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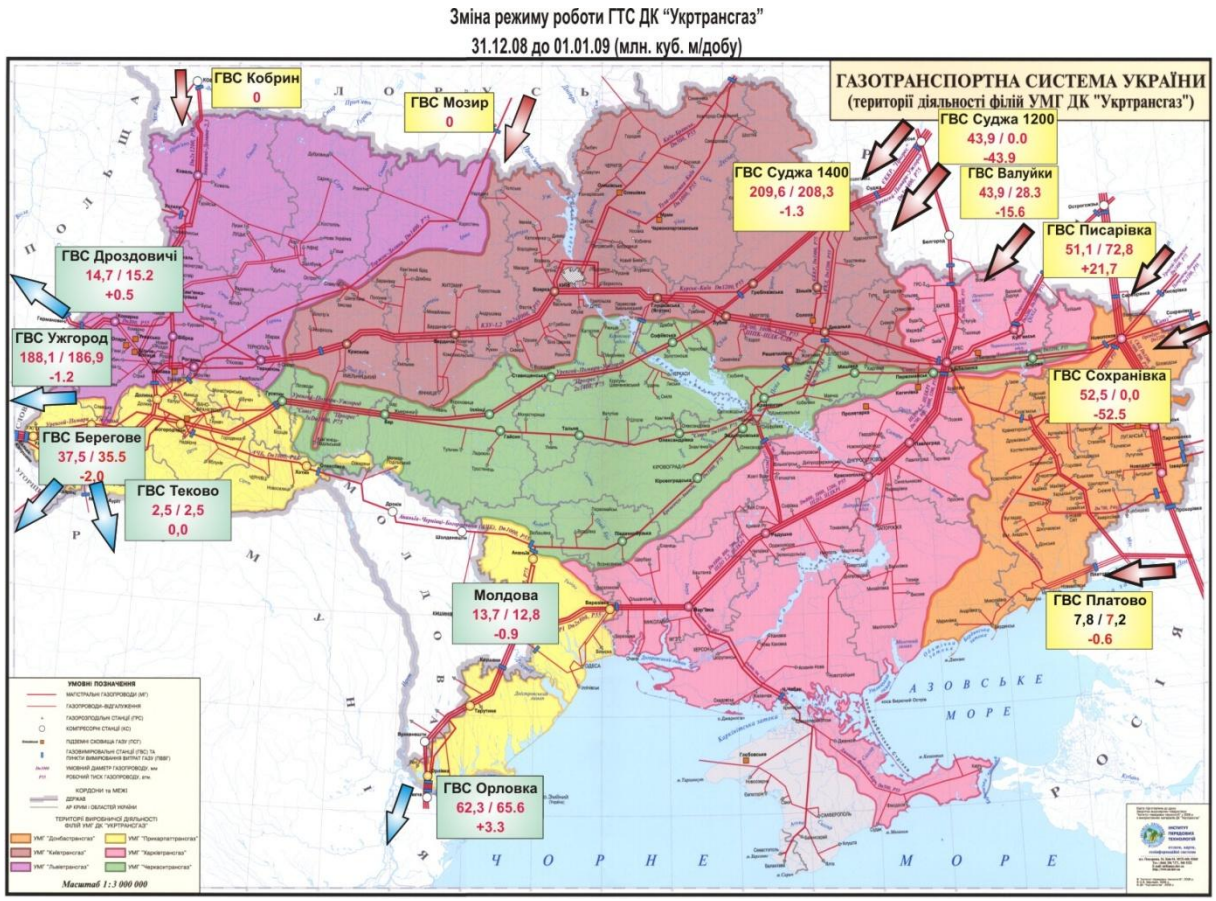
Lessons for European Union from the Russian-Ukrainian Natural Gas Crisis

Let's start from New Year's Eve 2009! Really a very good time for commencing business meeting and discussion on deliveries of the raw materials for European Union Economy… Financial crisis is already entering our homes and instead of New Year's parties and greeting cards you have probably received following postcard from UkrTransGaz:



Map 1. Operational regime change Dec.,31st.2008 – Jan.,01st .2009 *Source: UkrTransGas*

Instead of best wishes from your President, Prime Minister or Mr. Andris Piebalgs Commissioner for Energy you could have heard information (living far, far away from Paris or London but not only somewhere in Slovakia or Bulgaria) that probably in few days your home gas heating system would have stopped because of lack of deliveries of natural gas from Ukraine or Russia…Does anybody care from whom?

After few months of cabinet discussions Moscow and Kiev had failed to negotiate the price (and in consequence - deliveries) of natural gas and the initial reduction affected at least ten

countries: Slovakia and Czech Republic, Poland (till today), Hungary, Romania, Greece, Turkey, Macedonia, Serbia, Croatia and Bulgaria. As problematic as this was, the problem has extended beyond these first victims. Russia, losing its reputation as a "reliable" supplier of gas to Europe, has started a very difficult confrontation. From the very beginning politicians, as well as journalists, said that motives for the Russian action include sending a signal to Europe that Ukraine should not be integrated into the Euro-Atlantic zone, but remained within the Russian sphere of influence. Russian's hurt bear showed that there are strong partners behind him in Euro Zone like Germany or Italy. The crisis could demonstrate general and strategic Europe's dependence on Russian gas now or in the near future, highlighting the necessity to change the situation with new pipeline inter - connections quickly - in order to prevent friends from old Europe against hostile takeover by Russia. The following interruption of Russian gas supplies in January 2009 (after Russian – Byelorussian crisis in **Feb. 18-19th. 2004** and **Jan. 1st. 2006** when Russia briefly interrupts gas supplies to Ukraine over payment dispute, triggering first time(!) criticism in the West that the Kremlin is using energy as a political tool) shows strong determination and huge political influence (tensions) on European Union from Russia. Case "January 2009" will not be the last Russian-Ukrainian, Russian - Byelorussian or Russian – EU gas confrontation indeed. Although the new 11-year contract between Russia's Gazprom and Naftohaz has been concluded.

Ukraine has achieved real progress in the commercialization of their gas relations (price level was dramatically changed!), but the political problem will not go away. Not only because of unsolved question about Ukraine's possibility to pay for the gas imported from Russia. The questions will become more acute in 2010, when the 20% price discount contained in the 2009 contract expires. Moreover, there is a potential for continued political controversy between the two countries during the life of the new contract like quality of pipelines and gas storage system in Ukraine. (This topic was discussed in details during the last conference held on March 23rd in Brussels during EU-Ukraine conference: "Partners for securing gas to Europe" and will be shortly discussed later on in this article.)

In particular, Russia and Ukraine still have to face major political issues of the future gas transit through Ukraine.

Today situation seems clear to everybody. Almost 95% of gas customers in CE Europe noticed nothing unusual in their gas supplies throughout the crisis in spite of the fact that there were "notable" exceptions in some countries. We would like to bring your attention to the key factors which in our opinion are as follows:

- ✓ There is no integrated EU natural gas supply system. We can see countries' "local" pipelines and gas storages caverns systems or hubs developed only in EU-15; no reversed interconnectors across EU, and mainly one direction gas flow. The recognised lack of an efficient infrastructure network is a key element to be addressed in the development of the EU - 27, and especially integration into the internal market.
- ✓ Russia (Gazprom) will be the a dominant natural gas supplier to the majority number of European countries in the nearest future.
- ✓ Separated and the individual negotiations with Gazprom conducted by every country leads to a fall of the common EU policy.

- ✓ Is there a common EU Energy Strategy? Do we have “Natural Gas sub-strategy for EU”? Is our problem already addressed?

The main lesson which can be drawn from the crisis of December/January 2009 is that the European gas supply system proved that it could be resilient to a cut in its leading source of supply from former Soviet Union countries (mainly Russia), but situation could dramatically change during a colder-than-normal winter or, in the depth of heavy one. The disaster was very close.

And it is not surprising that across most of Central and Eastern Europe we could observe a considerable anger that the supply of contracted natural gas was interrupted because of a quarrel inside Ukrainian politicians or between two countries somewhere close to EU border but outside European control. Moreover, only Poland itself was hurt enough to open serious discussion about the necessity of the future cooperation. In large part of the system of EU-15 there is new testimony that the operational effectiveness of the technical infrastructure and the sustained implementation over many decades of a commercial strategy of diversifying supply was successful.

But, for example in Slovakia, Bulgaria or Romania immediate demand restrictions were imposed on large industrial customers. After few days and begs from the highest politician levels the supply of the Slovak gas system from the west end was initiated in order to keep pressure in the huge pipelines that normally let Russian gas flow across the country to the Czech Republic, Austria, Italy and the rest of Europe. Moreover, by January 18, German and French companies were obliged to deliver daily volumes of over 15 mio m³ into Slovakia—about 60% of the normally required winter daily demand—and local storage supplied the other 40%. Luckily this situation lasted for several days only. Supplies from Dutch, Norwegian, and domestic sources in Germany and Poland increased abnormally, while the Russian gas that bypasses Ukraine—flowing through JAMAL I (Belarus and Poland) to Mallnow on the German-Polish border—reached maximum capacity of about 70 mio m³ per day. (Bypass JAMAL I in Byelorussia is under GAZPROM control). Elsewhere in central Europe—as in Slovakia—some technical works were undertaken to control the flow and the capability of particular storage facilities and to link them via new connections.

Italy drew heavily on its gas storage reserves. It was a plan to increase liquefied natural gas (LNG) imports which could allow for a greater flexibility and aggressive withdrawal of stored gas. Contingency plans were drawn up for the interruption of industrial customers in Italy in the event that the Russian-Ukrainian dispute lasted the whole winter. But in the end they were not needed.

General message passed by Russia was clear. In such circumstances two additional direct connections from Russia (Nord & South Stream see fig. 7) to the heart of Old Europe seems to be very urgent and needed. Europe do not need to be dependent on unstable system of Ukrainian transit. If Europe is likely to depend more, not less, on gas imports by pipeline, then there is a strong case for joint action to diversify delivery routes. So the question is: can common Europe agree on a diversification strategy and does it have necessary means and will - or wish - to implement it?

The Russian-Ukrainian problem is still open and will not go away in the near future. There is much political controversy still to come between Russia and Ukraine during the life of the new

contract. Till today almost 2.5 billion m³ has not been delivered to Poland. There is still no agreement between Russia and Poland….

Decisions on starting of construction of new transport routes are close. It is not our current subject to reopen discussion on above mentioned links but it is worth to be considered deeply once more having on mind general European Gas Strategy.

Coming back to our main topic - there were many different approaches to manage the crisis. In aggregate numbers, supply of about 300 MM m³ per day was lost for 14 days.

For the first few days (five or six), European gas companies and grid operators were obliged, in addition to providing compensating supply, to meet an extra demand over 200 MM m³ per day, above the normal winter weekday level. It was not an exceptionally cold weather which could coincided with cutoff of the supply. Gas companies were able to do so in large part (Germany, Poland, Czech Republic) by withdrawing gas from storages at faster-than-normal rates.

This above mentioned performance was the consequence of a very mild winter (full capacities in gas storages systems), previous well known bad habits and well thought out strategy of resilience and diversity in the biggest countries, like Germany or Italy. But crisis has shown that EU – 27 need to implement common energy – natural gas strategy especially having on mind "new EU entrants", because even now after few months it is difficult to estimate the commercial cost of the measures that were taken to substitute for the flow interruption. Nobody even tried to ask GAZPROM or Ukrainian government to cover the losses. And gas prices in Europe were especially high in the first quarter of 2009. Thanks God world's financial crisis came on time as well. For those European companies and customers whose gas price is linked more closely to the short-term markets, spot prices for gas moved very little through the gas war. This largely reflected the comfortable sufficiency of supplies in northwest Europe, where spot trading is most developed. Heavy regulated market in CEE has avoided to increase gas prices.

In these circumstances Gazprom or who else will be the financial loser? Alone?

In light of the European gas industry, heavy dependent on Russian influence, successful management of the recent interruption, one might reasonably ask whether it is necessary to change anything at all. Apart from improving the interconnections of the European network—notably to include the Balkan countries—would it not be sufficient simply to continue what the European companies have been doing so far: expanding underground storages, multiplying alternative delivery routes, increasing LNG re-gasification capacity in Poland, Germany or Italy, and in general strengthening the resilience of the existing system?

There are several reasons why this will not be enough:

- Europe's upstream gas production is declining.
- LNG suppliers will be abundant for the next several years and investment in new LNG projects has abruptly been delayed (like in Poland) or ceased (now one can estimate the delay in Poland for min. 2 years)
- We can't expect that yesterday's LNG oversupply will likely be followed by a longer period of time
- Development of alternative energy sources is now problematic - fuel fossils price is rather low – and ETS scheme seems to be problematic with 9€ per CO_2 tone.
- Consequently, Europe's dependence on imports by pipeline will continue to grow (France, Great Britain, the Netherlands, Germany, Italy and Belgium) and the consequences of any future interruption could be far more serious.
- Measures now seem likely to be taken to reinforce west-east flows for the Czech Republic Poland and Slovakia and to strengthen cross-border connections between Austria and Slovenia, Hungary and Romania, Poland Slovakia and Hungary or Poland and Germany.

Fig. 2. Possible idea for connections and new routes for natural gas transportation to Poland.
Source: *www.rynekgazu.pl*

- In Europe there is a strong obligation to the "new entrants" with Bulgaria and Romania as an EU member to help to correct the weakness in the energy supply system.
- Several European gas companies (BASF, E.ON Ruhrgas, ENI, GASUNI, GdF) have developed strong business relationships and financial partnerships with Gazprom in both upstream and downstream activities. Other European companies are also heavily engaged in Russia and President Medvedev will now undoubtedly seek to strengthen these bilateral partnerships.
- **Most of EU countries' gas markets are more or less regulated, non-liberalized, hardly available for new participants, so can't be described as a free markets. This situation improves Gazproms' domination and additionally strengthen its negotiation position as a main gas supplier to European Union.**

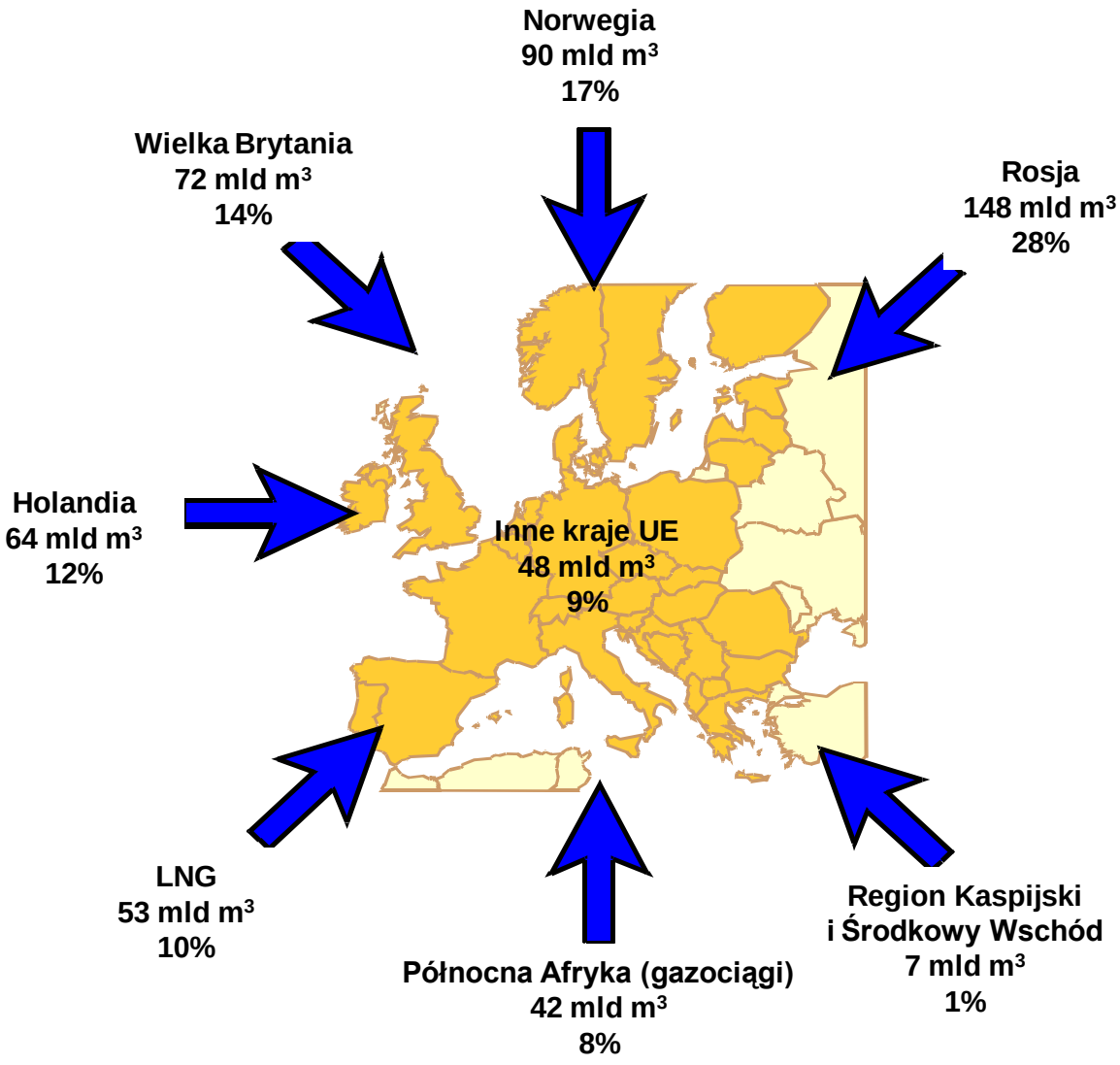


Fig. 3. Sources for natural gas deliveries to Europe (2007).
Source: Own calculations based on BP Statistical Review of World Energy 2008

Europe now seems to be focused as never before on energy security, and several ways are being actively explored. New position of the European Parliament was adopted at second reading April 22nd 2009 with a view to the adoption of New Directive 2009/.../EC of the European Parliament and of the Council concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC. The Member States, according to above mentioned document, should now "cooperate closely, eliminating obstacles to cross-border exchanges of electricity and gas with a view to achieving the objectives of Community energy policy. On the basis of the impact assessment of the resource requirements for a central entity, it was concluded that an independent central entity offered a number of long-term advantages over other options. An Agency for the Cooperation of Energy Regulators ("the Agency") should be established in order to fill the regulatory gap at Community level and to contribute towards the proper functioning of the internal markets in electricity and in natural gas. The Agency should also enable national regulatory authorities to enhance their cooperation at Community level and participate, on a mutual basis, in the exercise of Community-related functions."

Yet the deepening global economic crisis, the prospect of lower gas demand ahead, disagreements among European decision makers and elections to European parliament will make it difficult to develop alternatives quickly. Moreover, given the chronic instability of Ukrainian politics, public quarrels between President and Prime Minister and still the unsettled outlook for Russian-Ukrainian relations, it is not clear that this is a promising avenue for lessening Europe's gas-transit risk.

Now it will be a situation of visible and direct impact of higher international natural gas prices on Ukraine, which were fixed significantly below European prices (through its long term contracts with Gazprom and Turkmenistan – RusUkrEnergo.)

These same factors have contributed to very high energy intensity of energy use (perhaps the highest in the region — 22 times more than Germany) which makes Ukraine vulnerable to energy price increases. Last few years shows that net energy imports are equal to 16 -18% of the Ukrainian GDP. Oil imports are equivalent to 7.5 -8.5% of GDP and gas imports are equivalent to 5.5 – 6.5% of GDP. It is clear that upward natural gas price pressures will bring a "dead or alive" alternative for Ukraine over the coming few years. Oil prices have already risen dramatically and stopped around 50$ per barrel.

This crisis requires urgent reforms identified for many years, to its natural gas and energy sector. For several years till 2006, Russia has continued to provide gas to Ukraine at US$50 per 1000 cubic meters. Earlier 2006 Ukraine and Turkmenistan negotiated a cash-based gas price of US$44 per 1000 cubic meters, which implies US$60 at Ukraine's border after Russian transport costs are included. Today Ukraine could see a significant increase in the cost of its gas supplies in comparison to 2006 and there is a concern about future gas costs subsequently. The "European Parity" price of gas is about US$380 (in last two years the price has rose from 178 to 450US$) and the parity transit fee is about US$2-3 per 1000 cubic meters per kilometer. Ukraine's own production for domestic consumptions represents about 18 billion cubic meters.

The result of gas crisis is hard to be predicted. Russia puts pressure on Ukraine for payment in cash at "European prices", but this terminology means only that the pipeline system and valuable gas storage facilities, which are an important part allowing for westward gas flows, are the next target.

Ukraine must continue to focus on the long term goal of being the transit country of choice for Russia. In further negotiations, it can't increase transit fee proposed to Gazprom. The gas pass-through is significantly larger than its own consumption, which gives a very good leverage on this point. It will be crucial to come to a reasonable solution, presumably moving the discussion from payment case to assets control.

Our understanding is that the preferred European Union option has been to leave the Russians and Ukrainians to work out their problems bilaterally and to keep a balance in relations with both Kiev and Moscow. In spite of a very close relationship between Polish and Ukrainian presidents, Polish voice and Polish position disappeared. Poland loses its strategic position even on Ukraine.

The recent crisis was notable because of the most important question: are there the route of bypassing both Russia and Ukraine by accessing eastern gas supplies, through Turkey for example (NABUCCO – one of the most visionary Project from the economic and politic point of view)?. Most visionary but still this option seems to be very promising in the long run but difficult to realize in the near term. In spite of the fact that GAZPROM had already bought at least 50% of the storages capacities in Baumgarten (gas hub and possible end – destination point for Nabucco pipeline Project), last geological findings suggest the presence of large gas resources in the deep Caspian off Azerbaijan, in the Yolotan-Osman complex of eastern Turkmenistan, and other locations.

Beyond the political problem Iran should be considered as a very good supplier as well. Turkey with a major domestic gas market, is eager to become a transit country.

Turning this potential into reality will require time and capital, as well as - not to forget - very good diplomacy. The difficulties of planning and financing a multinational pipeline, as experience shows, increase rapidly with the number of countries involved, thus requiring a high degree of coordination at the EU level. Below you can see a map with the main planned corridors to CEE.

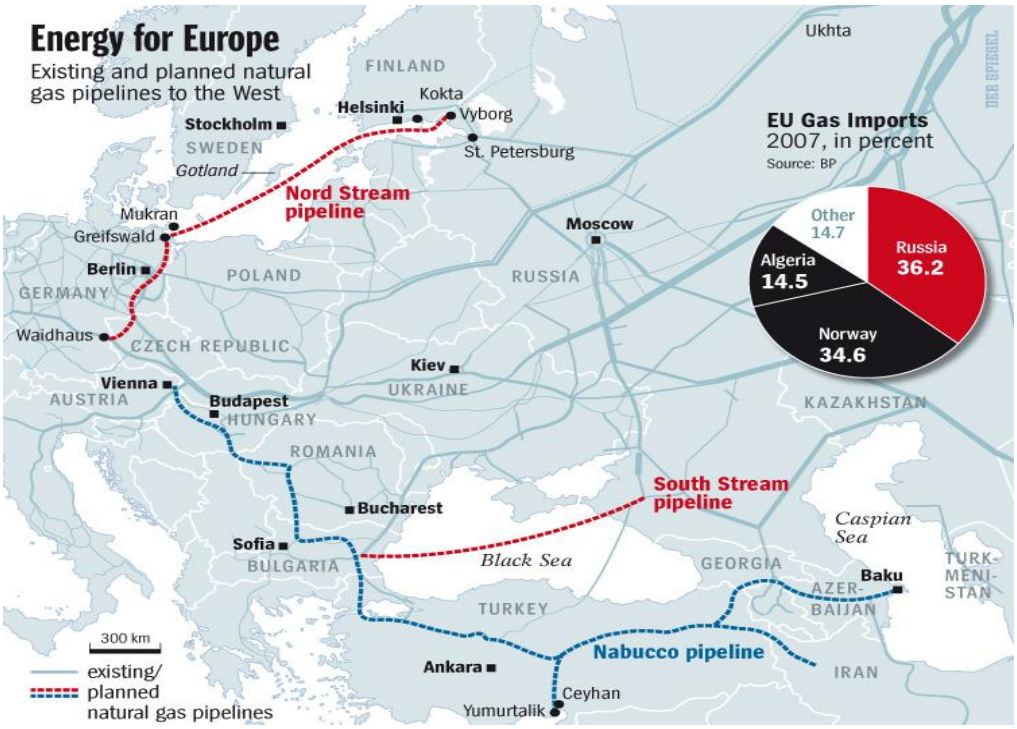


Fig. 4. Existing and planned natural gas pipelines to the West. *Source: Der Spiegel January 2009*

Mainly as a result of the deepening economic crisis and energy supply/demand problem there are, however, growing constraints on Europe's freedom of action, and controversies over how to respond to it. Problems showed in the banking system (no loans market) forces companies to provoke cancellation or at least delay in commitments to major investment decisions. Answering to the economic crisis at the same time as contributing directly to energy security can appear a very attractive option. Experts underline that: "there is a strong current of hostility to the "list" of gas infrastructure projects that has been proposed by the European Commission for EU funding support, on the basis that the process of identification of viable projects had not been transparent, and that any public money for such projects should not necessarily be provided via EU funding mechanisms rather than by member states".

We can't forget, on the other hand, that deeper and longer recession may reduce or even eliminate growth in a gas demand for a number of years especially in "Old Europe". There are further uncertainties about the long-term demand impact of policies to promote more energy efficiency— especially in the area of household heating and power generation based on natural gas.

From the Polish perspective we observe that open and free access to grids : electricity, natural gas or oil and to underground gas storages systems as well as cross-border connections are now key issues for the Polish economy. There are only few energy and natural gas suppliers which dominate the EU market but still the abovementioned fears and forecasts for gas prices or free access to fuels are a competitive disadvantage for the Polish economy. In our opinion competitive energy markets are essential because today local EU's energy markets seem not to be competitive.

We would like to agree that to achieve these objectives, it is important to put them in an overall framework. This could be augmented with a strategic objective which balanced the goals of sustainable energy use, competitiveness and security of supply; for example, by aiming for a minimum level of the overall EU energy mix to come from secure and low-carbon energy sources. This would combine energy security with the freedom of Member States. The EU members could and should choose between different energy sources (coal still as the main energy source in Poland) and the need for the EU as a whole to have an energy mix that, overall, meets its core energy objectives with energy security as a principal rule.

The Green Paper puts forward a number of firm proposals to meet these objectives and Polish government seems to be ready to support several issues. From our point of view the EU needs to complete at first the internal natural gas and electricity markets and looks for a proper tool for building its concrete base. European regulator "Agency" and a European Centre for Energy Networks should also be considered. One should consider improvement of interconnections and stimulation of construction of new ones especially in CEE, creating the framework to stimulate new infrastructure investments and more effective unbundling.

From the Polish economy point of view these must be addressed as a priority; the Commission will reach final conclusions on any additional measures that need to be taken to ensure the rapid completion of genuinely competitive, European-wide natural gas - energy markets, and present concrete proposals as soon as it will be possible.

The EU needs to ensure that its internal energy market guarantees a security of supply and a solidarity between Old Member States and New Entrants. We are expecting a real Community-wide debate on different energy sources including coal, costs and contributions to climate change, to enable us to be sure that, overall, the EU's energy mix pursues the objectives of security of supply, competitiveness and sustainable development for each member country.

A common external energy policy should be a priority. In order to react to the challenges of high and volatile energy prices, increasing import dependency, strongly growing global energy demand and global warming, the EU needs to have a clearly defined external energy policy and pursue it, at the same time at both national and Community levels with a single voice. An international agreement on energy efficiency is strongly needed.

From the Polish perspective, as a new entrant into the region, it is a must : new European energy forecast till minimum year 2025-30 (every source of energy should be considered starting from old well-known but a little bit forgotten like water and coal through oil, natural gas, nuclear energy and "white energy").

Simulations and forecasts should be based, with few alternative scenarios, on Member Countries' policies prepared and agreed before. Such document has to discuss new investments needed, Member Countries research and development policies, each country foreign trade balance, employment and economy impact. Energy efficiency compared with energy security has a fundamental role in an energy and climate policy so we have to base our common future on a properly prepared, agreed and implemented on mutually understood trends and forecasts.

We would strongly like to recommend that above mentioned document will be a very good support for the preparation of The European Union Energy Strategy and will include The European Union Energy Security Policy (nuclear and white energy with wind farms and water, coal, oil or natural gas, but renewable sources - biomass as a general feedstock included as well). The Strategy has to discuss global climate change problem but not only CO_2 emissions.

And last but not least COMMON EUROPEAN INFRASTRUCTURE – integration of the energy infrastructure between EU-15 and EU – 12.

We have discussed above trans-European connectors, pipelines, etc. But once more, it is a must to improve a transportation efficiency to secure our energy deliveries.

Preparation of above mentioned Strategy and Policies should be strongly reconsidered and discuss.

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List of maps and pictures:

Summary:

Lekcje dla Unii Europejskiej z gazowego kryzysu rosyjsko- ukraińskiego z początku 2009 roku

Article show roots, track out and current run Russian – Ukrainian natural gas crisis from January 2009. The authors focused on current EU works and needs to ensure that its internal energy market guarantees a security of supply and a solidarity between Old Member States and New Entrants. Document underline expectation on a real Community-wide debate on different energy sources including coal, costs and contributions to climate change, to enable Poland to be sure that, overall, the EU's energy mix pursues the objectives of security of supply, competitiveness and sustainable development for each member country.

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