

NABUCCO PIPELINE PROJECT

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MARKET FORCES VERSUS POLICY FORCES

Traditionally energy markets are analyzed by using economic indicators, namely the supply and demand forces in the market. Increasingly the actors in the energy sector are becoming more interested in the geopolitics of energy, and in policy risk analysis. In line with this trend, in this paper I will focus on the Nabucco pipeline project with a policy analysis approach. I will briefly explain the Nabucco project itself and analyze positions of the parties that will be affected by the project - Turkey, the EU and Russia. An outline of the basic arguments would be, if Nabucco becomes operational;

- Turkey will be economically and politically benefiting from the project by utilizing its geographical position and becoming indispensable for European Union (EU).
- Europe will be diversifying its natural gas resources.

However;

- Russia is blocking the Nabucco project with building alternative pipelines and routes, making it less preferable for investment.

i. Nabucco Pipeline Project

a. *Participants and route of Nabucco*

Nabucco pipeline project consists of a 3,300-kilometre pipeline, with a planned maximum capacity of 30 billion cubic meters per year that will carry natural gas from suppliers in the Middle East and Caspian region to Europe. According to Europe website the western end of the pipeline will be at Baumgarten an der March, in Austria. The project is developed by the Nabucco Gas Pipeline International GmbH, established in 2004 in Vienna. The shareholders of

the company are: OMV of Austria, MOL of Hungary, Transat of Romania, Bulgargaz of Bulgaria, BOTA of Turkey.

b. Construction timeline

According to the website of Nabucco pipeline project, first construction phase of the project will start in 2009 and it will cover the planned route between Ankara and Baumgarten - construction of approximately 2,000 km of pipeline. The next phase will be the usage of the existing pipeline facilities between the Turkish / Georgian and Iranian borders for an interim period of 2 years, in order to link the new pipeline to the Turkish borders. According to this projection the pipeline will be operating as of 2012 with an initial pipeline capacity up to 8 bcm, while the construction of the rest of the pipeline will be finished in parallel¹.

c. Suppliers of Nabucco

East end of the project is still not well defined. EU sources describe the pipeline as one that would carry Caspian gas, whereas the Nabucco website includes Egypt and Iran within the scope of the project. Eastern gas source for the project will be depending on the political developments in Middle East and Caspian region. Iran's vast resources can only be utilized if political landscape convinces the European investors and politicians to be dependable. This is not a surprise having in mind the whole idea behind EU's insistence on the project is to secure European energy via diversifying and being less dependent on Russian gas. Caspian suppliers' policies will be more predictable following the presidential elections in Russia in 2008 because state owned Gazprom's investment decisions are intertwined with Russian politics.

ii. Turkey and Nabucco

¹ <http://www.nabucco-pipeline.com/>

Turkey is situated in a region where 70 % of the world's proven energy reserves are located – namely the Middle East and the Caspian basin. It thus, is a country that can act as a key outlet for natural gas in the two regions, at the same time securing energy for continental Europe through diversification of supply sources and routes. However two clashing policies keep the country in a paralyzed situation with regards to Nabucco. The U.S. supports Nabucco pipeline, as an alternative route for Caspian gas however it is not favoring the cooperation between Iran, as the project developers foresee. European Union does not openly cooperate with Iran due to a rather politicized nuclear energy dispute.

Currently the future of relations seems to be more dependent on developments in the Middle East rather than in the Caspian Basin; mainly because of Russia's influence in Caspian. This point seems to be dominating view in the Turkish government as well. In a recent interview Turkey's Energy and Natural Resources Minister Hilmi Guler emphasized importance of Iranian natural gas reserves for European energy security. "The EU needs Iranian gas more than us. The pipeline (Nabucco) via Turkey goes to Europe. The European Union makes use of this gas. Some European gas companies have signed contracts with Iran. So we are also considering this." (Energy Economist) According to John Roberts, author of the article, Minister Guler refers to some Austrian and Swiss companies that already made contracts with Iran for providing gas to domestic markets.

Another factor is signaling a change in the share of Gazprom's share in Turkish markets. Turkey's contract with Russia's Gazprom to import up to 10 bcm/year of gas via Balkans will expire in 2010. According to Minister Guler, Turkey will discuss a three year average for process and volumes after this point (Energy Economist).

iii. East end of Nabucco

East front in the project constitutes supply side of the function.

a. *Caspian supply*

Various sources provide different lists of Caspian countries when defining the region. Some sources refer to them as Azerbaijan, Kazakhstan, Turkmenistan, Uzbekistan, Kyrgyzstan, Tajikistan and Xinjiang Uygur autonomous region of China; and others as composed of Azerbaijan, Kazakhstan, Turkmenistan, Russia and Iran as littorals whereas others include Egypt and Iraq to the list (Bilgin.) Since this paper's focus – Nabucco -- does not require a discussion of the definition of Caspian region, we accept the first list of countries when referring to Caspian region.

Tables 3 and 4 show the gas reserves of Caspian countries and Russia from two different sources (EIA and BP). We see Azerbaijan, Kazakhstan and Turkmenistan stand as the primary sources in the region. According to Bilgin, these three countries, which he refers as 'inner-Caspian,' will be potent enough to produce about 6 tcf of gas per annum by 2010. Leaving about 2–3 tcf of natural gas available for external markets. This amount is the remaining amount after Turkmenistan's commitments to Russia and domestic consumption is extracted.

Turkmenistan appears to be one of the possible suppliers in the region, although loyal to Russia, the country is willing to find alternative ways. Azerbaijan is already connected to Turkey via Georgia by the BTC oil pipeline. Kazakhstan has already signed an agreement to be involved in WECT inner-Caspian by vessels traversing Caspian and arriving at Baku to feed BTC oil pipeline. Furthermore developments in Kashagan and Karachaganak might lead to the trans-Caspian oil pipeline, to replace tankers (Bilgin.)

b. *Iran*

In 2006 Tehran has exported 5.6 bcm of gas to Turkey, and already targets to increase this amount to 30 bcm/year allowing Turkey to import Turkmen gas via Iran. Ankara and Tehran already signed a memorandum of understanding in August 2007 on the exploitation of the natural gas reserves of South Pars on the southern Iranian coast. The agreement foresees the state-owned Turkish Petroleum Corporation (TPAO) being granted operating licenses for three different sections of Iran's South Pars gas field, which has estimated total recoverable reserves of around 14 trillion cubic meters (Milliyet, July 19). Turkish energy officials have estimated that the project will require a total investment of around \$3.5 billion, including approximately \$2 billion to build a pipeline to transport the gas across Turkey.² This project would diminish Russian control on Turkey's gas market, strengthen Turkey's hand in negotiations with EU membership and will make the country indispensable in the political sense. Turkey's economic stability will be more important for Europe, which would have vast political implications that will not be developed here.

iv. European Union and Nabucco

European countries constitute demand side of the Nabucco project. On the way to become a union, EU took its first steps by establishing coal and steel cooperation, which later on turned the cooperation in energy into a political project. However energy seems to be less efficient as a binding factor for the members of the Union in 21st century. Nabucco project – a project that is the brainchild of Europeans – does not provide an optimistic picture in the short run. Although the picture is included in the EU Trans-European Energy Network program, and it was identified in the European Council of 24 March 2007 as one of the priority projects, the

² http://www.jamestown.org/edm/article.php?article_id=2372370

Union cannot act swiftly on the issue, which in turn weakens its hand against effective energy policies of Russia.

According to Europa website 40 % of European natural gas is imported and this number is expected to reach 70 % in 2020. 45% of Europe's oil imports come from the Middle East and 40% of natural gas comes from Russia. In 10 years from 1995 to 2005, natural gas consumption in the EU countries has increased from 369 billions m³ to 510 billion m³ year. As a result, EU produces in 2005, 212 billions m³ of natural gas. Growing consumption, decreasing production brought increase of imports from 161 billion m³ in year 1995 to 298 billion m³ in year 2005. In these years imports from Russia increased by 15%, imports from Norway and Algeria even doubled. See Table 2 for gas supplies to EU.

EU feels vulnerable against Russia in terms of energy security. These concerns became more vocal following January 2006 when Russia cut the gas that goes via Ukraine to Europe due to a pricing dispute. Countries started to search for additional suppliers and different kinds of energy such as renewable energy. In a speech on September 14th, EU commissioner for Energy, Andris Piebalgs reasserted European support for Nabucco saying, "Europe is united in its determination to go ahead with this key project, which will boost our efforts to diversify our supply sources and our supply routes of gas."³ Not all countries feel that committed to Nabucco though. Piebalgs aim in reasserting European support was merely a result of the greater concern of Hungary's reluctant attitude towards the project. Prime Minister of Hungary, Mr Ferenc Gyurcsány, was previously quoted saying "the Nabucco has been a long dream and an old plan, but we don't need dreams. We need projects." (Herald Tribune, Mar 12th)⁴ Hungary's socialist leader is considering Russia's proposal that is extending Blue Stream via Hungary. In a very

³ Speech at the "High Level Conference on Nabucco" septembre 14th.

⁴ <http://www.ihf.com/articles/2007/03/12/news/hungary.php>

successful political move Russia is playing Europe's most likely gateway for energy resource diversification. Currently Hungary is the weakening the position of European Union and scaring away the prospective investors in the Nabucco as well.

Nevertheless, Nabucco is still among the priority documents of EU. According to the report of commission of European communities, dated January 10th 2007, Nabucco gas pipeline's construction that is listed under the greater framework of NG3 axis of the union's priority plans, will cost 4,5 to 5 B€ The total capacity of the pipe will be 25 to 30 Bm³/pa in Turkey and 14 to 16 Bm³/pa in Baumgarten - 12 to 15 Bm³/pa would be taken in transit countries.

v. Russia and Nabucco

Russian Gazprom and Putin's effective deals in the regions set the biggest impediment not only for Nabucco but for all alternative projects in the region. Gazprom blocks the trans-Caspian export options with bilateral agreements with ex-Soviet states. If not by agreements, than by preventing them by environmental and legal objections regarding the use of Caspian Sea. On the other hand Gazprom fuels European market with increasing number of pipelines via Ukraine, Balkans, and Turkey.

a. *Blue Stream*

Gazprom by building Blue Stream had more than one achievement. First of all it has expanded its market share in Turkey. For the last decade Turkey used to buy 65 % of its gas from Russia. Energy Minister Guler says now Russia's share has dropped to 60 % still this value is crucial because 50 % of the country's electricity comes from gas. Secondly Blue Stream route by

passes former Soviet states, such as Ukraine and Belarus that Russia constantly has problems in gas transit. Lastly Blue Stream blocks the east west route, mainly Nabucco.

b. South stream

Planned South Stream pipeline starts from Russia's Black Sea coast goes through Bulgaria. Two options are under consideration for the Bulgaria-Italy route. The southwestern option would continue through Greece and the Adriatic seabed in the Otranto Strait to southern Italy. The northwestern would run from Bulgaria through Romania, Hungary, and Slovenia to northern Italy. By building this route Russia will decrease its route dependency to both former Soviet states and Turkey.

According to Vladimir Socor from Eurasia Daily⁵, the planned South Stream project is weakening the possibility of Nabucco transport project for Caspian gas mainly because it is planned to take place along that same route. South Stream would also rival the proposed extension of the Baku-Tbilisi-Erzurum gas pipeline through Turkey, which is planned to either be integrated with Nabucco or run from Turkey to Greece and Italy.

vi. Conclusion

Two options are on the table according to Nabucco one is combining Turkmen gas with Azeri gas the other is to embrace Iranian gas. The European Commission predicts that *at least* 10–15% of the EU's gas supply will come from the Caspian Sea region by 2025 ([ECPR, 2006](#)). Although Nabucco is not an easy task after Blue Stream and South Stream pipelines, it remains to be an option because neither of the above mentioned routes provide resource diversity and related to that, energy security, that Europe seeks.

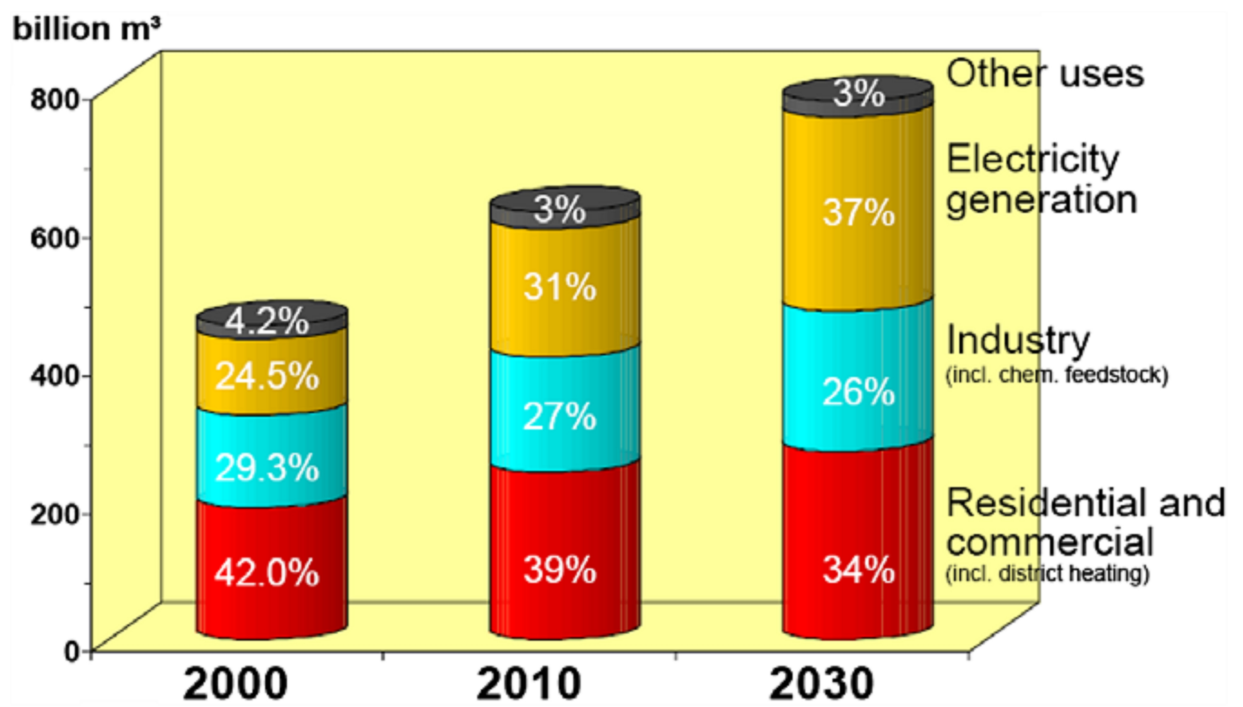
⁵ http://www.jamestown.org/edm/article.php?article_id=2372249

APPENDIX

Figure 1



Figure 2



Forecast of natural gas consumption in Europe.

Figure 3

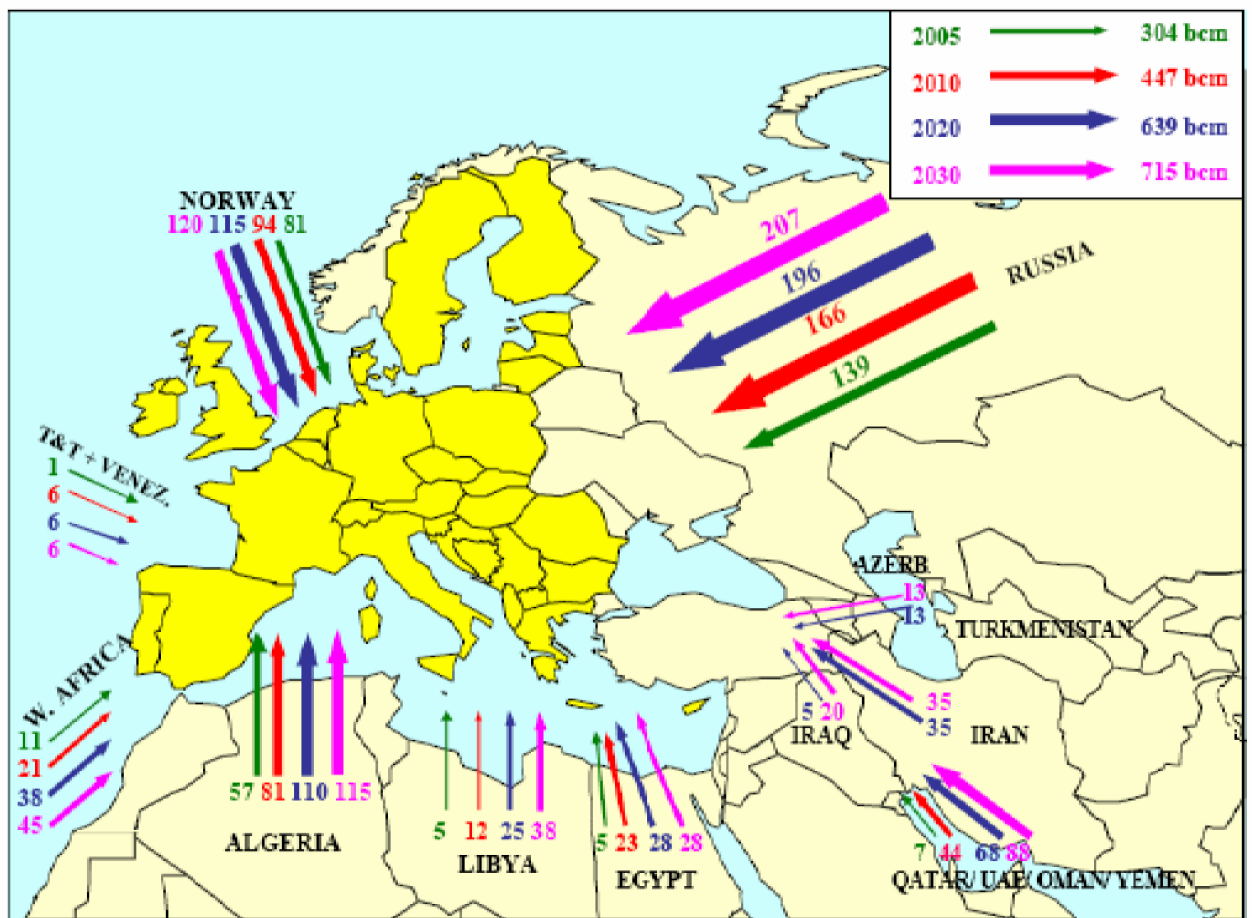


Figure 2.2 Gas export potential of the main producers to the European Union, Switzerland and Balkan countries

Source: OME

Table 1**Turkey's natural gas sale and purchase agreements⁶**

AGREEMENTS	VOLUME BCMA (DURING THE PLATEAU PERIOD)	DATE OF SIGNATURE	DURATION (YEARS)	STATUS
Russian Fed. (Westward)	6	14 February 1986	25	In operation
Algeria (LNG)	4	14 April 1988	20	In operation
Nigeria (LNG)	1.2	9 November 1995	22	In operation
Iran	10	8 August 1996	25	In operation
Russian Fed. (Black Sea)	16	15 December 1997	25	In operation
Russian Fed. (Westward)	8	18 February 1998	23	In operation
Turkmenistan	16	21 May 1999	30	-
Azerbaijan	6.6	12 March 2001	15	-

⁶ http://www.botas.gov.tr/eng/naturalgas/ng_buy_ant.asp

(Resource: BOTAS website 01.11.2007)

Table 2

a. Natural Gas Suppliers of EU

Country	Volume
Russia	131 bcm
Norway	62.6 bcm
Algeria	33.5 bcm
Libya	0.5 bcm

b. Natural Gas Suppliers of EU (in LNG form)

Country	Volume
Algeria	18.80 bcm
Nigeria	10.75 bcm
Middle East countries	5.40 bcm

Source: World Energy Outlook 2005 by IEA

Table 3

Caspian gas reserves (in tcf)

Country	Proven reserves	Possible reserves	Total reserves
Azerbaijan	30	35	65
Kazakhstan	65	88	153
Turkmenistan	71	159	230
Inner-Caspian	166	282	448
Uzbekistan	66.20	35	101
Russia (Caspian coast)	NA	NA	NA
Iran (Caspian coast)	NA	11	11
Outer-Caspian	66	46	112
Total Caspian Sea region	232	328	560

Source: Adopted from [EIA, 2007](#).

Table 4

Proven Reserves in The Caspian and Central Asian Region

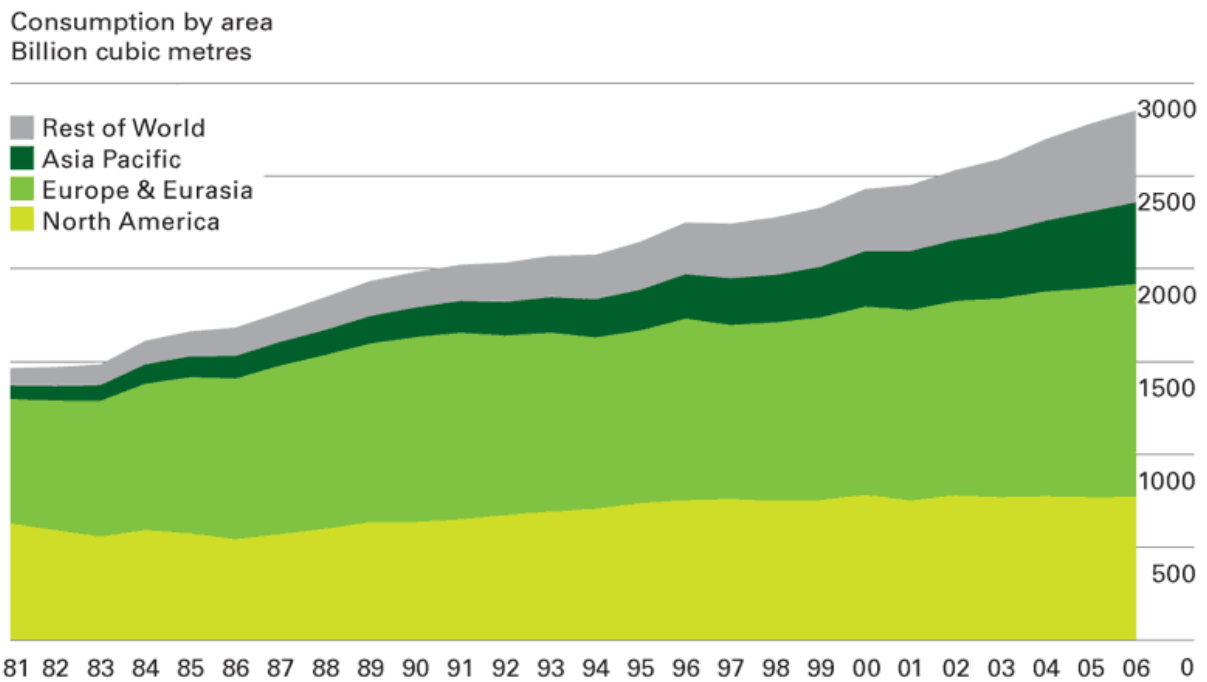
Country Proven	Gas Reserves
Azerbaijan	1550 bcm
Iran	358 bcm
Kazakhstan	1840 bcm
Russia	3168 bcm
Turkmenistan	2860 bcm
Uzbekistan	1870 bc

Source: BP

Figure 4

Natural Gas consumption by area

(Retrieved from BP statistical review of World Energy 2007)



World natural gas consumption rose by 2.5% in 2006. Russia accounted for 40% of global consumption growth. Asia Pacific consumption growth remained strong. Consumption fell in the US and UK.

NATURAL GAS⁷

Natural Gas Supply and Demand Scenarios (Million m³)

	YEARS	2007	2008	2009	2010	2015	2020	2025	2030
Sm ³	TNATURAL GAS DEMAND VOLUMES	35.035	35.966	39.780	43.806	56.183	65.867	70.546	76.378
Sm ³	EXPORT (GREECE)	62	492	737	737	737	737	0	0
Sm ³	TOTAL DEMAND	35.097	36.458	40.517	44.543	56.920	66.604	70.546	76.378

Natural Gas Supply and Demand Scenarios

	YEARS	2007	2008	2009	2010	2015	2020
Cm ³	RUSSIAN FEDERATION	6000	6000	6000	6000	0	0
Cm ³	1. LNG (M. EREGLISI) ALGERIA	4444	4444	4444	4444	0	0
Cm ³	1. LNG (M. EREGLISI) NIGERIA	1338	1338	1338	1338	1338	1338
Cm ³	IRAN	9556	9556	9556	9556	9556	9556
Cm ³	RUSSIAN FED. (ADDITION)(WEST)	8000	8000	8000	8000	8000	8000
Cm ³	RUSSIAN FED. (BLACKSEA)	10000	12000	14000	16000	16000	16000
Cm ³	TURKMENISTAN (*)	0	0	0	0	0	0
Cm ³	AZERBAIJAN (**)	3000	5000	6600	6600	6600	6600
Sm ³	TOTAL SUPPLIES	41621	45553	49092	51059	40791	40791

(*) : There is an uncertainty of purchasing natural gas. (**): Annual contracted amounts may change upon changes in the initial date for gas deliveries.

(Resource: BOTAS website 01.11.2007)

⁷ http://www.botas.gov.tr/eng/naturalgas/ng_sup_dem.asp

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