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Ukraine and Slovakia

in a post-crisis architecture of European energy security

Prospects for transport of hydrocarbons and bilateral cooperation

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CONTENTS

ABBREVIATIONS:

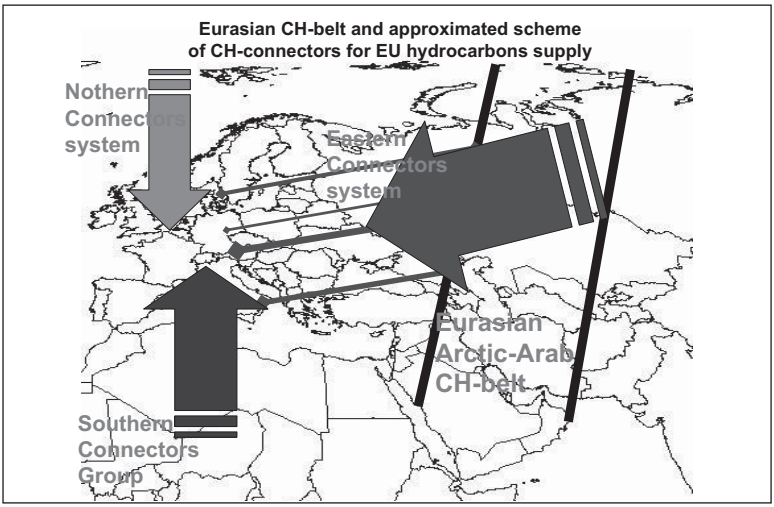
AWP – Adria–Wien Pipeline
CEE – Central and Eastern Europe
CEGH – Central European Gas Hub
CH – chemical symbol of hydrocarbons (oil and gas)
CHSS – Communal Heat Supply Sector
CMEA – the Council for Mutual Economic Assistance
CoC – Chamber of Commerce
CPC – the Caspian Pipeline Consortium
CSTO – Collective Security Treaty Organization
CzR – Czech Republic
DC – Subsidiary Company
EC – European Commission
ECT – Energy Charter Treaty
ECT – Energy Community Treaty
EEC – European Energy Community
ETR – Energy Transparency Regime
GCU – gas compressor unit
GMS – gas measuring station
GTS – gas transportation system
ITGI – Interconnector Turkey – Greece – Italy
MOP – Main Oil Pipelines
MPT - Main Pipeline Transport
NERC – National Electricity Regulatory Commission
NJSC – National Joint Stock Company
OFM – Oil Flow Meter
RF – the Russian Federation
RUE – RosUkrEnergo
SOCAR – State Oil Company of Azerbaijan Republic
SPP – Slovensky Plynarensky Priemysel, a.s.
SR – Slovak Republic
TAP – TransAdriatic Pipeline
UGE – Ukrgaz-Energo, a joint venture between RUE and Naftogaz of Ukraine
UGS – Underground gas storage
URMH – The Regulatory Office for Network Industries (regulatory body of SR)
V4 – Visegrad Group (Czech Republic, Hungary, Slovakia, Poland)
WT – the Warsaw Treaty

1. Introduction: Slovakia and Ukraine in Eurasian energy area

1.1 EURASIAN TRANS-CONTINENTAL HYDROCARBON AXIS: MOSCOW - KYIV - BRATISLAVA - PRAGUE - BERLIN – BRUSSELS

1.1.1. Hydrocarbon landscape of Eurasia

A wide strip of mainland and continental shelf territory starting from the Russian sector of the Arctic up to the Arabian Peninsula can be labelled an Arctic - Arabian hydrocarbon belt (CH-belt) of Eurasia. It is the strip where the major mainland oil and gas fields are located on the territory of Russia, Kazakhstan, Uzbekistan, Turkmenistan, Iran, and the Gulf and Arabian Peninsula countries. As the production of hydrocarbons has been developing, transport routes to the markets of their consumption, the major of which is the European Union, started to branch off this diagonal CH-belt of Eurasia in the latitudinal direction. Practically, these transport routes connect the area of production (upstream) with the consumption market (downstream).



Historically, the first such connector became an oil and gas supply route from the Western Siberia to Europe through Ukraine, which was developed in 1970s-80s. After a period of geopolitical transformation of Europe, which began with the unification of Germany, and continued with disintegration of Yugoslavia, the USSR and the Czech and Slovak Federal Republic, and which ended with the EU enlargement to the Central, North-Eastern and South-Eastern Europe, the main latitude CH-connector of Eurasia has been transformed in political terms from a two-side connector "Moscow (USSR - CMEA - WT) - Bonn (Germany)" to a 6-side connector "Moscow (RF) - Kyiv (Ukraine) - Bratislava (SR) - Prague (CzR) - Berlin (Germany) - Brussels (EU)". Of course, the transformation of a simple two-side system into the 6-side one automatically means the complication of its functioning, reduces reliability and increases the risks of unforeseen situations, what actually happened later. Anyone of the creators of hydrocarbon supply transcontinental system could hardly imagine in 1960s-70s, for example, the gas crisis of 2006 or 2009. Even after the Arab oil embargo in 1973, the gas crisis of 2009 looked as a phantasmagoria.

Economically growing Turkey, India, China, Indonesia, South Africa, and Brazil need more and more energy. It is unlikely that the global economic recession can stop growing energy consumption even in the developed countries. In the future we can assume a conservative trend of an energy consumption growth in the OECD area. An exception might become the EU, which has chosen a strategy of energy efficiency without a significant increase in energy consumption, as far as it wants to reduce carbon emissions. However, the success or failure of this strategy will be possible to estimate only after 2020, depending on the implementation of 20-20-20 plan.

As for energy production, additional resources – primarily hydrocarbons, are needed. Eurasia is being compared to a territory of a "global hunt". The role of global "hunters" is traditionally played by the U.S. and the EU, economies of which cannot develop without imported energy carriers. Although the shale gas revolution in the U.S. has made it independent from the natural gas imports, the prospect for reducing U.S. oil imports by developing domestic production does not look promising against the background of the accident in the Gulf of Mexico. China and India, whose rapid growth requires ever-increasing amount of energy, joined the "global hunt" at the beginning of this century. Turkey, whose GDP has been growing intensively during the past decade, is joining the "club of hunters" as well.

Countries-owners of energy resources of the Eurasian CH-belt are concentrated in the Central Asia, the Caspian region and the Middle East. Although the Caspian region has not become the second Persian Gulf, it is comparable to the North Sea area, hydrocarbon reserves of which have played an important role in the

European economy in the last quarter of the XX century. Russia plays a dual role. On one hand, its energy resources are attractive for the "global hunters", on the other one, Russia itself is a regional player, which tries to maintain and strengthen its own control over the transportation of energy resources from the Central Asia and the Caspian region to world markets, what was clearly shown by the events of August 2008 in the South Caucasus.

The EU, as well as its neighbours in Eastern Europe, continues to be dependent on supplies of Russian oil and gas, albeit by different degrees. Closer to the East, there is a greater dependence on imports from Russia. It is a hereditary phenomenon of the former socialist block (WT, CMEA) and the USSR. This dependence has been clearly shown during the January 2009 gas crisis by the case of both Bulgaria and Slovakia.

The EU has three main sources of carbohydrate supplies: the North Sea, the Middle East and Russia. Central Asia with its Caspian region has prospects for increasing its importance within the Eurasian continent. In the current decade, Turkmenistan, Iran and Iraq may come at the forefront with the prospects for expanding production and exports of their gas, and Kazakhstan - of its oil.

In the area of diversification of energy supplies, the Central Asia and Caspian Sea are becoming more and more significant regions for Europe. Azerbaijan already has become an important energy player. It has substantial oil and gas resources and it became one of the two key links of non-Russian transit route from the Central Asia to Europe via the South Caucasus. The largest gas reserves among the Central Asian countries are in Turkmenistan, Kazakhstan and Uzbekistan. After the international audit of gas reserves, Turkmenistan has significantly improved its ratings. Practically, with its 8.1 trillion cm of proven reserves, Turkmenistan took the 4th position among countries with the largest gas reserves in the world, being only behind of Russia, Iran and Qatar, and outstripping Saudi Arabia, UAE, Algeria and Iraq.[1] Importance of Azerbaijan is growing; its proven gas reserves are also increasing. By estimates, after the discovery of new deposit "Umid" they have already surpassed the Norwegian gas reserves. "Today, our proven gas reserves amount to 2.2 trillion cubic meters, and I am sure that potential reserves are even greater than this figure", - Azerbaijani President Ilham Aliyev stated at the joint press conference with the European Commission President Jose Manuel Barroso in Baku on 15 January 2011.[2]

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1 BP Statistical Review of World Energy, June 2010, p.22 Available online at: http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2008/STAGING/local_assets/2010_downloads/natural_gas_section_2010.pdf

2 «Ильхам Алиев: Южный газовый коридор поможет реализации газового потенциала Азербайджана», 15.01.2011 http://www.centrasia.ru/newsA.php?st=1295042160

Russia is the world's leading supplier of hydrocarbon energy resources, which are imported by the EU and Eastern Europe, including Slovakia and Ukraine. Russia has the largest reserves of natural gas in the world. The leading Russian gas producer Gazprom controls more than 60 % of Russia's proven gas reserves, which represents about 17 % of the global gas reserves. According to estimates of the independent auditor «DeGolyer and MacNaughton», proven and possible reserves of the Gazprom Group at the end of 2009 totalled 21.9 trillion cm of gas[3]. However, natural gas in the bowels of the earth and gas "on the burner" of consumers is not the same thing. First, gas must be retrieved and delivered to the consumer. There is a question where the problem comes into the sight for the Russian gas monopoly. In the present Russia, the reality of the hydrocarbons' reserves development is a different thing, than it was in the period of the gas boom of 1970s. Since 2002, gas production is falling at the major Western Siberian fields of Urengoy, Yamburg, Medvezh'ye, Nadym and Pur-Tazovskoye. Particularly, sharp decline is taking place at the first two fields, which together provide two thirds of Gazprom's production. Despite the media activity of Gazprom, the pace of work on the development of new deposits at the Yamal Peninsula and offshore Shtokman field in the Barents Sea shelf, the development of which had to be launched in the mid-90ies, does not give a ground for optimism. Large-scale volumes of natural gas production at the Yamal and Shtokman fields, comparable to the Western Siberian volumes of 80s—90s are expected only beyond the horizon of the year of 2020. Thus, there is a kind of "scissors effect" - the growing imbalance between the gas reserves, which are being developed, and replacing stocks.

Although, as declared by Gazprom, the trend of negative increase is overcome, but even in Russia this claim is challenged. Russian experts reasonably believe that stocks growth is actually obtained though the re-interpretation of the old geological information, gained during the Soviet period. The twelve years long period of low growth of the gas reserves, which occurred in Russia in 1993-2005, of course, will be recalled even if the current dynamics of the increase will be positive. Hence, there are rooted Russia's attempts to control a Central Asian gas. With the operation of gas pipeline Turkmenistan – China and its capacity expansion to Iran, these attempts are doomed. But without Central Asian gas resources Russia faces a default in securing the contracted supplies to European markets if the EU increases its imports from the East. Economic recession in the euro zone, implementation of the 20-20-20 plan and more flexible pricing of other gas suppliers at the European market entails a reduction of the EU gas imports from Russia, what has become the saving straw for Gazprom on one hand, but on the other hand, it has turned into compression shrinkage of traditional market for Russian gas.

[3] Available online: http://www.gazprom.ru/production/reserves/

However, despite Russia's problems, the basic Eurasian CH-connector Moscow - Kyiv - Bratislava - Prague - Berlin - Brussels continues to function. Of course, the reality of the new decade will be the emergence of other CH-connectors in addition to the transit gas pipeline Yamal – Europe and transit-free oil Baltic Pipeline System - 1 that emerged in the first half of the last decade. In particular, the transit-free pipeline North Stream, initiated by Russia and Germany, and Southern gas corridor, initiated within the EU, are able to change dramatically the connectors' map of Europe. Actually, the tendency to form new routes is rooted in the last decade. However, it can be argued that it did not significantly influence the existing main routes loads level, and supply and transit of gas and oil through the Slovak-Ukrainian route, as far as the hydrocarbon consumption in the EU has been increasing and requiring additional transport capacity. Two large-scale gas crisis in Europe in 2006 and 2009, the global financial crisis in 2008 and economic recession have made drastic adjustments of the development of European energy industry.

Energy efficiency, energy conservation, renewable energy, and a nuclear renaissance outlined the long-term trend of conservation or low-level growth in consumption of hydrocarbon resources. Also the so-called revolution of a shale gas in the U.S. has contributed to consolidation of this trend, what caused a domino effect on the LNG market and re-oriented its flows from the U.S. to Asian and EU markets. Gas crisis stimulated projects on diversification of geographic sources of oil and gas supplies. Inflexible pricing of Russian Gazprom for its European costumers led to a reduction in its market share as well as to the growth of other suppliers' shares, in particular, Norway and Qatar, and to a lesser extent Algeria.

When Russia will complete the Baltic Pipeline System -II in 2011, the question of future of the oil pipeline system "Druzhba", which has been the main supply route for Siberian oil to CEE countries for almost 50 years (since 1962), will be on the agenda, and first of all the supply and transit through Ukraine and Slovakia ("Southern Druzhba"). All the above mentioned facts pose challenges for the Ukrainian-Slovak route of hydrocarbons' supply and transport.

1.1.2. Ukraine and Slovakia on the CH-axis of Eurasia and CH-connector systems of the EU.

In order to assess the prospects for the main route of hydrocarbons transportation from the Western Siberia to Europe, it is necessary to consider its place in the overall supply of gas and oil to the EU. Traditionally, the EU receives hydrocarbon resources through several communication corridors which are the connector systems and connector groups (oil and gas pipelines, shipping routes of transportation and terminals). Connector system emerges when communications are controlled from the single centre (usually the supplier of resources) or from several

centres, but within the agreed policy between provider and consumer. Connector group appears only due to geographical factors of communication that are not interconnected into the system, as far as resource providers and consumers are different and carry out competitive policies.

1. **Northern connector system** generates oil supplies from the North Sea shelf covering 26,7% and 15,5% of the total EU gas imports. It can be considered as an intra-European system. As hydrocarbon resources are exhausting, it will turn into a phase of degradation.

2. **Southern connector group generates 30,5% and 32,7% of gas and oil supplies respectively through:**
   - **Southern Mediterranean Connector: 22,1% of gas and 10,2% of oil supply respectively from Algeria, Libya, and Egypt;**
   - **Persian Mediterranean (Suez) Maritime Connector: 19,7% of oil from the Persian Gulf (Iran, Saudi Arabia, etc.), and 2,4% of gas from Qatar.**

3. **Atlantic Connector:** Tanker supplies of oil (2,8%) and LNG (6%) from the West Africa (Nigeria), and the Caribbean (Trinidad and Tobago)

4. **Eastern connector system generates 40.8% of gas and 37.4% of oil supply from RF and Central Asia through continental and maritime routes and is composed of three connectors:**
   - **Eastern European (Russian-European) multi-connector** - oil and gas from RF and Central Asia is supplied by the continental pipeline system through Ukraine and Belarus in the direction to Slovakia, Hungary, Romania, and Poland. Multi-connector by itself includes the three connectors:
     - *Southern Baltic connector* supplies oil through a combined route (pipeline + tanker) through the Baltic ports (ceased operation when RF abandoned the transit via Latvia and Lithuania);
     - *Belarusian connector* supplies oil and gas by pipelines via Belarus to the EU;
     - *Transcarpathian connector* supplies oil and gas by pipelines via Ukraine to the EU.
   - **Black Sea-Mediterranean connector** supplies oil by tankers from Russia through the Black Sea Straits to the Mediterranean market. Future prospects of this connector lay within the projects of combined oil transportation (tanker + pipeline): oil pipelines Samsun - Ceyhan or Burgas – Alexandroupolis, and gas pipelines the South Stream or the Blue Stream - II;
   - **East Baltic Connector** supplies oil and gas from Russia through the Baltic. It has been launched in 2005 after the creation of the Baltic Pipeline System – I. This connector formation will be finalised when North Stream gas pipeline and BTS-II oil pipeline projects will be implemented.

5. **Trans-European connector system: oil from Azerbaijan is transported by the Baku - Tbilisi - Ceyhan pipeline. It has in the future development prospects for gas supplies from Azerbaijan, Turkmenistan and Iran (Nabucco), the Middle East (Iraq, Egypt) within the framework of Southern Gas Corridor, as well as of oil supplies by Samsun - Ceyhan pipeline via the territory of Turkey.**
6. **Caspian-black Sea-Mediterranean connector system**: oil from Kazakhstan and Turkmenistan is transported across the Caspian Sea (tankers), the South Caucasus (rail) and the Black Sea (tankers) to the Mediterranean.
7. **Caspian – Black Sea – Central European connector group has been under development since the second half of 1990s, its prospects are uncertain (oil pipeline routes Odesa - Brody - Southern Druzhba, Constanta -** Omišalj - Trieste and gas pipelines White Stream and AGRI). Its resource base depends on oil and gas in the Caspian basin.

Therefore, the most powerful CH-connector system of the EU at the pre-crisis year of 2007 was the Eastern one.[4]

According to the above classification, Ukraine and Slovakia are parts of the Carpathian connector of the Eastern European multi-connector system, which has the monopolist supplier - Russia, a supplier which performs as an owner of transport system of hydrocarbon resources, as well as the controller of actual transit of certain volumes of oil and gas from Central Asia to the EU market. This connector has been formed as the key connector for the gas supplies for the EU and remains in this position, having created a kind of CH-axis of Eurasia. Ukraine and Slovakia are located on this axis.

Along this axis a "global competition" is going: who will expand its own rules, the supplier or consumer, monopoly or market? Slovakia became a bright example of both the expansion and the strengthening of the area of European rules of play. Becoming a member of NATO and the EU, Bratislava has implemented European energy rules of play; it has transformed its energy sector and passed a point of no return. Ukraine did not become a member of NATO and the EU, though it has declared respective intentions. By joining the Energy Community Treaty, Ukraine committed itself to implementation of European rules of play. However, Ukraine did not pass point of no return; moreover, the reverse processes are taking place: having declared its non-alignment, Ukraine refused

[4] Calculations of capacities of the connector systems' and groups' shares within the general provision of hydrocarbons import to the EU are made on the basis of: "EU energy and transport in figures. 2010", p. 31
Available online at: http://ec.europa.eu/energy/publications/statistics/doc/2010_energy_transport_figures.pdf

to join NATO, agreed to the extension of the Russian military presence on its territory, and Kyiv has marked its interest in integration projects (the Customs Union, CSTO), which are offered by Moscow. Russia is trying to modify the rules of play in Europe to its own liking, including the rules within the energy sector. Ukraine once again "did the splits". The clash of "two worlds" is taking place on the Eurasian CH-axis, where on one hand, there are NATO, EU, V4, Slovakia, and on the other one - Russia, CSTO, the Customs Union. Between these worlds, there is a buffer – Ukraine. Moreover, the buffer, which more and more closely is being tied by Russia to its political and economic projects. In great extent, the both neighbouring countries – Ukraine and Slovakia – have a little room for cooperation and freedom of manoeuvre, because the other parties or supranational formats define the rules of play. It is worth to pay attention to words said by J. Friedman of STRATFOR:

«Russia, by building pipelines for natural gas supply, meets the Europe's needs in energy while solving its own economic problems and putting Europe into a dependency. In a world needy of energy, Russian energy and energy resources export is similar to heroin supplies. Countries that once benefited from gas and oil from Russia fall into a kind of dependence on these supplies. Russia already uses its gas resources as a tool to coerce other countries, forcing those to bow to its will. This power penetrates to the heart of Europe, where the Germans and the former Soviet satellites from the Eastern Europe depend on Russian natural gas. Combined with other resources, it allows Russia to exert strong pressure on Europe»[5].

In this context, one should look what Kyiv and Bratislava can undertake together in order to keep the Carpathian CH-connector functioning, to prevent its breakdown or minimize damage if such a break happens. To a large extent, a gas crisis of January 2009 became an indicator of this possibility and/or impossibility. According to its course and consequences, rather sad conclusion can be done: Kyiv and Bratislava, being in the very epicentre of the crisis, nothing could do **together**. They operated separately and - above that - on different sides of strange and unnecessary for both "gas war": Bratislava accused Kyiv, and Kyiv ignored Bratislava. Activity centres were Moscow, Brussels and Prague (Czech Presidency in the Council of the EU). But the crisis is forcing everyone, and above all Ukraine and Slovakia, to take appropriate measures for the future.

[5] Фридман Д., Следующие 100 лет: прогноз событий XXI века, перевод с английского, Москва, ЭКСМО, 2010, стр. 145-146 - Friedman, G.,The The Next 100 Years: A Forecast for the 21st Century, the translation from English. Moscow, EKSMO, 2010, pp. 145-146 [in English]

1.2. THE GAS CRISIS - 2009: A BRIEF RETROSPECTIVE

1.2.1. The situation of Slovakia

Natural gas has been transported from Russia to Slovakia by main gas pipelines through Ukraine since 1972. On January 7, 2009 it came to a complete cessation of gas supply, which happened for the first time in 37-year history of the Siberian gas transit from Russia to the EU. The "gas pause" have lasted for almost two weeks (from January 7th to 20th 2009), it adversely affected 17 European countries, including 12 EU member states. Among EU countries, the gas crisis hit for the most Slovakia and Bulgaria, which were 100 % dependent on Russian gas supplies. SR was not prepared for the crisis and was forced to reward the high price for dependency on one source and one route for natural gas supplies, as well as for the long failure to address the issue of diversification.

On the initiative of SPP, the government of SR has introduced the state of emergency and imposed the regulatory level №8, which lowered the use of gas for large companies (those that consume more than 60 thousand cm of gas per year) to the necessary level only in order not to destroy their technological capacities. The electricity supply and transmission system stability were under the threat, since almost 15% of electricity in the SR is produced on basis of gas. Also, introduction of the regulative level number №8 had a negative impact on businesses that provide additional services to maintain the stability of the transmission system of electricity. Slovakia, since its beginnings in 1993, confronted the biggest external threat to its energy security. Extraordinary regulatory level №8 touched about 770 enterprises in the country that were forced to restrict radically, and in most cases to stop completely their productions. Many companies were considering relocation of their production activities to neighbouring countries, which suffered from gas crisis to less extent.[6] Had the crisis lasted several weeks longer, the consequences for the Slovak economy could be disastrous, including the outflow of investments, and would cause a jump in unemployment.

At the extraordinary meeting with the Prime Minister Miroslav Topolanek of the Czech Republic in Prague on 16 January 2009, aimed at finding ways out of crisis, the Prime Minister of Slovakia Robert Fico said: "The expert analysis indi-

[6] According to the words of manager at the Whirlpool Slovakia Pavol Cedzo, said at the seminar organized by American Chamber of Commerce Slovakia on March 9, 2009 in Bratislava, if the gas cuts hold on several days more, company would relocate the significant part of production of washing machines to neighbouring Poland. Many other Slovak enterprises found themselves in analogical situation being not able to produce and fulfil the contractual obligations before their clients because of the gas shortage. See: *Energy crisis: lessons learned*. Business seminar, AmCham, Bratislava, march 5, 2009; Available online: http://www.amcham.sk/upload/gallery/Docs/conn_04_2009_27.pdf.

cates that every day we lose about 100 million Euros".[7] According to the calculations of the Slovak Academy of Science, economic losses of Slovakia, caused by the gas crisis, amounted to about 1 billion Euros. Slovak Finance Minister Ján Počiatek, at the meeting of the EU Economic and Financial Affairs Council (ECOFIN) on 20th January 2009, stated that "according to the first assessments of his ministry, the GDP will decrease as a consequence of the gas crisis by 1-1.5% of the GDP".[8]

Complete stoppage of gas supplies from Russia through Ukraine to Slovakia on 7th January 2009 caused the Prime Minister of the SR Robert Fico's emergency visits to Kyiv and Moscow, which took place on 14th January 2009. The Slovak side has asked Ukraine to agree to the swap operation between Russia, Slovakia and Ukraine of 20 million of natural gas supplies per day, which would allow solving the problem of acute shortage of gas in Slovakia. Within this exchange transaction, Russia would be supplying gas to Eastern Ukraine, and Ukraine would supply the same volume of gas from its underground storage facilities in Western Ukraine to Slovakia. The Russian side agreed to this exchange, the Ukrainian side did not. Prime Minister of Ukraine Yulia Tymoshenko stated that Ukraine is unable to supply gas from domestic production or storage facilities in Western Ukraine to Slovakia, because after the gas supply cessation by Russia the gas transportation system in Ukraine has been transferred in reverse mode, and gas from UGS is the West of the country has been transported to the East. Moreover, Ukraine itself experienced a shortage of gas.

At the negotiations with the Ukrainian counterpart, the Prime Minister of the SR directly has accused Kyiv of responsibility for the cessation of gas supplies from Russia to Europe. In a discussion program at the Slovak television "5 minutes after twelve", which was broadcast on the STV-1 channel on 18th January 2009, the Prime Minister of Slovakia said

[7] „Fico a Topolánek: SR môže dostávať cez ČR denne až 20 mil. kubíkov plynu". *TACP*, - "Topolanek and Fico: SR may receive through the CzR up to 20 million cubic meters of gas daily." TASR, January 16, 2009. [In Slovak]

[8] „Počiatek: plynová kríza bude mať na ekonomiku SR dopad v rozmedzí 1 – 1,5 % HDP". *TACP*, - "Počiatek: gas crisis will have impact on the economy of the SR in the range 1 to 1.5% of GDP." TASR, January 20, 2009. [In Slovak]

that Ukraine's refusal of an offer to substitute gas may be the cause of the political consequences in the mutual relations with the SR. Thus, he did not rule out the possibility that this may be reflected in the revaluation of the current Slovak support of Ukraine's aspirations of its integration into the European and Euro-Atlantic structures.[9] The gas crisis has put serious question marks over the further development of bilateral Slovak-Ukrainian relations.

1.2.2. The situation of Ukraine

However, actual situation in Ukraine, which as a consumer of Russian gas as Slovakia and other EU countries, was close to critical, despite the fact that it had its own gas production and used the UGS gas resources by reversing the GTS. Here is a brief description of the situation on January 11, 2009 (4th day of supply to Slovakia cut-off and 11th day of supply cut –off to Ukraine) using the language of operative documents:

«*In connection with the termination of deliveries of Russian natural gas for Ukrainian needs and transit to European consumers, industrial complex has been transferred to the limited gas supply mode. Government of Ukraine and local authorities has carried out the organizational measures to limit the consumption of natural gas by:*

- *temporary shutdown of some enterprises that have no closed loop of production;*
- *reduction of gas consuming by reduction of production volumes and working day;*
- *switch to reserve fuels (fuel oil, coal);*
- *lowering the temperature of heating;*
- *discontinuation of gas deliveries to the* indebted companies.

These measures, as well as the air temperature increase during the last days helped to reduce daily consumption of natural gas from 306.3 million (in the period of January 7th -8th) to 267 million (January 11th).

In particular, as on January 10th, the consumption was ensured by following resources:

- *underground gas storages (UGS) - 197.4 million cubic meters. (9 January - 203.1 million cubic meters, 8 January - 209.7 million cubic meters.);*
- *domestic production - 61.7 million cubic meters. (9 January - 61.5 million cubic meters, 8 January - 61.6 million cubic meters.);*

[9] „Тимошенко: Украина не может помочь Словакии собственным газом". *Korespondent.net*, 14 января 2009 - "Tymoshenko: Ukraine cannot help Slovakia with its own gas." Korespondent.net, January 14, 2009 [in Ukrainian]; Toda, M., Procházková, P., „Slovenský premiér navrhol improvizované riešenie: výmenu ruského plynu s Ukrajinou". *SME,* 14.01.2009. - Toda, M., Procházková, P., „Slovak Prime Minister proposed a makeshift solution: the exchange of Russian gas with Ukraine." *SME*, January 14, 2009 [In Slovak]; Statement by the Prime Minister of Slovakia Robert Fico in a discussion program „5 minutes after twelve". STV-1, 18 January 2009.

- *deficit, which was covered by using the technical gas from the GTS - 10,8 million cubic meters. (9 January - 25.7 million cubic meters, January 8 - 35 million cubic meters).*

The state of the gas transport system operation remains close to critical. Because of insufficiently tough position of local governmental bodies and NJSC Naftogaz Ukrayiny concerning limitation of gas deliveries to enterprises and their cuts if necessary, the consumption of technical gas from the GTS has been continuing during the last week. If the current regime of GTS resources consumption continues, on January 12-13 the gas transport system may become disbalanced along with unpredictable consequences.

Local authorities and departments in all regions of Ukraine, pursuant to instructions of the government and the recommendations of the NJSC Naftogaz Ukrayiny has been undertaking measures to limit gas consumption, primarily, by industrial customers. Currently, gas deliveries to chemical industry enterprises and the majority of steel plants are suspended or reduced to minimum possible technical level. In such a way, it was succeeded to reduce daily consumption of natural gas to industrial consumers by 22 million cubic meters, to a level of 33.7 million cubic meters. At the same time, the analysis of the situation shows that the implemented measures are insufficient to stabilize the situation with the gas deliveries.

Most of the social infrastructure and housing and communal services after the cease of Russian gas supplies to Ukraine are operating in a stable mode. However, from January 10 in some regions there are happening consumers' cut off from hot water, the enterprises of communal heating services are reducing the heating and water temperature for the residential and social facilities (Great Yalta, Dnipropetrivsk, Donetsk, Zhytomyr, Zaporizhzhya, and Odesa). In addition, on January 10, at one of the telephone conferences the NJSC Naftogaz Ukrayiny management has given recommendations to local authorities in the regions to cut off the enterprises of communal heating for 1-2 hours a day and to low gradually the temperature of heating.

***To address the restoration of reliable gas supplies to Ukraine and ensuring the Russian gas transit to European consumers, as well to prevent crises in the future, it is offered to exert immediately every effort in order to stop the consumption of gas from the gas mains. Thereto, it is necessary to limit strictly the consumption of gas to 250 million cubic meters per day, first of all for the industry**. In order to maintain the stable operation of GTS on the minimum maintenance level, Ukrainian daily gas consumption shall not exceed 260 million cubic meters (consumption from the UGS + domestic production), and for gradual compensation of already used technical, the gas consumption should be 240-250 million cubic meters."*[10]

[10] On the basis of generalized corporate estimates of the situation during the peak of the gas crisis in January 2009.

Only strict self-imposed restrictions, established in Ukraine, and sticking to them allowed to avoid the GTS technical dysfunction and to resume gas transit to EU at most quickly (within days), after settling the situation with agreement of January 19. If the mentioned above threshold consumption limits were not met, recovery of the GTS technological capacity to carry out transport of gas would took at least three weeks. That is, the SR would remain without gas at least by 10 February 2009. This would mean a collapse for the Slovak economy. Feeling of such a threat prompted the SR leadership and the national gas operator SPP to develop quickly emergency scenarios to ensure gas supply to the country, using the only possible at that time Ukrainian model – reverse flow of the GTS.

1.2.3. Restoration of the gas supply and preliminary conclusions

On January 17, 2009 the Slovak gas company SPP confirmed that it has secured the additional natural gas supplies through contracts with its shareholders - the German company E.ON Ruhrgas and the French company GDF Suez, as well as RWE Transgas, which owns the transit pipelines on the territory of the Czech Republic – in order to provide reverse operation of pipelines and gas supplies to Slovakia from the territory of the CzR, and to abolish restrictions on gas consumption. Agreed gas amounts were pumped from the sources of the above mentioned companies, which agreed to sell it to the SPP. The result of these actions was the fact that on 18 January 2009 – for the first time in the history of the Slovak transit pipeline - gas was pumped into the SR not from the East, i.e. from the territory of Ukraine, but from the West, i.e. the Czech Republic. With these deliveries, starting from midnight from January 18 to 19, 2009, SPP cancelled restrictions for Slovak wholesalers. Simultaneously, on the same day, Russian and Ukrainian parties at the talks in Moscow agreed the settlement of disputes and restoring the natural gas supplies from Russia through Ukraine to European consumers. On January 20, 2009, after 12:00 Russian gas started to be delivered at the Ukrainian-Slovak border through the GMS at Veľké Kapušany. By evening, the SPP subsidiary company Eustream renewed Russian gas transit through the territory of Slovakia for customers in the Czech Republic, Austria and other European countries of the EU. SPP- Distribution withdrew a state of emergency in the gas sector of the Slovak Republic from 14:00 of January 23, 2009.[11]

At the ardent discussions during the cold days in January 2009, both former prime ministers of the SR - Vladimir Mečiar and Mikuláš Dzurinda, who held the post of the head of government the longest - recognized that in the past their gov-

[11] Summary of the course and impact of the crisis in the supply of natural gas in January 2009, Central office of the SPP, a.s., Bratislava, January 27th, 2009

ernments did not give sufficient attention to the diversification of gas supplies. According to the executive director of the Slovak gas and oil union Ján Klepáč, "responsibility [for the gas crisis] lays on all of the previous (Slovak) governments - the governments of Mečiar, Dzurinda and Fico - some of them more, some less. All of them just talked about the search for new gas supply routes, but did nothing."[12] The main lesson from the gas crisis of January 2009 is that any responsible Slovak government can no longer afford the ignorance of the diversification of energy supplies.

Slovakia has no its own fault in becoming a hostage of the gas dispute between Russia and Ukraine. The SR economic losses caused by the gas crisis exceeded - according to the above mentioned estimates - 1 billion Euros. The impact of gas crisis on economic growth in 2009 was expressed in a 1% fall in GDP. The crisis threatened with the relocation of investors' economic activities from Slovakia to other countries, tensions in bilateral relations with Ukraine and finally, a confidence in Russia as a reliable supplier of natural gas was undermined. At the seminar, organized by American Chamber of Commerce in SR on March 5, 2009 in Bratislava, the vice-president of the SPP Dušan Randuška acknowledged in response to a direct question why SPP did not foresee the possibility of such crisis scenarios in the supply of natural gas that the Slovak gas industry did not admit the possibility of complete stoppage of gas supplies from Russia via Ukraine. He also added: "It will never be like it was before."[13] Minister of Economy Ľubomír Jahnátek declared after the crisis: "The price of gas will not be the only criterion to be considered for future gas deliveries to Slovakia."[14] He responded to the widespread argument in previous "diversification debates" in Slovakia about the lowest price of the Russian gas what, therefore, makes no sense for Slovakia to seek other sources of gas supply. The gas crisis in January 2009, on the contrary, showed that Russian gas can be too expensive for Slovakia under certain circumstances.

To summarise, we can define the most typical signs of gas crises, basing on events not only of January 2009, but of January 2006 as well.

1. During the gas crisis, especially in January 2009, the lack of objective information has been the major problem: «*At the EU level, a major difficulty in assessing how best to respond to the crisis was the limited access to important*

[12] Klepáč, Ján: „Za plynové škody môžu Mečiar, Dzurinda a Fico., by Martin Kováčik, Pravda, 23.01.2009 - Klepáč, Ján: Mečiar, Dzurinda and Fico are responsible for the gas damages", Interview prepared Martin Kováčik, Pravda, January 23, 2009 [In Slovak].

[13] *Energy crisis: lessons learned*. Business seminar, AmCham, Bratislava, March 5, 2009.; Available online: http://www.amcham.sk/upload/gallery/Docs/conn_04_2009_27.pdf.

[14] Slovák, Kristián: „Plynová kríza obnažila slovenskú bezmocnosť". *Trend*, 15.01 2009 - Slovák, Kristián: "Gas crisis has bared Slovak helplessness", Trend, January 15, 2009

technical information with respect to the gas system and gas flows at a national and an EU level. There was not enough reliable information about gas flows, how much gas was in the transit system, and demand patterns. This situation reflected on the fact that qualitatively different systems exist across Member States, with unequal access to information by market players and others, including public authorities. <...> the market was hampered by inadequate information on cross-border gas flows and transparent information on the flow of gas into the EU»[15] .

2. The crises **had a pan-European nature** and took place in a **trilateral format**. In other words, in each of these gas crises the **three major European actors** were involved: the Russian party - supplying gas, the Ukrainian party – transiting gas, and the EU party - consuming gas.
3. All crises failed to be prevented both by political and legal means.
4. The crises were resolved by **political means**. Legal mechanisms have not been involved or played a minor role. Settlements achieved have not a complex nature and can be seen as a kind of **ad hoc solution.**
5. Ultimate consumers, national governments of consuming countries and the European Commission did not know a complete pattern of the crisis, based on data from instrumental control, since the objective control of gas flow did not and does not exist.
6. Crisis unfolded practically under one scenario: the gas supplier reduced (in January 2009 until the full stop) the supply of gas to Ukraine, what led to a reduction (in January 2009 to a complete stoppage) of the gas transit through Ukraine. As a result, European consumers received lower volumes of gas then they have contracted with the Russian supplier. Following the Russian interpretation of the causes of the crisis, they accused Ukraine;
7. Slovakia and Ukraine were unable to consolidate efforts to counteract the crisis. Moreover, in 2009 the Slovak party identified Ukraine as a perpetrator of crisis. Trust between Kyiv and Bratislava was seriously undermined. The passivity of the Ukrainian side in the issue of cooperation with SR in the gas sector in the post-crisis period became for Bratislava a superfluous proof of Kyiv's guilt for interruption of supplies from Russia.

[15] Commission Staff Working Document. Accompanying document to the Proposal for a Regulation of the European Parliament and of the Council concerning measures to safeguard security of gas supply and repealing Directive 2004/67/EC. The January 2009 gas supply disruption to the EU: an assessment. Brussels, p. 5-6, 10 Available online: http://eur-lex.europa.eu/SECByRange.do?year=2009&min=976&max=1000

2. Post-crisis assessment of trends in energy security of Eastern Europe: political and legal aspects

2.1. CHALLENGES COMING FROM THE EAST IN THE CONTEXT OF THE REVISED ENERGY STRATEGY OF THE RUSSIAN FEDERATION AND OTHER OFFICIAL DOCUMENTS OF THE RF

An important factor of 2009 was not only the January gas crisis in relations between Russia and Ukraine, and the EU, but also the package of basic strategic documents adopted by Moscow: "National Security Strategy of the Russian Federation till 2020", "Energy Strategy of Russia for the period up to 2030", and "Military Doctrine of the Russian Federation".[16] Moreover, in 2009, RF made several controversial moves when it comes to its external energy policy. The first step was the publication of a sort of ersatz European Energy Charter[17] by the Russian President in April 2009 instead of adopting the existing one. The second step was the process of creating a Gas OPEC, which was continuing in June - albeit not successfully - as a Forum of gas exporting countries.[18] The third one was the Russian President's removal of the RF signature from the Energy Charter Treaty (ECT) in August 2009. By the above moves, Russia has put itself beyond the rules of play in the energy sector, which were agreed during the first half of the 1990s by 51 member countries of ECT. In addition, Russia came up with an initiative to conclude a *Treaty on European Security* (TES), in other words, a new European Security Pact that would

[16] Military Doctrine was adopted in February 2010 while it was ready in autumn 2009. See:: «Новая военная доктрина РФ почти готова», 08.10.2009 - The new military doctrine of Russia is almost ready, 08.10.2009 [in Russian] Available online:, http://www.prime-tass.ru/news/articles/-201/%7B66F6FF60-4642-4E42-9702-A9A3EF36C5EF%7D.uif

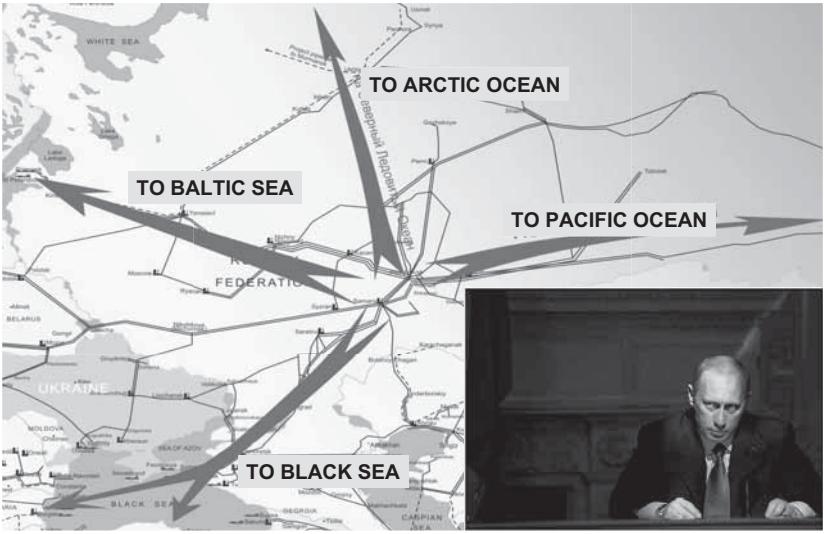
[17] It goes about the document „Conceptual Approach to a New Legal Framework for International Energy. Cooperation. Goals and Principles", published on April 21, 2009. Available online: http://www.kremlin.ru/text/docs/2009/04/215303.shtml

[18] http://www.gecforum.org/

establish a new European security architecture[19], which has been put into the test by the precedents of Kosova, South Ossetia and Abkhazia. All that lead us to an assumption that Moscow aims to reformat European political and energy sectors according to its own interests as well as to define exclusive zones of its influence. Additional confirmation of the latter can be found in a Programme on efficient use of foreign policy as a tool to support a long-term development of the Russian Federation, which has been drafted in 2010 by the Russian Foreign Ministry. The Programme contains the objective to promote the reform of Russian approach towards European security architecture simultaneously with a deterrence of „expanding activities of the NATO".

Given the scale of Russia and its role in European affairs, as well as dangerous signs of its aggressive behaviour that were manifested particularly in the Caucasus in August 2008, the strategic documents adopted in 2009 deserve careful analysis. Russia's ardour for the large-scale infrastructure projects in the area of hydrocarbon energy resources transportation that bypass traditional transit countries, on the background of the Russian leadership's propensity to use oil and gas as tools of exerting political influence on its neighbours, what has been clearly visible during the period starting from 2003 (time of the adoption of the first Energy

RUSSIAN STRATEGIC VISION: BYPASS ROUTES FOR OIL&GAS EXPORT ACCORDING TO ENERGY STRATEGY TILL 2030 (MORE PIPES THAN OIL AND GAS)



[19] «Project of European Security treaty », 29.11.2009, Available online: http://kremlin.ru/news/6152

Strategy of Russia for the period up to 2030) inclines to the necessity to consider possible vectors of Russian activities in Europe.

As for Russia's energy strategy, its specific provisions should be taken into serious consideration:

1. "Russia will strengthen its efforts ***to consolidate around its gas transport infrastructure the major regional gas production centres (countries of Central Asia, Iran) and form a Eurasian integrated transport system*** to ensure the export and transit flows between Europe and Asia"[20] *(hereinafter there are our selections for stressing attention – auth. note)*;
2. "The Russian pipeline infrastructure will become a part of the energy bridge between Europe and Asia, and ***Russia will become a key centre for its management***"[21].

Formulated in such a way provisions of the strategy are a bit better disguised reflections of more explicit proposals that were developed during the document's drafting in 2007:

"Russia is capable of <...> strengthening its influence on other resource centres, associated with Russia by common energy transport infrastructure (Kazakhstan and Central Asian republics)" [22], *«<…> Russia's role will be determined not only by our country's production capacity and supply of our own energy resources, but also by the possibility of effective dispatching of the third countries' transit energy flows... "»*[23].

In the above-mentioned project of the "Lavrov Program", not by accident there is a separate position on Ukraine and its gas transportation system as follows: "Russia's participation in the operation of the gas transport system of Ukraine should be regarded as a strategic goal"[24]. From the technical point of view, it is clear that without Ukrainian gas transport system and UGS Russia will not be able to become a full-fledged managing centre of gas flows on the East – West axis. The document contains very illustrative provisions when it comes to the development of energy cooperation between Russia and major energy rich countries in various formats:

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[20] «Энергетическая стратегия России на период до 2030 года», с. 54- „Energy Strategy of Russia for the period up to 2030", p. 54 [In Russian] Available online at: http://www.energystrategy.ru/projects/docs/ES-2030_(utv._N1715-p_13.11.09).doc

[21] Ibid., p 55

[22] Conception of Russia's Energy Strategy for the period till 2030 (project), Moscow: Ministry of industry and energy of Russia, Institute of Energy Strategy, 2007, p. 36

[23] Ibid., p 78

[24] http://www.runewsweek.ru/country/34184/

"To interact actively in the gas area within the Gas Exporting Countries Forum and a "big gas troika" (Russia, Iran and Qatar). <...> To ensure an effective use of competitive advantages of the Russian Federation in the energy sector through the development of regional and bilateral cooperation within the CIS area, transit initiatives, the establishment of mechanisms of coordination of activities of gas producing countries, interaction with OPEC and the leading countries-exporters of oil.[25]

That is, positions expressed in official documents are clearly focused on sustaining the policy of dominance of Russia in the energy sector through the pipeline infrastructure not only on a national level but also within international formats. Against the background of the Russia's withdrawal from the Energy Charter Treaty and its "unifying" initiatives (the so-called Putin's initiative on the merger between Gazprom and Naftogaz Ukrayiny), the above positions of Russia cannot but alert.

The importance of resource potential of Russia in terms of strengthening its international leverage are also highlighted in the National Security Strategy of the RF (p. 9): "The transition from a bloc confrontation to the principles of a multi-vector diplomacy as well as ***the resource potential of Russia*** and pragmatic policies of making use of it have expanded the Russian Federation capacities to strengthen its influence on the world stage."[26].

Taking into account paragraph 17 ("The determining factor for Russia in its relations with the North Atlantic Treaty Organization will be ***inadmissibility of plans to move NATO military infrastructure to Russian borders*** as well as any attempts to assign to the Alliance the global responsibilities that are inconsistent with the norms of international law"[27]), the foregoing paragraph 26 logically focuses on strategic deterrence. "Strategic deterrence involves the development and implementation of a complex system of interrelated political, diplomatic, military, ***economic, information and other measures*** aimed at forestalling or reducing the threat of destructive action on the part of the aggressor state (or a coalition of states). ***Strategic deterrence shall be carrying out along with the use of the economic potential of the state.***" [28]

Since the new military doctrine of Russia defines modern military conflicts, as "an integrated use of military force and capabilities, including ***measures of a non-military nature***", the deterrence task is formulated to be achieved through "neutral-

[25] http://www.runewsweek.ru/country/34184/

[26] «Стратегия национальной безопасности РФ до 2020 г.»- National Security Strategy of the Russian Federation to 2020" [In Russian] http://www.scrf.gov.ru/documents/99.html p. 3

[27] Ibid., p 6

[28] Стратегия национальной безопасности РФ до 2020 г.» - National Security Strategy of the Russian Federation to 2020" [In Russian]http://www.scrf.gov.ru/documents/99.html, pp. 7-8

izing the potential military challenges and military threats by political, diplomatic ***and other non-military tools***."[29].

The list of non-military means may also include energy and infrastructural capacity, which Russia is intensively upgrading. The threat of restriction or suspension of energy supplies, also under the guise of commercial conflict, can have impact on the potential adversary, especially along with the simultaneous mobilization of a lobby potential within the respective object country, carrying out the large-scale media psychological campaigns, and cyber attacks. This can create a cumulative effect of heterogeneous impacts on the authorities of the respective country and force it to the required concessions. It is not an accident that in the military doctrine of Russia information context of modern military conflicts is emphasized in the following way: "carrying out preventive information confrontation activities in order to achieve political objectives without the use of military force, and subsequently – to create a favourable response of the international community when it comes to the use of military force. "[30].

Vice Speaker of the State Duma of the Russian Federation and the Chairman of the Russian Gas Society Valery Yazev drew attention to the need of strengthening the information component in the context of the gas crisis in January 2009, while speaking at a parliamentary hearing. "Russia lost the information war in Europe during the "gas conflict" with Ukraine", – this was the conclusion, though not an indisputable one, made by influential Russian politician. Deputy Chairman of the State Duma said that recently an information component has become much more important part of ensuring national security of Russia. "Conquest of informational superiority has become a prerequisite of ensuring the victory in any fight - the military, political, etc..." - noted V. Yazyev.[31]

During the gas crisis in January 2009 Russian Federation carried out the attendant propaganda campaign which was biased in favour of the Russian position, including a simultaneous campaign with the aim to discredit Ukraine and Naftogaz Ukrayiny. It has become an important factor which led to increasing distrust to Ukraine from the side of its Central European neighbours and Slovakia in particular.

[29] Ibid., p 5-6

[30] Ibid., p 5

[31] В.Язев: Россия проиграла информационную войну в Европе по время «газового конфликта» с Украиной, «Нефть России», 14.04.2009, - V.Yazyev: Russia lost the informational war in Europe during the „gas conflict" with Ukraine, Neft' Rossii, 14.04.2009 http://www.gazo.ru/images/upload/ru/1555/GL_15.04.2009.doc [in Russian]

2.2. UKRAINIAN PROSPECT FOR A NEW DECADE: SECTORAL INTEGRATION TO THE ENERGY AREA OF THE EU THROUGH THE ENERGY COMMUNITY

2.2.1. Ukraine's accession to the Energy Community Treaty and the start of the Second EU Gas Directive implementation

On December 31, 2010, the President of Ukraine signed the Law of Ukraine "On ratification of the Protocol on Ukraine's accession to the Treaty establishing the Energy Community". Two weeks before, on December 15, the Protocol was ratified by the parliament. Minister of Fuel and Energy of Ukraine signed it in Skopje on September 24, 2010. Thus, pursuant to formal accession to the Treaty Establishing the Energy Community (ECT) Ukraine has needed more than three months – disproportionately long term if compared, for example, with the Kharkiv agreements between Ukraine and Russia, which were ratified in six days after their signing. Of course, the stumbling block of Ukraine's accession to the ECT was a draft law "On Principles of Operation of the Natural Gas Market of Ukraine", which is the Ukrainian equivalent of the Second EU Gas Directive. Ukraine has been invited to adopt this law at the meeting of the Ministerial Council of the Energy Community in Zagreb, on December 18, 2009, a meeting which decided about Ukraine's admission to the Energy Community. As for the EU the adoption of the above law was additional condition that would demonstrate political will and consistency of the Ukrainian government in the field of reforms of its domestic gas market. Such a position of the EU is a quite understandable since the law has been drafted for over eight years. In a memorandum to the draft of the law there is a statement that it was developed on the assignment of the Cabinet of Ministers of Ukraine of April 15, 2002, the assignment of the President of Ukraine of April 15, 2002 as well as in the accordance with the working plan on the adaptation of the legislation of Ukraine to the EU legislation in 2002!

This condition was fulfilled: the law was adopted on July 8, 2010, and came into force on July 24, 2010[32]. It is difficult to assess how long the law adoption would be procrastinated if not the EU's decision to make it a prerequisite for Ukraine's accession to the European Energy Community. Thus, the EU's pressure has become the key factor leading finally to its adoption by Ukrainian government. Ukraine has not demonstrated an adequate political will, despite repeated official declarations of intentions. The law is of fundamental importance not only in terms of the reorganization of the domestic gas market in Ukraine in a line with the European model, but also in terms of ensuring the natural gas transit through Ukraine

32 http://zakon.rada.gov.ua/cgi-bin/laws/main.cgi?nreg=2467-17

to the EU, where Slovakia is a key partner. Since Ukraine's gas transport system combines the functions of transit of gas to European consumers as well as of it delivery to the Ukrainian consumers, the importance of the above law only hardly could be overestimated.

It is a sort of irony that before the adoption of the gas market law, the regulation of one of the most important sectors of Ukrainian economy, on which the national security depends directly, has been fragmented within almost two decades. Certain provisions were included in different laws, i.e. the laws of Ukraine "On Oil and Gas", "On the Pipeline System", "On natural monopolies", "On Licensing of Certain Types of Business Activity", etc. The vast majority of norms were laid down by sub-legal acts, including a number of decisions of the Cabinet of Ministers of Ukraine (the key one was the resolution of the government no. 1729 of 27.12.2001 "On providing consumers with natural gas") and regulations of the National Electricity Regulation Commission of Ukraine (the key regulations of this commission identify licensing terms for different types of economic activities in the natural gas market). The outcome was the lack of norms and rules on functioning of the natural gas market fixed on the law legislation level, and consequently, the absence of the operation model of the gas market in Ukraine. In addition, a fragmentary Ukrainian legislation in the field of gas industry was not consistent with the objectives and principles of the European Union legislation (primarily with the provisions of the First and Second EU Gas Directives № 98/30/ES of 22.06.1998 and № 2003/55/EC of 26.6 .2003) respectively.

Adoption of the gas market law should provide a systematic approach to creating conditions for stable operation of the natural gas market and its further development, as well as it should bring a "gas" legislation of Ukraine in compliance with EU law (the following two objectives are outlined by the government of Ukraine in a memorandum to the gas market law).

The main benefits of the gas market law include the fact that it establishes three basic principles which are key in the EU law and on which the possibility of gas market liberalization depends heavily: **(i)** free choice of consumers to sort out gas suppliers, **(ii)** free and equal access to gas pipelines (transit and domestic gas distribution networks) and to the gas storage, and **(iii)** separation of the transportation of gas from the activities of its extraction and supply, as well as the separation of the gas distribution from its production, supply, storage and transportation activities (so-called "unbundling").

The possibility of certain categories of gas consumers to choose freely the gas suppliers determines the degree of the gas market liberalization. The rule of free choice of gas suppliers is stipulated mainly in Articles 9 and 19 of the Ukrainian law. However, the introduction of this regulation is delayed. Under the Chapter VI of the Law, as from January 1, 2012, the right to freely buy gas from any supplier

will be obtained by a limited number of customers, defined by the NERC (it goes about so-called "qualified customers"; most likely such status will be assigned to the non-households, mainly industrial enterprises), whereas all other categories of consumers will be free to choose gas suppliers starting from January 1, 2015. Thus, the Ukrainian gas market should be partially liberalized in 2012 and fully liberalized in 2015. Such an approach has been agreed with the European Commission during the talks on Ukraine's accession to the Energy Community. It is critically important that starting from January 1, 2015, the right to buy freely gas from any supplier was given also to household consumers, i.e. the population that uses gas for their household needs (cooking, heating water, and heating the housing). However, exactly in this very part, which enables households (population) to choose gas suppliers freely - the Law is not enough clear. The point is that Chapter VI of the Law stipulates that starting from January 1, 2015, a free choice of providers will be received by "all categories of consumers", but the definition of "consumers" following Article 1 (22) of the Law defines only "legal entities and individual entrepreneurs who use natural gas as fuel or raw material in their activities" as consumers.

That is, from the formal legal point of view of the Law, population (domestic consumers of natural gas) does not fall under the definition of "consumer" by Article 1 (22) of the Law. The terms "consumers" and "household consumers" are defined by the Law as categories, which do not intersect each other. Although it is logical to assume, that "household consumers" are the part of "consumers". The Main Scientific-Expert Department of the Parliament drew attention to such an inconsistency in the draft law (and directly pointed out the need to harmonize the terms "consumer" and "population"), but this deficiency was not corrected during the process of drafting the final version of the Law. What is it: the possibility to leave open an option to exclude households (population) from those consumers who can freely choose suppliers of gas or an unfortunate technical mistake? The answer to this question can be obtained from the NERC that, according to the Law, will define the ranking of consumers' qualification (i.e. will outline the categories of consumers who have the right for free choice of suppliers).

However, systematic interpretation of the Law allows the conclusion that the population is still regarded as one of the categories of "consumers" and should get a free choice of suppliers as from 1 January 2015. The opposite interpretation would lead to absurd results: for example, to the conclusion that natural gas supply (as defined by paragraph 1 (18) of the Law) cannot be delivered to population, but that is, of course, a non-sense.

As far as it is known, the mentioned imperfection of the Law came to the attention of the European Commission, which requested the Government of Ukraine in a written request for the evidence that the term "consumer" used in the law, also includes population as well as that starting from 2015 gas market of Ukraine will

be completely liberalized. The corresponding written explanations has been prepared by the Ministry of Fuel and Energy of Ukraine. Thus, **the gradual liberalization of the gas market (a partial one from 2012, and the complete one from 2015) should cover all categories of gas consumers, including population; in addition, such liberalization is not only a requirement of the Law, but also an international legal commitment of Ukraine according to its membership in the Energy Community Treaty.**

2.2.2. Free access to the Ukraine's GTS

Free and equal access to gas transport system of Ukraine (gas transit and distribution networks, as well as facilities of the gas storages) is guaranteed by Articles 7, 9, 13, 14 and 15 of the Law. According to this norm, **all subjects of the natural gas market have equal access to the gas transportation system (GTS) of Ukraine and underground gas storage facilities**. It may be refused only if: (a) lack of a spare bandwidth capacity, (b) violation of the GTS access requirements by the customer, and (c) the temporary restriction of access to the network, foreseen by the Procedure of access the GTS, which has to be approved by NERC. The law also foresees that the presence or absence of a free bandwidth capacity is determined by the methodology approved by the Ministry of Fuel and Energy.

Securing the right to free and equal access to Ukraine's GTS is an absolute positive element of the Law and in principle it generally corresponds with the Second EU Gas Directive. It should be just noted that prior to the adoption of the Law, the procedure of access to the gas transmission system of Ukraine was regulated by the order of Naftogaz Ukrayiny №79 dated 03/26/2001 - that is, by the document issued by an interested entity (not a public authority), a document, which by its legal nature could not be regarded as a legal act at all.

The disadvantages identified in the Law's statutory provisions regarding the free and equal access to the Ukrainian gas transport system include the fact that cases of a temporary restriction of access will be defined under the subordinate act of NERC (given the sensitivity of the issue, it will be better if that would be settled by the Law in order to prevent possible misuses and misunderstandings). In addition, the Law does not provide opportunity for legal appeals regarding the decisions on restriction of access to the gas network. As far as such decision will be made not by a governmental body, but an economic player (operator of gas transmission or gas distributing company), it would be difficult to challenge it in court, if that option is not directly foreseen by the Law.

It is important to note that in terms of the Law, **free and equal access to Ukraine's GTS has to be provided for the purpose of supplying gas to consumers in Ukraine, as well as for the purposes of gas transit through Ukraine**. The latter

aspect means that as **from now the Ukrainian side is obliged to ensure transit of gas across its territory not only for Gazprom, but in case of appropriate applications also for other interested entities, including European companies, under the equal conditions**.

Since the law does not contain any transitional provisions of the assess to the GTS of Ukraine, from the formal legal perspective, the right for free and equal access arises from the date when the Law comes into force, i.e. from 24 July 2010. However, **the practical realization of the right of access to Ukrainian GTS faces several problems** as follows:

- *legal*: the Procedure of access to the gas transmission system (NERC responsibility) and not yet approved the Procedure of access to the GTS of Ukraine (NERC responsibility), including the Methodology on determination of the presence or absence of a free throughput capacity of the GTS of Ukraine (responsibility of the Ministry of Fuel and Energy). The above Procedures and Methodology, after their adoption, will demonstrate the practical content of the principle of free and equal access to the gas transport system of Ukraine;

- *technological*: first of all it refers to the order and procedures of access to gas transit infrastructure through the territory of Ukraine. Today, the monopoly and priority access belongs to Russian Gazprom. In order to provide the same equal access to all stakeholders (including European companies), it is necessary to provide technological and technical conditions for pumping gas to the Ukrainian gas transport system on the Ukrainian-Russian border not only to Gazprom, but also to other interested companies. And this requires, above all, construction of a gas meter stations on the Ukrainian part of Ukrainian-Russian border and define the technological rules of gas acceptance and transmission according to European principles (particularly, rules on sending and confirmation of nominations) at the Ukrainian-Russian border as well as at the Ukrainian-EU one. In this respect, the Slovak experience with harmonization of its legislation and with practical application of European principles and rules of the gas market is useful for Ukraine.

In general, **the implementation of the EU norms of free and equal access to Ukraine's GTS (gas mains) for the purposes of transit of gas, enshrined in the Law, will require the review of the Transit Agreement concluded between Naftogaz and Gazprom on 19.01.2009** (in particular, it will be necessary to introduce the principle of booked capacities that is the principle of "transit or pay") **and the Technical Agreement. By the above documents Gazprom has *de facto* monopolized access to the Ukraine's GTS for the purpose of gas transit**. Particularly illustrative in terms of fixing Gazprom's exclusive position is the Technical Agreement (See Appendix 1. "A Technical Agreement concluded by and between Gazprom OJSC and Naftogaz Ukrayiny NJSC on Terms of Delivery-Acceptance of Natural Gas at Gas-Measuring Stations, Located on the Border, for

Gas Transit through the Territory of Ukraine, and also Transfer of Natural Gas to Ukrainian Consumers in 2008.")

In fact, in the context of the adopted gas market law it is necessary to negotiate the establishment of legal and technical conditions for transferring the point of acceptance of Gazprom's gas by European buyers from the western to the eastern border of Ukraine. As a result, EU-bound gas transit through Ukrainian territory will be based on the contracts between Naftogaz and European buyers of Russian gas.

It is clear that Gazprom will not be pleased with such perspective, but otherwise the right for free and equal access to gas transport system of Ukraine will be only a nice declaration without the possibility of its implementation within the framework of a European model. Finally, Ukraine has to care primarily about its own national interests. In a similar way as Gazprom acts when it develops bypassing pipelines, taking no care about problems of the Ukrainian GTS capacities.

In this respect it is worth to note that **the outlined approach - transfer of the point of acceptance of Russian gas for its European consumers to the Ukrainian-Russian border as well as providing European customers with the free and equal access to the GTS of Ukraine - will be an appropriate response to Russian construction of the pipelines bypassing Ukraine**.

It would not be necessary to persuade Russia to abandon construction of various gas-streams (while sacrificing the national interests of Ukraine), it is simply necessary to provide the European gas business with an opportunity (legal and technical) to choose the most economically attractive option for gas transportation to the EU (which, as it has been already calculated, will be transit through Ukraine). European gas business will be interested in implementing the above mentioned approach because, among other things, this will allow it in the eventual case of problems with gas transit through Ukraine to settle the issue directly with the Ukrainian side (without any need to bring along a gas supplier, activities and expertise of which will stop at the Ukrainian-Russian border). In the current situation European companies are not dealing with Naftogaz, but with Gazprom in terms of gas transit through Ukraine. Gazprom is a partner to European companies, which is contractually responsible for gas transit via Ukraine and which any problems with the gas transit (regardless of the reasons for their occurrence) qualifies as a force major, as it has been shown during the gas crisis in January 2009.

2.2.3. Unbundling in the oil and gas sector

Ensuring free and equal access to the GTS of Ukraine depends on implementation of *the unbundling regulation* (a principle of separation of the activities of transportation or distribution of gas from its extraction and supply) as it is defined in Articles 16 and 17 of the Law. In fact it is about prevention of conflict of interests

in the gas industry. Producer (supplier) of gas is interested in the limited competition from other mining companies and suppliers. So if producer (supplier) is simultaneously a gas network operator, it will try every way to block access to such networks for other mining and supplying companies in order to eliminate them from the gas market. The mentioned principle of unbundling is aimed at avoiding such a situation and creating a truly competitive environment in the gas market. Following the Second EU Gas Directive, the Law stipulates the functional unbundling: if the gas transporting or gas distributing company is a part of a vertically integrated business organization, it must be legally and organizationally independent of other activities that are not associated with transporting and/or distributing the natural gas.

In Ukraine, the implementation of unbundling rule will launch a real large-scale cooperation with the European gas companies (including providing them with services at European prices). In particular, European companies have repeatedly stated willingness to use for their own needs Ukrainian underground gas storages provided that gas storage activity is separated from other activities in the gas industry. In general, the implementation of unbundling rule together with ensuring free access to gas networks, will provide significant incentives for EU companies to invest in modernization of Ukrainian gas transportation system (in particular, such approach will provide the European side with the real right to manage the part of the GTS developed with their investments).

When analyzing the Law on unbundling, it is hard to ignore the fact that Article 16 of the Law refers to the "separation of the functions of gas *transportation*, distribution and supply", but in Chapter VI of the Law which, among other points, determines the timing for unbundling in Ukraine, the "separation of functions of distribution and supply" is mentioned only, i.e. the function of transportation is omitted. Probably, in this case there is a technical inconsistency that happened during the process of preparation of the Law (as in the case of the definition of "consumers", as it was discussed above). In any case, the European approach, on which the Law stands, provides that the activities of gas transportation must be at least legally and organizationally separated.

The implementation of unbundling principle in Ukraine is closely related to the following important question: how imperative is the reform of Naftogaz? By its structure, Naftogaz is a vertically integrated company, which incorporated the activities of natural gas production (SC *Ukragazvydobuvannya*, NJSC *Chornomornaftogaz*, JSC *Ukrnafta*), transport (SC *Ukrtransgaz*), and distribution and supply (SC *Gas of Ukraine* and the very *Naftogaz Ukrayiny* as a separate legal entity).

Therefore we can assume that official Kyiv will act on the premise that there is no need in the reform of Naftogaz since the separation of the transportation activity is already separated from natural gas production and supply (different Naftogaz

subsidiaries are involved in different fields of activities). According to the Cabinet of Ministers of Ukraine resolution № 1173 of 7.24.1998, the functions of production, transportation, storage and sales of natural gas are separated by the established Naftogaz subsidiary companies.

The final decision on the reform of Naftogaz has to be made taking into account the compliance of its current structure with the unbundling specified in Chapter 4 (Article 16) of the Law. In particular, the matter is that it prohibits merging positions in Naftogaz and its subsidiary companies that are engaged in gas transportation and distribution, as well as the independence of these subsidiaries when it comes to decision-making process in the fields of financial operations, and maintenance, construction or modernization of the GTS.

In this regard it should be noted that the legal status of Ukrtransgaz and Gas of Ukraine as *subsidiary companies* of Naftogaz, established before the new Civil and Commercial Codes of Ukraine entered into force in 2004, is characterized by significant organizational and legal dependence on the mother company, including when it comes to decision-making process (before the adoption of the above mentioned Codes, Ukrainian legislation was giving the same status to subsidiary companies, and affiliations and subsidiary offices).

Departing from the above point we assume that the most optimal scenario for the implementation of unbundling principle in Ukraine would be the establishment of joint stock companies based on subsidiary companies Ukrtransgaz, Ukrgazvydobuvannya and Gas of Ukraine, with the parallel transformation of Naftogaz into a state holding company (according to the Law of Ukraine "On Holding Companies in Ukraine"), which will manage the holding's corporate shares in joint-stock companies created on the basis of the above named subsidiary companies. It appears that such scenario would give reason to the least objection of foreign creditors to Naftogaz, which consent is necessary to any reform of Naftogaz under existing credit contracts (otherwise the creditors can claim earlier repayment of credits). In any case, **it seems to be impossible to create a gas market in Ukraine according to the European model without bringing legal forms of Naftogaz subsidiary companies in accordance with the Civil Code of Ukraine**.

A lot will depend on the plan which SC Ukrtransgaz and SC Gas of Ukraine will prepare in order to ensure the independence of their economic activity from the activities of Naftogaz. According to Chapter 5, Article 16 of the Law, such plan should be prepared annually and shall be disclosed, including the report on its implementation.

Ukrainian government has some time for making the optimal decision on the above mentioned question: according to the Law, unbundling must be complet-

ed (i.e., the functions of the transport, distribution and supply should be separated) by January 1, 2012.

2.2.4. Underwater reefs of the new law

In the context of review of the Gas Market Law there is a need to pay attention to the following aspects:

Firstly, the Law defines the powers of NERC to set tariffs for natural gas transportation by mains. Before the adoption of the law, the authority of NERC on this matter was somewhat narrower. According to the Government Resolution № 1548 of 25.12.1996, the NERC was authorized "to establish tariffs for transporting natural gas and oil by main pipelines... that *are delivered to Ukrainian consumers*." In other words, the NERC could set tariffs for main pipelines transporting the gas addressed to Ukrainian consumers. Setting the tariffs for gas transit (transportation of natural gas by Ukrainian pipelines to further supply to European consumers) did not belong to the competence of the NERC. However, as the Law comes into force, the NERC can set the transit fees as well. Since the NERC while setting the tariffs will follow the relevant methodology and procedure of calculation (which are, as a rule, based on the principle of economic feasibility), **the NERC's authority to establish transit fee under certain circumstances may cause the necessity to review the rates for gas transit through Ukraine, established by the Transit contract between Naftogaz and Gazprom on 19.01.2009** (especially if economically grounded NERC calculation will result in higher transit fee comparing to the rate, calculated under the contract of 01.19.2009). The relevant precedents had already taken place. As media reported, in 2007, when NERC increased the fees for pumping, transportation and consuming the natural gas from underground storage facilities, the respective tariffs were also increased under the contract between Naftogaz and RUE № 14/935- 3 / 04 of 29.07.2004

Secondly, before the adoption of the Law any activity in the gas sector (production, transportation, storage, distribution and supply of natural gas) was a subject to licensing regardless of its scope. When the Law was passed, situation has somewhat changed. The Law stipulates that economic activities in the natural gas market are subject to licensing if *volumes of natural gas involved exceed the level set by the license terms*. So, now **the activities of production, transportation, storage, distribution or supply of small volumes of natural gas can be carried out without obtaining a NERC license**. In this case, however, the term "minor amount" is not specified in the law and depends on the NERC decision.

Thirdly, although the **Law** is designed to bring a "gas" legislation of Ukraine into accordance with the Second EU Gas Directive, **it is bypassing such a core principle of EU law as the transparency of relations in gas sector.**

According to the second Gas Directive, transparency is essential prerequisite for building a competitive and liberalized gas market. The level of transparency in the gas industry of each of the EU member state is controlled by the competent regulatory authority, independent from the gas industry interests. In addition, the Second Gas Directive requires the EU member states to "create appropriate and efficient mechanisms for regulation, control and transparency in order to avoid any abuse of a dominant position, in particular to the detriment of consumers, and any incursive behaviour". [33] The Ukrainian law does not provide anything of that kind. And that is despite the fact that as early as September 30, 2009, the Government of Ukraine adopted a Decree №1098 on Ukraine's accession to the Extractive Industries Transparency Initiative (EITI) and a special statement, which stresses that "*implementation of the Initiative, also in the gas industry, will be one of the elements of transparency in work of the gas transport system of Ukraine.*" When adopting the Law, it would be useful to identify and establish the implementation mechanisms in Ukraine of the above-mentioned international Initiative, which is based on simple and clear criteria (a regular publication of oil and gas companies reports on their significant payments for the benefit of the state, and reports on any significant revenues they received from the state; moreover the publication of these reports is made accessible for general public in a comprehensive and visible form). At the present about 30 countries are currently the members of this Initiative in different formats. Unfortunately, this possibility was not used in Ukraine.

Attention should be drawn also to the fact **that many of the Law's provisions have a framework or reference nature**. The Law is basically providing legal *principles* for regulation in the gas industry and states that specific norms should be further developed and approved on the subordinate level. Important role in this regard is given to the Cabinet of Ministers, the NERC and the Ministry of Fuel and Energy. In particular, the Cabinet of Ministers is in charge of preparation of procedures on the guaranteed suppliers definition, restriction or termination of natural gas transport and supply to consumers, establishment of insuring gas reserves by suppliers, and more. The NERC should, inter alias, develop and/or approve: the procedure of access to the GTS of Ukraine, rules of natural gas use for legal persons, methods of gas tariffs calculation, a variety of procedures (forming, calculating and establishing the prices for gas, monitoring of the licensing conditions compliance, investment programs forming) and a model contracts. Ministry of Fuel and Energy has, among other things, to define the operator of Ukrainian GTS, to develop a procedure for the preparation of monthly plan (projected) balances of supply and distribution of natural gas, to approve the methodology for determining the presence or absence of free bandwidth capacity of the Ukrainian GTS, as well as to develop methodo-

[33] http://www.energy.eu/directives/l_17620030715en00570078.pdf

logical guides on application of national accounting standards in accordance with oil and gas industry specifics. In this connection it is worth to note, that at the stage of the drafting of the Law, its framework nature caused concern of the Main Legal Department of Parliament, which opinion states the following: *"... the adoption of the Law in its edition submitted to the second reading will lead to legal conflicts and incompleteness of legal regulation, because it does not provide the sufficient legal mechanisms for clauses implementation, as required by the rule of law principle, which enforcement was stressed by the Constitutional Court of Ukraine (case on liability of legal persons, 30 May 2001, №7- pn/2001)*".

Thus, **the implementation of the Law to a considerable degree or even a crucial one will depend on its implementation mechanisms, which have to be further developed by the Cabinet of Ministers, the NERC, and the Ministry of Energy and Coal Industry of Ukraine**. From the latter it will depend whether the European principles on which the Law is based, will receive the same European content in Ukraine. The law does not fully reflect the model of the gas market as identified by the Second EU Gas Directive. However, the implementation of fundamental European principles provided by the Law – consumers' free choice of gas suppliers, free and equal access to the gas networks, and separation of activities within the gas sector - will allow building the skeleton of the European-style liberalized and competitive gas market in Ukraine:

- ✓ if the authorities, responsible for implementing the Law, will seek to specify the principles stipulated by the Law in a way that it will correspond with the European content;
- ✓ if principles will not be distorted;
- ✓ if free choice of gas suppliers will not be used only in order to provide a direct access to Gazprom or its affiliates to Ukrainian consumers;
- ✓ if free access to gas networks will not mean a "cementing" of Gazprom's exclusive access to Ukrainian GTS; and finally,
- ✓ if unbundling will not become a tool to promote Gazprom's strategies of taking over the most attractive gas assets in Ukraine.

Within the above context a serious threat is posed by a possibility to rent underground gas storage facilities in Ukraine. Under a framework law a leasing agreement might withdraw the most important component of Ukraine's GTS. This will strengthen the monopoly of Gazprom as on the domestic market of Ukraine, as well of its export shipments to the EU. Ukrainian authorities might lose leverage of the gas market development, and its European perspective will remain a declaration.

Another threat associated with a framework character of the Law is that there attempts may occur to implement it as the European Charter for Regional and

Minority Languages. Although the Charter is aimed at protection of languages in danger of withering away, its implementation in Ukraine has become a tool of guaranteeing the "special" status of the Russian language. The consequences of such implementation of the Law would be disastrous for the whole energy and national security of Ukraine. On the other hand, the implementation of the Law in the European way, building a liberalized and competitive gas market following a European model will not only contribute to Ukraine's integration into the European gas area, but will also facilitate building of a truly equitable and mutually beneficial relationships with Gazprom, based on the European principles.

Ukraine's accession to the Energy Community means the beginning of a long process of harmonization with the EU legislation in the energy sector. Will Ukraine be able to walk this way, taking into account non-transparent processes of Russian-Ukrainian "unifying" cooperation in energy sector? This question remains open both to Kyiv and Brussels, and, of course, to Bratislava. Just so, as another important matter an that is the Brussels Declaration on the Modernisation of Ukraine's Gas Transit System of 23 March 2009. Although the Ukrainian side confirmed its readiness to continue cooperation with the EU and even the relevant proposals were made by the president and the prime minister of Ukraine to Germany, Poland, Slovakia, and Austria, however, the real progress in implementation of the Brussels agreements has not been evidenced for two years from the date of their signing.

However, it is important to note that there are **certain "hidden risks" for development of the gas market in Ukraine connected with the process of drafting new legal acts in the Ukrainian parliament**. Particularly, it goes about the draft of the law № 7562 "On state guarantees on enforcement of the implementation of the court's judgements"[34] prepared by the government in January 2011. Firstly it might seem that his draft has nothing in common with the range of problems of the gas market. However, the draft of the Law №7562 has introduced the amendments to the Article 7 of the Law of Ukraine "On Pipeline Transport". The above mentioned Article 7 contains a provision on the prohibition of restructuring and privatization of the state-owned trunk pipeline transport enterprises (TPT), and does not allow any disposal with property as well as any manipulations with assets and shares of state TPT enterprises, including NJSC Naftogaz, its subsidiary companies, affiliations and storage facilities. **Article 7 of the Law of Ukraine "On Pipeline Transport" provides a kind of mechanism for preventive action against the attempts of taking over gas market of Ukraine by non-market means (including the gas transport system of Ukraine).**

The proposed changes suggest that the Cabinet of Ministers of Ukraine will be given an authority to determine the list of enterprises covered by Article 7 of the Law of

[34] http://w1.c1.rada.gov.ua/pls/zweb_n/webproc4_1?id=&pf3511=39454

Ukraine On Pipeline Transport. On one hand, the need for proposed amendments can be explained by the lack of a clear definition of the term "state-owned enterprises of TPT" in Ukrainian legislation, that to some extent complicates practical application of Article 7 (exactly because of this fact, in 2007, Article 7 have been extended with particular references to Naftogaz and its subsidiary companies). However, it looks it would be much better to fill the existing gap by an exact definition of the term "state-owned TPT enterprises" directly within the text of the Law of Ukraine "On Pipeline Transport". It looks like that regardless of what will be the list of entities approved by Ukrainian government under provision of the adoption of the draft law No 7562, the Article 7 of the Law of Ukraine On Pipeline Transport will be applicable to Naftogaz Ukrayiny and its subsidiary companies, as they are referred directly in that Article.

However, there are considerable risks that still exist. For example, the operator of Ukrainian main oil pipelines – JSC Ukrtransnafta - is a subsidiary company of Naftogaz (moreover, this JSC is not formally included in the category of public enterprises). Therefore its fortune may be put into the hands of the Ukrainian government (depending on its inclusion or non-inclusion in the respective governmental list of companies), without the parliamentary control.

On the other hand, the operator of gas mains - SC Ukrtransgaz is a subsidiary company of Naftogaz and as such will be a subject to Article 7 of the Law of Ukraine On Pipeline Transport, regardless of the decision of the Cabinet of Ministers of Ukraine. But that might be limited by the time when Naftogaz Ukrayiny will be reformed and subsequently, Ukrtransgaz will become a separate independent company. In such case, the future of Ukrtransgaz (similarly to Ukrtransnafta) will depend solely on the decision of the government. The above mentioned correlations prove the importance and necessity of effective public and parliamentary control over the process of preparation of legislative proposals relevant to the reform of gas market of Ukraine in order to prevent a non-market takeover of Naftogaz and its subsidiary structures under the guise of harmonization with European standards.

Thus, with a delay of six years, Ukraine made an attempt to get on the same path as Slovakia in energy sector, and namely the following three Slovak laws - the Act on Energy, the Act on Regulation, and the Act on Heating – that were adopted by the Parliament of the SR in November 2004. These laws have become three pillars of the energy legislation of the SR since 1 January 2005. Later in the framework of secondary legislation following of the above acts Ministry of Economy defined the rules of the gas network operation on the basis of which companies developed their own rules, which were consequently approved by the Ministry. In Ukraine only the basic legislation has been adopted so far. A draft Working Plan of the Ministry of Energy and Coal Industry of Ukraine

for 2011 contains only two paragraphs that formulate tasks on o further work towards the Europeanization of the Ukrainian energy sector: "Development of energy cooperation with member countries of the Energy Community, including learning existing experience of participating countries. Implementation of European energy legislation, creating conditions for the formation of a single EU energy market "(p.1.3.4) and finally, "the elaboration of drafts of legal regulations regarding the fuel and energy sector taking into account the EU regulations" (p.3.3.1). The experience of SR would be very much useful for Ukraine, however, provided that there will be a political will to reform the gas sector of Ukraine without making allowance for Russia.

2.3. OIL AND GAS SECTOR OF UKRAINE: POLITICAL AND LEGAL ASPECTS OF BRAKING TRANSFORMATION PROCESS IN THE CONTEXT OF CONTRACTUAL ARRANGEMENTS WITH GAZPROM

2.3.1. Price hook in Ukrainian-Russian gas relations

Russian factor is one of the three key braking factors (the other two are first, the lack of transparency and second, the corruption), which hinder the

implementation of European rules of play in the energy sector. Oil and gas sector is an expression of a serious problem, and namely, state monopoly's reluctance to implement European-style reforms on one hand, and Russian counterpart's continuing desire to take over a Ukrainian partner using its permanently difficult financial position, on the second one. The financial position of Naftohaz is an outcome of a discriminatory "*Contract* of *purchase*

and sale of natural gas in 2009-2019", signed on January 19, 2009, between Naftogaz Ukrayiny and Gazprom "(hereinafter - Gas Contract).

One of the key issues of Ukrainian-Russian relations in the gas sector is the change of the pricing formula for the natural gas purchased by Ukrainian side according to the contract. This issue has been repeatedly stressed by the prime minister of Ukraine, who indicated that the gas deal is unfair and must be revised.[35] He also noted that: "*Russia has to realize: despite of some time ago it managed to obtain under certain circumstances a lucrative contract, this does not stipulate the possibility of sticking to it till the end of its term. It cannot be treated this way; it is not a correct approach from the point of view of our long-term relationship and our strategic partnership. We must think about the future.*" [36]

Meanwhile, it is interesting that **official Kyiv plans to achieve changes in the pricing formula of the Gas Contract through negotiations with the Russian side. In other words, at the actual stage Ukrainian side has initiated merely a mechanism of *political* settlement.** Basically, this is a traditional mechanism for getting into an agreement between the two countries. However, the attempt of political settlement between Kyiv and Moscow under current realities and in such sensitive sphere as the gas sector brings a significant risk of additional substantial losses for the Ukrainian side in the form of political and economic concessions to Moscow. According to the accurate statement of the prominent Ukrainian economist and academician A. Halchynskyi, in relations with Ukraine

[35] http://www.ua-energy.org/post/3241

[36] http://economics.unian.net/ukr/detail/72202

Russia is not simply protecting its national interests, but rather implements policy of "defeat the competitor" [37].

One must not forget that since 2005 all attempts to revise the gas agreements with Moscow by political means ended with large-scale economic and political losses for Kyiv, while Russia foisted off more and more onerous terms of the gas "cooperation". During the first decade of the 2000s, the strategic partnership, officially announced in 1990ies, resembled increasingly a strategic dependence that has formed asymmetric subordinated partnership favourable towards Russian interests.

Moscow has already begun to announce what it wanted to obtain in exchange for a gas formula correction: Ukraine's gas transport system and Naftogaz takeover by Gazprom, which is disguised as a "merger". Thus, owing to Russian side efforts the dominant feature of the two countries relationship is reduced to a mercantilist approach "and what Moscow will get in return?" In this case it goes about the adjustment of a pricing formula, which has been imposed on Naftogaz in the midst of unprecedented gas crisis in January 2009. The above formula brought unfair results for Ukraine, including higher gas prices than other European consumers pay for Russian gas. At the same time, this formula ignores several important factors, including, the fact that Ukraine is the largest consumer of Russian gas in Europe as well as that transportation costs for gas supplies to Ukraine are lower than to EU countries. In other words, the existing pricing formula ignores the very geographical fact of Ukraine's neighbourhood with RF. The adjustment of the price formula is needed in order to balance the Russian-Ukrainian gas relations and, finally, to restore conditions of fair and equal cooperation, what is the most reliable guarantee of uninterrupted gas supplies to the European market. However, Russian side does not take this into account.

The paradox of the current situation is that Russia really has to be interested in finding a compromise in the sphere of Ukrainian-Russian gas cooperation not less than Ukraine itself. At the least this will allow Gazprom to retain Ukrainian gas market, which is the largest market in Europe, in the situation when the Russian monopoly has to face serious challenges in international markets. This is what Gazprom admitted publicly in its report on the second quarter of 2010: "*In recent decades, rising prices on natural gas as well as technological progress have led to growing interest in development of unconventional natural gas resources. It is expected that in North America the share of gas production from unconventional sources in long term perspective will continue to grow. This will lead to a reduction*

[37] «Dzerkalo Tyzhnia », №31 (811), 28 August 2010

in U.S. imports of LNG, therefore LNG suppliers will redirect released volumes to markets in Europe and Northeast Asia and, consequently, competition in these markets increases." And further*:* "*It is estimated that in 2009 gas consumption in European countries of far abroad will fall by 36 billion cubic meters (or about 6%) to 540 billion cubic meters. Larger supply of LNG will negatively influence the price levels in Europe and will reduce the volumes of pipeline gas purchase, including the gas supplied by Russia*". And finally: "*...the process of market recovery is far from complete*".[38]

Therefore, **the aggressive behaviour of Russian side regarding the conditions of gas cooperation with Ukraine along with the mercantilist rhetoric ("what we get in return? ") is far from being a sign of constructive dialogue between the two strategic partners. In fact it is motivated by Kremlin's wish to "wrest" as much as possible concessions from Kyiv, to stake out a long-term claim to the Ukrainian gas market and to make it a "cash cow" for Gazprom in a situation where competition in the European market is growing, including the reduction of Gazprom's share in that market** (28,4% in 2008, and 26 3% in 2009). In order to achieve this objective a *political* settlement is the most walk able way to go.

A striking example of *political* settlement in Russian-Ukrainian gas relations is a discounted price of gas agreed in April 2010. Only due to political reasons it became possible to present the adjustment of the gas price for Ukraine that brought it in a line with the world market and European levels as a "discount" and "damage" to the Russian budget. As well only due to political reasons this so-called "discount" on gas price for Ukraine has been exchanged for political concession of Ukraine – the extension of the Russian Black Sea Fleet stationing in Ukraine for next 25 years.

Considering all the above-mentioned contexts, **any attempt to reach a political settlement with Russia in the field of gas cooperation is linked to serious challenges for economic (energy in particular) and political security of Ukraine.** The outcome of economic consequences of *political* settlement of gas disputes with Russia in 2006 and 2009 is a disastrous one for Ukraine. It is worth to bear in mind the recent historical lesson learned, and to consider applying alternative ways of settlement, including the adjustment (adequate balancing) of the Gas Contract pricing formula.

[38] Ежеквартальный отчет ОАО «Газпром» за 2 квартал 2010 года, стр. 53, 275 - The quarterly report of JSC Gazprom for 2 quarter 2010, pp. 53,275 Available online: http://www.gazprom.ru/f/posts/22/042553/repii_2010.pdf [In Russian]

2.3.2. Legal aspects of contractual arrangements

Alternative methods of settlement which Ukraine is authorized to apply are legal ones. They are envisaged by the provisions of the Gas Contract as well as by the Swedish law, which is applicable to the contract.

In particular, Article 4.4 of the Gas Contract states the following: if "*the circumstances in the market of energy products change significantly compared with what Parties reasonably expected during the signing of the Contract, and contract price specified in clause 4.1 of the Contract does not reflect the level of market prices*", the parties will start to renegotiate the price clause. Further the contract provides that if an agreement on a revision of contract price is not achieved within the three months from the date of the start of talks, either party may file proceedings at the International Arbitration Court in Stockholm for its judgement.

Thus, in for the implementation of procedure according to the paragraph 4.4 of the Gas Contract, the Ukrainian side needs to justify the change of circumstances in the market with energy products (apparently there is implied a *European* market because the price formula in the Gas Contract refers to parameters of fuel oil and gas oil price on the European market), and to prove that the current price which follows the Gas Contract (excluding the discount) does not reflect a price level in European market. To prepare such justification would be much less difficult for Ukraine than efforts to persuade both Kremlin and Gazprom to adjust pricing formula to a fair format without any additional economic and political concessions from Ukrainian side. But the main point is that in case of a refusal of Russian side to come to an agreement, Naftogaz will be authorized to file proceedings at the independent international arbitration, which can result in a new pricing formula of the contract.

Important arguments that allow for starting the procedure of legal settlement in order to correct the pricing formula for the Gas Contract are provided by Gazprom itself. In its company report on the second quarter of 2010, Gazprom notes the following: "*In the first half of 2010 compared to the first half of 2009, the decrease of revenue from the gas sales (in Europe) was 18.79%, mainly owing to reduction of the average calculated prices due to changes in world prices*." [39]. The following passage from the above-mentioned quarterly report of the Russian gas monopoly is also important: "*In 2009 the E.ON Ruhrgas Co. addressed JSC Gazprom Export wit a request to reduce the contract price and/or change some other contract conditions. The request followed significant changes in the market, among other things, a lower demand for gas due to global economic crisis and supply increase, including liquid*

[39] Ibid., p. 74

trading markets, as well as a significant difference in prices pegging to prices of oil products under long-term contracts and spot prices".[40] Gazprom was forced to meet the E.ON Ruhrgas and other German companies' appeals. Referring to the report's wording that has been done in order "to envisage measures that would ensure the competitiveness of Russian gas in the emerged circumstances." [41].

With regard to the question how the price of the Gas Contract reflects price level in the European market, we will note the following facts. According to the data of the cited Gazprom's report, average gas price (per 1000 cubic meters) in European market presented the following trend: $269.4 in 2007, $407.4 in 2008, $ 287.5 in 2009[42], and during the first half of 2010 the gas price fell in 18.79%.[43] That is, since 2009, there is a trend of price decrease in the European market. If one takes prices based on the formula of the Gas Contract (here we refer to data of the State Statistics Committee of Ukraine[44]; without applying step-down ratios and discounts) the opposite trend could be observed for Russian gas price for Ukraine: $248.96 in the third quarter of 2009, $260.07 in the fourth quarter of 2009, $ 304.16 the first quarter of 2010, and $333.72 in the second quarter of 2010. Thereby, the effect of the pricing formula of the Gas Contract implementation is evident: gas prices in European market are falling whereas price on Russian gas for Ukraine is increasing with the same dynamics. The conclusion is that the Russian-Ukrainian gas price formula may be hardly considered to be adequate and fair. The very practice of the Gas Contract implementation testifies the imperfection of its pricing formula: within the period of 20 months since the contract came into effect, the pricing formula in its "pure form" has been applied only within three months (the first quarter of 2010). During the rest of the period it has been applied with a discount coefficient 0.8 (during the whole year of 2009), or with the April discount (as from April 1, 2010).

The abovementioned facts indicate necessary preconditions as well as the right of Ukrainian side to apply the mechanism of legal settlement under the Article 4.4 of the Gas Contracts. There is no need to fear that filing proceedings at the international arbitration in Stockholm might be perceived as a hostile move towards

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40 Ibid., p.. 81-82

41 Ibid., p.82

42 Отчет руководства ОАО «Газпром» за 2009 год, стр. 18. - Management Report of JSC Gazprom for 2009, p. 18. (http://www.gazprom.ru/f/posts/28/135151/2010_04_29_gp_mgt_report_rus_final.pdf) [In Russian]

43 Ежеквартальный отчет ОАО «Газпром» за 2 квартал 2010 года, стр. 74 - The quarterly report of JSC Gazprom for 2 quarter 2010, p. 74 [In Russian]

44 http://www.ukrstat.gov.ua/ (ection „Export and import of particular products by country"-„Mineral Products", in Ukrainian)

Russia. Court settlement of disputes is simply a civilized way of solving conflict situations. Gazprom itself often applies this method in its commercial activities. In 2007-2010 it has repeatedly filed proceedings at the International Commercial Arbitration Court at the RF Chamber of Commerce and Industry asking for the forced pay off by SA Moldovagaz for the supplied gas. Within the year of 2000 six similar lawsuits against Naftogaz were filed by Gazprom at the same arbitration court in Moscow.

Finally, the Swedish law applicable to the Gas Contract, which the Ukrainian government considers to be unfair and bonded, provides another option to act. Following Article 36 of the Swedish Contracts Act: "*A contract provision may be changed or cancelled provided that it is reasonless with respect to the contract's contents, circumstances at the time of its conclusion, subsequent developments or circumstances in their complexity. If the given provision has such significance for the contract that it would be reasonless to enforce the implementation of the contract with other unchanged provisions, the contract may be changed in its other provisions or cancelled*". Lawyers know that Article 36 of the Swedish Contracts Act is aimed at the protecting rights of weaker or more dependent side of contractual relations side (e.g. customers) as well as that the above provision is rarely applied in the relations between dominant companies within the same economic sector.

Naftogaz already has learned some important lessons from the Stockholm arbitration with RosUkrEnergo (RUE). Naftogaz should be well aware that just in its dispute with RUE, the Stockholm arbitration applied the above cited Article 36 of the Swedish law to evaluate events that took place during the gas crisis in 2006. The court believed that a justified reason for Art 36 application was the fact that Gazprom sharply reduced the gas supply to pipeline system of Ukraine on 1 January 2006 and was blocking the purchase of Turkmen gas by Naftogaz. (It is worth to mention events of 2 January 2006, when Gazprom has informed Naftogaz that, even though existence of the valid contract between the Ukrainian company and Turkmengaz, as from January 1, 2006, all Turkmen gas was bought out by Gazprom). The court considered the above circumstances as such that Gazprom forced Turkmengaz to cancel its contract with Naftogaz. In this respect, arbitration explicitly stated that if a party interferes with the contractual relations between other parties and this interference leads to a breach of the contract to the detriment of one of its sides, then such a behaviour of the interfering party can be considered **an improper business activity that entails the obligation to compensate the damage.**

This example shows the following:

- if politically dependent and corruptive layers are not involved, often the truth in gas disputes is on the side of Naftogaz;

- the Ukrainian side had good chance to be successful if it would apply legal mechanisms on protection of its interests, particularly, when it would appeal the Arbitration Court in the context of gas crisis in 2006.

It is important for Ukraine to realize that **the use of legal mechanisms has significantly lower risk of further increasing the dependence on Gazprom and the Kremlin in comparison with political settlements**. Thus, in the present situation, the term of the Gas Contract (until 2019) and stipulated volumes of gas purchase (41-52 billion cubic meters a year) seem to be more or less optimal parameters for Ukraine on the proviso that a more balanced pricing formula is agreed. That is possible to achieve by means of the legal settlement mechanisms. However, the realities and trends in international markets are pushing Gazprom to secure a longer term of the Gas Contract with enlarged (up to 70 billion cubic meters a year) volumes of gas purchase by Ukraine. Russian side can manage to get this end only by using mechanism of *political* settlement. If Russia will manage the above goal Ukraine will lose promising prospects for development of unconventional natural gas resources, including shale gas and coal bed methane.

In addition, by analogy with the Article 4.4 of the Gas Contract, the Transit Contract contains Art.8.7, which states that the gas transit tariff rate is a subject to revision provided that conditions of transit tariffs formation is changing significantly on European gas market as well as a transit rate introduced by the Transit Contract does not correspond with the tariffs on European market. The disparity of gas tariffs rates, which are applied in Ukraine and in the EU countries, is no secret. If Naftogaz and Gazprom fail to agree on a revised transit rate, it can also be established by international commercial arbitration.

European principle of the rule of law and settlement of problematic gas issues on its basis only can ensure finding for reasonable, fair and mutually beneficial solutions for both Ukraine and Russia. Otherwise, with time going a gasocratic regime in Kyiv might feel like the Minsk one, which is driven to a blind alley by its ruthless orientation on Moscow that in the end push it to seek for support from Tehran and Caracas. If the latter would become a reality prospects for cooperation between Ukraine and the EU, including Slovakia, in energy sector look very gloomy.

3. Multiple vectors of natural gas

3.1. MOSCOW - KYIV: KHARKIV AGREEMENTS AND THE CASE OF ROSUKRENERGO. IMPACT ON PROSPECTS FOR INTERNATIONAL COOPERATION OF UKRAINE AND NAFTOGAZ

3.1.1. Excursus into the historical background of the "Gas – Fleet" issue

Since 1990s a basic component of Russia's strategy in bilateral relations with Ukraine has been a combination of the issues of the Russian Black Sea Fleet stationing in Ukraine and of ensuring the gas supply from Russia to Ukraine into one single negotiating package. An ambitious goal of Ukraine to achieve its energy independence from Russia has not been materialized within the last 20 years. After a retrospective analysis, one can conclude that Ukrainian side was engaged in a business gas deal during the entire period putting aside the quotes of the package issues of its national security, including its military, economic and energy dimensions. Kharkiv agreements signed by presidents of Ukraine and Russia on April 21, 2010, evidenced an irrevocable nature of this trend. They express well an impetus of the Russian side, which declares a number of "unifying" initiatives, but in the end they appear to be just "takeover" initiatives in economic relations with Ukraine.

Prime ministers of Ukraine and Russia signed in Kyiv a package of three basic agreements on 28 May 1997, including an intergovernmental agreement on division of the Black Sea Fleet of the former USSR as well as a stationing of Russia's part of the fleet on the territory of Ukraine. It was an unbalanced package of agreements conditioned by the necessity of solving the issue of "Ukraine's debts under the state credits granted to it by the Russian Federation in accordance with the intergovernmental agreements as of May 26, 1993, and of March 20, 1995. The debt became a subject to repayment till the end of the year 2007 being recognised by the sides as of May 28, 1997, in the total amount of 3,074.0 million US dollars, including credit interests."[45] The debt of more than $ 3 billion was attributed to the policy of the government of Ukraine seeking credits from Russia

[45] http://zakon.rada.gov.ua/cgi-bin/laws/main.cgi?nreg=643_077

for payments for imports of its energy resources. The Russian side, following its post-Soviet reintegration intentions, the aim of which was to sustain dependence of former Soviet republics on Russia, has helped to create state debt of the CIS countries to Russia using the practice of free prices in mutual trade within the first half of the 1990s. Ukraine received 47.6% of the total $ 5.26 billion of Russian credits lent to eleven CIS countries in the course of 1992-1993.[46] The main purpose of loans was energy purchases. In fact, the "oligarchonomy" in Ukraine started to emerge by the formula "income – for myself, debts – for the state." Oligarchy has got its start thanks to default of state in payments for gas.

The prominent economist A. Aslund pointed out that "Gazprom/Russia requested Ukrainian state to pay for gas for which Ukrainian private business did not pay."[47] In this way the state accumulated a critical mass of debt. At a critical point of time "X" Russian side made a gage by being able to form a package of "fleet-debt" link by the means of mutual debiting scheme: "Agreements on offsetting of debts associated with the division of Black Sea Fleet, supply of fossil materials and energy resources, and supply of fishing vessels ended in a recognition of Ukrainian debt of 3,074.0 million US dollars together with credit interests as of 28 May 1997". [48]

The typical sign of the final package of agreements concerning division of the Black Sea Fleet proposed by Russia was not neither discussed nor approved by the National Security and Defence Council of Ukraine. The NSDC was excluded from the talks with Russia as the then head of state has not been sure that the NSDC staff will give a positive evaluation of the draft agreements. Indeed they were flawed from a legal standpoint and dangerous from the point of view of national interests and security. In addition, Kyiv wanted to sign a Treaty on Friendship, Cooperation and Partnership with Russia, which would finally recognize the territorial integrity of Ukraine and inviolability of the existing state borders. However, Moscow was ready for this but on the proviso of signing a package of agreements on the Black Sea Fleet.

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[46] Хейфец Б. А. «Взаимные расчеты по долгам и экономическое взаимодействие стран СНГ и России», Материалы круглого стола «Противоречия процессов валютно-финансовой интеграции в регионе СНГ», Москва, 2005 – Kheyfets B.A., The mutual settlements on debts and economic interaction between the CIS and Russia, Proceedings of the roundtable „The contradictions of the processes monetary and financial integration in the CIS „, Moscow, 2005, p. 68 [In Russian]

[47] Ослунд А. «Чому в Україні відновилось економічне зростання?», «Наукові матеріали №15», Інститут економічних досліджень та політичних консультацій, липень 2002, стор. 9.

[48] Хейфец Б. А. «Взаимные расчеты по долгам и экономическое взаимодействие стран СНГ и России», Материалы круглого стола «Противоречия процессов валютно-финансовой интеграции в регионе СНГ», Москва, 2005 - Kheyfets B.A., The mutual settlements on debts and economic interaction between the CIS and Russia, Proceedings of the roundtable „The contradictions of the processes monetary and financial integration in the CIS „, Moscow, 2005, p. 69 [In Russian].

In 2010, something similar happened. Just instead of the debt issue, the question of price on gas was on the agenda. The fleet-debt exchange (the Black Sea Fleet deployment in exchange for an annual paying off the debt) was substituted with a fleet-price scheme (extension of the Black Sea Fleet deployment until 2042 for a 30 percent discount in the price of gas by 2020). In fact, in 2010 it was not so much the Russian side who initiated an exchange deal as it happened in the 1990s, but this time it was Ukrainian one who came up with an offer. Moreover, a way how Ukrainian side has approached an elaboration of the deal looks even more uncultivated than it happened in 1997. Though, the National Security and Defence Council have been excluded from the process once again.

It is necessary to analyze the genesis of such approach, which is quite evident on the side of Russia within the framework of its imperial paradigm, but which is unacceptable to be followed by Ukraine simply because of the presence of any foreign military base on the territory of the state poses a priori a threat to its national security.

3.1.2. RosUkrEnergo: a Yalta start

In order to understand the logic of action of the present Ukrainian government in its relations with Russia as well as a motivational context that led to the signing of Kharkiv agreements, one should recall the events of 2004 that took place in Yalta. From the point of scheduling the events in Russia-Ukraine relations the Yalta 2004 finds itself in a midway between 1997 and 2010. Few people mention Yalta 2004 - what is completely wrong – as the understanding of Yalta 2004 is necessary if one wants to understand "orange" but also "post-orange" developments in Ukrainian politics.

Presidents of Ukraine and Russia Leonid Kuchma and Vladimir Putin met with businessmen from both countries in Yalta on 26 July 2004. The parties came into agreement on a joint scheme for supply of gas to Ukraine. The following two events took place simultaneously in three days on July 29, 2004: both sides have signed the Protocol on the Coordination Council of the newly established company RosUkrEnergo and the package of bilateral contracts on the supply and transit of natural gas until 2028. On the same day the websites of Gazprom and Naftogaz published outline information describing the above events, including their political background, i.e. meeting of the presidents of Ukraine and Russia: "On 26 July in Yalta, at the meeting of Presidents of Russia and Ukraine with members of the two countries' business communities, the agreements were reached on forming a single long-term gas balance. In furtherance of these agreements today ***the JSC Gazprom Headquarters hosted a ceremony of signing a set of documents, identifying the terms of the Russia-Ukrainian cooperation in natural gas supplies and transit up to 2028.*** By the documents signed a new company RosUkrEnergo

was established. The business niche of RUE will be as follows: it will purchase Turkmen gas for Ukrainian market and will act as operator of the purchased gas as well as it will invest into the development of gas transportation infrastructure necessary for gas transit."[49]

In media reports the Ukrainian-Russian summit in Yalta did not look ordinary or routine. Some highlights show its special importance in comparison with the previous summits. "For the third time this year, Leonid Kuchma hosted his friend and colleague Vladimir Putin in the Crimea. The reason for the July meeting of the presidents was a business forum with participation of elite business circles from Ukraine and Russia. <...> The presidential motorcade arrived with a delay of exactly one hour after the appointed time at the Livadia Palace. Spacious "protocol" limousine appeared to be unoccupied. Leonid Kuchma and Vladimir Putin preferred instead the normal, black Mercedes 600, just with armoured glass. On the way from the state residence in Foros to Livadia, they have been sitting together in the backseat and dotting the i's in their informal conversation without witnesses, which they have started yet on morning."[50]

The package of agreements between RUE and NJSC Naftogaz Ukrayiny transformed significantly gas relations between Ukraine and Turkmenistan. In fact Russian side having intercepted volumes of Turkmen gas through the Putin - Niyazov agreement of 4 October 2003, prevented any direct delivery of gas from Turkmenistan to Ukraine. Furthermore, it created an intermediary structures controlled by Gazprom in the form RUE and put under its own control gas trade between Ukraine and Turkmenistan.

Analysis of 26 July events in Yalta followed by the signing ceremony in the Gazprom headquarters in Moscow on 29 July, shows that not only the legal aspects of the Turkmen gas trading scheme was changed, which served some business interests of political figures on both sides, but also, it shows a correction of Ukraine's strategic priorities. The package approach of 2004, designed for long-term period up to 2028, has been elaborated by Russia. Financial potential of RUE schemes, including extensive network of lobbyists, allowed the Russian side to influence Ukrainian structures of power and to enforce its interests. In the end Russia managed to receive certain concessions of a strategic nature. Here is the illustration of media coverage of the July 2004 events: "Provisions on joining NATO and accession to the European Union as the ultimate goals of the Euro-Atlantic and European integration policies of the country were excluded from the military

[49] http://www.gazprom.ru/press/news/2004/july/article54932/

[50] Майкл Львовски. «Комсомольская правда», №139, 28.07. 2004 - Michael Lvovski, Komsomolskaya Pravda, issue 139, 28 July 2004 Available online: http://www.cidct.org.ua/press/2004/20042107.html#10

doctrine of Ukraine. It was the matter of the decree of Ukrainian President Leonid Kuchma signed on 15 July 2004. **It was released only on 26 July on the eve of the meeting of presidents of Russia and Ukraine in Yalta"**[51]

3.1.3. Kharkiv 2010 in the context of Yalta 2004

A Yalta episode is a key to understand developments after July 26, 2004, – the date of two presidents' another meeting "without ties", a one of many others that took place before Yalta 2004 and later on, including the meeting in Kharkiv on April 21, 2010. It should be noted that shortly before the Kharkiv meeting the president of Ukraine Viktor Yanukovych put to a determination the National Centre for Euro-Atlantic integration of Ukraine as well as the inter-ministerial commission on the preparation of accession of Ukraine to NATO by the presidential decrees N495/2010 and N496/2010 as of April 2, 2010. In fact, one can see a sort of analogy with the aforementioned decision of the former president Leonid Kuchma who decided to withdraw from the then valid military doctrine of Ukraine, including a provision on Ukraine's integration with NATO.

Kharkiv 2010 is just an upgraded version of a Yalta 2004. A discount on gas price offered to Ukraine by the Agreement between the Russian Federation and Ukraine on the Deployment of the RF's Black Sea Fleet on Ukrainian Territory and the Appendix to Contract of 19.01.2009 № KP signed between Gazprom OJSC and Naftogaz Ukrayiny on purchase and sale of natural gas within the period of 2009 – 2019 in Moscow will bring a very limited benefit for Ukraine, however, it will maintain a Russian military presence in Ukraine until 2042. A new gas bubble inflates again: annual volume of Russian gas supplies to Ukraine is expected to be increased from 33.75 billion to 36.5 billion cubic meters.

In fact, the Kharkiv agreements brought Ukraine into dependency on the Russian government as the discount on gas price has been introduced by the Decision of the Government of the Russian Federation No. 291 of April 30, 2010, on the Rates of Export Customs Duties for Supplies of Gas from the Territory of the Russian Federation to the Territory of Ukraine beginning ex post facto from April 1, 2010. However, a formula on price calculation established by the Contract of 19.01.2009 № KP between Gazprom and Naftogaz when it comes to purchase and sale of gas within the period of 2009 – 2019 remains unchanged. The agreement on deployment of Russian fleet in Ukraine of 21 April 2010 in fact has a secondary character. But, the agreement is an international contractual document ratified by parliaments, which limits of a freedom of manoeuvre for Ukraine would it want to

[51] Andriy Myselyuk, Kyiv, http://news.bbc.co.uk/hi/russian/news/newsid_3927000/3927721.stm 2004/07/26 17:19:09 GMT

review the agreement. In contrast Russia has managed to retain full freedom for its actions through the mechanism of governmental regulations.

The discount price does not cover the entire volume of gas supplies form Russia to Ukraine, but only a "preferential" portion of it. The discount was applied on the volume of 30 billion cubic metres imported in 2010, and will be applied to annual volume of 40 billion cubic metres in years to come. When it comes to volume of gas which exceeds the above quotas, e.g. 6.5 billion cubic meters in 2010, Ukraine pays full price for such gas without any discount.

Kharkiv agreements did not change the pricing formula, which has remained unchanged in terms of "take-or-pay". The essence of the agreements consists in the following outcome: Naftogaz will pay for gas with a discount equal to *"the amount by which the export duty on gas supplies to Ukraine is decreased*" and in case "*if such an adjustment is applied by the decree of the Government of the Russian Federation on export duties for natural gas supplies from the territory of the Russian Federation to Ukraine*". Thus, **the discount on gas price is not regulated directly by the gas contract (i.e. it is not a part of corporate relations between Naftogaz and Gazprom)**. The contract contains only a reference norm, according to which Gazprom and Naftogaz are pledged to obey by the decision of the Russian government on gas prices. This means, inter alia, that thanks to **April 21, 2010 agreement, Russian government was given a legal mean to influence directly price of gas supplied to Ukraine** by changing or cancelling its own decree N291.

In addition, neither the gas contract nor the intergovernmental agreement that has prolonged the deployment of the Russian fleet in Ukraine established legal sanctions and/or legal consequences for a Russian side should it break provisions of the agreements or should it want to use them to challenge Ukraine's interests. It is also important to note that in the case of a dispute on gas discount (e.g. concerning its amount or cutback) it cannot be subject to the independent review by the arbitration courts since the government of Russia is not a commercial entity. In other words, there will be the only scenario to solve such dispute for Ukraine, and namely to engage with Russia in intergovernmental and/or diplomatic talks.

According to the Foreign Minister of RF S. Lavrov, the level of relations and the number of Russian-Ukrainian agreements achieved within the year of 2010 "exceeded our expectations; their far-going dimension as well as the operative way in which they have been concluded, certainly, is a record-breaking in bilateral relations."[52]

[52] Україна та Росія готують нові домовленості щодо Чорноморського флоту. Данило Кляхін. 03.01.2011 - Ukraine and Russia are preparing new agreements on the Black Sea Fleet. Daniel Klyakhin. 03.01.2011 Available online: http://www.golosua.com/main/article/mizhnarodni-vidnosini/20110103_rosiya-ta-ukrajina-gotuyut-novi-domovlenosti-schodo-chornomorskogo-flotu [In Ukrainian]

Relations between Moscow and Kyiv as they have been formed within the year of 2010 less and less resemble a model of relations "sovereign-vassal", as it seemed from the beginning. They resemble more and more the model of "predator-booty" relationship. For all that booty still does not realize its status and continues to consider itself as being junior partner of predator, together with which it will be acting in full coordination and without any competition on foreign markets. In other words, in our case booty believes it can be predator's partner in hunting other booties.

Flywheel of a transaction scheme "national interests in exchange for a cheaper gas" has not stopped after the Kharkiv agreements. Despite the fact that Russia's position became even more rigid in terms of new requests (e.g. proposal on merging aerospace industries, shipbuilding, nuclear power sectors, and finally, gas production assets), Ukraine continues to make concessions. The Law of Ukraine "On the Principles of Domestic and Foreign Policy" adopted by the Ukrainian Parliament and ratified by the President in 2010, which has introduced the non-aligned status of Ukraine, gives a striking evidence of Ukraine's concession. It is obvious that Ukraine's refusal to join NATO will not contribute to its European integration process against the background of its almost unconditional rapprochement with Russia, which seeks to reincorporate Ukraine and Belarus into its sphere of influence giving itself a kind of "gifts" on the eve of the 2012 presidential elections. In the above context, it is not by accident that talks between Ukraine and the EU on whole package of strategic issues, including Association Agreement and the Deep and Comprehensive Free Trade Agreement, came to a dead zone.

The post-Kharkiv period shows a growing number of complications in Ukraine's talks with EU across the whole spectrum of issues, especially in the energy sector. In Brussels, the Kharkiv agreements were perceived by many as a strategic U-turn of Ukraine. There is no lack in official statements in Kyiv on its firm course toward European integration. However, the new dynamism of Ukraine's cooperation with Russia, including high intensity of meetings on the level of senior officials along with talks going slowly with Brussels raised questions about a graveness of Ukraine's intentions. Adoption of the Law of Ukraine № 2411-VI "On Foundations of Domestic and Foreign Policy" has been considered in Brussels as an important indicator of the fact that a European course does not present a priority policy for Kyiv. Not speaking about the fact that the task to enforce the process of European integration of Ukraine is listed as 12th among 16 policy priorities defined by Article 11 of the Law.[53]

[53] Закон України №2411-VI «Про засади внутрішньої і зовнішньої політики» - The Law of Ukraine № 2411-VI On Foundations of Domestic and Foreign Policy available online: http://www.president.gov.ua/documents/12069.html [In Ukrainian]

Kharkiv agreements have softened Ukraine's relations with Russia; however they did not stop Moscow's effort to exert its pressure on Kyiv. On the contrary, there is an evident trend of Russia's policy toward Ukraine after Kharkiv 2010, i.e. it is trying to get more new concessions from Ukraine without offering something in exchange. The good illustration of such policy could be Russia's continuing preparations of the South Stream project and simultaneous refusal to negotiate real guarantees for Ukrainian GTS (based on generally accepted principle "ship or pay"), etc. Thanks to Kharkiv agreements Russia managed to create a sort of foreign policy vacuum around Ukraine with the aim to ensure that post-Soviet integration and security projects of Russia, e.g. CIS, EurAsEC, Customs Union, CES, and CSTO, do present the only long-term alternative for Kyiv. Moreover, if Ukraine will continue tacitly to follow Russia, the outcomes will that the EU will discuss and settle Ukrainian agendas with and through Russia. That would undermine the status of Ukraine as an independent actor on international scene.

3.1.4. Swiss face of the Gazprom and Ukraine's "Stockholm syndrome"

The lawsuit initiated by the RosUkrEnergo against NJSC Naftogaz Ukrayiny at the Arbitration Department of the Stockholm Chamber of Commerce has started before the gas crisis of January 2009; however, it became publicly known after it. It did not attract such a keen interest of the EU as it happened in case of the Gazprom – Naftogaz relations. General assumption prevailed in the EU in terms of viewing the 2009 gas crisis as a dispute between two insufficiently transparent monopoly corporations in countries that are not EU members. It was a wrong estimation, at least because of RUE with the consent of Gazprom supplied gas to the EU countries neighbouring with Ukraine. Also, with the help of this "Swiss tool" in the course of 2006-2010 Gazprom has been carrying out an effective special operation with the aim to create a critical mass of economic and political problems for Ukraine through a gas price-debt mechanism. The ambition was to put Ukraine in a situation, in which the only solution for it would be "assistance" of Moscow. Why the role of Gazprom is so important in relations between Naftogaz and RUE? Because it really shows one another side of relations between Gazprom and Naftogaz, disguised as a relationship with a "third party", which, however, is just one of many faces of "multi-faced Yanus Gazprom".

From the perspective of Ukrainian-Slovak relations in the gas sector, the RUE factor did not play so important role as, for instance, in Ukraine's relations with Poland. Polish national oil and gas company PGNiG had a contractual relationship with RUE and consequently it has been facing the serious problem as far as it comes to securing its gas balance. As mentioned above, issue of RUE is important for European expert community in order to understand what happened (and continues to happen) in Ukraine, but also a RUE factor is important in order to under-

stand strategy and tactics of the Russian gas monopoly, through which Russia has been implementing to a great extent its political and economic projects with the aim to renew its sphere of dominance in CEE as well as to increase its influence on the EU via countries of the "old Europe".

That is why it is worth to look more carefully at the RUE "tool" of Gazprom, which proved to be effective leverage of Russia that was applied not only with the aim to keep Ukraine on Russian orbit, but in addition, it showed that it can be applied also with the aim to manage the change of government. Here Russians are not original inventors of a regime change since they apply U.S. methods of a regime change in "banana republics" as Americans did it when the United Fruit Company was active in Latin America. The main technological difference of today's methods is refraining from the use of force. The specific features of the use of Gazprom's "toolkit" in the form of RUE are analyzed below.

In January 2007, co-director of RosUkrEnergo and at the same time the board member of Gazprom Konstantin Chuychenko in his public interview clearly identified relations within the tandem RUE - Gazprom. "*Historically, the gas has been supplied to Ukraine by intermediaries who had no relation to Gazprom. So I emphasize that* ***RUE is not just an intermediary for Gazprom, but it is Gazprom's subsidiary trading company***," - stated a professional lawyer, currently presidential aide and the Head of the Presidential Control Directorate.[54] Wolfgang Putschek, not the least most important person in RUE, gave a similar description of RUE relations with Gazprom. He said to the British NGO Global Witness yet in 2006: "***RosUkrEnergo has not been a transit company, like the Eural Trans Gas... Gazprom has the controlling power in the RosUkrEnergo ...***"

In this context, conclusion of two contracts for sale-purchase of 11 billion cubic meters of gas between Gazprom and Naftogaz on January 20, 2009, (the first day after the settlement of the gas crisis) can be interpreted as a ***fulfilment of commitments by Gazprom - as a parent company controlling RUE - to transpose property rights on the above mentioned volume of gas to Naftogaz bypassing the RUE***.

This illustrates a number of critically important points.

1. Conclusion of the Stockholm arbitration on the issue whether 11 billion cubic meters of gas were legally transferred into the ownership of Naftogaz, largely depended on the adjudication of the legal aspects of relations not only between Naftogaz and RUE, but also between Naftogaz and Gazprom, as well as

[54] http://korrespondent.net/worldabus/176284/print

between Gazprom and RUE. It is known, that documents and testimonies that reveal these aspects have been withdrawn from the arbitration by decision of the Ukrainian side upon strong request of the Russian side. Deputy Chairman of Gazprom Valeriy Golubev wrote a letter on September 15, 2009, in which he emphasized inadmissibility of detection of a role of Gazprom in the dispute between RUE and Naftogaz during the arbitration process in Stockholm.

2. If Gazprom as a co-founder of RUE, moreover, a co-founder which effectively controls RUE, had to transfer rights to own 11 billion cubic meters of gas to Naftogaz, but instead of that, the decision the Stockholm arbitration court put back ownership rights to RUE, the question sounds: did Gazprom meet its obligations to Naftogaz following the contract of 20 January 2009? If it did not, the question is: why? Can this be seen through the prism of criminal law? We should not forget that giving back the above amount of gas to RUE should suit interests of Gazprom as the shareholder of RUE. Neither Naftogaz nor any other public or private company from Ukraine is the shareholder of RUE!

3. It is important to note here that 11 billion cubic meters of natural gas, which Naftogaz has acquired in its ownership, were placed in underground storage facilities in Ukraine in the so called "transit regime" and, allegedly were destined for subsequent export to the EU countries. As claimed earlier by RUE, such export was intended to cover losses from gas deliveries to Ukraine at the prices lower than the European. We will elaborate later how much convincing is this explanation. Now it is only important to note that during the change of scheme of the gas supplies to Ukraine and the Agreement on Settlement of Relations in Gas Industry of 4 January 2006, three parties involved (Naftogaz Ukrainy, Gazprom and RUE) have agreed to establish a functional dependence between **RUE right to export** 15 billion cubic meters of gas to the EU countries and **its obligation to ensure Ukraine's gas balance at affordable prices**. In other words, RUE received gas from Gazprom for export to the EU *on condition* that it will ensure the gas balance of Ukraine.

As to explanation by RUE, part of the profit earned from European exports was intended to cover its loss due to deliveries to Ukrainian consumers for lower price. As suggested in January 2009 one of the beneficiaries of the RUE Dmytro Firtash: "I have satisfied all at once: I have fed Ukraine, I have fed Gazprom, and the whole banquet was paid by Europe."[55] Thus, if RUE was excluded from the scheme of gas supplies to Ukraine in January 2009, the question is whether it is entitled to receive (in 2009) benefits from natural gas exports to the EU providing that gas

[55] http://www.kommersant.ua/doc.html?DocID=1105789

had been supplied by Gazprom for the purpose of maintaining the gas balance of Ukraine? Is it right to retain RUE exports of natural gas to the EU providing that it ceased to be a supplier of natural gas to Ukraine in the view of the aforementioned functional relationship between exports to the EU and ensuring the gas balance of Ukraine? In this context, there is an additional important nuance: in accordance with the agreement of 4 January 2006, the RUE had the right to export gas to the EU ***only within joint projects with Gazexport***. Without the consent of Gazprom, which, inter alia, is de facto controlling the gas metering stations (GMS) in Ukraine, the RUE would not be able to export gas to the EU countries

The Stockholm tribunal did not analyze substantially the question to what extent Gazprom controls the RUE. In its decision, the arbitration court limited itself to the statement that "*the RUE is a joint venture in which the Gazprom Group and company Centragas Holding AG own a 50% stake each*." However, we should pay attention to some facts which indicate that **the degree of Gazprom's control over the RosUkrEnergo is higher than one of 50% shareholder.**

1. According to the consolidated financial (accounting) reports of JSC Gazprom for 2005, in October 2005 the Group issued a guarantee to the loan given by JSC Gazprombank to RosUkrEnergo AG in the amount of USD 672 million due in June 2007 at an interest rate 10%. As of 31 December 2005 outstanding amount of this loan was USD 366 million that was guaranteed by the Group, pursuant to its obligations. [56]. As stated in the consolidated financial (accounting) reports of JSC Gazprom for 2006, RUE met its obligations under the above mentioned loan contract JSC Gazprombank, and thus Gazprom's obligations under the contract of guarantee have been terminated. [57]

   The above fact is noteworthy for at least two reasons.

   First, it is eloquent evidence of which entity is in charge for the establishment of RUE. The loan of a quite significant amount was needed for the starting up RUE activities - the initial formation of a flow capital. As we see, it was Gazprom Group who provided RUE with its initial capital as well as guaranteed paying off the loan.

   Second, according to established practices, guarantees within such amounts of financing and within business as usual circumstances are used to be provided for companies that are **under effective control of the guarantor.** That is, the guarantor is a parent structure. Otherwise, there is a high risk of irreversible loss of money.

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[56] Annual Financial Report of JSC Gazprom for 2006 (http://www.gazprom.ru/f/posts/96/642868/finans_rus.pdf) In Russian]

[57] Годовой финансовый отчет ОАО «Газпром» за 2005 год - . Annual Financial Report of JSC Gazprom for 2005, p. 93 (http://www.gazprom.ru/f/posts/91/747099/financial_report_rus_2005.pdf) [In Russian]

2. RosUkrEnergo as one of the largest dependent companies that are members of the Gazprom Group has been mentioned in the consolidated financial (accounting) reports of the Gazprom Group for the years of 2005-2008. In these reports, among other things, one can find information regarding the operations of the Gazprom Group and RUE as one of the affiliated (related) entities under the provisions of Accounting Statute "Information on Affiliated Persons" (PBU 11/2000). Application of the mentioned PBU provisions to RUE means **that Gazprom considered itself to be a company which has the ability to control or influence decision-making process of RUE on its economic activity.**

3. At the official website of RUE, the documents entitled "Financial indicators 2006" and "Financial indicators 2007" were published. Let's omit the fact that RUE has never released its audited statements. It has limited itself to publishing financial indicators only. These documents, as large as one and half pages each (!) are stating that they are certified by an auditor. However, neither auditor's confirmation nor statement has been ever published (!). Remarkable is the fact, that in the footnotes to the above mentioned documents the RUE directly stated that "*present financial indicators are* ***provided to Gazprom Group's consolidated accounting (financial) statements***". In accordance with the international financial reporting standards RUE indicators can be consolidated in the statements of Gazprom only if Gazprom exercises full and effective control over the company. This example can indicate that **RUE considered itself to be under effective control of Gazprom**.

4. It is known that the role of RUE in the gas trade between Russia and Ukraine was made out by the Agreement on Regulations of Relations in the Gas Sector of 4 January 2006. The signatories of this agreement were the following three parties - Naftogaz, Gazprom and RosUkrEnergo. Future role of the RUE was adjusted by the Agreement on the Development of Relations in the Gas Sector of March 13, 2008."[58] What is remarkable, the latter agreement was signed by *two parties only: Naftogaz and Gazprom*. However, it contained provisions for liabilities of the RUE. For example, Article 1: "From January 1 to December 31, 2008, RosUkrEnergo AG or Gazprom will sell natural gas to Naftogaz..." Moreover, Naftogaz (it seems at the request of Gazprom) undertook a number of obligations regarding RUE. For example, Article 7 states: "Naftogaz undertakes obligation to ensure taking and transit of volumes of Central Asian gas delivered by RosUkrEnergo AG".

5. The fact is that Gazprom responded in a nervous manner when Naftogaz tried to involve it in the arbitration court proceedings after the gas crisis in 2009 as a third party. This response might be other indirect evidence of the fact that Gazprom did have a complete control over RUE. It is not coincidentally, that

[58] http://www.gazprom.ru/press/news/2008/march/article56498/

Deputy Chairman of the Management Committee of Gazprom V. Golubev in his letter from 15/09/2009 to the Board Chairman of Naftogaz Ukrayiny Oleg Dubyna wrote about inadmissibility, in his view, of constructing the Naftogaz defence at the court by involving Gazprom in the dispute between Naftogaz and RUE (see Appendix 2. Letter № 06-2129 from the Deputy Chairman of Gazprom V. Golubev of 09.15.2009).

Herewith, it looks like that in early 2008 Gazprom negotiated with Naftogaz as well on behalf of the RUE, which did not protest against it, but complied with all agreements reached by Gazprom on its behalf for its commitments (the contract on natural gas supply to Ukraine in 2008 was concluded between Naftogaz and RUE on the conditions provided in Article 1 of the agreement of 03/12/2008). One another provision, Article 7 of the Agreement dated 3/12/2008, is also significant: according to it *Naftogaz is obliged to give Gazprom confirmation of natural gas volumes stored in underground storages of Ukraine, which are owned by RUE.* All this indicates that **Gazprom was behaving as having full rights on RUE ownership, it cares about property of RUE as it would be its own property, acts on its behalf in contractual relations with third parties. And finally, RosUkrEnergo does not protest against this although the agreements made by Gazprom are legally binding for RUE!**

6. One another precedent is the October 2008 *Agreement on the principles of long-term cooperation in the gas sector*. [59] In this agreement signed bilaterally by Naftogaz and Gazprom *without* participation of RUE, the parties agreed to quit from the Agreement on adjustment of relations in the gas sector of 4 January 2006, and to transfer to Gazprom the debt of Naftogaz to RUE for supplied gas. Concluding such agreements without participation and consent of the RosUkrEnergo is legally impossible, unless we consider Gazprom and the RUE the same and a single entity. Thus, in the above case, **Gazprom again behaved like a legal person that has full control over RUE, and the latter did not have any objections in this respect**.

7. It is necessary to refer on the technical agreements between NJSC Naftogaz Ukrayiny and JSC Gazprom, one of which has been repeatedly emphasized here. Technical agreements contain a lot of interesting things. For example, if we take the Technical Agreement on the terms of taking natural gas – its acceptance on the frontier gas metering stations for its transit via the territory of Ukraine, and also its transfer of natural gas to Ukrainian consumers in 2008, we find natural gas of RUE included in this agreement. Its Article 9 clearly states: "*The current technical agreement applies to the Contracts under which natural gas transit, transfer and storage is organized, namely*:

[59] http://www.zn.ua/newspaper/articles/55158

- *contracts between NJSC Naftogaz Ukrayiny and the RosUkrEnergo AG company № 5 TRK purchase and sale of natural gas dated July 29, 2004, contract № 14/935-1/04 on purchase and sale of natural gas in the years of 2005-2028 dated July 29, 2004 , № 14/935-2/04 contract on volumes and terms of transit of natural gas through Ukraine in the years of 2005-2030 dated July 29, 2004, contract № 14/935-3/04 on volumes and terms of pumping natural gas into underground gasholders, its storage, extraction and transportation in the years of 2005-2030 dated July 29, 2004, contract (without a number) on purchase and sale of natural gas dated March 6, 2008, contract № 14/198/08 on sale of natural gas dated 14 March 2008;*
- *contract on natural gas sales in 2006-2010 between UkrGazEnergo and RosUkrEnergo AG Company.*

The conclusion is obvious: Gazprom acted in this agreement not only on its own behalf, but also on behalf of RUE in its relations with Naftogaz. In fact, following the technical agreement Gazprom and RUE act as a single unit. (See Appendix 1. Technical agreement between Gazprom and Naftogaz of Ukraine on the conditions of taking of natural gas on metering stations at the border for its transit through the territory of Ukraine, as well as its transfer to consumers in Ukraine in 2008).

3.1.5. Gas business of RUE with supplies to Ukraine

Within the period of January 2006 to January 2009 RosUkrEnergo has been operating as an exclusive supplier of natural gas to Ukraine. Financial (accounting) statements of JSC Gazprom (parent company) and consolidated financial (accounting) statements of the Gazprom Group for 2005-2009 contain information open for public access, in particular, on RUE operations in the gas market.[60] Summary of this information provides us with a number of very interesting conclusions. The following data are taken directly from the above mentioned financial (accounting) statements of the Gazprom Group or calculated on the basis of those data, if a different source is not indicated.

[60] Annual Financial Report of JSC Gazprom for 2005, (http://www.gazprom.ru/f/posts/91/747099/financial_report_rus_2005.pdf)
Annual Financial Report of JSC Gazprom for 2006 (http://www.gazprom.ru/f/posts/96/642868/finans_rus.pdf)
Annual Financial Report of JSC Gazprom for 2007 (http://www.gazprom.ru/f/posts/00/122023/fin_rus_2007.pdf)
Annual Financial Report of JSC Gazprom for 2008 (http://www.gazprom.ru/f/posts/59/948424/fr_2008.pdf)
Annual Financial Report of JSC Gazprom for 2009 (http://www.gazprom.ru/f/posts/28/135151/financial-report-2009.pdf)

During the years of 2006, 2007 and 2008, at which RUE achieved the peak of its business activities, Gazprom supplied 66, 65 and 62 billion cubic meters of natural gas respectively. Most of this gas was supplied to Ukraine. The rest was intended for export to Europe, for the sales at market prices in order to compensate the alleged losses of RUE due to lower prices of gas supplied to Ukraine. Volumes of gas supplied to Ukraine for its domestic consumption as well as volumes of gas that was exported to Europe are not specified in the annual reports of the Gazprom Group. However, information on volumes and prices of gas supplies to Ukraine can be obtained from the State Statistics Committee of Ukraine.[61] (*see Table 1*.)

Table 1. Volume and cost of natural gas exports to Ukraine

		Russian Federation	Central Asia			**TOTAL**
			Turkmenistan	***Kazakhstan***	***Uzbekistan***	
2006	Volume (billion cubic meters)	4,2	36,6	6,4	3	50,2
	Cost (million U.S. dollars)	397,5	3 479	605,4	287,8	4 769,7
	The average price per thousand m^3 (U.S. dollars)	94,62	95,00	95	95,00	**95**
2007	Volume (billion cubic meters)	4	36,1	7,7	2,3	50,1
	Cost (million U.S. dollars)	520	4 689, 9	1 002,5	299	6 511,4
	The average price per thousand m^3 (U.S. dollars)	130,00	129,9	129,9	130,00	**130,00**
2008	Volume (billion cubic meters)	1,4	31,3	9,6	10,3	52,6
	Cost (million U.S. dollars)	247	5 610	1 730	1 852	9 439
	The average price per thousand m^3 (U.S. dollars)	179,49	179,49	179,50	179,50	**179,50**

The above data can be compared with the data provided by the Gazprom Group when it comes to volumes and costs of gas supplies to RosUkrEnergo (See: Table 2.)

[61] http://www.ukrstat.gov.ua/ (Chapter"Export and import of specific commodities by country"- „Mineral Products")

Table 2. Gas supplies from Gazprom Group for RosUkrEnergo AG

		2006	2007	2008	Total
(1)	The total volume of gas delivered to RUE in billion cubic meters	66	65	62	**193**
(2)	The volume of gas sold to RUE for supplies to domestic consumption in Ukraine, billion cubic meters.	50,2	50,1	52,6	**152,9**
(3)	The volume of gas sold to RUE for export to Europe and for sail to Gazprom Group, billion cubic meters, calculated data (1) - (2)	15,8	14,9	9,4	**40,1**
(4)	The total costs of gas delivered to RUE, million RUR	157 450	172 242	230 093	**559 785**
(5)	The average exchange rate rouble against the U.S. dollar over the period, RUR / USD.	27,18	25,57	24,81	
(6)	The total cost of gas delivered to RUE, million U.S. dollars, design values, (4): (5)	5 792,86	6 736,1	9 274,2	**21 803,16**
(7)	**The average price for total delivered gas by RUE (excluding transportation costs**), U.S. dollars per 1000 cubic meters, design values, (6), *X1000:(1)*	**87,77**	**103,63**	**149,58**	**(112,97)**

The following fact deserves attention: **the average price for which RUE has been receiving natural gas from Gazprom in the course of 2006-2008 was significantly lower than the price for which it supplied gas to Ukraine**. In this context there is need to pay attention to the following two nuances:

It goes about *average (weighted average)* price. In Gazprom reports, unfortunately, the exact price of natural gas of every different origin is not indicated: there are indicated only upper and lower limits for the gas price of Russian origin and the average price for gas of Central Asian origin. Information on the supplied volumes of each kind of natural gas (by its origin) for RUE is absenting as well. This approach might be explained by unwillingness of Gazprom to disclose commercial information about Gazprom's pricing policy for RUE, what confirms once again: RUE and Gazprom are parts of the same and single unit.

Central Asian natural gas, most likely, RUE purchased at the border of Russia with Central Asian countries. That is, RUE also shared the costs of its transportation to the Ukrainian-Russian border. So it will be logical to adjust the average price of delivered gas, taking into account the costs of the gas delivery to the border with Ukraine. These data may be found in annual financial statements of Gazprom. Departing from the above considerations and omitting calculations, we get the following pricing table: (*See: Table 3*).

Table 3. Price parameters of natural gas supplies to RosUkrEnergo

		2006	2007	2008
(1)	The price of Russian gas delivered to RUE, U.S. $ per 1000 cubic meters	163-232	130-285	230-553
(2)	The average price of Central Asian gas delivered to RUE, U.S. $ per 1000 cubic meters.	72	103	146
(3)	**The average price of total volume of the gas delivered to RUE (including transportation costs),** U.S. dollars per 1000 cubic meters., design values	**94,39**	**110,42**	**164,83**
(4)	The average price of natural gas imported to Ukraine, U.S. $ per 1000 cubic meters	**95**	**130**	**179,5**

Departing from the data of the Table 3 it follows, that, taking into consideration a weighted average prices, RUE could earn on every thousand cubic meters of gas supplied for the purpose of consumption in Ukraine: $ 0.61 in 2006, $ 19.58 in 2007, and $ 14.67 in 2008. And these numbers should be multiplied by deliveries which exceed 50 billion cubic meters per year! **The above calculations shows that a "Ukrainian business" has been very lucrative for RUE even if it supplied gas to Ukraine at prices lower than the European ones.** These calculations question the statements of some of the RUE beneficiaries that "*Ukrainian business has never been profitable", "the RosUkrEnergo has been subsidizing Ukraine for three years, amounting to $ 4,5-5 billion", "[the RosUkrEnergo] has been subsidizing the costs of gas for Ukraine at the expense of profits derived from exports to Europe."*[62].

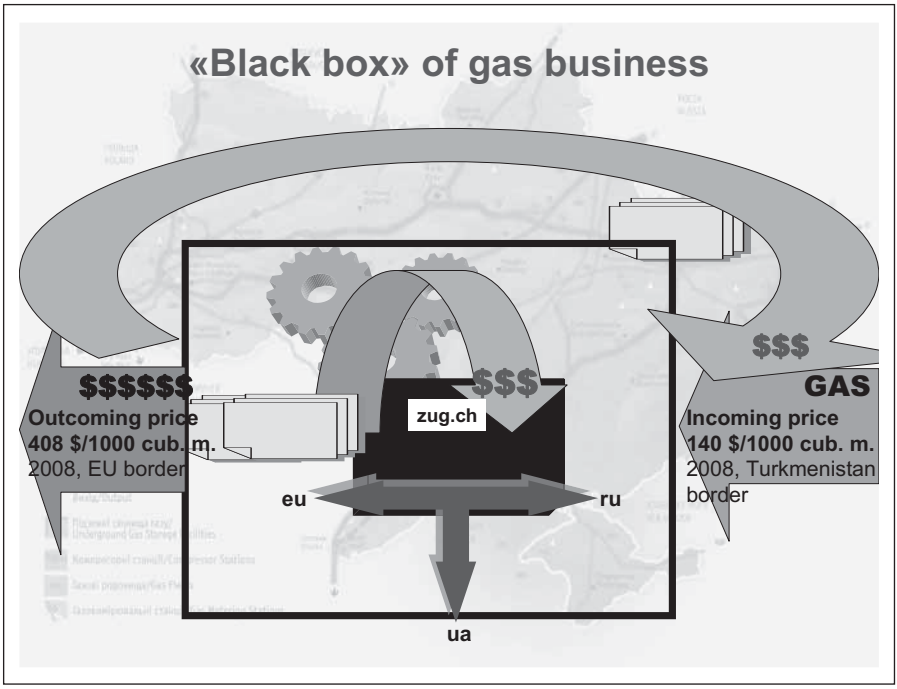
It might be possible that these statements followed the fact that RUE has included in the balance of gas supplies to Ukraine also Russian gas, which was formally bought from Gazprom at a price that exceeds the price of deliveries to Ukraine (for example, in 2006, when the price of gas in Ukraine was $ 95 per 1000 cubic meters, RUE has been buying Russian natural gas at prices ranging from $163 to $232 d per 1000 cubic meters, including the gas for supply to Ukraine). Most probably this is the foundation for allegation in "unprofitable" Ukrainian business for the RUE. However, **this scenario is nothing more than manipulative virtual technology that is clearly pursuing non-economic goals**.

On one hand, the inclusion of a relatively expensive Russian gas into the balance of gas supplies to Ukraine gave a possibility to save face of the Russian side that insisted on the increase of price on Russian gas to $ 230 during the gas crisis in 2006. And on the other hand, RUE could export to Europe more of the Central Asian gas (its price, as it is seen from the Table. 3, was significantly lower than the purchase price of Russian gas), selling it at European prices with increased margin

[62] http://www.kommersant.ua/doc.html?DocID=1105789

that allowed it to gain super-profits. The above is the main scenario that was implemented in practice. Diagrammatic scheme of "black box" of the trans-national gas business functions as follows (in this example the prices of 2008 are used):

Let us now imagine an alternative scenario, at which RUE would supply to Ukraine only Central Asian gas being bought at a price lower than the price of deliveries to Ukraine whereas all volume of the more expensive Russian gas would be exported to the EU. No matter how expensive Russian gas was, its price for RUE was lower than European prices in any case. In this alternative scenario, both supplies to Ukraine and exports to the EU would be profitable for RUE, although the gross revenues from exports to the EU would be lower than in the main scenario.



The most important is **that the implementation of both basic and alternative scenarios, first, provided RUE with an opportunity to receive the same income** (i.e. there was no impact on the overall gross income of RosUkrEnergo) and**, second, RUE did not require any technological changes in the scheme of gas supplies to Ukraine and to the EU (as both scenarios are implemented only "on paper")**. This, in turn, suggests that **the choice of a scenario of gas supplies could be motivated by other than economic reasons, i.e. political factors.** Therefore, one can assume that the granting a right to RUE on export of natural gas to the EU was not actually a compensation for unprofitable business with gas

supplies to Ukraine, as it has been publicly declared, but rather as a mechanism allowing for generation of super profits for RUE and its beneficiaries.

Finally, the annual financial reports of the Gazprom Group can dispel another myth created by RUE. On its website RUE stated that "company guarantees gas supplies to Ukraine at prices affordable to Ukrainian economy on the one hand, and that it is being a financial guarantee before Gazprom for payments for gas delivered to Ukraine on the other one." About how RUE was performing its function of being a financial guarantor to Gazprom inform data from the Table. 4.

Table 4. Debts of RosUkrEnergo AG to the Gazprom Group

		As to 31.12.2005	**As to 31.12.2006**	**As to 31.12.2007**	**As to 31.12.2008**	**As to 31.12.2009**
(1)	The total amount of debts payable to the Group „Gazprom", in roubles, including:	2 678 000 thousand	77 605 000 thousand	79 284 000 thousand	76 514 000 thousand	22 415 000 thousand
(1.1)	Debts for gas supply and gas transportation services to JSC Gazprom (parent company), in roubles	1 190 812 thousand	41 848 254 thousand	51 162 562 thousand	49 562 094 thousand	8 683 034 thousand
(1.2.)	Long-term portion of restructured debt to JSC Gazprom (parent company), in roubles	absent	14 903 403 thousand	6 946 575 thousand	absent	11 842 000 thousand
(2)	Exchange rate of rouble against the U.S. dollar at the end of period[2], RUR / USD	28,78	26,33	24,55	29,38	30,24
					/	

(3)	**The total amount of debts payable to the Gazprom Group, in U.S. dollars, including:**	**93 050,73 thousand USD**	**2 947 398 thousand USD**	**3 229 491 thousand USD**	**2 604 289 thousand USD**	**741 236,77 thousand USD**
(3.1)	Debts for gas supply and gas transportation services, to JSC Gazprom (parent company) in U.S. dollars	41 376,37 thousand USD	1 589 375,39 thousand USD	2 084 014,75 thousand USD	1 686 933,08 thousand USD	287 137,37 thousand USD
(3.2.)	Long-term portion of restructured debt to Gazprom (parent company), in U.S. dollars	Absent	566 023,66 thousand USD	282 956,21 thousand USD	absent	391 600,53 thousand USD

As it is seen from the Table 4, the RosUkrEnergo is a permanent debtor of Gazprom. **The total amount of debts within each of the three years of the peak activities of RUE on the gas market (2006-2008) exceeds 1.5 billion (!) for gas supplies** (another part of the RUE debt was restructured on the long term basis).

Yet at the beginning of 2010 the total amount owed by RUE to the Gazprom Group was about $ 750 million, nearly $ 400 million of which was a long term part of the restructured debt. This attitude of Gazprom to RUE's debt seems to be more than loyal, especially against its strict policy regarding Naftogaz, which had to pay for gas supplies in full amount within 7 days of the next calendar month. Not speaking about careful observance and schedule of payments by Naftogaz, this has been under the strict control of Gazprom.

Analysis of the annual financial reports of the Gazprom Group for the years of 2005-2009 gives grounds for additional conclusions and findings. For example, it is interesting that the Gazprom Group has been not only selling gas to RUE, but also has been buying it from the RUE. In principle, this would not mean anything special, given the fact that historically the services for the Central Asian natural gas transit through Russia have been provided by intermediary structures like RUE and have been paid through transfering to the Gazprom Group of respective volumes of gas. However, here striking is the fact that the costs of appropriate

transit services were substantially lower than the costs of gas purchased by Gazprom from RUE. Thus, in 2007 cost of services of RUE for gas transit to the border on Ukraine was approximately $ 440 million, while from sales of gas to the Gazprom Group RUE received about $1 740 million. That means that the balance in favour of RUE in its business with the Gazprom Group was 1.3 billion (!)

A similar situation could be observed also in 2008: the cost of transit through Russia was about $ 945 million, and the RUE income from the gas sales to the Gazprom Group was $1.585 billion, thus, the balance in favour of RUE was around $ 640 million. It is interesting that the financial statements of the Gazprom Group directly states that gas from RUE has been purchased at market prices (!). Therefore, one can assume that RUE was buying gas from the Gazprom Group at below-market prices, and was selling it at market ones. It looks like RUE was getting earnings not only from gas exports to Europe, but also from trading gas to the Gazprom Group (!). Does it mean that RUE was profiting not only from the sales of natural gas to Europe, but also from buying it from the Gazprom Group (?!).

It would be also very interesting to get at least an idea about price at which RUE purchased Russian natural gas from the Gazprom Group. As noted above, financial statements of the Gazprom Group inform only upper and lower limits for a price of Russian gas sold to RUE. However, as for the Central Asian gas the average price is provided. In the Gazprom Group reports only total volumes of gas supplied to RUE are presented with no differentiation between Russian and Central Asian gas. However, knowing the total volume of gas supplies to RUE, the average price of Central Asian gas (see Table 3.), and the precise volumes as of gas supplied to Ukraine from Central Asia as well as from Russia (see Table 1.), it is possible to calculate an average price at which RUE has been receiving Russian gas from the Gazprom Group. In this regard, for example, calculations for 2007 show that, depending on the volume of Russian gas deliveries to RUE (minimum volumes are only those delivered to Ukraine, the maximum volumes are the difference between total supply to RUE and the volume of Central Asian gas supplied to Ukraine), the average price of Russian gas supplied by the Gazprom Group to RUE amounted between $ 105 and 113 per 1000 cubic meters. Ukraine has imported Russian gas in 2007 at price of $ 130 per 1000 cubic meters.

The EU and its member states should analyze carefully the history of relations between Ukraine and RUE. Actually, the RUE scheme is being cloned in the European projects of Russian gas monopoly. Offices of companies developing Russian gas flows projects operate in the Swiss canton of Zug, and, unlike RUE where Gazprom was formally a 50-50 shareholder on a par, in the cases of Nord Stream, South Stream, and Shtokman Development it has 51%, i.e. the controlling share of stocks. Swiss offices started to distribute financial flows

as soon as the work on projects had been launched. The acceptance of those economically dubious projects by some Western European countries sends alerting signals as well as raises question whether the level of corruption in Berlin, Rome and Paris has not exceeded the critical level.

Swiss business-instruments (RUE–Clons) for Gazprom's gas expansion

RosUkrEnergo AG, 22.07.2004, Bahnhofstrasse 7, 6300 Zug

Nord Stream AG, 02.12.2005, Grafenauweg 2, 2304 Zug

South Stream AG, 18.01.2008, Industriestrasse 13C, 6304 Zug

Shtokman Development AG, 21.02.2008 Baarerstrasse 8, 6301 Zug

3.1.6. Post-Stockholm consequences

The history of relations between Ukraine and RUE includes one more matter, which is able to effect Ukraine's relations with the European Union in the sector of natural gas.

It goes about the **Contract № 14/935-3/04 on volumes and terms of pumping natural gas into underground gas storages, its storage, extraction and transportation in the years of 2005-2030** (hereinafter - Contract 3 / 04)[63] concluded between Naftogaz and RUE on July 29, 2004 – **in a week after RUE has become registered** by the Commercial Register of the Canton Zug, Switzerland. A Stockholm Arbitration Court in its ruling of June 8, 2010, recognized the Contract 3 / 04 as valid and binding for the parties "at the moment."[64] Similarly as

[63] http://www.dt.ua/img/st_img/2010/805/805-RUE-kontrakt.gif

[64] http://www.dt.ua/img/st_img/2010/804/doc.gif

it happened in the gas transfer case analyzed above, the arbitration court did not turn to a detailed discussion and analysis of the situation regarding the validity of the Contract 3 / 04. It only stated that "*common position is that the Contract 3/04 is valid and binding for the parties, and any requirements of Naftogaz that it is entitled to terminate this contract do not exist anymore.*" Thus, **an arbitration decision on the validity of Contract 3/04 is rather a result of the lack of objections by Naftogaz and a conformation of parties of the dispute than the result of objective and thorough scrutiny**.

By Contract 3/04 RUE pledged to transmit annually to Naftogaz 10 billion cubic meters of gas, and Naftogaz on its side to take responsibility for pumping the gas into the underground gas storages, storage of the gas, its extraction from the underground storages and its transportation. In January 2006, the volume of gas was increased to 15 billion cubic meters annually. Thus, the entire contracted volume of gas amounts to **385 billion cubic meters**! up to 2030. There is no precedent of such long term contract within the history of gas industry of Ukraine. The term of the Contract 3/04 started on 5 April, 2005 and will last to 15 April 2030, i.e. **25 years**!

Tariff rates for 1000 cubic meters of gas transportation over 100 km were initially set at $ 1.09375, and further increased to $1,6 in January 2006, and to **$1,7** in 2007. Tariff for pumping, storage and extraction of gas was initially set at $2.25 per 1000 cubic meters per year of storage period, of which $ 0.56 is paid for pumping, $ 1.13 – for storage, $ 0.56 – for extraction. In 2007 this tariff was increased to $6.06 (history of this increase is analyzed later in this text). **Tariff rates under the Contract 3/04 are strictly fixed and are determined not by an agreed formula, but might be changed only by the annex to the contract by mutual agreement of both parties.**

According to data of the National Gas Association of Ukraine, **tariff rates for gas pumping, storage and extraction, which were valid in the EU at the time of the conclusion of Contract 3/04 are 6 to 17 times higher than the same tariffs for RUE (!).**

Table 5. Gas storage tariff rates for the season of 2006

Country	**$/1000 cubic m**
Ukraine	2,25
Italy	37,51
Germany	22,98 and 39,71
Hungary	38,06
Austria	13,61

Source: On the base of the *Gas Strategies* information

The contract includes RUE commitments to transfer to Naftogaz up to 15 billion cubic meters of gas annually for its storage and transport. We should pay attention to contract's wording, particularly to the phrase "up to". Formally, zero is also "up to 15 billion cubic meters". **Contract 3/04 does not define the minimum volume of gas that RUE would be committed to taking and to transfer to Naftogaz.**

The contract 3/04 presumes that operations like pumping gas into storages, its extraction and transport are carried out by Naftogaz against the request of RUE. Thus, in accordance with Article 2.2 of the Contract 3/04, "*a monthly pumping of gas into storages is determined by applications which RUE sends to Naftogaz not later than 10 days prior to the respective month of the supply of gas*". However, the contract does not stipulate a right of Naftogaz to endorse such applications and to deny them under certain (exceptional) circumstances, such as lack of capacity during the peak loads, etc. Hereby, Naftogaz must be constantly in a state of readiness to pump/ extract and transport the volume of gas which it is notified about within 10 days. **Actually Contract 3 / 04 establishes preferential treatment of ordered (reserved) capacities for RUE, except for the situation that RUE will not pay for exploiting storage and transit services of Naftogaz.** Thus, one can find that the contract **assigns key rights to RUE whereas key obligations are left to Naftogaz**.

In addition, following the Contract 3/04 tariff rates for transport, pumping, storage and extraction of gas **are rigidly fixed and could be changed only by mutual consenzus**. In other words, the costs of services under the Contract 3/04 are not related in anyway to external market prices. **The contract 3 / 04 has not a typical component of any long-term contract in the gas industry - a pricing formula and a objective initial price, which allow for objective and quick adjustment of tariffs in the future without inducing any dispute between the parties of the contract**.

Moreover, the Contract 3 /04 significantly limits the right to review tariff rates that are part of the contract. Article 4.5 of the Contract 3/04 clearly stipulates that "*no party will be entitled to review of tariff rates during the first two years of the beginning of contracted services (up to August 2007* - author*), and thereafter either Party may require revision of this Contract provisions on tariff rates* ***two (2) times*** *throughout all the term of this Contract*." Formally, limitation of the right to review tariff rates under the Contract 3/04 are defined as a mutual restriction of the rights of the parties to this contract. However, it would be naive, even at the moment of the conclusion of this contract, to believe that never ever during the whole period of the contract until 2030, the situation might happen when prices of services provided under the contract by Naftogaz will increase. In addition, **in the contract concluded for a quarter-century (!), there is no provision for an automatic adjustment of rigidly fixed tariff rates at least by an inflation rate**. One can just imagine what will be the denomination of 6.06 U.S. dollars in 2030.

It might looks that Naftogaz has an option to review tariff rates following the provision of the paragraph 2, Article 4.1 of the Contract 3/04: "*In case of adoption of regulation acts in Ukraine that will change tariff rate, the Parties will adjust the tariff rate by signing an annex to the present Contract.* "The NERC Decree number 447 as of 27 April 2000 that has been yet in effect on the date of the signature of the Contract 3/04 has enacted the following tariffs: 3 UAH on pumping, 6 UAH on storage, 3 UAH on extraction, in total 12 UAH what was broadly equal to $2.25 following the official exchange rate of the National Bank of Ukraine at the moment of the conclusion of contract. The above rate was included in the Contract 3/04 when it has been signed. However, late on 11 May 2006 the NERC adopted a new resolution which increased respective tariffs as from 1 June, 2006: 7.5 UAH on pumping, 18 UAH on storage, 7.5 UAH on extraction, 33 UAH in total. Thus, **rates for services of Naftogaz following the Contract 3/04 increased almost threefold as from June 2006**. Nevertheless it did not mean that RUE started to pay at new tariffs approved by the NERC when they came into force.

After the NERC decision of 11 May 2006, Naftogaz has been repeatedly appealing RUE to sign an annex to the contract on new rates on gas pumping, storage and extraction that would bring them in a line with the new NERC regulation. RUE has been refusing to sign an additional agreement referring on the provision of the contract (Article 4.5) that within the first two years of its implementation tariff rates cannot be changed. Finally in the second half of the year of 2007 – i.e. more than a year after the adoption of the NERC tariff regulation of 11 May 2006 – RUE agreed to increase relevant tariffs.

This example explicitly reveals **that the wording of the paragraph 2, Article 4.1 of the Contract 3/04 is imperfect in legal terms at least to say, and as we can observe, it works in favour of RUE:**

- it does not mean automatic tariffs adjustment in case if tariffs are changed by new regulation act of the regulatory authority of Ukraine;
- it does not exactly say that tariffs should comply fully with new tariff approved by the regulatory authority of Ukraine;
- provisions of Articles 4.1 and 4.5 of the Contract 3/04 contradict to each other: **no matter how many times regulatory authority of Ukraine will change tariffs, following the contract Naftogaz can appeal RUE to agree on their adjustment to Ukrainian regulation only twice (!) during the contract period until 2030**.

Hereby, **the Contract 3/04, which actually does effect about 50% of capacity of Ukraine's GTS, including more than 10% of the transport facilities transiting gas to European costumers, has not only limited rights of NJSC Naftogaz, but as well the authority of NERC to implement of tariff policy in the field of the storage and transport of natural gas.**

If one compares the Contract 3/04 with an analogical Transit Contract concluded on January 19, 2009, between Gazprom and Naftogaz Ukrayiny, one can conclude that the Contract 3/04 is even more imperfect than the Transit Contract. We can support this finding by the following arguments:

- under Contract 3/04 RUE is obliged to supply **up to** 15 billion cubic meters of gas annually for transport and storage in Ukraine. Transit Contract sets the obligation of Gazprom to transfer to Naftogaz **not less** than 110 billion cubic meters of gas annually to transit it to European consumers. The difference in approaches is more than obvious. Although the Transit Contract is not a contract of the "ship-or-pay" type, by setting the minimum contracted transit volumes it provides Naftogaz with legal grounds to raise an issue of compensation for damages in case of Gazprom's failure to comply with these minimal volumes. However, any attempt to raise a question on compensation under the Contract 3/04 will face significant legal obstacles;
- transit rate under the Contract 3/04 is fixed to **$ 1.7**. A similar transit rate under the Transit Contract is established by the pricing formula and, for example, in the first quarter of 2010 it was **$ 2.78**;
- parties of the Contract 3/04 have a right to renegotiate the transit rate not more than two times during the 25-year period of its validity. The Transit Contract contains no such restriction, the only condition for an authorized request to review transit tariff is the justification of such request;
- Transit Contract in it Article 8.7 gives a clear procedure for dealing with requests for revision of the transit rates, as well as empowers the arbitration court with the authority to determine the tariff rates, if the parties cannot agree. The Contract 3/04 does not assume anything alike. Even if between Naftogaz and the RUE file the proceedings on the tariff rates under the Contract 3/04 at the arbitration court, the court cannot determine the amount of such tariffs independently, unless both parties (i.e. including RUE) have not authorize it to do so.

The above mentioned facts show how **a balance of commercial and legal interests under the Contract 3/04 has been distorted in favour of RUE even in a comparative perspective with the Transit Contract as of 19 January 2009.**

It is evident that there are quite specific economic interests standing beyond the desire to preserve validity of the Contract 3/04 validity, and it is not only the interests of RUE. In case if Naftogaz transfers 12.1 billion cubic meters of gas to RUE following the decision of the Stockholm court, it will not be in capacity to realize these volumes "on the wing". It will take some time to store and transport this gas it to customers, in other words, Naftogaz shall carry out activities that are the subject of the Contract 3/04. If this contract would not exist or would invalidated RUE would need to conclude with Naftogaz a new agreement, similar by the subject and form, but completely different in economic terms: tariffs on

gas pumping, storage and extraction would be higher as well as the tariff on transportation of gas. Finally, the period of validity of the new agreement would be much shorter than that of the Contract 3/04. Otherwise, how could we explain the conclusion of an agreement of Naftogaz with RUE for 20 years (while the contract with Gazprom is for 10 years only) as well as the better business terms of contract for RUE than the terms of contract for Gazprom?

However, should the Contract 3/04 be sustained it can be profitable also for Gazprom. Starting from 2006 Gazprom has been having no contract on the gas storage in Ukrainian UGS. At the same time it is understandable that without the use of Ukrainian UGS the Russian company may face considerable difficulties in the winter period in terms of its capacity to react promptly on the high volatility of gas demand in Europe. In this case, Gazprom might try to resume the exploitation of Ukrainian UGS through RUE, which is under the control of Gazprom. The Contract 3/04 provides for much more than attractive (as for a client) tariffs and mode of access to gas mains and underground storage facilities. When it comes to Naftogaz it can only hardly profit under the Contract 3/04 in its present form. The impact of the Contract 3/04 on the gas industry development in Ukraine is negative in wider context as well.

Firstly, Contract 3/04 does not correspond to the Law of Ukraine "On Principles of Operation of the Natural Gas Market of Ukraine" adopted in 2010. According to Articles 7, 9, 13 and 15 of this Law, all subjects of the natural gas market have equal rights to access the Single gas-transport system of Ukraine (gas pipelines and natural gas storage facilities). The law points out that one of the principles of the natural gas market will be an *honest competition* between the parties *under conditions of equal rights and opportunities*. Do Naftogaz and Ministry on Energy and Coal Industry of Ukraine wish to open gas market and to ensure that all subjects under the Contract 3/04 have "fair and reasonable" conditions? **If Contract 3/04 sustains in its present form and structure, including higher tariffs or a different mode of the use of UGS for other entities than RUE, it will violate equal rights and opportunities.** In this case, **other actors, even Gazprom, may require getting the same conditions and opportunities, which are provided by the Contract 3 / 04 to RUE.**

Second, Contract 3/04 can bring complications to Ukraine when it comes to meeting its obligations under the Energy Charter. In particular, under Article 6 of the EC Ukraine "*shall work to alleviate market distortions and barriers to competition in economic activity in the Energy Sector*". The Article 10 of EC commits Ukraine to "*encourage and create stable, equitable, favourable and transparent conditions for Investors of other Contracting Parties to make investments in its energy area. Such conditions shall include a commitment to* ***ensure fair and equitable treatment*** *to investors of other Contracting Parties without any exclusion.*" According to the

above EC obligations, the Ukraine shall cooperate with foreign companies, including European ones, under the same conditions as it does with RUE under the Contract 3 / 04 (which of course does not correspond with European practice and is unlikely to be profitable for Ukrainian side). Another option for Ukraine would be to impose a different regime for other companies, which will be discriminatory, and thus will violate its international legal obligations with all subsequent consequences.

Third, Contract 3/04 will not allow Ukrainian side to use free capacities of Ukrainian UGS to offer storage services to European companies. The total storage capacity of 13 Ukrainian USG facilities is 32.5 billion cubic meters. Under the Contract 3/04 Naftogaz is obliged to provide RUE with services of up to 15 billion cubic meters. Therefore, the contract covers almost 50% of Ukrainian underground gas storage facilities and blocks them for RUE. At the same time RUE does not pays for the maintenance of such a large reserve capacity of underground gas storage. It is not obliged to care about their insufficient exploitation. In addition it determines by itself how much gas it will store in Ukrainian USG within up to the maximum volume of contracted gas, i.e. 15 billion cubic meters. Thus, it may happen that free capacities of Ukrainian UGS will not be used neither by RUE nor they can become available to European companies (since they are reserved for RUE) and in the end Naftogaz will not receive any income. Actually that's a today's reality.

Taking into account the above connectivity one can conclude that the **Contract 3/04 will have a long term negative effect on the state of Ukraine's energy security as well as will limit prospects for cooperation of Ukraine with the European Union and neighbouring countries, including Slovakia and Poland.**

3.1.7. RUE forever?

Following the above analysis we can assume that the RUE scheme as well as its analogical schemes can have an impact on the operation of European gas markets. At the same time, there is only very limited and publicly accessible information about RUE and its beneficiaries.

The main reason has to do with specific conditions of doing business in Switzerland (RUE is established registered in the Swiss canton of Zug). In accordance with Swiss commercial law, which has been changed as from January 1, 2008, (it should be noted that it did not provide for more transparency), the registration of corporate shareholders is solely the prerogative of corporations. That is, if previously a register of shareholders had been maintained at the cantonal level, since 2008 this has been done at the corporate level. The company creates a register of its shareholders by itself and is not obliged to report it to anybody. Swiss legislation

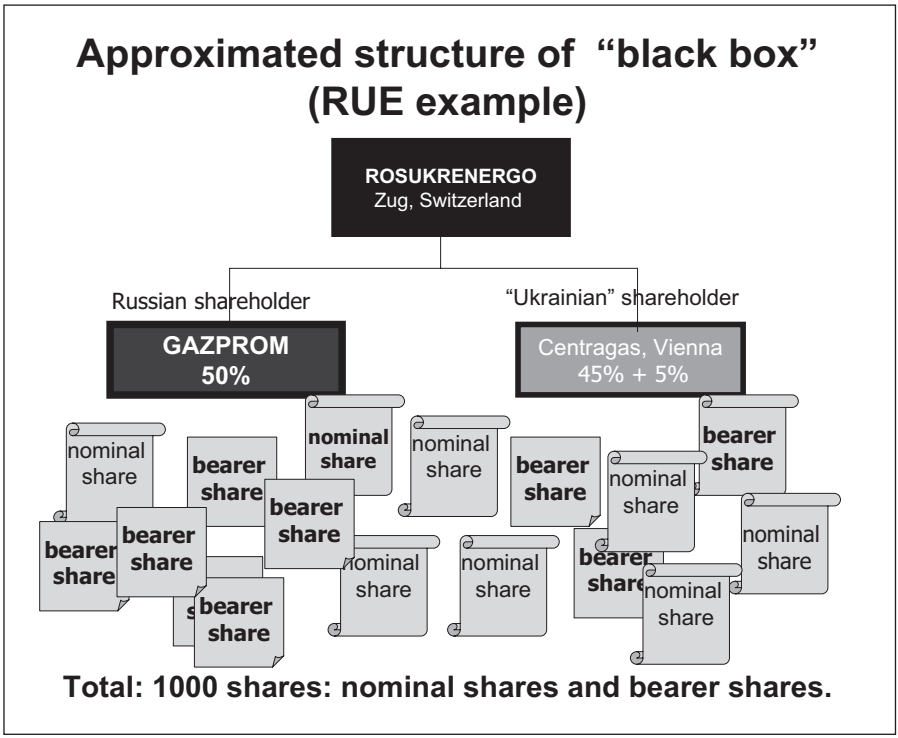
stipulates clearly a limited duty of company to disclose its business information. For instance, an annual report, a balance sheet, and an auditors' report are open only to the shareholders. How "comprehensive" is publicly and officially available information about RUE may be verified by everyone who wishes to look through the commercial register of the canton of Zug[65].

Under the Swiss law, the company is established at the moment of writing it down into the Commercial Register. It contains information on its location (address of seat), authorized capital stock, members of the governing body and statutory representatives. However, information about the shareholders can be open to third parties only on the base of the shareholders' approval. This is one of the key factors that should be taken into account if one wants to understand statements by some business people and/or politicians on whether they are related to certain businesses registered in Switzerland and how they correspond to the facts.

In order to be sure whether one or other person is involved, for instance, to the RUE business, one should get, in fact, the relevant protocols starting from 22 July 2004 a date of the registration of RUE in the Commercial Register. But even if protocols are obtained, it should be realised that it goes about just corporative information, even if notarized, to the purpose of informing other corporation, but not any official governmental structure. That is why it is difficult to verified such information by independent sources.

Second and the most important characteristics of the companies such as RUE is existence of two types of shares: registered and payable to holder. The fact of the matter is that registered shares by the decision of the shareholders can be transformed into shares of holders (essentially, anonymous), and vice versa. A shareholder certificate does not contain any data about the owner. Holder of such certificate is automatically considered the owner. S/he is not registered in the company's register. Neither the company nor the shareholders, nor any of the statutory representatives is obliged to verify way she/or he has acquired such a certificate. When these shares are sold, there is not necessary to add any information on the transfer to the certificate or to conclude any accompanying document. Holder of shares may deny his/her ownership or any relationship with respective shares since his/her name is not registered, however, he/she can require and receive dividends. That provides companies with wide opportunities to make businesses for profit of its real owners.

[65] http://www.hrazg.ch/webservices/inet/HRG/HRG.asmx/getHRGHTML?chnr=1703027441&amt=170&toBeModified=0&validOnly=0&lang=4&sort=0.



A company of a RUE-type with the reference to Swiss law may deny any request to inform about its shareholders, including the period within which they own shares. This allows any person, who is in the public service of a particular country to combine her/his activities with the company's businesses, and simultaneously to declare „in good conscience" no relationship that company. Herein lays the elegance of such business schemes. It provides real owners with almost unlimited possibilities for corruption as well as protects them from being responsible for corruption in their home countries. It is impossible to exclude the fact that in the list of those who own holders' shares are not only governmental officials, but also prime ministers and presidents who can act through confident proxies. It is not by a coincidence that presidents and prime ministers are changing, there is no cheap gas, but the scheme sustains.

One of the leading European gas experts has stated correctly in his expert opinion to the Stockholm court: "... ***in my opinion, the fact that Ukrainian government has made so little effort to find out owners of RUE and to investigate their activities is unusual***." It is worth to note that it was exactly an uncertain ownership structure what led KPMG Company to refuse to make audit of RUE in October

2005. It was declared, that the company can no longer act as an auditor of RUE because of the risk for its reputation. The history of a survivability of RUE shows one important thing: financial resources that circulate outside the state and public control have extremely dangerous potential, in particular, the corruption one. Registration of RUE in the Swiss canton means that its activities are not controlled by any competent authorities of Ukraine, Russia or the EU. Financial flows under the decision of the governing body of such company can be directed easily to different banking accounts of natural and/or legal persons.

That has an impact on Ukraine and its state-owned companies' external relations with foreign partners. In the case of oil and gas sector of Ukraine a system of its external (shadow) management has been developed. Accordingly, development of relations with foreign partners is not so much motivated by the needs of Naftogaz, but by goals the private Swiss company, which is the affiliated entity of Gazprom. Thus, the latter via RUE indirectly determines the level of cooperation between Ukrainian state company Naftogaz and its European partners. And given that Gazprom is a prolongation of the Kremlin's administrative structure, the whole chain of influences, interests and, accordingly, restrictions for Ukrainian side in its external relations is coming into sight. Financial potential of the non-transparent gas business scheme and an extensive network of lobbyists and corruption allow Russian side to exert influence over power structures of Ukraine and to manipulate with them. However, this is not the only explanation of the effectiveness of schemes such as RUE.

Trans-national nature of the RUE scheme is one of the explanations for a phenomenon of successful gas-political business. If you look at the membership of the governing bodies of companies created under the RUE scheme, there are not only Slavic (Ukrainian and Russian) names can be found, but also non-Slavic ones. So, all of three components of the gas chain are presented: production - transportation - sales. Trans-national phenomenon of a "gas octopus" is no less unique than the drug phenomenon. Consequences of a "gas octopus" operation are no less ambitious than it's a drug analogue.

In the above context special resonance should be given to the report of the National Intelligence Council (*Global Trends 2025*: *A Transformed World*), published in 2010: "*Crime could be the gravest threat inside Europe as Eurasian transnational organizations — that are drawing their strength from energy and mineral sectors — become more powerful and broaden their scope of activities. One or more governments in Eastern or Central Europe could fall under their domination.*"[66] It seems that this prognosis in the case of Eastern Europe, if look at Ukraine has been at least partly

[66] Глобальні зміни світу – 2025. Доповідь Національної розвідувальної ради США. Переклад з англійської. – Львів: Літопис, 2010, стор.84-85.

materialized. The Central Europe is in a turn. The authors of the report foresee a disappointing scenario: "*Europe could pay a price for its heavy dependence; especially if Russian firms are unable to fulfil contract commitments because of underinvestment in their natural gas fields or if growing corruption and organized criminal involvement in the Eurasian energy sector spill over to infect Western business interests*".[67]

The events unfolding within the Eurasian energy area in the course of 2006-2010 - gas crisis, political disputes, international litigation, where the active players were dubious companies of non-transparent origin - demonstrated that the epidemic has started already to be spreading and threatening with unforeseeable consequences. The following forecast by George Friedman of STRATFOR applies not only to the post-Soviet space: "There will be three stages *in the development of Russia. In the first stage Russia will focus at restoring power and effective control within the former Soviet Union as well as at recreating the Soviet system of buffers. At the second stage Russia will try to build a second series of buffer zones already outside the former Soviet Union*»[68]. Obviously, the countries

[67] Ibid.,p. 85

[68] Фридман Д., Следующие 100 лет: прогноз событий XXI века, перевод с английского, Москва, ЭКСМО, 2010, стр. 145-146

bordering the former Soviet Union, in particular, such as Slovakia and Hungary, as well as Poland and Romania, are falling into a zone of special attention on the proviso that Russia achieves its objectives in Ukraine and Belarus. In this context, one should recall that the basis for this prognosis is the fact that particular non-transparent gas business schemes have emerged not only in Ukraine. For example, the predecessor of RUE, the Eural Trans Gas, appeared, as is known, in Hungary. Formal original founders of RUE Centragas and Arosgas companies originated from Austria.

To summarise, it can be argued that certain dubious and non-transparent trading schemes of trade in energy resources in Eastern Europe would be unlikely successful without the offshore section. A number of the EU countries and Switzerland are the area of activities of ambitious business groupings which have gained a powerful capital through the non-transparent trans-national trading schemes in hydrocarbons that are based on corruption under the protectionism of Eurasian authoritarian and kleptocratic regimes, some leaders of which have already become favourites of their counterparts in the Old Europe.

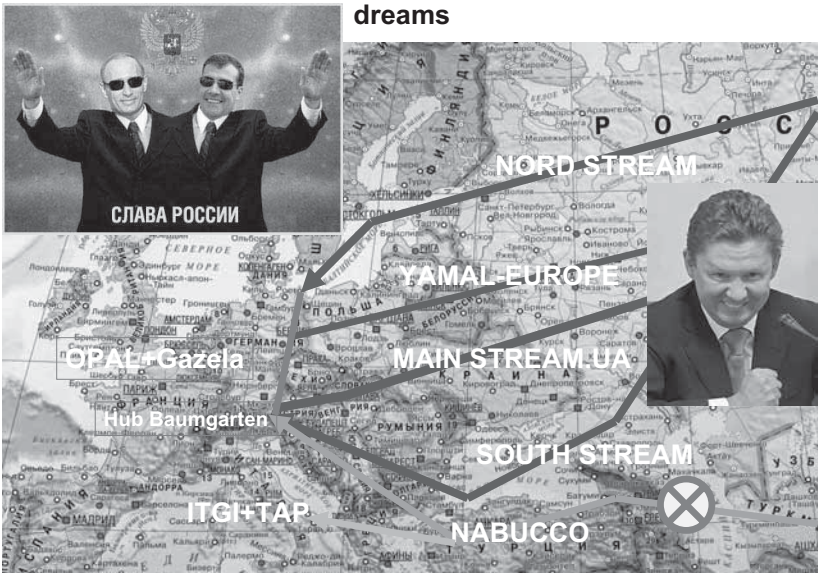
The specific energy players that are being cloned in the Swiss cantons, are aimed at gaining the super profits and may indirectly affect the stability of the energy systems through the manipulative algorithms and not only within individual countries, but also, under certain circumstances, on a European scale.

3.2. DEFINITION OF THE LOWEST CRITICAL LOAD LIMITS OF THE UKRAINIAN GTS FOR ENSURING ITS TECHNOLOGICAL CAPACITY TO CARRY OUT TRANSIT OPERATIONS

3.2.1. Transit instability as a basic scenario for the Eastern European Connector within the next decade

Gas dispute between Russia and Belarus in summer 2010 indicated some changes in Russia's energy policy. Cutting off gas supply has not become exclusively a winter phenomenon any more. Gazprom forms a reflexive behaviour of its consumers in order to make them ready for reduction or complete stoppage of gas supplies. It examines likely reactions and counteractions of its opponents during emergency situations. As well it carefully monitors and analyzes behaviour and algorithms of actions of the European Commission. In fact, it is working out and improving program of "gas wars". The Russian monopoly is preparing itself for an H-hour – dominance at the European gas market - regardless of dramatic changes that are taking place in the world gas markets. Expansion of a niche of shale gas in North America brings a domino effect through the growing liquefied gas supplies to the EU market, which

The scheme of future gas streams according to Russian dreams



consequently leads to downsizing a share of gas supply via pipelines from Russia to European market.

It is very likely that the present decade will be a period of transformation of the scheme of pipeline gas flows on the East – West axis that has been formed during the 1970s. For both Slovakia and Ukraine as countries that posses a central position on the CH-axis of Eurasia, it is important to understand ongoing trends, draw conclusions and take appropriate actions with the aim to preserve their transit status or to transform it. The positive fact is that in 2010 the Ukrainian government leadership understood the following: maintenance of the existing transit volumes of gas depends not only and not so much on Gazprom, but primarily it depends on willingness of European consumers to buy gas from the Russian monopoly. "For a long period, let's say 10 years, Europe should give Russia guarantees that it will buy gas, and Russia should give us a guarantee that these gas volumes will be pumped through our gas transport system as well as that a bypassing transport routes will not be constructed", – said Prime Minister of Ukraine M. Azarov on 16 June 2010.[69]

[69] http://gazeta.ua/index.php?id=343429

It should be noted that the implementation of "two streams" (the Nord Stream and the South Stream) by Russia will lead to a redundancy of existing gas transit infrastructure, its loss-making and growing expensiveness what casts doubt about a justified economic feasibility of the new streams projects. The implementation of new streams includes a potential threat to national gas markets, especially those which do not have a diversified access to the energy resources. The extension of gas transit infrastructure with free and unemployed capacity brings also more opportunities for manipulations.

According to IEA, there is a global trend of growing surplus of gas transportation infrastructure's capacities. In the pre-crisis 2007 period the surplus was 12% the forecast for 2015 is 27%.[70] It is possible to make an assumption that to a great extent the above gas transit capacity surplus is formed by the Russian Federation. Why? Let us look in more detail way at this issue.

Possible scenarios for volume fluctuations of Russian gas transit through the Ukrainian GTS were modelled after the gas crisis of January 2009. They included estimation of a model processes on both sides of Ukrainian pipeline – in Russia and the EU. The model analysis showed that in most cases (15 of 25) a scenario of instability of transit flows prevails. There are also 5 critical scenarios that actually mean technical dysfunction of Trans-Carpathian gas connector.

Table 6. The simplified matrix of the volume change scenarios for gas transit from Russia to the EU via Ukraine and Slovakia

RF - EU	**1. Increase of production and exports**	**2. Decrease of production and export**	**3. Development of LNG production**	**4. Shift of exports to APR (Asia Pacific)**	**5. Implementation of Nord Stream and South Stream projects (at least one of them)**
1. The growth of consumption and imports	1.1. Preserving a volume with a trend to its increase	1.2. Close to a critical reduction	1.3. Preserving volumes with a tendency to non-critical reduction	1.4. Preserving volumes with a tendency to non-critical reduction	1.5. Instability of transit volumes

[70] N. Tanaka "Prospect for global gas", 22.03.2010, http://www.iea.org/speech/2010/Tanaka/India_FICCI.pdf

2. Fall of consumption and imports	2.1. Preserving volumes with a tendency to non-critical reduction	**2.2. Critical reduction of volumes**	2.3. Instability of transit volumes	2.4. Instability of transit volumes	**2.5. Critical reduction of volumes**
3. Growing demand and supply LNG and unconventional gas	3.1. Instability of transit volumes	3.2. Instability of transit volumes	3.3. Instability of transit volumes	3.4. Instability of transit volumes	**3.5. Critical reduction of volumes**
4. Growing demand and gas supply from non-Russian sources	4.1. Instability of transit volumes	4.2. Instability of transit volumes	4.3. Instability of transit volumes	4.4. Instability of transit volumes	**4.5. Critical reduction of volumes**
5. Implementation of the Southern Gas Corridor (at least, Nabucco) and integration of Ukrainian GTS within the EU	5.1. Instability of transit volumes	5.2. Instability of transit volumes	5.3. Instability of transit volumes	5.4. Instability of transit volumes	**5.5. Critical reduction of volumes**

The above modelled scenarios are relevant not only for the transit through Ukraine, but also for other transit routes, e.g. Belarus and Poland. One can conclude that construction of a diversified system of Russia's gas export to Europe is designed to vary with gas volumes, change directions of its transit, and influence price formation on internally fragmented market of the EU. The aim is to maximize Russia's revenues from gas experts as well as to develop additional capacity to exert a pressure on one or another country by threat of restrictions and/or suspension of gas deliveries, especially in the combination with informational and psychological campaign.

The American expert of Russian descent, Mikhail Korchemkin from the East European Gas Analysis, arrived at a similar conclusion: "Following the developments of recent years, there is no reason to doubt that in the case of political conflict and the availability of a bypass pipeline Russia will cut off gas deliveries to Poland.

a. In case of conflict with Bulgaria, Gazprom will be able to cut off gas supplies by South Stream pipeline, without reduction of exports to other countries.

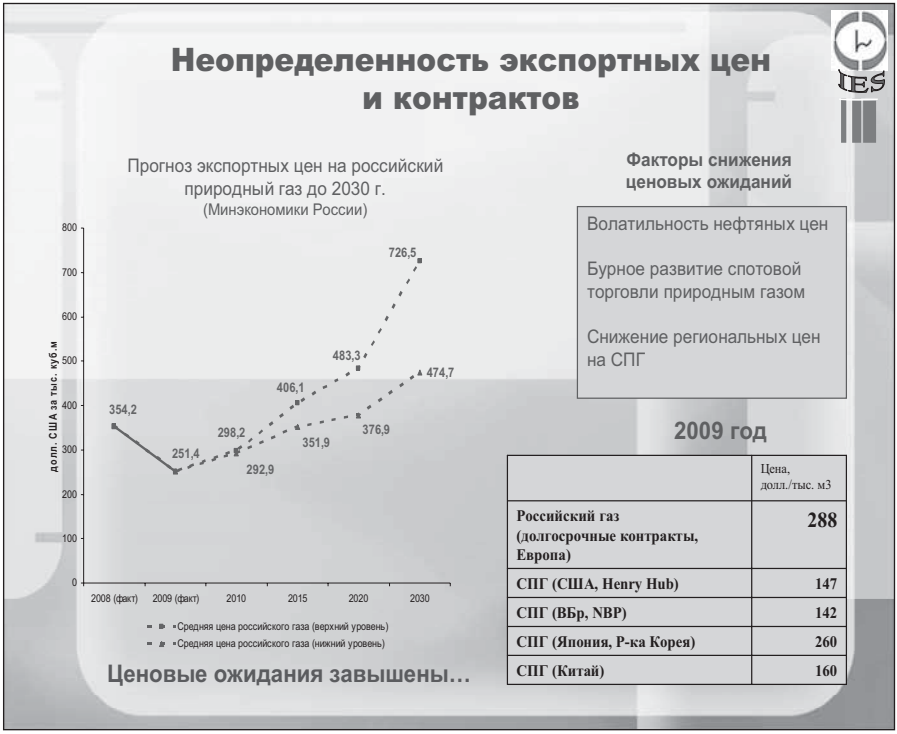
b. In case of conflict with Germany, Gazprom will be able to cut off gas pipelines of the Nord Stream, and that would not affect exports to other countries.

c. The Nord Stream and South Stream pipelines are designed not to expand volumes of Russian gas supply to Europe and/or to increase reliability of energy supply to Europe. New Gazprom projects will provide Russia with a possibility to make selective gas cut-offs vis-à-vis Belarus, Germany, Poland, Hungary, Romania, Bulgaria and Greece. Thus, **energy security of these countries will shrink**."

It is worth also to pay attention to one of the Energy Strategy of Russia provisions, which foresee the following goal: "*to reduce the risk of mono dependency of Russia's energy sector on energy exports to Europe as well as* ***to increase profitability and efficiency of the international activities of Russian energy companies without a substantial increase in exports volumes of primary energy*** *(!)*. Priority of the price escalation policy compared with the preservation of a market niche in Europe is also traced in some expert recommendations, which can be found on the Gazprom's website: "***In the present situation, in any case, it is needed to analyze how to maximize the profits of Russia from its gas exports to Europe.*** One way to achieve this goal is to change the pricing formula for gas, and namely, to separate it from the oil price that would allow very likely to preserve volumes of gas supply to European markets. ***Another way is to preserve the existing formula for a gas price; however, it will be needed to cut volumes of supplied gas.***" (By the way, one should remember that the head quarter offices of both "new streams" are located in the same place where RUE office is - in the canton of Zug in Switzerland. This provides good starting point for their sound coordination work, including minimization of taxes and maximization of profits of Gazprom at the expense of European consumers).

It should be noted that official projection of the Ministry of Economy of Russia on price of gas exported from Russia has clearly visible escalatory trend. Naturally Gazprom is also acting as the promoter of growth of gas price: its leadership in June 2010 predicted the gas price return at levels above $ 400 per 1000 cubic meters in 2011, that is, at the level of a pre-crisis 2008 period. Nevertheless such predictions are not necessarily shared even by Russian expert community. The evidence is shown on the following slide of the Russian Institute of Energy Strategy with the conclusion that expectations concerning a growth of price of Russian gas in European markets are unjustified.

Uncertainty of export prices and contracts



The main factors that reduce expectations regarding a dramatic growth of gas prices:

- Volatility of oil prices
- Rapid development of spot trading in natural gas
- Depreciation of regional prices on LNG

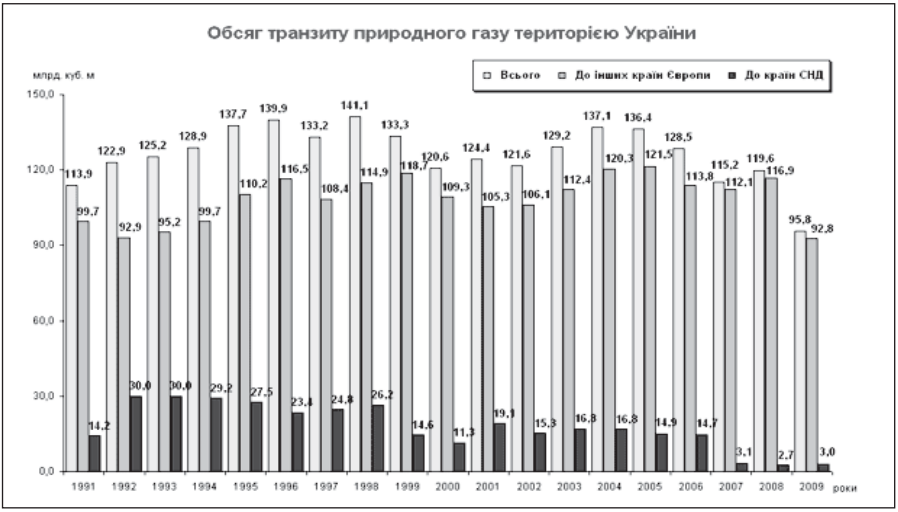
Today it is very difficult to assess the reliability of any forecasts on the development of prices due to volatility of energy markets and unstable exchange rate of the U.S. dollar. However, the very fact is worrisome that despite of the economic crisis of the EU and difficult situation of euro zone, Russia plans to escalate gas price or at least it will try to maintain its highest possible level along with the reduction of gas supply. The way to escalate a gas price via supply restrictions might well be implemented thanks to the increased capacity of new gas streams as well as artificial gas crisis and/or "technical problems" on any of the available transit routes.

Lessons from the 1973 successful implementation of „oil weapon" by Arab countries should be taken into consideration. Threefold jump of oil prices was an out-

come of a 9-percent reduction in oil supplies during the 1970 oil crisis. The existence of a substantial surplus of gas transit capacity (over 1/3), which is the aim of the Russian gas monopoly, would mean possibility for it to proportionally reduce supply of gas on one hand, and to increase disproportionably price on gas on the other one. That means that the risk of instability of the gas flows will be increased, including instability when it comes to volumes of transited gas.

Analyses of the official statistical data of Naftogaz Ukrayiny on the volume of transit through the Ukrainian GTS to Europe (see Chart 1) provide for a conclusion that the range of fluctuations of volumes of gas transited through the territory of Ukraine in the course of 1991-2009 was between 92.9 (1992) and 121.5 (2005) billion cubic meters of gas. Thus, an average annual volume of a gas transit is 109.7 billion cubic meters. The figure of 110 billion cubic meters is not by accident fixed as an indicative volume of gas for the 10-year period until 2019 in the Transit Contract between Naftogaz Ukrayiny and Gazprom of 19 January 2009. This figure corresponds to the average historical level of the exploitation of Ukrainian GTS by Gazprom regardless even the fact that in recent years Gazprom has implemented two transit route projects bypassing Ukraine - Blue Stream and Yamal - Europe I.

Volumes of natural gas transit through the territory of Ukraine



In the context of strengthening energy efficiency programs within the EU as well as expanding the use of renewable energy sources, it is unlikely to expect a serious increase in gas market niche in the EU energy sector. In this perspective, the very fact of developing plans with aim to increase capacity of gas transit infrastructure seems to be rather questionable in terms of its economic sense.

3.2.2. Ukrainian GTS: the limit levels of functioning

Ukrainian side shall be concerned not only by the issue of expanding transit capacity of its GTS and its maximal exploitation – which seems per se a bit strange against the clear EU policy to reduce energy consumption of hydrocarbons, - but also by **the issue on the lowest possible limit of gas volume transit through the GTS of Ukraine.**

Gas pipeline system of Ukraine

This will become very relevant issue for Ukrainian GTS once projects of the Nord Stream and South Stream will start to be exploited at least at a half of their capacity, and simultaneously consumption of Russian gas in Europe will start to decrease. This scenario should worry the EU as well since Russia's diversification of the gas supply routes to Europe, shared by Brussels, and does not mean the diversification of sources. Source remains unchanged and that is Gazprom. Assuming that Russia will prefer to transport gas through the newly built transit pipelines at the costs of the route through Ukraine and Slovakia, Central and Eastern Europe falls into risk, since under above conditions certainty of gas supply destabilization would dramatically increase as far as **there are** critical **minimal limits of volume of gas that should be available in GTS in order to maintain its capacity to transit gas**. **The first minimal limit is an economic one and that is a *zero profitability limit*** below which the GTS runs at a loss mode. **The second minimal limit is a *technological threshold*** below which the GTS cannot transit gas under high

pressure. It should be kept in mind that the gas produced by Ukraine is transported together with a flow of imported and transit gas and is being delivered to consumers through an extensive network of distribution pipelines.

Distribution pipelines are designed to deliver gas from the mains to the gas distribution stations. They are constructed with 100 - 700 mm diameter pipes with working pressure of 5.5 MPa – 7.5 MPa. The total length of these pipelines on Ukrainian territory is about 14 thousand kilometres, representing almost 40% of Ukraine's GTS. Routes for transit gas pipelines have been laid in a way that they pass through the areas with very low gasification. Therefore, consumers located within a relatively short distance from transit pipelines have been connected directly to them.

Thus, 46 nearby consumers in seven regions of Ukraine are connected to the pipeline Soyuz by 40 access points. The total length of distribution pipelines connected to Soyuz is 462.7 km. The average diameter of the pipeline is 247.6 mm. The total estimated transit capacity is 6.323 billion cubic meters of gas per year. The biggest nearby consumer of the Soyuz pipeline is Ladyzhynska hydroelectric power plant located in the Vinnytsya region.

Along, 37 nearby customers in 9 regions of Ukraine are connected via 30 access points to the system of pipelines Urengoy - Uzhgorod and Progress. The total length of pipelines of the Urengoy - Uzhgorod and Progress pipeline network is 320 km. The average diameter of the pipeline is 205.1 mm. The total estimated transit capacity of the pipelines is 2.26 billion cubic meters per year.

Further, 31 consumers in 5 regions of Ukraine and Moldova are connected to the system of pipelines Yelets-Kremenchuk-Ananyiv-Izmayil via 27 access points. The total length of pipelines is 313.8 km. The average diameter of the pipeline is 382.4 mm. The total estimated transit capacity is 5.462 billion cubic meters per year. The major consumer of this pipeline system is the city of Odessa. And finally, the cities of Uzhgorod and Mukachevo are connected to the gas pipeline Dolyna - Uzhgorod. Overall estimated gas taking from this pipeline is 0.6937 billion cubic meters a year.

The total length of all distribution pipelines in Ukraine connected with the transit pipelines is 1089.3 km. The total estimated consumption capacity of the nearby consumers is 14.77 billion cubic meters of gas per year. In fact, the number and length of gas pipelines has increased significantly in Ukraine in recent years. It happened thanks to cooperation of regional state administrations and managements of nearby plants with the regional departments of SC Ukrtransgaz. Companies that operate plants in sectors of metallurgy and chemical industry have constructed the so-called "straight pipes" – a distribution pipelines that work under high pressure. As a consequence the significant part of Ukrainian gas consumers, including households, is connected to the transit gas pipelines across the whole territory of Ukraine.

The present GTS of Ukraine is a complex system of transit and distribution gas pipelines that work under high pressure. In addition, there are special connectors at compressor stations, which enable a reallocation of gas flows between pipelines with different diameters. The above is a unique technological feature of Ukrainian GTS since it allows continuing in transiting gas to European consumers even if one of the pipelines suffers from any emergency situation. In such cases the flow of gas is redirected to another pipeline thanks to special connectors and thus, gas continues to be transported to consumers without any interruption.

Reduction of the volume of transit gas in the GTS system of Ukraine may lead to a complete stoppage of the work of compressor stations. Furthermore, a lack of transit gas in the GTS will not allow transporting gas of domestic production in/from the regions of Kharkiv, Poltava and Sumy oblasts of Ukraine. It is necessary to take into consideration a fact that gas is supplied to each particular locality in Ukraine by different distribution pipelines interconnected within a united system. Normal operation of gas compressor stations as well as a linear part of gas pipelines in Ukrainian GTS needs to be supplied at least by gas volumes at the level of 170-200 billion cubic meters per year. According to the Technical Agreement between Gazprom and Naftogaz, the latter must maintain a certain level of pressure at the exit of GTS what, in fact, allows European consumers pump out the required volume of gas (See: Table of Pressures - paragraphs 3.4 and 3.5 of the Annex 2 to the Technical Agreement between JSC Gazprom and Naftogaz Ukrayiny "On terms of delivery - acceptance of natural gas at the gas-measuring stations located on the border for gas transit through the territory of Ukraine, and also transfer of natural gas to Ukrainian consumers in 2008).

Decrease of volume of transit gas supply will automatically lead to problems with transport of gas from domestic production as well as with taking out technical gas from the GTS. In such situation the GTS of Ukraine could be stabilized for certain limited period of time by operating under reduced pressure. However, that is possible only provided that GTS of Ukraine is taken into autonomous mode of work, i.e. it becomes isolated from both Russian and European GTS. This happened in January 2009 when Russia cut off gas transit to the EU over the territory of Ukraine. However, the threat of the dysfunction of GTS working in an autonomous mode under low pressure is very high what has been confirmed also by the events of 2009:

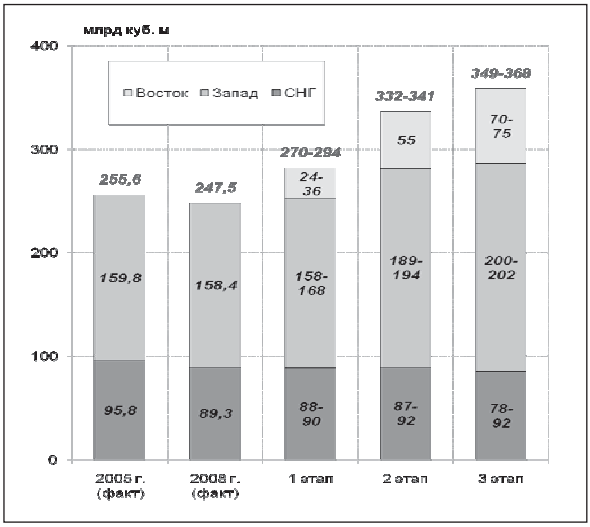
The operation of the gas transport system remains close to be critical. <...> As at 6 p.m. of January 11, 2009, the volume of technical gas in the GTS was 815 million cubic meters. If this volume continues to decrease and will reach a level below 800 million cubic meters, the technological process of transit of natural gas and its distribution can get completely out of the technical control of SC Ukrtransgaz. In particular, because of a possible shutdown of compressor stations, operator will not be able to ensure the gas supply regime and to restore gas supplies to enterprises. Should that happen a chaotic

intake of gas may become a reality. Consequently, the most distant municipalities and energy intensive enterprises will have no gas without having opportunity to restore gas supplies until the moment of filling the pipeline. Restoration of gas supply and solving the problems will require a relatively long time: three weeks or even more time. During this period Ukrainian and European consumers will remain without gas.

Reduction of the volume of transit gas in Ukrainian GTS can lead to a complete stoppage of the operation of compressor stations by their automatic blocking. Hypothetically **a technological limit for the GTS of Ukraine *as a whole system, not individual pipelines,* may be a transit of ~ 60 billion cubic meters annually**. However, this figure requires careful verification by institutions that are not dependent on Naftogaz and Gazromu.

3.2.3. Unpleasant prospects for the future

In order to analyze a priori probability of the scenario of artificial gas crisis it is necessary to depart from the algorithm of changes in the volumes of gas supply from Russia to Europe. When modelling such scenario we will refer to the forecast made by the major Russian institution in the field of energy security, an institute, which was taking part in preparing respective strategic documents of Russia. The chart below shows a supply scenario prediction of the Institute of Energy Strategy on directions/and volumes of Russian gas. It predicts a slight increase in exports of Russian gas to Europe by 2015 and 2020.



Note: *According to the Energy Strategy of Russia phase 1 means the years of 2013-2015, phase 2: 2020-2022, and phase 3: 2030.*

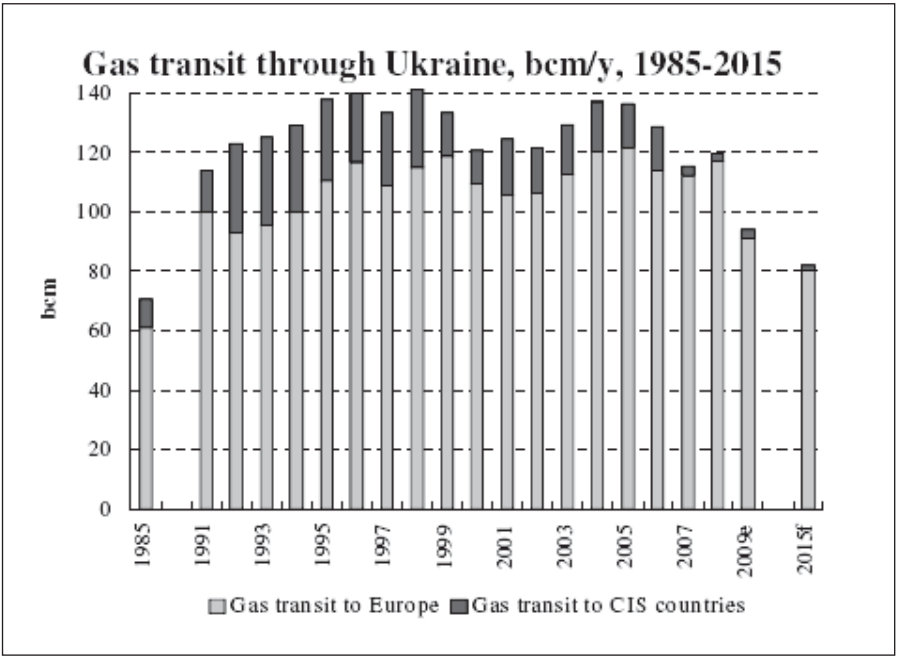
Scenario-2015 banks on 163 billion of cm of gas exports from Russia to Europe whereas scenario-2020 suggests that the volume of gas exported to Europe will be 191.5 billion cm. These numbers are the arithmetic average annual volumes of gas exports to Europe. Without going into details of the calculations done by IES as well as departing from the assumption that gas transit project bypassing Ukraine are implemented by 2015 we can conclude that under the scenario-2015 the volume of gas transit through Ukraine's GTS could be 56.5 billion cubic meters annually, and under the scenario-2020 it could reach only 24.5 billion cubic meters.

Thus, **provided that the Nord and South Stream projects will start to operate by 2015 as well as the existing Blue Stream pipeline will operate at its full transit capacity, loading of Ukrainian GTS with transit gas may be close to critical level. The technological minimum of transit gas for the Ukrainian GTS in order to ensure its capacity to operate is about 60 billion cubic meters.**

Of course, the above conclusion cannot be considered as a final and definitive one. Costs of gas transit via newly built routes (Nord Stream, South Stream) is higher than costs of transit of Russian gas via "old pipelines" on the territory of Ukraine and Belarus. In other words Russian gas supplied via new pipelines will become more expensive for final consumers. In the view of one of the leading Russian experts from the Institute of Europe of the Russian Academy of Sciences Aleksey Khaytun: "Following the plans of Gazprom the new gas supply routes should allow for bypassing Eastern European countries along the northern and southern flanks. In this case, Russian gas becomes more expensive for consumers (the Nord Stream project will not be competitive even with the liquefied shale gas delivery from the U.S. by tankers, not speaking about the costs of transit via Belarus and Poland)."

Therefore, **because of economic factors** Gazprom will be forced to use less costly ways for its gas supply to Europe, i.e. "old pipelines" via the territory of Ukraine and Belarus. This consideration coincides with the estimates done by other leading Russian research centre in the field of energy security - the Institute for Energy and Finance (see Chart 3). By the IEF estimates, the volume of gas transit to the EU through Ukraine's GTS will slightly exceed 80 billion cubic meters a year by 2015.

This scenario seems to be quite a realistic one, however, provided that Gazprom will evenly distribute gas flows to existing network of transit pipelines as well as it will refrain from manipulations when it comes to distribution of gas flows and its transit directions. However, the latter should be read within a political context, which does not depend solely on Gazprom since policymaking in Russia is the prerogative of Kremlin. In other words, one cannot predict probability of manipulative approach motivated by political considerations on side of Russia since its gas sector remains a close ground for foreign costumers. **Therefore, one cannot**



eliminate threat of sudden interruption of gas supply from Russia. The above threat calls for the creation of a transparency regime in gas supply (producer – transit - consumer) that could be established on a European level.

Do officials and experts in Brussels think about the lowest limit of technological functionality of Ukraine's GTS, when they say that merging of Gazprom and Naftogaz is just a bilateral issue of Ukraine and Russia? If Gazprom receives full control over the Ukrainian gas transport system and makes it completely non-transparent for the third parties (European consumers), it will be able to generate an artificial shortage of gas in European markets under the guise of technical problems at any of the gas transit routes. Vis-à-vis Ukraine, the mode of eventual actions of Gazprom might be quite simple: the reduction of volume of transit gas through the Ukrainian GTS below its critical technological level, which will put a stop to its operation. Supplies of gas via other routes to European customers cannot compensate the cut-off supplies through Ukraine. Thus, according to our estimates in the case of an unexpected stoppage of gas supply via Ukraine nearly 37 % shortage of gas can "suddenly" occur on European market what will immediately increase price on gas. Gazprom will be able to fill the gap by spot supplies from the Central European Gas Hub AG in Baumgarten (Austria), of course, for a different price. Gazprom controls 50 % of shares of the CEGH Baumgarten, which it bought the OMV Group.

It is natural that Gazprom as a gas producing company is not interested in having a non-Russian gas at the Austrian Central European Gas Hub in Baumgarten. In this context it is understandable why Russia is consistently opposing the Nabucco project since alternative gas supplies through it might neutralise a scenario of creating artificial gas deficit in Central European market via reduction of gas supply from Russia at a certain "H-hour". Indeed, if the Nabucco project is implemented with a full planned transit capacity it can provide only 5-6% of total gas consumption in the EU. However, this very percentage may play a crucial balancing role in case of the crisis. This very percentage as well as the transit routes facilitating delivery of non-Russian gas to Europe that are out of the Gazprom's control are eliminating room for a possible manipulative manoeuvres of Russia, including future gas wars in Europe.

In 2010, Gazprom has approached the German company RWE AG, which makes Herculean efforts to promote the Nabucco with an offer to join the South Stream project. Gazprom was more successful in case of the Austrian OMV Group, which, actually, initiated the Nabucco project in 2002. As conceived by Gazprom, if OMV and RWE will join the Russian South Stream project that will reduce to zero a chance for successful implementation of the Nabucco project. If that happens the massive pipeline system for supply of Russian gas to Europe that has been developed during the last quarter of the twentieth century, will be complemented by the new bypassing pipelines what will allow Russia not only to sustain its position on European gas market, but will significantly upgrade it. This system would be based on a monopoly of the gas producer, which is interested in maximizing its profits, including by applying non-market ways and means.

Arsenals of Gazprom's tools that are applicable on achieving its strategic goals are manifold: starting from large-scale media campaigns ending by provoking political tensions and armed conflicts in the producing regions and/or on the key transportation routes. Therefore, energy wars in terms of both a struggle for energy resources and their use as tools for exerting external influence will not become a matter of the past. In this context it is worth to bring back reaction of Russia to the fall of oil prices in 2008. "Russia as one of the largest exporters and producers of oil and petroleum products cannot find itself out of the process of formation of world prices on these raw materials, we need to develop a package of measures that will enable us to influence the market situation," said Vladimir Putin at the meeting with members of the government and representatives of Russian oil sector in November 2008.[71] It is noticeable how desperately Russia wants to sustain dependence of formation of gas price on oil price, while at the same time it wants to implement large-scale transit pipeline projects as well as to get access

[71] http://www.government.ru/archive/archive/2008/11/10/8710444.htm

to/control over gas distribution companies in the EU. Probably, that is motivated by intentions to develop an effective system as already mentioned above that would enable Russia to manipulate with volumes of supplied gas, directions of its transit and thus to influence prices in European market.

Likely there might be a certain "coffee-break" in gas relations on the East – West axis as it happened after the 1973 oil shock, however, the overall potential for energy wars will be sustained. Future scenarios fit well with the Paul Horsnell's description of the following three reasons for the disruption of energy supplies: *"force majeure disruption"* (producer's inability to ensure exports because of internal or external conditions, such as military actions), "*export restrictions"* (deliberate restriction of exports by a producer, or group of producers trying to achieve non-economic goals), the "*embargo on imports"*(restrictions implied by consuming countries on the oil exports of specific countries).[72] Thus, the potential of unconventional use of energy resources, including transit infrastructure, especially under scenario of export restrictions will sustain although sometimes it may seem that the time of energy wars is gone, just like in the 1990s gas wars of a 2006 and 2009 pattern were seemed to be unlikely.

3.3. KYIV - BRATISLAVA: PROSPECTS FOR THE TRANS-CARPATHIAN CONNECTOR

3.3.1. The mechanism of early warning and crisis prevention for gas supply

The events of January 2009 in the field of gas supply, which adversely affected energy security of Ukraine, Slovakia and the European Union, force for elaboration of early warning mechanism and for development of a package of measures in order to minimize negative effects of a prolonged disruption of energy supplies. The consequences of January 2009 are of a large-scale pan-European nature. They had negative impact on lives and welfare of citizens of Ukraine, Slovakia, and the EU. **However, a clear response on what happened in January 2009 – did Russia suspend gas supply or did Ukraine disrupt gas transit – is missing until now**. For obvious political reasons the European Commission avoids official response to such questions and limits itself just by stating the fact: "*On the night of 6th to 7th January, all supplies from Russia through Ukraine to the EU were cut. There were no gas supplies from Russia to Europe from 7th January to 20th January.*" [73] Some of the EU officials point out that the question of

[72] Horsnell P., "The probability of oil market disruption: with an emphasis on the Middle East", James Baker Institute for Public Policy, May 2000, http://www.rice.edu/energy/publications/docs/JES_ProbabilityOilMarketDisruption.pdf p. 7

[73] Commission Staff Working Document. Accompanying document to the Proposal for a Regulation

whom to blame for the 2009 gas crisis is not an important one. Obviously, such equivocation includes elements of a diplomatic courtliness. However, the very fact that the above question remains unanswered might always encourage a party that initiated the crisis to apply its "secret weapon" again. Certainly, one can take a point of the EC stressing that the most important issue is to develop mechanisms that would minimize negative consequences of gas crisis should it be repeated. In our point of view **question should be formulated much more consistently: how to create a system that will prevent future energy crisis and/or make them impossible?**

In the above context there is an important room for cooperation between Ukraine and Slovakia that would aim at drawing up proposals on an effective early warning mechanism and prevention of gas crisis. Both Ukraine and Slovakia have a unique position in the Eastern European gas multi-connector. They can develop a crisis prevention mechanism at bilateral level. The initial stage would be just introduction of "hot lines" between responsible officials at governmental and corporate levels, e.g. Ambassador Plenipotentiary for Energy Security at MFAs, heads of gas transport companies Ukrtransgaz and Eustream, officials in charge on the ministerial levels - Ministry of Energy and Coal Industry of Ukraine and the Ministry of Economy of the SR or the adviser on energy to Prime Minister of the SR considering the asymmetry of the governmental structures of both countries. Indeed, the gas crises of 2006 and especially the 2009 one have shown that direct contacts and objective information was lacking for the most. Since Ukraine and Slovakia are on the "submit-accept link" of the gas flows from Russia to the EU, their direct interaction in a crisis is not less important than contacts between suppliers and consumers - Moscow and Brussels, that use to take place "over the heads of transit countries".

The best option would be to create a mechanism for early warning, prevention and settlement of energy crisis on a pan-European level. However, by now we are dealing with bilateral mechanisms which are far from being effective enough. Within the negotiation talks between Ukraine and the EU on Deep and Comprehensive Free Trade Area (DCFTA) Brussels has offered Ukraine to accept a mechanism of financial responsibility, however, worthiness of the latter, including its effectiveness might be questioned. The head of Ukrainian negotiating team on DCFTA Deputy Minister of Economy of Ukraine Valeriy Pyatnytskyi have specified Brussels's proposal in his interview to the leading Ukrainian political weekly Dzerkalo Tyzhnia (Mirror Weekly) in fall 2010: "*...[they] offer accelerated mechanism of resolving disputes, a compensation mechanism, which is based on the*

of the European Parlament and of the Council concerning measures to safeguard security of gas supply and repealing Directive 2004/67/EC. The January 2009 gas supply disruption to the EU: an assessment. Brussels, p. 4

fact that some amount that corresponds to the equivalent of potential losses, will be deposited outside Ukraine. <...> In other words, we deposit certain amount, and if suddenly something happens due to our responsibility, it is written off unconditionally. However, it is going about funds allocated by the state, but often the parties that are trading with each other are corporate entities. It turns out that the state should assume full responsibility for disputes between corporate actors".[74]

However, if one would apply the proposed mechanism on a gas crisis the most important point is who and how will be identified as being responsible for a disruption of supply. There is a natural inclination to identify as an offender the weakest sides of the dispute as there no objective mechanism of controlling the gas flow that would allow for identification of responsibility of concerned sides exists. In our view, a possible mechanism for the prevention and settlement of gas crisis should be based on an effective **trilateral dialogue** on the "supplier - transit - consumer" axis. The mechanism should consider the status of Ukraine as a transit country not as a country-supplier of hydrocarbons. That is, such mechanism should be applicable in situations in which the reduction of the supply of hydrocarbons to the EU happens not as much because of performance of Ukraine but because of actions of the party, which is the primary supplier of hydrocarbons to the EU via Ukraine. Ukraine can take over responsibility (including financial one) on the *international level* in its relations with the EU when it comes to gas transit through its territory only provided that on the *corporate level* NJSC Naftogaz Ukrayiny will become a responsible entity to ensure transit to European consumers.

That is, if the European Commission will recommend to European companies that purchase gas transited over Ukrainian territory and of course, if European companies would agree, the existing scheme of gas trade could be modified: first, transfer of gas from Gazprom's to the European customers would take place on the Ukrainian-Russian border, and second, Naftogaz would conclude contracts with European customers on transit of gas through the territory of Ukraine from its eastern border to the border with the EU.

Then foreign minister of Ukraine Petro Poroshenko raised the issue of the creation of an early warning mechanism in order to prevent energy crisis within the trilateral format "Russia - Ukraine – the European Union" during his meeting with Spanish foreign minister in Madrid on January 10-11, 2010. Spanish foreign minister Miguel Moratinos, as a representative of the state holding the Presidency in the EU Council, took the proposal of Ukrainian counter-partner with an interest. During his visit to Moscow on January 12, 2010, and talks to foreign minister Sergey

[74] Тетяна Силіна «Валерій Пятницький: «Загинуть ті, хто не хоче і не вміє працювати. Виживуть підприємливі», «Дзеркало тижня» №38, 16 Жовтень 2010, - Tetiana Silina, „Valery Pyatnitsky: Those who do not want and can not work, will perish. Enterprising ones will survive", Dzerkalo Tyzhnia № 38, October 16, 2010 http://www.dt.ua/newspaper/articles/61231 [In Ukrainian]

Lavrov, Miguel Moratinos touched upon the question of a trilateral early warning mechanism. According to available information Russian foreign minister S. Lavrov welcomed the idea.[75]

The idea of a trilateral format of an early warning mechanism corresponds with the three-component and/or trilateral principle of the whole technological chain of production - transport (transit) – consumption of natural gas. Therefore it is logical that early warning mechanism includes all three components since if it includes only two the whole system loses its integrity and efficiency. As already noted Russian foreign minister Sergey Lavrov commented in quite a constructive way a possibility to create a preventive mechanism on the tripartite basis. This is evidenced by his position expressed at the press conference in Brussels on October 19, 2009, after the meeting of the EU-Russia Permanent Partnership Council: "We are convinced that we should find a solution, including the so-called early warning scheme, early warning on trilateral basis with the participation of the main producer, main transit player and main consumers. We are convinced, that the solution should be found taking into account balance of interests of all sides of this triangle".[76] However, position of Russian foreign minister on energy issues is not the key one within the power structure of Kremlin. The last word on the matter always belongs to the pipeline monopolies of Gazprom and Transneft, and their curator - the deputy prime minister on energy.

On the other hand, if the trend of Ukraine's "de-sovereignization" in energy sphere continues, the trilateral format (EU - Ukraine - Russia) never can be established. Within the bilateral format Russia - the EU, Moscow will exert its pressure on Brussels with trying to get the support of some European companies and governments of some EU member states.

For preventing future interruptions in the energy supply and the use of energy infrastructure as a mean of "energy wars" a system of confidence-building measures should be developed. Lessons from the confidence-building process in the military sphere that was evolving in the 1970s and 1980s can be much useful. The strengthening stability and security in Europe, including the process of reduction of the military forces and weapons became possible within OSCE thanks to crea-

[75] Information bulleting of the Working Group 3 of the Eastern Partnership Civil Society Forum Coordinator Office, No.2 (February 2010), p.12

[76] Стенограмма выступления и ответов Министра иностранных дел России С.В.Лаврова на вопросы СМИ в ходе совместной пресс-конференции по итогам пленарного заседания Постоянного совета партнерства Россия-ЕС на уровне министров иностранных дел в Брюсселе, 19 октября 2009 г. - Transcript of Remarks and Replies to Media Questions by Russian Minister of Foreign Affairs Sergey Lavrov at Joint Press Conference Permanent after the plenary session of the Partnership Council Russia-EU session of the Ministers of Foreign in Brussels, October 19, 2009 [in Russian]

tion of the confidence regime based on information exchange, including enough sensitive data, e.g. size and structure of the military forces, types and kinds of weapons, military technologies, their deployment, etc. A key part of the regime was a communication channel allowing for timely exchange of information related to the implementation of agreed measures of confidence. The experience from implementation of the Treaty on Conventional Forces in Europe, including the monitoring of compliance of states with the provisions of the flank restrictions, allows for conclusion that the "exchange of information and regular reporting led to the enhanced international transparency."[77]

There is reason to believe that the proclamation and implementation of the Energy Transparency Regime (ERT), which will cover the whole technological chain from production to consumption of natural gas, could become an effective mechanism for strengthening energy security in Europe. This initiative should be based on the fundamental right "to know". Consumers in each country (Russia, Ukraine, EU member countries) are entitled to know parameters of energy supplies because they pay for them. Sectoral forms of this Regime should cover all energy flows – gas (ETR-gas), oil (ETR-oil), electricity (ETR-electricity).

Transparency of the chain Production - Transportation - Consumption actually could create a regime of enhanced confidence. Mutual access to the telemetric information on the movement of physical energy flows would help to improve transparency as well. For the energy sector and particularly its gas segment, it requires special procedures since it is an area where monopolies are involved. The transparency system could become a mechanism for diagnosis and prevention of potential problems in the field of gas supply.

Table 7. List of aggregated parameters for the online monitoring in a daily mode on the example of the gas sector (ETR-gas)

№	**Parameters**	**Upstream** Producer/ Exporter	**Midstream** Transit	**Downstream** Importer/ Customer
1.	The number of existing production wells	+	+	+
2.	Daily gas production capacity **million m ^{3} / day**	+	+	+
3.	Actual carrying capacity of the pipeline: - Input - Output **million m ^{3} / day**	 + +	 + +	 +

[77] SIPRI Yearbook 2007, «Озброєння, роззброєння та міжнародна безпека» (переклад з англійської), Київ 2008, стор. 531 - *SIPRI Yearbook* 2007. Armaments, Disarmament and International Security (translation from English), Kyiv 2008, p.531 [in Ukrainian]

4.	Actual throughput capacity reserve: - Input - Output **million m ^{3} / day**	 + +	 + +	 +
5.	The volume of gas transferred at the exporter's border **million m ^{3} / day**	+		
6.	The volume of gas that enters the territory of transit **million m ^{3} / day**		+	
7.	The volume of gas transferred at the border "transit - consumer" **million m ^{3} / day**		+	
8.	The volume of gas that enters the territory of the consumer: - transit - transit-free **million m ^{3} / day**			 + +
9.	Working pressure at the input and output GMS: - average (P) - daily variance (Pmax – Pmin) ***MPa***	 + +	 + +	

The appropriate on-line monitoring system of telemetry data received from a respective gas- metering stations (GMS) should be installed by mutual consent of the parties. Moreover, in the case of relations on the axis Naftogaz - Gazprom, the technical agreement provides exchange of technical parameters of GTS with GMS and compressor stations:

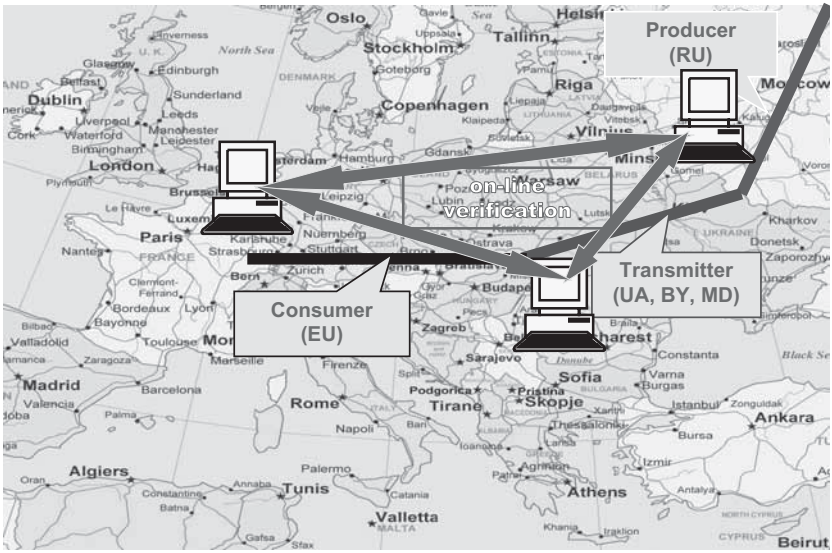
3.6. Dispatcher services of Gasprom OJSC and Naftogaz NJSC shall, no less than every four hours, share with each other all parameters of operating mode of the GMS, indicated in clauses 1.3. and 1.4, and compressor stations adjacent to them.

Each Party shall have the right to obtain information from the computer, which receives information from automatic calculators of GMS indicated in clauses 1.3. and 1.4., and the Party owning the GMS shall ensure the technical possibility of automatic transfer of such information to the computer of the permanent contractor's representative.

If it is impossible to transfer such information automatically, the owner of the GMS shall communicate information form automatic gas consumption calculators to the contractor in the volume and in a format agreed by the parties in a daily basis by 12:00 (hereinafter Moscow time).

(See; Annex 1. Technical Agreement between JSC Gazprom and Naftogaz Ukrayiny On terms of delivery-acceptance of natural gas at the gas-measuring stations, located on the border, for gas transit through the territory of Ukraine, and also transfer of natural gas to Ukrainian consumers in 2008.)

APPROXIMATED SCHEME
OF THE ON-LINE DATA INTERCHANGE SYSTEM AS A BASE OF ETR-gas



Parameters introduced in Table 7 are quantitative indicators of the physical movement of gas flows should be provided, fixed and compared by the parties in the daily mode. Commercial or financial performance indicators are not required to be open to the access of the other party under the proposed gas transparency system. All parties that participate in the technological chain "Production - Transportation – Consumption" (Russia - Ukraine - EU) should have an access to the information system. Comparison of parameters will provide all parties with an opportunity to identify problem areas along the whole route of gas flows from localities of its extraction to consumers as well as to identify a responsible party in case of a gas traffic failure.

ETR can be a test of the willingness of all participants of the technological chain to work on the rules of transparency. When it comes to Russia it would correspond to at least two principles declared in 2009 by the new draft of Energy Charter initiated by the President of RF Dmitriy Medvedev:

- Transparency in all the segments of international energy markets (production / export, transit, consumption / imports);
- Creation and improvement of early warning mechanisms with participation of suppliers, consumers and transit countries.[78]

Implementation of the Gas Transparency Initiative would comply fully with the principles of the European Energy Charter and the Second EU Gas Directive 2003/55/EC of 26.06.2003. In particular it will correspond with the principle of a gas market transparency enshrined in the above documents. It should be noted that after the gas crisis of 2006, the Secretariat of Energy Charter worked out a mechanism to ensure the transparency in the technological chains of energy resources transport. In particular, the former Deputy Secretary General of the Energy Charter Secretariat Andrey Konoplyanik has pointed out: "In fall 2006, the Secretariat launched a new initiative <...> to ensure, within reasonable sufficiency, transparency of gas flows volumes in the major sites of the cross-border gas supply chains along all their length within the ECT zone, extending to the East the practice of information transparency, existing in Europe within the Gas Infrastructure Europe."[79] Unfortunately, this initiative has not acquired a pan-European character.

In the summer of 2009 a group of Ukrainian NGOs offered a proposal on ETR-gas in the form of the European Initiative of Gas Transparency. The initiative was addressed to the European Commission and the Secretariat of the Energy Charter Treaty[80]. It has been supported by the Civil Society Forum of the Eastern Partnership and presented at the Eastern Partnership Ministerial Meeting of December 8, 2009 in Brussels[81], as well as at the meeting of the Eastern Partnership Thematic Platform 3 on energy security on 20 May 2010. The Cabinet of Commissioner for Energy Gunter Oettinger positively responded to the proposals to introduce the ETR-gas initiative: "… *proposal on an Energy Transparency regime and the list of key points that you believe warrant further consideration will be taken into consideration*

[78] Концептуальный подход к новой правовой базе международного сотрудничества в сфере энергетики (цели и принципы) - Conceptual approach to the new legal framework for international cooperation in the energy sector (the purpose and principles) http://www.kremlin.ru/text/docs/2009/04/215303.shtml [In Russian]

[79] Андрей Конопляник: «Газотранспортная система Украины и России всегда была единой», «Экономические Известия», №997(234), 24.12.2008 - Andrey Konoplyanik, Konoplyanik: „The gas transport system of Ukraine and Russia have always been single",Ekonomicheskie Izvestiya, №997(234), 24.12.2008; http://eizvestia.com/state/full/43676 [In Russian]

[80] http://ua-energy.org/uploads/library/strategy/European_Initiative_of_gas_transparency.pdf http://ua-energy.org/uploads/library/strategy/Letter_EIGT_for_EU.pdf

[81] EASTERN PARTNERSHIP CIVIL SOCIETY FORUM. RECOMMENDATIONS. WORKING GROUP 3: ENVIRONMENT, CLIMATE CHANGE AND ENERGY SECURITY (Brussels, 16-17 November 2009) http://ec.europa.eu/external_relations/eastern/civil_society/forum/working_group3_en.pdf

in the ongoing work to prepare the Communication on external energy relations that is due next year [2011]".

(See Annex 3. Letter of Paula Pinho, Member of Cabinet of Commissioner Gunter Oettinger 30.11.2010)

The importance of the Initiative will grow over time along with the process of implementation of new gas transit pipeline projects for supplies of Russian gas to the EU markets.

3.3.2. Post-crisis complex of measures at the EU level

In the course of 2009 the EU has been receiving a number of warnings from Russia (almost monthly) about the possible recurrences of gas supply disruption due to the low solvency of Ukraine. Although no case of late payment for gas supplies to Ukraine has been registered during the years of 2009-2010, nevertheless certain risks of inability of Ukraine to pay for Russian gas have been in place. The general position of the EU during the Swedish and Czech EU Presidencies in the course of 2009 has been unchanged: first, European consumers have long-term contracts on gas supply; second, the problem of the transit through Ukraine and gas supplies from Russia to Ukraine is a matter of their bilateral relationship, not the EU member states or European companies; and third, European consumers are not ready to pay anything extra.[82]

First of all, the EU member states focused on the homework with the aim to enhance their readiness for eventual future crises in the gas supply from foreign suppliers. The EU declared its readiness to provide financial support for upgrading the transit system of Ukraine, but on the basis of clearly defined conditions, which will include the reform of Ukraine's gas sector. Ukrainian government has met neither arrangements that were included in the Joint EU-Ukraine Declaration on the Modernisation of Ukraine's Gas Transit System of 23 March 2009 nor the conditions agreed at the Brussels multilateral technical meeting on gas sector reforms in Ukraine held on June 29, 2009, with the participation of the European Commission, international financial institutions, and the Government of Ukraine.[83]

The gas crisis of January 2009 has shown that within the EU there are significant regional differences in terms of gas supplies security and prices of this commodity. The member states that import gas from Russia were affected by the crisis.

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[82] Duleba, Alexander та Lisoňová, Zuzana: „Spoločná energetická politika EÚ a energetická bezpečnosť Slovenska III. Analytická správa z priebehu rokovania konferencie". Report at the conference The Common EU Energy Policy and the Energy Security of Slovakia- III. The Research Centre of the Slovak Foreign Policy Association, n.o.,Bratislava, 23-24November 2009; http://www.sfpa.sk/dok/energetika-23nov2009BA-sk.html.

[83] Ibid.

Instead, the crisis has not touched those member states that import gas from other suppliers (e.g. Norway and Algeria). In early November 2009, gas prices in the Austrian hub CEGH (Baumgarten) were 30 % higher than the gas prices in the Dutch hub TTF. In case of the CEGH it is going about the price of Russian gas delivered by pipeline. In autumn 2009, Russian gas was the most expensive one in the EU gas market.[84]

According to analysis conducted by the European Commission, the gas crisis of January 2009 had a negative effect on 12 EU member states; among those who suffered most were Slovakia and Bulgaria. Following the evaluation of the gas crisis it was decided that the Directive 2004/67/EC concerning measures on security of natural gas supply is insufficient and that further actions should be taken. On July 16, 2009, the European Commission presented its proposal on *a Regulation of the European Parliament and the Council on measures to strengthen security of gas supply and repealing Directive 2004/67/EC*.[85] The legal form of "regulation" rather than "directive" imposes that the agreed rules once adopted by the Council and the European Parliament should be transposed to the legislation of the member states as well as applied immediately without a transposition period.

Regulation provides that each EU member state should create national agencies to be responsible for security of gas supply. The role of this administrative authority will be overseeing of gas supply at national level, making a risk assessment, the establishment of preventive action plans and emergency plans. Activities of national agencies will be coordinated though the European Commission and the Gas Coordination Group. The risk assessment of security of gas supply in the member state shall be updated by its national agencies yearly by September at the latest. Emergency Plans shall be adopted by March 2011 with a proposal of the measures to be taken to mitigate the potential impact of a gas supply delays. Each EU member state should coordinate its emergency plans with the European Commission before their adoption at national level. The European Commission will assess all member states emergency plans; it has a right to require their revision, if it considers that they are inadequate or they do not comply with emergency plans of other member states.

My March 2014 each EU country should have enough gas stored on its territory or in cross border storage facilities. The volume of stored gas should make the mem-

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[84] *Boltz, Valter*: *Perspectives of regulatory policy in the EU*. Report at the conference The Common EU Energy Policy and the Energy Security of Slovakia- III. The Research Centre of the Slovak Foreign Policy Association, n.o.,Bratislava, 23-24November 2009; http://www.sfpa.sk/dok/energetika09/BOLTZ.pdf.

[85] Proposal for a Regulation of the European Parliament and of the Council concerning measures to safeguard security of gas supply and repealing Directive 2004/67/EC , Brussels, COM (2009) 363, 16. July 2009.

ber state able to deliver gas to the gas system and to ensure the consumption for the period of 60 days. Definition of the required volume of gas will be based on a common indicator to define a serious gas supply disruption, the so called *N-1* indicator. The N-1 indicator defines the volume of gas needed to ensure supplies during a period of sixty days of exceptionally high gas demand during the coldest period statistically occurred within the last twenty years.

As well by March 2014, each member state gas distribution system should be equipped with the bidirectional flow capacity on all intra-EU interconnectors, i.e. all pipelines within the EU should be able to pump gas in a reverse flow. Simultaneously, the Commission will be allowed to declare a Community emergency at the request of one member state or if more than one member state declares an emergency situation. According to the Lisbon Treaty Article 100, *the Council, on a proposal of the Commission, may decide, in a spirit of solidarity between Member States, upon the measures appropriate to the economic situation, in particular if severe difficulties arise in the supply of certain products, notably in the area of energy.*[86]

At the same time, the research conducted by the European Commission and GTE (Gas Transmission Europe) have identified 43 infrastructure projects, implementation of which will mean a significant shift in the integration of gas networks within the EU, so that if necessary it is possible to supply gas to the EU member states who will face the supply constraints. Investment expensiveness of these projects is at average 1-1.5 million euro for a project. Thus, the total investment volume comes to 80 to 90 million euro.

If the above measures at EU level will be implemented and member states will adhere to the schedule for their implementation by March 2014 the EU will be much better prepared for eventual disruptions of gas supply. The capacity of the EU member states provide each other assistance in case of a gas crisis will be radically improved as well.

3.3.3. Measures undertaken by the Government of the SR

The government of the Slovak Republic initiated fundamental changes in the respective national legislation since the *Law N656/2004 On Energy* and the Ministry of Economy's *Regulation N459/2008 on Emergency Situations* – did not foresee a scenario of a complete stoppage of gas supplies. On 15 March 2009, the *Law On Energy* was amended: the definition of the "security standard of gas supply" has been expanded and the obligation to corporate entities active in the gas sec-

[86] The European Commission set to have new powers over security of gas supply". *The European Journal*, 07/20/2009.

tor in the following way: in the case of suspension of gas supply or restriction of its supply from abroad to ensure supplying gas to consumers for 30 days at least in average daily volumes for the given period of the year. Amended Law imposed an obligation on companies to meet that obligation by storing gas in underground storages on the territory of Slovakia or through the contracts with companies in neighbouring countries that operate gas storages. The volume of gas stored abroad should total up to 50% of the required volume of gas. In case of emergency, the Law defined the duties of UGS operator, including a stoppage of extraction of gas from the storage.[87]

Changes to the *Law On Regulation of Network Industries* provided a regulated mode of access to underground gas storages. It has introduce a model of a direct pricing for gas storage based on comparison of prices for gas storage in Slovakia and other EU countries. Amendments to the *Mining Law* empowered the Ministry of Economy of the SR (ME SR) to allocate a portion of underground storage facilities to address the emergency situations already at the stage of issuing the licenses for operating underground gas storage. On November 6, 2009, the Resolution of the Ministry of Economy of the SR N459/2008 was amended: the limits of the wholesale degrees have been changed, setting down an exception for power producers and operators of underground storage in a way that in case of emergency they are not forced to reduce their economic activity.[88] This regulation defines the procedures of the Ministry of Economy of the SR for cooperation with the gas dispatching centre and a detailed methodology for determining the value of the wholesale limit level and heating schedules in case of emergency in the gas sector. The new measures also include the right of the operator of the electricity transmission network to require the elimination of restrictive measures to ensure that the network is functioning in projected mode. For example, steam-to-gas power stations would have the opportunity to continue to produce electricity from gas and thus maintain normal pressure in the electricity transmission network. The resolution of the ME SR suggests that in case of emergency the specific restrictive measures, restrictions and limitations of wholesale limits and heating schedules become a part of gas supply contracts with end consumers.[89]

During the post-crisis debate, many large customers have criticized the fact that during the crisis they felt the lack of information on the events from the anti-crisis headquarters and the gas dispatching centre. In most of cases, in situations

[87] Petrovič, Ján: *Plynová kríza v januári 2009 – poučenie pre energetickú bezpečnosť SR*. Report at the conference The Common EU Energy Policy and the Energy Security of Slovakia- III. The Research Centre of the Slovak Foreign Policy Association, n.o.,Bratislava, 23-24 November 2009 [In Slovak] http://www.sfpa.sk/dok/energetika09/PETROVIC.pdf

[88] Ibid..

[89] „Jahnátek: plynovej krízy sa nemusíme báť". *CITA*, 6.10.2009. [In Slovak]

where the company needed verified and reliable information for making operational decisions in crisis management, they had to rely only on information from the media.[90] Creation of the high-quality information system which would permit information channelling between large consumers and the anti-crisis headquarters, gas control and dispatching centre of the GTS operator is a task that should be solved by the SR government together with business circles - including the SPP and its subsidiaries Eustream and SPP-distribution.

3.3.4. Measures undertaken by the SPP

Natural gas consumption in Slovakia amounts to 5.7 - 7 billion cubic meters of gas a year. The exclusive solution found by SPP (Slovenský plynárenský priemysel, a.s.) during the January crisis in 2009 in cooperation with foreign shareholders of SPP - E.ON Ruhrgas and GDF Suez, was the precedent for the SPP long-term planning as a commercial diversification of gas supplies to Slovakia from the territory of Germany and Czech Republic. In case of crisis, a subsidiary company of SPP for natural gas transportation Eustream is able within 2-3 hours turn into the reverse mode of gas supply from the CR, which was tested for the first time during the January crisis in the period from 18th to19th January 2009.[91]

In early October 2009 SPP announced the signing a contract with GDF Suez, whereby it will supply for the SPP 500 million cubic meters of natural gas annually. Earlier, in July 2009 the SPP signed a contract with E. ON Ruhrgas for supply of 500 million cubic meters of gas. Both contracts - with E. ON Ruhrgas and with GDF Suez – are the long-term contracts for five and ten years rspectively. In August 2009, the SPP signed a short-term contract with German company Verbundnetz Gas, which in case of a crisis will supply to Slovakia 30 million cubic meters of gas.[92] Thus, in general SPP has a sufficient capacity: the volume of 1.03 billion cubic meters of gas yearly in addition to the long term contracts with Russian company Gazprom. In case of recurrence of complete cessation of supplies from the east, this gas can be delivered to the territory of Slovak Republic from the west. In addition, the SPP has concluded contracts with operators of gas storages in Slovakia: NAFTA Gbely and Pozagas on the total volume of 1,7 billion cubic meters of gas, representing about one third of average annual consumption of

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[90] See: *Energy crisis: lessons learned.* Business seminar, AmCham, Bratislava, 5 March 2009; http://www.amcham.sk/upload/gallery/Docs/conn_04_2009_27.pdf.

[91] Meyer H.-G..: *The gas crisis of January 2009: Lessons learned for energy security of Slovakia and the EU*. Report at the conference The Common EU Energy Policy and the Energy Security of Slovakia- III. The Research Centre of the Slovak Foreign Policy Association, n.o.,Bratislava, 23-24November 2009; http://www.sfpa.sk/dok/energetika-23nov2009BA-sk.html.

[92] „SPP diverzifikuje zdroje, podpísal zmluvu s GDF Suez". *SITA*, 5.10.2009.

the SR. It is much more than the respective average indicator in the EU countries.[93] SPP is also involved in building a new storage Gajary-Baden[94], which is operated by Nafta Gbely Co.

Further homework for the SPP is a technological preparation for the introduction - in case of crisis – the reverse mode of the GTS, which will allow supplying natural gas from the UGS in the western part of Slovakia to the central and eastern districts. The crisis of 2009 clearly showed that the most vulnerable area of the SR regarding the security of natural gas supplies is the Eastern Slovakia. When there was a zero pressure in the pipelines at the border with Ukraine, SPP has been unable to deliver gas from storage facilities located in western Slovakia to the east without running the reverse mode supplies from the Czech Republic. Ensuring the use of GTS reverse mode is possible through investments to build additional compressor capacities. In any case, it is a task that arises from the new Regulation N994/2010 and must be completed by March 2014.

According to the SPP, its activity is currently focused mainly on gaining access to much more diversified portfolio of suppliers with the European Union. The goal is not only to reduce dependence on gas supplies from Russia, but also to develop routes for alternative ways of its supply. The aim is to obtain alternative volume of gas in an amount more than 10% of annual consumption of the SR.[95] As mentioned above, if suspension of gas supplies from the east happens again, SPP is ready to start the reversal mode of the gas flow from the Czech Republic within 2-3 hours. SPP simultaneously monitors and evaluates the potential benefits of current European diversification projects.[96]

In terms of investment, the cheapest option that would allow diversification of gas supply routes is construction of new and expansion of existing connections between Slovak GTS and gas systems in neighbouring countries. In particular, it goes about construction of a new pipeline from Hungary, increase of capacities and introduction of the reverse mode of the pipeline to Austrian Baumgarten, and the construction of a new route that will link Poland with Baumgarten.

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93 *Zhrnutie priebehu a dopadov krízy v dodávkach zemného plynu v januári 2009*. SPP, a. s., Bratislava 27 January 2009.

94 *Zabezpečenie spoľahlivých dodávok zemného plynu pre všetkých odberateľov je pre SPP prioritou*. Publication for the major customers. SPP, a. s., July 2009.

95 Ibid.: After signing the contract with GDF Suez in October 2009, it is already referred to the volume of gas that is approximately 17% of annual consumption of the SR.

96 Ibid.: The review of the opportunities for diversification of natural gas sources and routes in Slovakia, see : *Stratégia energetickej bezpečnosti SR*. Міністерство економіки СР, http://www.economy.gov.sk/index/index.php .

Construction of Slovakia-Hungary *gas interconnector* (*Velky Krtis – Vecsés*) will allow SR to have access not only to supporting supplies from the storage facilities in Hungary, but it is also about prospect for gas supply from the planned LNG terminal in the Adriatic Sea and the Nabucco pipeline. The estimated annual capacity of the pipeline should be about 5 billion cubic meters of gas annually and it should be put into operation in 2013.[97] Introduction of the reversal flow of gas from Baumgarten would provide access to new sources of gas, although nowadays it is a very limited option. The prospects of its further use can change significantly only in case of implementation of the Nabucco project, which has to transport gas from the Caspian Sea and Middle East to Baumgarten, or of the South Stream project, which would also be connected with the Austrian Baumgarten. Given the fact that Baumgarten should be a destination for two major gas pipeline projects, the expansion of Slovakia's capacities of gas connection to this hub was one of the priorities of diversification for the government of the SR and the company Eustream. Finally, since 24 October 2010 it became possible to use reverse mode of the pipeline to/from Baumgarten. [98] Another alternative is to diversify the sources of gas is to conclude the long-term contracts for import of Norwegian gas through Germany and Czech Republic. Currently the daily capacity of reverse flows from the CR is 15-25 million cubic meters of gas per day. There are planned investments to expand capacity of gas supplies in reverse mode from the CR to the SR.[99]

All three investments - the enlargement of capacities for reverse gas flows from the CR, the introduction of the reverse mode with Austria and the construction of a new gas pipeline to Hungary - are in need for support within the European economic recovery plan from the EU sources. The projects for interconnecting underground storages on the territory Slovakia (Lab) with a network of gas transit system on the territory of Slovakia, and the project on adaptation of the transport network in the SR so that it would work in reverse mode from west to east Slovakia are under development. There is search for a consensus on the level of V4 on joint projects to implement regional solutions to enhance security of gas supplies to V4 countries on a regional level, including the development of a possible future North-South gas pipeline connection.[100]

With the mentioned above measures of the government of the SR and SPP, Slovakia is ready for full 30-day stoppage of gas supplies from Russia through Ukraine,

[97] Petrovič, Ján, Ibid.

[98] Petrovič, Ján, Ibid.

[99] *Správa o výsledku monitorovania bezpečnosti dodávok plynu*. Міністерство економіки СР, червень 2009 р.

[100] Petrovič, Ján, Ibid.

or even for a longer period, depending on weather conditions and the level of gas consumption.

As for Ukraine, it should avoid the temptation of simple solutions, suggested from the outside, for supposedly solving the problem of loading of the Ukrainian GTS through a joint venture with Gazprom or at all to transfer the trunk pipelines to Russia. These proposals conceive a dangerous illusion. In order to solve the problem of the Ukrainian GTS download, it is necessary to establish cooperation with those who are interested not the less than Ukraine in stable operation of the existing gas supply routes. Slovakia is directly interested in preserving the operation of the East European gas connector, as far as 80% of the gas transit through the territory of Ukraine to the EU countries goes through SR. Not once or twice, both at governmental and corporate level, Slovakia proposed to begin a serious cooperation on the problems of security of hydrocarbon supplies to the EU, especially after the events of January 2009. However, the official Kyiv has remained deaf and mute in a dialogue with Bratislava. It should not since cooperation with Slovak companies of the SPP Group means also interaction with E.ON-Ruhrgas and GdF-Suez, which are the shareholders of SPP. Ukrainian Ukrtransgaz should establish closer cooperation with its Slovak counterpart Eustream. Ukrainian Gas Union could cooperate with the Slovak Gas and Oil Association, which is well respected association not only in Slovakia but also in Central and Western Europe. It is Bratislava who could politically assist the government of Ukraine, helping Kyiv make its addresses to be adequately heard in Brussels without being interpreted by Gazprom.

3.3.5. The system of underground gas storages

Underground gas storage system is essential for reliable and uninterrupted operation of any gas transport system. It plays the role of a sort of gas accumulator, and in case of disruption of gas supplies through a pipeline it is capable to sustain deficit of the gas delivery system for a certain period. A length of such period depends on the UGS storage capacity.

UGS located in the Western countries has been working quite effectively during the gas crisis of 2009. With their help, Slovakia managed to increase the gas supply of gas from UGS to its GTS in 2,4 times: as of 01.01.2009 the daily volume of gas pumped out was 302 million cubic meters, while on 01.07.2009 it already amounted to 725 million cubic meters [101]. Obviously, the larger is the UGS storage capacity and the greater is volume of active gas (working gas), the better it is. Ukraine in this regard has unique position.

[101] Calculated on the base of the RWE data.

Ukrainian UGS system has been developed in accordance with general trends in the gas industry. The need for reliable gas supply to Ukrainian consumers and natural gas exports to European countries has been constantly increasing from year to year, actualizing the task of creating UGS closer to the major customers, as well as along the gas mains transit routes.

Today in Ukraine there is a complex of 13 UGSs with total active volume of gas about 32 bcm; 12 of them are managed by Ukrtransgas and one – Hlibivske in Crimea – by the company Chornomornaftogaz . Eleven underground gas storage facilities are located in the depleted gas fields, and two in aquifer. Geographically UGSs are located in 4 regions: 5 UGSs in the Western Ukraine (Bilche-Volytsko-Uherske, Dashavske, Oparske, Uherske and Bohorodchanske), 3 UGSs in the Central Ukraine (Olyshivske, Chervonopartyzanske and Solokhivske), 3 UGSes in the Eastern Ukraine (Chervonopopivske, Verhunske and Kehychivskye), and 2 storages are located in the Southern part of Ukraine (Proletarske and Hlibivske). In the Lviv oblast, there is a biggest UGS in Ukraine - Bilche-Volytsko-Uherske, which is the second largest in the world by its capacity of an active volume of 17 billion cubic meters of stored gas (for comparison: the world's largest UGS is the Severo-Stavropolskoe in Russia with an active volume of 20 billion cubic meters of gas; the largest underground gas storage in the EU is Rehden in Germany with an active volume of 4 billion cubic meters).

The total active gas volume in Ukrainian UGSs is over 55% of annual natural gas consumption, what places Ukraine within the world top countries under this parameter. For comparison, the figure for other countries is: 29% in France, 26% in Italy, 20% Germany, and 15% Russia. The above-mentioned criteria in general indicate the reliability and security of gas supply for domestic consumers in Ukraine.

Ukrainian UGSs have not been used at their full capacity since 1991, the average volumes of pumping and extraction of gas during the pre-crisis period amounted to 17 bcm per year. For a long time, the main consumers of gas storage services in UGS were traditionally JSC Gazprom, NJSC Naftogaz Ukrayiny, Ukrnafta, RUE and Ukrgaz-Energo. However, the use of Ukrainian UGSs became covered by a peculiar aura of non-transparency. Within the neighbouring countries of Ukraine the perception has been formed that there is a privileged circle of customers of Ukrainian UGS system. The primary of the privileged customers is Gazprom represented by its subsidiaries, affiliates and satellite structures (Gazprom Export, RUE, Ukrgaz-Energo), which enjoy respective price preferences. They prevent the use of underground gas storage in Ukraine by companies from the Central Europe, which are uncertain, given the priority status of the Russian monopoly, whether they will be able to obtain the necessary gas volumes from Ukrainian underground storage facilities during peak demand, i.e. in the winter season. Thus, Ukraine misses the significant benefits from its UGSs, and its neighbours are increasingly focusing on

integration of their own low-volume storage facilities into a single network.

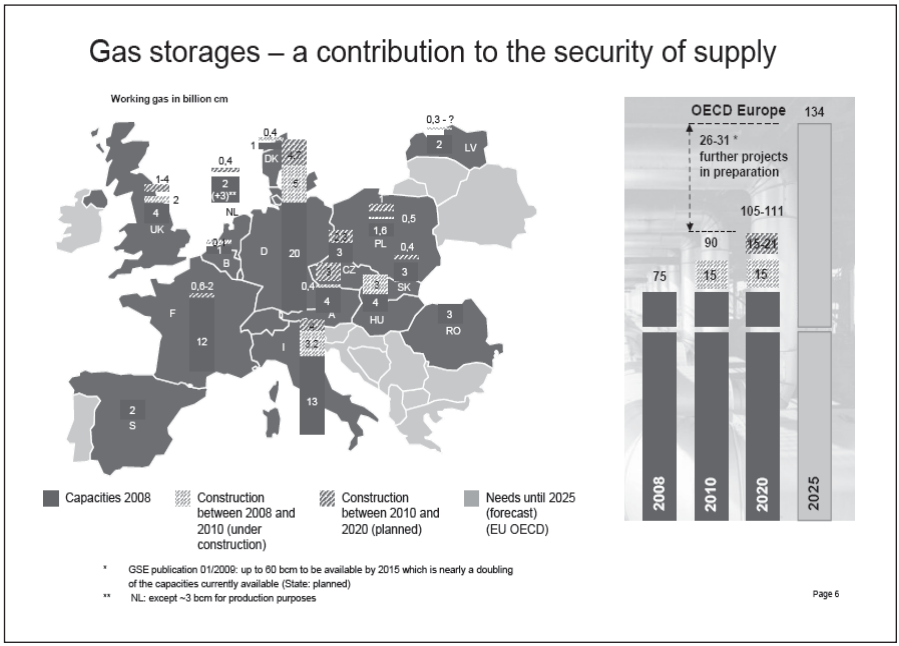
Ukrainian UGS offered services to neighbouring CEE countries, but only within a relatively insignificant gas volumes (200-300 mcm) have been pumped during several years (from mid 1990s to 2002) under the contract with the Polish company PGNiG and Hungarian MOL. It should be noted that Ukrainian customs legislation ignores the peculiarities of the gas business activities what creates additional problems in the implementation of contracts for gas storage.

In Ukraine today there are good conditions for further expansion and increase of existing storages capacities as well as for construction of new ones. Services of gas storage in Ukraine's UGS are based on licenses issued by the NERC. Currently only two such licenses have been issued to the companies Ukrtransgas and Chornomornaftogaz. Due to the fact that throughout the period since 1991 the volume of active gas in the UGS of Ukraine has not been reaching its maximum value (32 bcm) there are technical possibilities for storing larger amounts of gas. Under the present legislation, and especially after Ukraine's accession to the European Energy Community and in view of adoption of the Law of Ukraine On Principles of the Gas Market Operation in accordance with the Second EU Gas Directive, licensees must ensure non-discriminatory access to the UGS for everyone willing to get it.

Underground gas storage and creating a separate channel for its uninterrupted supply to Slovakia in the case of recurrence of disruptions in Russian gas supplies could be another focus area where Ukraine and Slovakia could cooperate both on corporate and intergovernmental levels. In order to create such backup channel of emergency gas supply from the Western Ukrainian UGS located in relative proximity to the border with Slovakia, it is necessary to conduct a feasibility study on the Ukrainian UGS capacities in the area of the Compressor Station Uzhgorod. For example, some time ago during the construction of gas pipeline threads from the compressor station Uzhgorod to Slovak territory, there was laid 10.6 km of pipelines (IV looping, ∅ 1000 mm), which is existing in a working condition as yet. On the Slovak territory this pipeline has not been continued further. Therefore, theoretically, it could be connected through one of existing pipeline threads from the UGS, and in case of carrying out the relevant engineering works on the Ukrainian and Slovak territories; an independent gas supply channel from Ukraine to Slovakia could be created.

Potential of the Ukrainian UGS system is important from the perspective of the EU plans to increase the storage capacities on the territories of the member states. On the recommendation of the IEA, UGS volumes should be increased from the level of 75 billion cubic meters in the pre-crisis 2008 to 134 billion cubic meters in horizon of 2025.

If the UGS system in western Ukraine will not be in some way integrated into the plans of the EU (Slovakia and V4 countries can facilitate its integration), then already in the horizon beyond 2020 it will not become relevant anymore for the EU.



3.3.6. Inconvenient scenarios

Ukraine's delay in the implementation of the Brussels declaration on the modernization of gas transit system of March 23, 2009, Russia's promotion of the bypassing projects, European institutions' systemic and complex work upon integration of national gas networks and storage facilities under a single EU energy space - all of that can create a new map of gas flows in Eurasia. Slovakia's and Ukraine's place at this map could be changed in not a positive manner. Transcarpathian connector may be used minimally with unstable transit volumes, and in further perspective it could start to get empty. Ukraine and Slovakia are facing the challenges of Russian bypasses, what has been analyzed above. However, the situation in the Western direction is not favourable for both countries as well.

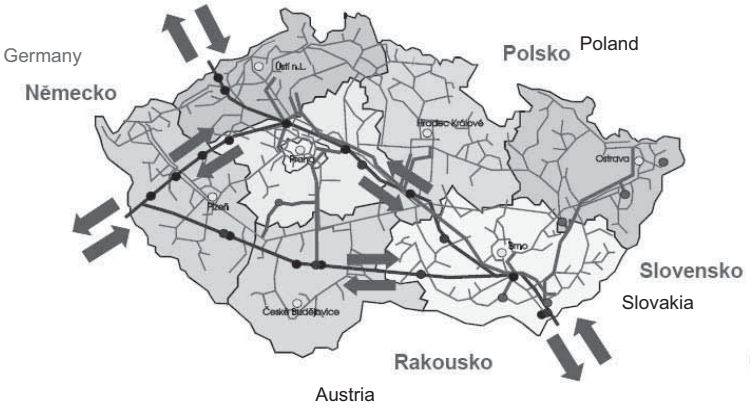
German company RWE and its subsidiary NET4GAS that operates Czech transit pipelines has worked out technical regulations for the reverse mode for the existing pipeline system East – West, and continues working on its improvement. Its goal is to make the GTS reverse mode technically equivalent to the normal func-

Challenge for Ukraine and Slovakia in the context of Nord Stream–OPAL–Gazela integrated pipeline system

Plynovod Gazela – alternativní cesta plynu z RF do ČR

Gazela Pipeline – an alternative route for gas from Russia to Czech Republic

The „Turn Table" for Gas in Central Europe supports east west and north south corridor

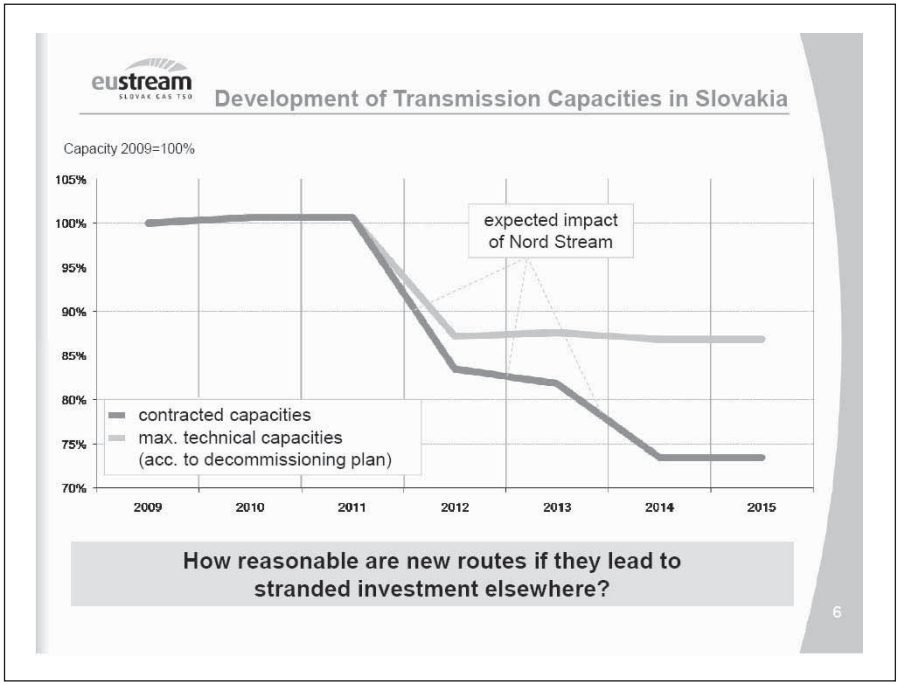


tioning of the gas pipeline Lanžhot (SR-CR border) – St Catherine Mt (CR-Germany border). In 2011, NET4GAS has to complete the relevant package of works.

After completion of the pipelines Nord Stream, OPAL and Gazela, actually they will form an integrated system through which large volumes of transit may be directed to bypass Ukraine and Slovakia. Czech Republic thus becomes a kind of a "gas switch" of Europe.

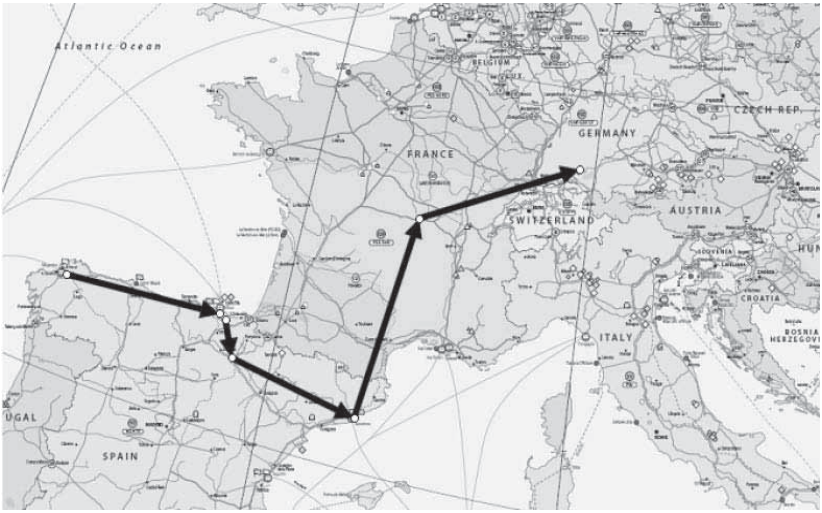
The Czech Republic has started to be labelled a future "gas tiger" of Europe. Of course, to some extent this is a metaphor, but given the fact that the Czech gas industry is owned by German companies, they are materializing a strategy of deepening diversification of routes and maximizing the gas flows traffic (both existing and the future ones) through Germany and the Czech Republic, where they occupy the dominant position.

In addition, once Nabucco and South Stream will be implemented and interconnector system North-South will be formed the gas traffic through the Transcarpathian connector will be minimized. The Nord Stream influence on the GTS load of the Slovak operator Eustream will amount to 10% decrease in transit of gas in 2012 after the Nord Stream first stage will start up, and to 27% from the mid of 2014 once its second stage will start up and reach the full transit capacity.



In this case, a rather optimistic view of Eustream is a reflection on the extension of contract with Gazprom Export to 2028 when it comes to transit volumes of gas to Baumgarten.

Also, against the tendency to increase imports of Norwegian gas, which was a result of Gazprom stiff pricing policies in Europe, as well as the result of Statoil-Hydro's consistent policy of expanding its market niche, it should be taken into account the probability of additional projects that can influence the stability of traditional gas flows from the East. There is an important project being developed, which today does not look as the most advanced against the background of projects as Nabucco or ITGI, but which can get a head start in case of their failure, or it can be just develop in a parallel way. This implies to the pipeline Oviedo - Bilbao - Barcelona – Ulm with total length of 2242 km, which can transport gas from the LNG terminals in the Northern Spain to the Southern Germany.[102]



The transportation from western EU countries to central EU countries of natural gas from LNG terminals of Spain: Oviedo, Gijon, Bilbao and Barcelona to South Germany (Ulm): Oviedo – Bilbao – Barcelona – Ulm

This advantage of this route is an absence of dependence on a single supplier, as it usually occurs in pipeline supplies from Russia, Norway or Algeria. LNG coming to Spain across the Atlantic connector terminals may have different origins, e.g.

[102] The Revision of the Trans-European Energy Network Policy (TEN-E): Final Report, p. 53

from Nigeria and Trinidad-and-Tobago. In the future it may be also the U.S. shale gas in liquefied form. The project proposal suggests developing capacities of four LNG terminals in Northern Spain from the current 38 billion cubic meters per year to 50.3bcm.[103]

This requires a special attention from Slovakia and Ukraine as far as it may be one of the factors of gas flows reorientation in Europe from the traditional East-West direction to the West - East under the influence of a "German factor". On its part, Norway becomes more and more influential player in Central Europe by expanding successfully a market niche for the North Sea gas while simultaneously it is trying to limit the emergence of surplus gas offers in the region. In this regard the "Norwegian factor" is effecting restrictively when it comes to the development of Nabucco project.

The StatoilHydro, which develops jointly with BP the Azerbaijani Shah Deniz field and owns shares of Trans-Adriatic Pipeline (*TAP*) is trying to accelerate the implementation of the Turkey-Greece-Italy interconnector (*ITGI*) and TAP project pushing them ahead of Nabucco. In this case, the additional gas volumes from the Caspian region might be channelled to the South of Europe. If this happens the Caspian gas is unlikely to enter the Baumgarten hub by the end of the present decade. This means that the Central Europe will remain an area of the monopolies' (Russian Gazprom and Norwegian StatoilHydro) in competitive and partner relations with a "German regulator". It is this type of relations that can be characterized simultaneously as partnership (for example, in Shtokman field development) and competitive (in the EU market or in the Barents Sea). In the future, they may lead to the exchange of assets between the three major players: Russian, German and Norwegian companies. Austrian OMV will hardly remain aloof especially if Nabucco is implemented.

The SPP ownership structure, where 49% is owned by the French-German tandem, reflects nowadays the realities of the late 1990s of the last century, rather than present situation, not speaking about prospects for the coming years. Thus, it may be significantly altered. Accordingly, changes may influence also the positioning of the SPP and Slovakia in the new gas coordinates of Europe, where the transit (in relation to other EU member states) and connecting role of the SR may be intercepted by other players - Austria and the Czech Republic, while German and Norwegian suppliers will be able to expand their niche into the Slovak market. Stronger gas flows competition certainly will be a positive factor for the SR; however, its transit role might be minimized as a result of more powerful factors, which Slovakia is unlikely to be able to counter-balance relying only on its own resources or even in cooperation with Ukraine.

[103] The Revision of the Trans-European Energy Network Policy (TEN-E): Final Report, p. 53

4. Multiple vectors of oil

4.1. THE "END OF DRUZHBA" AND THE SECURITY OF OIL SUPPLY IN CEE

Analogous to disruption of gas supply during the gas crisis of 2006 and 2009, there was a disruption of oil supply from Russia to Slovakia in 2007 through the 'Druzhba' oil pipeline, which runs through Belarus and Ukraine. The reason of the oil crisis was a conflict between Moscow and Minsk as on outcome of complex and non-transparent economic relations within the Union State of Russia and Belarus.[104] Russia introduced a customs duty on Russian oil supplies to Belarus starting from 1 January 1 2007. In a turn Belarus announced the introduction of fees for transit of Russian oil through its territory. On January 8, 2007, Russian company 'Transneft' stopped transit of oil through Belarus, accusing the latter in an unauthorized taking-in of Russian transit oil. Oil refineries in Central Europe as well as two Eastern German refineries which are traditional customers of Russian oil delivered via Druzhba had to switch into manufacturing of oil products from their own oil reserves. Finally, on 12 January 2007 Prime-Ministers of Russia and Belarus signed the "Agreement on measures to settle trade and economic cooperation in the field of export of oil and oil products' what has led to the renewing of oil transit via Druzhba oil pipeline.

Projections say that the fields of heavy oil in Russian Western Siberia, which are being exploited since 1960s and which supply oil for the Druzhba pipeline, providing that volumes of extracted oil will remain at present level, may be exhausted in horizon of 2014. "...The legacy of the Soviet period will let to draw growth of oil production on the paper still within five to ten years before production will start rapidly to fall", - that is what independent Russian expert Y. Kogtev is thinking regarding the extra-optimistic oil forecasts of the Federal Agency on Oil Resources.[105]

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[104] „Súhrn udalostí súvisiacich s prerušením dodávok ropy cez Bielorusko". *TASR*, 9.1.2008. - "Summary of events associated with the interruption of oil supplies through Belarus". *TASR*, 9.1.2008.

[105] Ibid: "Head of the Federal Subsoil Resources Management AgencyAnatoly Ledovskikh reported for the work carried out by his department in 2010. Results, as usual, are impressive. Growth of liquid hydrocarbon reserves totaled 750 million tones, what means reserves exceeds the volume of production in one and half times„

According to the Energy Strategy of Russia until 2020 (as from 2003) as well as the new version of this strategy until 2030 (as from 2009), Russia's aim is to redirect its oil exports in order to bypass the territory of Belarus, Ukraine and the Baltic countries.[106] Russia stopped transit of oil to Latvian oil terminal Ventspils – the most powerful in the Baltic Sea during the Soviet Union period – in 2003 as well as it stopped oil supplies to the oil-refinery in Mažeikiai and the oil terminal Būtinciems in Lithuania in 2006. Thus, even if Russia will be able to sustain its oil production, the Baltic experience proves that there is a threat of non-economic factors that motivate decision-making process in Russia in the area of oil supply, including redirections of oil transit, imposing restrictions, reductions of oil supply or even their complete stoppage. That is possible first of all because of the growing surplus transit capacity of Russian 'Transneft' company thanks to newly developed transit infrastructure in Russia that allows for redirection of oil transit as foreseen by the Energy Strategy of Russia.

Table 8. Selected indicators of the oil sector of Russia according to phases indicated by the Energy Strategy until 2030.»[107]

	2008 (de-facto)	I phase (2013-2015	II phase (2020-2022)	III phase (2030)
Oil production				
Total, (in mln. tons and % comparing to 2005: 470,2 mln. tons)	487,6 (103,7)	486–495 (103–105)	505–525 (107-112)	530–535 (113-114)
Oil refinery				
Total, (in mln. tons and % comparing to 2005: 208 mln. tons)	237 (113,8)	232–239 (112-115)	249–260 (120-125)	275–311 (132-150)
Oil transportation				
Surplus of capacities of pipelines for supplies out of CIS countries (in % comparing to 2005)	2	36 – 52	61 - 67	65 - 70
Export of oil and oil products				
The share of Asian-Pacific direction within the total export of oil and oil products (in % comparing to 2005)	8	10 – 11	14 - 15	22 - 25

[106] *Енергетическая стратегиа России на период до 2020 года*. Утверждена распоряжением Правительства Российской Федерации 28 августа 2003 г. № 1234-р. - Energy Strategy of Russia until 2020. Approved by the directive of the Government of Russian Federation on August 28, 2003 № 1234-р.; *Енергетическая стратегиа России на период до 2030 года*. Утверждена распоряжением Правительства Российской Федерации 27 авґуста 2008. - Energy Strategy of Russia until 2030. Approved by the directive of the Government of Russian Federation on August 27, 2008.

[107] Quantitative data are taken only from: «*Енергетической стратегии России на период до 2030 года*» Приложения №3 и №4 (Energy strategies of Russia for the period until 2030. Annexes 3 and 4).

The above table proves a dangerous trend from point of interest of European customers of Russian oil, a trend which is envisaged by the Energy Strategy of Russia.

If one takes the time horizon of 2020 one may observe a relatively small increase in terms of predicted volume of oil production (7-12%), a substantial increase of producing capacity of Russian refineries (20-25%) as well as a serious growth of pipeline capacity to transport oil (61-67%). In other words, export volumes of crude oil from Russia will tend to be decreased whereas refining capacity, including export of oil products will be increasing. Finally, the growth of transport pipeline capacity of Russia will increase and first of all thanks to development of transport routes aimed at exporting Russian oil to the Pacific through the oil transit system "Eastern Siberia - Pacific Ocean".

It is worth to note here words of the former head of Transneft who said yet in 2006: "All our export capacity is directed to Europe, which is overfed by Russian oil. That is why a speculative, discriminatory attitude toward a price on our crude oil prevails in Europe."[108] Thus, we can conclude that the strategic goal of Russia is, similarly as in the sector of natural gas, to create a diversified system of oil exports in order to affect oil price in European market, including enlarging room for manoeuvre vis-à-vis European customers. It is possible also to assume that an announcement on restricting and/or terminating oil supplies via Druzhba - because of its old age (50 years of exploitation), etc. – has been made with the aim to exert pressure on refineries and oil transit companies in CEE so that Russian companies are given their part in oil assets of CEE countries that are traditional purchaser of oil delivered via Druzhba. One should also take into consideration the fact that profitability margins of refineries in Europe are decreasing and that's why they are pushed to undergo a restructuring process, including their ownership structures. Russian oil companies that have their own oil resources, including a geographically convenient logistical access to the EU market might be given strong preferences.

Reduction of oil supplies from Russia to the Czech Republic in July 2008 raised many questions about future of Russia – CEE interaction in oil sector and not only. While the United States agreed with the CR and Poland on deploying elements of its antimissile defence system in these countries at that time, Russia was strongly opposing the move considering it a threat to its national security. In order to prevent the deployment of the antimissile radar in the Czech Republic, Russia got ready to counteract with the use of various countermeasures. It showed it

[108] „Российская газета" - Федеральный выпуск №3994 от 10 февраля 2006 г. http://www.rg.ru/2006/02/10/a98045.html - Rossijskaya gazeta. Federal Issue №3994. February 10. 2006. – Available online: http://www.rg.ru/2006/02/10/a98045.html

is ready to apply non-diplomatic methods by the reduction of oil supplies to the Czech Republic, which "only by accident" coincided with the day of signing the treaty between the CR and the U.S in Prague on the deployment of U.S. radar defence system. Official explanations of the reduction of oil supplies from Russia to the CR have not been given. Later on statements came from Russia in way of referring on technical and organizational problems, absence of contracts between suppliers of Russian oil and Czech refineries, etc. Anyway those post-fact technical explanations looked completely untrustworthy against the aggressive anti-radar rhetoric of Russia as well as a strange timing of the reduction of oil supply with the date of signing of the respective U.S. – CR treaty. As for the CR the reduction of oil supply from Russia was not a catastrophe since at the time it happened CR has had 115-day strategic oil reserves as well as it had an access to alternative supply of oil via the Trans-Alps Pipeline (TAP) and the Ingolstadt - Kralupy - Litvinov pipeline (IKL) constructed yet in 1996.

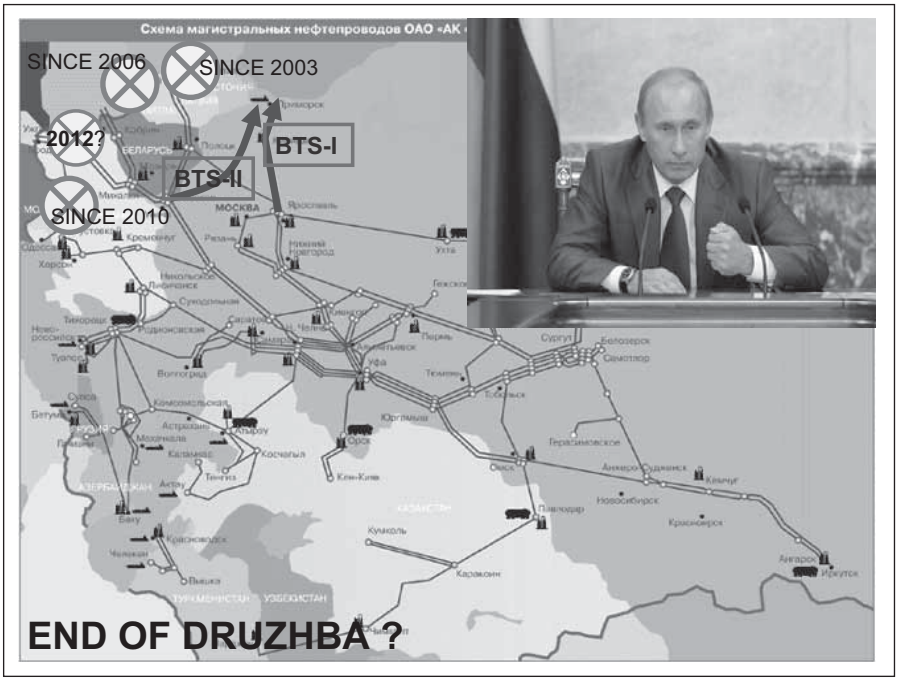
Refineries in Central Europe, including Slovnaft Bratislava, which belong to the traditional purchaser of Russian oil transported through the 'Druzhba' pipeline, face the problem of ensuring the supply of oil within the coming five years. In other words, when it comes to security oil supplies it is equally important for energy security of the SR as the security of gas supplies.

Slovakia met the requirements envisaged by the Council of the EU Directive 2006/67/EC, which imposed the obligation for member states to maintain strategic oil reserves in the volume equal to 90 days of daily consumption of the previous calendar year in December 2008. On September 14, 2009, the Council adopted a new Directive 2009/119/EC that changed the methodology for the calculation of oil reserves. Member states should have reserves amounting to 90-day supply of oil equivalent to daily net imports of crude oil and oil products during the previous calendar year. Transitional period for the EU member states to achieve the desired level of emergency oil reserves under the new directive was ending 1 January 2011. According to the State Department for the Reserve of SR, Slovakia has emergency oil reserves equal to 92 days of daily consumption in 2008, with 55% in the form of oil and 45% in the form of oil products (36% - gasoline, 53% - oil, 5 % - jet fuel, and 6% - fuel oil). Together with commercial stocks, Slovakia has oil and petroleum products equal to 100-120 days of consumption in 2008.[109]

Unlike natural gas, the law number 170/2001 on emergency oil stocks and crisis emergencies does not oblige private companies in Slovakia to maintain strategic reserves of oil. Emergency oil stocks are fully within the responsibility and

[109] Seková, Andrea, Oil security and emergency reserves of crude oil and petroleum products in Slovak Republic. Report on the conference „Common EU Energy Policy and the Energy Security of Slovakia III „. Research Center of the Slovak Foreign Policy Association, nonprofit organization, Bratislava, November 23-24, 2009. Available online: http://www.sfpa.sk/dok/energetika09/SEKOVA.pdf. - ;

governance of state.[110] However, more and more EU member states (including members of IEA) tend to apply the model of supporting the development of emergency oil stocks by means of end-users of oil products. The three EU countries (Austria, Italy and Greece) put the responsibility for the maintenance of emergency stocks to oil companies that must provide the resources for their own account. In other EU countries, except for exclusively oil exporters (UK) which are not required to maintain emergency oil stocks, there were created agencies that manage the strategic oil reserves by the end user costs (e.g. Germany, Holland, Belgium etc.) or a combination of an agency model (paid by end user) with a model of oil company (oil company pays). Czech Republic and Slovakia are the only two EU member countries where the strategic oil reserve is fully in competence and management of the government.[111]



[110] Ibid.

[111] Senkovič, Marek: *European Oil Security Challenges*. Report on the conference „Common EU Energy Policy and the Energy Security of Slovakia III„. Research Center of the Slovak Foreign Policy Association, , Bratislava, November 23-24, 2009. Available online: http://www.sfpa.sk/dok/eneregtika09/SENKOVIC.pdf.

In Slovakia there is a need to further discuss the profitability of the existing model of emergency oil and oil products. In terms of security of oil supplies to the EU and addressing the emergencies it is of extreme importance to sign cross-border agreements between EU member states on the use of free capacity of oil storages in neighbouring countries (in case of Slovakia, it is particularly the ability to use existing free storage capacities in the Czech Republic and Hungary).

The issue of strategic oil reserves in CEE countries is of strategic importance for their energy security and especially in the context of the problem of BPS-II – and launching the exploitation of Unecha – Ust-Luga pipeline in Russia, which will redirect traditional oil supplies from the Druzhba pipeline to a Baltic direction.

The management of Russian 'Transneft' is open when it comes to its intentions: "We will not of course fill foreign ports at the interest of our own <…> BPS-2 will be filled with oil from 'Druzhba' which is currently directed to Gdansk; we'll make easier operation of the Primorsk terminal <…> as well we'll take down crude from the Odessa-Brody and the Brody-Yuzhnyy terminal directions".[112] However, at the same time the above statements are added by contradicting declarations reassuring costumers in CEE that Russia does not want change its strategy: "There is no logics in reducing supplies via routes, which serve decades for oil delivery to European refineries".[113] Although, it is difficult to rely on such statements considering the unprecedented and full stoppage of oil supply to Lithuanian refinery Mazejkiu Nafta in 2006, which has been later on justified by technical problems.

4.2. OIL REFINING IN SLOVAKIA

The following companies play the dominant role in oil refining and the oil products market in the CEE region: MOL, PKN Orlen and Lukoil. Hungarian company MOL owns refineries in Hungary, Slovakia and Croatia. Polish company PKN Orlen is the owner of oil refineries not only in Poland but also in the Czech Republic and Lithuania. The Russian company Lukoil became the owner of refineries in Ukraine, Bulgaria and Romania. Above three companies are major players on the market of oil products in CEE. On the other hand, the main trend in the oil market in Central Europe in recent years is marked by the fact that the market was left by the powerful U.S. companies ConocoPhilips and ExxonMobil. Functioning of refineries and oil market in Central Europe reflects the negative impact of the

[112] *М. Арустамов, вице-президент АК «Транснефть», интервью ТТН, №11-2010 http://www.transneft.ru/objectdata/CatalogUnitImpl/11398/09-11.pdf* - M. Arustamov, vice president of Transneft, in interview to the journal "Truboprovodnyj Transport Nefti" (TTN), № 11-2010Available online: *http://www.transneft.ru/objectdata/CatalogUnitImpl/11398/09-11.pdf*

[113] Ibid.

economic crisis – the amount of oil refinery and oil products sales decreased. It is expected that this situation will continue in subsequent years, depending on the economic crisis. Moreover, the problem of CEE market is that is still far from becoming a full-fledged oil market in comparison with other regional markets of the EU, e.g. North-Western part of Europe (ARA) and Southern Europe (MED).[114]

The only Slovak refinery Slovnaft is one of the leading refiners not only in Central Europe but also in the EU in terms of efficiency of processing crude oil and oil products with high added value - motor fuels and polymers. Annually it refines 5.5 - 6 mln tons of oil. In 2008 'Slovnaft' was ranked the second position within the European refineries in terms of efficiency of refining process. The share of oil products with the high added value is 86% and only 14% are the products with lower market price (heavy oil, grease, asphalt, sulphur, etc.). To compare: in 1995 correlation of Slovnaft products with high added value to products with low added value was 59%: 41%. Technological process of Slovnaft has been traditionally oriented on refining heavy Russian oil brand Urals.[115]

In the period after the oil crisis of 1973 oil consumption in the EU increased slightly, despite the fact that the GDP of EU countries during this period increased in 2.5 times. In the long term (the ongoing decade and possibly the next few decades) there will be no real alternative to replace the production of motor fuels and polymers from sources other than oil. Therefore, EU policy on oil security should prevent transfer of oil refining process to countries located outside the EU. Development strategy of processing oil in the EU should focus on production of oil products with high added value. From this perspective it is important that the EU's commitment to combat climate change does not put in a disadvantageous position the refiners of the EU as well as the EU should apply equal approach to all countries in matters of limiting carbon emissions.[116]

Thus, problems of supply of oil of Urals brand or similar brands to refineries in Central Europe will remain a key challenge. Although in the case of Slovakia it is a corporate prerogative since the owner of 'Slovnaft' is Hungarian MOL. However, the government of the SR has to keep under consideration the issue of security of oil supply in order not to become dependent on the market strategy of a foreign shareholder.

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[114] Lippold, Marcus: *Security of oil supply and the development of oil markets in Central Europe.* Доповідь на конференції „Спільна енергетична політика ЄС та енергетична безпека Словаччини III". Дослідницький центр Словацької асоціаціїзовнішньої політики, н.о., Братислава, 23-24. листопад 2009; http://www.sfpa.sk/dok/energetika09/LIPPOLD.pdf.

[115] Сенковіч, Марек, цитована праця.

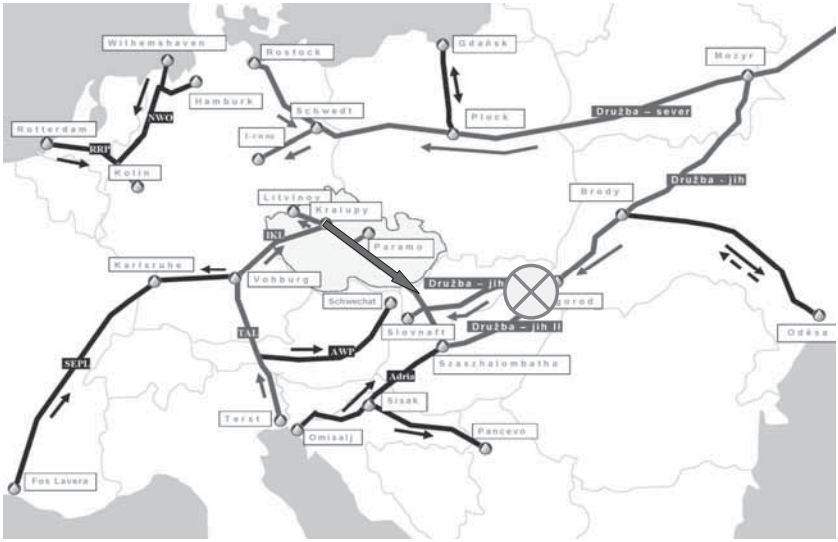
[116] Ibid.

4.3. ODESA – BRODY – "SOUTHERN DRUZHBA" AND ALTERNATIVE SCENARIOS

4.3.1. Transportation of oil in Ukraine

Russia is the key external supplier of oil to the EU. Import of oil to the EU in 2008 reached 491 mln ton (72% of annual EU consumption), 180 mln ton of which were imported from Russia. As already noted prospects for the exploitation of 'Druzhba' pipeline after 2012 when it reaches 50 years age remain unclear. In terms of ensuring long-term oil supplies from Russia provided that Druzhba will not be used by Russia to supply oil to CEE an alternative solution for a number of refineries in the region will be an increased delivery through the Adria pipeline from the Croatian oil terminal on the Adriatic coast Omišalj through Hungary to Slovakia. Another possible option is to reverse transportation of oil from the Czech Republic, the route from the terminal in the Italian Trieste and oil pipelines TAL and IKL on the territory of Austria and Germany. Active promoter of such alternative scenario for supply of Russian oil is the Czech oil transportation company MERO a.s.

Trieste – TAL – IKL and Adria routes for Slovnaft



However, a simple comparison of pipeline routes of Adria and TAL - IKL provide the evidence which is not in favour of the latter, since the length of the route for oil transportation and tariffs will be significantly higher in comparison with Adria.

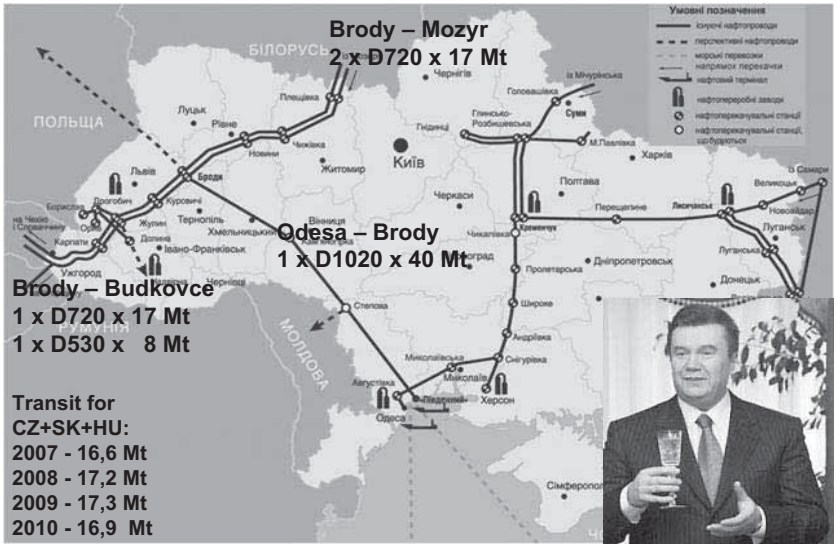
In addition, the Ministry of Industry and Trade of CR prefers diversification of oil supply so that part of the crude comes from East and another part comes from the West. For the SR switching of oil flows from East to West means the loss of revenues from oil transit via its territory. The same is true also for Ukraine. The only exception is if Ukraine and Slovakia will take advantage of opportunities provided by the use of Ukrainian oil transportation system.

Ukraine has the second largest oil transportation system in Europe consisting of 4671 km of pipelines, 51 compressor stations, 11 oil storages with total capacity of more than 1 million cm, and the terminal "Pivdennyy" near Odessa on the Black Sea coast.

The Ukrainian system includes the following oil pipelines:

- Oil pipeline Druzhba: from the border with Belarus to Uzhgorod on the border with Slovakia with further direction to Slovakia, Czech Republic, Hungary, and to the western Ukrainian refineries (Drohobych and Nadvirna);
- "Prydniprovski oil pipelines": from the border with Russian Federation to 4 eastern and southern Ukrainian refineries (Lysychansk, Kherson, Odesa and Kremenchuk), and to the Black Sea ports Odessa and Yuzhnyy;
- pipeline "Odesa-Brody" and terminal 'Pivdennyy' for transit of oil flows from the Black Sea (delivered by tankers to 'Pivdennyy') with subsequent transportation through the Odessa-Brody pipeline and 'Southern Druzhba' to Belarus and the EU countries.

Belorussian oil traffic via Odesa – Brody started.
Window of opportunity for Brody – C.Europe is opened…



With the launch of the terminal "Pivdennyy" and the Odessa – Brody pipeline into operation in 2002, Ukraine has created technical capacities to import and transit oil from other than Russian sources that has been used until 2011. In 2011 the above new capacities started to be used to supply Azerbaijan oil to Belarus on the base of a swap contract between Belarus, Venezuela and Azerbaijan.

Transit capacity of oil transportation system of Ukraine at its entrance is over 100 mln ton per year. Ukraine's pipeline system was developed as a part of the transit oil pipeline system of the former Soviet Union in the framework of a comprehensive program of energy-supplies within its territory considering the location of oil refineries. Thus, the capacity of the oil transportation through the territory of Ukraine was calculated following the producing capacities of oil refineries in Ukraine, export of oil primarily to allow for supply of Russian oil to Central Europe, and the capacities of oil terminals in Novorossiysk and Odessa.

Table 9. Transit capacity of the main oil pipelines in Ukraine

Name	**Projected capacity,** mln. tons per year	**De-facto capacity,** mln. tons per year
Samara (RF) – Lysychansk	90,0	62,0
Michurinsk (RF) – Kremenchuk	18,0	18,0
Mozyr (Belarus) – Brody	34,0	28,0
Snihurivka – Odesa	13,2	16,2
Lysychansk – Tikhoretsk (RF) (directed to Novorossiysk)	30,0	16,8
Brody – Uzhgorod (directed to Slovakia, Hungary and Czech Republic)	25,0	24,7
Odesa – Brody (I stage/ full projected capacities)	14,5 / 40	14,5

The initial processing capacity of refineries, located in Ukraine was designed to provide oil products not only for consumers in Ukraine but also for a considerable part of the bordering regions of the Russian Federation. Economic crises of the 1990es as well as the dissolution of the Soviet Union were two main reasons leading to the significant decrease of production activities of Ukrainian refineries. For example, the volume of the refined oil products by Ukrainian refineries in 1991 was 58.1 mln tons per year whereas in 2000 it was only 8.5 mln tons. The peak of 22.9 mln tons was reached in 2003. Since that time the gradual decrease can be observed with 11.1 mln tons of oil products in 2010[117]. Consequently the volumes of refined oil products influenced the volumes of loaded oil in

[117] According to statistical data of Ministry of Fuel and Energy of Ukraine. Available online: http://mpe.kmu.gov.ua/fuel/control/uk/publish/category?cat_id=35081

transportation system of Ukraine what led to under-loaded existing pipeline capacities.

However, the main factor affecting the loading of oil transportation system of Ukraine is the strategy of RF to bypass territories of transit countries. Russia has been consistently implementing policy of developing its own oil transport capacity and the export terminals in order to reduce dependence on transit countries. The main factor that has significantly influenced the redistribution of transit flows of oil from Russia was the construction of BPS-I, including a new oil terminal in Primorsk on the Baltic Sea coast with the export capacity of 73 mln tons per year. Another factor was the construction of the oil pipeline 'Sukhodilna-Radionivka' in 2001, which allows for the transportation of Russian oil to terminal in Novorossiysk bypassing the territory of Ukraine. Both projects led to a significant reduction of Russian oil transit through Ukraine as well as called into question prospects for the use of Ukrainian sea ports for the export of Russian oil.

Table 10. The volume of pipeline transit oil, mln.tons

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
56,4	48,6	27,4	33,2	32,6	31,4	33,2	39,7	32,8	29,1	20,14

Data of Ministry of Fuel and Energy of Ukraine. Available online: http://mpe.kmu.gov.ua/fuel/control/uk/publish/category?cat_id=35081

The following are the transit oil pipelines in Ukraine that have been active within the last decade:

- Transit of oil through 'Druzhba' pipeline to Hungary, Slovakia and the Czech Republic. This transit covers almost 100% of needs in crude oil of Slovak Republic and Hungary and almost 2/3 of the Czech Republic;
- Transit of oil through the system of "Prydniprovski oil pipelines" to Odessa port, which serves as a hub for the export of Russian and Kazakh delivered to Ukraine via Russia;
- Transit of Russian oil through Odesa-Brody pipeline to the oil terminal 'Pivdennyy' (in 2004-2011 the rout was used in the reverse direction).

When it comes to an oil transit position of Ukraine the following two different oil streams that cross its territory should be noted: oil transit through the pipeline 'Druzhba' to the oil refineries in Central Europe, which has been stable for many decades years; and the transit of oil to the ports of Odesa and Yuzhnyy, through which it was delivered onward to the Mediterranean market. The volume of oil transit via sea ports of Ukraine is comparable with other oil export ports located on the coasts of the Black Sea and the Baltic Sea, e.g. Russian ports in Novorossiysk and Primorsk, or Gdansk in Poland.

Thus, following the above data we can conclude that the volume of oil transit through Ukrainian oil transport system has declined in 2.8 times within the past decade. If we consider the fact that 17 million tons of oil of the total of 20.14 million tons of oil transited through Ukraine 2010, was an oil transit through 'South Druzhba' for customers in Slovakia, Hungary and the CR, it is easy assume that in case of termination of supply of Russian oil through 'Druzhba' the transit function of Ukraine will become close to zero.

This situation, among other reasons, results from the Agreement between the Government of Ukraine and the Russian Federation on oil transit through Ukraine of August 18, 2004, and also the Contract on services for oil transportation through the territory of Ukraine between Ukrtransnafta (Ukraine) and JSC 'Transneft' (Russian Federation) of November 16, 2004 concluded for the period of 15 years. The contract gave the Russian oil transport monopoly exclusive right to make contracts with Russian oil companies on oil transportation through Ukraine. In this way, the 'Transneft' company became the only customer of transport services and acts as a liaison between 'Ukrtransnafta' and oil producers from Russia. Contract with "Transneft" did not include any 'ship or pay' obligations for Russian side. This allows Russia for preferring other transport routes at the expense of Ukraine since the existing contractual framework between the Ukrainian and Russian operators of oil transit pipelines includes no commitment of the Russian side to load Ukrainian oil transport system. Moreover, following the contract Ukrainian side has to coordinate with Russian partners the exploitation of its oil transportation routes, rates and other provisions of transit services. The above contractual framework enabled Russia to block transportation of oil via pipeline Odesa – Brody to European consumers.

4.3.2. Locking-out the European direction of the Odessa – Brody oil pipeline

The main business idea of the Odessa - Brody pipeline is to use it as a cheaper alternative for the oil transport from the Caspian basin to Europe in comparison with the traditional route via the Black Sea straits and the Adriatic terminal in Trieste. The idea of this project has been developed by such oil companies as Azerbaijani SOCAR, Kazakh KazMunaiGas, and American ChevronTexaco for which the pipeline Odessa – Brody gives an opportunity for a less expensive transport of their oil produced in Caspian basin to European refineries.

'Ukrtransnafta' in cooperation with respective Ukrainian state agencies on the implementation of the Euro-Asian Oil Transport Corridor (EOTC) project managed to sign a number of contracts with both suppliers and consumers of Caspian oil, in particular:

Odesa – Brody oil pipeline system: potential of development

- With the state oil company of Kazakhstan KazMunaiGas and the Turkish trader SOM Petrol – an agreement on loading Odesa - Brody pipeline with crude oil by the volume of 7.6 mln tons (4 and 3.6 mln tons respectively) in 2004;
- With PKN Orlen and "Grupa LOTOS" (Poland) - protocols on the use of Odesa - Brody pipeline for supply of light oil up to 7 mln tons annually;
- With the Czech Holding Unipetrol Refinery - memorandum on supplying refinery in Kralupy (CR) with light oil (2.5 mln tons).

In addition, Ukrainian refineries in Nadvirna and Drohobych have guaranteed taking-in up to 2 million tons of oil delivered via Odessa – Brody pipeline annually for their own needs.

Diplomatic efforts aimed at creating the legal framework for the construction of the Polish part of the EOTC project (Brody - Plock) were undertaken. In particular, the Agreement between the Governments of Ukraine and Poland on the use of the Odessa - Brody pipeline for transport of hydrocarbons and its integration with Polish transit infrastructure" was concluded on November 26, 2003. The agreement showed readiness of the government of Poland to construct a connecting pipeline Brody - Plock.

Furthermore, PricewaterhouseCoopers Co. has developed a business plan for EOTC. According to its findings, the route Odessa - Brody - Uzhgorod - Central

Europe offers cost-effective alternative for refineries in Czech Republic, Austria and South Germany, which already purchase light oil from the Caspian basin. The main advantage of the Odessa - Brody pipeline is its efficiency and reliability that has been proved by PC calculations. Thus, delivery of 1 ton of oil along the Odessa - Brody pipeline to the refinery Kralupy in the Czech Republic under market conditions of 2004 gave $ 0.95-1,0 savings in comparison with the traditional route through the Bosporus, Trieste terminal and the oil pipelines of TAL and IKL.

The year 2003 was a year of intense communication between representatives of Ukraine's political leadership and managers of Russian state and private oil companies. Ukrainian leaders showed very accommodative approach towards wishes of their Russian partners. For example, the head of Russian oil company TNK has sent the letter to President of Ukraine Leonid Kuchma dated on June 20, 2003, with a proposal to use the Odessa - Brody pipeline in reverse mode to supply oil from Russia to Odessa, in which he "guarantees delivery of at least 9 million tons of oil per year" (starting from autumn 2003), and requests the creation of the respective working group 'involving representatives of JSC TNK in order to prepare the material for the decision of the Cabinet of Ministers of Ukraine". The above letter was officially registered at the secretariat of the President of Ukraine on June 24, 2003, (see Annex 4), but the respective instruction from President to the Head of Government Ukraine has been given on 23 June, that is, the day before the official registration of the letter! (see Annex 5). Prime-minister of Ukraine issued his own instruction to governmental officials and management of state oil companies to create the respective working group already on 26 June.

Russia has employed a system way and multi-level lobbying on this issue at the highest levels of Ukrainian authorities, which clearly went beyond the cooperation of corporate entities. That is shown not only by the speed by which a written correspondence has been transformed into concrete steps, but also by the fact that each Russian official at different ranks of power carried out their tasks. For example, in the same period, the Prime Minister Yanukovych received a letter signed by leaders of five major oil companies of Russia and the oil transport monopoly 'Transneft', which clearly demonstrates from its first words political motivation for the reverse operation of the Odessa - Brody: "***In the process of forming the single economic space a significant role belongs to the integration of fuel and energy complexes of our countries***" (see Annex 6). In other words, reverse operation of the Odessa - Brody pipeline was a component of a multi-level game of Russia aimed at involvement of Ukraine in Russia's integration projects within the former Soviet Union as well as for prevention of Ukraine's cooperation with Western partners, as well as Azerbaijan, Kazakhstan and Georgia. The EOTC project was aimed at diversifying supplies of oil through strategic route for new oil flows from the Caspian Sea to Central and Eastern Europe bypassing the territory of Russia.

On January 23, 2004, a group of ambassadors of the partners of Ukraine in the implementation of the Odesa - Brody pipeline (the Czech Republic, Poland, USA, and Turkey, which was concerned about the extra loads of the Black Sea Straits due to reverse operation of the Odessa – Brody pipeline) sent a letter to the President of Ukraine, in which they focused on the following points:

- Ukraine has made progress in developing the Odesa – Brody pipeline. After its construction, Ukraine has managed to attract major foreign oil companies and get both political and logistical support from the European Commission and the United States Government <...>
- The Odessa - Brody - Southern Druzhba project is beneficial for Ukraine, suppliers of the Urals and Caspian oil mixtures and the European markets <...> This project opens reliable overland route to Czech and German markets in the short term perspective as well as to the Austrian, Polish and other markets of European countries in more distant future <...>
- If the government of Ukraine makes its choice in favour of the Odessa - Brody - Southern Druzhba pipeline for the delivery of oil to Central Europe, it will not only get significant revenues from oil transportation, but also will give Ukraine benefits by sending a signal to world markets that Ukraine is a hospitable environment for foreign investment.

(See Annex 7)

The Government of Ukraine also received respective letters from interested companies. In his letter of January 26, 2004, President of Turkish oil trader SOM Petrol wrote: "*We confirm today as well as are willing to develop agreement with Ukrtransnafta in order to achieve further agreements regarding:*

- Delivery of more than 3,6 mln. tons of Caspian oil via Odesa-Brody pipeline to Europe;
- Participation in filling Odesa-Brody with the technological oil with the volume of 360 thousand tons".

CEO of ChevronTexaco David O'Reilly in his letter to the President of Ukraine of January 29, 2004, noted: "*We are ready to continue our cooperation with Ukrtransnafta and other pipeline companies on the implementation of this project and to supply oil by Odessa - Brody pipeline to Central Europe*". (See Annex 8). However, this letter was not taken into consideration by the President of Ukraine. He showed absolutely different approach toward a written correspondence with Russian companies.

Anyway, Russian "reverse blitzkrieg" failed. On February 4, 2004, the Government of Ukraine adopted a decision on the use of oil pipeline Odesa - Brody in European direction in view of the fact that negotiations on the agreements on oil supply are close to conclusion. This has triggered Russian side, which has deployed

leverage not only on Ukraine but also on its other partners, which could influence the implementation of the project. A striking example in this regard is Slovakia. Ukrtransnafta negotiated with the Slovak and Czech partners MERO and Slovak oil transiting company Transpetrol and has organized the light oil pumping test at the route Brody - Budkovce - Kralupy. This experiment should have to serve as a starter for the deliveries of Azerbaijani oil through the route Odesa - Brody – 'Southern Druzhba' to Czech Kralupy nad Vltavou via the territory of Slovakia. On January 29, 2004, Transneft sent a letter to Transpetrol, in which, under conditions of bilateral Russian-Slovak agreement actually objected to such testing. (See Annex 9) The test failed for many reasons, but one of them has been certainly a pressure on the leadership of the Slovak operator Transpetrol, 49% of which were (then) under the control of Russian shareholder.

Yet in May 2004, First Deputy Prime Minister of the Government of Ukraine in his letter was persuading the European Commissioner for Transport and Energy on Ukraine's firm position to materialize a European direction of the Odessa – Brody pipeline. On its side Ukrainian government was an addressee of repeated confirmations from companies operating in the Caspian basin on their readiness to load Odessa – Brody pipeline with light low-sulphur oil.

Thus, on 17 June 2004, a letter came from the oil trader Baltic Petroleum: "*We are ready to conclude an agreement on transporting crude oil through the facilities of the Odesa - Brody with the volume of 5.0 - 7.0 million tons over the first 18 months, starting from September 2004.*" Having no official response, the Baltic Petroleum addressed the Minister of Fuel and Energy of Ukraine by the letter dated on 6 July: *"We once again confirm our readiness to sign the contract for the transportation of oil via the Odessa - Brody pipeline with the volume of 5.0 – 7.0 million tons over the first 18 months for further distribution by rail to European consumers. Oil necessary to fill the pipeline will be supplied* ***for free*** *to Ukrtransnafta beginning from September-October this year"*.

However, on July 5, 2004, the Government of Ukraine changed its own resolution of February 4, 2004, turning the green light to the use of Odessa – Brody in the reverse mode. Here is the quotation of the Slovak economic weekly "Trend": *"Transportation of Caspian oil through the territory of Slovakia is no longer on the agenda. Finally, Ukraine is changing its priorities again. Even though the project on transportation of Caspian oil from Odessa to Brody and then to Slovakia was officially approved by the Government of Ukraine in February, in early July, immediately after his visit to Moscow Prime Minister Viktor Yanukovych told about an unexpected change of the priorities. It means the reverse direction of the pipeline, which enabled transportation of heavy oil from deposits of Russian concern "TNK-BP" through Brody to Odessa and further by tankers. Thus, Ukrainians accepted the proposal of Russians, which was repeatedly rejected before."* <...>

Reverse exploitation of Odesa - Brody pipeline in the course of the period of autumn 2004 to summer 2010 did not lead to increase of oil transit through Ukraine. Quite on the contrary, each year the volume of oil transited via territory of Ukraine has been gradually reduced (see above Table 10). Russian companies that initiated a reverse flow and are cited in the above letter to the Prime Minister of Ukraine did not bear any responsibility for reduction of oil transport in spite of their assurance that they will *guarantee stability and a full load of the pipeline Brody – Odessa*. The contractual partner of Ukrtransnafta on Russian side was a Cyprus-based offshore company. (See Annex 6)

Operation of the reverse flow of Odesa – Brody has its corrupt background similarly to Russian-Ukrainian non-transparent gas deals. It thrown back development of a European direction of the pipeline as well as has destroyed trust in Ukraine as a serious partner in the EU energy sector. However, it was Russian company Transneft who rejected to use the Samara - Unecha - Mozyr - Brody – Yuzhnyy route in the second half of 2010. Finally, it was also unexpected arrangement between Belarus and Venezuela after the repeated oil dispute between Minsk and Moscow that again put on the agenda a European direction in exploitation of the Odesa – Brody oil pipeline.

In 2010 Ukraine has reached an agreement with Belarus on the use of the Odesa - Brody pipeline, namely one of its two strings of "Southern Druzhba" pipes in the section of Mozyr (Belarus) - Brody (Ukraine), in reverse mode to supply oil to Mozyr refinery in Belarus. It should be noted that the option of exploitation of the route Odesa - Brody - Mozyr was first calculated yet in 1995 by the Ukrainian Institute of Oil Transportation at the request of the Belarusian State Concern for Oil and Chemistry. Back in the mid 90's, when construction of the Odessa - Brody pipeline started Minsk was considering to make the use if it in the future. An era of cheap Russian oil as the payment for political loyalty has led Minsk to forget about Ukrainian project. Things started to change in 2004 thanks to conclusion of the first trilateral protocol (Ukraine - Belarus - Latvia) on the creation of the Black Sea-Baltic Sea route with oil transportation capacity up to 10 million tons. The series of Russian-Belarus oil disputes of 2007-2011 stimulated Minsk for the development of technological capacity to manage taking-in oil from the both South and North - from the Black Sea through Ukraine and the Baltic Sea through Latvia and Lithuania.

It should be stressed that actually it was Belarus' interest in the use of Odessa - Brody oil pipeline which has led to its operation in originally projected mode. One can assume that relationship between Kyiv and Baku, Baku and Minsk, and Kyiv and Minsk in the course of 2010, may result in loading Odessa - Brody and the "Southern Druzhba" (in directions to Belarus and Slovakia) with different brands

of oil which will be transported by the method of a consistent transportation that is applied at the operation mode of TAL or IKL pipelines.

4.3.3. The last windows of opportunity for 'Druzhba' and 'Odesa-Brody'?

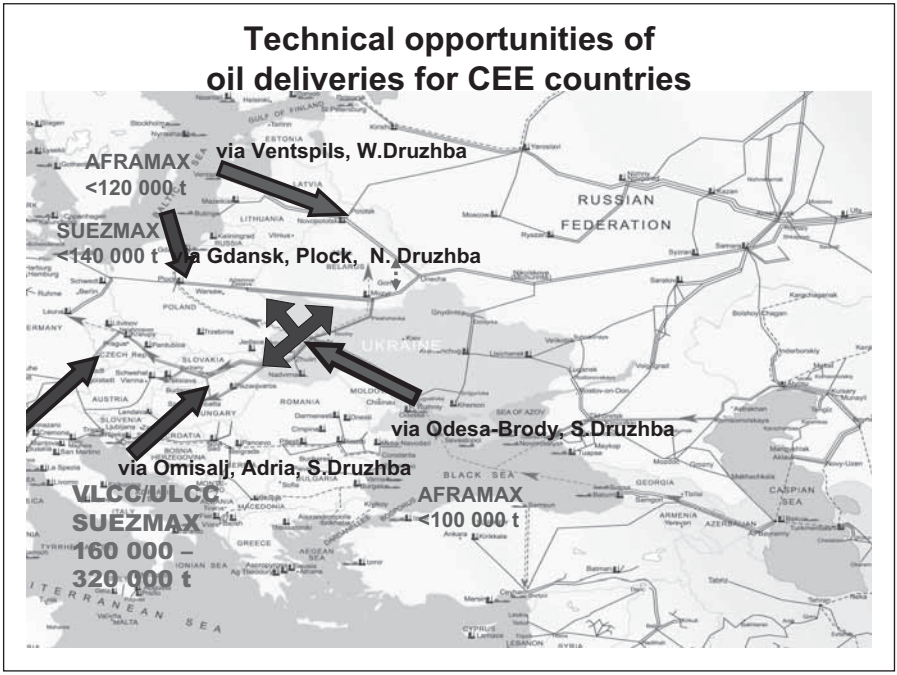
There are several transportation routes, through which oil can be imported to Central Europe and Slovakia from the Caspian basin via the Druzhba pipeline through Ukraine:

1) Baku - Novorossiysk pipeline (launched in 1997, capacity 18 million tons per year). From Russian Novorossiysk terminal on the Black Sea, oil can be transported by tankers to the Ukrainian Terminal Pivdennyy (near Odesa), thence through the Odesa - Brody pipeline to Druzhba and then to Slovakia. The advantage of the route Odesa - Brody - Southern Druzhba is relatively low transport tariffs.
2) Baku - Supsa pipeline (launched 1999; capacity 1.2 million barrels per day). From terminals at the Georgian Black Sea coast near Supsa or Kulevi, which is owned by SOCAR the oil can be transported by tankers to the Ukrainian Pivdennyy terminal and then through the route Odesa - Brody - Southern Druzhba to Slovakia.
3) The combined route Atyrau – Samara – Unecha – Mozyr – Southern Druzhba. Pipeline Atyrau – Samara with the transport capacity of 17 mln tons per year links together deposits in Kazakhstan with the Russian Samara, which is the starting point for Druzhba. This is the only existing a land route, which can transport oil from Kazakhstan directly to Central Europe through Russia, Belarus and Ukraine. In addition, it is the only route that is not dependent on oil transportation from Kazakhstan by tankers. In recent years, volumes of Kazakh oil of Urals brand coming to Slovak refinery Slovnaft is increasing.
4) Tengiz – Novorossiysk KTK pipeline (capacity 28 mln. tons per year with possible extension to 67 mln. tons after 2014). The pipeline links together deposits in Kazakh district Tengiz with the oil terminal "Yuzhnaya Ozereevka" near Novorossiysk on the Black Sea. From this terminal it would be possible to transport oil by tankers to the Ukrainian Pivdennyy terminal and further to Odesa - Brody pipeline and to Southern Druzhba. Route Yuzhnaya Ozereyevka - Pivdenny was successfully tested by Ukrainian company Ukrtransnafta in 2002.

The above routes can be used to transport Caspian oil to Central Europe through the Odessa - Brody and the Southern Druzhba pipeline to Europe. Oil tankers can deliver oil to the Pivdennyy Terminal and Odesa - Brody pipeline from Novorossiysk (Russia), Georgian Supsa, Batumi and Kulevi terminals on the Black Sea. From the above terminals as well as from the Turkish Ceyhan located on the Mediterranean coast oil of different brands from the Caspian Sea region is transported to Italian

Trieste and Croatian Omišalj and goes further through TAL and Adria to Central Europe. A significant limitation for oil transportation by tankers from the Black Sea into the Mediterranean Sea is presented by internationally agreed limits for transport from the Black Sea straits of Bosporus and Dardanelles.

There is only one route (Atyrau – Samara – Unecha – Mozyr – Brody – Uzhgorod – Budkovce - Bratislava) that can use Southern Druzhba pipeline in its full length on the territory of Ukraine and almost full length on the territory of Slovakia. Considering the commercial interests of some Central European refineries, including the Slovak refinery Slovnaft, which are willing to continue processing oil of Urals brand, in case it would be impossible to obtain it from Russia, it would be possible to get an alternative supply from Kazakhstan through Druzhba oil pipeline, which is, of course, subject to approval of the RF. If Russia completely switches its oil export via its own terminals and will cut-off supplies to the Central European refineries, Druzhba may get free for the export from Kazakhstan via the above mentioned route Atyrau - Samara – Druzhba, which connects Kazakhstan with the region of Central Europe through Russia, Belarus and Ukraine. Transit capacity of Atyrau - Samara exactly fits the annual consumption of oil of Urals brand by the Czech Republic, Hungary and Slovakia – more than 17 million tons. The possibility to use this route in the future requires joint and coordinated actions of Slovakia and Ukraine with partners from Kazakhstan, Russia and Belarus.



The project of a pipeline that will connect Slovak refinery Slovnaft with Austrian Schwechat might become an engine for the development of oil transportation through Southern Druzhba. OMV is transporting oil for its Schwechat refinery through the traditional route from Trieste via TAL and AWP. This route is being exploited almost at its full transit capacity. It does not have a free capacity for the transportation of commercially attractive volumes of oil to Slovnaft. According to Slovak experts, the combination of Slovnaft – OMV – Schwechat linkage will serve mainly to transport oil from the pipeline Druzhba from Slovakia to Austria, not vice versa. In other words, it would not solve the security issue of oil deliveries to Slovakia. The project is challenged by environmental considerations since it should cross the territory of Žitný ostrov, which is an area with the largest underground sources of drinking water in Europe.[118]

However, one can assume that the project will get new impetus within the context of a potential problem of the "end of Druzhba" that might happen due to the planned launch of Russian BTS-II in 2012. In addition there are intentions to expand capacity of TAL according to agreement between the Czech MERO and Austrian TAL as of November 2010. If the TAL's capacity is enlarged it would be able to increase supply of oil to Schwechat by AWP, which has 25% transit capacity reserve to meet the urgent additional demand of OMV. However, with no extension AWP will not be able to create additional capacity and would hardly serve as the alternative for the supplies to Slovnaft. Another option is the Adria pipeline (by means of increasing the capacities of Sisak – Százhalombatta – Sahy pipeline). However, all above indicative options are based only on the necessity to meet needs of Slovnaft refinery, but ignore the need to load the Slovak transit pipelines operated by Transpetrol, therefore under above scenarios Slovakia is facing the challenge of losing its oil-transit function.

The only way for Slovakia to maintain its transit position is the preference for Odesa - Brody – Southern Druzhba scenario as a strategic option for Slovakia for the next 50 years. One can assume that Czech refineries will switch to TAL-IKL route, i.e. they will transport at least part of needed oil from other then a Slovak direction. In fact the basic module of Odessa – Brody (pipeline D1020mm and throughput capacity of 40 mln tons annually) can ensure supply of oil through Southern Druzhba and satisfy the needs of CR, SR, Hungary and Belarus in the case of complete cut-off of deliveries trough Druzhba. Certainly, provided that the capacity of the terminal Pivdennyy as well as oil storages in Pivdennyy and Brody will be expanded, and two additional compressor stations will be constructed.

Ukrainian side should bear in mind that Odesa - Brody now gets the last "window of opportunity" to be integrated into the EU oil supply system within the Caspian-

[118] Alexander Duleba and Zuzana Lisoňová, ibid.

Black Sea-Central Europe connector that is being developed since the second half of the 1990s. It is also the last window of opportunity for Pan-European project (PEOP) Constanta – Trieste, which was considered to become a competitive project to the Ukrainian route. However, recently it receives a number of impulses. In particular, in its resolution on the EU strategy in the Black Sea region of 20 January 2011, the European Parliament stresses in § 39 that it "*reiterates the importance of the Southern Energy Corridor projects <...> including the pan-European oil pipeline Constanta-Trieste*"[119].

PanEuropean oil pipeline Constanta – Trieste and possible oil route from Black Sea to Slovakia

Unlike Ukraine, Romania is a member of NATO and the EU. In addition, the Kazakh national oil and gas company KazMunaiGas acquired oil assets in Romania and intends to expand its business activities in the EU. Moreover Kazakhstan considers Romania as a strategic link for further expansion of exports of its oil to the EU. During the visit of Romanian President T. Basescu to Astana in March 2010, the Kazakh President N. Nazarbayev expressed his country's position regarding PEOP project: "… *Kazakhstan (delivers oil) through the Caspian Sea to Baku, through*

[119] European Parliament resolution of 20 January 2011 on an EU Strategy for the Black Sea. Available online: http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2011-0025+0+DOC+XML+V0//EN&language=EN

Azerbaijan and Georgia to the Black Sea and further by tankers to Romania. <...> then the project Constanta-Trieste can be useful."[120] Azerbaijan as well has expressed its support for the project.

Nevertheless prospect for implementation of PEOP project look a bit problematic against Slovenia's hesitation because of environmental reasons. Theoretically project can be materialized even in an abridged form – up to its connection with Adria pipeline. That would enable Hungary and Slovakia (in case of extension of Sisak – Százhalombatta – Sahy pipeline) to get the oil from the Black Sea. Again, the PEOP project will significantly decrease a transit role of Slovakia – there might be a limited transit of oil through Bratislava - Schwechat pipeline, if constructed, of course - to OMV.

Thus, if Ukraine and Slovakia want to sustain their role in transit of oil and to ensure their strategic positions in a changing European architecture of energy security they should come up with inventive solutions aimed at gaining new oil flows through the existing pipelines. In this regard, it looks worthy to work out idea on the creation of a Central European oil consortium on the basis of the assets of Ukrtransnafta (Pivdennyy terminal, Odesa – Brody pipeline, Southern Druzhba, etc.), Transpetrol, MERO, MOL and Belneftekhim with the participation of companies that operate oil refineries in the region of CEE. A Slovakia-Ukraine tandem has the potential to become a cornerstone of such consortium.

[120] http://www.rian.ru/economy/20100302/211820427.html.

5. Scenarios, projections, and recommendations

5.1. MATRIX SCENARIOS FOR COOPERATION BETWEEN UKRAINE AND SLOVAKIA IN THE FIELD OF TRANSPORT OF HYDROCARBONS

The processes and trends described above are new phenomenon emerging in Ukrainian and Slovak energy sectors as well as within the post-crisis European energy security architecture. They are result of a number of factors that lead to particular scenarios under which future developments will take place. So, one or another vector of development, including Slovak-Ukrainian cooperation can be foreseen. Basically, the number of fundamental factors which are influencing the development is limited, although the number of other accompanied factors and variables is obviously wider. We did limit ourselves to a sectoral approach to draft possible main scenarios for bilateral Slovak-Ukrainian cooperation in the field of transport of hydrocarbons. One can assume that if we would consider the variable of unpredictable breakthrough of technologies which can lead to non-hydrocarbon development or the variable of the possibility of the EU's or Russia's collapse, which are widely discussed now, we would certainly come to different mosaic of conclusions. In such mosaic Ukrainian-Slovak cooperation in the field of hydrocarbons would gain the minor role, or would be even obsolete in comparison with the global scale of much more important events. At the same time if Ukraine starts to develop its deposits of shale gas or methane hydrate deposits in the Black Sea it will significantly improve prospects for the large-scale cooperation of both countries. However if such scenario would become a reality it might happen not earlier than in 2025.

The book "Oil and Gas of Ukraine" includes a brief note on interesting historical moment. World War II did not stop the development of gas industry in Western Ukraine. Moreover, gas production increased in the course of the years of 1939-1944 2.8 times, furthermore, in 1943 there was even a new gas pipeline Opory (Ukraine) – Stalowa Wola (Poland) constructed. However, this fact cannot be assessed as a fruitful result of Ukrainian-Polish cooperation since both

countries were occupied by Nazi Germany at that time.[121] It is also difficult to define Ukrainian-Slovak cooperation in the gas sector in the post war period as bilateral, although it certainly had a place at the level of Slovak and Ukrainian organizations and professionals who, however, were not independent in making their decisions, and did obey the will of a single power centre, which has determined what and how should be done in Kyiv, Bratislava and other capitals of the former Soviet bloc.

While modelling the matrix of possible scenarios for Ukraine and Slovakia authors considered the fact that both countries are placed in different political and economic formats of cooperation, have a different hierarchy of cooperation formats, however, both have a political will to benefit from the 'windows of opportunities' as well as they acknowledge that neighbourhood per se should be a strong inspiration for bilateral collaboration.

Table 11. Matrix of possible scenarios for cooperation between Ukraine and Slovakia in gas sector in 2011-2025

Ukraine **Slovakia**	**Status-quo («Naftogaz of Ukraine» depends on «Gazprom»)**	**Europeization of gas sector by Energy Community Treaty implementation**	**Fragmentation of Naftogaz by creation of a number of joint ventures with the Russian companies, merging the assets of Naftogaz and Gazprom**	**Implementation of by-passing Nord Stream and South Stream projects by Gazprom**	**Transformation of Gazprom (collapse of the monopoly and / or sectoral reorganization)**
Status-quo (domination of French-German tandem in SPP)	**Non-development** Cooperation is defined and determined by the partnership of Russain, French and German companies	**Progress** Cooperation on the EU platform with the consideration of German – Russian cooperation	**Regress and/ or collapse of cooperation**	**Regress and/ or collapse of cooperation**	**Progress**

[121] «Нафта і газ України», під редакцією М.Ковалка, «Наукова думка», Київ, 1997, стор 147-148 – "Oil and Gas of Ukraine ", edited by M. Kovalko, Naukova Dumka, Kyiv, 1997, p. 147-148

Czech model (implementation of energy packages of the EU for the expansion of German energy companies	**Regress** Cooperation is defined and determined by Russian-German partnership	**Limited progress** Cooperation is defined and determined by Russian-German partnership formally on the EU platform	**Regress and/ or collapse of cooperation**	**Regress and/ or collapse of cooperation**	**Progress**
Revanche of "Gazprom" (Gazprom's entry into the SPP as an outcome of purchasing 49% of shares)	**Regress** Technical cooperation within the necessary limits approved by Gazprom	**Regress** Technical cooperation within the necessary limits approved by Gazprom	**Regress and/ or collapse of cooperation**	**Regress and/ or collapse of cooperation**	**Limited progress**
The change of market and technological factors in Europe (LNG, shale gas, integration of gas networks within the EU)	**Regress**	**Limited progress**	**Regress and/ or collapse of cooperation**	**Regress and/ or collapse of cooperation**	**Regress**
«Norway's expansion» (the entry of the Norwegian company into the structure of SPP property)	**Non-development** Minimal cooperation determined by partnership interests of RF, Germany, Norway and France	**Limited progress** Cooperation on the EU platform determined by RF-Norway cooperation	**Regress and/ or collapse of cooperation**	**Regress and/ or collapse of cooperation**	**Limited progress**

Comments on gas sector:

Scenario "Non-development" displays post-crisis level of cooperation with the minimal level of trust and cooperation both at corporative and inter-ministerial and inter-governmental levels.

Scenario "Limited progress" displays some development of mutual cooperation mostly on the technical level determined by the interests of the suppliers (RF, Norway) and consumers (EU, Germany, France).

Scenario "Progress" displays the development of bilateral cooperation determined by the EU as a common denominator for activities of both sides.

Scenario "Regress and/or collapse of cooperation" displays degradation and finally vanishing of any type of cooperation due to the transformation of the subjects of cooperation.

Analysis of matrix of 25 possible scenarios makes allows for the following conclusions:

1. Scenarios for bilateral cooperation are not dominant - 8 scenarios of progress and limited progress out of 25 possible.
2. Scenarios for a possible degradation of bilateral cooperation prevail - 15 out of 25possible.
3. There are two conservative scenarios of non-development or in other words preservation of the existing minimal cooperation which is not enough to bring significant positive results that would upgrade bilateral cooperation.

However, the predominance of regressive scenarios should not to be regarded as a lack of prospects for cooperation. Rather it should be considered as an unfriendly environment for the development, because of the countries' belonging to different geopolitical and geo-economic formats, their sovereignty and limited opportunities, which are unfortunately, clearly confirmed by the events of January 2009.

Table 12. Matrix of possible scenarios for cooperation between Ukraine and Slovakia in oil sector in 2011-2025

Ukraine **Slovakia**	**Status-quo (keeping oil traffic through 'Southern Druzhba')**	**Joining Russian integration projects by Ukraine, Merger of oil-transport assets**	**The entry of companies active in Caspian basin into oil-refinery and oil-transportation systems**	**The development of South – North oil transportation system (to Belarus)**	**BTS – II (limitation/ Termination of supplies via 'Southern Druzhba')**
Status-quo (keeping oil transit through 'Southern Druzhba')	**Conservation of the existing status** determined by partnership with RF and Transneft	**Conservation of the existing status**	**Progress** Partial increase in loading of oil into transportation system	**Conservation of the existing status**	**Progress** Exploitation of Odessa – Brody – Southern Druzhba, increase in loading of oil into transportation system

The entry of companies active in Caspian basin into oil-refinery and oil-transportation systems	**Conservation of the existing status** determined by partnership with RF and Transneft, growth of supplies through Adria	**Conservation of the existing status** determined by partnership with RF and Transneft	**Progress** Exploitation of Odessa – Brody – South Druzhba, increase in loading of Oil transportation system	**Progress** Exploitation of Odessa – Brody – South Druzhba, increase in loading of Oil transportation system	**Progress** Exploitation of Odessa – Brody – South Druzhba, increase in loading of Oil transportation system
Changes of the ownership structure of MOL and 'Slovnaft' (entry of Russian co-owners)	**Conservation of the existing status** determined by partnership with RF and Transneft	**Regress** Loss of subjectivity in the relationship	**Regress** Minimal technical cooperation	**Regress** Minimal technical cooperation	**Conservation of the existing status** determined by partnership with RF and Transneft
Czech model (switching of system of oil supplies to TAL and IKL)	**Regress**	**Collapse of cooperation** The lack of subject interested in cooperation (oil supplies and transit)	**Regress**	**Regress**	**Collapse of cooperation** The lack of subject interested in cooperation (oil supplies and transit)
Building the pipeline Bratislava – Schwechat	**Minimal progress** determined by partnership with RF and Transneft	**Minimal progress** determined by partnership with RF and Transneft	**Progress** Exploitation of Odessa – Brody – Southern Druzhba, increase in loading of oil into transportation system	**Progress** Exploitation of Odessa – Brody – Southern Druzhba, increase in loading of oil into transportation system	**Progress** Exploitation of Odessa – Brody – Southern Druzhba, increase in loading of oil into transportation system
Building of PEOP Constanta – Trieste	**Conservation of the existing status**	**Regress** Partial switching to the supplies from PEOP and Adria	**Progress** Exploitation of Odessa – Brody – Southern Druzhba	**Progress** Exploitation of Odessa – Brody – South Druzhba	**Collapse of cooperation** The lack of subject interested in cooperation (oil supplies and transit)

Comments on oil sector:

Scenario "Conservation of the existing status" displays the existing level of cooperation with relatively not intense contacts on corporative, inter-ministerial and intergovernmental levels.

Scenario "Minimal progress" displays some positive development of bilateral cooperation limited to the technical aspects and determined by the interests of the third parties.

Scenario "Progress" displays the improvement of cooperation determined by coinciding interests of both sides.

Scenario "Regress" displays degradation of bilateral cooperation brought by external factors and mutual lack of trust.

Scenario "Collapse of cooperation" displays the end of any forms of bilateral cooperation because of transformation of oil flows within the European energy area.

Analysis of matrix of 30 possible scenarios allows for the following conclusions:
1. Scenarios for bilateral cooperation are not dominating, but most numerous - 12 scenarios of progress and minimum progress out of 30 possible.
2. Scenarios for degradation and collapse of cooperation are not dominating and are less numerous than the scenarios of progress – 10.
3. There are 8 scenarios for preservation of the existing level of bilateral cooperation.

Overall picture in the oil sector provides for more optimism than in the gas sector. 20 progressive or conservative scenarios prevail. Under present circumstances maintenance of the existing status-quo is a positive aspect.

The general conclusion may be that bilateral cooperation between Ukraine and Slovakia will depend first of all on willingness of political and business leaders of both countries to promote bilateral cooperation and mutually beneficial projects in the area of energy security. Ukraine and Slovakia can create their own success story in spite of negative factors.

5.2. POLICY RECOMMENDATIONS ON BILATERAL COOPERATION BETWEEN SLOVAKIA AND UKRAINE

5.2.1. Strategic framework

Slovakia and Ukraine are the key energy transit countries from the East to Europe via Trans-Carpathian connector. This is especially important in case of natural gas because the pipelines which pass through Ukraine and Slovakia deliver about 80% of export volumes of Russian gas to European consumers. Common strategic interests of Ukraine and Slovakia demand preservation of their strategic position sus-

tained for almost 40 years in the European gas industry and nearly 50 years of their cooperation in oil sector. The larger volumes of oil and natural gas are transported through Ukraine, the larger volumes of hydrocarbons will be transported through the territory of Slovakia. The more hydrocarbons are consumed in Europe through Slovak pipes, the more will be uploaded via Ukrainian pipeline transport capacity. Reducing the volume of transportation through Ukraine will automatically mean a reduction in income from the use of transit systems for oil and gas in Slovakia. Using the whole transit infrastructure bring common interests of Slovakia and Ukraine in the context of the European gas and oil businesses. If both countries want to maintain a strategic transit position, they must work closely together, whatever narrow is space for cooperation. Kyiv and Bratislava have to expand bilateral cooperation in order to enhance their leverage on a changing energy security of Europe.

However, it should be understood that Russia is not going to develop the export of its energy resources via Slovak-Ukrainian Eastern European connector. It is quite transparently recorded in the updated 2009 Energy Strategy of Russia: "*to stimulate the construction of transport infrastructure to diversify markets and the export routes of Russian energy resources in the east, south, north-west and north of the country*".

When it comes to ongoing debate on energy security there within the EU it is understood mainly in the context of a "security for consumer" – in terms of an access of European consumers to the energy sources in the required amount and at an affordable price. The vast majority of developed countries, including EU member states, which are the largest consumers of oil and gas on the world's markets, developed a policy of energy security, especially in ensuring access to energy resources for their own use, which is quite natural and understandable. That has been a natural response to the oil crisis in the early 1970s of the last century. The aim is to diversify access to resources and the possibility of obtaining them from multiple suppliers. Russia itself as the producer seeks to enhance its own security as an energy producer and to get the access to European markets through the diversification of transport routes in order to reduce its transit dependence on Ukraine and Belarus. However, energy security for Russia means also less competitive suppliers of oil and natural gas to European markets. The above approaches to energy security are contradictory and inevitably lead to tensions between producing, consuming and transit countries.

Energy security should be approached in a broader context, namely, its format should be based on three pillars: security for the consumer, safety and security to the producer and security of the transit. This opens up opportunities for harmonization of interests in accordance with the nature of the hydrocarbon business, which consists of three principal components: production - transport - consumption. In order to develop effective international cooperation in the field of energy security it is necessary to overcome the concept of a "consumer-oriented" energy security and to think also about the security of the producer, which requires a long-term "secure market" as

well as a transit security, which should give a clear and long-term prospects for those countries that are providing transit services. It is of mutual interest of Slovakia and Ukraine to change European discourse on the subject of energy security in a way it includes the all three fundamental pillars of energy security.

Should Slovakia and Ukraine be able to make joint contribution to the change in the European way of thinking about/and decision-making in the field of energy security and further to develop a "three pillar" energy security architecture in Europe, they can help to improve international energy security for all actors involved and at the same time to protect their own interests of the transit countries. Creating a new architecture of European energy security, based on three pillars mentioned above (security for the producer, security for transit and security for the consumer), which can be based on creating a new EU partnership with Russia as the main producer and Ukraine and Belarus as the main transit countries is the common interest of Slovakia and Ukraine. Slovakia and Ukraine's interests coincide with the interests of long-term energy security of Europe. Slovak-Ukrainian bilateral cooperation in this area does have a pan-European dimension.

The framework for the development of bilateral cooperation between Slovakia and Ukraine on energy security is the relationship between the EU and Ukraine. During the years of 2009-2010 negotiations on the Association Agreement between Ukraine and the EU, except for some issues (especially energy) and the FTA were completed at the working level. Association Agreement will replace the Partnership and Cooperation Agreement between EU and Ukraine dated by 1994. According to the European Commission for negotiations on liberalizing trade with Ukraine (part of the Association Agreement), negotiations can be completed by the end of 2011. Certainly this statement is valid in case Kyiv will confirm its commitment to democratic values that are crucial for the EU. The Association Agreement includes 31 sector segments, on which Ukraine is committed to gradually harmonize with European legislation and policies, including energy. In 2010, the procedures were completed on Ukraine's accession to the EU Energy Community Treaty and on February 2, 2011, Kyiv gained full membership in it. ECT provides for full transfer of European standards in the energy sector to Ukrainian legislation. Regarding the other areas of cooperation, Ukraine does not have to implement full European standards but in the energy sector Ukraine is committed to fully harmonize national legislation and policies with European norms. The above mentioned contractual framework between the EU and Ukraine creates conditions for increasing of Slovak-Ukrainian energy cooperation in the near future.

5.2.2. Sector of natural gas

In order to use the capacities of bilateral cooperation within the context of gas transit security which are rooted in common interests and existing treaties between Ukraine and the EU, we recommend:

- To initiate regular dialogue about cooperation in gas supplies from Russia to Slovakia via Ukraine based on the experience of the gas crisis in January 2009 with the participation of the Ministry of Economy, Ministry of Foreign Affairs of both countries and companies of Naftogaz of Ukraine and the SPP. The negotiation process must have at least the following tasks:

  1) To introduce "hot lines" between the responsible officials on the governmental and corporative levels: ambassadors at large on energy security at the Foreign Ministries, heads of gas transit companies Ukrtransgaz and Eustream, persons in charge at the ministerial level – at the Ministry of Energy and Coal Industry Ministry of Ukraine and Ministry of Economy of SR (or adviser to Prime Minister on energy in Slovakia, taking into account asymmetry of the governmental structures in both countries);
  2) to study the possibility for opening offices of Eustream in Ukraine and respectively Ukrtransgaz in Slovakia on the basis of positive experience of the representation office of the Ukrtransnafta to Slovakia over the past 7 years;
  3) to develop a common position on the trilateral mechanism to strengthen energy security on the European continent by means of Energy Transparency Regime (ETR), which has to cover all the technological chain – starting with the production of energy and finishing with its consumption accompanied with the installation of the respective online system of monitoring of the telemetric data of movement of gas flows which will be obtained from the respective gas metering stations upon the approval of interested states;
  4) to discuss the possibility for signing agreement between companies Naftogaz of Ukraine and SPP, and the Ukrtransgaz and Eustream on natural gas transit from Russia to Slovakia. The absence of contractual relations between Slovakia and Ukraine in this field is an anachronism that has been shown fully during the gas crisis in January 2009. The basic approach should be to move the transfer point of taking-in Russian gas to European customers to the Ukrainian-Russian border what would facilitate the implementation of the respective EU legislation, including free and equal access of European companies Ukraine's GTS;

  5) to elaborate common proposals regarding the new architecture of European energy security in the gas sector based on the three pillars: security for the producer, security for the transit countries and the security for the consumer accompanied by trust-building in the energy sector of Europe. Slovakia and Ukraine should coordinate their actions in order gain the support for this initiative in the EU states, Russia and Belarus.

- To identify projects for bilateral cooperation between Slovakia and Ukraine in the following areas:

1) to study the possibility for delivery of natural gas from underground gas storages in Western Ukraine to Slovakia in emergency situations using the existing technical provisions and GTS of Ukraine. Slovakia and Ukraine could develop a special channel of gas supply in case of an emergency. With this aim both sides might initiate a feasibility study on the existing capacity of Ukraine's GTS in the compressor station "Uzhhorod" (IV loop) and the Slovak side;
2) to explore the possibility for providing technical assistance by the Slovak Republic and Slovak companies for the modernization of the gas transportation system of Ukraine based on the Memorandum between the EU and Ukraine as of 23 March 2009;
3) to discuss investment opportunities for Slovak companies in the field of gas distribution in Ukraine, including projects that would support upgrading the gas distribution networks in Ukraine;
4) to create a joint expert group of governmental and nongovernmental experts to study Slovak experience with the process of restructuring gas sector and its reform, in particular, experience from a partial privatization of the national gas monopoly;
5) to create joint expert group on non-governmental level under the auspices of the Slovak Gas and Oil Association with aim to promote harmonization of norms and regulations of the European energy legislation in accordance with ECT in Ukraine, including monitoring of their implementation.

- To initiate consultations on regional cooperation in security of gas supplies within the format V4 + Ukraine. Slovakia and V4 countries should be interested in developing cooperation with Ukraine in the gas sector that would facilitate a coordination of national systems for natural gas transportation and underground storages of V4 countries and Ukraine, including gas distribution networks. V4 regional cooperation in the gas sector is, among other things, stimulates collaboration of gas companies from the V4 in order to improve energy security in a line with measures adopted by the EU in the consequence of gas crises of 2006 and 2009.
- To consider initiation of the international cooperation in the format of the OSCE consultations on the bilateral and multilateral level with the aim to create a possible mechanism involving the OSCE in the area of energy security in a line with the conclusions of the OSCE chairmanship of Greece adopted at the end of 2009.
- To organize a seminar under the auspices of SFPA, SGOA and Ukrainian Q-club in the format of V4+Ukraine with participation of Norwegian governmental and non-governmental experts on a strategy of Norway on gas markets in CEE region.

5.2.3. Sector of oil

In the context of precedents of interrupted oil supplies from Russia in recent years, unclear prospects for the Druzhba oil pipeline after the horizon of 2014 as well

as taking into account the gradual depletion of existing fields in Western Siberia and the Russian government actions on redirecting export of Russian oil through terminals of Primorsk and Ust-Luga on the Baltic Sea, Slovakia and Ukraine are facing the common challenge in the field of oil supply.

In order to develop common positions that are beneficial for both Slovakia and Ukraine, we recommend:

- When it comes to prevention of oil supply disruptions:
  1) to cerate a bilateral early warning mechanism on oil supply analogous to what has been proposed to the gas sector based on "hot lines" between the responsible officials at governmental and corporative levels;
  2) to elaborate bilateral proposal on the regime of transparency in oil sector (ETR-oil) as a component of the Energy Transparency Regime for the oil sector, which has to cover the whole technological chain – starting from the metering stations at the point of entry of oil to national pipeline network to the metering stations at the refinery together with the installation of the respective online system of monitoring of telemetric data of movement of oil flows which will be obtained from the respective oil metering stations upon the approval of interested states.
- With the aim to develop long-term action plan to address the problem of the "end of Druzhba" it is necessary:
  1) to hold consultations between the Ministry of Economy and Foreign Affairs of both countries and the companies Transpetrol and Ukrtransnafta with the participation of representatives of the European Commission. Consultations should explore ways to maximize the use of the oil pipeline route Odessa - Brody – Southern Druzhba to transport oil from the Black Sea and the Caspian Sea to Slovakia, Hungary and the Czech Republic. Both Slovakia and Ukraine should coordinate their activities in order to achieve implementation of major projects within the EU Eastern Partnership, in particular in the part of energy security, including the development of the "Southern Energy Corridor". It is in interests of both countries to get the support from the EU in order to expand and modernize infrastructure on the transit axis of Odessa – Brody - Uzhgorod - Budkovce (Slovakia).
  2) to create a joint expert group involving experts from the EU institutions (and in subsequent phases involving other stakeholders) with the mandate to explore the possibility for creation of a Central European oil consortium on the basis of the assets of companies as follows: Ukrtransnafta, Transpetrol, MERO, MOL and Belneftekhim with the participation of companies that operate oil refining facilities in the CEE region.
- To establish cooperation on the level of core departments and state companies of Ukraine and Slovakia with the aim to bring strategic oil reserves of Ukraine in accordance with the requirements of the EC and IEA standards.

5.3. REGULATORY POLICY, ENERGY EFFICIENCY AND THE USE OF RENEWABLE ENERGY RESOURCES

After signing an association agreement with the EU and joining the Energy Community Treaty, Ukraine must fully harmonize with European standards and EU policies in the energy sector, including energy regulatory policy, energy efficiency and the use of renewable energy resources. In order to develop bilateral cooperation between Slovakia and Ukraine in this field, we recommend:

- To prepare a program of SR's assistance to Ukraine in implementing Association Agreement, including Association Agenda agreed with the EU. The program should be developed by MFA of SR in consultations with the Ukrainian side. Objectives for ministries and other institutions that will be participated in its implementation should be approved by the Government of Slovakia and their performance should be coordinated by the MFA. A special subprogram should focus on providing assistance of SR to Ukraine in the sector of energy reflecting provisions of the Association Agreement and the obligations of Ukraine following its accession to ECT. Ukraine ought to put into effect the third energy package of the EU, including the application of the EU regulatory policy in the market in electricity and natural gas. Regulatory Office for Network Industry of the SR has extensive experience in implementing all three EU legislation packages in energy sector. Its assistance to Ukrainian National Electricity Regulatory Commission based on the exchange of the experience would be of added value for the completion of Ukraine's obligations in the field of energy sector reform.
- To develop joint bilateral projects in the field energy efficiency and the use of renewable energy sources with the participation of the Slovak Innovation and Energy Agency and a relevant Ukrainian partner. Slovakia has experience in implementing the Government Action Plan for Energy Efficiency in Slovakia for 2008-2010 based on EU related commitments. After joining the ECT, Ukraine will have to perform commitment to prevent climate change. Consideration should be given to the opportunity for SR to participate in Eastern European Partnership for Environment and Energy initiated by Sweden with aim to implement specific projects in Ukraine.
- With the participation of the Ministry of Economy and Slovak Chamber of Commerce, Association of Cities and Villages in Slovakia and entrepreneurial entities to begin negotiations with the Ukrainian partners on cooperation in investment in the reconstruction of urban heating, water supply, increasing energy efficiency of the buildings, modernization of waste utilities and more. Slovak businesses have experience with investment projects in this area in Slovakia and abroad. Modernization of municipal infrastructure is one of the biggest challenges Ukraine cannot avoid to deal with.

Annexes

TECHNICAL AGREEMENT

concluded by and between Gazprom OJSC and Naftogaz of Ukraine NJSC on Terms of Delivery-Acceptance of Natural Gas at the Gas-Measuring Stations, Located on the Border, for Gas Transit through the Territory of Ukraine, and also Transfer of Natural Gas to Ukrainian Consumers in 2008

ARTICLE 1. GENERAL CONDITIONS

1.1. The Technical Agreement governs relations between Gazprom OJSC and Naftogaz of Ukraine NJSC (hereinafter referred to as the Parties) and specifies:

- distribution of total volumes of gas between points of delivery and acceptance and by directions (gas-main pipelines);
- directions and length for the transit of natural gas through the territory of Ukraine;
- procedure for determining volumes for the transit of natural gas through the territory of Ukraine;
- transfer and transit modes;
- issues pertaining to determining quantity and physicochemical parameters of gas (hereinafter referred to as PCP) when it crosses borders of the states;
- rights and obligations of the Parties' representatives at points of delivery and acceptance;
- responsibility of the Parties for breach of the Agreement.

1.2. The Parties have agreed that the following terms shall have the following meanings:

Gas Consumption Measuring Point (GCMP) means an object (construction) designated for measuring the volume of gas in a gas pipeline and/or Gas Distribution Station during its delivery and acceptance and consisting of one or several measuring pipelines.

Gas Measuring Station (GMS) means an object (construction) designated for measuring the volume and PCP of gas during its delivery and acceptance, consisting of one or several GCMP and including chemical and analytical laboratory and/or automatic stream measuring devices (MD) of gas PCP.

1.3. Gazprom OJSC delivers and Naftogaz of Ukraine NJSC accepts natural gas on the following GMS and GCMP:

Name of GMS, GCMP	Name of Gas Pipeline
GMS Sudzha	▪ Urengoy – Pomary – Uzhgorod (UPU); ▪ Progress; ▪ Elets – Kursk – Krivoy Rog (EKKR); ▪ Kursk – Kiev (KK); ▪ Elets – Kursk – Dikanka (EKD).
GMS Valuyki	▪ Ostrogozhsk – Shebelinka (OS);
GMS Serebrianka	Section Ostrogozhsk – Novopskov of gas pipeline SKT;
GMS Pisarevka	▪ Urengoy – Novopskov (UN); ▪ Petrovsk – Novopskov (PN);
GMS Sokhranovka	▪ Soyuz; ▪ Orenburg – Novopskov (ON);
GMS Kobrin	▪ Ivatsevichi - Dolina (ID);
GMS Mozyr	▪ Torzhok – Dolina (TD);
GMS Platovo	▪ Taganrog – Mariupol (TM);

Name of GMS, GCMP	Name of Gas Pipeline
GMS Belgorod	▪ Shebelinka – Belgorod – Kursk – Briansk (SBKB);
GCMP to Volchansk (Shebekino)	▪ outlet from gas pipeline SBKB to Shebekino – Volchansk;
GCMP Loznaya	▪ outlet to Voyevodskoye from gas pipeline Severnyy Kavkaz – Tsentr (SKT);
GMS Prokhorovka	▪ Severnyy Kavkaz – Tsentr (SKT);
GMS Alekseyevka	▪ Ananyev – Chernovtsy – Bogorodchany (ACB);
GMS Kaushany	▪ Ananyev – Tiraspol – Izmail (ATI); ▪ Shebelinka – Dnepropetrovsk – Krivoy Rog – Izmail (SDKRI); ▪ Razdelnaya – Izmail (RI);
GCMP of loops of ATI gas pipeline	▪ Ananyev – Tiraspol – Izmail (ATI);
GCMP Limanskoye	▪ Tiraspol - Odessa -3 (TO)

1.4. Naftogaz of Ukraine NJSC delivers and Gazprom OJSC accepts natural gas on the following GMS and GCMP:

Name of GMS, GCMP	Name of Gas Pipeline
GMS Uzhgorod	▪ Urengoy – Pomary – Uzhgorod (UPU); ▪ Progress; ▪ Soyuz; ▪ Dolina – Uzhgorod – Gosgranitsa-2 (DUG-2);
GMS Beregovo	▪ outlet to Beregovo;
GMS Drozdovichi	▪ Komarno – Drozdovichi (KD);
GMS Orlovka	▪ Ananyev – Tiraspol – Izmail (ATI); ▪ Razdelnaya – Izmail (RI); ▪ Shebelinka – Dnepropetrovsk – Krivoy Rog – Izmail (SDKRI);
GMS Tekovo	▪ Khust – Satu-Mare;
GMS Grebeniki	▪ Ananyev – Tiraspol – Izmail (ATI); ▪ Shebelinka – Dnepropetrovsk – Krivoy Rog – Izmail (SDKRI); ▪ Razdelnaya – Izmail (RI);
GMS Alekseyevka	▪ Ananyev – Chernovtsy – Bogorodchany (ACB);
GCMP Ananyev	▪ Ananyev – Chernovtsy – Bogorodchany (ACB);
GCMP of loops of ATI gas pipeline	▪ Ananyev – Tiraspol – Izmail (ATI);
GCMP Limanskoye	▪ Tiraspol - Odessa -3 (TO)

1.5. The procedure for delivery and acceptance of natural gas transported through the territory of the Republic of Moldova and supplied for the consumers of the Republic of Moldova on the border Ukraine - Republic of Moldova and Republic of Moldova - Ukraine shall be set forth by the tripartite "Technical Agreement Concluded by and between Gazprom OJSC, Naftogaz of Ukraine NJSC and Moldovagaz JSC on Supply of Natural Gas to Consumers in the Republic of Moldova, Ukraine and Gas Transit through Their Territories in 2008".

1.6. The abovementioned Technical Agreement shall be performed by:

1.6.1. Gazprom Open Joint Stock Company that places practical performance of the Technical Agreement on Gazprom transgaz Moscow LLC, Gazprom transgaz Volgograd LLC, Gazprom transgaz Saint Petersburg LLC, Gazprom transgaz Kuban LLC, Mezhregiongaz LLC, Gazprom Export LLC (permanent representative office of Gazprom Export LLC in Ukraine), and Topenergy BDC JSC .

1.6.2. Naftogaz of Ukraine National Joint Stock Company that places practical performance of the Technical Agreement on Ukrtransgaz Subsidiary.

1.6.3. Gazprom OJSC and Naftogaz of Ukraine NJSC shall immediately settle all technical issues pertaining to setup, operating procedures of GMS and GCMP, record of quantity and PCP of gas, volumes and modes of gas delivery and acceptance.

1.7. The Parties have agreed that gas transit in the direction of GMS Orlovka on the sections of ATI gas pipeline having loops belonging to Gaztranzit CJSC shall be performed by Naftogaz of Ukraine NJSC (based on the Supplementary Agreement No. 2 to the Addendum 1GU-07) and Gaztranzit CJSC (based on a separate agreement with Gazprom OJSC). Naftogaz of Ukraine NJSC shall not be liable to Gazprom OJSC and any third persons for possible risks and losses, change of quality during gas transit by pipelines of Gaztranzit CJSC.

1.8. The Technical Agreement shall apply in full to the terms of transfer of Russian gas and gas of other origin.

ARTICLE 2. GAS VOLUMES

2.1. Gazprom OJSC delivers and Naftogaz of Ukraine NJSC accepts natural gas in delivery and acceptance points on the following borders: Russian Federation – Ukraine, Republic of Belarus – Ukraine, Republic of Moldova – Ukraine in the following volumes as envisaged in the contracts.

Gas volumes are determined in standard conditions:
P = 0.101325 MPa = 1.03323 kg/sm^2 and t = 20°C.

million cubic meters

	2008	I Quarter	II Quarter	III Quarter	IV Quarter
Delivery, total:	**184,504**	**49,949**	**45,094**	**40,516**	**48,945**
by gas pipelines	**178,604**	**47,465**	**44,194**	**40,516**	**46,429**
- gas of Gazprom OJSC	120,150	34,113	28,060	26,195	31,782
- gas of ROSUKRENERGO AG	58,454	13,352	16,134	14,321	14,647
withdrawal from the USF of Ukraine	**5,900**	**2,484**	**900**	0	**2,516**
- gas of ROSUKRENERGO AG	5,900	2,484	900	0	2,516
Distribution:	**184,504**	**49,949**	**45,094**	**40,516**	**48,945**
For Ukraine	**54,200**	**14,331**	**13,974**	**11,637**	**14,258**

	2008	I Quarter	II Quarter	III Quarter	IV Quarter
- gas of Central Asian Company "ROSUKRENERGO AG" by gas pipelines	52,824	12,955	13,974	11,637	14,258
gas of Gazprom OJSC, Russian	1,376	1,376	0	0	0
For the Republic of Moldova	**2,976**	**1,003**	**473**	**500**	**1,000**
For the European Countries	**127,328**	**34,615**	**30,647**	**28,379**	**33,687**
- gas of Gazprom OJSC under Supplementary Agreement No. 2 to Addendum 1GU-07	115,798	31,734	27,587	25,695	30,782
- gas of the company by gas pipelines of ROSUKRENERGO AG	4,254	397	2,160	1,308	389
Return of gas by Naftogaz of Ukraine from the balance of Ukraine	1,376	0	0	1,376	0
- gas of ROSUKRENERGO AG from the USF of Ukraine	5,900	2,484	900	0	2,516

2.2. Gas shall be deemed delivered by Gazprom OJSC and accepted by Naftogaz of Ukraine NJSC as soon as it passes delivery and acceptance points on the borders Russian Federation – Ukraine, Republic of Belarus – Ukraine and Republic of Moldova – Ukraine.

Responsibility for uninterrupted transit of gas shall be transferred from Gazprom OJSC to Naftogaz of Ukraine NJSC as soon as gas passes the borders Russian Federation – Ukraine, Republic of Belarus – Ukraine and Republic of Moldova – Ukraine.

2.3. Considering the contracts concluded, discharge capacity and technical state of gas-main pipelines, gas pipelines outlets and GDS the volumes of gas delivered according to clause 2.1. shall be distributed by the following directions:

million cubic meters

By Gas Pipelines	2008	I Quarter	II Quarter	III Quarter	IV Quarter
UPU, EKKR, Progress	**90,665**	**24,040**	**22,683**	**20,616**	**23,326**
Kursk – Kiev, EKD	**16,112**	**4,212**	**3,850**	**3,700**	**4,350**
Ostrogozhsk – Shebelinka	**12,371**	**3,843**	**2,528**	**1,900**	**4,100**
Total by Novopskov:	**45,574**	**11,359**	**10,945**	**9,942**	**13,328**
Urengoy – Novopskov	29,889	7,768	7,500	6,842	7,779
Petrovsk – Novopskov	6,583	685	1,798	3,100	1,000
Ostrogozhsk – Novopskov	608	0	608	0	0
Orenburg – Novopskov, Soyuz	8,494	2,906	1,039	0	4,549

SBKB	**168**	**18**	**0**	**0**	**150**
Ivatsevichi – Dolina*	**5,358**	**0**	**2,550**	**2,808**	0
Torzhok – Dolina*	**4,585**	**892**	**1,638**	**1,550**	**505**
Tula – Shostka - Kiev	**0**	**0**	**0**	**0**	0
Severnyy Kavkaz – Tsentr	**2,561**	**2,191**	**0**	**0**	**370**
Taganrog – Mariupol	**1,210**	**910**	**0**	**0**	**300**
TOTAL:	***178,604***	***47,465***	***44,194***	***40,576***	***46,429***

**Gas delivery volumes above the contractual volumes of previous years (3,660 million cubic meters) designated for transit in the direction of GMS Uzhgorod and, as agreed by the Parties, for injection in the USF of Ukraine.*

2.4. Naftogaz of Ukraine NJSC delivers and Gazprom OJSC accepts natural gas supplied to states-importers through the following GMS:

million cubic meters

GMS	2008	I Quarter	II Quarter	III	IV Quarter
Uzhgorod total	**83,574**	**22,522**	**20,085**	**19,186**	**21,781**
including					
- gas under Supplementary Agreement No. 2 to Addendum 1GU-07	80,441	22,404	19,005	18,072	20,960
- Central Asian gas of ROSUKRENERGO AG by gas pipelines	995	0	180	426	389
- gas of ROSUKRENERGO AG from	1,450	118	900	0	432
- gas of Naftogaz of Ukraine NJSC, return	688	0	0	688	0
Beregovo total	**13,639**	**3,616**	**3,127**	**3,119**	**3,777**
including					
- gas under Supplementary Agreement No. 2 to Addendum 1GU-07	8,944	2,140	1,839	2,250	2,715
- Central Asian gas of ROSUKRENERGO AG by gas pipelines	1,469	0	1,288	181	0
- gas of ROSUKRENERGO AG from the USF	2,538	1,476	0	0	1,062
- gas of Naftogaz of Ukraine NJSC, return	688	0	0	688	0
Drozdovichi total	**4,936**	**1,250**	**1,275**	**1,171**	**1,240**
including					
- gas under Supplementary Agreement No. 2 to Addendum 1GU-07	2,411	531	820	510	550
- Central Asian gas of ROSUKRENERGO AG by gas pipelines	1,513	397	455	661	0
- gas of ROSUKRENERGO AG from the USF	1,012	322	0	0	690
Tekovo total	**1,996**	**615**	**679**	**190**	**512**
- gas under Supplementary Agreement No. 2 to Addendum 1GU-07	819	47	442	150	180
- Central Asian gas of ROSUKRENERGO AG by gas pipelines	277	0	237	40	0
- gas of ROSUKRENERGO AG from the USF	900	568	0	0	332
Orlovka total*	**23,183**	**6,612**	**5,481**	**4,713**	**6,377**
including by directions:					
to Bulgaria	3,338	886	827	708	917
to Turkey	16,612	4,984	4,033	3,265	4,330
to Romania	3,233	742	621	740	1,130
Total	**127,328**	**34,615**	**30,647**	**28,379**	**33,687**
Total under Supplementary Agreement No. 2 to Addendum 1GU-07	**115,798**	**31,734**	**27,587**	**25,695**	**30,782**
Central Asian gas of ROSUKRENERGO AG by gas pipelines	**4,254**	**397**	**2,160**	**1,308**	**389**
gas of ROSUKRENERGO AG from the USF	**5,900**	**2,484**	**900**	**0**	**2,516**
gas of Naftogaz of Ukraine NJSC, return	**1,376**	**0**	**0**	**1,376**	**0**

** The abovementioned gas volumes may be delivered to GMS Orlovka provided that Flowing Plant Tiraspol –I, II and Flowing Plant Vulkaneshty operate, project loading of gas pipeline section Tiraspol – Vulkaneshty – Isakcha, loading of Flowing Plant Tarytino and loops belonging to Gaztranzit CJSC, on which Naftogaz of Ukraine NJSC and Gazprom OJSC are sections.*

*** The Parties have agreed that supply volumes of gas of ROSUKRENERGO AG by delivery and acceptance points may be corrected as agreed on an operational basis.*

The Parties have agreed that ordered daily transit volumes of Russian gas of Gazprom OJSC according to the Supplementary Agreement No. 2 to the Addendum 1GU-07 through GMS Uzhgorod, GMS Beregovo and GMS Tekovo in the I and IV quarters of 2008 may not exceed in aggregate 275 million cubic meters, and in II and III quarters may not exceed in aggregate 250 million cubic meters.

If technically possible the Contractor will ensure increase of gas transit volumes by the abovementioned directions.

2.5. Should daily gas transit volumes through GMS on the exit points from the Gas Transportation System of Ukraine exceed the volumes envisaged in clause 2.4., to ensure this transit the gas supply on the entry points to the Gas Transportation System of Ukraine will be performed, first and foremost, through gas pipelines UPU, EKKR, Progress, Urengoy – Novopskov, Kursk – Kiev and EKD, and in case of shortfall of production of the abovementioned gas pipelines – through gas pipelines Torzhok – Dolina and Ivatsevichi – Dolina.

2.6. Gas shall be deemed delivered by Naftogaz of Ukraine NJSC and accepted by Gazprom OJSC as soon as it passes delivery and acceptance points on the borders Ukraine – States-

Importers (including Ukraine - Republic of Moldova).

Thereto, the Parties take into account gas seepage, use of gas for own needs and offtake on the gas-main pipelines, gas pipelines outlets and GDS from gas measuring stations to the border between the states according to the following approved documents:

- "Methodology for the Determination of Gas Seepage as Part of Process Losses on the Gas-Main Pipelines, Gas Pipelines Outlets and GDS between Border GMS of Gazprom OJSC (after Orifice Plates) and Borders Russia – Ukraine, Belarus - Ukraine and Other" approved on February 26, 1998;
- "Methodology for the Determination of Gas Consumption for Own Needs during the Operation of Border Gas-Main Pipelines, Gas Pipelines Outlets and GDS between Border GMS and Borders Russia – Ukraine, Belarus - Ukraine" approved on December 7, 1998.

Naftogaz of Ukraine NJSC shall be relieved from responsibility for uninterrupted transit of gas as soon as gas passes the borders Ukraine – States-Importers, Ukraine – Republic of Moldova.

2.7. Gazprom OJSC will ensure gas supply to settlements Gremyach and Muravi (Ukraine). Name of GDS and owners of distribution networks through which gas is supplied to the abovementioned settlements are specified in Appendix No. 2.

2.8. Directions and length of natural gas transit through the territory o Ukrine are provided in Appendix No. 1. The procedure for determination of volumes of natural gas transit through the territory of Ukraine by each transit direction is provided in Appendix No. 3 hereto.

ARTICLE 3. GAS DELIVERY MODE

3.1. Monthly allocation of the quarter gas volumes indicated in article 2 shall be, as a rule, conducted evenly on the basis of the daily average quarter volume. Monthly volumes of gas delivery and transit may be changed within the quarter quota, as may be agreed between the Parties. Mutual proposals regarding the changing of quarter volumes of gas delivery and transit shall be agreed by the Parties 15 days prior to the beginning of the relevant quarter.

3.2. Deviation of actual volumes of gas delivery or acceptance at the expense of reallocation of gas flows by directions shall be admitted, subject to written mutual agreement of the Parties.

3.3. Delivery and acceptance of gas within a month shall be, as a rule, performed evenly with an admissible deviation of daily volumes from daily average, and monthly volumes from those determined by clause 3.1 of this article, constituting not more than +5%, and not more than +3% for GMS Uzhhorod. At that, quarterly delivery and acceptance of gas shall correspond to the volumes indicated in clauses 2.1 and 2.4.

In the event, when European countries take-off the volumes exceeding the admissible deviations of daily off-taking volumes from the daily average for more than 5%, and more than 3% for GMS Uzhhorod, Gazprom OJSC shall compensate such deviations by supplying gas to the borders between the Russian Federation and Ukraine and the Republic of Belarus and Ukraine not later than 36 hours prior to the occurrence of deviations exceeding the prescribed deviation admittances. In such case, the Parties shall agree the volumes, directions, duration and mode of gas delivery.

3.4. Gas pressures by directions shall be ensured by Gazprom OJSC, subject to Naftogaz of Ukraine NJSC complying with the daily off-taking quota, taking into account clauses 2.1, 2.3 and 3.3, within the following limits:

Excess pressure, in kgf/cm^2

		I, IV quarter	II, III quarter
Gas pipeline Urengoy – Pomary Uzhhorod	To GMS Sudzha	60-65	60-65
Gas pipeline Yelets – Kryvyi Rih	To GMS Sudzha	60-65	60-65
Gas pipeline Progress	To GMS Sudzha	60-65	60-65
Gas pipeline Kursk - Kyiv	To GMS Sudzha	42-45	44-47
Gas pipeline Yelets - Dykanka	To GMS Sudzha	42-45	44-47
Gas pipeline Tula – Shostka - Kyiv	To GMS of the TShK	40-45	40-45
Gas pipeline Ostrogozhsk - Shebelynka	To GMS Valuyky	40-45	40-45
Gas pipeline SKTs (to Novopskov)	To GMS Serebriankato	46-50	46-50
Gas pipeline Urengoy – Novopskov	To GMS Pysarevka	70-75	69-75
Gas pipeline Petrovsk - NovopskovGas pipeline Urengoy	To GMS Pysarevka	50-55	50-55
Gas pipeline Soyuz	To GMS Sokhranovka	58-75	62-75
Gas pipeline Orenburg - Novopskov	To GMS Sokhranovka	58-75	62-75
Gas pipeline ShBKB	To GMS Belhorod	28-35	29-35
Gas pipeline Ivatsevichi - Dolyna	To GMS Kobryn	40-55	50-55*
Gas pipeline Torzhok - Dolyna	To GMS Mozyr	44-55	44-55
Gas pipeline Taganrog - Mariupol	To GMS Platovo	28-35	23-28
Gas pipeline SKTs (to Daryevka)	To GMS Prokhorovka	45-50	-

** If necessary, loading of the second compression stages at CS Kobryn and CS Kovel will be conducted simultaneously.*

At that, Naftogaz of Ukraine NJSC shall maintain the pressure at entry points of the border compressor stations (the Russian Federation – Ukraine, the Republic of Belarus - Ukraine) at the level not exceeding design values, and at the CS Romny of gas pipelines UPU, Progres and YeKKR not more than 53 kgf/cm^2. If necessary, the Parties shall promptly agree the pressure at the entries and exits of border compressor stations.

In the event of change of the volumes of gas delivery from Turkmenistan for Ukraine, pressure for pipelines Ostrogozhsk – Shebelynka, SKTs, Orenburg – Novopskov, Soyuz, Taganrog – Mariupol and at the entry of border compressor stations (the Russian Federation – Ukraine, the Republic of Belarus - Ukraine) shall be determined according to the mode of delivery of new volumes of gas.

Gazprom OJSC shall assist Moldovagaz JSC in maintaining the following pressures at the exit of compressor stations:

Excess pressure, in kgf/cm^2

		I, IV quarter	II-III quarter
CS Tiraspol-2	Gas pipeline Ananiev - Izmail	72-75	72-75
CS Tiraspol-1	Gas pipeline Razdelnaya – Izmail, ShDKRI	Not less than 52	Not less than 52
CS Vulkaneshty	Gas pipeline Razdelnaya – Izmail, ShDKRI	Not less than 50	Not less than 50

Should Moldovagaz JSC not ensure the specified pressures at the exit of compressor stations, Naftogaz of Ukraine shall be released from obligations to maintain pressures at GMS Orlovka.

Launch and stop of gas compressor units at the CS Tarutyno of the gas pipeline Ananiev – Tiraspol – Izmail shall be conducted by the operator (SC Ukrtransgaz) in the event of deficiency or excess of transit capacities in the direction of GMS Orlovka as agreed by the Parties.

In the event of any emergency situations, decision to launch or stop the gas compressor units at the CS Tarutyno shall be made by the United dispatch control (ODU) of the SC Ukrtransgaz subject to mandatory notification of the Central Production Control Department (CPDD) of Gazprom OJSC.

3.5. Naftogaz of Ukraine NJSC shall ensure the gas pressures at the GMS, according to the volumes of clause 2.4, subject to compliance of the importing state with the gas off-taking in the volumes not exceeding contractual volumes, taking into account admissible deviations of off-taking and supply during a day, specified in clause 3.3:

Excess pressure, in kgf/cm^2

GMS Uzhgorod (Average pressure at four gas pipelines)	52-55
GMS Berehovo	Not less than 40
GMS Drozdovychy	Not less than 34
GMS Tekovo	54-56
GMS Orlovka to Bulgaria	49-52
GMS Orlovka to Turkey	51-55
GMS Orlovka to Romania	Not less than 37

Excess pressures, in kg/cm^2

		I, IV Quarter	II-III quarter
Gas pipeline Ananiev – Tiraspol - Izmail	At the exit of CS Ananiev	72-75	72-75
Gas pipeline Ananiev – Chernivtsi - Bohorodchany	At GCMP Ananiev	Not less than 35	Not less than 35
	At GMS Alekseevka*	I quarter – not less that 28, IV quarter –	Not less than 35
Gas pipeline Shebelinka – Dnipropetrovsk – Kryvyi Rih - Izmail	At the entry of CS Tiraspol-1	Not less than 35	Not less than 35

**the pressure will be specified in the tripartite Agreement between Gazprom OJSC, Naftogaz of Ukraine NJSC and Moldovagaz JSC.*

3.6. Dispatcher services of Gazprom OJSC and Naftogaz of Ukraine NJSC shall, no less than every four hours, share with each other all parameters of operating mode of the GMS, indicated in clauses1.3 and 1.4, and compressor stations adjacent to them.

Each Party shall have the right to obtain information from the computer, which receives information from automatic calculators of GMS indicated in clauses 1.3 and 1.4, and the Party owning the GMS shall ensure the technical possibility of automatic transfer of such information to the computer of the permanent contractor's representative.

If it is impossible to transfer such information automatically, the owner of the GMS shall communicate information from automatic gas consumption calculators to the contractor in the volume and in a format agreed by the Parties on a daily basis by 12:00 (hereinafter Moscow time).

3.7. Upon mutual agreement, the Parties shall have the right to change the volume of gas transfer by separate pipelines within the scope of design capacity. Changes in the volumes of gas transfer shall be agreed by 16:00 of the next day.

3.8. In order to ensure the coordinated execution of the planned maintenance at main pipelines and compressor stations affecting the mode of delivery and acceptance, the Parties shall, in the first quarter of 2008, exchange information regarding the terms of conducting maintenance operations and volumes of reducing the transportation of gas by supply directions. The Parties shall confirm the conduction of maintenance operations not later than three days prior to the commencement of such operations.

3.9. Off-taking of gas exceeding the average daily volume of gas delivery, taking into account the admittance according to clause 3.3, shall be considered to be an excessive off-taking of gas.

Off-taking of gas below the average daily volume of gas delivery, determined taking into account the admittance according to clause 3.3, and subject to maintaining the pressures in accordance with clauses 3.4 and 3.5, shall be considered to be the short off-taking.

Supply of gas below the envisaged average daily volume of delivery, determined taking into account the admittance according to clause 3.3, and caused by the reduction of pressure below the limits specified in clause 3.4, shall be considered to be the short delivery of gas.

3.10. Should technological operations be required, including the in-pipe defectoscopy, at the sections of gas pipeline and CS adjacent to the borders of Naftogaz of Ukraine NJSC and Gazprom OJSC, the Parties shall coordinate the execution of such works, and this shall release them from any sanctions connected with the mode disturbance, caused by execution of such works. The Parties shall in good time notify permanent representatives at the corresponding GMS about the planned works. The Parties hereby undertake to carry out necessary technological operations in relation to launch, passing control and acceptance of purifiers and in-pipe defectoscopes.

In order to ensure execution of the works, the Parties may, upon mutual agreement, change the volumes of gas transferring through GMS and GCMP, indicated in article 1.

3.11. Information on the volumes of gas delivery to Ukraine from Turkmenistan and other countries of Central Asia for the preceding day shall be transferred daily at 17:00 by Gazprom OJSC to the ODU of the SC Ukrtransgaz. The indicated volumes shall be preliminary and shall be communicated via fax (email).

3.12. Volume of gas transported via the loopings of the ATI gas pipeline belonging to Gaztransit CJSC shall be measured with the measurement systems mounted on such loopings.

3.13. Representative Office of Gazprom Export LLC in Ukraine and Ukrtransgaz SC, as executors of this Agreement, shall cooperate by means of exchanging information on the transit modes of natural gas through the territory of Ukraine within the scope of implementation of the Contracts for transportation of natural gas.

Amount of information provided to the Representative Office of Gazprom Export LLC in Ukraine shall correspond to the amount of information provided by Ukrtransgaz SC to Gazprom OJSC.

Information on the volumes and PCP of gas collected by the Representative Office of Gazprom Export LLC in Ukraine from the border GMS-s shall be, in its entirety,

transferred to the Representative Office of Gazprom Export LLC in Ukraine and Ukrtransgaz SC.

The Representative Office of Gazprom Export LLC in Ukraine and Ukrtransgaz SC shall conduct a joint analysis of execution of the contractual conditions for transit of natural gas, provided for by the Contracts and this Agreement.

ARTICLE 4. DELIVERY AND ACCEPTANCE POINTS

4.1. Natural gas delivery and acceptance points under this Technical Agreement shall be the GMS and GCMP indicated in clauses 1.3 and 1.4.

Design of the sensing lines of GMS and GCMP shall not introduce an additional error into calculation of gas amount. Should this condition be impossible to fulfill, the Parties shall, on a case by case basis, agree on the possibility to use each specific GMS or GCMP before the reconstruction (modernization) operations of the GMS are completed.

In the event there are gas distribution stations (GDS) at the section from the GMS to the state border (Appendix No. 2), registration of gas amounts at such GDSs shall be conducted by means of the variable pressure drop using the standard contractions and automatic calculators or gas meters with electronic correctors, according to the requirements of normative documents being in effect in the country, where the GDS are located. When using the gas meters, the procedure and terms of transition onto the requirements of new normative documents shall be additionally determined by the Parties.

Gas PCP for GDS and GCMP shall be accepted according to the data of automatic stream MD or chemical analytical laboratory at the nearest GMS of the gas pipeline, from which the offset to the GDS or GCMP was taken.

4.2. Gas delivery and acceptance points under construction or reconstruction shall be equipped in accordance with the design, key technical solutions of which have been agreed by the Parties.

The Parties shall consider and agree the key design solutions within a month after the documents have been submitted for reconciliation.

Documentation maintained and stored at the GMS shall comply with the requirements of the "List of Documentation for Border GMS" (Appendix No. 8).

4.3. Delivery and acceptance points shall be equipped with the MD providing the precision of measurements not less than that specified in article 6 of this Technical Agreement.

4.4. All MDs shall be certified in the country owning the GMS and inspected by the state metrological service authorities.

Introduction of new types of MD at the GMS or GCMP shall be performed in compliance with the following procedure:

- Coordination of the MD use and its main technical and operational properties;
- Carrying out of preliminary joint testing of one sample MD, according to the agreed program, in order to test the measurement characteristics declared by the manufacturer and compliance with the requirements of this Technical Agreement.
- Pilot commercial operation of each individual MD for the purpose of accruing statistical data and determination of possible failures and discrepancies in operation of the MD at each operational site during one calendar month. Duration of the pilot commercial operation may be reduced in an individual case upon agreement of the Parties, but may not constitute less than 2 weeks.
- On the basis of an analysis of the results of the pilot production, a conclusion shall be made on the prospects for implementing the MD in commercial operation.

This procedure does not extend to MD implementation after the repair or a change to a single-type MD as a result of malfunction.

4.5 The software (S/W) of the MD must be approved for application by the Parties and have the capability to control the invariability of the computation algorithms installed in it.

4.6 Each gas transfer and acceptance point must be equipped with fixed and back-up MD for the measuring of gas amounts.

Each GMS must be equipped with automatic stream MD (single-channel or multi-channel) for the determination of the components and PCP of the gas (density, combustion heat and dew-point of the gas).

4.7 MD selection and their operating schedules shall be conducted in accordance with "The Regulation for the Operation of Chromatographs and Hygrometers at Border Gas Measuring Stations" (Appendix No. 6), hereinafter "Regulation", which is an integral part of this Technical Agreement.

Prior to the implementation or on the malfunction of automatic MD's, gas PCP's shall be determined in accordance with GOST's and frequency, determined in clauses 7.2 and 7.4 of this Technical Agreement.

4.8 The Parties shall ensure compliance with technological operating conditions at border GMS's and GCMP's, in accordance with the "Instruction on Compliance with the Technological Conditions of Border Gas Measuring Stations (GMS) by Gazprom OJSC and Naftogaz of Ukraine NJSC" (Appendix No. 5), hereinafter "Instruction", which is an integral part of this Technical Agreement.

4.9 Standby measuring pipelines of the GMS must be switched off by means of turning off the faucet prior to and after constriction meters. After the switching off and compaction, faucets must be sealed by representatives from both Parties. The putting into operation and taking out of operation of measuring pipelines should be conducted, based on the technological operating conditions of the GMS (GCMP) in accordance with the provisions of the Instruction.

All operations at the GMS (GCMP) on the putting into operation and taking out of operation of measuring pipelines should be conducted on the agreement and in the presence of a permanent representative, and in his absence (vacation, illness and for other reasons) after the notification of the other Party.

4.10 The Parties have agreed to conduct joint-inspections of the accuracy of gas use accounting and quality control indices at the GMS, as indicated in clauses 1.3 and 1.4. The frequency of joint inspections shall be determined by a "Schedule for Joint Inspections of Border GMS's in 2008" which has been approved by the Parties.

ARTICLE 5. PERMANENT REPRESENTATIVES AT THE GMS

5.1. Permanent representatives of the counterparty shall have the right to be present at all gas transfer and acceptance points on the basis of "Agreement on Conditions for the Operation of the Permanent Representatives of Gazprom OJSC and Naftogaz of Ukraine NJSC at Border GMS's (Appendix No. 9). The owner of the GMS shall provide permanent representatives of the counterparties with a separate office for the normal operation of specialists.

5.2. The following number of permanent representatives shall be established at gas transfer and acceptance points:

coordination of operations of the permanent representatives of Gazprom OJSC at border GMS's, belonging to Naftogaz of Ukraine NJSC, shall be conducted by the Gazprom Export LLC Representative Office in Ukraine.

ARTICLE 6. VOLUME OF GAS

6.1. The principal GMS and GCMP connections for measuring the volume of gas are measuring pipelines with constriction devices or meters, implemented in accordance with the project approved by the Parties.

The application of meters as the principal or back-up system shall be approved by the Parties for each individual GMS or GCMP.

6.2. Measuring pipelines with constriction devices and/or meters at GMS's and GCMP's shall comply with the requirements of regulatory documents of the country-owner of the GMS (GCMP).

6.3. The method for calculation of the volume of gas at all border GMS's and GCMP's on the use of measuring pipelines with constriction devices shall be based on "The Provisional Provision on the Procedure for the Calculation of the Use and Volume of Gas at all Border GMS's and GCMP's by Gazprom OJSC and Naftogaz of Ukraine NJSC" (Appendix No. 4), which is an integral part of this Technical Agreement.

The Parties have agreed to implement the calculation of the volume of gas at all GMS's, GCMP's and GDS's in accordance with the standards, which are harmonized with the international ISO 5167:2003 standard. The procedure and term for the transition of the Party shall be determined separately.

When using measuring pipelines with constriction devices for each measuring pipeline at GMS's as the principal and back-up system for measuring the volume of gas, automatic calculators are used in the set with sensors for differential pressure having a 0.1 accuracy classification, pressure sensors having a 0.1 accuracy classification, and temperature sensors with a basic margin of error of ± 0.3°C.

6.4. When using measuring pipelines with constriction devices as the principal and/or back-up system for measuring the volume of gas for each measuring pipeline, meters are used in the set with pressure sensors having a 0.1 accuracy classification, and temperature sensors with a basic margin of error of ± 0.3°C.

Principal and back-up automatic calculators and sensors, connected to one measuring pipeline must be identical in their technical and metrological characteristics.

6.5. Discrepancies between corresponding average daily indices principal and back-up MD should not exceed overall fractional error of the measuring parameter.

6.6. Back-up MD's should not impact the operation of principal MD's, particularly in connecting lines (impulse off-takes) and channels for measuring parameters should be separate for all the GMS's and GCMP's indicated in clauses 1.3. and 1.4.

On the agreement of the Parties, the connection of the back-up system of a second control system for gas recording control to connecting lines is possible.

6.7. Automatic calculators should prepare and transfer data for the printing of daily (hourly) and monthly reports, including "emergency situations" and "operator intervention".

6.8. The owner of the GMS shall ensure working standards at the GMS. The scope of permitted values for the margin of error regarding working standards, used during calibration, should not exceed 1/3 of the limit of the permitted value of the margin of error of the MD used.

6.9. The owner of gas transfer and acceptance points shall provide an adequate number of standby measuring MD's for the purpose of ensuring the reliable and continuous measuring of the volume and PCP of gas, in addition to the automatic stream PCP MD.

6.10. The calibration or check-up of the MD for gas use in the principal and back-up systems, when using measuring pipelines with constriction devices shall be conducted in accordance with the "Instruction". The frequency of conducting MD calibration – at least once per three months according to the schedule or on the demand of the representative of one of the Parties.

The Parties have agreed that during 2008, they will supplement the existing "Instruction" with sections, pertaining to the operation of meters.

The calibration and examination of the efficiency of automatic gas PCP MD's at GMS's is conducted in accordance with the "Regulation". The replacement of automatic gas PCP MD's at GMS's shall be conducted in the presence of the representative of the counterparty, and in the case of his absence – after the preliminary notification of the other Party.

6.11. At the GMS's and GCMP's indicated in clauses 1.3. and 1.4, the Parties shall have the right to install systems for the measuring of the use and volume of natural gas, other than those indicated in clause 6.1. System data cannot be used as commercial data and should not impact their operation.

6.12. The accounting of gas at border GMS's when conducting a set of operations for the cleaning and internal pipe diagnostics of sections of gas-main pipelines, adjoining the GMS, is conducted in accordance with the "Instruction", taking into account the specific features of an individual GMS. When conducting the above-mentioned work, the Parties should take measures in support of a stable (unchanged) mode for the transfer and acceptance of gas via gas-main pipelines, on which this work is conducted.

ARTICLE 7. GAS QUALITY

7.1. Component composition and PCP of natural gas, delivered by Gazprom OJSC to Naftogaz of Ukraine NJSC at the Delivery-Acceptance Points, for export and internal use in Ukraine (clauses 1.3 and 1.4.), shall comply with the following specifications:

Methane CH4 (C1), %	- not less than 90
Ethane C2H6(C2),%	- Not more than 7
Propane C3H8(C3), %	- Not more than 3
Butane C_4H10(C4), %	-Not more than 2
Pentane C5H12(C5) and Heavier Hydocarbons, %	-Not more than 1
Nitrogen N2, %	-Not more than 5
Carbon dioxide CO2, %	-Not more than 2
Oxygen O2, %	-Not more than 0.02
Mass Concentration of Hydrogen Sulfide H2S, mg/m^3	-Not more than 6
Mass Concentration of Sour Sulphur, mg/m^3	- Not more than 20
Contamination	- 0

Water dew-point of natural gas, measured at the working pressure and recalculated to the pressure of 3.92 MPa (40 kg/sm^2) for concentration of water steams under the standard conditions.	- not more than minus 8°C
Net Calorific Value Capacity, kkal/m^3 Max Min	- Not more than 8,250 - not less than 7,800

Note.
When determining the physicochemical parameters by means of flow measurement devices, component composition shall be specified in % mole or % ob.

7.2. PCP of natural gas shall be determined according to current international acts at all GMS specified in clauses 1.3. and 1.4.

GOST 5542-87	Natural Combustible Gases for Industrial and Domestic Use. Specifications
GOST 18917-82	Natural Fuel Gas. Methods of Sampling
GOST 22667-82	Natural Combustible gases. Calculation method for determination of calorific value, specific gravity and Wobbe index.
GOST 22387.2-97	Combustible natural gases. Methods for determination of hydrogen sulphide and sulphur mercaptan
GOST 22387.4-77	Gas for domestic and public utilities. Method for determination of tar and dust content
GOST 20060-83	Natural combustible gases. Methods for determining water vapour content and dew-point of moisture.
GOST 20061-84	Combustible natural gases. Method for determination of hydrocarbon dew point temperature
GOST 23781-87	Natural combustible gases. Chromatographic method for determination of component composition
GOST 30319.0-96	Natural gas. Methods of calculation of physical properties. General
GOST 30319.1-96	Natural gas. Methods of calculation of physical properties. Definition of physical properties of natural gas, its components and processing products

Note.
When determining the physicochemical parameters of natural gas it is allowed to follow the provisions, instructions, rules, tables and other documents that the Parties agreed.

7.3. The PCP of natural gas shall be determined for each pipeline separately.

7.4. When there are no computerized measurement device or it breaks down, the determination of the PCP of natural gas at Delivery-Acceptance Points shall be made with the following frequency:

7.4.1. Bulk density, composition, oxygen content, minimal calorific value, maximum Wobbe index, water dewpoint temperature – once a day (once a week – for GDS and GCMP at the gas pipeline branches).

If a computerized flow chromatograph determines oxygen with nitrogen with one peak, the measuring of oxygen content shall be made with a laboratory chromatograph once a week.

7.4.2. Regardless whether there are computerized flow measurement devices:

Mass concentration of hydrogen sulphide, mass concentration of sour sulphur, mass of contamination shall be measured twice a month at all GMS (once a month at GDS and GCMP at the gas pipeline branches).

When measuring (switching) of gas flows, going through a GMS, in case of absence or failure of the computerized flow measurement devices, an unscheduled determination of the PCP of natural gas shall be made and relevant documents be executed according to Article 8 hereof.

7.5. The operation of computerized measurement devices on the measurement of natural gas PCP shall be regulated by the "Rules". Should a decision be taken on the use of new types of the measurement devices of the PCP of natural gas at border GMS, such measurement devices shall be subject to a joint testing according to the preliminary agreed plans.

Prior to introduction of the computerized measurement devices or in case of their failure, the stationary (movable) measurement devices shall be applied for the determination of water dewpoint.

7.6. If Central Asian gas is transported through the pipeline systems of Gazprom OJSC for Ukrainian consumers, this gas shall not worsen the physicochemical parameters of Russian gas, being transported in a common flow therewith.

ARTICLE 8. EXECUTION OF DELIVERY-ACCEPTANCE REPORTS

8.1. On the basis of readings of the measurement devices, a daily, monthly delivery-acceptance reports (the latter – given off-takes and leakages of gas between the GMS and the state borders according to clause 2.5) and passports – certificates of physicochemical parameters of gas shall be executed by owner of GMS and signed by representatives of both parties.

8.2. Hourly printouts of computerized calculations signed by the parties' representatives shall be annual acceptance-delivery reports.

The contract time shall be 10 o'clock of Moscow time for the last day. Conversion of time at computers from a winter to summer time and vice versa shall be made on the last Saturday of March and October according to the decision of the State Committees of Universal Time and Reference Frequencies, starting from 12 o'clock of Moscow time.

Average daily readings of chromatographs and dew-point measuring devices shall be recorded in daily passports – certificates of physicochemical parameters of gas. Printouts of computerized measurement devices of physicochemical parameters of gas signed by parties' representatives may be an annual report of physicochemical parameters of gas.

Daily reports, passports-certificates of physicochemical gas parameters and printouts of the computerized calculators accompanied with other documents, executed and signed by the authorized representatives of the Parties shall be kept at the delivery-acceptance points for one year and then be stored in the archive under a handover act.

8.3. A monthly delivery-acceptance report shall be executed and signed by each GMS and GCMP specified in clauses 1.3 and 1.4., by representatives of both Parties until the third day of the month following the reporting month on the basis of daily delivery-acceptance reports in four copies in Russian – 2 for each Party. At Orlovka GMS a monthly report shall be executed according to the Trilateral Treaty between Gazprom OJSC, Naftogaz of Ukraine NJSC and Moldovagaz JSC in 6 copies in – 2 for each party. Reports shall be signed by the representatives of three Parties on the basis of daily Delivery-Acceptance Reports by the third day of month following the reporting month.

Monthly reports shall be signed regardless any disputes concerning volume and quality

of gas and include an individual opinion of non-agreeing party. Discrepancies shall be agreed and taken into account in the Acceptance-Delivery Report of the following month. A month shall mean a timeframe from the 1st sate of current month (10 o'clock) to the 1st date of the following month (10 o'clock).

When supplying gas though the GMS, specified in clause 2.4., monthly report shall include a division of gas volumes according to different Contracts specifying the Contracts and volumes under each Contract.

According to the instructions of Parties Gaztransit CJSC and Ukrtransgaz SE shall execute and sign daily and monthly reports for actual volumes, transported through the loopings of ATI (30.4-69.3 km, 304.0-333.8 km, 335.2-340.9 km), owned by Gaztransit CJSC. Data specified in these reports shall be used when executing the reports for the provision of transit services.

8.4. Monthly passport – certificate of PCP of gas shall be executed on the basis of monthly passports – certificates of PCP by the 3d date of month following the reporting month, in 4 copies in Russian – 2 copies for each Party. At Orlovka GMS passport – certificate of gas PCP for a month shall be executed according to a trilateral Treaty between Gazprom OJSC, Naftogaz of Ukraine NJSC and Moldovagaz JSC. Monthly passport - certificate pf PCP of gas shall be signed by representatives of three Parties on the basis of daily passports-certificates of gas PCP by the 3d date of month following the reporting month.

8.5. If an error is detected in any of monthly reports, it is to be corrected with a separate act within a day of detection thereof.

8.6. Records of principal MD shall be taken into account when making final settlements of gas volumes. Transfer to a backup system shall be formalized with a separate act.

8.7. In case of any discrepancies between the Parties regarding the determination of gas volume, transferred and accepted at the delivery-acceptance points, a preliminary daily delivery-acceptance report shall be executed on the basis of the recordings of measuring devices. After the settlement of discrepancies, difference shall be taken into account when making a final daily delivery-acceptance report with an obligatory attachment of report specifying the reasons caused the necessity to correct a gas volume.

Settlement of disputable issues on the technical condition of the measuring part of the delivery-acceptance points shall be made during the negotiations. If the Parties fail to come to a mutually acceptable decision, any of the Parties may initiate an arbitration proceeding according to Article 12 (2) of the Contract on Volumes and Terms of Natural Gas Transit through the territory of Ukraine from 2003 to 2012 dated June 21, 2002.

ARTICLE 9. MISCELLANEOUS

9.1. Rights and obligations of the Parties' representatives at GMS shall be formalized with a separate "Agreement on the work conditions for permanent representatives of Gazprom OJSC and Naftogaz of Ukraine NJSC at the border GMS".

9.2. When conducting an in-pipe defectoscopy of the border pipeline sections of Ukrtransgaz SE and Gazprom OJSC, the Parties as represented by the companies, which are obliged to make a practical execution of this Technical Agreement, shall conclude a contract on the conducting of an in-pipe defectoscopy.

9.3. This Technical Agreement shall apply to the Contract on transit, transfer and storage of natural gas, in particular:

- Contract between the National Joint-Stock Company Naftogaz of Ukraine and Open Joint-Stock Company Gazprom on Volumes and Terms of Transit of Russian Natural Gas through the territory of Ukraine from 2003 to 2013 dated June 21, 2002;

- Contracts between the National Joint-Stock Company Naftogaz of Ukraine and ROSUKRENERGO AG No.5-TRK on Sale and Purchase of Natural Gas dated July 29, 2004, No.14/935-1/04 on Sale and Purchase of Natural Gas in 2005-2028 dated July 29, 2004, No.14/935-2/04 on Volumes and Terms of Natural Gas Transit through the Territory of Ukraine in 2005-2030 dated July 29, 2004, No.14/935-3/04 on Volumes and Terms of Injection of Natural Gas into the Underground Gas Storage Facilities, its Storage, Withdrawal and Transportation in 2005-2030 dated July 29, 2004, No. without number on Sale and Purchase of Natural Gas dated March 6, 2008, No.14/198/08 on Sale and Purchase of Natural Gas dated March 14, 2008;

- Contract on Sale and Purchase of Natural Gas in 2006-2010 between UKRGAZ-ENERGO CJSC and ROSUKRENERGO AG.

This Technical Agreement may be from time to time amended upon the Parties' agreement taking into account the capacities of gas transportation system.

Proposal of one of the Parties on introducing of amendments to the Technical Agreement shall be given to the other Party in writing.

The Parties are obliged to enter into negotiations as regards the said proposals within fifteen days upon the date of receipt of the other party's proposal.

9.4. This Technical Agreement shall become effective upon its signing by the Parties, regulate the Parties' relations, which emerged since January 1, 2008, and be valid until December 31, 2008.

For Gazprom OJSC
Deputy Chairman of the Board
/signature/
Seal: Gazprom OJSC, Moscow, Russian Federation

For Nafrogaz of Ukraine NJSC
First Deputy Chairman of the Board
/signature/
I.N. Didenko
Seal: Naftogaz of Ukraine NJSC, Kyiv, Ukraine
Identification code 20077720

[signature]
V.Ya. Valov

Except for paragraph 5, clause 9.3.

[signature]
N.N. Dubik,
Head of the Legal Department,

[signature] [signature] [signature] [signature] [signature]

Appendix 1

Directions and Length of the Transit of Russian Natural Gas through the Territory of Ukraine

to GMS Uzhhorod:

1. UPU, EKKR, Progress	-1,136.5 km
2. Soyuz;	-1,538.4 km
3. Orenburg – Novopskov, Soyuz	-1,510.0 km
4. Kursk-Kyiv-KZU-DUG-2	-1,196.0 km
5. EKD-Kyiv-KZU-DUG-2	-1,295.8 km
6. Ivatsevichi – Dolina-Uzhhorod	-579.3 km
7. Torzhok – Dolina-Uzhhorod	-720.5 km

to GMS Berehovo:

1. Progress-Berehovo	-1,147.0 km
2. Yelets-Kremenchuh-ACB-Berehovo	-1,234.2 km
3. Soyuz – KS Bohorodchany-Progress	-1,519.9 km

to GMS Orlovka:

1.EKKR-ATI, including	-939.4 km
1.1. Transit via the Naftogaz of Ukraine NJSC section	-865.0 km
1.2. Transit Naftogaz of Ukraine NJSC together with Gaztranzit CJSC:	
- section (30.4 – 69.3 km)	-38.9 km
- section (304.0 – 333.8 km)	-29.8 km
- underground crossing via the river Danube (335,2 - -340.9 km	-5.7 km
2. Transit via the Naftogaz of Ukraine NJSC section EKKR-ATI-ShDKRI,RI	-900.5 km
3. Ostrogozhsk –Shebelinka-ShDKRI	-935.4 km

to GMS Drozdovichi:

1. Kobrin-Drozdovichi	-374.4 km
3. KK-KZU- Drozdovichi	-1,126.0 km

to GMS Tekovo:

1. UPU-KS Bohorodchany-Soyuz-Tekovo	-1,093.1 km

to Moldova:

1. UPU-KS Bohorodchany-GMS Alekseyevka	-1,176.7 km
2. Ostrogozhsk-N.Pskov-ShDKRI	-891.1 km
3. Yelets-Kremenchuh-Ananyev-Grebeniki-ShDKRI,RI	-770.3 km
4. Pisarevka-N.Pskov-ShDKRI	-897.1 km
5. Ostrogozhsk –Shebelinka-ShDKRI	-796.5 km
6. Yelets-Kremenchuh-Ananyev-Grebeniki	-770.3 km
7. Yelets-Kremenchuh-Ananyev-Sholdaneshti	-748.1 km
8. Yelets-Kremenchuh-Radushnoye-Grebeniki	-812.0 km

On behalf of Gazprom OJSC
Deputy
Chairman of the Board
[signature]
V.A. Golubev
[Seal: Gazprom, Open Joint-Stock Company, Moscow]

on behalf of Naftogaz of Ukraine NJSC
First Deputy
Chairman of the Board
[signature]
Mr. I.N. Didenko
[Naftogaz of Ukraine, National Joint-Stock Company, Kyiv, Ukraine, Identification Code 20077720]

[signature] V.Y. Valov [signature] H.V. Kucheryavenko [signature]

ТЕХНИЧЕСКОЕ СОГЛАШЕНИЕ

между ОАО «Газпром» и НАК «Нафтогаз Украины» об условиях сдачи-приемки природного газа на приграничных газоизмерительных станциях для транзита его через территорию Украины, а также передачи природного газа потребителям Украины в 2008 году

СТАТЬЯ 1. ОБЩИЕ УСЛОВИЯ

1.1. Данное Техническое соглашение определяет взаимоотношения ОАО «Газпром» и НАК «Нафтогаз Украины» (далее по тексту Стороны) и регламентирует:

- распределение общих объемов газа по пунктам сдачи-приёмки газа и направлениям (магистральным газопроводам);
- направления и протяженность транзита природного газа через территорию Украины;
- порядок определения объемов транзита природного газа по территории Украины;
- режимы передачи и транзита газа;
- вопросы определения количества и физико-химических показателей газа (далее по тексту ФХП) при пересечении им границ государств;
- права и обязанности представителей Сторон на пунктах сдачи-приёмки газа;
- ответственность Сторон за нарушение данного соглашения.

1.2. Стороны согласовали, что перечисленные ниже определения имеют следующее значение:

Пункт замера расхода газа (ПЗРГ) – объект (сооружение), предназначенный для измерения количества газа на газопроводе и/или ГРС при его сдаче-приёмке и состоящий из одного или нескольких измерительных трубопроводов.

Газоизмерительная станция (ГИС) – объект (сооружение), предназначенный для измерения количества и ФХП газа при его сдаче-приемке, состоящий из одного или нескольких ПЗРГ и включающий химико-аналитическую лабораторию и/или автоматические потоковые средства измерений (СИ) ФХП газа.

1.3. ОАО «Газпром» сдает, а НАК «Нафтогаз Украины» принимает природный газ на следующих ГИС и ПЗРГ:

Название ГИС, ПЗРГ	Название газопровода
ГИС Суджа	▪ Уренгой – Помары – Ужгород (УПУ); ▪ Прогресс; ▪ Елец – Курск – Кривой Рог (ЕККР); ▪ Курск – Киев (КК); ▪ Елец – Курск – Диканька (ЕКД).
ГИС Валуйки	▪ Острогожск – Шебелинка (ОШ);
ГИС Серебрянка	участок Острогожск – Новопсков газопровода СКЦ;
ГИС Писаревка	▪ Уренгой – Новопсков (УН); ▪ Петровск – Новопсков (ПН);
ГИС Сохрановка	▪ Союз; ▪ Оренбург – Новопсков (ОН);
ГИС Кобрин	▪ Ивацевичи – Долина (ИД);
ГИС Мозырь	▪ Торжок – Долина (ТД);
ГИС Платово	▪ Таганрог – Мариуполь (ТМ);

Название ГИС, ПЗРГ	Название газопровода
ГИС Белгород	▪ Шебелинка – Белгород – Курск – Брянск (ШБКБ);
ПЗРГ на Волчанск (Шебекино)	▪ отвод от газопровода ШБКБ на Шебекино – Волчанск;
ПЗРГ Лозная	▪ отвод на Воеводское от газопровода Северный Кавказ – Центр (СКЦ);
ГИС Прохоровка	▪ Северный Кавказ – Центр (СКЦ);
ГИС Алексеевка	▪ Ананьев – Черновцы – Богородчаны (АЧБ);
ГИС Каушаны	▪ Ананьев – Тирасполь – Измаил (АТИ); ▪ Шебелинка–Днепропетровск–Кривой Рог–Измаил (ШДКРИ); ▪ Раздельная – Измаил (РИ);
ПЗРГ лупингов газопровода АТИ	▪ Ананьев – Тирасполь – Измаил (АТИ);
ПЗРГ Лиманское	▪ Тирасполь – Одесса – 3 (ТО)

1.4. НАК «Нафтогаз Украины» сдает, а ОАО «Газпром» принимает природный газ на следующих ГИС и ПЗРГ:

Название ГИС, ПЗРГ	Название газопровода
ГИС Ужгород	▪ Уренгой – Помары – Ужгород (УПУ); ▪ Прогресс; ▪ Союз; ▪ Долина – Ужгород – Госграница-2 (ДУГ–2);
ГИС Берегово	▪ отвод на Берегово;
ГИС Дроздовичи	▪ Комарно – Дроздовичи (КД);
ГИС Орловка	▪ Ананьев – Тирасполь – Измаил (АТИ); ▪ Раздельная – Измаил (РИ); ▪ Шебелинка–Днепропетровск-Кривой Рог–Измаил (ШДКРИ);
ГИС Теково	▪ Хуст – Сату-Маре;
ГИС Гребеники	▪ Ананьев – Тирасполь – Измаил (АТИ); ▪ Шебелинка–Днепропетровск-Кривой Рог–Измаил (ШДКРИ); ▪ Раздельная – Измаил (РИ);
ГИС Алексеевка	▪ Ананьев – Черновцы – Богородчаны (АЧБ).
ПЗРГ Ананьев	▪ Ананьев – Черновцы – Богородчаны (АЧБ).
ПЗРГ лупингов газопровода АТИ	▪ Ананьев – Тирасполь – Измаил (АТИ);
ПЗРГ Лиманское	▪ Тирасполь – Одесса – 3 (ТО)

1.5. Порядок сдачи-приемки транспортируемого через территорию Республики Молдова и подаваемого для потребителей Республики Молдова природного газа на границе Украина - Республика Молдова и Республика Молдова – Украина определяется трехсторонним «Техническим соглашением между ОАО «Газпром», НАК «Нафтогаз

Украины» и АО «Молдовагаз» о подаче природного газа потребителям Республики Молдова, Украины и транзите газа через их территории на 2008 год».

1.6. Исполнение данного Технического соглашения осуществляет:

1.6.1. Открытое акционерное общество «Газпром», которое возлагает практическое исполнение Технического соглашения на ООО «Газпром трансгаз Москва», ООО «Газпром трансгаз Волгоград», ООО «Газпром трансгаз Санкт-Петербург», ООО «Газпром трансгаз – Кубань», ООО «Межрегионгаз», ООО «Газпром экспорт» (постоянное Представительство ООО «Газпром экспорт» в Украине), БДЦ АО «Топэнерджи».

1.6.2. Национальная Акционерная Компания «Нафтогаз Украины», которая возлагает практическое исполнение Технического соглашения на ДК «Укртрансгаз».

1.6.3. ОАО «Газпром» и НАК «Нафтогаз Украины» призваны оперативно решать все технические вопросы, касающиеся устройства, правил эксплуатации ГИС и ПЗРГ, учета количества и ФХП газа, объемов и режимов приема-подачи газа.

1.7. Стороны договорились, что транзит газа в направлении ГИС Орловка на участках газопровода АТИ, имеющих лупинги, принадлежащие ЗАО «Газтранзит», осуществляют НАК «Нафтогаз Украины» (на основании Доп.соглашения № 2 к Дополнению 1ГУ-07) и ЗАО «Газтранзит» (на основании отдельного соглашения с ОАО «Газпром»). НАК «Нафтогаз Украины» не несет ответственности перед ОАО «Газпром» и любыми другими третьими лицами в отношении возможных рисков и потерь, изменений качества при транзите газа по трубопроводам ЗАО «Газтранзит».

1.8. Данное Техническое соглашение в полном объеме распространяется на условия передачи российского газа и газа другого происхождения.

СТАТЬЯ 2. ОБЪЕМЫ ГАЗА

2.1. ОАО «Газпром» сдает, а НАК «Нафтогаз Украины» принимает природный газ в пунктах сдачи-приемки на границах: Российская Федерация - Украина, Республика Беларусь - Украина, Республика Молдова - Украина в следующих объемах, предусмотренных контрактами.

Объемы газа определяются при стандартных условиях:
P = 0,101325 МПа = 1,03323 кгс/см² и t = 20ºC.

млн. куб. м

	2008г.	I кв.	II кв.	III кв.	IV кв.
Поступление, всего:	**184 504**	**49 949**	**45 094**	**40 516**	**48 945**
по газопроводам	**178 604**	**47 465**	**44 194**	**40 516**	**46 429**
-газ ОАО «Газпром»	120 150	34 113	28 060	26 195	31 782
-газ компании «ROSUKRENERGO AG»	58 454	13 352	16 134	14 321	14 647
отбор из ПХГ Украины	**5 900**	**2 484**	**900**	**0**	**2 516**
-газ компании ROSUKRENERGO AG	5 900	2 484	900	0	2 516
Распределение:	**184 504**	**49 949**	**45 094**	**40 516**	**48 945**
Для Украины	**54 200**	**14 331**	**13 974**	**11 637**	**14 258**

	2008г.	I кв.	II кв.	III кв.	IV кв.
-газ центральноазиатский компании «ROSUKRENERGO AG» по газопроводам	52 824	12 955	13 974	11 637	14 258
Газ ОАО «Газпром» российский	1 376	1 376	0	0	0
Для Республики Молдова	**2 976**	**1 003**	**473**	**500**	**1 000**
Для европейских государств	**127 328**	**34 615**	**30 647**	**28 379**	**33 687**
-газ ОАО «Газпром» по Доп.соглашению №2 к Дополнению 1ГУ-07	115 798	31 734	27 587	25 695	30 782
-газ компании по газопроводам «ROSUKRENERGO AG»	4 254	397	2 160	1 308	389
Возврат газа от «Нафтогаз Украины» из баланса Украины	1 376	0	0	1 376	0
-газ компании «ROSUKRENERGO AG» из ПХГ Украины	5 900	2 484	900	0	2 516

2.2. Газ считается переданным ОАО «Газпром» и принятым НАК «Нафтогаз Украины» как только он пройдет пункты сдачи-приемки на границах Российская Федерация – Украина, Республика Беларусь – Украина и Республика Молдова – Украина.

Ответственность за обеспечение бесперебойной транзитной транспортировки газа перейдет от ОАО «Газпром» к НАК «Нафтогаз Украины», как только этот газ пройдет через границу Российская Федерация – Украина, Республика Беларусь – Украина и Республика Молдова – Украина.

2.3. С учетом заключенных контрактов, пропускной способности и технического состояния магистральных газопроводов, газопроводов-отводов и ГРС объемы переданного согласно п.2.1 газа распределяются по направлениям:

млн.куб.м

По газопроводам	2008 г.	I кв.	II кв.	III кв.	IV кв.
УПУ, ЕККР, «Прогресс»	**90 665**	**24 040**	**22 683**	**20 616**	**23 326**
Курск – Киев, ЕКД	**16 112**	**4 212**	**3 850**	**3 700**	**4 350**
Острогожск – Шебелинка	**12 371**	**3 843**	**2 528**	**1 900**	**4 100**
Всего по Новопскову:	**45 574**	**11 359**	**10 945**	**9 942**	**13 328**
Уренгой – Новопсков	29 889	7 768	7 500	6 842	7 779
Петровск – Новопсков	6 583	685	1 798	3 100	1 000
Острогожск – Новопсков	608	0	608	0	0
Оренбург–Новопсков, «Союз»	8 494	2 906	1 039	0	4 549
ШБКБ	**168**	**18**	**0**	**0**	**150**
Ивацевичи – Долина*	**5 358**	**0**	**2 550**	**2 808**	**0**
Торжок – Долина*	**4 585**	**892**	**1 638**	**1 550**	**505**
Тула – Шостка – Киев	**0**	**0**	**0**	**0**	**0**
Сев. Кавказ-Центр	**2 561**	**2 191**	**0**	**0**	**370**
Таганрог-Мариуполь	**1 210**	**910**	**0**	**0**	**300**
ИТОГО:	***178 604***	***47 465***	***44 194***	***40 516***	***46 429***

** Объемы подачи газа, превышающие контрактные объемы предыдущих лет*

(3 660 млн.куб.м), предназначены для транзита в направлении ГИС Ужгород и, по согласованию Сторон, для закачки в ПХГ Украины.

2.4. НАК «Нафтогаз Украины» сдает, а ОАО «Газпром» принимает объемы природного газа, подаваемого в государства-импортеры по следующим ГИС:

млн.куб.м

ГИС	2008 г.	I кв.	II кв.	III кв.	IV кв.
Ужгород всего	**83 574**	**22 522**	**20 085**	**19 186**	**21 781**
в т.ч.					
- газ по Доп. соглашению №2 к Дополнению 1ГУ-07	80 441	22 404	19 005	18 072	20 960
- центральноазиатский газ "ROSUKRENERGO AG" по газопроводам	995	0	180	426	389
- газ "ROSUKRENERGO AG" из ПХГ	1 450	118	900	0	432
-газ «Нафтогаз Украины» возврат	688	0	0	688	0
Берегово всего	**13 639**	**3 616**	**3 127**	**3 119**	**3 777**
в т.ч.					
- газ по Доп.соглашению №2 к Дополнению 1ГУ-07	8 944	2 140	1 839	2 250	2 715
- центральноазиатский газ "ROSUKRENERGO AG" по газопроводам	1 469	0	1 288	181	0
- газ "ROSUKRENERGO AG" из ПХГ	2 538	1 476	0	0	1 062
-газ «Нафтогаз Украины» возврат	688	0	0	688	0
Дроздовичи всего	**4 936**	**1 250**	**1 275**	**1 171**	**1 240**
в т.ч.					
- газ по Доп.соглашению №2 к Дополнению 1ГУ-07	2 411	531	820	510	550
- центральноазиатский газ "ROSUKRENERGO AG" по газопроводам	1 513	397	455	661	0
- газ "ROSUKRENERGO AG" из ПХГ	1 012	322	0	0	690
Теково всего	**1 996**	**615**	**679**	**190**	**512**
- газ по Доп.соглашению №2 к Дополнению 1ГУ-07	819	47	442	150	180
- центральноазиатский газ "ROSUKRENERGO AG" по газопроводам	277	0	237	40	0
- газ "ROSUKRENERGO AG" из ПХГ	900	568	0	0	332
Орловка всего*	**23 183**	**6 612**	**5 481**	**4 713**	**6 377**
в т.ч. по направлениям:					
на Болгарию	3 338	886	827	708	917
на Турцию	16 612	4 984	4 033	3 265	4 330
на Румынию	3 233	742	621	740	1 130
Всего	**127 328**	**34 615**	**30 647**	**28 379**	**33 687**
Итого по Доп.соглашению №2 к Дополнению 1ГУ-07	**115 798**	**31 734**	**27 587**	**25 695**	**30 782**
центральноазиатский газ "ROSUKRENERGO AG" по газопроводам	**4 254**	**397**	**2 160**	**1 308**	**389**
газ «ROSUKRENERGO AG» из ПХГ	**5 900**	**2 484**	**900**	**0**	**2 516**
газ «Нафтогаз Украины» возврат	**1 376**	**0**	**0**	**1 376**	**0**

** Данные объемы газа могут быть поданы на ГИС Орловка при условии работы КС Тирасполь – I, II и КС Вулканешты, проектной загрузке участка газопровода Тирасполь – Вулканешты – Исакча, загрузке КС Тарутино и лупингов, принадлежащих ЗАО «Газтранзит», участниками которого являются НАК «Нафтогаз Украины» и ОАО «Газпром».*

*** - Стороны согласовали, что объемы подачи газа «ROSUKRENERGO AG» по пунктам сдачи-приемки могут корректироваться по оперативному согласованию.*

Стороны согласовали, что заказанные суточные объемы транзита российского газа ОАО «Газпром», согласно Доп.соглашения №2 к Дополнению 1ГУ-07, через ГИС Ужгород, ГИС Берегово и ГИС Теково в I и IV кварталах 2008 года могут суммарно достигать не более 275 млн.куб.м., а во II и III кварталах – не более 250 млн.куб.м.

При наличии технической возможности Исполнитель обеспечит увеличение объемов транзита газа по указанным выше направлениям.

2.5. В случае, если суточные объемы транзита газа через ГИС на выходе из ГТС Украины превышают объемы, предусмотренные п. 2.4., подача газа на входе в ГТС Украины для обеспечения данного транзита будет осуществляться в первую очередь по газопроводам УПУ, ЕККР, «Прогресс», Уренгой – Новопсков, Курск – Киев и ЕКД, а при недостатке производительности указанных газопроводов - по газопроводам Торжок – Долина и Ивацевичи – Долина.

2.6. Газ считается доставленным НАК «Нафтогаз Украины» и принятым ОАО «Газпром», как только он пройдет пункты сдачи-приемки на границах Украина - государства-импортеры, (в т. ч. Украина-Республика Молдова).

При этом Стороны учитывают утечки, расходы газа на собственные нужды и отборы на участках магистральных газопроводов, газопроводов-отводов и ГРС от газоизмерительных станций до границы между государствами согласно утвержденным:

- «Методике определения утечек газа в составе технологических потерь газа на участках магистральных газопроводов, газопроводов-отводов и ГРС между приграничными ГИС ОАО «Газпром» (после замерных диафрагм) и границами Россия - Украина, Беларусь - Украина и др.», утвержденной 26.02.98г.;
- «Методике определения расхода природного газа на собственные нужды при эксплуатации приграничных участков МГ, газопроводов-отводов и ГРС между приграничными ГИС и границами Россия-Украина, Беларусь-Украина», утвержденной 7.12.98 г.

Ответственность за обеспечение бесперебойной транзитной транспортировки газа снимается с НАК «Нафтогаз Украины», как только газ пройдет через границы Украина

- государства-импортеры, Украина- Республика Молдова.

2.7. ОАО «Газпром» обеспечит подачу газа в поселки Гремяч и Муравьи (Украина). Название ГРС и собственники распределительных сетей, по которым газ подается в указанные населенные пункты, указаны в Приложении №2.

2.8. Направления и протяженности транзита природного газа по территории Украины приведены в Приложении № 1. Порядок определения объемов транзита природного газа по территории Украины по каждому направлению транзита приведен в Приложении №3 Соглашения.

СТАТЬЯ 3. РЕЖИМ ПОДАЧИ ГАЗА.

3.1. Распределение квартальных объемов газа, указанных в статье 2 по месяцам производится, как правило, равномерно, исходя из среднесуточного квартального объема. По согласованию Сторон возможны изменения месячных объемов подачи и транзита газа в пределах квартальной квоты. Взаимные предложения по изменению квартальных объемов подачи и транзита газа Стороны согласовывают за 15 дней до начала квартала.

3.2. Допускается отклонение фактических объемов подачи или приема газа за счет перераспределения потоков по направлениям по взаимной, письменно оформленной, договоренности Сторон.

3.3. Подача и прием газа в течение месяца осуществляется, как правило, равномерно с допустимым отклонением суточных объемов от среднесуточного и месячных объемов от предусмотренных п 3.1. настоящей статьи не более ± 5%, а по ГИС Ужгород – не более ± 3%. При этом подача - прием газа за квартал должна соответствовать объемам, указанным в пунктах 2.1. и 2.4.

В случае отбора газа европейскими странами объемов, превышающих допустимые отклонения суточных объемов отбора от среднесуточных более чем на 5%, а по ГИС Ужгород – более чем на 3%,ОАО «Газпром» обеспечивает компенсацию отклонений подачей газа на границах Российская Федерация – Украина, Республика Беларусь - Украина не позднее, чем за 36 часов до момента возникновения отклонений, превышающих установленные допуски отклонений. При этом Стороны согласовывают объемы, направления, продолжительность и режим подачи газа.

3.4. Давления газа по направлениям обеспечиваются ОАО «Газпром» при соблюдении НАК «Нафтогаз Украины» суточной нормы отбора газа с учетом п.2.1., 2.3. и 3.3. в пределах:

Избыточное давление, в кгс/см²

		I, IV кв.	II, III кв.
г-д Уренгой – Помары - Ужгород	на ГИС Суджа	60-65	60-65
г-д Елец – Кривой Рог	на ГИС Суджа	60-65	60-65
г-д Прогресс	на ГИС Суджа	60-65	60-65
г-д Курск – Киев	на ГИС Суджа	42-45	44-47
г-д Елец – Диканька	на ГИС Суджа	42-45	44-47
г-д Тула – Шостка - Киев	на ГИС г-да ТШК	40-45	40-45
г-д Острогожск - Шебелинка	на ГИС Валуйки	40-45	40-45

		I, IV кв.	II, III кв.
г-д СКЦ (на Новопсков)	на ГИС Серебрянка	46-50	46-50
г-д Уренгой - Новопсков	на ГИС Писаревка	70-75	69-75
г-д Петровск - Новопсков	на ГИС Писаревка	50-55	50-55
г-д «Союз»	на ГИС Сохрановка	58-75	62-75
г-д Оренбург - Новопсков	на ГИС Сохрановка	58-75	62-75
г-д ШБКБ	на ГИС Белгород	28-35	29-35
г-д Ивацевичи - Долина	на ГИС Кобрин	40-55	50-55*
г-д Торжок-Долина	на ГИС Мозырь	44-55	44-55
г-д Таганрог-Мариуполь	на ГИС Платово	28-35	23-28
г-д СКЦ (на Дарьевку)	на ГИС Прохоровка	45-50	-

** В случае необходимости загрузка вторых ступеней сжатия на КС Кобрин и КС Ковель будет произведена одновременно.*

При этом НАК «Нафтогаз Украины» поддерживает давление на входе приграничных компрессорных станций (Российская Федерация-Украина, Республика Беларусь-Украина) не выше проектных, а по КС Ромны газопроводов УПУ, Прогресс, ЕККР не выше 53 кгс/см². При необходимости Стороны согласуют в оперативном порядке давление на входе и на выходе приграничных компрессорных станций.

При изменении объемов подачи газа из Туркменистана для Украины давления газа по газопроводам Острогожск - Шебелинка, СКЦ, Оренбург - Новопсков, «Союз», Таганрог-Мариуполь и на входе приграничных компрессорных станций (Российская Федерация-Украина, Республика Беларусь-Украина) определяются режимом подачи новых его объемов.

ОАО «Газпром» оказывает содействие АО «Молдовагаз» по поддержанию следующих давлений на выходе компрессорных станций:

Избыточное давление, в кгс/см²

		I, IV кв.	II-III кв.
КС Тирасполь-2	г-д Ананьев-Измаил	72-75	72-75
КС Тирасполь-1	г-д Раздельная-Измаил, ШДКРИ	не менее 52	не менее 52
КС Вулканешты	г-д Раздельная-Измаил, ШДКРИ	не менее 50	не менее 50

В случае не обеспечения указанных давлений на выходе компрессорных станций АО «Молдовагаз» с НАК «Нафтогаз Украины» снимаются обязанности по поддержанию давлений на ГИС Орловка.

Пуск оператором (ДК «Укртрансгаз») в работу и остановка ГПА на КС Тарутино газопровода Ананьев – Тирасполь – Измаил производится при дефиците или избытке транзитных мощностей в направлении ГИС Орловка по согласованию Сторон.

При возникновении аварийных ситуаций решение о пуске и остановке ГПА на КС Тарутино принимает ОДУ ДК «Укртрансгаз» при обязательном уведомлении ЦПДД ОАО «Газпром».

3.5. Давления газа на ГИС, согласно объемам п.2.4., НАК «Нафтогаз Украины» обеспечивает при условии соблюдения государством-импортером отбора газа в объемах, не более контрактных с учетом допустимых отклонений отбора-подачи в течение суток, указанных в п.3.3:

Избыточное давление, в кгс/см²

ГИС Ужгород (Среднее давление по 4-ем газопроводам)	52-55
ГИС Береговo	не менее 40
ГИС Дроздовичи	не менее 34
ГИС Теково	54-56
ГИС Орловка на Болгарию	49-52
ГИС Орловка на Турцию	51-55
ГИС Орловка на Румынию	не менее 37

Избыточные давления, в кг/см²

		I, IV кв.	II-III кв.
г-д Ананьев - Тирасполь - Измаил	На выходе КС Ананьев	72-75	72-75
г-д Ананьев – Черновцы - Богородчаны	На ПЗРГ Ананьев	не менее 35	не менее 35
	На ГИС Алексеевка*	I кв.не менее 28 IV кв.не менее 30	не менее 35
г-д Шебелинка - Днепропетровск – Кривой Рог- Измаил	На входе КС Тирасполь-1	не менее 35	не менее 35

** Давление будет уточнено в трехстороннем Соглашении между ОАО «Газпром», НАК «Нафтогаз Украины» и АО «Молдовагаз».*

3.6. Диспетчерские службы ОАО «Газпром» и НАК «Нафтогаз Украины» обмениваются не реже, чем каждые четыре часа всеми параметрами режима работы ГИС, указанных в п.1.3 и 1.4 и прилегающих к ним компрессорных станций.

Каждая из Сторон имеет право на получение информации от ПЭВМ, на которую выводится информация с автоматических вычислителей ГИС, указанных в п.1.3 и 1.4., а Сторона - владелец ГИС обеспечивает техническую возможность передачи такой информации в автоматическом режиме на ПЭВМ постоянного представителя контрагента.

В случае невозможности передачи такой информации в автоматическом режиме, владелец ГИС ежедневно до 12.00 (здесь и далее – московское время) обязан предоставить контрагенту информацию от автоматических вычислителей расхода газа в объеме и формате, согласованном Сторонами.

3.7. Стороны имеют право изменять объем передачи газа по отдельным газопроводам в пределах их проектной производительности по взаимному согласованию. Согласование изменения объемов передачи газа производится до 16-00 предыдущего дня.

3.8. Стороны, для согласованного проведения планово-предупредительных работ на магистральных газопроводах и компрессорных станциях, влияющих на режим подачи-приема, обмениваются информацией в первом квартале 2008 года о сроках

проведения ремонтных работ, и объемах сокращения транспорта газа по направлениям подачи. Не позднее, чем за три дня до начала работ Стороны подтверждают проведение ремонтных работ.

3.9. Перебором газа считается отбор газа выше среднесуточного объема подачи, определенного с учетом допуска согласно п.3.3.

Недобором газа считается отбор газа ниже среднесуточного объема подачи, определенного с учетом допуска согласно п.3.3., при условии поддержания давлений в соответствии с пп.3.4. и 3.5.

Недопоставка газа - подача газа ниже установленного среднесуточного объема подачи, определенного с учетом допуска согласно п.3.3., вызванная снижением давления газа ниже пределов, указанных в п.3.4.

3.10. При необходимости выполнения технологических операций, в том числе проведение внутритрубной дефектоскопии, на прилегающих к границам НАК «Нафтогаз Украины» и ОАО «Газпром» участках газопровода и КС, Стороны согласовывают проведение этих работ, и это освобождает их от взаимных санкций, связанных с нарушением режима, вызванного проведением работ. При этом Стороны заблаговременно уведомляют постоянных представителей на соответствующих ГИС о запланированных работах. Стороны обязуются выполнять необходимые технологические операции, связанные с запуском, контролем прохождения и приемом очистных устройств и внутритрубных дефектоскопов.

Для обеспечения работ, Стороны, по взаимной договоренности, могут изменять объемы передачи газа по ГИС и ПЗРГ, указанным в статье 1.

3.11. Сведения об объёмах подачи газа в Украину из Туркменистана и других стран Средней Азии за прошедшие сутки ОАО «Газпром» ежедневно до 17.00 передает в ОДУ ДК «Укртрансгаз». Указанные объемы являются предварительными и сообщаются факсограммой (по электронной почте).

3.12. Объем газа транспортируемого по лупингам газопровода АТИ, принадлежащих ЗАО «Газтранзит», измеряется измерительными комплексами, смонтированными на этих лупингах.

3.13. Взаимодействие Представительства ООО «Газпром экспорт» в Украине и ДК «Укртрансгаз», как исполнителей настоящего Соглашения, осуществляется путем обмена информацией о режимах транзита природного газа через территорию Украины в объеме исполнения Контрактов на транспортировку природного газа.

Объем оперативной информации, предоставляемой для Представительства ООО «Газпром экспорт» в Украине, должен соответствовать объему информации, предоставляемому ДК «Укртрансгаз» для ОАО «Газпром».

Информация об объемах и ФХП газа, собранная Представительством ООО «Газпром экспорт» в Украине с приграничных ГИС, передается в полном объеме в Представительство ООО «Газпром экспорт» в Украине и ДК «Укртрансгаз».

Представительство ООО «Газпром экспорт» и ДК «Укртрансгаз» совместно проводят анализ выполнения контрактных условий транзита природного газа, оговоренных в Контрактах и настоящем Соглашении.

СТАТЬЯ 4. ПУНКТЫ СДАЧИ-ПРИЁМКИ.

4.1. Пунктами сдачи-приемки природного газа по настоящему Техническому соглашению являются ГИС и ПЗРГ, перечисленные в п.1.3 и п.1.4.

Конструктивное исполнение измерительных трубопроводов ГИС и ПЗРГ не должно вносить дополнительную погрешность в расчет количества газа. При невозможности выполнения данного условия, Стороны в индивидуальном порядке согласовывают возможность эксплуатации каждой конкретной ГИС или ПЗРГ до завершения работ по реконструкции (модернизации) ГИС.

Если на участке от ГИС до государственных границ имеются газораспределительные станции (ГРС) (Приложение № 2), учет количества газа по этим ГРС должен осуществляться методом переменного перепада давления с использованием стандартных сужающих устройств, с применением автоматических вычислителей или счётчиками газа с электронными корректорами в соответствии с требованиями нормативной документации, действующей в стране местоположения ГРС. При применении счетчиков газа порядок и сроки перехода на требования новых нормативных документов Стороны определяют дополнительно.

ФХП газа для ГРС и ПЗРГ принимаются по данным автоматических потоковых СИ или химико-аналитической лаборатории ближайшей ГИС того газопровода, от которого взят отвод на ГРС или ПЗРГ.

4.2. Вновь строящиеся и реконструируемые пункты сдачи-приемки газа должны быть оборудованы в соответствии с проектом, основные технические решения которого согласованны Сторонами.

Стороны рассматривают и согласовывают основные проектные решения в течение месяца с момента предоставления документации на согласование.

Документация, ведущаяся и хранящаяся на ГИС, должна соответствовать требованиям «Перечня документации для приграничных ГИС» (Приложение №8).

4.3. Пункты сдачи-приемки оборудуются СИ, обеспечивающими точность измерений не хуже, чем указано в статье 6 настоящего Технического соглашения.

4.4. Все СИ должны быть сертифицированы в стране-владельце ГИС и поверены органами государственной метрологической службы.

Ввод в эксплуатацию новых типов СИ на ГИС, ПЗРГ должен осуществляться согласно нижеприведенной процедуре:

- Согласование применения СИ и его основных технических и эксплуатационных характеристик;
- Проведение, на основании согласованной программы, предварительных совместных испытаний одного образца СИ для проверки заявленных изготовителем метрологических характеристик и соответствие требованиям данного Технического соглашения;
- Проведение опытно-промышленной эксплуатации каждого конкретного СИ с целью наработки статистических данных и определения возможных отказов и несоответствий в работе СИ на каждом действующем объекте в течение одного календарного месяца. Срок опытно-промышленной эксплуатации может быть сокращен в отдельном конкретном случае по согласованию Сторон, но не может быть менее 2-х недель.

- На основании анализа результатов опытно-промышленной эксплуатации делается заключение о возможности ввода СИ в коммерческую эксплуатацию.

Данная процедура не распространяется на ввод СИ в эксплуатацию после ремонта или замены на однотипное СИ из-за неисправности.

4.5 Программное обеспечение (ПО) СИ должно быть согласовано для применения Сторонами и иметь возможность контроля неизменяемости заложенных в него алгоритмов вычислений.

4.6 Каждый пункт сдачи - приемки газа должен быть оснащен основными и дублирующими СИ для измерения количества газа.

Каждая ГИС должна быть оснащена автоматическими потоковыми СИ (одноканальными или многоканальными) для определения компонентного состава и ФХП газа (плотности, теплоты сгорания и влажности газа).

4.7 Выбор СИ и режим их работы осуществляется согласно «Регламента работы хроматографов и гигрометров на приграничных газоизмерительных станциях» (Приложение №6), далее «Регламента», являющегося неотъемлемой частью настоящего Технического соглашения.

До внедрения или при неисправности автоматических СИ, ФХП газа определяются в соответствии с ГОСТами и периодичностью, указанными в п.7.2 и п.7.4 настоящего Технического соглашения.

4.8 Стороны обеспечивают на приграничных ГИС и ПЗРГ соблюдение технологических режимов работы в соответствии с «Инструкцией по соблюдению технологического режима приграничных газоизмерительных станций (ГИС) ОАО «Газпром» и НАК «Нафтогаз Украины» (Приложение №5), далее «Инструкция», являющейся неотъемлемой частью настоящего Технического соглашения.

4.9 Резервные измерительные трубопроводы ГИС должны быть отключены путем закрытия кранов до и после сужающих устройств. Краны после закрытия и уплотнения должны быть опломбированы представителями обеих Сторон. Включение в работу и выключение измерительных трубопроводов должно осуществляться исходя из технологического режима работы ГИС (ПЗРГ) согласно положениям Инструкции.

Все работы на ГИС (ПЗРГ) по включению или выключению из работы измерительных трубопроводов должны проводиться по согласованию и в присутствии постоянного представителя, а при его отсутствии (отпуск, болезни и др. причины) после уведомления другой Стороны.

4.10 Стороны договорились проводить совместные проверки правильности учета расхода и контроля показателей качества газа на ГИС, указанных в пунктах 1.3 и 1.4. Периодичность совместных проверок определяется согласованным сторонами «Графиком совместных проверок приграничных ГИС в 2008 году».

СТАТЬЯ 5. ПОСТОЯННЫЕ ПРЕДСТАВИТЕЛИ НА ГИС

5.1. На всех пунктах сдачи-приемки газа имеют право находиться постоянные представители контрагента на основании «Соглашения об условиях работы постоянных представителей ОАО «Газпром» и НАК «Нафтогаз Украины» на приграничных ГИС» (Приложение №9). Владелец ГИС предоставляет для постоянных

представителей контрагентов отдельное служебное помещение для нормальной работы специалистов.

5.2. Устанавливается следующее количество постоянных представителей на пунктах сдачи-приемки газа:

ГИС Кобрин	2 представителя от НАК «Нафтогаз Украины» 1 представитель от ОАО «Газпром»
ГИС Мозырь	1 представитель от НАК «Нафтогаз Украины» 1 представитель от ОАО «Газпром»
ГИС Суджа	3 представителя от НАК «Нафтогаз Украины»
ГИС Серебрянка, ПЗРГ Лозная	2 представителя от НАК «Нафтогаз Украины»
ГИС Писаревка	2 представителя от НАК «Нафтогаз Украины»
ГИС Сохрановка	2 представителя от НАК «Нафтогаз Украины»
ГИС Прохоровка на 326 км г -да СКЦ	2 представителя от НАК «Нафтогаз Украины»
ГИС Валуйки	2 представителя от НАК «Нафтогаз Украины»
ГИС Белгород	1 представитель от НАК «Нафтогаз Украины»
ГИС Дроздовичи	2 представителя от ОАО «Газпром»
ГИС Берегово	2 представителя от ОАО «Газпром»
ГИС Ужгород	4 представителя от ОАО «Газпром»
ГИС Платово (47 км газопровода Таганрог – Мариуполь)	2 представителя от НАК «Нафтогаз Украины»
ГИС Гребеники	1 представитель от ОАО «Газпром» 1 представитель от АО «Молдовагаз»
ГИС Алексеевка	1 представитель от ОАО «Газпром» 1 представитель от АО «Молдовагаз»
ПЗРГ Ананьев	1 представитель от ОАО «Газпром» 1 представитель от АО «Молдовагаз»
ГИС Орловка	2 представителя от ОАО «Газпром» 1 представитель от АО «Молдовагаз»
ГИС Теково	1 представитель от ОАО «Газпром»
ГИС Каушаны	1 представитель от НАК «Нафтогаз Украины» 1 представитель от ОАО «Газпром»

5.3. Владелец ГИС обеспечивает нормальную работу пункта сдачи-приемки и работы специалистов контрагента, в том числе:

- обеспечит рабочим помещением на территории ГИС или в здании размещения инженерно - технического состава ГИС (в соответствии с государственными санитарными нормами);
- отдельным телефонным номером и служебной телефонной связью с автоматическим набором в подразделение контрагента;
- свободный доступ в любое время суток представителям контрагента ко всем СИ пункта сдачи-приемки с присутствием другой стороны.

Сторона - владелец пункта сдачи-приема газа на условиях аренды контрагента содействует обеспечению постоянных представителей жильем с коммунально-бытовыми условиями согласно нормам, действующим в данной местности, не допуская ухудшения существующих условий проживания.

Условия проживания и работы постоянных представителей на газоизмерительных станциях Стороны оформляют отдельным протоколом или соглашением. Финансовые затраты по содержанию постоянных представителей на ГИС Стороны обеспечивают самостоятельно.

5.4. Оперативный контроль режимов транзита природного газа через территорию Украины и координацию работы постоянных представителей ОАО «Газпром» на приграничных ГИС, принадлежащих НАК «Нафтогаз Украины», осуществляет Представительство ООО «Газпром экспорт» в Украине.

СТАТЬЯ 6. КОЛИЧЕСТВО ГАЗА

6.1. Основными узлами ГИС и ПЗРГ для измерения количества газа являются измерительные трубопроводы с сужающими устройствами или счетчиками, выполненные в соответствии с проектом, согласованным Сторонами.

Применение счетчиков в качестве основной или дублирующей систем Стороны согласовывают для каждого конкретного ГИС или ПЗРГ.

6.2. Измерительные трубопроводы с сужающими устройствами и /или/ счетчиками на ГИС и ПЗРГ должны соответствовать требованиям нормативных документов страны-владельца ГИС (ПЗРГ).

6.3. Методика подсчета количества газа на всех приграничных ГИС и ПЗРГ при использовании измерительных трубопроводов с сужающими устройствами должна основываться на «Временном положении о порядке расчета расхода и количества газа на всех приграничных ГИС ОАО «Газпром» и ДК «Укртрансгаз» (Приложение №4), являющимся неотъемлемой частью настоящего Технического соглашения.

Стороны договорились внедрить расчет количества газа на всех приграничных ГИС, ПЗРГ и ГРС согласно стандартов, гармонизированных с международным стандартом ISO 5167:2003. Порядок и сроки перехода Стороны определят дополнительно.

При использовании на ГИС измерительных трубопроводов с сужающими устройствами для каждого измерительного трубопровода в качестве основных и дублирующих систем измерения количества газа применяются автоматические вычислители в комплекте с датчиками перепада давления класса точности 0.1, датчиками давления класса точности 0.1 и датчиками температуры с пределом основной погрешности ±0.3ºС.

6.4. При использовании измерительных трубопроводов со счётчиками в качестве основных и/или дублирующих систем измерения количества газа для каждого измерительного трубопровода применяются счётчики в комплекте с датчиками давления класса точности 0.1 и датчиками температуры с пределом основной погрешности ±0.3ºС.

Основные и дублирующие автоматические вычислители и датчики, подключенные к одному измерительному трубопроводу должны быть идентичны по своим техническим и метрологическим характеристикам.

6.5. Расхождение между соответствующими среднесуточными показаниями основных и дублирующих СИ не должно превышать предельной приведенной погрешности измерения параметра.

6.6. Дублирующие СИ не должны оказывать влияния на работу основных СИ, в частности соединительные линии (отборы импульсов) и каналы измерения параметров должны быть отдельными для всех ГИС и ПЗРГ, указанных в п.1.3. и п.1.4.

По согласованию Сторон возможно подключение к соединительным линиям дублирующей системы второй контрольной системы для контроля учета газа.

6.7. Автоматические вычислители должны формировать и передавать данные для печати суточных (почасовых) и месячных отчетов, включая «аварийные ситуации» и «вмешательства оператора».

6.8. Владелец пункта сдачи-приема обеспечивает наличие на ГИС рабочих эталонов. Предел допускаемых значений основной погрешности рабочих эталонов, используемых при калибровке, должен быть не более 1/3 предела допускаемого значения основной погрешности используемого СИ.

6.9. Владелец пунктов сдачи-приемки газа обеспечивает достаточное количество резервных измерительных СИ для обеспечения достоверных и бесперебойных измерений количества и ФХП газа, кроме автоматических потоковых СИ ФХП.

6.10. Проведение калибровки или поверки СИ расхода газа основной и дублирующей систем при использовании измерительных трубопроводов с сужающими устройствами осуществляется согласно «Инструкции». Периодичность проведения калибровки СИ - не реже одного раза в 3 месяца по графику или по требованию представителя одной из Сторон.

Стороны договорились о том, что в течение 2008 года дополнят существующую «Инструкцию» разделами, касающимися эксплуатации счетчиков.

Градуировка и проверка работоспособности автоматических СИ ФХП газа на ГИС осуществляется согласно «Регламента». Замена автоматических СИ ФХП газа на ГИС производится в присутствии представителя контрагента, а в случае его отсутствия - после предварительного уведомления другой Стороны.

6.11. Стороны имеют право на установку на ГИС и ПЗРГ, приведенных в п.1.3 и п.1.4, других, отличных от указанных в п. 6.1, систем измерения расхода и количества природного газа. Данные системы не могут быть использованы в качестве коммерческих и не должны оказывать влияние на их работу.

6.12. Учет газа на приграничных ГИС при проведении комплекса работ по очистке и внутритрубной диагностике участков магистральных газопроводов, прилегающих к ГИС, осуществляется в соответствии с «Инструкцией» с учетом особенностей конкретной ГИС. Во время проведения указанных работ Стороны должны принять меры по поддержанию стабильного (неизменного) режима подачи-приема газа по магистральным газопроводам, на которых проводятся эти работы.

7.1. Компонентный состав и ФХП природного газа, сдаваемого ОАО «Газпром» НАК «Нафтогаз Украины» в пунктах сдачи-приемки, на экспорт и для внутреннего потребления Украиной (п.1.3 и п.1.4.), должны соответствовать следующим требованиям:

Метан $CH_4(C_1)$, %	- не менее 90
Этан $C_2H_6(C_2)$, %	- не более 7
Пропан $C_3H_8(C_3)$, %	- не более 3
Бутан $C_4H_{10}(C_4)$, %	- не более 2
Пентан $C_5H_{12}(C_5)$ и другие более тяжелые углеводороды, %	- не более 1
Азот N_2, %	- не более 5
Углекислый газ CO_2, %	- не более 2
Кислород O_2, %	- не более 0,02
Массовая концентрация сероводорода H_2S, мг/м^3	- не более 6
Массовая концентрация меркаптановой серы, мг/м^3	- не более 20
Механические примеси	- отсутствуют
Точка росы природного газа по влаге, измеренная при рабочем давлении и пересчитанная к давлению 3.92 МПа (40 кг/см^2) для концентрации водяных паров при стандартных условиях	- не может быть выше минус 8^{0}С
Допустимый диапазон низшей теплоты сгорания, ккал/м^3 - максимум - минимум	 - не более 8250 - не менее 7800

Примечание.

В случае определения ФХП потоковыми СИ компонентный состав представляется % моль, или % об.

7.2. ФХП природного газа определяются согласно действующим межгосударственным нормативным документам на всех ГИС указанных в п.1.3. и п.1.4.

ГОСТ 5542-87	«Газы горючие природные для промышленного и коммунально-бытового назначения. ТУ»
ГОСТ 18917-82	«Газ горючий природный. Методы отбора проб».
ГОСТ 22667-82	«Газы горючие природные. Расчетный метод определения теплоты сгорания, относительной плотности и числа Воббе».
ГОСТ 22387.2-97	«Газы горючие природные. Методы определения сероводорода и меркаптановой серы».
ГОСТ 22387.4-77	«Газ для коммунально-бытового потребления. Методы определения содержания смолы и пыли».
ГОСТ 20060-83	«Газы горючие природные. Методы определения содержания водяных паров и точки росы влаги».
ГОСТ 20061-84	«Газы горючие природные. Метод определения температуры точки росы углеводородов».
ГОСТ 23781-87	«Газы горючие природные. Хроматографический метод определения компонентного состава».

ГОСТ 30319.0-96 «Газ природный. Методы расчета физических свойств». Общие положения».

ГОСТ 30319.1-96 «Газ природный. Методы расчета физических свойств. Определение физических свойств природного газа, его компонентов и продуктов переработки».

Примечание.

При определении ФХП природного газа разрешается руководствоваться положениями, инструкциями, регламентами, таблицами и другими документами, согласованными Сторонами.

7.3. Определение ФХП газа производится раздельно для каждого газопровода.

7.4. Определение ФХП природного газа на пунктах сдачи-приемки при отсутствии или выходе из строя автоматических СИ производятся со следующей периодичностью:

7.4.1. Расчетная плотность, компонентный состав, содержание кислорода, теплота сгорания низшая, число Воббе высшее, температура точки росы по влаге – ежедневно (один раз в неделю – для ГРС и ПЗРГ на газопроводах-отводах).

В случае, если автоматический потоковый хроматограф определяет кислород совместно с азотом одним пиком, измерение содержания кислорода производится на лабораторном хроматографе один раз в неделю.

7.4.2. Независимо от наличия/отсутствия автоматических потоковых СИ:

массовая концентрация сероводорода, массовая концентрация меркаптановой серы, масса механических примесей определяется два раза в месяц на всех ГИС (один раз в месяц для ГРС и ПЗРГ на газопроводах-отводах).

При изменении (переключении) потоков газа, проходящих через ГИС, в случае отсутствия или неисправности автоматических потоковых СИ, проводятся внеочередные определения ФХП природного газа с оформлением документов в соответствии со статьей 8 данного соглашения.

7.5. Работа автоматических СИ по измерению ФХП газа регламентируется «Регламентом». При решении вопроса о применении на приграничных ГИС новых типов СИ ФХП газа, такие СИ подлежат совместным испытаниям по предварительно согласованным программам.

До внедрения автоматических СИ точки росы газа по влаге или в случае их выхода из строя измерения должны производиться стационарными (переносными) СИ.

7.6 В случае транзита через систему газопроводов ОАО «Газпром» среднеазиатского газа для потребителей Украины, этот газ не должен ухудшать ФХП российского газа, транспортируемого с ним в общем потоке.

СТАТЬЯ 8. ПОРЯДОК СОСТАВЛЕНИЯ АКТОВ СДАЧИ-ПРИЁМКИ

8.1. На основании показаний основных СИ владельцем ГИС составляются суточные, месячные акты сдачи-приемки (последние - с учетом отборов и утечек газа между ГИС и государственными границами, согласно пункту 2.5.) и паспорта - сертификаты

ФХП газа и подписываются представителями обеих сторон.

8.2. Суточными актами сдачи-приемки являются почасовые распечатки автоматических вычислителей, которые подписываются представителями обеих Сторон.

Контрактный час - 10 часов московского времени за прошедшие сутки.

Перевод времени в вычислителях с зимнего на летнее, и с летнего на зимнее, осуществлять в последнюю субботу марта и октября месяца, в соответствии с решением Государственных комитетов единого времени и эталонных частот, начиная с 12 часов московского времени.

Среднесуточные показания автоматических хроматографов и измерителей точки росы заносятся в суточные паспорта - сертификаты ФХП газа. Суточным актом ФХП газа могут являться распечатки автоматических СИ ФХП газа, подписанные представителями обеих Сторон.

Суточные акты, паспорта - сертификаты ФХП газа и распечатки автоматических вычислителей совместно с другими документами, оформленные и подписанные уполномоченными на это представителями Сторон, должны храниться на пунктах сдачи-приемки в течение одного года, после чего должны быть переданы по акту на хранение в архив.

8.3. Месячный акт сдачи-приемки газа составляется и подписывается на каждой ГИС и ПЗРГ, указанных в п.1.3 и п.1.4., представителями обеих Сторон до 3-го числа месяца, следующего за отчетным, на основании суточных актов сдачи-приемки в 4-х экземплярах на русском языке - по 2 экземпляра каждой Стороне. На ГИС Орловка месячный акт составляется в соответствии с трехсторонним Соглашением между ОАО «Газпром», НАК «Нафтогаз Украины» и АО «Молдовагаз» в 6-ти экземплярах на русском языке – по 2 экземпляра каждой стороне. Акты подписываются представителями трех Сторон на основании суточных Актов сдачи-приемки до 3-го числа месяца, следующего за отчетным.

Месячные акты подписываются вне зависимости от наличия разногласий по количеству и качеству газа с обязательным изложением в нем особого мнения несогласной Стороны. Разногласия согласовываются и учитываются в акте сдачи-приемки следующего месяца. Месяцем считать промежуток времени с 1-го числа текущего месяца (10 ч. 00 мин.) по 1-е число следующего месяца (10 ч. 00 мин).

При подаче газа через ГИС, указанные в п. 2.4., по разным Контрактам в месячном акте приводится разделение объемов газа с указанием Контрактов и объемов по каждому из них.

По поручению Сторон ЗАО «Газтранзит» и ДК «Укртрансгаз» составляют и подписывают суточные и месячные акты по фактическому количеству газа, протранспортированному по лупингам газопровода АТИ (30,4-69,3 км, 304,0-333,8 км, 335,2-340,9 км), принадлежащим ЗАО «Газтранзит». Данные этих актов используются при оформлении актов об оказании услуг по транзиту.

8.4. Месячный паспорт - сертификат ФХП газа составляется на основании суточных паспортов - сертификатов ФХП до 3-го числа месяца, следующего за отчетным, в 4 экземплярах на русском языке - по 2 экземпляра каждой Стороне. На ГИС Орловка паспорт - сертификат ФХП газа за месяц составляется в соответствии с трехсторонним Соглашением между ОАО «Газпром», НАК «Нафтогаз Украины» и АО

«Молдовагаз». Месячный паспорт - сертификат ФХП газа подписывается представителями трех Сторон на основании суточных паспортов - сертификатов ФХП газа до 3-го числа месяца, следующего за отчетным.

8.5. В случае если будет обнаружена ошибка в каком-либо из суточных актов, то она должна быть исправлена отдельным протоколом в течении суток с момента обнаружения ошибки.

8.6. В окончательный расчет количества газа берутся показания основных СИ. Переход на дублирующую систему оформляется отдельным протоколом.

8.7. В случае каких-либо разногласий между Сторонами в определении количества газа, сданного и принятого в пунктах сдачи-приемки, составляется предварительный суточный акт сдачи-приемки на основании показаний СИ. После разрешения разногласий, возникшая разница учитывается в окончательном суточном акте сдачи-приёмки с обязательным приложением акта с указанием причин, вызвавших необходимость корректировки объема газа.

Разрешение спорных вопросов технического состояния измерительной части пунктов сдачи-приемки производится путем переговоров. В случае, если Стороны не смогут найти взаимоприемлемого решения, то какая - либо Сторона может обратиться в арбитражный орган согласно статье 12, пункта 2, Контракта между НАК «Нафтогаз Украины» и ОАО «Газпром» об объемах и условиях транзита природного газа через территорию Украины на период с 2003 по 2013 годы от 21 июня 2002г.

СТАТЬЯ 9. ПРОЧИЕ УСЛОВИЯ

9.1. Права и обязанности представителей Сторон на ГИС оговорены отдельным «Соглашением об условиях работы постоянных представителей ОАО «Газпром» и НАК «Нафтогаз Украины» на приграничных ГИС».

9.2. В случае проведения внутритрубной дефектоскопии прилегающих к границам ДК «Укртрансгаз» и ОАО «Газпром» участков газопроводов, Стороны в лице предприятий, на которые возлагается практическое исполнение данного Технического соглашения, заключат договор на проведение внутритрубной дефектоскопии.

9.3. Настоящее Техническое соглашение распространяется на Контракты, по которым осуществляется транзит, передача и хранение природного газа, а именно:

- Контракт между Национальной акционерной компанией «Нафтогаз Украины» и Открытым акционерным обществом «Газпром» об объемах и условиях транзита российского природного газа через территорию Украины на период с 2003 по 2013 годы от 21 июня 2002 года;
- Контракты между Национальной акционерной компанией «Нафтогаз Украины» и Компанией ROSUKRENERGO AG № 5-ТРК купли-продажи природного газа от 29 июля 2004 года, №14/935-1/04 купли-продажи природного газа в 2005-2028 годах от 29 июля 2004 года, №14/935-2/04 об объемах и условиях транзита природного газа через территорию Украины в 2005-2030 годах от 29 июля

2004 года, №14/935-3/04 об объемах и условиях закачки природного газа в подземные хранилища газа, его хранения, отбора и транспортировки в 2005-2030 годах от 29 июля 2004 года, №6/н купли-продажи природного газа от 6 марта 2008 года, №14/198/08 купли-продажи природного газа от 14 марта 2008 года;

- Контракт купли продажи природного газа в 2006-2010 годах между ЗАО "УКРГАЗ-ЭНЕРГО" и компанией "ROSUKRENERGO AG".

Настоящее Техническое соглашение может быть в любое время изменено или дополнено по согласованию Сторон с учетом возможностей работы газотранспортной системы.

Предложение одной из Сторон о внесении изменений или дополнений в Техническое соглашение должно быть направлено другой Стороне в письменной форме.

Стороны обязуются вступить в переговоры по упомянутым предложениям в течение 15 дней со дня получения предложения противоположной стороны.

9.4. Настоящее Техническое соглашение вступает в силу с момента его подписания Сторонами, применяется к отношениям Сторон, возникшим с 1 января 2008 года, и действует до 31 декабря 2008 года.

От ОАО «Газпром»
Заместитель
Председателя Правления

От НАК «Нафтогаз Украины»
Первый заместитель
Председателя Правления

И. Н. Диденко

Валов В. Я.

Н.Н. Дубик
Начальник Юридического департамента

29.07.08
М.Е. Юрьев

С.И. Кузнец

Приложение №1

Направления и протяженность транзита российского природного газа через территорию Украины

на ГИС Ужгород:

1. УПУ+ «Прогресс»	- 1136,5 км
2. «Союз»	- 1538,4 км
3. Уренгой-Новопсков-«Союз»	- 1510,0 км
4. Курск-Киев-КЗУ-ДУГ-2	- 1196,0 км
5. ЕКД-Киев-КЗУ-ДУГ-2	- 1295,8 км
6. Ивацевичи – Долина-Ужгород	- 579,3 км
7. Торжок-Долина-Ужгород	- 720,5 км

на ГИС Берегово:

1. «Прогресс»-Берегово	- 1147,0 км
2. Елец-Кременчуг-АЧБ-Берегово	- 1234,2 км
3. «Союз» - КС Богородчаны-«Прогресс»	- 1519,9 км

на ГИС Орловка:

1. ЕККР-АТИ, в т.ч.	- 939,4 км
1.1. Транзит по участку НАК «Нафтогаз Украины»	- 865,0 км
1.2. Транзит НАК "Нафтогаз" совместно с ЗАО «Газтранзит»:	
- участок (30,4 – 69,3 км)	- 38,9 км
- участок (304,0 – 333,8 км)	- 29,8 км
- подводный переход через р. Дунай (335,2 – 340,9 км)	- 5,7 км
2. Транзит по участку НАК "Нафтогаз Украины" ЕККР-АТИ-ШДКРИ,РИ	-900,5 км
3. Острогожск-Шебелинка-ШДКРИ	-935,4 км

на ГИС Дроздовичи:

1. Кобрин-Дроздовичи	- 374,4 км
3. КК-КЗУ- Дроздовичи	- 1126,0 км

на ГИС Теково:

1. УПУ-КС Богородчаны-«Союз»-Теково	- 1093,1 км

А.М. Парамонов

на Молдову:

1. УПУ-КС Богородчаны-ГИС Алексеевка	- 1176,7 км
2. Острогожск-Н.Псков-ШДКРИ	- 891,1 км
3. Елец-Кременчуг-Ананьев-Гребенники-ШДКРИ,РИ	- 770,3 км
4. Писаревка-Н.Псков-ШДКРИ	- 897,1 км
5. Острогожск-Шебелинка-ШДКРИ	- 796,5 км
6. Елец-Кременчуг-Ананьев-Гребенники	- 770,3 км
7. Елец-Кременчуг-Ананьев-Шолданешты	- 748,1 км
8. Елец-Кременчуг-Радушное-Гребенники	- 812,0 км

От ОАО «Газпром»

Заместитель Председателя Правления

А.В. Ручкин

От НАК «Нафтогаз Украины»

Первый заместитель Председателя Правления

И. Н. Диденко

Валов В.Я.

Г.В. Кучеризенко

ОТКРЫТОЕ АКЦИОНЕРНОЕ ОБЩЕСТВО ТЮМЕНСКАЯ НЕФТЯНАЯ КОМПАНИЯ
(ОАО "ТНК")

Юридический адрес:
625000, Тюмень, ул. Ленина, 67
Телефон: (3452) 46 5012
Факс: (3452) 25 1819

Почтовый адрес:
115093, Москва, ул. Щипок 18, стр. 2
Телефон: (095) 787-8950
Факс: (095) 787 9668

20.06.03 № 04-100/0070и
На № _____ от _____

Президенту Украины
господину Кучме Л.Д.

Уважаемый Леонид Данилович!

23 апреля 2003 года между ОАО «АК Транснефть» и ОАО «Тюменская нефтяная компания» (ОАО «ТНК») с российской стороны, НАК «Нефтегаз Украины» и ОАО «Укртранснефть» с украинской стороны был подписан Протокол о намерениях по вопросу организации нового маршрута экспорта российской нефти транзитом через территорию Украины с отгрузкой в порту «Южный» и использованием реверса нефтепровода «Одесса-Броды». В соответствии с указанным Протоколом ОАО «ТНК» подтверждает и гарантирует задекларированную поставку не менее 9 млн.тонн нефти в год (начиная с осени 2003 года).

11 июня 2003 года состоялась Ваша встреча с Главным управляющим директором компании «British Petroleum p.l.c.» Лордом Джоном Брауном, в ходе которой в качестве одного из основных обсуждался вопрос обеспечения эффективного и безопасного функционирования отдельных нефтетранспортных систем на территории Украины.

По результатам последовавшей за этим встречи Вице-премьер министра Украины В.А.Гайдука с руководством компании «British Petroleum p.l.c.» и ОАО «ТНК» был подписан Меморандум, в котором стороны также подчеркнули необходимость содействия эффективному функционированию трубопроводных систем Украины.

В связи с вышеизложенным учитывая важность и актуальность задачи по началу эксплуатации нефтепровода «Одесса-Броды», просим Вас, уважаемый Леонид Данилович, дать указание об организации рабочей группы с привлечением представителей ОАО «ТНК» для комплексной подготовки и рассмотрения данного вопроса на заседании Кабинета Министров Украины.

С глубоким уважением,

Исполнительный директор Г.Б.Хан

АДМИНИСТРАЦИЯ ПРЕЗИДЕНТА УКРАИНЫ
24.06.2003
вх.№ 403/22561-0

Премьер-министру Украины

В.Ф. Януковичу

Уважаемый Виктор Федорович!

В процессе формирования Единого экономического пространства значительную роль играет углубление интеграционных процессов в топливно-энергетических комплексах наших стран.

Положительный опыт сотрудничества российских и украинских компаний в реализации инвестиционных проектов на территории России и Украины создает условия для дальнейшего расширения взаимовыгодного партнерства, в том числе, в области развития действующих и создания новых перспективных маршрутов транспортировки нефти.

В этой связи, подписание в апреле этого года Протокола о намерениях по вопросу организации нового маршрута экспорта российской нефти с использованием реверса нефтепровода «Одесса - Броды» является важным шагом в укреплении двухстороннего сотрудничества.

Существующие и прогнозируемые уровни добычи нефти позволяют нам гарантировать стабильную и полную загрузку трубопровода «Броды-Одесса», что положительным образом отразится на социально-экономической ситуации районов его прохождения, позволит обеспечить дополнительные доходы бюджета Украины и будет способствовать дальнейшему развитию межгосударственных отношений.

По оценкам экспертов, увеличение объема транзита нефти через черноморские проливы на 9 млн. тонн год не окажет существенного влияния на судоходство и экологическую обстановку в регионе, в связи с чем реализация проекта не повлечет негативных последствий для других участников международной торговли.

1

ДЕПАРТАМЕНТ ДІЛОВОДСТВА ТА МОНІТОРИНГУ СЕКРЕТАРІАТУ КАБІНЕТУ МІНІСТРІВ УКРАЇНИ

Учитывая изложенное, просим Вас, уважаемый Виктор Федорович, оказать содействие в скорейшей реализации проекта и поручить заинтересованным органам власти включить указанное направление транзита российской нефти по территории Украины в Соглашение между Правительством Российской Федерации и Кабинетом Министров Украины.

С уважением,

Президент ОАО «АК «Транснефть» С.М. Вайншток

Президент ОАО «Роснефть» С.М. Богданчиков

Заместитель Председателя Правления – Исполнительный директор ОАО «ТНК» Г.Б. Хан
исх. 04-30/0009м от 20.06.03

Председатель правления ОАО «НК ЮКОС» М.Б. Ходорковский
исх.№ 202-616 от 23.06.2003г.

Президент ОАО «Сибнефть» Е.М. Швидлер

Президент ОАО «НГК «Славнефть» Ю.Е. Суханов
исх.№ НК-1998 от 20.06.03

АДМІНІСТРАЦІЯ ПРЕЗИДЕНТА УКРАЇНИ
КОНТРОЛЬ

ПРЕЗИДЕНТ УКРАЇНИ

ДОРУЧЕННЯ

В.ЯНУКОВИЧУ

З метою забезпечення ефективного використання нафтопроводу "Одеса - Броди":

утворити робочу групу із залученням, зокрема, компанії "British Petroleum - ТНК" для опрацювання питання щодо використання нафтопроводу для транзиту нафти;

розглянути на засіданні Кабінету Міністрів України пропозиції, підготовлені робочою групою.

Доповісти – до 20 липня 2003 року

Л.КУЧМА

Вих.№ 1-1/767
від 23 червня 2003 року

ДЕПАРТАМЕНТ ДІЛОВОДСТВА ТА МОНІТОРИНГУ СЕКРЕТАРІАТУ КАБІНЕТУ МІНІСТРІВ УКРАЇНИ

ПРЕМ'ЄР-МІНІСТР
УКРАЇНИ

До доручення Президента України від 23.06.2003 № 1-1/767

ГАЙДУКУ В.А.
ЄРМІЛОВУ С.Ф.
ХОРОШКОВСЬКОМУ В.І.
ЗЛЕНКУ А.М.
БОЙКУ Ю.А.
ТОДІЙЧУКУ О.С.

Утворити робочу групу відповідно до вказівки Глави держави, всебічно опрацювати питання щодо використання нафтопроводу "Одеса-Броди" для транзиту нафти та підготувати пропозиції для розгляду на засіданні Кабінету Міністрів не пізніше 16 липня поточного року. За результатами підготувати проект доповіді Президенту України.

Термін - до 17 липня 2003 року

ЯЦУБІ В.Г.

Проскуркіну В.П.
Ратушняку І.С.
Янчуку Ю.М.

Віктор ЯНУКОВИЧ

"26" червня 2003 р.

№ 37609

ChevronTexaco Corporation
6001 Bollinger Canyon Road
San Ramon, CA 94583-2324
Tel 925 842-3232
Fax 925 842-1230
dj oreilly@chevrontexaco-.com

David J. O'Reilly
Chairman and
Chief Executive Officer

ChevronTexaco

January 29, 2004

His Excellency Leonid Kuchma
President of the Republic of Ukraine
Kiev

Dear Mr. President:

I am writing to follow up on the enclosed letter from the President of ChevronTexaco Overseas Petroleum, George Kirkland, and to confirm personally to you the interest of ChevronTexaco in developing access to. our Central European customers through the Odessa-Brody pipeline.

As Mr. Kirkland's letter indicates, there are a number of technical and economic issues to be resolved in transporting our oil through the pipeline. Nevertheless, I believe your original vision for this project to provide a new transportation outlet for Caspian crude is economically viable and strategically important.

We are prepared to continue to work actively with UkrTransNafta and the other pipelines along the route to implement this project and make shipments through Odessa Brody to central Europe a reality.

Sincerely your,

Enclosure

ОТКРЫТОЕ АКЦИОНЕРНОЕ ОБЩЕСТВО
АКЦИОНЕРНАЯ КОМПАНИЯ
ПО ТРАНСПОРТУ НЕФТИ "ТРАНСНЕФТЬ"
ОАО "АК "ТРАНСНЕФТЬ"

ул. Щепкина Пасечная, 57, Москва, Россия, 119180,
тел. 953-86-94, телефакс: 953-55-25, факс-сервер: 930-89-00,
телекс: 911560 BOLID RU, Телекс: 611274 LAZER RU, 611321 LAZER RU,
ОКПО 00044463, ОГРН 1027700094486, ИНН/КПП 7706061901/997150001

29.04.04 № 13-05-04/ 976

На № _____ от _____

Генеральному директору
АО «Транспетрол»

Штефапу Цуцу

Уважаемый господин Цуцу!

По имеющейся в Компании информации планируется проведение эксперимента по поставке нефти по участку «Броды-Ужгород» нефтепровода «Дружба» по резервной схеме учета в направлении НПЗ Кралупы, расположенных на территории Чехии.

Указанная операция не согласована с ОАО «АК «Транснефть», что нарушает условия «Соглашения о сотрудничестве и совместной деятельности между ОАО «АК «Транснефть» и АО «Транспетрол» от 13.04.1999г, предусматривающего сотрудничество по вопросам обеспечения транспортировки нефти на НПЗ Словакии и транзитом через территорию Словацкой Республики и недопущение действий, наносящих экономический ущерб друг другу.

Считаю необходимым отметить, что по указанному нефтепроводу осуществляются бесперебойные поставки российской нефти, оформляемые маршрутными поручениями в соответствии с таможенными требованиями государств, через территорию которых осуществляется перемещение нефти.

ОАО «АК «Транснефть», заключив с российскими нефтяными компаниями договоры об оказании услуг по транспортировке до конечного пункта назначения ПСН «Будковце», обеспечивает поставку нефти, показатели качества которой соответствуют требованиям ГОСТ Р 51858, и оформление учетных документов.

Несогласованные с ОАО «АК «Транснефть» действия по поставке дополнительных количеств нефти приведут к несанкционированному изменению качества сдаваемой, в пункте назначения нефти, ограничению принимающей стороны, невыполнению графика транспортировки нефти для экспорта, утверждаемого Комиссией Правительства Российской Федерации, срыву обязательств ОАО «АК «Транснефть» перед российскими производителями и контрактных обязательств нефтяных компаний перед иногокупателями.

Нашей Компанией осуществляется деятельность по формированию грузопотоков и контролю качества нефти, и, соответственно, любые действия по изменению состава и количества нефти в потоке не могут осуществляться в одностороннем порядке без участия ОАО «АК «Транснефть».

Предполагаемая схема учетных операций по резервной схеме не сможет обеспечить достоверность учета не только «экспериментальной» партии нефти, но и всей перемещаемой в этот период нефти по показаниям СИКН № 701.

На основании изложенного, считаем неправомерным осуществление поставок нефти через ПСН «Будковце» в нарушение установленных норм и требований, предъявляемых заинтересованными сторонами к документальному оформлению партий нефти, учету количества и контролю качества транспортируемой нефти.

Вице-президент С.К.Евлахов

Kiev, Ukraine
January 23, 2004

Your Excellency:

We are writing to express our concern over indications that Ukraine is wavering in its commitment to use Odesa-Brody as a land-based Caspian oil transport corridor to Europe. We also want to reaffirm our convictions that utilizing the Odesa-Brody-Southern Druzhba as an oil transport corridor to Central Europe makes short-term and long-term commercial, economic and political sense for Ukraine.

As you make your decision on how best to use the Odesa-Brody pipeline, we think it is important to offer the following observations. First, even in the short-term, Odesa-Brody provides a higher cash flow for Ukraine than reversal of the pipeline if Ukraine seeks to maximize total revenue from all of its pipelines. Second, western oil companies are trying to negotiate contracts with Ukraine, but the Ukrainian government has not named an individual authorized to make binding commitments on tariff negotiations, and this has blocked further progress. Third, constraints on the Turkish Straits will require bypass options to be built. Ukraine will lose its opportunity as a leading bypass option if Odesa-Brody is reversed, even temporarily. We expand on these points in this letter.

Ukraine has made progress in advancing the Odesa-Brody project. Having completed its construction, Ukraine succeeded in attracting the attention of major foreign oil companies and received both political and technical support from the European Commission and the United States Government. The signing of agreements with Polish companies to receive Caspian crude through Odesa-Brody demonstrates one example of market demand in Europe. Western companies continue to actively negotiate a transportation agreement despite recent negative indicators and government inaction to address outstanding issues including the development of a mutually beneficial tariff methodology. Ukraine's decision to date not to field a commercially competent negotiating team with proper authorities to successfully conclude an international standard transportation agreement hinders progress. Such lack of commitment would ordinarily dampen enthusiasm for the project, yet suppliers, transporters and consumers are still,at the table. This continued enthusiasm is strong evidence of its commercial feasibility.

The positive step of signing the joint implementation agreement on extension of Odesa-Brody to Plotsk and Gdansk will be nullified by even a short-term, "temporary" reversal. "Temporary" reversal will render Odesa-Brody's extension commercially infeasible, and inaction as regards negotiation of an oil transportation agreement will preclude the possibility of reaching Odesa-Brody's true potential.

His Excellency
Leonid Kuchma
President of Ukraine
Kiev, Ukraine

The Odesa-Brody-Southern Druzhba project is a win-win-win for Ukraine, Caspian and Urals suppliers, and the ever-more environmentally-conscious European market. It opens a reliable, land-based route for both Caspian and Urals crudes to Czech and German markets in the short-term and Austrian, Polish and other European markets in the longer term. Supply and demand are already present, and prospects for using Odesa-Brody to its full potential are strong. On the other hand, reversing Odesa-Brody to deliver Urals crude for less than three years is neither commercially beneficial, technically feasible, nor politically expedient.

Despite Russian suppliers' claims that they are in dire need of export routes, they did not meet their third quarter supply commitments through Ukraine. Since Ukraine has not insisted on the western standard of "ship-or-pay" contracts, there was a loss for Ukraine's transit system. Even if the additional export access were necessary, Russian suppliers, who presently ship about 9 million tons of crude by rail, can use up to 9, million tons of capacity available on the already proven Pridniprovskiy route which is cheaper and faster than the Brody-Odesa alternative. The use of the Pridniprovskiy route would free up Odesa-Brody to be used as originally intended while providing Russian producer/shippers a previously unattainable land-based route through the southern Druzhba to Germany.

Russian suppliers have recently claimed that volumes through Ukraine to the Turkish Straits will not increase, despite record highs in oil production. Some claim they will just change routes from rail to the pipeline. If this claim were true, Ukraine would not gain new transit fees, and net income would actually decrease. In addition, without "ship-or-pay" commitments, suppliers can transport as much or as little as they want.

According to some estimates, reverse operation of the Odesa-Brody pipeline would mean at least an additional 20 million tonnes of oil transportation in the Turkish Straits annually. Apart from the unacceptable ecological threats any such project would mean for the Black Sea, the volume of traffic flow in the Turkish Straits has already exceeded the limits of safe navigation. A maritime accident in the Straits involving hazardous cargo not only has the potential of endangering the lives of thousands of people, but also may cause irreversible damage to the environment and the cultural heritage of Istanbul. Navigational safety in the Straits is vital for all nations using them, particularly for the littoral states of the Black Sea. We are sure that you and other Ukrainian authorities are well aware that the Turkish Straits are not a viable and acceptable option for the transportation of additional dangerous and hazardous cargo including oil.

If the Government of Ukraine chooses the Odesa-Brody-southem Druzhba route to Central Europe, it will not only bring in significant oil transport revenues, Ukraine will enjoy a multiplier effect by signaling to global markets that Ukraine is a welcoming environment for foreign investment. Ukraine could accrue multiple benefits if it acts swiftly to take control of this process. Odesa-Brody could have already been operational if Ukrainian authorities had empowered a commercially competent negotiating team. We would welcome a Cabinet of Ministers' decision to use Odesa-Brody to transport light-sweet crudes to Europe. Active engagement will be the true test of Ukraine's

commitment. Choosing the Central European direction will also send a clear signal that Ukraine is serious about its avowed Euro-Atlantic integration intentions, while choosing reversal will be a signal to the contrary.

Trusting that you will make the right choice for Ukraine, we look forward to cooperation on this very significant matter and extend to Your Excellency the assurances of our highest considerations.

Karel Stindl
Ambassador of the
Czech Republic

Marek Ziolkowski
Ambassador of Poland

Ali Bilge Cankorel
Ambassador of the
Republic of Turkey

John E. Herbst
Ambassador of the
United States of America

cc: The Honorable Viktor Yanukovych, Prime Minister
The Honorable Andriy Klyuyev, Deputy Prime Minister
The Honorable Kostyantyn Gryschchenko, Minister of Foreign Affairs

Неофіційний переклад

23 січня 2004 р.
м. Київ, Україна

Ваша Високоповажносте:

Ми звертаємося до Вас, щоб виразити своє занепокоєння щодо сигналів про вагання України в прийнятті рішення про використання нафтопроводу "Одеса-Броди" як суходольного коридора для транспортування нафти з Каспійського басейну в Європу. Ми також хочемо іще раз підтвердити наші переконання про те, що використання нафтогонів "Одеса-Броди"- Південна "Дружба" як нафто-транспортного коридору до Центральної Європи є раціональним для України з комерційних, економічних та політичних міркувань як в короткостроковій, так і в довгостроковій перспективі.

В той час, коли приймається рішення про те, як найкраще використовувати нафтопровід "Одеса-Броди", ми вважаємо важливим запропонувати Вам наступні спостереження. По-перше, якщо Україна прагне максимально збільшити надходження від усіх своїх нафтопроводів, "Одеса-Броди" навіть у короткостроковій перспективі, забезпечить більший дохід Україні, аніж реверс нафтопроводу. По-друге, західні нафтові компанії намагаються провести з Україною переговори щодо контрактів, однак уряд України не призначив уповноваженої особи, яка б могла визначати тарифні зобов'язання на переговорах, і це блокує подальший прогрес у цьому напрямку. По-третє, обмеження в районі Турецьких проток вимагатимуть будівництва обхідних шляхів. Якщо відбудеться реверс "Одеса-Броди", навіть на тимчасовій основі, Україна втратить можливість стати провідним обхідним маршрутом. Ми детальніше розкриваємо вказані пункти в цьому листі.

Україна досягла прогресу у просуванні проекту "Одеса-Броди". Після завершення його будівництва, Україні вдалося привернути увагу основних зарубіжних нафтових компаній і отримати як політичну, так і технічну підтримку з боку Європейської Комісії та уряду Сполучених Штатів. Підписання угод з польськими компаніями про. отримання каспійської нафти через "Одесу-Броди" демонструє один з прикладів наявного попиту на ринку Європи. Західні компанії продовжують активно вести переговори щодо транспортної угоди, незважаючи на нещодавні негативні сигнали та відсутність дій уряду для вирішення неврегульованих питань, включаючи розробку обопільно вигідної методології нарахування тарифів. Прогресу заважає те, що до сьогоднішнього дня, рішенням України не призначено компетентної з комерційної точки зору команди, наділеної потрібними повноваженнями для того, щоб успішно укласти транспортну угоду, що відповідатиме міжнародним стандартам. Відсутність таких зобов'язань зазвичай зруйнувало б оптимістичне ставлення до проекту, однак постачальники, транспортувальники і споживачі і досі виявляють зацікавленість. Це продовження зацікавленості проектом є сильним свідченням про його комерційну придатність.

Його Високоповажності
Леоніду Кучмі
Президенту України
м. Київ, Україна

АДМІНІСТРАЦІЯ ПРЕЗИДЕНТА УКРАЇНИ
27 01 2004
ВХ № 404/2954-01

Єфект від такого позитивного кроку, як підписання угоди про спільні дії щодо продовження "Одеси-Броди" до Плоцька, буде знищений навіть короткостроковим, "тимчасовим", реверсом. "Тимчасовий" реверс зробить продовження "Одеси-Броди" непрактичним з комерційної точки зору, і бездіяльність у переговорах по транспортній угоді перешкоджатиме можливості розкриття справжнього потенціалу "Одеса-Броди".

Проект "Одеса-Броди"- Південна "Дружба" є виграшним для України, постачальників каспійської та уральської нафтосумішей, а також для європейських ринків, які сьогодні, як ніколи, виявляють стурбованість екологічними аспектами. Цей проект відкриває надійний сухопутний шлях до чеських та німецьких ринків в короткостроковій перспективі та до австрійських, польських та ринків інших європейських країн у. більш віддаленому майбутньому. Пропозиція та попит вже існують, і використання "Одеса-Броди" в повному обсязі його потенціалу має потужні перспективи. З іншого боку, реверсування "Одеса-Броди" для постачання нафти Юралз на менш ніж три роки не є ні комерційно вигідним, ні доцільним з технічної чи політичної точок зору.

Хоч російські постачальники і говорять, що їм конче потрібні нові експортні шляхи, вони на ділі не виконали своїх зобов'язань по обсягах постачання територією України за третій квартал. Оскільки Україна не вимагала стандартної у західних контрактах умови про накладення штрафу в разі недопостачання, транзитна система Україна понесла певні збитки. Навіть якщо й існувала б необхідність у додатковому експортному шляхові, російські постачальники, які в даний час перевозять близько 9 мільйонів тон нафти залізницею, могли б використати для 9 мільйонів тон вже перевірені потужності "Придніпровських магістральних нафтопроводів", що є дешевшим і швидшим шляхом, аніж альтернативний шлях "Броди-Одеса". Використання маршруту через "Придніпровські" звільнило б "Одесу-Броди" для експлуатації таким чином, як це планувалося від початку, одночасно надаючи російським нафтовидобувникам/ постачальникам раніше недосяжний сухопутний маршрут через південну гілку "Дружби" до Німеччини.

Російські постачальники стверджували, що потік нафти через Україну в напрямі Турецьких проток не збільшиться, незважаючи на рекордно високі обсяги видобування. Деякі з них говорять, що вони просто змінять маршрути, перевантаживши обсяги, що транспортуються залізницею, у трубопроводи. Якщо ці твердження відповідатимуть дійсності, Україна не отримає нових надходжень від транзиту, а чистий дохід, насправді, навіть би зменшився. Окрім того, не маючи за контрактом зобов'язань про сплату штрафу в разі недопостачань, постачальники можуть перекачувати як завгодно багато чи мало, на власний розсуд.

За оцінками деяких експертів, використання "Одеса-Броди" у реверсному напрямі означало б додатково як мінімум 20 мільйонів тон надходжень в район Турецьких проток щорічно. Навіть не враховуючи неприпустимі екологічні загрози, які будь-який такий проект ніс би для Чорного моря, вантажопотік в Турецьких протоках вже перевищує допустимі обмеження для безпечної навігації. Аварія у водах Турецьких проток, в якій був'би задіяний небезпечний вантаж, не тільки потенційно загрожувала б життю тисяч людей, але також і спричинила б невиправну шкоду довкіллю і культурній спадщині Стамбулу. Навігаційна безпека в Протоках є життєво важливою для всіх розташованих навколо країн, особливо причорноморських. Ми переконані, що Вам та іншим владним представникам України, добре відомо, що Турецькі протоки не є ні доцільним, ні прийнятним варіантом транспортування додаткових обсягів шкідливих та небезпечних вантажів, включаючи нафту.

Якщо уряд України обере шлях "Одеса-Броди"- Південна "Дружба" до Центральної Європи, це не тільки принесе значні доходи від транспортування нафти, але й дасть Україні переваги помноженого ефекту, надіславши сигнал світовим ринкам, що Україна є гостинним середовищем для іноземних інвестицій. "Одеса-Броди" вже могла б розпочати функціювання, якби українські урядовці призначили комерційно компетентну команду для переговорів. Ми вітали б рішення Кабінету міністрів України про використання "Одеса-Броди" для транспортування легкої каспійської нафти в Європу. Активне залучення стане справжньою перевіркою зобов'язань України. Вибір у напрямку Центральної Європи також стане чітким сигналом про серйозність проголошених намірів України про Євроатлантичну інтеграцію, в той час, коли вибір ревесного варіанту дасть рішучий сигнал про протилежне.

Сподіваючись, що Ви зробите правильний для України вибір, ми з нетерпінням очікуємо співпраці з цього дуже важливого питання і виражаємо Вашій Високоповажності запевнення в своїй глибокій повазі.

Карел Стіндл,
Посол Чеської
Республіки

Марек Зіолковскі,
Посол Республіки
Польща

Алі Більге Джанкор,
Посол Республіки
Туреччина

Джон Е. Гербст,
Посол Сполучених Штатів
Америки

Копія: Високоповажному Віктору Януковичу, Прем'єр-міністру України
Високоповажному Андрію Клюєву, Віце-прем'єр-міністру України
Високоповажному Костянтину Грищенку, Міністру закордонних справ

Annex 6

EUROPEAN COMMISSION

Cabinet of Commissioner Günther Oettinger
Member of Cabinet

Brussels 30. 11. 2010
PP/cg A/2715 (2010) 885025

Mr Mykhailo Gonchar
President, Co-ordinator of WG3
Eastern Partnership - Civil Society Forum
Centre of Global Studies "Strategy XXI"
Olzhycha str,13 - Off. #22
04060 Kyiv
Ukraine

Dear Mr Gonchar,

Thank you for your letter of 6th July 2010 to the EU Commissioner for Energy, Mr Günther H. Oettinger, concerning the work that has been undertaken by the Centre of Global Studies "Strategy XXI" on the issue of energy and energy security, and for indicating the main conclusions of the latest project on "Energy resources and their delivery infrastructure: the potential for inappropriate operation in Europe".

Commissioner Oettinger has asked me to reply on his behalf.

Clearly, tackling the challenge of ensuring energy security requires the EU to use a wide range of tools ranging from internal measures, such as improving energy efficiency and the development of renewable energies, creating a truly EU wide internal energy market that is fully interconnected and integrated through to external initiatives, with our main energy partners, be they suppliers or transit countries. In particular, the recent membership of Moldova and the upcoming membership of Ukraine in the Energy Community will entail the expansion of the EU's energy market model to these countries.

In all our energy relations with third countries, the principles of open, competitive markets, transparency and predictability are fundamental. For instance, we are in the process of negotiating a New Agreement with Russia to follow on from the existing Partnership and Co-operation Agreement; it is the intention of the Commission to have robust provisions on energy that will be of mutual benefit and designed to put our energy relations on a firmer footing.

Your proposal on an Energy Transparency Regime and the list of key points that you believe warrant further consideration, will be taken into consideration in the ongoing work to prepare the Communication on external energy relations that is due next year.

Yours sincerely,

Paula Pinho

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Неофіційний переклад

Європейська комісія
Кабінет Комісара Гюнтера Оеттінгера
Член кабінету

30.11.2010 року
Брюссель

Пану Михайлу Гончару
Президенту Центру глобалістики «Стратегія XXI»,
Координатору РГ3 Форуму громадянського суспільства Східного партнерства
вул. Ольжича 13, оф. 22
м. Київ, 04060
Україна

Шановний пане Гончар,

Дякую Вам за Ваш лист від 6 липня 2010 Комісару ЄС з енергетики пану Гюнтеру Х. Оеттінгеру, що стосується роботи, виконаної Центром глобалістики "Стратегія XXI" з питання енергетики й енергетичної безпеки, і за надання основних висновків по останньому проекту "Енергетичні ресурси і інфраструктура їх доставки: потенціал непрофільного використання в Європі".

Комісар Оеттінгер попросив мене відповісти від його імені.

Очевидно, що рішення проблеми забезпечення енергетичної безпеки вимагає від ЄС використання широкого спектру інструментів, починаючи від внутрішніх заходів, таких, як підвищення енергоефективності та розвиток відновлюваних джерел енергії, створення дійсно широкого внутрішнього енергетичного ринку ЄС, який повністю взаємопов'язаний і інтегрований до зовнішніх ініціатив наших основних енергетичних партнерів - чи то постачальників, чи транзитних країн. Зокрема, останнє членство Молдови і майбутнє членство України в Енергетичному співтоваристві спричинить за собою розширення моделі енергетичного ринку ЄС для цих країн.

У всіх наших енергетичних відносинах з третіми країнами фундаментальними є принципи відкритих, конкурентних ринків, прозорість і передбачуваність. Наприклад, ми знаходимося у процесі переговорів щодо нової угоди з Росією, яка стане продовженням існуючої Угоди про партнерство та співробітництво. В контексті нової Угоди наміром Єврокомісії є досягнення надійних положень в галузі енергетики, які будуть взаємовигідні і призначені для приведення наших відносин у сфері енергетики до більш міцної основи.

Ваша пропозиція по Режиму енерготранспарентності і перелік ключових моментів, які, на Вашу думку, важливі для подальшого розгляду, будуть прийняті до уваги в поточній роботі з підготовки Комунікації з зовнішніх енергетичних зв'язків, яка має вийти в наступному році.

З повагою,

Паула Піньйо

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About authors

Mykhailo Gonchar

Mykhailo Gonchar is expert with 25 years of experience in fields of national and international security, energy security and hydrocarbons infrastructure. During his career he served in governmental and non-governmental organizations, think tanks, including a management of the company active in the field of hydrocarbons infrastructure. At the present he is the President of the Centre for Global Studies "Strategy XXI" (Kyiv) from 2008 and the Director of Energy Programs of the NOMOS Center (Sevastopol) from 2006. He is the former Deputy Chairman of the Board of the Ukrainian National Oil Transportation Operator JSC UkrTransNafta as well as former Advisor to the Secretary of National Security and Defense Council. He was an expert of Joint Working groups for economic cooperation between Ukraine and Poland, Czech Republic, Slovakia, Germany, Croatia, Azerbaijan, Georgia, Kazakhstan, Russia, Turkey (2001-2006).

M. Gonchar is author of several publications (in co-authorship):

"From the energy crises to mutual trust through transparency in the Upstream – Midstream – Downstream chain", ("International Issues & Slovak Foreign Policy Affairs" Vol. XIX, No. 1/2010, Bratislava, Slovakia);

"2009 gas conflict and its consequences for the European energy security" (Oil, Gas & Energy Law Intelligence, 2 (2009), The Netherlands);

The impact of Nord Stream, South Stream on the gas transit via Ukraine and security of gas supplies to Ukraine and the EU, (Electronic Publications of Pan-European Institute "The EU-Russia gas connection: Pipes, politics and problems", №8/2009, Finland);

Ukrainian Oil&Gas Sector: Transparency of functioning and revenues, Kyiv-Sevastopol 2008.

Alexander Duleba

Alexander Duleba is the director of the Research Center of the Slovak Foreign Policy Association (RC SFPA). He obtained the PhD degree in political science from the Institute for Political Sciences of the Slovak Academy of Sciences in 1998 and the Ass. Prof. (Doc.) degree from the Comenius University in Bratislava in 2009. From May 1993 until August 1995 he was an analyst with the Slovak Institute for Inter-

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His main publications includes: (2010) Toward a Strategic Regional Framework for the EU Eastern Policy. Searching for Synergies between the Eastern Partnership and the Partnership for Modernization with Russia, 52 p., co-author; (2009) Searching for New Momentum in EU-Russia Relations. Agenda, Tools and Institutions, 224 p., editor; (2008) The Reform of the Neighborhood Policy. Tools, Institutions and a Regional Dimension, 79 p., co-author; Regional Integration in the East and West: Challenges and Responses, 250 pp, co-editor; (2004) Foreign Policy of Slovakia after NATO and EU Accession, 115 pp, co-editor; (2003) Eastern Policy of the Enlarged European Union. A Visegrad Perspective, 272 pp, co-editor; (2000) Ukraine and Slovakia, 402 pp.

Oleksandr Malynovskyi

O. Malynovskyi is a Master of International Law (Institute of International Relations, T. Shevchenko Kyiv National University, Ukraine) and Master of International Studies (Complutense University, Madrid, Spain). During 1997-1998 he studied at the Diplomatic School of Spain. O. Malynovskyi has been practicing law since 1998. He served at the Ministry of Foreign Affairs of Ukraine and the Administration of the President of Ukraine. He has been engaged in consultancy and private legal activities since October 2004.

He participated in international and intergovernmental negotiations on the settlement of topical issues of interstate cooperation, including in the gas field. He provided consultancy services for the implementation of production of hydrocarbons projects in the UAE and Egypt. O. Malynovskyi was awarded a "Lawyer of the Year 2010 - a representative of private law Company within the annual national Ukrainian competition "Lawyer of the Year" organized by the Ukrainian Union of Lawyers.

O. Malynovskyi has the diplomatic rank of adviser of the first class.

He authored a number of publications on energy issues, in particular:
Ukrainian Oil&Gas Sector: Transparency of functioning and revenues // Kyiv-Sevastopol 2008 (co-authored);
Ukrainian-Russian Gas Agreements: Pro et Contra // Dzerkalo Tyzhnia, No. 45 (773), 21 November 2009 (co-authored);
From the Energy Crises to Mutual Trust Through Transparency in the Upstream – Midstream – Downstream Chain // International Issues and Slovak Foreign Policy Affairs, Vol.XIX, Issue 01/2010, Bratislava, Slovakia (co-authored);
Gas Market Law: New Perspectives // Dzerkalo Tyzhnia, No. 43 (823), 20 November 2010.