

Geopolitics of pipelines and Eastern Europe with especial regard to Hungary

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Abstract

The energy strategy of East Central European countries have joined to EU in 2004 is differentiated. It can be stated that majority of these countries have already energy policy and strategy to secure their own energy supply. All of them are making fluent efforts to be independent from considerable part of the Russian oil and gas import in the near or farer future. To avoid negative effects of the future's unforeseen gas wars and unfriendly actions originated from Russia or Ukraine, the new member states of the European Union have worked out more scenarios and projects for the future. Additionally, they have also declared targets to increase the rate of renewable energy in their domestic energy production. Opposite to it Hungary is still stuck into powerful energy economies that drive to international energy-security politics. The county has just switched sides when turned off from US initiations and gave preference to Russian connections. Furthermore there are no visible indication of a coherent national energy security strategy. It is not surprising that the country is not taken into account when decisions are made, neither to the extent is should. It should be priority to take pending political decisions and form a real national strategy.

Key words: energy policy, gas pipelines, East Central Europe

The global energy sector is under a continuous tension since the end of the 20th century, which is a result of the rapid growth of global energy consumption, of the skyrocketing of energy prices and the strong competition for the energy resources. So it is understandable, that the security of supply of energy, being the engine of economic development, is an extremely important issue, first of all for the importing countries. This is especially true for the EU-member countries, which are only able to cover a minor part of their energy consumption by own production (*Table 1*). The present-day tense situation results from the risks of great imbalances between energy demand and supply. Additional problems are the territorial concentration of the major hydrocarbon reserves and the political uncertainty in some of these energy producing regions

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Table 1. World Crude Oil and Natural Gas Production and Consumption (2006)

Continents, regions	Crude Oil Million tons		Natural Gas Billion cubic metres	
	Production	Consumption	Production	Consumption
North America	454.9	1055.1	713	724.7
Central & South America	533.6	375.2	194.9	185.6
Europe	251.9	771.0	309	551.8
Former USSR	607.3	193.9	832.8	681.8
Middle East	1240.2	329.0	345.4	324.9
Africa	499.8	142.1	197.3	86.9
Asia & Oceania	394.5	1186.8	375	432.2
World Total	3984.2	4053.1	2967.4	2987.9
EU-27	119.8	731.6	213.3	532.1

Source: www.eia.doe.gov

Table 2. World Proved Crude Oil and Natural Gas Reserves (January 1, 2009)

Continents, regions, countries	Crude Oil		Natural Gas	
	Billion barrels	Million tons	Trillion cubic feet	Billion cubic metres
North America	209,910	28,754.8	308,794	42,300.5
Central & South America	122,687	16,806.4	266,541	36,512.5
Europe	13,657	1,870.8	169,086	23,162.5
Former USSR	98,886	13,546.0	1993,800	273,123.3
Middle East	745,998	102,191.5	2591,653	355,021.0
Africa	117,064	16,036.2	494,078	67,681.9
Asia & Oceania	34,006	4,658.4	430,412	58,960.5
World Total	1,342,207	183,864.0	6254,364	856,762.2
EU-27	6,321	865.9	84,296	11,547.4
<i>Norway</i>	6,680	915.1	81,680	11,189.0
<i>Russian Federation</i>	60,000	8219.2	1,680,000	230,137.0
<i>Kazakhstan</i>	30,000	4,109.6	85,000	11,643.8
<i>Azerbaijan</i>	7,000	958.9	30,000	4,109.6
<i>Turkmenistan</i>	0,600	82.2	94,000	12,876.7
<i>Iran</i>	136,150	18,650.7	991,600	135,835.6
<i>Iraq</i>	115,000	15,753.4	111,940	15,334.2
<i>Kuwait</i>	104,000	14,246.6	63,360	8,679.5
<i>Qatar</i>	15,210	2,083.6	891,945	122,184.2
<i>Saudi Arabia</i>	266,710	36,535.6	258,470	35,406.8
<i>United Arab Emirates</i>	97,800	13,397.3	214,400	29,369.9
<i>Algeria</i>	12,200	1,671.2	159,000	21,780.8

Source: www.eia.doe.gov

(Fig. 1, 2). The Gulf States and Russia possess the 62.9% of the proved oil and 73.3% of the proved natural gas reserves of the world (Table 2). At the same time the majority of the energy import concentrates to Europe and North America (e.g. 59% of the crude oil import, 85.5% of the natural gas import in

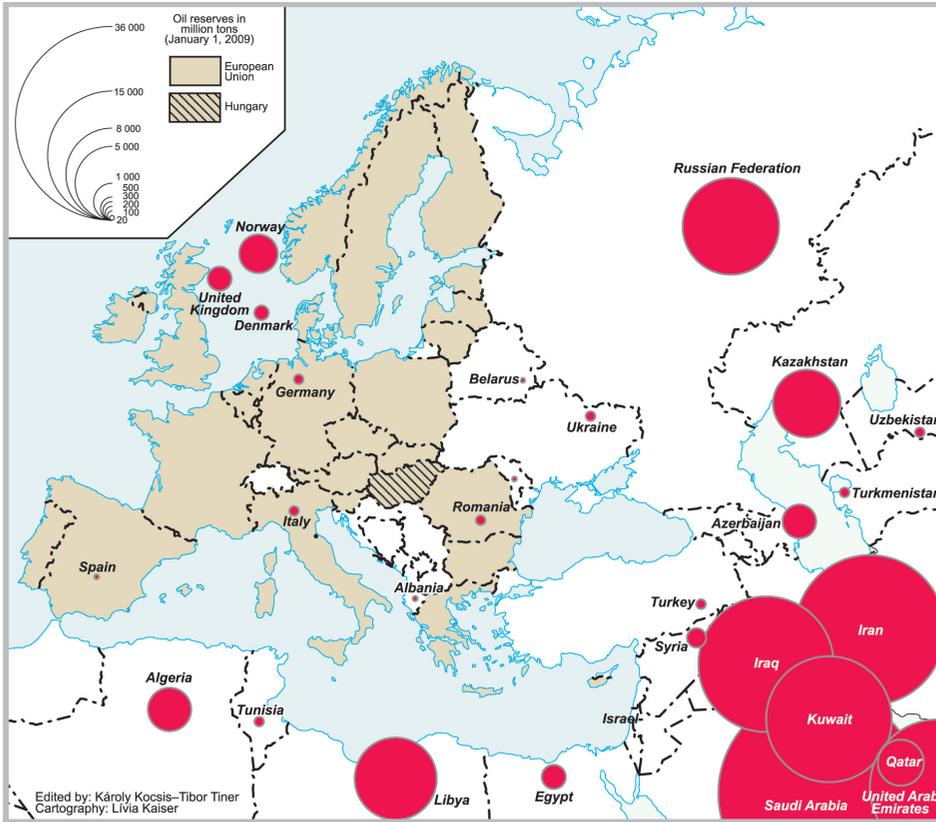


Fig. 1. Oil reserves in Europe (January 1, 2009, million tons)

2005). The largest European oil and gas consumers (and importers) are in the west (Germany, France, UK, Italy, Spain, Benelux states) surrounded from afar by their largest suppliers (Russia, Norway, Algeria, Lybia, Golf states) (Fig. 3, 4). The territorial imbalance between the energy exporters and importers upgraded the role of the transit countries, who during the last years, the time of the inflating energy prices often came into conflicts, price-disputes with the producers (e.g. Russia's disputes with Ukraine in 2006, 2009, with Belarus in 2007). These conflicts resulting temporary breakdown in the energy supply drew attention the importance of the security of energy supply, the security of the energy markets and the need of the diversification of supply routes. In this Eurasian geopolitical context of the energetic issue the East European countries play a special role as an important transit area between Russia, Middle East and Western Europe.

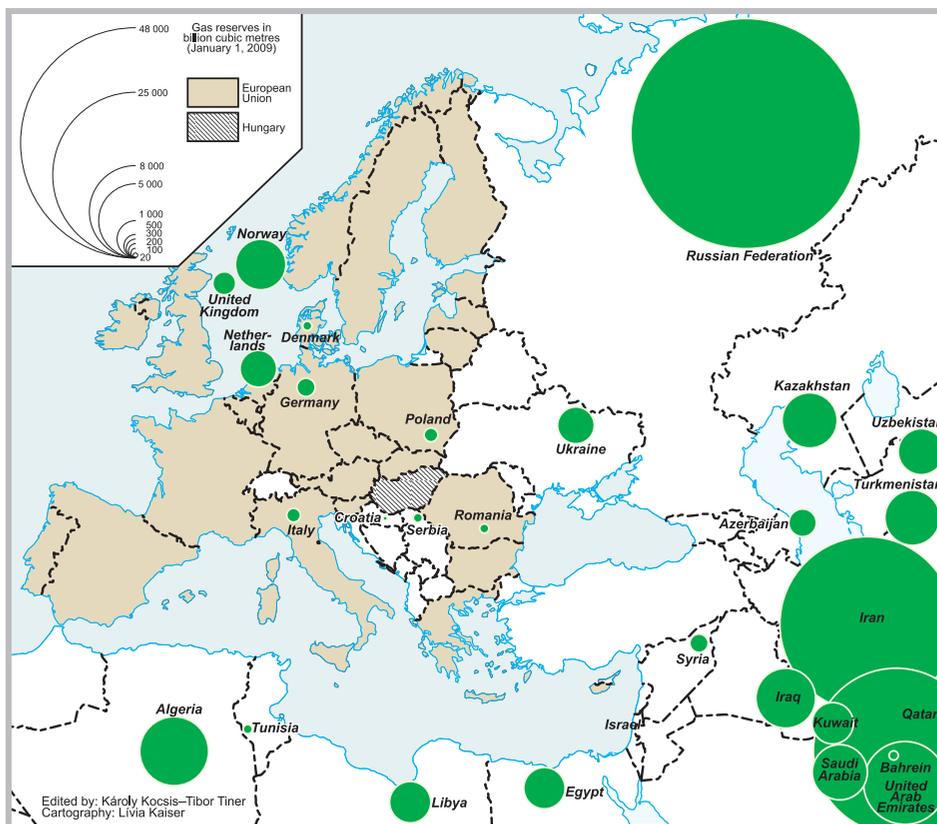


Fig. 2. Gas reserves in Europe (January 1, 2009, billion m³)

Some geopolitical characteristics of the energy supply in Europe

During the last quarter century the production and consumption of crude oil and the production of natural gas nearly stabilized, in parallel with the sharp decline of the coal production and consumption. Due to the fact, that the natural gas is the cleanest, most nature-friendly energy source (similar to the nuclear energy) and its application entails any social problems, its share in the European energy balance is continuously increasing. Between 1980 and 2005 the gas consumption of the EU-27 increased by 88.4% and for the period of 2005–2030 a growth of 24% (from 537 bcm to 666 bcm) is forecasted. At the same time the EU's gas production will decrease by 30% until 2030 (ESNAULT, B. et al. 2007). These facts underline the dynamically increasing import dependency of the EU-27 (52.3%), which is in the case of coal 39.6%, 82.2% of crude oil and

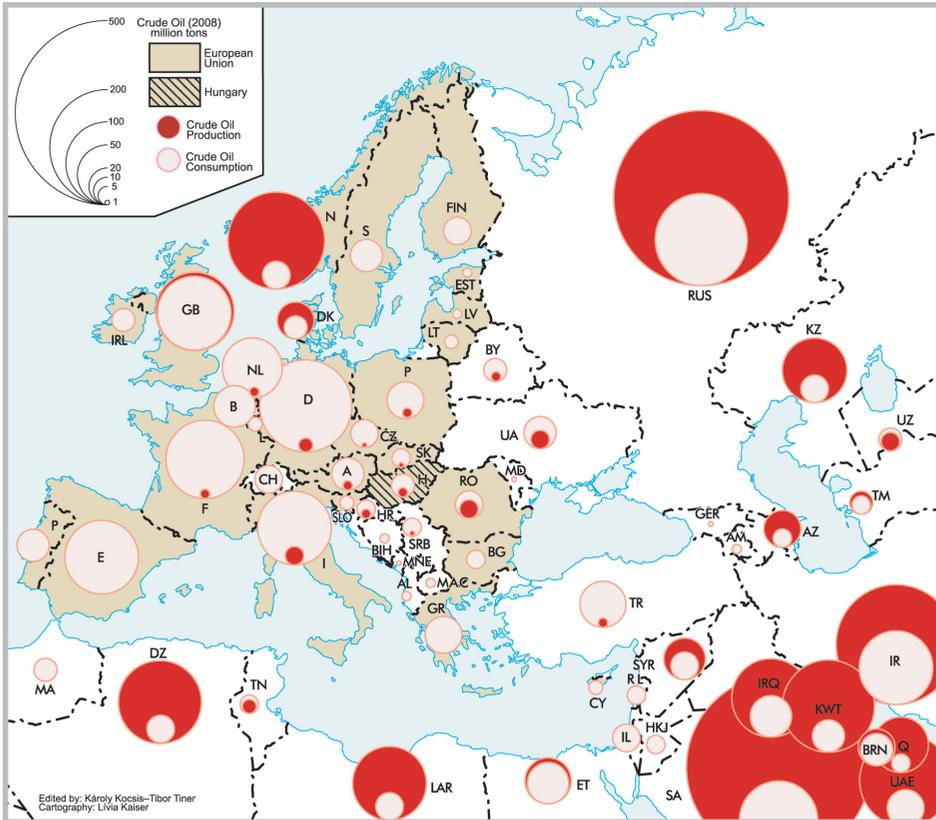


Fig. 3. Crude oil production and consumption in Europe (2008)

57.7% of natural gas (2005) (Table 3). This external dependency of the EU is expected to reach by 2030 66% (coal), 90% (oil) and 80% (gas) (Geopolitics... 2007). The dependency of import of hydrocarbons is especially high in the Visegrád Group. Due to their historic (COMECON³) past and geographic location their oil and gas import is almost exclusively controlled by the Russian Federation. The first international oil and gas pipelines supplying the V4 countries with Soviet (mostly Russian) fuels were built during the 1960s (Druzhba-Friendship oil pipeline 1964, Brotherhood gas pipeline 1967) (Fig. 5).

During the Socialist-Soviet period the oil and gas supply was stable and based on long term agreements, also with Western Europe (since 1968!) in spite of political disagreements. Following the collapse of the communist alliance sys-

³ COMECON (Council for Mutual Economic Assistance) was an economic organization of the socialist states led (and controlled) by the USSR, between 1949 and 1991.

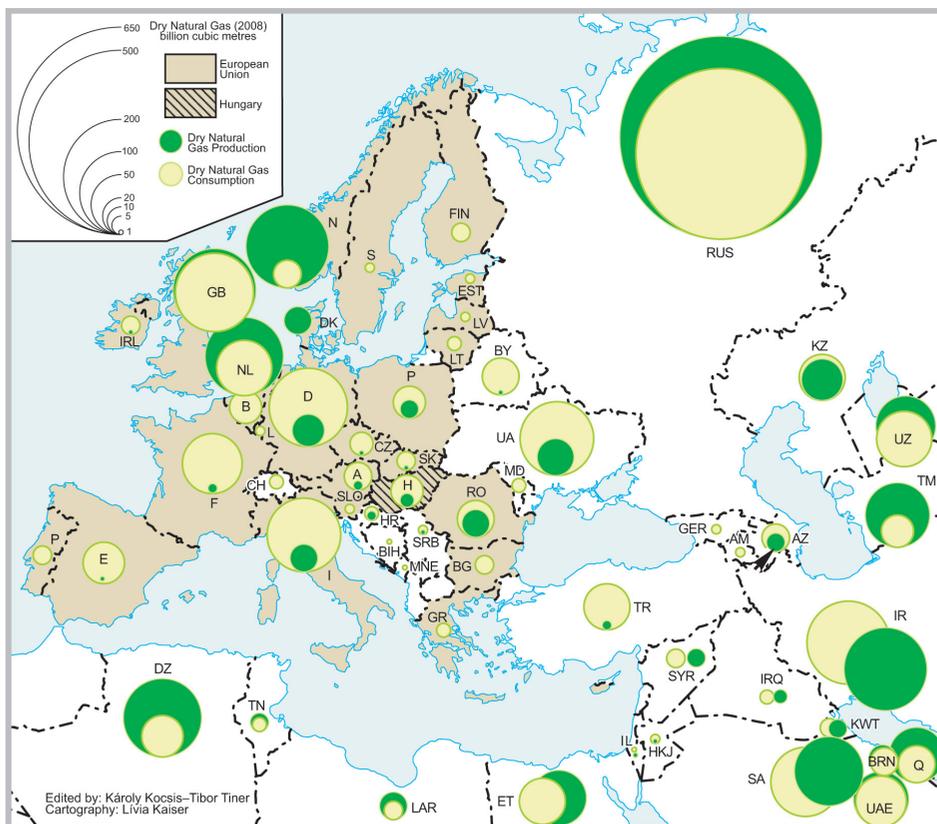


Fig. 4. Natural gas production and consumption in Europe (2008)

Table 3. Fuel Import Dependency of EU-27 and of the Visegrád Group (2005, 2030 in %)

	All fuels		Coal	Oil	Gas
	2005	2030	2005	2005	2005
EU-27	52.3	64.2	39.6	82.2	57.7
Czechia	27.4	50.3	-17.4	97.4	97.8
Hungary	62.9	63.9	43.4	79.2	81.1
Poland	18.0	44.7	-22.6	96.0	69.7
Slovakia	64.6	69.6	88.5	81.9	97.2

Remark: Negative numbers indicate that the country is a net exporter.

Source: EU Energy in Figures, Pocket Book 2007 (<http://ec.europa.eu/dgs/energy>), MANTZOS, L.–CAPROS, P. 2006.

tem and of the USSR – in spite of the surviving energy interdependencies – the previous stability of international energy supply in the post-Communist countries gradually came to an end. The deeply changed international situation in

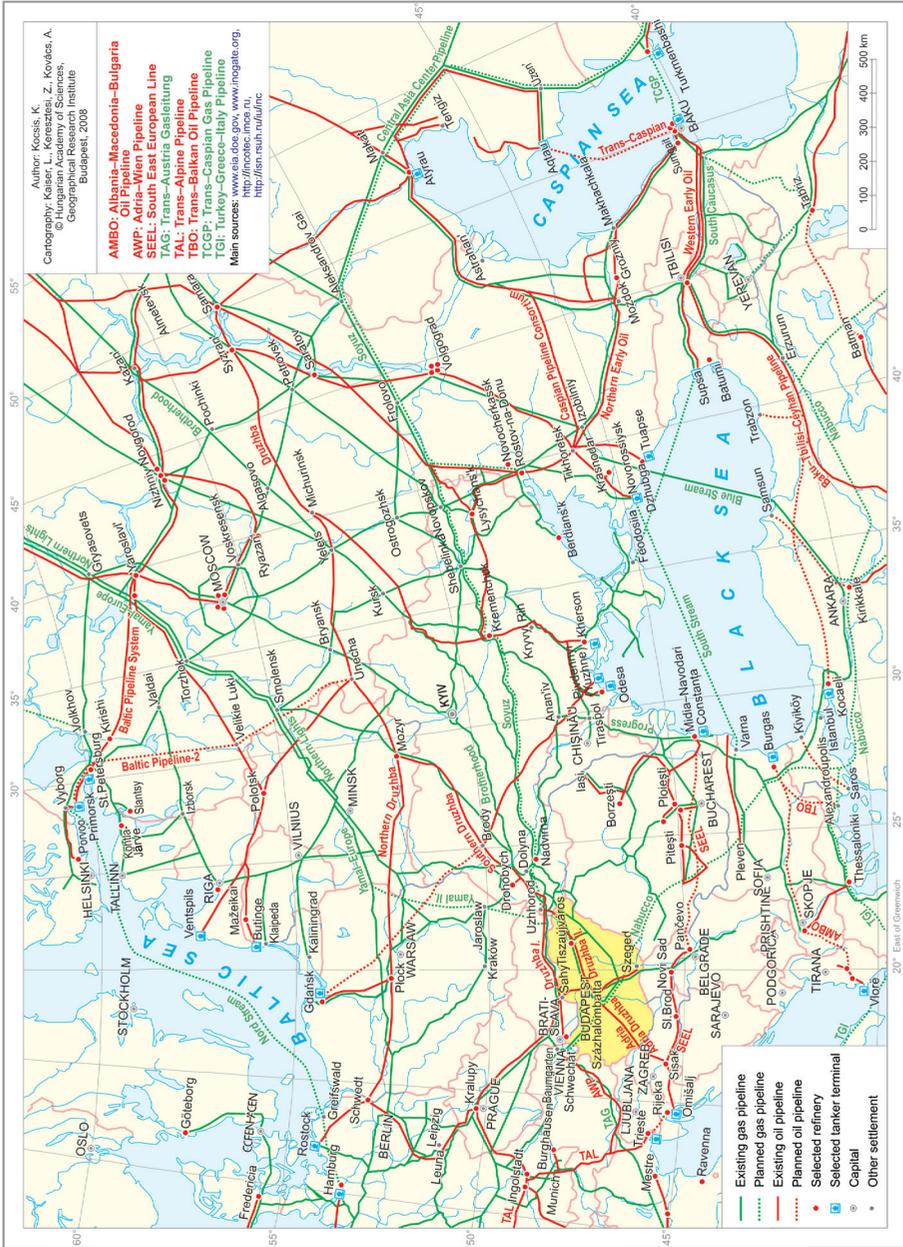


Fig. 5. Major gas and oil pipelines in Eastern Europe (2009)

the eastern half of Europe (enlargement of the EU, establishment of pro-Western and pro-Russian economic organizations⁴ in the former Soviet space) heavily transformed the economic equilibrium of international energy (export-import) systems and increased the importance of their geopolitical aspects. During the second half of 1990s started the efforts at diversification of energy supply routes and bypassing of transit states with new pipeline construction projects.

The dominant actors of the recent west Eurasian geopolitical games on energetics, of the new pipeline projects are the Russian Federation and the EU (and the USA). The EU-27 largely depends on Russian gas and oil imports (45.1% and 29.9% in 2005), so does Russia depend on European markets (Table 4.). The European oil and gas exports represent about 2/3 of total Russian exports (ESNAULT, B. et al. 2007). Accordingly the main economic goal of Russia to remain reliable energy supplier for Europe, to decrease dependence from the traditional transit countries (first of all from Ukraine and Belarus) and to preserve its dominant position on EU's gas and oil markets. The latter is connected with the reviving political ambitions of the Kremlin to use energy supply as geopolitical weapon to restore past international political position of Russia.

Table 4. Origin of Crude Oil and Natural Gas Import of EU-27 (2005, in %)

	Crude Oil	Natural Gas
Russian Federation	29.9	45.1
Africa	18.1	28.3
Norway	15.5	24.1
Middle East	20.1	2.5
Caspian	6.8	0.0
Other regions	9.6	0.0
<i>Total</i>	<i>100.0</i>	<i>100.0</i>

Source: <http://ec.europa.eu/dgs/energy>

Pipeline projects to reduce Russian dependence

Since second half of 1990s USA pushed for construction of several pipelines (e.g. *TCGP: Trans Caspian Gas Pipeline*, 1996- or *Trans Caspian* oil pipe-

⁴ GUAM (Organization for Democracy and Economic Development, 1997) established by Georgia, Ukraine, Azerbaijan and Moldova to counterbalance Russian influence. A common interest in efforts to resolve "frozen conflicts" in their territory (Abkhazia and South Ossetia in Georgia, Nagorno-Karabakh in Azerbaijan, Transnistria in Moldova) also unite these GUAM countries located in the buffer zone between Russia, the EU and NATO and blaming problems for the presence of Russian military forces. EURASEC (Eurasian Economic Community) proclaimed on October 10, 2000 by Russia, Belarus, Kazakhstan, Kyrgyzstan (and with the accession of Uzbekistan in 2006) was the union of customs and tariffs within CIS (Commonwealth of Independent States).

line) that would carry Caspian energy westward without transiting Russia. It would break Russia's monopoly on the region's energy transportation system. Moscow moved fast to construct its own Blue Stream submarine gas pipeline (2001–2005) from Russia to Turkey, which killed the USA and EU backed TCGP project (GEROPOULOS, K. 2007). At the same time with strong USA support the *South Caucasus Pipeline* (SCP) project (between Baku and Erzerum) was realised (2006), which allowed Azerbaijan and Georgia to resist Russian political and economic pressure (Table 5). This gas pipeline with the potential of being connected to the Turkmen and Kazakh producers via the planned TCGP would be in the future the supplier of the EU backed Nabucco and TGI pipelines. On the SCP and the Baku–Supsa, Tbilisi–Yerevan–Tabriz gas pipelines based the Ukrainian project of *Supsa–Feodosiia* submarine pipeline between Georgia and Ukraine (bypassing Russia), which could supply Caspian and Iranian gas to Ukraine and other European countries.

The *Baku – Tbilisi – Ceyhan oil pipeline* (BTC) was built during the period 2002 and 2006, between the Azerbaijani capital Baku and the Turkish Mediterranean port, Ceyhan and represents the second longest oil pipeline of the world (1,768 km). The establishment of the pipeline route was geopolitically and ecologically motivated (bypassing Russia, Iran, the unstable Middle East and the overcrowded Turkish straits, Bosphorus and Dardanelles) and served the increase of the economic independence of the GUAM-member Azerbaijan from Russia.

For December 2002 a new plan has been worked out regarding the *extension* of the Ukrainian *Odesa–Brody oil pipeline* (built 2001) to the Polish port of *Gdańsk*. This would be the only route for transporting Caspian oil to Central Europe, to the Visegrád countries – bypassing Russia, via the GUAM states: Azerbaijan, Georgia, Ukraine (through Baku–Batumi–Odesa/Pivdennyi terminals). Although it is supported by the EU, this pipeline has only 9 million tons annual capacity, which is very modest comparing to larger projects in terms of commercial attractiveness. Moreover, Russia has successfully blocked oil transport from Kazakhstan to Ukrainian seaport Odesa. Kazakhstan declined to join this project, unless it is transformed to include Russia and committed additional massive oil volumes for export via Russia. On 10 October 2007 an agreement to form this pipeline consortium was signed by Poland, Lithuania, Ukraine, Georgia and Azerbaijan in Vilnius. Finally, in accordance with Russia's will the Kazakh oil (from the giant Tengiz field) started to supply the Odesa-Brody pipeline via the CPC (Caspian Pipeline Consortium) in Russia. This project is highly important to make safe oil supply for East Central Europe, first of all for Poland and Lithuania.

On April 3, 2007 Romania, Serbia, Croatia, Slovenia and Italy signed an agreement about the construction of a 1,400 km long oil pipeline (*South East European Line*, SEEL) from the Romanian port *Constanța* to the Italian *Trieste*.

Table 5. Major East European Pipelines (existing and planned)

Pipeline name	Fuel	From - to	Capacity (bcm gas or mt oil/year)	Start date	Existing or planned
Brotherhood	gas	Russia – Slovakia, Hungary	104.0	1967, 978, 1984, 1989	Existing
	gas	Russia – Finland	5.8	1973	Existing
	gas	Russia – Ukraine	–	1978, 1983	Existing
Soyuz	gas	Russia – Romania	14.3	1987	Existing
Yamal - Europe	gas	Russia – Poland, Germany	33.0	1999	Existing
Blue Stream	gas	Russia – Turkey (Izobilniy – Durusu)	16.0	2003	Existing
South Caucasus Pipeline	gas	Azerbaijan – Turkey (Baku – Erzurum)	16.0	2006	Existing
Nord Stream	gas	Russia – Germany (Vyborg – Greifswald)	2 x 27.5	2010	Planned
Nabucco	gas	Turkey – Austria (Erzurum – Baumgarten)	4.5–31.0	2013	Planned
TGI	gas	Turkey – Greece – Italy	11.5	2013	Planned
Druzhba	oil	Russia (Samara) – Poland, Germany, Slovakia, Czechia, Hungary	70.0	1964	Existing
Northern Early Oil	oil	Azerbaijan – Russia (Baku – Novorossiysk)	5.8	1997	Existing
South Stream	gas	Russia – Bulgaria - Italy (Novorossiysk – Varna -)	30.0	2013	Planned
Trans-Caspian Gas Pipeline	gas	Turkmenistan – Azerbaijan (Turkmenbashi – Baku)	30.0	?	Planned
Western Early Oil	oil	Azerbaijan – Georgia (Baku – Supsa)	5.8	1999	Existing
Baltic Pipeline System	oil	Russia (– Primorsk)	75.0	2001	Existing
Caspian Pipeline Consortium	oil	Kazakhstan – Russia (Tengiz – Novorossiysk)	28.2	2001	Existing
Odesa - Brody	oil	Ukraine (Pivdennyi – Brody)	9.0	2001	Existing
Baku – Tbilisi - Ceyhan	oil	Azerbaijan – Turkey (Baku – Ceyhan)	50.0	2005, 2006	Existing
Trans-Balkan Oil Pipeline	oil	Bulgaria – Greece (Burgas – Alexandroupolis)	15–23.0	2011	Planned
South East European Line	oil	Romania – Serbia – Italy (Constanța – Trieste)	40–60.0	2012	Planned
Baltic Pipeline System-2	oil	Russia (Unecha – Primorsk)	50–75.0	?	Planned

Remark: bcm = billion cubic metres, mt = million tons. Source: ESNAULT, B. et al. 2007.

This EU backed pipe with a planned capacity up to 90 million tons annually would reduce tanker transportation in the Turkish straits and Adriatic Sea and would be a competitor to the Russian dominated Burgas-Alexandroupolis pipeline transporting oil from the Black Sea, Caspian area to the largest markets of the EU. Most likely source of the oil could be the large Kazakh fields, from where the main transit routes (CPC) are under Russian control (Socor, V. 2006).

Since the “Orange Revolution” in Ukraine (2005), the changed, pro-Western (EU and NATO) attitudes of Ukrainian foreign policy resulted the increase of Russian natural gas and crude oil prices up to the international level. In January 2006 a real gas conflict was burst out between the two countries because following the unsuccessful talks about gas prices the Ukrainian Naftohaz company siphoned the main transit gas pipelines running via Ukraine from Russia to Central and Western Europe, which resulted the Russian shutdown of gas supply. This was not a unique phenomenon, Russia often shut down pipelines supplies during the time of political disputes (e.g. 2003 Latvia; 2006 Ukraine, Lithuania, Georgia, 2007 Azerbaijan), which enabled by the extremely close relationship between the Russian energy industry and the Kremlin.

Following the gas crisis the EU expressly endeavours to decrease strategic dependence (EU-25 43% in 2005) on Russian (Gazprom’s) gas and to diversify energy supply (HAFNER, M. 2006). The first step of this was to realize alternative, non-Russian controlled gas corridors to EU: the Nabucco and Turkey-Greece-Italy (TGI), for further diversification of export possibilities to the European markets, with bypassing Russia and Ukraine. Construction of the 3,300 km long *Nabucco* gas pipeline is expected to begin in 2009 and is planned to be finished in 2012. It would connect Baumgarten an der March, the largest natural gas hub in Austria with Erzerum in Turkey, the end of South Caucasus Pipeline. Once completed, it would allow transportation of natural gas from producers in the Caspian region such as Azerbaijan, Turkmenistan and Iran to EU and to the countries (Turkey, Bulgaria, Romania, Hungary) along its path. The recently announced *TGI* pipe would transfer Caspian gas from Turkey through Greece to Italy with an annual capacity of 11.5 bcm and completion date of 2012. Though it was an original Austrian conception to carry Iranian gas to Europe, the Nabucco project was delayed for years by USA opposition to development of Iran’s gas fields. Western failure to engage with Turkmenistan deprived Nabucco of that possible source of gas for Europe. Washington had to insist that Azerbaijani gas alone (expected to flow in coming years to eastern Turkey) could support both Nabucco and the planned TGI pipeline simultaneously, an argument that led to more questions. Turkey’s government, driven by short-term tactical and political considerations (often unrelated to energy policy as such), never came fully on board the Nabucco project. As a result of existing and planned „pro-Russian” and „pro-Western”

energetic corridors Turkey became a natural hub for Caspian and Iranian gas destined for Europe and the arena of rivalry between EU/US and Russia. This strategic transit country similarly to Ukraine is increasingly depends on Russian energetic supplies (60% of natural gas and 20% of oil imports). Due to the Russian influence, Turkey has already demonstrated cool attitude towards Ukraine's and Georgia's NATO aspiration and openly opposed NATO's naval deployments in Black Sea area (Tsereteli, M. 2005).

Pipeline projects to secure Russia's market positions

Between 1994–1999 was built the 4,196 km long *Yamal-Europe pipeline* (since 2005 with a capacity of 33 bcm) to supply Russian gas from the Yamal peninsula the North Central European market via Belarus, Poland and Germany.

The *Baltic Pipeline System* (BPS) transports Russian oil from the Timan – Pechora area, West Siberia and the Volga-Ural region to the oil terminal Primorsk at the Gulf of Finland. The pipe built between 1997–2001 aims to bypass the continental transit countries (e.g. Belarus, Ukraine, V4) and supply the Western Europe by tankers via the Baltic Sea.

With similar Russian geopolitical motivations was planned (from 1997) and started to construct (from 2005) the *Nord Stream* (former names: North Transgas, North European Gas Pipeline) with a 1,196 km long Baltic Sea offshore section between the Russian Vyborg and the German Greifswald. The Nord Stream submarine pipeline as an alternative route of the Russian gas to West-Central Europe beside of the existing Yamal-Europe pipe have seen by opponents as geopolitical weapon against the continental energy transit countries (Belarus, Ukraine and V4). The Nord Stream seems to be a tool to exert Russian political influence on transit countries by threatening their gas supply without affecting gas exports to Western Europe (Baran, Z. 2007).

The disagreement over oil tariffs between Belarus and Russia at the beginning of January 2007 led to a disruption of oil supplies via Druzhba pipeline to Central Europe between January 8 and 11, 2007. Following this event the Russian government decided to construct an oil pipeline (*Baltic Pipeline System-2, BPS-2*) from the Druzhba pipe (from Unecha near the Belarus border) to the Baltic Sea port Primorsk, which annual throughout capacity is expected to increase up to 150 million tons. The BPS-2 reducing Russia's reliance from the transit state Belarus will redirect about half of the capacity of the Druzhba, the oldest and largest oil pipeline transporting Russian and Kazakh oil across Europe. This project will cause Belarus a possible loss of revenue of 3–400 million Euro annually (Resnicoff, M. 2007).

The *Northern Early Oil* (NEO) pipeline transports oil from the large Azeri-Chirag-Gunashli (ACG) fields in the Caspian Sea near Baku via Grozny

to the Russian port Novorossiysk since 1997 and following a break since 2005. With the launch of the EU-US backed BTC oil pipeline in 2005–2006 the utilization of NEO's capacity is reduced considerably (ZASLAVSKY, I. 2006).

It was a strategic mistake for the West and a big success for Russia, that the 1,510 km long *Caspian Pipeline Consortium's* (CPC) oil pipeline, planned to export annually 65 million tons of oil from Kazakhstan to Russia (Tengiz – Novorossiysk), was built also by American companies (e.g. Chevron) with government approval from the late 1990s to 2001. Currently operating at some 28.2 million tons of oil annually, this Russian controlled pipeline direct the majority of Kazakhstan's growing oil output and export to Russia, which fact ruined the Western-backed Trans Caspian oil pipeline project (Aqtau – Baku) and seriously damage the interests of the US government-backed BTC pipeline.

On May 25, 2007 Russia, Bulgaria and Greece signed a basic treaty to implement of the project *Burgas – Alexandroupolis* oil (previous name: Trans-Balkan Oil, TBO) pipeline during the period of 2008–2011. This 279 km long pipe is the first on the territory of EU to be 51% owned by Russian firms and aims to supply the western markets with Russian-Kazakh oil bypassing the overcrowded Turkish straits.

The Russian geopolitical goals of the construction of the 1,213 km long trans-Black Sea gas pipeline, *Blue Stream* (2005) was to block the plans (TCGP and Nabucco) of the EU to use the territory of Turkey to bring gas from the Caspian and the Middle East to Europe bypassing Russia. The absence of a real Western energy strategy in Western-Central Asian region was demonstrated by the ENI, Italy's state-controlled energy holding company, which was partner of the Russian Gazprom at the building of the Blue Stream, loaning the technology and financing for the submarine pipeline (Socor, V. 2007).

Russia evidently again trying to preempt Nabucco and TGI pipelines to preserve its European market dominance. Following the Western opposition to Gazprom's involvement in Nabucco, Russia announced in June 2007 the Russian-Italian project *South Stream* (900 km long submarine pipeline from Russian Novorossiysk to Bulgarian Varna) bypassing both the Caucasian countries and Ukraine. From Varna the southwestern route of the South Stream would run through Greece to South Italy, the northwestern route would continue via Romania, Hungary and Slovenia to North Italy.

Beside of this Russia in the frame of its anti-Nabucco campaign in May-June 2007 signed agreements with *Kazakhstan, Turkmenistan and Uzbekistan* (with the main gas supplier of the planned Nabucco) to construct new Russia-bound gas export pipelines, which seriously damage the EU-plans about non-Russian controlled pipelines from the Caspian region. According to these plans vital for the Gazprom and Russia among others a gas pipeline would establish from the Russian Aleksandrov Gai (crossing of Soyuz and Central

Asia Center Pipelines) to Ukrainian Novopskov, in the same corridor, which is used for the Soyuz (1983) gas pipeline. With an annual 28 bcm capacity, this gas pipeline could serve as a link in the system through which gas is transported from Central Asia to Europe. The pipeline expansion between Uzhhorod and Novopskov would strengthen the role of Ukraine as transit country for natural gas to Central and Western Europe.

Due to these agreements Kazakhstan, Turkmenistan and Uzbekistan almost completely depended on Russian-controlled export pipelines. This situation made possible for the Russian Gazprom to purchase gas at a rate of about 45–65 USD/1,000 cubic metres (Dec., 2006) from these Central Asian countries and sell that gas to Western Europe for around 230 USD (BARAN, Z. 2007). To keep out Turkmenistan from the West (and to retain as a reliable gas supplier) Gazprom agreed to rise the price of Turkmen gas from 100 USD/1,000 cubic metres in December 2007 to 130–150 USD in 2008, which could result the increase in gas prices also in Ukraine and in V4.

In 2007 Russia's strategy for Caspian energy resources and transport routes was almost completely successful. The main goals of this strategy were the following: encircling the EU by gas pipelines (Nord Stream, South Stream) bypassing problematic transit countries; buying the majority of the East Caspian gas as cheap as possibly and selling as expensively as possible; bringing Kazakh oil and Turkmen gas to the West through Russian controlled pipes; making Russia's ties with the Caspian as strong as possible; discouraging or killing competing EU/US backed projects (e.g. TCGP, Nabucco, TGI) and ensuring the West that Russia is reliable energy supplier (KARBUZ, S. 2007).

Recent developments

The Nabucco Project

For the spring of 2009 new challenges has been emerged for supporters of Nabucco projects to cope with. According to original plans the pipeline is scheduled to start operating in 2013, but it is doubtful that it will be built. Continued and current hesitation by the private sector to finance this project, not to mention the brief war between Russia and Georgia for South Ossetia in August 2008, means that Nabucco has to face an uncertain future.

It's also a real problem, that Nabucco faces many further obstacles, among which are the planned rival South Stream pipeline, supported by Russia's giant company Gazprom. The European Commission insists that Nabucco is not an attempt to find alternatives to Russian supplies, but a necessary additional channel. This position is confirmed heavily by ÖMV Austrian gas and oil company, interested in the project.

The gas crisis burst out between Russia and Ukraine in January 2009 and cut or disrupted gas supplies to 18 EU member countries did not appear to be a sufficient argument in favour of Nabucco among experts of European Parliament's foreign affairs committee. At political level, at first it had appeared that Nabucco would gain credibility in light of the crisis.

In mid January 2009 the member states of the European Parliament have issued a rather pessimistic draft report on EU energy security, in which Nabucco featured prominently. This important report was presented just a few days before Hungary organizes a 'Nabucco summit' in Budapest at the end of that month.

The summit had raised hopes that the project could be re-launched soonest. Representatives of the Czech Republic, which country holds a half year rotating EU presidency, have indicated they will push for Nabucco project as one of its top priorities.

Independent experts of the Centre for European Policy Studies emphasize that the main question is: Where the Nabucco-gas come from? Lack of large technical investment makes imports from Iran problematic. It is because that country is still a net importer of gas, despite holding the world's second-largest natural gas reserves. Besides, serious political and economic sanctions against Iran make the whole Nabucco project appear more likely to be realised only in the distant future.

As for Turkmenistan the country's government is reluctant to deliver gas to Europe, as it prefers to sell to Russia on high prices and Turkmenistan also has China as an alternative client.

Regarding the issue of transit Turkey can be considered as a key transit country. It has huge domestic demand for Russian or other natural gas itself, while legal disputes on the delimitation of the Caspian Sea could be used by Russia to block the project. Additional problem is the financing of Nabucco which remained a challenge.

Problems regarding to the Nabucco project has emerged in the focus of more NATO experts. They also express their scepticism towards the project. By their latest opinion it remains unclear which sources and routes would be more beneficial and reliable. They warned, if the main goal of the European Union is to enhance routes that are not controlled by Moscow, there is a real risk that the EU will compete in markets in which it is not familiar or well-placed.

The South and North Stream projects

The plan to build the South Stream, a new gas pipeline under the Black Sea linking the Russian Black Sea port Novorossiysk to Bulgaria's Varna would mean that Russia would no longer send its gas supplies through Ukraine,

which locked horns with Russia over payment of outstanding gas debts last December. The dispute led to gas supply disruptions to European consumers in winter. It will contribute the diversification of gas supplies, which is an important factor in energy security.

Putting into operation South Stream will meet these requirements. Gazprom's representatives more times promised to develop of the Arctic gas field, which has estimated reserves of 133 trillion cubic feet. That would supply the North Stream gas pipeline from Russia to Germany, currently being built under the Baltic Sea.

Bulgaria, Hungary, Slovenia, Italy and many other EU-members have also reiterated their interest in construction of the South Stream gas pipeline, intended to send Russian gas to Europe across the Black Sea bed. The South Stream gas pipeline, is due to be commissioned in 2013.

Meanwhile Belarus has proposed another pipeline to guarantee a stable supply of Russian natural gas to Europe, and has sought involvement of Poland and Germany in the project. The proposed pipeline would bring gas from the Yamal Peninsula in NW Siberia. But some Ukrainian experts are cautioning against such expansion. They emphasize, it is necessary to guarantee not just the route but the supplier. Presently, several European countries depend solely on the Russian monopoly Gazprom, and construction of more pipelines from Russia would only reinforce dependency on Russian gas.

Additionally, the major part of the North Stream pipeline is designed to be laid almost entirely along the sea bottom that runs through the economic zones of Baltic countries. This plan creates additional tension over national security concerns, land ownership and environmental issues. A purely economic issue here is ownership of the gas and the transmission pipelines.

Ukrainian economists suggest separating the object of gas transportation and the pipelines to avoid vertical integration and monopolization of the market. It would be necessary because both 'Stream' projects are not reliable means to diversify gas transit through Ukraine and to ensure constant gas supplies to East and West European countries as consumers.

Finally, Hungary has made a contract with Russia in March 2009 to contribute to the construction costs of Hungarian section of South Stream (in a rate of 15%) which offers an alternative solution in gas supply instead of the traditional route running via Ukraine.

Further alternative solution to Hungary for a safe gas supply

Hungary is one of the most energy-sensitive country among East Central European states. It was suffering from the negative effects of gas crisis during January 2009 and now is searching for alternative solutions to safe enough

quantity of natural gas for their consumers inside of the country. It seems to be a strategic question because of the high rate of natural gas consumption for electric energy production. Between 1990 and 2007 it's share has increased from 19.7% to 37,9% in Hungary (Reményi, 2009).

Desiring to prevent the crisis situation in the future Hungary and Croatia plan to build a brand new gas transit pipeline by mid-2011 which would ship gas from Hungary to Croatia, but would also allow two-way shipments later. This plan has been announced by the representatives of MOL's gas transmission 'Földgázszállító' (FGSZ = Natural Gas Transporter), the leading gas supplier in Hungary in February 2009.

The new pipeline would have an annual capacity of around 6.5 billion cbms. The heads of Plinacro, the gas branch of Croatian INA, and the Hungarian company FGSZ" decided to sign a joint development agreement soon aimed at connecting the pipeline networks of Hungary and Croatia.

The new pipeline will be reversible, which means once a planned liquefied natural gas (LNG) terminal which is built on the island of Krk in Croatia's northern Adriatic. This also means that this small independent country in SE-Europe will be able to connect to any of the major international pipelines that may be built in the future, like Nabucco or South Stream. By the content of the contract Földgázszállító will build the 206-km long Hungarian section of the pipeline, while Croatia will cover the costs of the 88 km stretch in Croatia. The pipeline will connect the village of Városföld in Hungary with Slobodnica in Croatia.

The Balkans were severely affected by stopping in gas supplies arising from Moscow's dispute with Ukraine this January and Croatia considered the planned LNG terminal as crucial for diversifying energy supplies.

Hungary, which also heavily relies on Russian gas imports but has sufficient reserves and has also domestic natural gas production on the territory of Hungarian Alföld (Great Plain) shipped gas to Croatia, Bosnia and Serbia during the gas crisis in January. The large capacity LNG terminal planned by a consortium of Croatian and European energy firms, should also improve supply security for the wider region as it will be able to process more gas than Croatia needs.

Conclusions

The global increase of hydrocarbon energy demand resulted the sustained increase in energy prices since 1999 and pushed the energy (especially the gas supply) security as a dominant global geopolitical issue. There is an energy interdependency between the suppliers and consumers, which underline the need of security of supply and of markets. Although the fair relations between the exporters, importers and the transit countries should be the priority of energy issues, due to the increasing competition for energy resources and markets,

beside of economic factors also the geopolitical motivations could be observed at decision making. As a result of little unity among EU-member states' energy policies Russia often took advantage of this situation. Due to this lack of unity the Kremlin could "preemptively block European attempts to construct transport routes for Caspian and Central Asian oil and gas that do not involve Russia" (BARAN, Z. 2007). The countries, and the large European energy companies (e.g. ENI, BASF, Ruhrgas, Gaz de France, Gasunie) are played against each other by Moscow in order to secure more favourable (often dominant) market situation for Russia. Sometimes Russia seems to strive after driving wedge between the eastern (former Soviet ally) and western member states of the EU.

The energy strategy of East Central European countries have joined to EU in 2004, it can be stated that majority of these countries have already energy policy and strategy to secure their own energy supply. All of them are making fluent efforts to be independent from considerable part of the Russian oil and gas import in the near or farer future. To avoid negative effects of the future's unforeseen gas wars and unfriendly actions originated from Russia or Ukraine, the new member states of the European Union have worked out more scenarios and projects for the future. Additionally, they have also declared targets to increase the rate of renewable energy in their domestic energy production.

Opposite to it Hungary is still stuck into powerful energy economies that drive to international energy-security politics. The county has just switched sides when turned off from US initiations and gave preference to Russian connections. Furthermore there are no visible indication of a coherent national energy security strategy. It is not surprising that the country is not taken into account when decisions are made, neither to the extent is should. It should be priority to take pending political decisions and form a real national strategy.

Hungary's EU lobbying techniques should also be enhanced. However, without clear political intentions and decisions it is difficult to lobby for anything. Technically and financially the country is not prepared to provide a substantial portion of national energy production from renewable energy sources. It is very unlikely that long term objectives will be integrated into effective government actions. The European Union is also putting the requirement of sound economic management over savings energy and all these initiatives Hungary have to take into consideration.

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