskoye field at a production level of 90 bcm	78

Figure 3.11.	Possible maximal level of gas production in new production centers, controlled by Gazprom in 2020 (bcm)	79
Figure 4.1.	Gazprom pipelines by pipe diameter in 2006	84
Figure 4.2.	The age of Gazprom's pipelines.....	84
Figure 4.3.	Length of Gazprom's pipeline system ('000 km).....	85
Figure 4.4.	Capital expenditures in transportation and storage (US\$ billion).....	86
Figure 4.5.	Development of underground gas storage in Russia	88
Figure 4.6.	Priorities of UGTS development	89
Figure 4.7.	Nord Stream ownership structure after anticipated entry of Gasunie in 2007	97
Figure 4.8.	Nord Stream organizational chart.....	97
Figure 4.9.	Planning gas deliveries to China via Altai pipeline	106
Figure 4.10.	Maximum potential expansion of gas transportation capacity to Europe by Gazprom	119
Figure 5.1.1.1.	Primary energy consumption by type of fuel in Belgium in 2006	120
Figure 5.1.1.2.	Gas imports to Belgium in 2006	121
Figure 5.1.1.3.	Interconnector shareholder structure	122
Figure 5.1.2.1.	Primary energy consumption by type of fuel in France in 2006.....	125
Figure 5.1.2.2.	Areas of GRTgaz company's investments till 2016 (million Euro)	127
Figure 5.1.2.3.	Gas imports to France in 2006	127
Figure 5.1.3.1.	Primary energy consumption by type of fuel in Germany in 2006	133
Figure 5.1.3.2.	Gas imports to Germany in 2006.....	137
Figure 5.1.3.3.	Structure of WINGAS	138
Figure 5.1.4.1.	Primary energy consumption by type of fuel in Italy in 2006	142
Figure 5.1.4.2.	Gas imports to Italy in 2006	149
Figure 5.1.5.1.	Primary energy consumption by type of fuel in the Netherlands in 2006.....	153
Figure 5.1.5.2.	Gas imports to the Netherlands in 2006	154
Figure 5.1.5.3.	BBL shareholder structure	156
Figure 5.1.6.1.	Primary energy consumption by type of fuel in Portugal in 2006	159
Figure 5.1.7.1.	Primary energy consumption by type of fuel in Spain in 2006	161
Figure 5.1.7.2.	Gas imports to Spain in 2006.....	162
Figure 5.1.8.1.	Primary energy consumption by type of fuel in Switzerland in 2006	165
Figure 5.1.8.2.	Gas imports to Switzerland in 2006.....	166
Figure 5.1.9.1.	Primary energy consumption by type of fuel in the United Kingdom in 2006	169
Figure 5.1.9.2.	Gas imports to the United Kingdom in 2006	171
Figure 5.1.9.3.	Outlook for FOB prices of Russian LNG exports to the United Kingdom in Teriberka (Euro/1,000 cubic meters).....	175
Figure 5.2.1.1.	Primary energy consumption by type of fuel in Denmark in 2006.....	176
Figure 5.2.2.1.	Primary energy consumption by type of fuel in Finland in 2006	180
Figure 5.2.2.2.	Gasum shareholder structure.....	181
Figure 5.2.2.3.	Russian gas supplies to Finland (bcm)	183
Figure 5.2.3.1.	Primary energy consumption by type of fuel in Sweden in 2006	185
Figure 5.3.1.1.	Primary energy consumption by type of fuel in Austria in 2006	188
Figure 5.3.1.2.	Gas imports to Austria in 2006	191
Figure 5.3.1.3.	GWH shareholder structure.....	192
Figure 5.3.2.1.	Primary energy consumption by type of fuel in Czech Republic in 2006.....	195
Figure 5.3.2.2.	Gas imports to Czech Republic in 2006	197

Figure 5.3.2.3.	Transit of Russian gas via Czech Republic (bcm)	198
Figure 5.3.3.1.	Primary energy consumption by type of fuel in Slovakia in 2006	200
Figure 5.3.3.2.	Transit of Russian gas via Slovakia (bcm).....	203
Figure 5.3.4.1.	Primary energy consumption by type of fuel in Poland in 2006.....	205
Figure 5.3.4.2.	Gas imports to Poland in 2006	209
Figure 5.3.4.3.	Transit of Russian gas via Poland (bcm).....	209
Figure 5.3.4.4.	EuRoPol GAZ shareholder structure.....	210
Figure 5.4.1.1.	Primary energy consumption by type of fuel in Albania in 2006	213
Figure 5.4.2.1.	Primary energy consumption by type of fuel in Bosnia and Herzegovina in 2006	215
Figure 5.4.3.1.	Primary energy consumption by type of fuel in Bulgaria in 2006.....	219
Figure 5.4.3.2.	Transit of Russian gas via Bulgaria in 2006.....	222
Table 5.4.3.2.	Outlook for Russian gas exports to Bulgaria and netback prices to the Russian border (2008-2020).....	224
Figure 5.4.4.1.	Primary energy consumption by type of fuel in Croatia in 2006	225
Figure 5.4.5.1.	Primary energy consumption by type of fuel in Greece in 2006	230
Figure 5.4.6.1.	Primary energy consumption by type of fuel in Hungary in 2006	236
Figure 5.4.6.2.	Gas imports to Hungary in 2006.....	238
Figure 5.4.6.3.	Panrusgas shareholder structure.....	240
Figure 5.4.7.1.	Primary energy consumption by type of fuel in Macedonia in 2006	243
Figure 5.4.7.2.	Gas deliveries to Macedonia in 2000-2006 (mcm)	244
Figure 5.4.9.1.	Primary energy consumption by type of fuel in Romania in 2006	248
Figure 5.4.9.2.	Gas imports to Romania in 2006 (bcm)	251
Figure 5.4.10.1.	Primary energy consumption by type of fuel in Serbia and Montenegro in 2006	254
Figure 5.4.11.1.	Primary energy consumption by type of fuel in Slovenia in 2006.....	259
Figure 5.4.11.2.	Gas imports to Slovenia in 2006	260
Figure 5.4.11.3.	Transit of gas via Slovenia (bcm)	260
Figure 5.4.12.1.	Primary energy consumption by type of fuel in Turkey in 2006	263
Figure 5.4.12.2.	Turusgaz shareholder structure	267
Figure 5.5.1.1.	Primary energy consumption by type of fuel in Armenia in 2006	272
Figure 5.5.1.2.	ArmRosgazprom shareholders structure	272
Figure 5.5.1.3.	Russian gas supplies to Armenia in 2002-2006 (bcm).....	274
Figure 5.5.2.1.	Primary energy consumption by type of fuel in Azerbaijan in 2006	277
Figure 5.5.2.2.	Gas production in Azerbaijan in 2000-2007 (bcm)	278
Figure 5.5.2.3.	Participants of Shakh-Deniz project.....	278
Figure 5.5.2.4.	Prices and volumes of Russian gas delivered to Azerbaijan	281
Figure 5.5.3.1.	Primary energy consumption by type of fuel in Georgia in 2006	283
Figure 5.5.3.2.	Gas consumption in Georgia in 2001-2006 (mcm).....	285
Figure 5.5.3.3.	Prices and volumes of imported Russian natural gas delivered to Georgia ...	287
Figure 5.5.4.1.	Primary energy consumption by type of fuel in Belarus in 2006	291
Figure 5.5.4.2.	Beltransgaz shareholder structure as October, 2007	295
Figure 5.5.5.1.	Primary energy consumption by type of fuel in Ukraine in 2006	297
Figure 5.5.5.2.	Transit of Russian gas via Ukraine (bcm)	301
Figure 5.5.5.3.	Forecast of tariffs's growth (US\$/1,000cubic meters)	302
Figure 5.5.6.1.	Primary energy consumption by type of fuel in Moldova in 2006.....	304
Figure 5.5.6.2.	Gas deliveries to Moldova (bcm)	306
Figure 5.5.6.3.	Moldovagas shareholder structure	307

Figure 5.5.7.1.	Primary energy consumption by type of fuel in Latvia in 2006	310
Figure 5.5.7.2.	Russian gas supplies and national gas consumption in Latvia (bcm)	311
Figure 5.5.7.3.	Latvijas Gaze shareholder structure	312
Figure 5.5.8.1.	Primary energy consumption by type of fuel in Lithuania in 2006	316
Figure 5.5.8.2.	Russian gas supplies and national gas consumption in Lithuania (bcm)	317
Figure 5.5.8.3.	Transit of Russian gas via Lithuania to Kaliningrad Region (mcm).....	318
Figure 5.5.8.4.	Lietuvos Dujos shareholder structure	319
Figure 5.5.9.1.	Primary energy consumption by type of fuel in Estonia in 2006	323
Figure 5.5.9.2.	Russian gas supplies and national gas consumption in Estonia (bcm)	323
Figure 5.5.9.3.	Eesti Gaas shareholder structure.....	326
Table 5.5.9.2.	Outlook for Russian gas exports to Estonia and netback prices to the Russian border (2008-2020).....	327
Figure 5.6.1.1.	Primary energy consumption by type of fuel in China in 2006.....	328
Figure 5.6.1.2.	National gas production and consumption in China (bcm).....	329
Figure 5.6.2.1.	Primary energy consumption by type of fuel in Japan in 2006.....	335
Figure 5.6.2.2.	Gas imports to Japan in 2006	339
Figure 5.6.3.1.	Primary energy consumption by type of fuel in Republic of Korea in 2006 ..	343
Figure 5.6.3.2.	KOGAS shareholder structure	346
Figure 5.6.3.3.	LNG imports to South Korea in 2006	346
Figure 5.6.4.1.	Primary energy consumption by type of fuel in Taiwan in 2006.....	350
Figure 5.6.4.2.	LNG imports to Taiwan in 2006	352
Figure 5.6.5.1.	Primary energy consumption by type of fuel in USA in 2006	354
Figure 5.6.5.2.	Gas imports to USA in 2006	356
Figure 5.6.5.3.	Cost plus FOB prices at the outlet of the Shtokman LNG plant (US\$ per million BTU)	360
Figure 6.2.1.1.	Gas demand and supply scenarios for 2010, 2015 and 2020 under 'White' scenario (bcm)	372
Figure 6.2.2.1.	Gas demand and supply scenarios for 2010, 2015 and 2020 under 'Blue' scenario (bcm).....	382
Figure 6.2.3.1.	Gas demand and supply scenarios for 2010, 2015 and 2020 under ' Red' scenario (bcm)	392

TABLES

Table 1.1.	Forecast of Gazprom's investments in new upstream and transportation projects until 2015 including shares in joint projects.....	27
Table 2.1.	Distribution of natural gas reserves in Russia by federal districts (tcm).....	34
Table 2.2.	New fields discovered by Gazprom in 2002–2006.....	42
Table 3.1.	Russian gas supply forecast for 2010 and 2020, Gazprom and independents (bcm)	58
Table 3.2.	The SWOT analysis of Yamal Peninsula development as Gazprom's future production base	64
Table 3.4.	The SWOT analysis of Shtokmanovskoye field development for Gazprom	74
Table 4.1.	The SWOT analysis of Nord Stream for Gazprom.....	101
Table 4.2.	Key parameters of Nabucco project	102
Table 4.3.	Nabucco vs South Stream: current situation	105
Table 4.4.	Planning gas pipelines in Eastern Siberia and Far East (option East).....	112
Table 4.5.	Cost plus FOB prices at the outlet of the Baltic LNG plant (US\$ per million BTU)	116
Table 4.6.	Possible supplies on the Atlantic market's terminals from the Baltic LNG (bcm)	117
Table 5.1.1.1.	Characteristics of UGS Loenhout.....	122
Table 5.1.1.2.	Outlook for Russian gas exports to Belgium and netback prices to the Russian border (2008-2020).....	124
Table 5.1.2.1.	Russian gas supplies and national gas consumption in France.....	128
Table 5.1.2.2.	Outlook for Russian gas exports to France and netback prices to the Russian border (2008-2020).....	131
Table 5.1.2.3.	Outlook for Russian LNG exports to France and FOB prices of LNG in Teriberka (2014-2020).....	132
Table 5.1.3.1.	Russian gas supplies and national gas consumption in Germany.....	137
Table 5.1.3.2.	Key assets of Gazprom Germania.....	139
Table 5.1.3.2.	Outlook for Russian gas exports to Germany and netback prices to the Russian border (2008-2020).....	141
Table 5.1.4.1.	Gas transportation system of Italy (pipeline and LNG)	145
Table 5.1.4.2.	Planned expansion of gas transportation system of Italy (pipeline and LNG)	147
Table 5.1.4.3.	Russian gas supplies and national gas consumption in Italy.....	150
Table 5.1.5.1.	Gas transportation system of Gasunie Transport Services in the Netherlands	155
Table 5.1.5.2.	Russian gas supplies and national gas consumption in the Netherlands	157
Table 5.1.7.1.	LNG terminals in Spain.....	163
Table 5.1.8.1.	Russian gas supplies and national gas consumption in Switzerland	167
Table 5.8.1.2.	Gazprom affiliates and joint ventures, registered in Switzerland	167
Table 5.8.1.3.	Outlook for Russian gas exports to Switzerland and netback prices to the Russian border (2008-2020).....	168
Table 5.1.9.1.	Gas consumption by consumer's groups in the United Kingdom (bcm)	170
Table 5.1.9.2.	Outlook for Russian gas exports to the United Kingdom and netback prices to the Russian border (2008-2020).....	174
Table 5.2.1.1.	Outlook for Russian gas exports to Denmark and netback prices to the Russian border (2012-2020).....	179
Table 5.3.1.1.	Austria's main gas pipelines	190

Table 5.3.1.2.	Russian gas supplies and national gas consumption	192
Table 5.3.1.3.	Outlook for Russian gas exports to Austria and netback prices to the Russian border (2008-2020)	194
Table 5.3.2.1.	Russian gas supplies and national gas consumption in Czech Republic	197
Table 5.3.3.1.	Russian gas supplies and national gas consumption in Slovakia	202
Table 5.3.4.1.	Characteristics of UGSs in Poland	207
Table 5.3.4.2.	Russian gas supplies and national gas consumption in Poland	208
Table 5.3.4.3.	Outlook for Russian gas exports to Poland and netback prices to the Russian border (2008-2020)	212
Table 5.4.2.1.	Forecasted gas demand in Bosnia and Herzegovina in the period 2007-2010 <i>Source: BH Gas</i>	216
Table 5.4.2.2.	Outlook for Russian gas exports to Bosnia and Herzegovina and netback prices to the Russian border (2008-2020)	218
Table 5.4.3.1.	Russian gas supplies and national gas consumption in Bulgaria	221
Table 5.4.4.1.	Balance reserves and production of natural gas in Croatia (bcm)	225
Table 5.4.4.2.	Gas transportation system of Croatia	227
Table 5.4.4.3.	Russian gas supplies and national gas consumption in Croatia	227
Table 5.4.4.4.	Outlook for Russian gas exports to Croatia and netback prices to the Russian border (2008-2020)	229
Table 5.4.5.1.	Russian gas supplies and national gas consumption in Greece	233
Table 5.4.5.2.	Outlook for Russian gas exports to Greece and netback prices to the Russian border (2008-2020)	235
Table 5.4.6.1.	Russian gas supplies and national gas consumption in Hungary	239
Table 5.4.7.1.	Outlook for Russian gas exports to Macedonia and netback prices to the Russian border (2008-2020)	245
Table 5.4.8.1.	Outlook for Russian gas exports to Montenegro and netback prices to the Russian border (2017-2020)	247
Table 5.4.9.1.	Russian gas supplies and national gas consumption in Romania	251
Table 5.4.9.2.	Outlook for Russian gas exports to Romania and netback prices to the Russian border (2008-2020)	253
Table 5.4.10.1.	Russian gas supplies and national gas consumption in Serbia	256
Table 5.4.11.1.	Russian gas supplies and national gas consumption in Slovenia	261
Table 5.4.11.2.	Outlook for Russian gas exports to Slovenia and netback prices to the Russian border (2008-2017)	262
Table 5.4.12.1.	Turkey gas balance forecasts 2005 and 2007 (bcm)	264
Table 5.4.12.2.	Turkish contracts for gas supply from Russia	268
Table 5.4.12.3.	Russian gas supplies and national gas consumption in Turkey	268
Table 5.4.12.4.	Botas released volumes	269
Table 5.4.12.5.	Outlook for Russian gas exports to Turkey and netback prices to the Russian border (2008-2020)	270
Table 5.5.1.1.	Outlook for Russian gas exports to Armenia and netback prices to the Russian border (2008-2020)	276
Table 5.5.3.1.	Production and import of energy resources in Georgia	284
Table 5.5.3.2.	Outlook for Russian gas exports to Georgia and netback prices to the Russian border (2008-2020)	290
Table 5.5.4.1.	Russian gas supplies and national gas consumption (including gas for transit needs) in Belarus	292
Table 5.5.4.2.	Transit of Russian gas via Belarus (bcm)	292

Table 5.5.4.3.	Gas transportation system of Belarus.....	293
Table 5.5.4.4.	Outlook for Russian gas exports to Belarus and netback prices to the Russian border (2008-2020)	296
Table 5.5.5.1.	Russian gas supplies and national gas consumption in Ukraine.....	298
Table 5.5.5.2.	Rosukrenergo's sales in 2006 (bcm).....	299
Table 5.5.5.3.	Gas transportation system of Ukraine	300
Table 5.5.5.4.	Outlook for Russian gas exports to Ukraine and netback prices to the Russian border (2008-2020)	303
Table 5.5.7.1	Gas transportation system of Latvia	314
Table 5.5.8.1.	Outlook for Russian gas exports to Lithuania and netback prices to the Russian border (2008-2020)	321
Table 5.5.9.1.	Gas transportation system of Estonia.....	324
Table 5.6.1.1.	Projected LNG terminals in China (LNG million tons).....	331
Table 5.6.1.2.	Outlook for Russian gas exports to China and netback prices to the Russian border (2014-2020)	334
Table 5.6.2.1.	Characteristics of LNG terminals in Japan.....	336
Table 5.6.2.2.	LNG contracts signed with Sakhalin Energy	340
Table 5.6.2.3.	Outlook for Russian LNG exports to Japan and netback prices to the Russian border (2008-2020), FOB	342
Table 5.6.3.1.	LNG terminals specifications	345
Table 5.6.3.2.	Outlook for Russian gas exports to South Korea and netback prices to the Russian border (2014-2020)	348
Table 5.6.3.3.	Outlook for Russian LNG exports to South Korea and netback prices to the Russian border (2008-2020)	349
Table 5.6.5.1.	Distances between the major centers of LNG production and consumption (nautical miles).....	358
Table 5.6.5.2.	Outlook for Russian LNG exports to Pacific coast of USA and FOB prices of LNG in Yuzhno-Sakhalinsk (2009-2020)	361
Table 5.6.5.3.	Outlook for Russian LNG exports to Gulf of Mexico USA and FOB prices of LNG in Teriberka (2014-2020).....	362
Table 5.6.5.4.	Outlook for Russian LNG exports to North East coast of USA and FOB prices of LNG in Teriberka (2014-2020)	363
Table 6.1.1.	Gazprom sales in 2006 by country in volume and cash.....	369
Table 6.2.1.1.	Change in sales by country by 2020 from 2006 under 'White' scenario (Euro million).....	373
Table 6.2.1.1.	Change in sales by country by 2020 from 2006 under 'White' scenario (Euro million) (continuation)	374
Table 6.2.1.2.	Gas deliveries to global markets under the 'White' scenario in 2008-2020 (bcm)	377
Table 6.2.1.2.	Gas deliveries to global markets under the 'White' scenario in 2008-2020 (bcm) (continuation).....	378
Table 6.2.1.3.	Gas sales to global markets under the 'White' scenario 2008-2020 (million Euro)	380
Table 6.2.1.3.	Gas sales to global markets under the 'White' scenario 2008-2020 (million Euro) (continuation)	381
Table 6.2.2.1.	Change in sales by country by 2020 from 2006 under 'Blue' scenario (million Euro)	384

Table 6.2.2.1.	Change in sales by country by 2020 from 2006 under 'Blue' scenario (million Euro) (continuation).....	385
Table 6.2.2.2.	Gas deliveries to global markets under the 'Blue' scenario in 2008-2020 (bcm).....	387
Table 6.2.2.2.	Gas deliveries to global markets under the 'Blue' scenario in 2008-2020 (bcm) (continuation).....	388
Table 6.2.2.3.	Gas sales to global markets under the 'Blue' scenario 2008-2020 (million Euro).....	390
Table 6.2.2.3.	Gas sales to global markets under the 'Blue' scenario 2008-2020 (million Euro) (continuation).....	391
Table 6.2.3.1.	Change in sales by country by 2020 from 2006 under 'Red' scenario (million Euro).....	394
Table 6.2.3.1.	Change in sales by country by 2020 from 2006 under 'Red' scenario (million Euro) (continuation).....	395
Table 6.2.3.2.	Gas deliveries to global markets under the 'Red' scenario in 2008-2020 (bcm).....	397
Table 6.2.3.2.	Gas deliveries to global markets under the 'Red' scenario in 2008-2020 (bcm) (continuation).....	398
Table 6.2.3.3.	Gas sales to global markets under the 'Red' scenario 2008-2020 (million Euro).....	400
Table 6.2.3.3.	Gas sales to global markets under the 'Red' scenario 2008-2020 (million Euro) (continuation).....	401

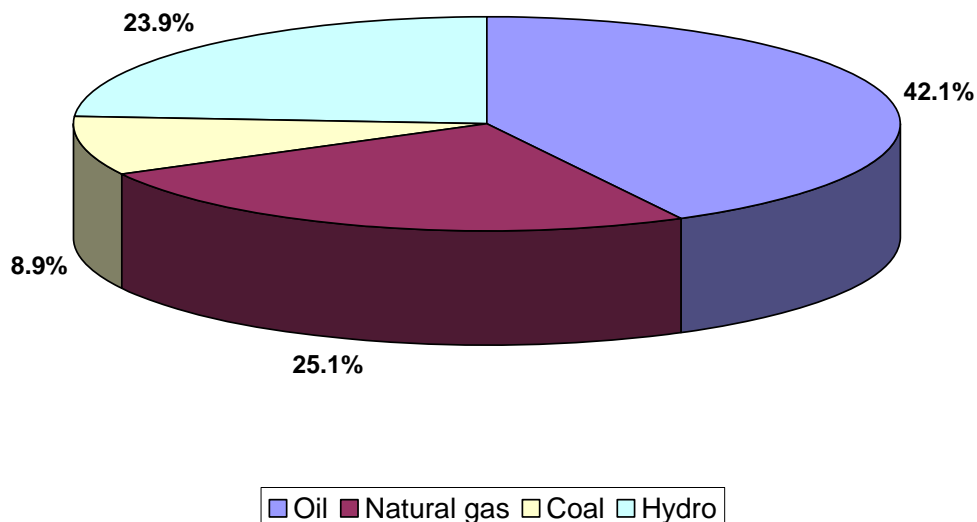
5. Current and Potential Country Markets for Russian Gas

SAMPLE PROFILE

Austria

Austria is an important regional player in the European natural gas market, boasting its own production and pipeline facilities to supply gas domestically and act as a transit system to third countries. Austria was the first Western country to import natural gas from the Soviet Union, and today it continues to be a key importer and transit country for Russian natural gas (about 20 percent of Gazprom's exports from the Russian Federation to Europe are shipped via this route). Russian gas arrives in the Austrian pipeline system from Slovakia and moves on to Germany (and further on to France), Italy, Hungary, Slovenia and Croatia. Gas is increasing its position in the primary energy mix in Austria, offsetting reductions in coal use. Coal's position has continued to diminish even though actual consumption has increased.

Figure 5.1 Primary energy consumption by type of fuel in 2006



Source: BP Statistical Review of World Energy 2007

There are no nuclear power plants in Austria. The share of gas in the primary energy mix is about the same as for the rest of Western Europe and is growing, due to the reduced use of coal in power stations. Unlike several other EU countries, Austria meets a substantial share of its natural gas demand (about 20 percent) with its own production. Over many years, the country has maintained its gas production at 1.8-2.0 bcm per year.

Austria's energy policy is aimed at using domestic energy sources, such as biomass (straw, saw dust) for heat and power generation, and natural gas is the second most important source of energy in Austria (25.1 percent of primary energy consumption).

Strong government influence on the energy sector, typical for Austria, is exhibited in ownership (specifically, OMV, the country's largest company, is a state oil and gas company; Laender (federal lands) and municipalities own gas infrastructure), controlled prices and a national-level energy policy.

The Austrian gas industry may be subdivided into three tiers. Two national upstream companies, OMV and RAG, operate in the first tier. The main gas transportation company, importer and pipeline operator, OMV, operates in the second tier, while nine regional distribution companies supplying gas and electricity make up the third tier: Wiengas, EVN, OOF, BEGAS, STFG, Salzburg AG, KELAG, TFG and VEF. Local governments hold stakes in the latter companies. Regional companies OOF and Steierische Ferngas (STFG) own smaller gas pipelines.

The OMV Group centralized marketing & trading and logistics activities by establishing in 2006 OMV Gas International. This holding company is responsible for OMV 's operations in the natural gas sector through OMV Gas GmbH (a 100-percent subsidiary), for international gas logistics projects (Nabucco, Adria LNG), as well as for gas marketing through a 50-percent subsidiary EconGas GmbH and Petrom Gas (a 100-percent subsidiary of Petrom, acquired by OMV in 2004).

Map 5.1 Austria's gas transportation system



Source: *Petroleum Economist World Energy Atlas 2007*

The total length of Austria's main and distribution gas pipelines is about 1,500 kilometers. The maximal operating pressure in the OMV pipeline system ranges for various pipelines from 6 to 84 bars. Transit gas accounts for a substantial share of streams carried by the pipeline network. The country annually transits 31 bcm. The transit to domestic consumption ratio is four to one. Six

pipelines, TAG, WAG, MAB, HAG, OW and SOL, are used for transit. OMV, Eni, E.ON Ruhrgas, Gaz de France are among the companies authorized to transit natural gas through Austria.

Table 5.1 Austria's main gas pipelines

Pipeline	Owners	Route	Length in kilometers	Current throughput capacity (after expansion), bcm/year
TAG (Trans-Austria Gasleitung)	Trans Austria Gasleitung GmbH; its shareholders are Eni Italy (89 percent) and OMV Gas (11 percent)	From Baumgarten on the Austria-Slovakia border to Tarvisio in northern Italy	380	32.5 (by October 2008 – 35.7; further expansion to 39 planned)
WAG (Western Austria Gasleitung)	Oberkappel Gasleitungsgesellschaft m.b.H.; its shareholders are OMV (51 percent), GdF (44 percent) and E.ON-Ruhrgas (5 percent)	Key transit route for Russian gas to German border, connects to German pipeline Megal at Oberkappel for further transit to Germany and France	245	5.0
HAG (Hungary-Austria Gasleitung)	OMV (100 percent)	Connects Baumgarten gas hub with Hungarian border	46	4.5
Penta West	OMV (100 percent)	Branch from WAG pipeline, enters Germany at Burghausen	95	3.0
SOL (Sud-Ost Leitung)	OMV (100 percent)	Branch from TAG pipeline transporting gas to Slovenia and Croatia	26	3.3
MAB (March-Baumgarten-Gasleitung)	OMV (100 percent)	Branch from WAG in Baumgarten, passes to LAB (Slovakian storage facility on the Austria-Slovakia border)	N.A.	N.A.

Source: RPI, based on companies' data

Recent gas consumption growth in southern Austria, Slovenia and Italy has caused a situation in which the existing capacity of the TAG pipeline is not sufficient to accommodate the required volumes. As a result, the pipeline operates with interruptions. The first phase of the proposed expansion that commenced in June 2005 will increase the pipeline's capacity by 3.2 bcm per year by October 2008. In early 2006, Eni announced the second development phase. When completed as planned by April 2009, it will further expand the throughput by 3.3 bcm. However, commissioning of this additional capacity, which was supposed to become operational after completion of the second compressor station, has been postponed indefinitely.

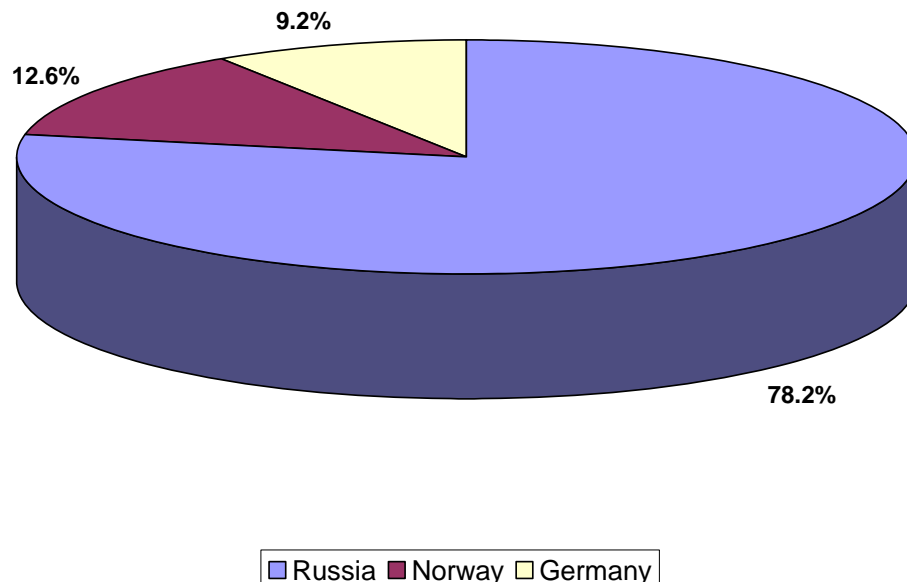
TAG GmbH will transfer the rights to the new capacity to third parties to comply with antitrust requirements forcing Eni, the company's main business partner, to reduce its presence in Italy's gas market.

From a contractual standpoint, TAG and WAG pipelines are operating at full load. At the same time, the actual load capacity of the WAG pipeline, shipping gas from Baumgarten eastwards, has been under-used. The capacity for domestic deliveries is reserved on the 'use or lose' and 'portability' basis, whereby consumers -- and not suppliers -- own the reserved network capacity, regardless of the actual gas supplier. Over 70 percent of gas shipped via Austria's pipelines is not subject to regulation as transit gas.

In terms of underground gas storage capacity, Austria is among the top countries in Europe; the capacity amounts to 22 percent of annual natural gas consumption (2.8 bcm). At present, Austria has four underground gas storage facilities that have enough capacity to support gas consumption for 140 days. OMV owns three storage facilities (about 77 percent of total storage capacity, or 2.32 bcm). Depleted fields are used for developing the storage facilities.

In May 2005, Gazexport, Wingas and Rohoel-Aufsuchungsgesellschaft (RAG), an Austrian gas production and exploration firm, signed an agreement to develop a new storage facility in the depleted Haidach gas field. The underground storage capacity of 1.2 bcm will be increased to 2.4 bcm of natural gas, which will make it the largest storage facility in Austria and the second largest in Central Europe after the Rehden facility in Germany. This storage facility became operational in 2007 and is connected to the Baumgarten terminal. Its capacity will be enough to store about 30 percent of gas annually consumed in Austria.

Figure 5.2 Gas imports to Austria in 2006. Total: 8.7 bcm



Source: Cedigaz

Austria currently imports gas from Russia, Germany and Norway, with Russia being its largest supplier. The first Austrian contract for importing natural gas from the USSR was signed with OMV on June 1, 1968, two years before the German ‘Gas for Pipes’ contract. Today, Gazprom supplies 76.4 percent of the gas consumed in Austria delivered through the Baumgarten natural gas hub.

Table 5.2 Russian gas supplies and national gas consumption

	2000	2001	2002	2003	2004	2005	2006
Russian exports (bcm)	5.1	4.9	5.2	6.0	6.0	6.8	6.8
Gas consumption (bcm)	7.7	8.2	7.8	8.9	8.9	9.6	8.9
Share (%)	66.2	59.7	66.5	67.4	67.4	70.8	76.4

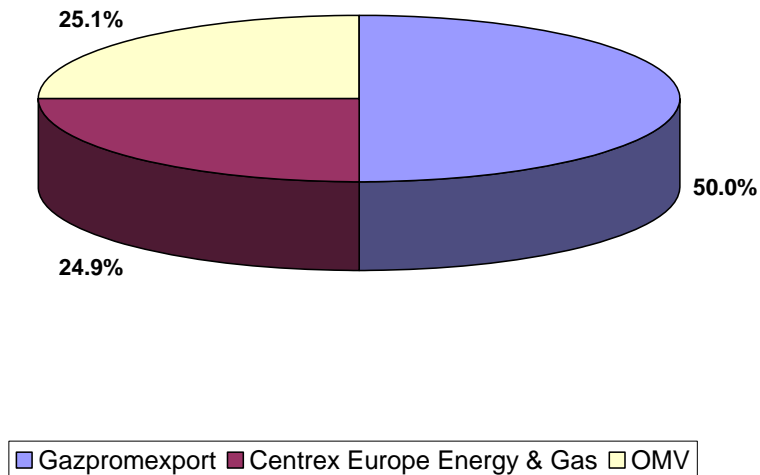
Source: Gazprom, Cedigaz

Russian gas is now being exported to Austria under four long-term contracts, which were extended through 2027 in September 2006. According to these contracts, Gazprom will supply to Austria 6.9 bcm annually through 2027. The contracts were signed with OMV and with GWH.

According to the 2006 agreement between Gazprom and OMV, the receiving party under the largest contracts was changed. EconGas replaced OMV Gas International as a buyer of Russian natural gas. OMV holds a 50-percent interest in EconGas, with Austrian regional traders owning the balance.

GWH is a Russian-Austrian trading house, where Gazpromexport holds a 50-percent stake. It was formed in 1991 to develop market opportunities for Russian gas in Europe. OMV transferred two contracts for importing Russian gas to Austria to this company in 1994. In addition to gas imports, GWH was also engaged in procuring equipment for Gazprom. At present, the company focuses on gas trade and transit.

Figure 5.3 GWH shareholder structure



Source: OMV

Austria-registered Centrex Europe Energy & Gas AG was established by Gazprombank to operate in the energy sector of Europe’s liberalized markets. Both GWH and Centrex Europe Energy & Gas AG will have an opportunity to directly market gas in Austria, specifically to consumers in Carinthia, Styria and Salzburg. This will be realized through a network of regional distributors yet to be created. GWH, with approximately 2 bcm of annual gas deliveries from Gazpromexport, is in a more preferable position to develop business.

The fact that local or federal governments hold controlling stakes in regional and local suppliers and distribution companies may however present a serious challenge for Russian companies’ access to the end-user gas market.

As mentioned above, Austria plays an important role in Russian gas transits to South Eastern and Western Europe. Through Gazprom’s joint ventures, Russian gas is delivered via Austria to Hungary. Approximately 1.8 bcm of Russian gas (bought in Slovakia) is being transported to Croatia and Slovenia by INA and Geoplin respectively. Together with Eni, Gazprom uses the TAG pipeline to deliver Russian gas to Italy.

In May 2005, OMV and Gazexport agreed to transit 4.4 bcm of Russian natural gas via Austria to other countries. For these purposes, the annual capacity of the WAG pipeline is to be increased from 7 to 11 bcm by 2011 through a EUR 260 mln investment program financed by OMV. The agreement will expire in 2027.

Gazprom has recently declared support for OMV's efforts in further developing the Baumgarten gas trading hub with the aim to get access to major industrial clients and power companies and strengthen its position on the European gas market.

It is unlikely that Austria would be interested in further increase of the current volumes of Russian gas in the country's gas pipeline system and of long-term gas suppliers to the domestic market in excess of the level of 2007. Currently, Austria is supporting alternative options for gas deliveries to Europe via South Eastern Europe by actively lobbying such projects as the Nabucco gas pipeline, which is projected to deliver gas from Central Asia, Azerbaijan, Egypt and Iran to Baumgarten, as well as the Adria LNG import / re-gas terminal in Croatia. These projects, if realized, would supply 2.5-3 bcm of gas for Austria's domestic needs. In case the Nabucco project is not implemented (as a possibility, for reasons of unsuccessful negotiations with potential shippers and competition with the South Stream), Gazprom's new deliveries starting from 2015 may range from 0.5 to 1 bcm, with the balance volumes coming from other sources like Norway and Adria LNG, thus the established gas supply balance would remain intact.

Table 5.3 Outlook for Russian gas exports to Austria and netback prices to the Russian border (2008-2020)

High Price Scenario	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Oil price (\$/barrel)	84	91	85	81	76	74	77	79	82	76	74	78	82
Gas price (Euro/1000 cubic meters)	268.8	305.6	283.5	272.6	257.0	255.7	278.6	297.8	320.6	292.5	287.1	314.4	344.2
Russian Export Duty (Euro/1000 cubic meters)	80.6	91.7	85.1	81.8	77.1	76.7	83.6	89.3	96.2	87.7	86.1	94.3	103.3
Transit costs (Euro/1000 cubic meters)	22.7	23.6	25.1	26.7	32.3	38.7	44.9	51.5	58.8	59.8	60.7	61.6	62.5
Price of gas at Russian border (Euro/1000 cubic meters)	165.4	190.3	173.3	164.1	147.6	140.3	150.1	156.9	165.5	145.0	140.3	158.5	178.4
Contracted volumes (bcm)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Possible incremental volumes (bcm)	0	0	0	0	0	0	0	0	0	0	0	0	0
Medium Price Scenario	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Oil price(\$/barrel)	77	70	68	64	60	62	59	57	55	58	60	62	65
Gas price (Euro/1000 cubic meters)	236.4	207.9	207.6	199.6	191.7	205.2	200.3	198.8	194.8	214.0	222.1	234.5	252.1
Russian Export Duty (Euro/1000 cubic meters)	70.9	62.4	62.3	59.9	57.5	61.6	60.1	59.6	58.4	64.2	66.6	70.3	75.6
Transit costs (Euro/1000 cubic meters)	22.7	23.6	25.1	26.7	32.3	38.7	44.9	51.5	58.8	59.8	60.7	61.6	62.5
Price of gas at Russian border (Euro/1000 cubic meters)	142.8	121.9	120.2	113.0	101.8	105.0	95.3	87.6	77.5	90.1	94.8	102.5	113.9
Contracted volumes (bcm)	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.2	6.2	6.2	6.2	6.2
Possible incremental volumes (bcm)	0	0	0	0	0	0	0	0	0	0	0	0	0
Low Price Scenario	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Oil price (\$/barrel)	74	68	60	55	53	51	49	48	46	41	44	48	53
Gas price (Euro/1000 cubic meters)	223.8	200.5	179.3	168.7	167.4	165.6	164.6	167.1	165.0	153.1	165.3	179.7	200.9
Russian Export Duty (Euro/1000 cubic meters)	67.1	60.1	53.8	50.6	50.2	49.7	49.4	50.1	49.5	45.9	49.6	53.9	60.3
Transit costs (Euro/1000 cubic meters)	22.7	23.6	25.1	26.7	32.3	38.7	44.9	46.1	47.7	48.4	49.2	49.9	50.6
Price of gas at Russian border (Euro/1000 cubic meters)	133.9	116.7	100.4	91.4	84.8	77.2	70.3	70.9	67.8	58.7	66.6	75.9	90.0
Contracted volumes (bcm)	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Possible incremental volumes (bcm)	0	0	0	0	0	0	0	0	0.5	0.5	0.5	0.5	0.5

Note: Similar outlooks are given for all current importer countries and for those considered to be prospective importers.

RUSSIAN GAS ON GLOBAL MARKETS: POTENTIAL, STRATEGIES AND OUTLOOK

Order Form

YES, I would like to order ***Russian Gas on Global Markets: Potential, Strategies and Outlook*** study at **5,800 EURO** (*hard copy and CD with print-out protected PDF file*)

Language: English

Delivery Address:

Name _____

Title _____

Company _____

Address _____

Country _____ Postal Code _____

City _____

Telephone _____ Fax _____

E-mail _____

Delivery by express courier at no extra charge

Please invoice me

Please charge my credit card:

___ MasterCard ___ Visa ___ American Express

Card # _____ Expiration date _____

Credit Card billing address: _____

Signature:

Fax or mail this form to Vsevolod Prosvirnin:

Tupolev Plaza – II, Akademik Tupolev Nab, 15/12, Office 401, Moscow, Russia

Telephone: (+7 495) 778-9332 / 4597;

Fax: (+7 495) 980-8968

E-mail: VsevolodP@rpi-inc.ru