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Russia-Ukraine-Europe gas crisis of January 2009: causes, lessons learned and strategies for Europe

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ABSTRACT

In January 2009, Europe experienced the worst gas crisis in its history. Following a dispute over the gas price between Russia and the Ukraine, all Russian gas flows via Ukraine were completely interrupted for two weeks, each side blaming the other. As the Ukraine transit route represents some 80% of all Russian gas exports to Europe, this shortfall was equivalent to about one third of European daily gas imports and one fifth of European daily gas demand. Some 18 European countries were heavily affected by this unprecedented supply shortfall. The situation was particularly dramatic in the Balkan countries which experienced a humanitarian emergency as part of the population could no longer heat their homes during some particularly cold winter days. Central European countries also felt an economic impact as gas deliveries to some industrial consumers had to be shut down. Most western European countries overcame the crisis without any physical delivery interruptions to their customers, thanks to large gas storage availabilities at that time and good interconnections to other gas sources.

This crisis will have lasting consequences. Both Russia's reputation as a reliable supplier and Ukraine's reputation of a reliable transit country are seriously damaged. Efforts to diversify gas sources, gas routes and energy sources will intensify.

In what follows, we outline briefly the history, causes and impacts of the crisis , the lessons learned and possible future strategies for Europe.

Historical background

Ukraine has one of the highest energy intensive economies worldwide and it is structurally very dependent on cheap natural gas. During Soviet times, the whole Ukrainian industry and the associated urban development used gas as the main energy source. In fact, in the Soviet economy, energy prices were completely unrelated to cost of supply, and thus Ukrainian consumers got access to extremely cheap gas on which the Ukrainian industrial and social development was based.

In 1991, when Ukraine became an independent State, it was heavily dependent on Russian gas, delivered at below cost prices. Russia thus progressively increased gas prices to its new independent neighbors trying to bring them somewhat closer to west European prices. This created economic difficulties to Ukraine which found it difficult, or was unwilling, to pay the new prices and consequently led to a regular accumulation of Ukrainian debts to Russia linked to domestic non-payments. The resulting disputes led Gazprom to cut off supplies to Ukraine on several occasions during the 1990s and 2000s. The traditional reaction of Ukraine to this situation was to cater for its gas needs by tapping the transit system (Russia called it "gas theft"). These conflicts were regularly solved thanks to some political arrangement (like for instance, an agreement on the ownership of the Black-Sea fleet), but soon after an agreement to erase past debt had been found, new accumulation of debt started again and so the next conflict was around the corner.

Ukraine has so far always successfully rejected pressures by Russia to exchange equity in the transit network and storage capacity for gas debts. At the same time, the transit network is deteriorating and the transport capacity falling because of missing rehabilitation investments.

Unfortunately, during the last 18 years since independence, little progress has been achieved by the Ukraine to decrease its energy intensity and to diversify energy supply. Still today, Ukraine (with 40 bcm/yr) is Russia's single largest customer.

Conversely, at the time of the break-up of the Soviet Union, Russia was completely dependent on Ukraine for its gas exports to Europe: 100% of Russian gas destined to Europe crossed Ukraine. Only later the Europol (or Yamal-Europe) pipeline crossing Belarus and Poland was built. Still today, about 80% of all Russian gas exports to Europe transits through Ukraine. This gives Ukraine a strong leverage over Russia: Russian gas exports to Europe represent 25% of the Russian Federation budget revenues. This explains Russia's wish to diversify gas routes and bypass transit countries.

Moreover, the Soviet gas pipeline network was designed as a centralized and integrated whole, with no attention at all being paid to reducing interdependencies and possible conflict between republics. Probably, had the possibility of a break-up of the Union dawned in the minds of the Soviet planners, they would never have designed the network the way they did. Political and strategic considerations were not alien to them, – for example they suggested that all export pipelines should run through Czechoslovakia, avoiding Poland; and that supplies to West Germany should not transit through the DDR. But within the Soviet Union, there was no concern about internal borders at all – creating a situation that is still today very difficult to disentangle.

In the late 1990s, Gazprom and the Russian Government adopted two significant tactics to manage the Ukrainian gas trade. One was to encourage Turkmenistan, the second largest CIS gas producer, to sell gas to Ukraine, therefore freeing up Russian volumes for Europe; the second one was to use a series of intermediary trading companies to deal with the difficult commercial relationships which often included barter deals.

While both Russia and Ukraine experienced a dramatic fall of about 40% in industrial output and GDP during the 1990s after the break-down of the Soviet Union, the 2000s saw an economic recovery in both countries which made possible some improvement in their difficult and politicized relationship.

However, from 2002 onwards, world oil prices rose steadily, and so did European gas prices. The differential between European prices and those charged by Russia to the CIS countries widened sharply, and Gazprom increasingly called for CIS prices to be raised to the level of European net-back (European price minus transportation cost from Ukraine to Europe). The Russian Government influence was responsible for the net-back principle to be applied in a different way according to the country: countries which had a friendly attitude towards Russia and which agreed to share

ownership of their pipeline system with Russia (eg. Belarus and Armenia) were able to negotiate much longer timetables for import price increases. On the other hand, Gazprom was allowed to raise prices more rapidly in countries whose governments showed a hostile attitude towards Moscow (e.g. Georgia after the Revolution of Roses in 2003, and Ukraine after the Orange Revolution in 2004).

The 2006 gas crisis

The first serious Russia-Ukraine gas crisis which was well noticed in Europe was the one of January 2006. Due to disagreement on prices for the new contract, and after the old contract had expired, Russia cut off supplies to Ukraine for 3 days. In good Ukrainian tradition, Ukraine diverted volumes destined to Europe. As a consequence, supplies to some Central European countries thus fell briefly, but were never cut off completely. This happened one year after the Ukrainian Orange Revolution, when a pro-western and pro-European Government emerged in Ukraine which sought rapprochement to the West and Europe and which was successful to find sympathetic views in Europe. In fact, during that crisis and in its aftermath, most European policymakers and media blamed Russia for the gas shortfall to Europe. Only the gas industry itself had a more nuanced view.

The subsequent agreement brought little progress towards a net-back pricing system as wished by Russia, but it allowed to end the barter deal scheme and set up a net-forward pricing system from Turkmenistan (i.e. Turkmen border price plus transportation cost to Ukraine).

After these January 2006 events, Russia intensified its diversification of routes strategy adding in June 2006 to the already existing Nord Stream pipeline project (connecting Russia across the Baltic sea without any transit country directly to Germany) also the South Stream pipeline project (connecting Russia across the Black sea to Bulgaria in the Balkans).

Moreover, in November 2006, the Russian Government declared its intention to bring gas prices for the domestic Russian market to an equivalent level with European equivalent prices by 2011 (that is, European prices minus transportation costs minus an export tax of 30%). This measure is part of a general Russian strategy to create an Eurasian gas market from Europe to Central Asia, including Russia. In fact, in 2008 Russia accepted to pay also Turkmenistan a European gas net-back price. An increase of Russian domestic gas prices was also strongly demanded by Gazprom which was losing a lot of money by selling gas below cost to domestic consumers, and was necessary in order to encourage gas production by the independent gas producers who by law can only sell on the domestic market.

During 2006 and 2008 the World oil price increase accelerated further, and so did the European gas price – with a lag of six to nine months. Therefore, despite Gazprom's efforts to increase the CIS gas prices, the gap between European gas price and CIS prices widened further. This lead in January 2007 to a gas dispute between Russia and Belarus which ended when Belarus agreed to sell 50% of its transit network to Gazprom and accepted a three year timetable for transition to European net-back prices. That year there was no major dispute with Ukraine, probably because Gazprom felt that it did not want to have a dispute on both transit countries at the same time.

For the last few years, gas price agreements between Russia and Ukraine were set on an annual basis, expiring the 31st of December. Negotiations for the new contracts were always difficult: when they went relatively smoothly, as at the end of 2007, the new gas contract was signed two minutes before midnight! In 2008, prices charged to Ukraine were about half the level of the European net-back prices, therefore Gazprom felt that it was suffering a huge economic loss by "subsidizing" such a large gas customer like Ukraine.

The 2009 gas crisis

By the end of 2008, Ukraine owned Russia a huge gas debt for which Russia demanded repayment. In addition, Russia demanded higher gas prices for the new contract starting from 1st of January 2009, in order to bring Ukrainian prices closer to European prices. This in the context of a severe economic crisis in Ukraine with strongly falling industrial output (in December Ukraine's industrial production was down 27% year-on-year) and at the same time a

deep political crisis with open rivalries between President Yushchenko and Prime Minister Timoshenko. With presidential elections to be held in 2009, neither of the two main contenders wanted to be seen as having sold out to Russia.

As no agreement was reached before 31st December 2008, on 1st January 2009 Russian exports to the Ukraine were cut off. In the following days, Russia and Ukraine swapped accusations of blame. Gazprom accused Ukraine of not paying its debts and stealing gas destined for Europe and replenishing its storage facilities, while Ukraine denied theft and accused Gazprom of trying to extract excessive prices and/or refusing a parallel rise in transit fees (technically, only the gas supply contract between Russia and the Ukraine had expired on 31st of December 2009, in fact the transit contract signed in 2006 stipulating the transit fee was still valid until 2011, so Russia saw no need to renegotiate the transit fee).

On January 7th, Gazprom stated that it had stopped all deliveries into the system because Ukraine had closed it down; Naftogaz said that it had closed down the system because Gazprom had stopped delivering gas. During the whole crisis it was quite clear that neither side was fully sincere and after it got out of control on January 7th neither side looked eager to reach quickly an agreement.

Starting from January 7th, South-Eastern Europe (which is completely dependent on Russian imports) did not have any more gas supply for the following two weeks. This resulted in a humanitarian crisis in some Balkan countries with part of the population not being able to heat their homes. Central European countries did also feel some economic pain, with gas supplies being cut off to some industry customers, while Western European countries, which were also interrupted, but which had high storage availabilities and interconnections with other suppliers, experienced only a very limited impact with no consumers being curtailed.

We should underline the unprecedented nature of this event. Supplies to Europe had previously never been halted since the gas transmission network was built in Soviet times. During previous gas disputes between Russia and Ukraine, there have never been such dramatic consequences for European consumers.

On 19th January, Prime Ministers Putin and Timoshenko signed an agreement to end the dispute and the heads of Gazprom and Naftogaz (the Ukrainian gas company) signed a transit contract, both covering the period 2009-2019. According to the contracts, from 1st January 2009, Naftogaz will be buying Russian gas at the price formulae stipulated in Gazprom's European contracts, however, it will have a 20% discount for 2009. The transit fee for 2009 will remain at the level of the previous year (1.7 $/1000cm), but from 2010 onwards it will be increased to the European standard. The new contracts are signed directly between Naftogaz Ukraine and Gazprom, thus bypassing the previous intermediary, RosUkrEnergo. Gas supplies restarted on 20th January and where fully restored on 21st January 2009.

These new contracts are a big step towards a Eurasian energy market and price. They imply a fundamental change in the methodology of Ukrainian gas pricing which are no longer net-forward prices from Turkmenistan (like during 2006-2008), but become European net-back prices, based on, and indexed to, oil products.

The problem is that due to the present economic crisis, Naftogaz is facing large non-payments by its customers. Moreover, political divisions in Ukraine are again mingling with the gas relations with Russia: already in the week following the signing of the agreements, Ukraine's president Yushchenko suggested that the Ukraine could renegotiate the deals because they are "discriminatory".

Thus it is not unexpected that very soon we will be back at square one and that further gas disputes between Russia and the Ukraine will arise.

Lessons learned

The crisis showed the fragility of South-East Europe to gas security of supply, due to a lack of proper supply diversification, little interconnection capacity and very limited storage availability in many of these countries. By far the most severe consequences were felt in Moldova, Bulgaria, Romania, Serbia, Bosnia-Herzegovina and Croatia.

The crisis also showed the profound non-functioning of the internal market. While overall enough gas was available in Europe, it was impossible to move it from one country to another due to physical limitations. These include not only missing interconnections but

also missing reverse-flow capabilities in existing pipelines (for example, the lack of reverse flow capability between Bulgaria and Turkey meant that Bulgaria could not receive gas from Turkey which had been sent by Russia across the Blue Stream). The crisis also showed that European countries are ill prepared for such emergency situations: emergency plans where either non-existing, or when they existed they were not coordinated among countries. Also, it took one week for some simple solutions, like for instance diverting LNG from the Iberian Peninsula to Greece, to be implemented.

On the supply side, the crisis has severely and lastingly damaged the reputation both of Russia as a reliable supply source and of Ukraine as a reliable transit country. One can only speculate why the conflict was not resolved differently. It came indeed as a big surprise to many observers that both sides allowed the dispute to escalate to the point where supplies to Europe where completely cut off, and then allowed this situation to continue for two weeks in the middle of winter.

The most plausible explanation seems to be that the situation got out of control. Ukraine was in a deep economic and political crisis. It probably thought it had nothing to lose, and at the same time hoped to receive the same support it had gotten from Europe during the previous crisis of 2006. Russia on the other side was fed up with the situation of being black-mailed by Ukraine and in addition being blamed by Europe for supply disruptions to Europe when Ukraine diverted gas destined to Europe as had happened in the previous crisis. After it was clear that the crisis could not be solved easily, Russia probably thought that it is only if Europe feels its part of the pain, that it will take the Russian approach to the Ukrainian transit issue seriously, i.e. ownership of the transit pipelines by a consortium of Gazprom, western gas companies and Naftogaz, and/or building bypass pipelines (Nord Stream and South Stream). In fact, the equity issue of the transit pipelines across Ukraine is today openly discussed.

There are other examples of gas transit we can draw lessons from. In fact, Europe gets its gas across transit countries from Russia (through Ukraine and Belarus) as well as from Algeria (through Tunisia and Morocco). It is interesting to notice that while the Eastern transit countries have experienced many conflicting relations during the last two decades, the Southern transit countries have never posed any of these problems. This can be attributed to the fact that the Eastern transit routes had been designed under one political and economic system but are now operated under another, while the Southern transit systems had been designed from the beginning in a context which has remained the same. In the case of Tunisia and Morocco, the gas is sold at the Algerian border respectively to the Italian (ENI) and Spanish (Gas Natural) clients. The transit pipelines are owned by the transit country, but are fully operated by the European gas company, ENI and Gas Natural respectively, who pay the transit countries a transit fee for transiting the gas across their territory. Transit has never been a problem neither in Tunisia nor in Morocco.

The lessons for Russia are that the crisis supported its conviction that something concerning the Ukrainian transit issue has to be done. This implies the pursuit of ownership of the Ukrainian transit system by a consortium involving Ukrainian, Russian and European gas companies as well as building by-pass pipelines (Nord Stream and South Stream).

The lesson for Ukraine should be to drastically reduce dependence on imported gas from Russia. This implies reducing energy consumption by means of energy saving measures and increasing own gas production. We must here mention that these policies have already been attempted in the 1990s and 2000s, but they failed because of political and economic problems. It is thus questionable that they will work now under the present circumstances.

Strategies for Europe

It is clear that a well functioning, well interconnected and more transparent internal EU gas market would allow to absorb much better possible supply interruptions.

It is also clear that Europe cannot do without Russian gas. In fact, Europe is as dependent on Russian gas as Russia is dependent on European markets (in 2008, Russian gas represented 26% of European gas demand and 25% of Russia's Budget revenues). And this interdependence is surely a good thing.

Having said that, in the longer term efforts should also be made aimed both at energy and

gas conservation as well as at diversifying gas supply source and supply routes.

European strategies can thus be defined in short and long term.

- In the short term, the European focus should be to develop regional emergency plans (mainly - but not only - in Central and South-East Europe). This includes adding interconnections, gas storage, fuel switching capability, equipment to existing pipeline interconnections to permit reverse flow and creating regional coordination units to deal with future crises as well as arrangements for cross-border operation and ownership of storages. All these measures require relatively limited investments.

  Europe should also put pressure on Ukraine to accept a joint operation of the transit network by European gas companies together with Naftogaz and Gazprom. This would have the triple benefit of making available the investments necessary to rehabilitate the aging transit pipeline system, to prevent undue diversion of gas belonging to other Parties, and of being a far cheaper option than building expensive new pipelines to bypass Ukraine. If the Ukraine does not show a cooperative approach to solving the transit issue, Europe should rethink its global strategy towards Ukraine which wishes closer association with the EU and with NATO.

- In the longer term the European focus should be to add diversification of supply routes and supply sources. This includes the Nord Stream and the South Stream which are promoted by Gazprom, but also a push for large scale Caspian and Middle Eastern gas to reach Europe through the South-Eastern corridor (the Nabucco pipeline and the Turkey Greece Italy interconnector). This corridor is of utmost importance for European gas supply diversification. It also implies to capture gas for Europe in Central Asia, the Caspian and Middle-Eastern regions. Another important project is the Trans-Saharan pipeline (Nigeria-Niger-Algeria-Europe pipeline), not only for diversification of supply but because it will also guarantee long term supplies to Southern Europe from the existing pipelines from Algeria once the Algerian gas supplies decline. In addition to these pipeline projects, the development of different LNG supply and receiving schemes is also important. Obviously, the timing of these different new supply projects has to be in line with the future demand evolution.

  Finally, pursuing consistently climate change policies will reduce gas demand growth and implies important co-benefits for security of supply. These policies include boosting energy efficiency, nuclear, renewable, clean coal with carbon capture and storage (CCS), etc.

  Even in presence of declining European demand for natural gas, as several recent greenhouse gases stabilization scenarios suggest, imports will still increase considerably in the medium run from today's levels because of the inevitable decrease in domestic gas production. This means that new supply schemes will be needed in any case.

  The European Commission and the national Governments should thus work hand in hand to put in place the conditions for industry to realize these investments which will be beneficial in the long run for European economies and their consumers.

At FEEM, and together with a few leading European partners, we have recently launched some energy policy analysis and research projects in order to position ourselves in the European energy policy debate. One future initiative will be a high level energy policy forum for a shared vision of a post-carbon Europe with common benefits for climate, security of supply and economic competitiveness.

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