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Russian Gas, Ukrainian Pipelines, and European Supply Security

Lessons of the 2009 Controversies

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The Russian-Ukrainian conflict over debt, transit fees and prices of January 2009 cannot be considered a mere repetition of the 2006 controversies: It produced considerably greater consequences. This time, the tug of war between the two actors led to a disruption of supplies of nearly two weeks, an event unprecedented in the international gas trade, which not only contradicted any decent business practice but also violated bilateral und multilateral agreements that had been concluded. Both Russia and Ukraine thereby lost their standing as reliable suppliers. Both countries gave a higher priority to domestic political controversies and considerations of power than to foreign policy and the solution of pressing energy. Europe suffered the biggest crisis of energy supply in its history. Its vulnerability to energy supply disruptions was revealed. The gas controversy of January 2009 thus constitutes a sharp break in the trilateral relationship between Russia, Ukraine and the EU.

Against this background, questions arise as to the lessons and consequences that should be drawn by German and European policy makers. Answers to such questions require close analysis of three sets of problems: First, the origins of the recurrent gas conflicts between Russia and Ukraine need to be examined. Second, German and EU crisis management and its possible deficits have to be scrutinized. Third, the quality of cooperation between the EU, on the one hand, and Ukraine and Russia, on the other, concerning energy policy and industry need to be evaluated and from this future perspectives and requirements of action need to be derived.

It has become obvious that grave structural differences lie at the root of the recurrent confrontations between Russia and Ukraine, thereby endangering security of supply on Europe's most important transit route. Although both countries in January 2009 concluded a new gas agreement, this does not mean that all the underlying conflicts have been solved. In Ukraine, the condition of its transit network and the structure of its energy consumption remain just as much of a problem as pervasive corruption and the mixture of private and public political and economic interests. The country's endeavor to maintain the gas

volumes in transit through its territory at current levels is diametrically opposite to the interest of the Russian energy corporation Gazprom routes to bypass that country. The European-Russian relationship in turn is characterized by complicated cooperation and latent competition. From the perspective of energy policy, the common neighborhood of Russia and the EU is quite important since in that geographic area both actors want to maintain the possibilities for investment as well as access to gas resources and transport networks but apply different political and socio-economic ordering principles and pursue different but concrete economic interests. Both Russia and the EU thus have a strategic interest in the Ukrainian energy market and its future orientation.

The latent conflict confront Germany and the EU with challenges in energy policy but also in foreign policy, the urgency of which lies in problems of geography and infrastructure: The EU is the world's biggest net importer of gas, Russia the biggest gas producer and exporter as well as the country with the most extensive reserves. Ukraine is by far the most important transit country for Europe, and this is unlikely to change in the near future. Gas imports from the east constantly provide warning signals and test cases for a common European energy policy.

On the basis of the present examination, the following conclusions can be drawn:

1. Enhancement of the EU's internal market will probably increase supply security. However, raising the number of interconnectors in Europe, increasing storage capacities and creating crisis management mechanisms based on the notion of solidarity carries political and economic costs. The EU, for that reason, has to adopt a number of decisions of principle. Since such decisions taken at the European level will gain in significance for the German gas market, a Europeanization of German energy policy will become necessary.
2. Concerning both Germany's and the EU's external dimension, it is quite apparent that the fragmentation and the differing structures of the gas markets constitute sources of conflict. The creation of a common energy space, therefore, is politically desirable, if only to counteract the progressive break-up of the gas markets into segments at the various levels of the gas markets. Their increasing economic interconnectedness should be strengthened by foreign policy measures and the incorporation of principles of good governance. Ukraine is and will remain a central partner. Accession of the country to the European *Energy Community* is desirable if it were to go hand in hand with structural and regulative reforms in its energy sector. For the EU, this would necessitate a delicate balancing act since it has to join Ukraine on the reformist road but at the same time insist on conditionality.
3. As before, it will be a great challenge cooperatively to bind Russia into a comprehensive design of energy relations, a common space of energy and the trilateral relationship with Ukraine. It is important to strengthen the existing economic network with Russia but flanking measures have to be taken at several levels. One of starting points for the renewal of a constructive dialog with Russia could be the Russian proposals for a new international agreement on energy security.
4. Realization all around that efforts should be made to achieve a more sustainable and less carbon based utilization of energy could form the basis for another important field of cooperation with benefits for all sides – for Ukraine because it has to put its energy consumption on a sound basis, including in financial matters, and for Russia because its desire for the realization of specific projects, above all in energy efficiency, can be met. Such efforts do not run counter to the interests of a gas exporter. On the contrary. First, the energy saved would then be available for export. Second, power stations running on gas can be used flexibly to balance the fluctuations in the supply of renewable energy. Protection of the climate and security of energy supply would simply be two sides of the same coin.

Russian-Ukrainian Gas Trade: Transit and Structural Problems

Russian-Ukrainian Gas Transit and European Energy Policy

The controversies between Russia and Ukraine concerning gas supply and transit are quite significant because they pertain to Europe's most important transit route and its biggest energy supplier. The relative importance of the two countries for Europe will not change much in the next decade and beyond.

The reasons for this state of affairs can be found in the existing conditions of infrastructure, geography and treaty relationships. Thus, for example, geographic proximity to Russian gas reserves is one of the factors that is responsible for the current volume of gas that is being used a source of energy in the European Union. Gas not only occupies an important position in European energy supply, its use also makes sense from the perspective of climate change.[1] Such features form the main rationale of the close gas partnership between Russia and Europe.

Annually, approximately 120 billion cubic meters of Russian gas are exported through Ukraine with a total capacity of 150 billion cubic meters. This means that close to 80 percent of the gas that is delivered to Europe from Russia flows through Ukraine. That volume accounts for 20 percent of European gas consumption. Alternative routes for the export of Russian gas to Europe at present are the Yamal-Europe pipeline leading through Belarus with an annual capacity of 33 billion cubic meters and the Blue Stream pipeline that leads from Russia on the Black Sea floor to Turkey with a capacity of 16 billion cubic meters per annum. Thus, there are only very few alternatives, which means that Ukraine will remain an important transit country for Russian gas deliveries to Europe.

Furthermore, the European energy firms are linked to Gazprom through long-term contracts valid until the year 2025, in some cases even until 2035. These contracts not only codify supply commitments by the Russian corporation but also contain import and payment obligations of the European treaty partners. Future developments on the most important transit route for gas thus have strategic significance for gas supply of the continent.

Controversies over Debts, Prices and Transit Fees

The Gas Controversy of 2009: Origins

The Russian-Ukrainian gas conflict of 2009 has its specific history, including several precedents. In the 1990s, Russia and Ukraine had concluded a series of barter and exchange agreements which were rarely carried out. Time and again Ukraine "illegally" diverted certain volumes of gas in transit through its territory and Russia reciprocated by "turning off the gas tap." The agreements typically, at least on paper, not only offset transit fees against volumes of delivery but factored in were also costs for the stationing of the Russian Black Sea Fleet in the Crimea and other military services. To that extent, before the year 2000, prices and transit fees had the quality of arbitrary units of account.

Starting from 2000, Russia began to exert more pressure on Ukraine in order to induce its neighbor to settle its debt and to stop the diversion of gas from the export pipelines. In both countries, following the collapse of the Soviet economic system and the difficult 1990s, some economic progress was achieved. At the same time, international gas prices began to rise. Beginning in 2004, Gazprom insisted on gradually adapting gas prices charged in the CIS area to European levels and simultaneously to terminate the until then customary settlement of transit fees for gas deliveries. This decoupling formally constituted an important step designed to do away with the in-

1 It is by no means a foregone conclusion that demand for gas will continue to increase. How demand will develop in the future is difficult to predict particularly in view of the global financial crisis, which has led to reductions in the demand for gas. The factors on which it depends are closely connected with the evolution of the post-Kyoto process but also with the future composition of the emery mix, above all in the generation of electricity and with the volume of investments in energy efficiency. All of this is difficult to calculate. Concerning these issues, see Jens Hobohm, *Mehr Erdgas für den Klimaschutz? Chancen und Risiken einer erweiterten Gasstrategie für die europäische Energieversorgung*, Berlin: Stiftung Wissenschaft und Politik, SWP-Studie, No. 32/2009.

transparent barter trade. However, Russian-Ukrainian tensions received international attention only when the controversies escalated at the turn of the year 2005 to 2006 and as, at that time and for the first time, European recipients of gas were affected by a reduction of pressure in the pipelines.

The agreement of 2006 which ended the gas conflict confirmed the separation of transit and pricing arrangements and the gradual increase of prices to European levels until 2012. There is, on the other hand, contradictory information concerning the duration and the number of treaties then concluded. Furthermore, the 2006 agreement moved the intermediary trading company RosUkrEnergo into the center of the gas trade. The Russian-Ukrainian joint venture buys Central Asian gas which, in turn, is transported through the Gazprom pipeline network to Ukraine and on from there to Europe. Behind this business construct is hidden a complex mixture of interests consisting of private business strategies, efforts by both Russian and Ukrainian business partners for personal enrichment and geo-economic calculations of Gazprom. These structural interconnections will be reconsidered later in more detail because RosUkrEnergo was one of the bones of contention in the 2009 gas conflict.

Notwithstanding some adaptations, the scissors between prices for Russian gas charged CIS members and European netback prices (see the box) in the years of 2007 and 2008 continued to widen. This development also lies at the root of the gas conflict between Russia and Belarus, another important gas transit country, in January 2007. The conflict with Minsk ended with the agreement that Gazprom would lift prices to European levels only gradually. In exchange, it succeeded in concluding an agreement which it had for a long time tried to achieve: the gradual takeover of a fifty percent share in Beltransgaz, the operator of the Yamal-Europe pipeline. The problem of Ukrainian import prices was at that time settled conspicuously quickly. Gazprom perhaps did not want to be embroiled in controversies with two transit countries simultaneously.[2] That relaxation, however, was to be only temporary.

European Netback Prices

The base line for price formation in the so-called netback system are the prices for the energy carriers such as heating oil or coal competing with gas in target countries. The costs for transportation and distribution are then deducted from these prices. The *European* netback prices for gas are similarly calculated by a complex formula. It uses a price basis which is increased or decreased by a factor which, in turn, is measured against prices of other sources of energy, notably light or heavy heating oil, in the target country. The calculations are usually performed monthly or quarterly, and the gas price as a rule is tied to the development of prices for various oil products with a delay of about three to nine months.

On that issue see Energy Charter Secretariat, *Putting a Price on Energy, International Pricing Mechanisms for Oil and Gas*, Brussels 2007.

The Gas Conflict of 2009: Developments

At the turn of 2008/09, yet another confrontation occurred between Russia and Ukraine because of unpaid gas bills and new gas price demands. This was to some extent a surprise because during the negotiations in 2008 agreement had almost been reached concerning the terms of the gas trade as well as the price for 1,000 cubic meters of gas, with a difference of only US$ 40 separating the negotiation partners – but then the global financial and economic crisis intervened.

As a result of the global recession, oil prices went into a tailspin. Given the linkage of the gas price to the oil price, though with some delay (see the box on netback prices), Gazprom would make less profit on the European market in the second quarter of 2009. This meant an increased importance of the CIS market for the corporation. Gazprom thus had an acute interest in renegotiation of the terms. Ukraine, in contrast, having earlier profited from strong global demand for steel, with that commodity accounting for 40 percent of the country's exports, experienced a dramatic downturn of its economy in the fourth quarter of 2008. Ukrainian steel production decreased by almost 50 percent. Despite a stand-by credit in the amount of US$ 16.4 billion, agreed upon with the International Monetary Fund (IMF) in November 2008, Ukraine teetered at the edge of bankruptcy.

2 Simon Pirani, Jonathan Stern, and Katja Yafimava, *The Russo-Ukrainian Gas Dispute of January 2009*, Oxford, February 2009, p. 10.

Chronology of the Russian-Ukrainian Gas Controversy of January 2009

- January 1: Gazprom cuts all gas exports destined for Ukraine; deliveries to European destinations continue
- January 5: Gazprom charges that Ukraine has "stolen" 65.3 million cubic meters of gas. Ukraine in response declares that the volume in question constituted "technical gas" necessary for the operation of the compressors and which, in the absence of a corresponding treaty, it was entitled to use
- January 6: Europe receives significantly less gas through the Ukrainian pipeline system
- January 7: Europe no longer receives gas via Ukraine
- January 10–12: Negotiations begin for the creation of an observer mission
- January 11: International gas observation mission formed upon initiatives by Germany and the EU begins its operation
- January 13–17: Gazprom daily provides documentation to prove that it tries to start gas deliveries through the Russian feeder point of Sudzha
- January 14: Ukraine points to the fact that no "technical agreement" existed stipulating volumes of gas of which quality to be pumped through which stations and in which sequence into the Ukrainian pipeline network
- January 15–19: The creation of a consortium of European firms for the purchase of technical gas is being discussed
- January 19: Signing of long-term agreements on gas transit and gas deliveries
- January 20: Gas deliveries are being resumed
- January 22: Gas exports reach their normal levels

A first trigger for the controversy was the Russian assertion that Ukraine had not paid its debts. Russia claimed that as of the end of December unpaid debts of its neighbor for gas imports amounted to US$ 2.4 billion. Kiev admitted only debts in the amount of US$ 1.5 billion. Gazprom, however, in addition claimed another US$ 0.6 billion in interest and penalties.

The conflict escalated over the question as to how European netback prices should be calculated. In the course of the negotiations and in order to increase the pressure, Gazprom abandoned its initial preferential offer of US$ 250 and step by step increased its demands to US$ 418 and even US$ 450 per 1,000 cubic meters of gas. Ukraine improved its offer from US$ 201 to US$ 235 per 1,000 cubic meters.

The price negotiations turned out to be especially difficult because the oil price, which had reached the height of US$ 147 per barrel in July 2008, within just four months decreased by almost US$ 100. The gas price, because of the delay as a result of the linkage to the oil price, had reached its highest point in the winter of 2008/09 but it was clear that subsequently it would significantly decrease. Both negotiating parties thus had good arguments to buttress their positions: Gazprom used the then high price as a starting point, whereas Ukraine referred to the likely downward evolution of prices in the course of the coming months.

Following the curtailment of deliveries, aspects of the transit regime began to play an increasingly important role. One of the main bones of contention were the volumes of gas necessary for the operation of the pipelines because in order to run the compressor and distribution stations and to maintain pressure in the pipeline system, certain volumes of gas, so-called "technical gas," are needed. Due to the increased gas prices, the Ukrainian state corporation Naftogaz was no longer willing to pay for this gas with the considerable volume of 23 million cubic meters, as provided for in the existing transit treaty, but demanded that Gazprom pay the bill.[3]

When Europe, starting from January 7, 2009, no longer received gas through the Ukrainian transit route – an event without precedent – the EU abandoned its wait-and-see attitude and demanded that at least the gas exports to Europe be resumed. A few days later, an international observer mission was dispatched to verify the actual volumes of gas flows in the Russian-Ukrainian transit system. This, too, however, did not produce the desired breakthrough. The controversy was settled only at a meeting between prime ministers Putin and Timoshenko during the night on January 18. On the following day, the accord reached by the two heads of government was converted into treaty form.

3 Pirani, Stern, and Yafimava, *The Russo-Ukrainian Gas Dispute* [see fn. 2], S. 20.

The New Contractual Relationship: Progress on Paper

The new contractual relationship reached between Russia and Ukraine is one of the most transparent in Europe since the documents, contrary to all customary international practice, could be read on the home page of a Ukrainian newspaper.[4] The supply and transit treaty that was concluded on January 19 by Gazprom and Naftogaz, therefore, is known in detail.[5]

On the surface, the solutions found in the treaties of January 2009 constitute real progress in the bilateral business relationship. One notable achievement lies in the agreement reached on a transit regime that is decoupled from the treaty on delivery. Both treaties contain clauses for revision and allow new negotiations if one of the treaty partners considers the conditions on the European gas market fundamentally to have changed. Moreover, in case of disagreement the treaties provide for arbitration at the International Court of Arbitration in Stockholm. It is also important to note that both treaties codify the transition from fixed prices for gas and transit to a pricing formula which is linked to oil. That procedure rules out prices set on the basis of political criteria.

4 *Kontrakt mezhdu natsional'noi aktsionernoi kompaniey "Naftogaz Ukrainy", Kiev, Ukraina i otkrytym aktsionernym obshchestvom "Gazprom", Moskva, Rossiskaia Federatsiia, ob ob"emakh i usloviiach tranzita prirodnogo gaza cherez territoriiu Ukrainy na period s 2009 po 2019 gody* [Treaty between the National Stock Holding Company Naftogaz Ukrainy, Kiev, Ukraine, and the Open Stock Holding Society "Gazprom," Moscow, Russian Federation, on Volumes and Conditions Relating to Gas Transit through the Territory of Ukraine from 2009 to 2019], Moscow/Kiev, January 19, 2009, www.pravda.com.ua/ru/news/2009/1/22/87178.htm, and *Kontrakt mezhdu natsional'noi aktsionernoi kompaniey "Naftogaz Ukrainy," Kiev, Ukraina i otkrytym aktsionernym obshchestvom "Gazprom", Moskva, Rossiiskaia Federatsiia, o kupli-prodazhi prirodnogo gaza v 2009–2019 godakh* [Treaty between the National Stock Holding Company Naftogaz Ukrainy, Kiev, Ukraine, and the Open Stock Holding Society "Gazprom," Moscow, Russian Federation on the Purchase and Sale of Natural Gas in 2009–2019], Moscow and Kiev, January 19, 2009, www.pravda.com.ua/ru/news/2009/1/22/87168.htm (accessed on January 23, 2009).

5 On that issue in detail see Jonas Grätz and Kirsten Westphal, *Ende gut, alles gut? Das russisch-ukrainische Gasabkommen auf dem Prüfstand*, Berlin: Stiftung Wissenschaft und Politik, SWP-Aktuell, No. 3/09), January 2009, www.swp-berlin.org/common/get_document.php?asset_id=5695; and Jonas Grätz and Kirsten Westphal, "Trügerischer Friede? Kosten und Nutzen der Gasverträge zwischen Russland und Ukraine," *Russland-Analysen*, (January 30, 2009) 176, www.laender-analysen.de/russland/pdf/Russlandanalysen176.pdf#page=5.

New Treaty on Supply of January 19, 2009

- Duration until 2019
- Ukraine pays European netback prices (see above, p. 8). Their levels are set in accordance with a formula that is recalculated every quarter and that takes into account the prices for light and heavy fuel oil. The base price set at US$ 450 per 1,000 cubic meters of gas can be considered to be relatively high.
- The treaty contains a take-or-pay clause which, independent of whether Ukraine actually imports the volume of gas agreed upon, is obliged to pay for at least 80 percent of the contracted volume
- In 2009, Ukraine has to purchase 40 billion cubic meters of gas from Gazprom; starting from 2010, that volume is to rise to annually 52 billion. This corresponds to the volume which the country imported on average in the preceding years
- In negotiations aimed at revision of supply provisions, the volume contracted for delivery may only be increased or decreased by 20 percent
- In case Naftogaz is late or defaults in its payment obligations once Gazprom is entitled immediately to stop the deliveries or commit Naftogaz to pay 100 percent for deliveries in advance
- For 2009, Ukraine receives a price rebate of 20 percent, which in practice means that the price charged for the first quarter of 2009 is decreased to US$ 360 per 1,000 cubic meters and in the second quarter to approximately US$ 266 (as compared to the gas price of US$ 179.50 in 2008)

The New Transit Treaty of January 19, 2009

- In 2009, transit fees are to remain at the preferential rate of US$ 1.70 for 1,000 cubic meters of gas per 100 kilometers (as compensation for the discount granted in the treaty on supply)
- Beginning in 2010, transit fees are to be calculated in accordance with a formula tied to the development of the gas price as stipulated in the treaty on supply. The fees may not fall below US$ 2.04
- At least 110 billion cubic meters of gas *per annum* have to be shipped through the pipeline network
- No ship-or-pay clause is included which would oblige Gazprom to pay, at least up to a certain volume, for unused transit services
- The treaty specifies feeding and exit points in minute detail and differentiates in accordance with quarterly shipments

Another improvement, finally, rests in the fact that the transit treaty takes into account not only fees for services but also the costs for fuel to operate the pipeline network.

In conclusion, it can be said that Gazprom to a considerable extent was able to assert its interests in the treaty negotiated between Putin and Timoshenko. Ukraine may have succeeded to improve its position on transit fees but relatively speaking Gazprom clearly is profiting more from the agreements than Naftogaz. Thus, the Russian corporation managed to impose a price formula that even under the condition of a low oil price in the long term guarantees a relatively high gas price to the detriment of Ukraine. That country in turn, through the take-or-pay clauses, is bound to Gazprom with considerable volumes of supply – a state of affairs that limits Kiev's freedom of action in energy matters and that, in case domestic demand were to fall sharply, would carry high costs.[6] The transit treaty in contrast does not contain a similar ship-or-pay clause. In fact, in the first half of 2009, Gazprom suffered enormous reductions of demand on the European market to the tune of more than 50 percent compared to 2008. Given the fact that Europe's gas imports in that period overall only decreased by 12 percent, it is quite apparent that the crisis hurt Gazprom. It also seems to indicate that the delay in the adjustment of the gas price to the oil price in the treaties concluded between Russia and Europe is fairly long. It was for that reason more beneficial for European firms to buy gas from sources other than Russia such as, for instance, Norway. However, Gazprom also calculated rationally in the gas controversy since it managed to compensate half of its losses on the European market by the high price increases charged to Ukraine and other CIS member states.

Furthermore, in a transitional period the previous Russian transit fees will be offset against accumulated debts: In a supplementary protocol to the treaty on supply, Naftogaz consented to cover the debts of the RosUkrEnergo intermediary owed to Gazprom and its affiliates in the amount of US$ 1.7 billion. In exchange, RosUkrEnergo finally will be removed from the business transactions. In order to meet its debts, Gazprom will grant Naftogaz advance payments for transport services in equal amounts for the years 2009 and 2010. Naftogaz in turn committed itself to use that money exclusively for redeeming its debts with Gazprom. That means that Naftogaz in the coming years will hardly make any profit. For ejecting RosUkrEnergo from the gas business Ukraine, therefore, is paying a high price.

In the course of 2009, internationally and domestically, concern and doubt abounded as to whether Ukraine would be able to meet its payment obligations for the gas deliveries of the preceding month due in the first week of the current month. As a result of sharp declines in the demand for gas, actual volumes imported are considerably lower than those contracted. As early as the first quarter of 2009, Russia magnanimously set aside the take-or-pay clause so that Ukraine for the time being has to pay only for those volumes of gas that it receives. Yet Moscow in the form of that clause retains a political lever. Russia maintained its generous attitude even in summer when the transit fees for the Ukrainian gas export network increased.

The economic crisis and the decline of the Ukrainian currency produce additional negative effects for the country. The government, therefore, had to bail out Naftogaz with financial aid from the state budget. The Ukrainian central bank, too, in May 2009 had to provide assistance in order for Naftogaz to meet its US Dollar obligations. The fact that the prime minister, only about one month after the conclusion of the gas treaties, in addition to the assistance provided by Russia in the amount of US$ 5 billion had to ask for more help from other countries shows how precarious the country's economic state of affairs has become.

Who Is to Blame?

Even in retrospect, it is difficult to say which side in the gas controversy of January 2009 is more to blame, Russia or Ukraine. One of the reasons for this is the vigorous public relations campaign waged by the two actors. Even before the onset of the controversy, the Russian government had hired several public relations agencies and issued warning in various European capitals about an impending conflict. It had obviously drawn lessons from the gas conflict of 2006 when it was unsuccessful in countering the waves of negative public and private international reaction. Ukrainian and Russian representatives blamed each other for the

6 Critics in Ukraine sharply pointed out that the volumes contracted in the treaty on supply contradicted the aims set out in the country's national energy strategy. For the year 2020, the strategy envisages volumes of imports of only 20.8 billion cubic meters. In contrast to that, the supply treaty with Gazprom stipulates, on the basis of the take-or-pay clause, annual import volumes of 52 billion cubic meters.

delivery shortfalls in Europe. According to Ukrainian data, Gazprom fed too little into the pipeline system for onward shipment to Europe because, in view of a very cold winter, it apparently did not have enough gas available for export. In the Russian version of events, Ukraine illegally diverted a big portion of the gas destined for Europe to use for its own purposes.

Detailed information that was furnished by the two parties did little to elucidate the true sequence of events. For instance, under the very eyes of the international observer mission, Russian representatives made several attempts at the Sudzha feeding point to pump gas into the Ukrainian net for its onward flow to Europe. At present, however, the majority of experts are of the opinion that it was technically impossible for Ukraine to transfer gas to Europe from this entry point. The Russian motivation in the game was obvious: For all to see, Ukraine's unreliability or, as the case may be, inability to provide for secure transit was to be revealed. What had happened was that Ukraine had closed the feeder point in order to supply the east and south of the country with gas from its storage facilities in the west. How exactly this was achieved, however, essentially still remains a mystery.[7] The fact that the endeavor was successfully carried out makes it safe to assume that Ukraine did not enter the controversy without preparation.

In the final analysis, it is immaterial by whom, when and by how much the gas supply was cut. Both parties suffered in reputation as a result of the unprecedented rupture of deliveries. At the same time, it is clear that both Russia and Ukraine put up with the damage. Private interests and power plays in the respective countries took precedence over foreign policy considerations. Furthermore, for an adequate assessment of the agreement reached in January, it also has to be stated that so far none of the Russian-Ukrainian gas treaties lasted until the end of its projected validity nor was the substance of these treaties ever carried out. In particular, whenever differences arose, both parties acted contrary to good faith and quickly abandoned the common ground of the agreements concluded. Finally, the gas controversy of January 2009 once again demonstrated that the Russian-Ukrainian tensions are to a considerable extent deeply rooted. In large part, they find their explanation in structural problems which jeopardize the security of supply on Europe's most important transit route.

The Background: The Soviet Legacy of Outdated Infrastructure and Conflicting Interests

Obsolete: The Ukrainian Transit Network

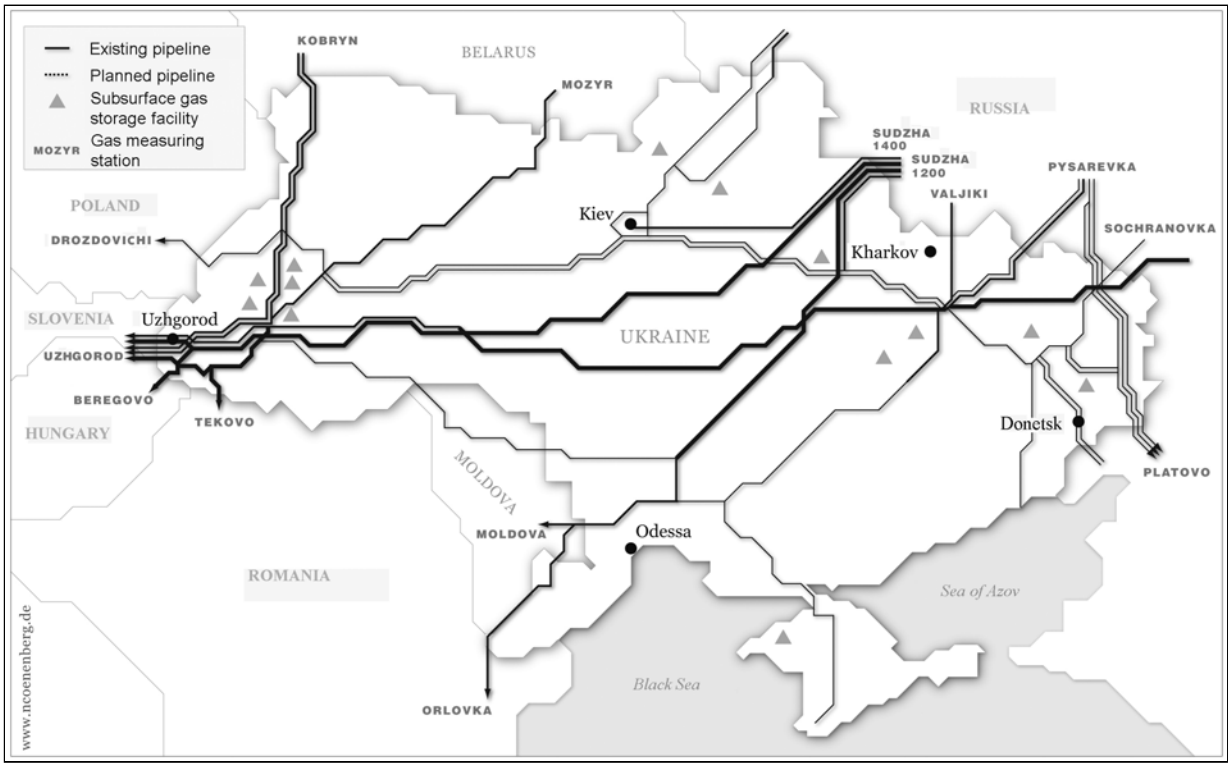
During the gas controversy of 2009, but also during the many less dramatic antecedents, technical details often played an important role. For instance, heated discussions took place concerning the question as to how much gas is needed for operating the pipelines and maintaining adequate pressure in the pipes. The inefficient operation of the Ukrainian transit network, which requires a lot of fuel, perennially is fomenting conflict because it is the basis for the charge that Ukraine is "stealing" gas. In the final analysis, however, it is difficult to establish whether a certain volume of gas is diverted for consumption or used as technical gas for transport purposes.

This is just one of the many examples pointing to the fact that the legacy of Soviet infrastructure causes problems. These occur because, first, the Ukrainian gas network was an integral part of the Soviet all-Union network and, therefore, not oriented towards today's national borders. Second, the transit pipelines are an integral part of Ukraine's domestic distribution system. Only *ex post facto* did they become part of an international gas transit system. For that reason, after the collapse of the Soviet Union there was not only an absence of an international treaty basis for gas transit but Ukraine was saddled with the anomaly that the transit system could apparently not be operated independently from the Ukrainian domestic network. The only redeeming feature of this state of affairs is that the flow of gas destined for domestic consumption can be measured independently of the volume transported.[8] Third, most of the transit pipelines were built in the 1970s and 1980s. Considering that the ordinary life span for pipelines is between 30 and 35 years, it is obvious that the requirements for maintenance, repair and replacement are ever more pres-

7 Ukraine probably isolates its gas market, that is, is blocking the feeder points so as, through pressure generated from the storage facilities in the west of the country, to transport gas to the eastern part. This is because the technical preconditions for reversing flows presumably do not exist.

8 Energy Charter Secretariat, *Gas Transit Tariffs in Selected Energy Charter Treaty Countries*, Brussels, January 2006, pp. 20–21.

Map 1
The Ukrainian Gas Pipeline Network



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sing. It is for that reason that Ukraine, at the end of 2006, announced that it intended to carry out a comprehensive program of modernization in the amount of US$ 4.6 billion. This program has not been implemented. However, as long as the transport network fails to be modernized, the security of gas transits is in jeopardy.

The Ukrainian gas pipeline network is one of the longest in the world. It comprises 38,000 kilometers of pipeline into which are fed approximately 280 billion cubic meters *per annum* with an overall carrying capacity of about 180 billion cubic meters for export.[9] Its transit capacity thus is higher than the floor of 110 billion cubic meters annually as codified in the new Russian-Ukrainian treaties of 2009. The export network consists of three main pipelines. Twelve stations measure the gas flows entering at the Ukrainian borders and ten at the border exit points. The country, furthermore, with 34 billion cubic meters, has the biggest storage capacity in Europe next to Russia. The main storage facilities are located in the west of the country. They are, therefore, primarily designed to supply the European market.

Ukraine's transit network is one of the most important assets of the country. Kiev, for that reason, must have a strong interest in maintaining the volumes of gas which are transported through its territory. It not only derives economic but also political benefit from its status as a transit country. Any reduction in the volumes transported, therefore, is tantamount not only to a financial loss of transit fees foregone but also a diminution of power. Given its significance, the transit network is owned by the Ukrainian state. A corresponding law forbids its privatization or its utilization by third parties.[10] The network is operated by the state-owned gas corporation Naftogaz and its affiliates. It is chronically underfinanced and several times it had to be bailed out to avoid bankruptcy. These structural deficiencies are part of the problem and entail a number of other negative consequences

9 On this issue in detail, see Simon Pirani, *Ukraine's Gas Sector*, Oxford: Oxford Energy Institute, June 2007, pp. 73–90.

10 Margarita Balmaceda, *Energy Dependency, Politics and Corruption in the Former Soviet Union, Russia's Power, Oligarchs' Profits and Ukraine's Missing Energy Policy 1995–2006*, London/New York: Routledge, 2008, p. 86.

such as, for instance, the inefficient use of energy of the country.

Intransparent: The Energy Sector

Ukraine at present is caught up in a crisis with two major dimensions. The country teeters at the edge of bankruptcy, and the stalemate between president and government constricts the freedom of maneuver of the leadership in Kiev to design and carry out policy. In that constellation, the energy sector forms one of the central foci of domestic power struggles.

That became evident also in the course of the Russian-Ukrainian gas controversy which fuelled and at the same time was exacerbated by the political rivalry between prime minister Timoshenko and president Yushchenko. The power plays in part serve to explain why up to now all attempts at comprehensive reform in the energy sector have foundered; reform efforts come up against an insurmountable barrier of corruption, financial stringencies and political trench warfare. The mutual neutralization of forces also entails the structural inability of Ukraine to conduct a forward oriented energy policy and to implement the energy strategy adopted in 2006 which is to guide policy until 2030.[11] This is despite the fact that the structure of Ukrainian energy consumption is to a considerable extent responsible for the calamitous state of the economy. In Ukraine, energy intensity, that is, energy consumption in relation to gross domestic product, is more than 2.5 times higher than in the countries of the European Union.[12] The share of Ukrainian industry in total energy consumption of the country amounts to 32 percent and to that extent is one of the most energy intensive in the world.

The share of gas in primary energy consumption in Ukraine amounts to approximately 46 percent. That is quite high. In Germany, for instance, that share amounts to 23 percent. Such a high gas quotient may be sensible for environmental reasons but under the conditions of energy intensity it fails to meet criteria of economic rationality, and the possible ecological benefits are counteracted by the wasteful usage of gas. Almost eleven percent of energy consumption is used for technical purposes, above all for operating the pipelines.[13] The potential in Ukraine, therefore, for energy savings, an increase in energy efficiency and changes in the energy mix in favor of renewable energy is quite high. Until now, however, the numerous plans in energy policy, as mentioned, have almost never been carried out.[14] In the electoral year of 2009, changes in that respect are even less likely.

Yet another problem lies in the fact that the Ukrainian gas trade is dominated by strategies of money absorption and profit maximization. This is the other side of the coin of price regulation. From social and political perspectives, price regulation may make sense since increasing energy costs are a financial burden for the population, and economic discontent could turn into political protest. But price regulation has economic side effects: It does not provide for any incentives to save energy, to use energy more efficiently or to develop indigenous gas resources.

At the same time, much money can be made when there are wide discrepancies in price levels as a result of subsidization and regulation. Opportunities abound for "smuggling," that is, the sale of cheap gas on a wide scale. Theoretically at least, on the Ukrainian gas market, the big industrial customers pay the highest prices. But whoever controls the flow of gas also determines profits and losses in other branches of industry. Access to cheap fuel is an important competitive advantage which, in the politically divided country, is often used to favor one's allies and friends. The gas trade is also hub and pivot of corruption and power struggles because the steel industry and, more generally, heavy industry as well as the producers of fertilizer in Ukraine are highly dependent on gas.

In conclusion, in the Ukrainian energy sector private profits are made at the expense of the state budget and the national economy. Since according to the law, the state-owned Naftogaz Ukrainy corporation cannot be allowed to go bankrupt, deficits have to be covered from the state budget. The most lucrative sectors of the gas trade are controlled by private gas traders leaving to Naftogaz those sectors which have the lowest prices or where there is no payment. Thus, for instance, Naftogaz furnishes the population with

11 Ministerstvo paliva ta energetiki, *Energetichna strategiia Ukraini do 2030 roku* [Ministerium für Brennstoffe und Energie, *Energiestrategie der Ukraine bis 2030*], Kiev, September 25, 2006, http://mpe.kmu.gov.ua/fuel/control/uk/doccatalog/list?currDir=50505 (accessed February 23, 2009)

12 International Energy Agency (IEA), *Ukraine Energy Policy Review 2006*, Paris 2006, p. 117.

13 International Energy Agency (IEA), *Ukraine Energy Policy Review 2006*, Paris 2006, p. 54.

14 Thus, for instance, at its session of February 2009, held in the wake of the gas crisis, the National Security and Defense Council deplored that out of 109 measures envisaged in 2005 only 39 had been carried out.

gas at a price that is only one tenth of the average European prices. That is another of the many reasons why the state-owned corporation does no have the resources to modernize the transit network.

Lucrative: The Intermediary Trade

Intermediary trade is that element in the energy industry that is most subject to personal enrichment and most suitable to serve political clienteles. The example of RosUkrEnergo, the firm that is active in this area, demonstrates how vigorously and viciously the struggle has raged over the profitable segments of the gas trade in Ukraine. RosUkrEnergo constituted the central pillar of the deal that was negotiated in the 2006 gas conflict. The Russian-Ukrainian firm not only profited as an intermediary from the sale of Central Asian gas but also from selling it to EU member countries and to big customers in Ukraine.

One half of RosUkrEnergo is owned by the Swiss-registered Centragaz Holding AG in which two Ukrainian "oligarchs," Dmitry Firtash and Ivan Fursin, hold 45 and 5 percent respectively of the shares. The other half is owned by Gazprom. The details of that ownership only came to light gradually. In the process, there was ample room for speculation about corruption and personal enrichment. Due to a largely free media landscape, the ties and connections in Ukraine have relatively well been documented. The media in Russia have to work under many more restrictions and are much more cautious with the effect that much less is known about the Russian dimension in RosUkrEnergo.

President Yushchenko is said to be quite close to the oligarch Firtash. Therefore, when Timoshenko became prime minister again in December 2007, the emergence of conflict with RosUkrEnergo was likely because she was determined to muscle Firtash out of the business.[15] In March 2008, it looked as if all sides had agreed to remove RosUkrEnergo from the business. According to the agreement, Naftogaz was to import gas directly from Gazprom, and Gazprom affiliates were to receive access to the Ukrainian gas market. At the turn of the year, the controversy escalated. According to Timoshenko's version, the reason why the negotiations failed was due in part to RosUkrEnergo, which wanted to remain in business.

In the end, in January 2009, RosUkrEnergo was excluded from the Russian-Ukrainian gas trade. For its removal, however, Ukraine had to pay a heavy price. According to a supplementary protocol to the gas treaty, Naftogaz has to repay RosUkrEnergo debts with Gazprom and its affiliates in the amount of US$ 1.7 billion.[16] It is a mystery how these debts originated and strange on top of that because Gazprom, as mentioned, owns half of the intermediary. As compensation, Naftogaz received access to 11 billion cubic meters of gas stored by RosUkrEnergo in gas storage facilities in Ukraine.[17]

RosUkrEnergo meanwhile is intent on fighting its ignonimous removal and, according to its own information, has initiated two cases against Naftogaz Ukrainy at the International Court of Arbitration in Stockholm. The events surrounding the intermediary were also in the center of ever more acid domestic political struggles in Ukraine. These went as far as a secret service operation against the Naftogaz headquarters at the beginning of March 2009.

Just as murky as the future of RosUkrEnergo is that of its affiliate, Ukrgazenergo, which has lucrative agreements for the delivery of gas to big Ukrainian customers. Under the new conditions, Gazprom through its affiliate Gazprom Sbyt Ukraina, all of whose shares are owned by Gazprom, now has direct access to the Ukrainian market and has been able, compared to an agreement concluded in 2008, significantly to enlarge its market share. It now sells 25 percent of its imported gas volume to the big industrial corporations in Ukraine and thereby has secured for itself a profitable business segment to the detriment of the state-owned Naftogaz. Gazprom Sbyt Ukraina, furthermore, takes over part of RosUkrEn-

15 Margarita Balmaceda, "Zwischenhändler und die innerukrainische Dimension des Gaskonflikts," *Ukraine-Analysen*, No. 50, January 27, 2009, pp. 18–21 (p. 20).

16 *Dogovor ustupki mezhdu otkrytym akcionernym obshchestvom "Gazprom", obshchestvom ogranichennoi otvetstvennosiu "Gazprom Eksport" v kachestve kreditorov i natsional'noi aktsionernoi kompaniei "Naftogaz Ukrainy" v kachestve novogo kreditora"* [Reassignment Treaty between the Open Stock Holding Company Gazprom, the Limited Liability Company Gazprom Eksport in Its Capacity as Creditor and the National Stock Holding Company Naftogaz Ukrainy in Its Capacity as New Creditor], Moscow and Kiev, January 19, 2009, www.epravda.com.ua/publications/499d7bb1081fa/ (accessed February 23, 2009).

17 The gas was obviously meant to be used for further export. It is for this reason that the gas crisis, in the first quarter of 2009, extended to Hungary, Poland and Romania. These countries had agreements with RosUkrEnergo for the delivery of a total of 7 billion cubic meters of gas. According to the new arrangements, these delivery obligations could not be met.

ergo's export business to Eastern Europe.[18] Poland, for instance, nevertheless needed more than half a year in order to compensate for the loss of RosUkrEnergo gas deliveries. By means of this new arrangement Gazprom not only extracts high rent as an intermediary but also fleeces the Ukrainian tax payer who now has to meet the debts which had allegedly accumulated.

It does seem, moreover, that the intransparent business practices in intermediary trade are by no means a matter of the past. For instance, in the gas trade with Hungary, a certain firm under the name of Rosgas has appeared, which like RosUkrEnergo is registered in the Swiss canton of Zug. Notwithstanding all disclaimers from the Gazprom headquarters, rumors stubbornly persist that Gazprom or Gazprom affiliates are behind the new firm.[19] Furthermore, the Ukrainian government permitted six big chemical corporations, starting from early June 2009, to conclude contracts directly with foreign gas suppliers. This will probably have the effect to push Naftogaz still deeper into debt.

Convenient: Gazprom's Gas Imports from Central Asia

The intermediary business, however, does not only pertain to the Russian-Ukrainian gas trade but begins with the purchase of gas in Central Asia. RosUkrEnergo is just the latest in a whole array of intermediaries such as ITERA or EuralTransGaz who bought gas in Central Asia and sold it to Ukraine or East-Central Europe. All of these intermediaries invariably had close connections to Gazprom and its management.

Gazprom thus pursues the objective to retain its monopoly for the transport and export of Central Asian gas to Europe. The creation of RosUkrEnergo, with the help of which the gas conflict of 2006 was settled, was for Gazprom an eminently successful deal because it was able to build on its monopoly position in three different ways.[20] It monopolized Turkmen gas exports to Ukraine; it profited, through its intermediary RosUkrEnergo, from gas sales to Ukraine; and, through one of its affiliates, succeeded to muscle itself into the lucrative gas business with the big Ukrainian industrial consumers.

Whereas, in the 1990s, the Gazprom management had still pursued the aim of keeping Central Asian and, above all, Turkmen gas away from the markets, the corporation under its new chairman and Putin confidant, Aleksey Miller, changed strategy after 2001. The corporation began to utilize the dependency of the Central Asian states on the Russian gas network. The strong position that Gazprom thereby acquired, it would appear, is the main reason for its rejection of the Energy Charter Treaty.

Gazprom initially was able to buy Central Asian gas at very low prices, to which the newly independent republics for lack of alternative routes to export their gas had to consent. In that way, the Central Asian states subsidized the low domestic prices for gas in Russia and in several CIS countries, including Ukraine. Gazprom, in turn, was able to reap high windfall profits because the import of cheap gas from Central Asia made it possible for the corporation to sell more Russian gas to Europe at high prices. In 2007, Gazprom received close to 60 billion cubic meters of gas from Central Asia, the lion's share from Turkmenistan. Only about little more than ten percent of that volume was for the Russian market, the rest was delivered to Ukraine.[21] These interconnections also affected the Russian-Ukrainian gas conflict in 2009: In autumn 2008, relatively early in the emerging controversy, Russia had agreed with the Central Asian states to import than US$ 300 per 1,000 cubic meters of gas at high prices. It most likely had done so also with the idea in mind that, in exchange, after the war in Georgia, these countries would extend greater political support to Russia and, for instance, would join Moscow in recognizing the break-away republics of South Ossetia and Abkhazia. The room for maneuver *vis-à-vis* Ukraine to concede lower prices had thereby considerably narrowed.

Gazprom, in short, has been able to kill several birds with one stone. For the Russian energy corporation, under conditions of shrinking production of its own huge West Siberian gas fields, it has made sense to retain the contracted Central Asian gas as an important asset in its portfolio. In that way, not only has it been feasible for the company to delay expensive

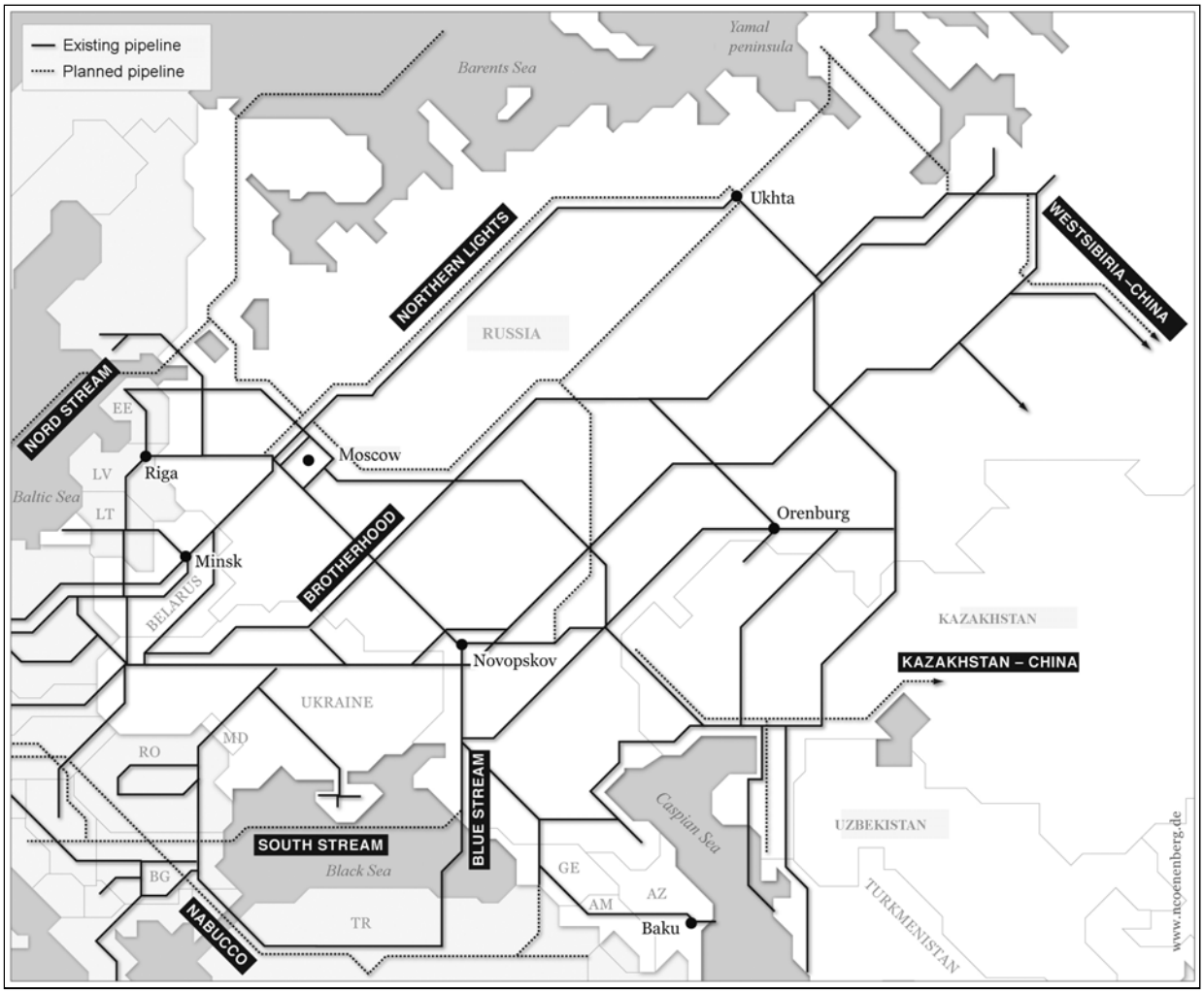
18 "Gazprom zamenit RosUkrEnergo v postavkakh gaza Vostochnoi Evrope" [Gazprom Replaces RosUkrEnergo in the Delivery of Gas to Eastern Europe], *Kommersant*, March 10, 2009.

19 See Jonas Grätz, "Der russisch-ukrainische Gasstreit: Fortsetzung ohne Ende?", *Ukraine-Analysen*, No. 58, June 9, 2009, pp. 2–4 (p. 4).

20 On this issue see Balmaceda, *Energy Dependency* [*op. cit.*, fn. 10], p. 127, and Simon Pirani, "Der russisch-ukrainische Gaskonflikt 2009," *Ukraine-Analysen*, No. 50, January 27, 2009, pp. 4–18 (p. 14).

21 IEA, *Natural Gas Information 2008*, Paris 2008, pp. II.20–II.37.

Map 2
The Gas Pipeline Network of Russia and the CIS Countries



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investments in its own fields but also, in the event of a serious decline in demand – as, for instance, in 2009, as a result of the financial crisis – at least in part to externalize the problem and pass it on to the Central Asian gas producers. Among them, as the country with the biggest reserves of gas, Turkmenistan is of particular significance. There are many signs that Russia has succeeded so far in pushing Turkmenistan *de facto* into the role of a swing producer. In this connection, there has been speculation concerning the likely cause of the explosion that occurred in April 2009 on the pipeline that leads from the Turkmen gas fields to Russia. The fact that the deliveries were thereby cut was to Gazprom's benefit since demand in Europe has decreased significantly. Only by mid September 2009 the countries started to broker. Prices were probably re-negotiated after they and demand had plummeted. Moreover, the Russian company ITERA signed a production sharing agreement with Turkmenistan to develop an off-shore gas field in the Caspian Sea. In that respect, ITERA followed the German RWE that had achieved a similar deal in a neighboring block in the Caspian Sea. Much depends now on the extent to which the Central Asian state will be able to diversify its exports and, in particular, its export routes.

Sophisticated: Gazprom's Export Strategy

One of the reasons why conflicts with Ukraine flare up time and again is connected with Gazprom's export strategy. Ever since the dissolution of the Soviet

Union, the corporation has had a strong interest to establish bypass routes to lead around Ukraine and to furnish the big European markets via direct connections.

Ukraine is Gazprom's biggest customer. In the past few years, the country imported between 50 and 57 billion cubic meters of gas annually from Russia. That is an important fact that in evaluations of Russian-Ukrainian gas conflicts is often overlooked. Following behind with some distance in second place is Germany with imports amounting to 34.5 billion cubic meters of gas in 2007. Especially against the background of the current financial crisis, then, the price to be paid by Ukraine for Russian gas is of considerable economic significance.

Ukraine, however, is not only eminently important for Gazprom as an importer of gas but also as a transit country, transporting by far the biggest volume of gas destined for Europe. In the medium term, because of its great capacity, the transit route through Ukraine is likely to remain the main line for the export of gas from Russia to Europe. Gazprom, for that reason, is quite interested in improving its position on questions of transport *vis-à-vis* Ukraine. It attempts to achieve that goal in three different ways. First, the corporation wants to establish a new *modus operandi* on the main transit route. Second, it makes efforts to acquire shares in the gas pipeline network, above all, in Ukraine's transit pipeline system. Third, in the recurrent controversies with Ukraine, it wants to raise consciousness in European recipient countries about the urgency of building direct pipeline links such as, for instance, the Nord Stream pipeline. One should not in this context forget that in the past Gazprom always increased pressure on Ukraine when alternative projects appeared to come to fruition as, for instance, when the Yamal pipeline was commissioned in 1999 or when the Nord Stream pipeline was agreed upon in 2005. Following the gas conflict of 2009, Gazprom is now pushing the South Stream pipeline project, which is to lead from the Caspian area through the Black Sea to Bulgaria. Gazprom and the Bulgarian hydrocarbon company Bulgargaz at the beginning of February 2009 signed an agreement that increases the chances for project to proceed.[22] On August, 5, 2009, Russia and Turkey signed a series of agreements including the construction of parts of the South Stream through Turkish waters of the Black Sea. This would be more costly but it would enable Russia to bypass the Ukrainian offshore section.

Conclusion: The Need for European Responses

Analysis of the contractual relationship between Russia and Ukraine concerning the trade in gas and the structural reasons for the recurrent bilateral conflicts between the two countries demonstrates that the problems on Europe's most important gas import route are likely to persist. After the quarrel is always before the quarrel.

Conditions in Ukraine are characterized by high structural dependency on cheap gas. In the 18 years since the dissolution of the Soviet Union, the country has hardly begun to embark on reforms so as to reduce this dependency. As a result, the price increases that the treaty on delivery entailed cannot be passed on directly to the consumer. However, whether the gas bill can be covered by the state budget is, in view of the desolate state of affairs of the Ukrainian national economy, quite uncertain. It will, therefore, be one of the biggest tasks of the government in Kiev to put the energy supply of the country on a sound economic basis. In order to achieve that, both gas imports and gas consumption have to be lowered. On both counts, the Ukrainian leadership has failed. Motivated by the quest for personal gain and calculations of advancement in the domestic power struggle, it has refrained from carrying out urgently needed reforms in the energy sector. The events surrounding the RosUkrEnergo intermediary has permitted insights into an abyss of corruption, organized crime and fusion of governmental and state security structures.

It should be in Ukraine's vital interest to retain its position as a transit country and at least to maintain the current volumes of transit. The efforts made by Kiev and Moscow on this issue, which also touches upon price formation, reveal wide discrepancies. Ukraine, in its capacity as a transit country, is able to wield a strong political and economic lever, which provides it with the possibility to assert its interests *vis-à-vis* Russia. Moscow would like to rid itself of the impediments of the Soviet legacy and reduce its dependency on transit through Ukraine but at the same time it profits from this very legacy in the form of the Central Asian countries' dependency on the

22 "Rossiia i ES o diversifikatsii marshrutov postavok gaza" [Russia and the EU on the Diversification of Gas Supply Routes], *Kommersant*, February 6, 2009.

Gazprom pipeline network. Obviously, in this struggle, the freedom of action of the Russian energy giant is by far greater than that of Ukraine. Assisted by the Kremlin, the corporation has in the last years pursued a geo-economic strategy that emphasizes market expansion and market dominance in Europe and the post-Soviet space. Recently, therefore, it has given preference to such projects of infrastructure that serve to provide direct access to the West European markets and circumvent the transit countries.

However, the at first sight purely commercially motivated business and trade dispute between Moscow and Kiev also exploded because of the tense political relationship between the two countries, which lately has deteriorated even further as a result of the Russian-Georgian war in August 2008 and the Ukrainian desire to join Nato. Whereas Russia has charged that Ukraine supplied weapons to Georgia, Kiev resents the stationing of Russian Black Sea Fleet in Sevastopol which, according to the 1997 treaty concluded between Moscow and Kiev, is permitted until 2017. As an indication of the merger of governmental and commercial interests in Russia, both the government and Gazprom were apparently equally keen to discredit Ukraine as a close partner of the West.

As for Europe, two points need to be stressed. First, the political and socio-economic conditions and the management of energy problems on post-Soviet space play a vital role in Europe's gas supply security. The central issues in the Russian-Ukrainian relationship as well as in Russia and Ukraine itself, however, are to a large extent still unsolved. That is to say, bilateral quarrels may produce effects at the other, European, end of the transit pipeline. In relation to their ties of the two countries to the EU, it is painful to conclude that both Russian and Ukrainian behavior in January 2009 ran counter not only to good business practices but also that it violated delivery and transit treaties as well as the Energy Charter Treaty. Concerning Ukraine, which after the Orange Revolution had been regarded as a shining European neighborhood model and in which many hopes had been placed, its behavior has meant for the West a harsh landing on the ground of hard facts.

Second, concerning the European Union, the Russian-Ukrainian gas conflicts of 2006 and 2009 have clearly revealed the constraints on EU crisis management. The instruments available to the Europeans in order to, directly or indirectly, bilaterally or multilaterally, react to the conflicts have turned out to be quite limited.

The EU: Gas Supply and Crisis Management Put to the Test

European Crisis Management during the Gas Controversy

Crisis Management in Germany

Germany of all the EU member states is by far the biggest customer of Russian gas. When, in January 2009, as a consequence of the Russian-Ukrainian gas conflict, disruptions of supply occurred, the south of the country was affected most of all, experiencing delivery shortfalls of up to 60 percent. However, dispatching, that is, internal redistribution of gas, including to southern Germany, worked well. The country as a whole suffered cuts of only 10 to 15 percent because Gazprom was able to deliver more volumes of gas via the Yamal-Europe pipeline. As a consequence, two of the big German gas companies, Wingas and VNG, could import via this route almost all of their customary volumes of gas from Russia. In addition, Norway and the Netherlands provided more gas than usual, and further amounts were piped in from Britain to the continent through interconnectors. German gas companies, therefore, were able to deliver gas to other European countries affected by Russian delivery shortfalls. In addition, at the beginning of the gas conflict, storage facilities were well stocked and, at its end, were filled normally for that season. However, decreased demand for gas as a result of the economic crisis also played a role. These two parallel developments could serve to explain why the spot market prices for gas rose only slightly during the controversy.

Due to the falling gas prices even after the Russian-Ukrainian conflict, the energy importers could fill the storage sites with cheaper gas, which in turn contributed to the stabilization of the domestic market prices. To that extent, the deliveries made to regions in short supply of gas during the crisis, which were labeled "assistance measures," were, in fact, commercially based and they were certainly profitable for the firms concerned.

Political leaders and business representatives unanimously concluded *ex post facto* that Germany, because of its sophisticated distribution system and storage capacities managed to sail fairly well through the crisis. The German gas companies, therefore, with a view towards the discussions conducted in the EU, argue that the crisis reaction mechanisms on a commercial basis and in the framework of the existing infrastructure, had actually worked very well. It is obvious that this argument by the German energy suppliers amounts to wanting to keep the *status quo*.

EU Crisis Management

Europe in January 2009 experienced the biggest gas supply crisis in its history. The possibilities for the EU directly to influence the two quarrelling parties during the crisis were quite limited. The observer mission initiated by the EU also did not succeed in breaking the deadlock. Contrary to their mandate, the observers were not allowed to monitor the gas flows in and out of the Ukrainian storage facilities. On the EU's internal market, the temporary halt of deliveries represented a true test for the crisis prevention measures of the energy companies, the EU member states and the EU itself.

Formally, the EU with its actions to a large degree adhered to the three-stage procedure provided for in the gas supply directive of April 2004.[23] According to the directive, the companies first have to attempt to ensure gas supply by drawing on their own resources. In the next stage, they are called upon to meet their obligations as, for instance, by deciding upon possible delivery cuts in certain sectors of consumption. This is, indeed, what happened in Slovakia and Bulgaria. It is only when these measures are considered not to be sufficient or when there is a shortfall in gas imports of more than 20 percent that coordination of measures are elevated to the community level. The Commission can then, in consultation with the Gas Coordination Group, suggest further steps and submit proposals to the Council. The Group, which has existed since 2006 and which consists of representatives of the Commis-

23 "Rat der Europäischen Union, Richtlinie 2004/67/EG des Rates vom 26. April 2004 über Maßnahmen zur Gewährleistung der sicheren Erdgasversorgung," *Amtsblatt der Europäischen Union*, L 127/92, April 29, 2006.

sion, EU member states, industry and important gas consumers, meets at least four times per year. During the 2009 gas crisis, it was convened twice.

Table 1 (pp. 22–23) provides an overview of the extent to which the EU member states and the European Energy Community were affected by disruptions in gas deliveries and what crisis reaction mechanisms were available to them. The reference date is January 7, 2009, when it had become apparent that gas supply through Ukraine had stopped.

The effects of the crisis in Northern Europe were marginal. In this area, the delivery shortfalls could be compensated by storage facilities, alternative deliveries and excellent network connections. In Central Europe, the cuts of gas delivery via Ukraine led to several ruptures in supply, above all, in Slovakia and Hungary. The two countries do not dispose of much storage capacity and, unlike other countries, lack the possibility for reversing pipeline flows and/or the necessary transnational interconnectors. The most dramatic reports came from South-Eastern Europe where the gas controversy had fundamental consequences for the gas supply. In that area, there is hardly any diversification of gas consumption, and storage capacity is minimal. It was necessary for these reasons to remove factories from the network. Heating supplies for private households and public buildings also stopped. The breakdown in gas supply could only in part be compensated by increased electricity generation through hydropower and change to alternative fuel sources such as heating oil and wood.

Seemingly simple solutions turned out not to be practical or they needed inexplicably much time to be implemented. Bulgaria, for instance, could not be supplied by Turkey by means of reverse flows, and it took more than a week until vessels loaded with liquefied natural could be diverted from the Iberian Peninsula to Greece.[24]

The means of the Europeans to influence the conflicting parties were quite limited. At the beginning of the gas controversy, the EU assumed the position of neutral observer and pointed to the bilateral and commercial nature of the conflict. In the further evolution of the reaction, the EU relied on *ad hoc* measures, for which it could draw upon the participation of the big gas corporations in Europe. Thus, the deployment of an observer mission, consisting of international gas experts, was meant to contribute to getting the gas flows started again. Several days later, on January 16, a proposal made by Gazprom and the Italian state corporation Eni to form a purchasing consortium composed of the big energy companies, which should make available the financial means for buying the technical gas necessary to operate the pipelines, took concrete shape. In view of the fact that through the early warning mechanism of the EU-Russia energy dialog, advance warning of the impending crisis had been given, there is much validity to the argument that EU conflict prevention failed.

After the Crisis: European Gas Supply and Policies

European Supply Security and Import Dependencies

The crisis has given new impetus to the discussion in the EU about the security of gas supply from Russia. Expressed in absolute figures, imports from Russia in the past 20 years have risen. However, since consumption in that period also increased, relatively the Russian share in total gas imports has decreased.[25] The EU, then, it would appear has increasingly diversified its imports of gas.

The crisis clearly demonstrated that the degree of vulnerability of a country or a community of states on imports from abroad depends on at least five factors. First, it is crucially important how much gas any given country receives from a supplier country and whether it is able to rely on alternative transport routes. Equally important is the amount of gas that it produces domestically. Second, this factor must be seen in relation to the share of gas in the primary energy mix. Third, it makes a difference in which sectors of the national energy market gas is used and what possibilities for substitution exist, above all, in the electricity and heating sectors in the shape, for instance, of coal and heating oil. The private households in that context are a sensitive domain. Fourth, storage is also an important factor so as to compensate for supply interruptions. Fifth, it is important how well individual states are integrated into the European

24 Manfred Hafner and Andrea Bigano, *Russia-Ukraine-Europe Gas Crisis of January 2009: Causes, Lessons Learned and Strategies for Europe*, Policy Brief No. 3/2009, Milan: Fondazione Eni Enrico Mattei, 2009.

25 See the illuminating contribution by Pierre Noel, *Beyond Dependence: How to Deal with Russian Gas*, ECFR Policy Brief No. 9, London: European Council on Foreign Relations (ECFR), November 2008.

Table 1
Degree to which European Countries Were Affected by Delivery Cuts (on January 7, 2009) and Available Crisis Reaction Instruments

Country	*Cut*	*Diversification*	*Gas Storage Capacity*	*Alternative Fuels*
Bulgaria	100%	No diversification	Minimal; reserves for a short term sufficient to cover 35% of demand	Alternative fuels last for twenty days
Slovakia	97%	No diversification	Minimal; reserves for the short term cover 76% of demand	Alternative fuels will last one month
Greece	80%	Only liquefied natural gas (fully operational); more LNG vessels on contract	Only available in liquefied natural gas terminal	One gas power station was converted to oil
Austria	66%	More imports from Norway and Germany	Gas storage reserves will last several weeks	The possibility exists
Czech Republic	71%	Imports were increased by 8 million cubic meters in part through supplies from Norway and via Yamal pipeline through Germany	Gas storage reserves will last forty days; increase of domestic production by 15%	Unused at present; possible alternative energy sources are coal and oil
Slovenia	50%	Gas from Algeria via Italy and from Austria; volumes were not increased, however	Gas supplied from storage facilities in Austria available only for close to one week, thereafter possible reductions of reserves by a further 20%	The possibility exists
Hungary	45%	Increased imports of 5% from Norway	Gas storage reserves will last 45 days	Alternative energy sources: crude oil for 90 days, fuel oil for 30 days
Poland	33%	Half of the cuts was compensated by deliveries through the Yamal pipeline and more gas was imported from Norway	Gas storage reserves will last several weeks	The possibility exists
Romania	34%	No diversification	Increased domestic production of 60% and reliance on storage facilities	The possibility exists
Germany	60% in Southern Germany, 10% overall	An additional 20 million cubic meters of gas were imported through the Yamal pipeline as well as from Norway and the Netherlands	Gas storage reserves will last several weeks	Unused at present

Country	*Cut*	*Diversification*	*Gas Storage Capacity*	*Alternative Fuels*
Italy	25%	Increased imports from Libya, Norway and the Netherlands	Gas storage facilities filled up to 79% which cover 50% of demand	Unused at present
France	15%	Supply of industrial is secure	Filled up to 80%	Unused at present
Serbia	100%	A 12% short-term import from Hungary	1 million cubic meters, i.e. reserves will last not even for one day; 8% of production covered	Fuel oil will last for three eeks
Bosnia and Herzegovina	40%	No diversification	No storage	Fuel oil will last for 20 ays
Former Yugoslav Republic of Macedonia	100%	No diversification	No storage	Fuel oil reserves available for industry only
Croatia	40%	Diversification through Italy was a possibility which, however, was not used; negotiations on that issue continue	Increased domestic production (43%); supplies from storage amounting to 500 million cubic meters	Fuel oil reserves available for industry only
Moldova (EU Observer)	100%	No diversification	No storage	No alternative

Source: Gas Coordination Group, *Member State General Situation According to Significance of Impact*, Memo 09/3, Brussels, January 9, 2009, and Simon Pirani, Jonathan Stern and Katja Yafimava, *The Russo-Ukrainian gas Dispute of January 2009: A Comprehensive Assessment*, Oxford: Oxford Institute for Energy Studies, February 2009.

network and whether they can, in case of need, be supplied alternatively as, for instance, through reverse flows of gas.

Gas from Russia: "Europe Held Hostage"?

Application of the above named criteria for the degree of vulnerability to gas supply crises reveals that the often talked about high degree of dependency of the new EU member states on Russia is not quite as dramatic as it would seem.

Table 2 (on p. 24) shows that, in absolute terms, import dependency on Russia overall is quite high. A different picture emerges, however, when imports are examined in relation to domestic production or when the share of gas in the primary energy mix and in electricity generation is considered. Bulgaria, for instance, is about 80 percent dependent on Russian gas but the share of gas in the primary energy mix amounts to only 13 percent and in electricity generation to only 4 percent. Hungary among the new members is a country that in terms of volume imports more gas than any other from Russia but it produces about one fifth of its gas requirements from domestic sources. In Romania, contrary to that, the share of gas in the energy mix is high, amounting to 35 percent. The country, however, possesses its own gas fields from which it is able to cover approximately 70 percent of its gas consumption; for the remaining 30 percent it is completely dependent on Russia.[26]

26 British Petroleum (BP), *Statistical Review of World Energy*, London, June 2008; IEA, *Natural Gas Information 2008* [*op. cit.*, fn. 21]; European Commission, *EU Energy Policy Data*, Brussels, October 10, 2007, SEC (2007) 12 (Commission Staff Working Paper).

Table 2
Gas in the Energy Mix of the New EU Member States and Share of Imports from Russia

Country	*Share of Domestic Gas Production in Gas Consumption*	*Import Dependency on Russian Gas*	*Gas Imports from Russia (billions of cubic meters)*	*Share of Gas in the Primary Energy Mix*	*Share of Gas in Electricity Generation*
Bulgaria	5%	80%	2.7	13%	4%
Slovakia	2%	100%	7.0	30%	9%
Hungary	20%	80%	8.8	44%	36%
Czech Republic	2%	74%	7.4	17%	6%
Poland	36%	63%	7.7	13%	3%
Romania	70%	100%	5.5	35%	19%

Source: BP, *Statistical Review of World Energy* , London, June 2008; International Energy Agency, *Natural Gas Information 2008*, Paris, 2008; European Commission, *EU Energy Policy Data*, Brussels, October 10, 2007, SEC 2007 (12) (Commission Staff Working Paper), http://ec.europa.eu/energy/energy_policy/doc/02_eu_energy_policy_data_en.pdf.

A differentiated picture also applies in Europe. The lion's share of Russian gas exports to that area, 68 percent of the total, are accounted for by the original EU-15, above all, by Germany, Italy and France, the first two countries alone having a share of almost 50 percent. All three countries possess storage capacities amounting to 20 percent or more of annual consumption.

Even considering the limitations which structural conditions on the gas market entail, gas imports of the big West European gas suppliers are relatively diversified. It is also necessary to take into consideration that the gas markets are to a considerable extent regionally structured and that consequently close to 80 percent of EU gas imports are transacted by three corporations.[27] For the same reason, the import of liquefied natural gas from more distant regions until now accounts for only 12 percent of the European gas supply. Where gas in individual EU member states comes from is obviously a matter of geography: the predominant share of Italian and French imports is from North Africa; 44 percent of Germany's gas imports originate in Russia, 32 percent in Norway and 23 percent in the Netherlands and one percent in other countries.[28] Among the old member states, Spain has the highest share of dependency on one single supplier: It imports more than 50 percent of its gas from Algeria. The rest of the imports is from many different sources, and two thirds of the gas, furthermore, are imported in liquid form.

On the whole, the EU-27 imports at present make up 61 percent of its gas consumption of which Russia covers 42 percent, Norway 24 percent, Algeria 18 percent and other countries 16 percent.[29] Depending on the scenario for future consumption but assuming the present structure of the use of energy, Europe's import dependency on gas will rise to 77 percent; positing a more rapid development of renewable energy and a more efficient utilization of energy, that share could amount to between 71 and 74 percent.[30] The share in the EU in 2020 will thus be lower than the current degree of German dependency, that is, 83 percent. To that extent, Germany already points the way to the EU gas market of the future with its high import dependency. Moreover, in Germany, the share of gas in total primary energy consumption of 22.9 percent is just below the EU's share of 24 percent. All of that is not irrelevant for the discussion about European supply security and the reliability of Russia as a supplier.

27 The three are the Norwegian GFU, the Algerian Sonatrach and Russia's Gazprom; see Rudolf G. Egging and Steven A. Gabriel, "Examining Market Power in the European Natural Gas Market," *Energy Policy*, Vol. 34, No. 17 (2006), pp. 2662–2778 (p. 2763).

28 Bundesministerium für Wirtschaft und Technologie, *Energie in Deutschland, Trends und Hintergründe zur Energieversorgung in Deutschland*, Berlin, May 2008, p. 15.

29 Europäische Kommission, *Mitteilung der Kommission an das Europäische Parlament, den Rat, den Europäischen Wirtschafts- und Sozialausschuss und den Ausschuss der Regionen: Zweite Überprüfung der Energiestrategie – EU-Aktionsplan für Energieversorgung und -solidarität*, Brussels, November 13, 2008, KOM (2008) 781 final, p. 4.

30 Directorate-General for Energy and Transport, *Market Observatory for Energy 2008. Europe's Energy Position. Present and Future*, Luxemburg 2008, p. 15, and IEA, *Natural Gas Information 2008* [*op. cit*., fn. 21], pp. IV.153–IV.159.

The External Dimension: Diversification of the Sources of Gas and Transport Routes

Diversification of the countries from which gas is imported and the corridors through which, including in liquid form, it is transported to Europe, is a major pillar of European energy supply policy. However, the gas import portfolio of the EU is constituted by the sum of the gas imports of every single European gas (trading) company. That is to say, there is *per se* no common import portfolio as a result of strategic considerations of the EU. Its composition, therefore, is to a large extent determined by the decisions of individual firms, and it is up to them to deal with the purchase and distribution of the gas. Moreover, the firms act primarily with a view to serving their (national) traditional markets.

The discussions about alternative and strategic pipeline corridors have to be examined against this background. Part of it is the fact that the individual enterprise decisions have an impact on the market positions of other firms. As in the case of the Nord Stream pipeline, it may happen that they are accompanied by a relative loss of economic and political "location rent" for a member state as a transit country. The result is that questions such as these are highly sensitive in an integrating EU gas market.

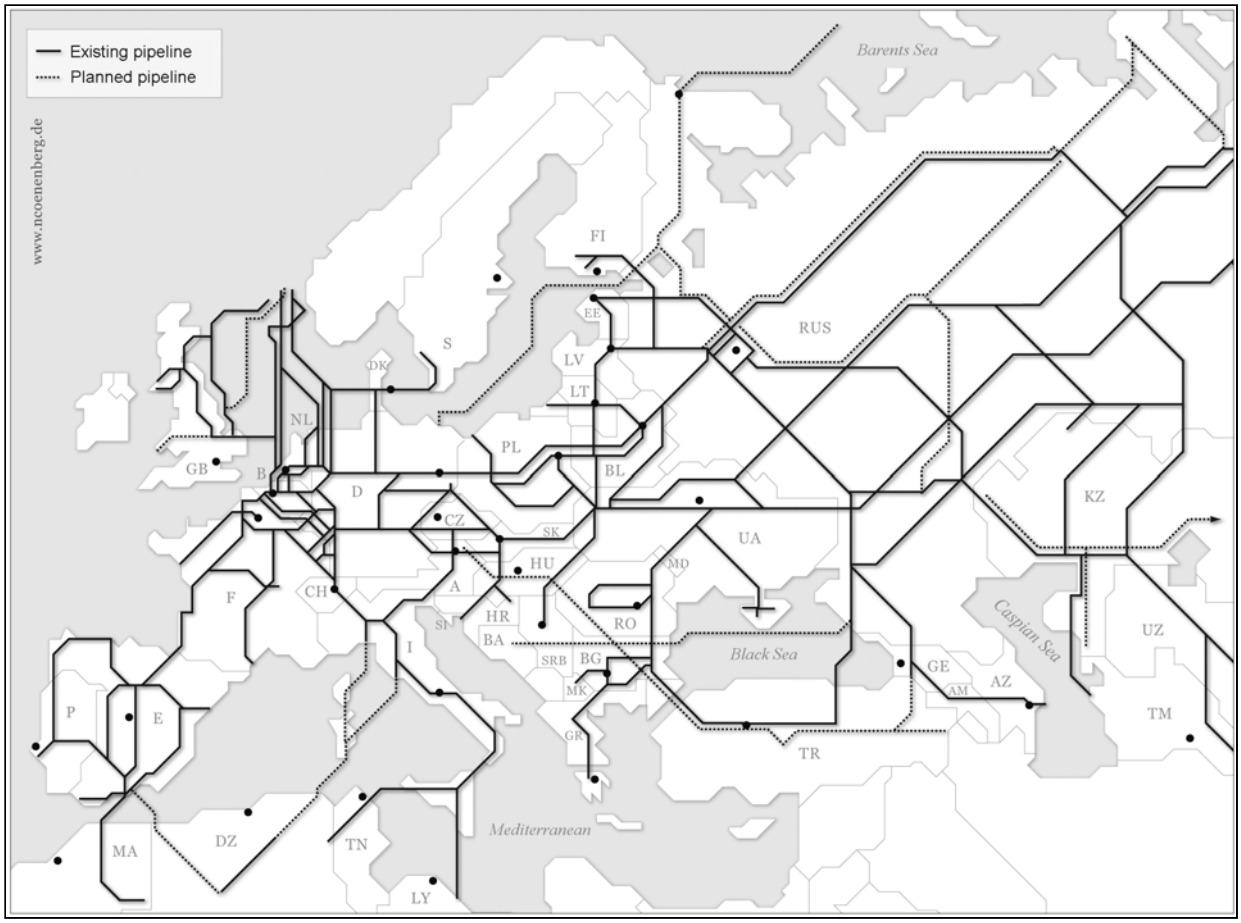
The Nord Stream pipeline project has advanced the farthest. The enterprises and member countries that are directly involved in it support the project because, in their view, it is based on commercial calculations. The investment is assumed to pay itself off, and the flow of the envisaged volumes of gas is practically guaranteed. Second, they argue, construction of the pipeline has been flanked by agreements at other levels of gas production and gas trade. Thus, Wintershall and E.ON Ruhrgas will participate with Gazprom in the exploration of the Yuzhno Russkoe gas field. Third, to complete their argument, with the involvement of the Dutch Gasunie and probably also Gaz de France, the pipeline has taken on a multilateral dimension.

Put pointedly, the "chicken-and-egg" problem of transport structure and gas production in this case was solved for the first phase of its operation. Often, there may be a risk that the construction of a pipeline will turn out to be a "stranded investment" and that it will entail commercial losses if there are no sufficient volumes of gas available for export or if it is uncertain whether gas will be purchased in adequate amounts. Under these circumstances, amortization would not be guaranteed. Conversely, good prospects for the realization of transport and export opportunities are an important criterion to decide whether plans for exploration and production are put into practice in the first place. What, then, needs to be present at the very beginning? When this question has to be answered, an approach that is informed by geopolitical and strategic calculations distinguishes itself fundamentally from projects based on commercial rationales. The example of the Nord Stream pipeline is a good illustration of the fact that implementation of a project based on commercial rationales can be made according to phases and in segments. Thus far, however, it is unclear whether a second, parallel pipeline will be built in the next phase because implementation depends on the development of the offshore Shtokman field in the Barents Sea. Because of the fact that the Shtokman project has been downgraded in the investment program and invitations for tenders have been issued only as of July 2009, it is doubtful whether gas from these fields will be available for export via Nord Stream starting from 2013. Doubts are fed also by the likely development of demand in Europe so that so that implementation of the whole project in phases does indeed appear to make sense.

These considerations also apply to the EU's Nabucco project. The chicken-and-egg problem in this case poses itself even more acutely. The pipeline is designed to tie the European gas markets to the gas reserves of the Caspian and Central Asia. Such a "fourth," southern corridor to the energy-rich area of the Caspian Sea until now is lacking. With the construction of the Nabucco pipeline, a dual contribution to diversification would be achieved: The pipeline would open access to new sources of gas, and it would use a new transport route, even though its capacity of 31 billion cubic meters annually compared to the total European consumption volume of close to 500 billion cubic meters is small.

The verbal support extended to this project by the EU and its member states notwithstanding, it has to be stated that its realization rests with a consortium of enterprises led by the Austrian OMV and to which, in addition to firms from the transit countries, also belongs the German RWE corporation. In this case, business calculations will be decisive. Strategically, the project makes a lot of sense but obstacles reside in the commercial realm. Even with start-up financing in the amount of 200 million Euros, which the EU made available after the Russian-Ukrainian gas con-

Map 3
European Gas Transit Network



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flict, the obstacles cannot entirely be removed so as to provide the project with the decisive impetus.

The project faces two problems: Where is the gas supposed to come from and how will the transit questions be solved? For the time being, the Shah Deniz gas field in Azerbaijan is envisaged for filling the pipeline. Since that country also has delivery agreements with Russia and the imperative of diversification is supposed to be met, further sources have to be found. Possible contenders mentioned in the discussion are Turkmenistan and Kazakhstan but also Iran, Iraq and Egypt. Such considerations underline the potential of this corridor but also demonstrate the complexity of the whole project. Notably an involvement of Turkmenistan, as aspired by the EU and the German RWE, would presuppose a Trans-Caspian transport link (facing a still pending legal status of the Caspian Sea) and the political will in Turkmenistan to confront the strong Russian side.

Transit is the other unsolved problem. Until the gas reaches the Austrian hub of Baumgarten it has to flow through four countries. All of them would like to be not only transit countries but use gas from the pipeline. Turkey above all wants to establish itself as gas hub and "distribution station." This, however, would contradict the transit character of the pipeline. Furthermore, several times Turkey threatened to tie the negotiations on Nabucco to those on EU accession. At the energy summit in Prague in May 2009, differences appeared to have narrowed. Quarrels persist, however, about transit fees. On July 13, 2009, the five transit countries, Austria, Bulgaria, Hungary, Romania and Turkey, signed an agreement that for the time being has settled these issues. All this emphasizes the urgency of laying down rules for transit and creating a common energy space that is based not only on economic networks but is set in a legal framework applicable to all participants.

More Energy Solidarity in the EU?

The crisis of 2009 revealed that the gas market in the EU is divided along borders running between the new and the old member states. In relation to diversification of gas supply, available storage facilities and access to networks the old members of the Union are by far better positioned than the newcomers. All of the EU member countries have their own individual energy mix and import portfolios, and it is for that reason that their interests diverge. For this reason, for example, the close long-term partnership of German, Italian and French corporations with Gazprom time and again puts limits on coordinated attempts at diversification, which is regarded as one of the main pillars of a common EU energy foreign policy. It could be argued that the gas import portfolio of the individual member countries is differentiated and that, for that reason, Europe's gas import portfolio, too, could be regarded as adequately diversified. From a practical point of view, however, the argument is unconvincing because due to a corresponding pipeline network it is thus far impossible to, say, pump Algerian gas from Spain to Bulgaria.

The gas crisis, at least for the time being, has put the spotlight on issues that in Germany and the EU had already been on the agenda for some time. One of these is the creation of a functioning internal market for gas. In that context, the improvement of infrastructure has taken center stage. Furthermore, the Lisbon treaty will elevate the principle of energy solidarity to the rank of a primary law. After the Russian-German agreement on the Nord Stream pipeline and the gas conflict of 2006, Poland first and foremost had demanded greater solidarity on the EU internal market. These developments have given new impetus to the debates about a common EU energy policy. Whereas the discussion may initially have been shaped by geopolitical and security considerations and focused on Russia, after 2007 it became increasingly pragmatic.[31] The energy action plan adopted in March 2007 puts the emphasis on economic efficiency and sustainability. In that way, the EU maintains continuity in its energy policy and complementarity with its internal market and demand orientation. The second review of the energy strategy under the title of EU Action Plan for Energy Supply Security and Solidarity of autumn 2008 underlines the inalienable linkage of domestic and foreign policy measures in energy policy.[32] In that document, the Commission defines as one of the most pressing issues the improvement of internal European infrastructure, the adoption of obligations for storage and the creation of mechanisms for solidarity in crises.

Lessons of the Crisis: The Necessity of Europeanization of Energy Policy

On of the lessons of the crisis is quite obvious: A well interconnected and transparent EU gas market would have made crisis management much easier in January 2009. In theory, there was enough gas on the market from many different sources. However, as the necessary infrastructure was lacking, the gas could not be transported to where massive shortfalls had occurred. The deficits of the gas pipeline networks in terms of trans-border interconnectors and the possibility of reversing flows and creating loopings have hampered the EU's ability to react appropriately and effectively in a crisis. The Union, therefore, has to expand and make more flexible its storage capacities and improve its short-term substitution potential if it wants to be ready for future gas supply crises. There is also need for better harmonization and coordination of national crisis procedures and emergency plans between the member states. In accordance with these lessons, the EU Commission presented a Regulation proposal on crisis management in the gas sector. Indeed, this is a pioneering document for a new pragmatic security-of-supply policy and risk management architecture in the EU.[33] The document addresses the major deficiencies in the EU market that were displayed during the gas crisis. The Commission aims to ahieve the "n-1" principle according to which a country should be able to supply private households and other "protected consumers" for a period of sixty days during and in cold weather even if a country's main gas infrastructure were to fail. The proposal allows high flexibility in terms of the measures to be taken by EU member

31 Oliver Geden, *Mehr Pragmatismus, weniger Geopolitik. Effiziente Ansätze für die Energieversorgungssicherheit der EU*, Berlin: Stiftung Wissenschaft und Politik, SWP-Aktuell, No. 83/08, November 2008; *id*., "Die Energy- und Klimapolitik der EU – zwischen Implementierung und strategischer Neuorientierung," *Integration*, Vol. 31, No. 4 (2008) , pp. 353–364.

32 Europäische Kommission, *Zweite Überprüfung der Energiestrategie* [*op. cit*., fn. 29].

33 Oliver Geden, *Effective Provisions for Emergency Prevention and Response in the Gas Sector. Pioneering Proposals of the Commission for a New Risk-Management Architecture,* Berlin: Stiftung Wissenschaft und Politik, SWP-Comment, No. 21/09, August 2009.

states. The sole principle to adhere to are "market-based measures". This may encompass commercial gas storage, diversification, the expanison of gas network capacity and reverse flows in transit pipelines. This opens also the possibility for dual fuel use or interruptible gas contracts in case of a supply crisis. Adoption and implementation of the proposed Regulation would help to accelerate a European internal market for gas.

The creation of an integrated and interlinked internal market would bring additional value to supply security of all the EU member states. The gas conflict has provided both functional and structural reasons why it is necessary to create a common European gas market and push that process politically. There are two major reasons why supply security should be coordinated at the European level. First, energy supply security can be achieved more efficiently and effectively by a division of labor. Second, market power in the last few years has shifted more strongly in the direction of those producer countries in which the big state corporations play a dominant role. It makes sense, for that reason, to employ the huge size of the EU market as an asset and for that purpose to create the appropriate preconditions in infrastructure. At the legal level, the abolition of the destination clause in the long-term agreements, which provides that the gas received by a customer can only be used at the place of destination, has been a first step in that direction. The officials in Brussels, furthermore, are of the opinion that a well functioning internal market in the long run will lead to more coherence and coordination of energy foreign policy among the EU member states. The principle of energy solidarity, too, would gain in importance. This principle, one should add, is in full conformity with European values and in keeping with the tradition of the stability, prosperity and peace project of European integration, at the cradle of which twice stood cooperation in energy policy: the European Community for Coal and Steel (ECCS) and EURATOM. Even though the road to the realization of a common European energy policy may be far and rocky, further Europeanization of national energy policies nevertheless has to be considered an important and inalienable step.

On the horizon, nevertheless, have appeared conflicts at the European level which are in urgent need to be solved politically. One of these is the question as to where the responsibilities and competencies in energy should lie. The enterprises are and will remain the main actors in energy supply. Most of all, however, the problem of burden sharing will have to be addressed.

Countries such as Germany, which have already done much of their homework, were in a better position to weather the crisis January 2009 despite their import dependency and significant share of gas in their energy mix and were capable of aiding other EU members. Thus, they furnished examples that crisis mechanisms and the principle of solidarity can work. Some of the other countries do not see it that way, which raises the question of free riders versus and burden sharing. It would be useful jointly to formulate criteria and objectives of a collective emergency system. It also would help to improve exchanges of information and an increase in transparency as well as to institute more effective coordination of national crisis plans and interconnected regional gas networks.

The EU also will have to deal with the question of the financing of common energy supply security. The improvement of pipeline networks and transport infrastructure requires big investments, which in the end can only be amortized if sufficient gas is transported. The future development of gas consumption in the EU, however, is difficult to predict. The risk of "stranded investments," therefore, is high. The calls for more diversification and improvement of import infrastructure confront the gas enterprises with demands for investments which, on the basis of pure business calculations, they ordinarily might not make. The enterprises have to match their import portfolio with their sales portfolio. When, for example, Germany imports 100 billion cubic meters of natural gas annually and this volume is guaranteed or locked in to about 95 percent by long-term contracts (until after 2030), there is no business rationale to diversify. The enterprises, it could even be said, profit more from tight markets. This fact has consequences for answering the question as to who is to bear the costs connected with more energy security. Excess capacities have to be financed. Solution of the problem could in the end lead to something like a change of paradigm in the EU because until now, current rules determine that access by third parties to the networks have to be provided at the lowest possible cost. Such rules will hardly stimulate investments which everyone now apparently considers to be urgent. This applies not only to improvement of the pipeline networks. It is likely that the current discussion about supply security will extend to storage facilities, which first and foremost are market instruments in order to level

seasonal fluctuations, and that changes will also occur in that dimension.

At every level, Germany, German gas enterprises and German energy policy play a key role. This is true for the internal market because Germany is the second biggest national gas market in the EU and a central gas hub. It applies also to the post-Soviet space due to Germany's close and long-term relations with Russian corporations and institutions involved in the gas business and its role as a hub for Russian gas in Europe. The position of the federal government will thus (have to) be listened to in Europe when lessons and consequences will be drawn from the crisis. Conversely, Germany will seriously have to deal with the question of the benefits and costs connected with a more pronounced Europeanization. Whatever the answer to that question, even now it is obvious that the European level will increasingly gain in significance for German energy policy.

Concerning the external dimension of Germany's energy policy, coordination with the other EU member states is important. The gas conflicts between Russia and Ukraine have amply demonstrated this. In fact, this is one of the big challenges for German and European policy: to move the energy markets of the European neighborhood and the post-Soviet space closer to the EU. Economic interconnections among the enterprises develop in conjunction with the strengthening of the legal basis and integration in a common energy space and create synergies at all levels of the gas market.

Energy Cooperation with Russia, Ukraine and the Post-Soviet Space Put to the Test

EU Instruments and Procedures

In order to meet the goal of moving energy markets of the countries of the EU's neighborhood closer to those of the Union, Brussels can take recourse to a number bilateral and multilateral instruments with the help of which it can attempt, in concentric circles and step by step, to export principles of its political and socio-economic order.[34] The corresponding policies and procedures would apply the notion of gradual convergence, that is, the adoption by these countries of individual components of the EU's common body of laws or the *acquis communautaire*. For convergence to work, it depends on the political will of the partner countries to implement corresponding programs.

The inner circle of the concentric rings, in which the national laws have to a large extent been harmonized with EU laws, includes the members of EFTA and of the European Economic Space. Norway as an important exporter of energy belongs to that circle.

The countries that form part of the next circle are those of the Energy Community which came into being on July 1, 2006. In addition to the EU member states, the countries of South-east Europe are to be found there. Essential elements of this Community are harmonization of legal norms, the extension of free trade in the electricity and gas sectors and coordinated management of demand, applying the principles of energy efficiency and environmental and climate protection. The Energy Community treaty explicitly provides for the possibility to admit new members. At present, the accession of Ukraine is being negotiated. Following accession, a process of implementation takes place, providing for several steps to be taken within a certain time frame (see box on p. 31).

Countries of the outer circle of the Union's energy policy are in the focus of the EU's European Neighborhood Policy (ENP) and the Eastern Partnership (EaP), the latter officially launched in May 2009. The vision which stands behind these initiatives is to expand the common market and to form a legal basis with the respective countries in the form of common commercial and ecological norms but also to create incentives which would serve to tie the countries of the Caspian, the Middle East and Northern Africa to the new European market by means of new projects for the improvement of infrastructure. Russia forms part of this outer circle. In that circle, approximation and the harmonization of laws is a matter for negotiation.

Since 2003, then, the EU has embarked upon a shift in emphasis as compared to the policies which it conducted in the 1990s. It now takes into account the development of structures of good governance in international energy relations and the increased importance of gas, and with the creation of the pan-European Energy Community is adopting a more geopolitical and geo(energy)economic approach. The EU thus offers the East European neighboring countries an alternative framework of political and socio-economic order as well as integration. On paper, of course, those are far-reaching projects and objectives. Implementation, unfortunately, is sketchy with obstacles extant both in Brussels and in the partner countries.

Energy Cooperation with Ukraine: Advanced in Theory, Deficient in Practice?

EU Neighbor Ukraine

For the far-reaching aims of the EU in energy cooperation with Ukraine, the Russian-Ukrainian gas controversy constituted a serious set-back and it revealed a big gap between wishes and reality. Moreover, the political, economic and energy conditions in Ukraine raise doubt as to whether the goal of a common energy space can be achieved. In the final analysis, external actors like the EU can only provide incentives and resources but political and social changes, as well as the reforms to bring them about, have to be initiated from within.

Energy cooperation between the EU and its neighbor and transit country Ukraine is based primarily on

34 See, for instance, Kirsten Westphal, "Liberalisiert, monopolisiert, fixiert. Antinomien des Energiemarkts in Europa," *Osteuropa*, Vol. 57, No. 2–3 (2007), pp. 241–56. The article is part of a special issue of the journal entitled "Inklusion, Exklusion, Illusion. Konturen Europas: Die EU und ihre Nachbarn."

The Energy Community

The EU's Energy Community came into force on July 1, 2006.[a] It is oriented towards the principles of the European Community for Coal and Steel. Its objective is to safeguard stable and secure energy supplies.

The electricity and gas sectors form the primary focus of the Community. In these sectors, it is the task of the Energy Community to organize the relations between the treaty partners and to create a legal and economic framework for energy networks and trade.

An important point for treaty partners who are not EU members is the acquisition of those parts of the *acquis communautaire* that pertain to energy matters, that is, rules and regulations that are related to electricity, gas, competition, renewable energy and the environment.

For all the signatories of the treaty, the section dealing with energy networks and markets is of special importance. It contains provisions which are aiming at the creation of a common market and are, in the final analysis, at the core of the treaty's aims.

Treaty partners are the European Union, Albania, Bosnia-Herzegovina, Croatia, Macedonia, Montenegro, Serbia, and the UN's Transitional Administration for Kosovo. Georgia, Moldova, Norway, Turkey and Ukraine have observer status.

Depending on the country or region, the treaty process envisages different stages of implementation. In accordance with the mandate, the treaty partners negotiate a plan for implementation within a certain time frame. The plan is based on an inventory of what the country has already achieved. Then, time scales for implementation of the individual sections of the treaty are set forth. In case of non-implementation or violations of the plan, the treaty provides for an arbitration procedure, and in case of repeated non-implementation certain rights growing from the treaty can be suspended. The possibilities for enacting sanctions, however, are quite limited.

a See "Beschluss des Rates vom 29. Mai 2006 über den Abschluss des Vertrags zur Gründung der Energiegemeinschaft durch die Europäische Gemeinschaft" (2006/500/EC), *Amtsblatt der Europäischen Union*, L 198/15–17, July 20, 2006, and *Treaty Establishing the Energy Community*, October 25, 2005, www.energy-community.org/portal/page/portal/ENC_HOME/ENERGY_COMMUNITY/Legal/Treaty; see also Franz-Lothar Altmann, *Südosteuropa und the Sicherung der Energieversorgung der EU*, Berlin: Stiftung Wissenschaft and Politik, SWP-Studie No. 1/2007, January 2007.

two instruments and procedures: the EU's European Neighborhood Policy and the Energy Community. The declared goal of the cooperation is integration of the energy markets. After the launching of the EU's European Neighborhood Policy in 2004 and the Orange Revolution at the end of that year and in 2005, expectations were wide-spread in Brussels that Ukraine would turn into a model country and that its economy and energy sector could be moved closer to EU institutions and procedures. Thus, the EU's Action Plan on Ukraine in the sphere of energy envisages a broad spectrum of cooperative measures. Among the specific goals are a more pronounced convergence of energy policies, harmonization of legal and regulative foundations, Ukraine's participation in EU energy programs, support of the country for switches to renewable energy and improvements of nuclear safety.[35] As early as December 2005, the EU and Ukraine signed a Memorandum of Understanding that is regarded as the key document for energy cooperation.[36] The program agreed upon is, in fact, quite ambitious. The Memorandum, among other things, contains road maps for the integration of the electricity and gas markets, for improving energy supply security and the modernization of the transit pipelines for oil and gas.

In the framework of this sectoral cooperation, Ukraine's accession to the Energy Community is under negotiation 2009. The two partners are thereby aiming

35 European Commission, *Annex to the Green Paper "A European Strategy for Sustainable, Competitive and Secure Energy," What Is at Stake – Background Document*, COM (2006) 105 final, SEC (2006) 317/2, Brussels, p. 37 (Commission Staff Working Document); *id*., *Communication from the Commission, European Neighborhood Policy*, Strategy Paper, COM (2004) 373 final, Brussels, May 12, 2004, p. 17.

36 *Memorandum of Understanding of Co-operation in the Field of Energy between the European Union and Ukraine*, Kiev, December 1, 2005, http://ec.europa.eu/dgs/energy_transport/international/bilateral/ukraine/doc/mou_en_final_en.pdf.

at the gradual acquisition by Ukraine of those parts of the *acquis communautaire* that pertain to matters of energy. In addition, Brussels and Kiev are negotiating an association agreement. Whereas the modalities of a free trade zone are still being discussed, the political part of the prospective agreement has already been accepted.

Money for the above-mentioned cooperative ventures can not only be drawn from the European Neighborhood Policy's ENPI and the Interstate Oil and Gas Transport to Europe (INOGATE) program but also from the so-called Baku[37] and Black Sea Synergy[38] initiatives. The objective of these EU policies is support for regional cooperation, improvement of energy security and sustainable energy policy. At the same time, since the EU is attempting, with the use of these instruments, to project its structural principles to the EU's neighborhood, they also have a geopolitical dimension.

The Ukrainian Transit Network and Storage Problems

A special sphere of energy cooperation between the EU and Ukraine is the modernization of the gas transport system. The Union had put this subject on its agenda even before the 2009 Russian-Ukrainian gas controversy. A study published by the EU Commission in 2007 estimated the financial requirements for the necessary repair and modernization work to be in the range of about 2.5 billion Euros. Ukraine's transit network is one of the biggest political and economic assets. Kiev, therefore, has a vital interest in maintaining the current volumes of gas flow and simultaneously to maximize transit receipts. On March 23, 2009, in a bilateral agreement, the EU committed itself to make the 2.5 billion Euros available for the above-mentioned purposes but it also stipulated that reforms in the Ukrainian energy sector, including in particular the creation of an operating company independent of the state-owned Naftogaz. Russia, which was not made part of the agreement, reacted angrily.

37 European Commission, Directorate-General Energy and Transport, *Energy and Transport International Relations, Baku Imitative – Energy*, http://ec.europa.eu/dgs/energy_transport/international/regional/caspian/energy_en.htm.
38 *Id.*, *Black Sea Synergy – A New Regional Initiative*, COM (2007) 160 final, Brussels, April 11, 2007.

The problem of the utilization of gas storage capacities is closely connected with the issues of transit and potential crisis situations. In June 2009, the Ukrainian government addressed itself to the EU with the request for financial assistance in the amount of US$ 4.2 billion. The money was to be used for filling the Ukrainian silos for the winter but also for ensuring the supply of Europe. However, there are diverging data concerning the current levels and projected replenishment. In that very month, it was estimated that the storage sites contained about 19 billion cubic meters of gas. Prime minister Timoshenko wanted to have them filled to up to 27 billion cubic meters, other interested parties advocated 30 billion cubic meters. It is difficult to gauge the significance of such figures since transparency in the sphere of gas storage is low. To create more clarity is a real challenge for European energy security because the storage facilities could, in the event of a crisis, compensate for shortfalls in supply. Another option discussed was for European firms to purchase gas and storing it in Ukrainian sites. This option, however, was rejected because of the risks and uncertainties connected with it. When the issue became more pressing during summer, two agreements were reached: In mid-July, the IMF reached an agreement with Ukraine on additional reforms in the country enabling the Fund to release a third tranche of $3.3 billion of its $16.4 billion standby arrangement. The IMF thereby amended the fiscal deficit target to include the deficit of Naftogaz. The reform package included gas tariff reforms and structural reforms of Naftogaz. This paved the way for an EU-brokered deal of July 31 between three international banks and Ukraine. World Bank, EBRD and EIB have agreed to consider loans totaling up to €1.2 billion. The package includes both funds for the modernization of the Ukrainian gas transit system in the longer term but it also aims at providing Ukraine's gas giant Naftogaz with working capital for immediate gas storage requirements. Amongst the conditions set by IFIs, aside from greater transparency and detailed due diligence, the loans require that Ukraine move towards more cost-reflective gas tariffs.

Facing presidential elections in January 2010, however, Tymoshenko has already announced that there will no price rises for the population. An additional quarrel looms on horizon as aides to Ukraine's President Viktor Yushchenko, also a candidate in the January 2010 elections, have urged Tymoshenko to implement the price increases. Whether the series of agree-

ments will be implemented effectively is not at all a foregone conclusion.

Until now, EU-Ukrainian energy cooperation has shown itself to be a problem. Detailed timetables for reforms, laying down stages in which they have to be carried out, are set forth but review of their implementation is sketchy. The EU obviously has a problem with evaluation which, in turn, is connected with uncertainty as to the possibilities that may exist for adopting sanctions.

The 2009 gas controversy has also given new prominence to the idea, discussed in the EU in 2002, to create a consortium.[39] An inalienable precondition for the realization of this idea, however, would be more transparency on questions of gas transit but also on the operation of the storage facilities. However, as long as basic reforms in the Ukrainian gas sector, up to and including changes in the law and privatization measures, have not been implemented, progress will not be made on the creation of a consortium, no matter whether it takes the shape of a franchise, an operating agency or a stock holding company. Cooperation below the level of direct foreign participation, too, could be imagined. Such participation could take the form of a commission of experts consisting of representatives of Western enterprises and advising Ukraine on issues such as internal restructuring and the accounting procedures of Naftogaz but also, more broadly, on reforms in the energy sector. This option should be executed if only in the interest of an improved flow of information.

All these problems point to a basic ill: Ukraine lacks the financial resources and first and foremost the purchase power of gas consumers so as not only to repair and modernize the transit network but also to pay its gas bills.

39 On this issue, see Elena Gnedina and Michael Emerson, *The Case for a Gas Transit Consortium in Ukraine: A Cost-Benefit Analysis*, Brussels: Centre for European Policy Studies (CEPS), CEPS Policy Brief, No. 180, January 2009.

EU-Russian Energy Relations: Between Complicated Cooperation and Concealed Competition

Phases of the Relationship

The relations between the EU and Russia have become more difficult, a fact that also manifests itself in the sphere of energy cooperation. In the past two decades, the bilateral relationship was characterized by changes which, in the Russian perspective, constituted ruptures but which, from (West) European viewpoints followed a sequential logic.

The first phase of energy relations extended from approximately the "gas for pipes" deal in 1970 via subsequent delivery treaties until the dissolution of the Soviet Union. Today, the myth of the reliability of Russia as a supplier of natural gas is derived from this experience at the height of the Cold War.

The second phase are the 1990s. This is a period in which the Russian gas industry to a large extent remained concentrated in one corporation despite the fact that fundamental changes had taken place in Russian politics and society, in the CIS countries and in East-Central Europe. In Russia, this epoch is characterized by the, from the viewpoint of government and the society, traumatic economic decline and the financial crisis of 1998. This time interval also saw the conclusion of the Partnership and Cooperation Agreement (PCA) that was signed in 1994, ratified in 1997 more than one year after the end of the war in Chechnya and that is at present being renegotiated. The European Energy Charter and the Energy Charter Treaty (ECT) were also concluded in that period. Gazprom put its business practices on a new basis. In relation to the countries of the CIS countries and the former Council of Mutual Economic Assistance (CMEA), it had no scruples to turn the gas tap up and down and to turn the screws on prices. East German gas firms, too, were affected by the changed enterprise policy as a result of which they had to raise gas prices by 10 percent.

The third phase, starting from the year 2000, coincides with the Putin presidency. That time period is characterized by constantly rising oil and gas prices which helped Russia to stabilize the state budget achieve economic growth and – at least in energy relations – regain Great Power status. Moscow's relationship with Brussels became more complicated. It not only demanded a right to co-decide matters

concerning the creation of common spaces and relations in the Common Neighborhood but also in EU affairs. The Russian arguments may be perfectly comprehensible. In practice, however, the country has ever more assumed the role of a veto power and competitor, and less that of a constructive partner. In 2000, at the start of the energy dialog with Russia, EU euphoria was still quite evident, as witnessed, for example, by the demand of the president of the commission, Romano Prodi, for doubling Russian gas imports. That kind of euphoria, in the meantime, has given way to disappointment and sobriety.

It can be conjectured that the current global economic and financial crisis will usher in a new, fourth phase in the energy relationship between Russia and the EU. Certainly, a greater need exists for the exchange of information and joint anti-crisis measures, for instance, with a view to reducing price volatility. This has opened a window of opportunity for the return to closer cooperation. By how much that window can be opened and whether it will be shut again to a large part depends on the Russian assessment of how long the crisis on the world markets will last.

Structural Problems

Russian foreign policy on energy matters is strongly focused on the gas sector. It is in this sphere where the policies conducted by Russia and the EU collide most strongly.

Russia has concentrated its efforts at cooperation on individual member states of the European Union that also happen to be Gazprom's foremost partners, notably Germany, Italy and France. The Russian corporation has concluded bilateral deals with German, Italian and French firms to strengthen its position on the European energy market. Thus, the Nord Stream pipeline is not only a much cited example of exclusive package deals with which enterprises secure their market position in the EU by vertically integrated projects with Gazprom but also for the fact that special business strategies serve as an instrument with which to undermine common EU energy policy. In the past, it is not least because of clever Gazprom policies that big corporations in the EU member states have pursued bilateral strategies and that attempts by EU partners to formulate common positions so often turned out to be difficult.

Russia has consistently rejected demands advanced time and again by the EU but also by the IMF for the liberalization of its gas sector. In fact, Gazprom's transport monopoly protected by the Russian government has been one of the perennial bones of contention between the EU and Russia. The Russian state owns slightly more than 50 percent of the Gazprom shares. The enterprise also assumes a strong social function since it supplies the Russian population but also the Russian economy with gas at subsidized prices. This role of Gazprom is highly political. In compensation, Gazprom pays fewer taxes: in contrast to the oil firms, who provide about one third of the Russian tax revenue, it contributes only about eight percent to the state budget.[40]

The special protection that Gazprom enjoys on the Russian energy market is evident also in another dimension: In addition to the transport and export monopoly, the enterprise has in the past few years also been able to acquire priority access to the most profitable portions of the Russian energy market and gas and oil reserves. In 2008, a new law On Foreign Investments in Strategic Sectors was passed,[41] and the existing law On Natural Resources was revised,[42] both to benefit the state-controlled Gazprom and Rosneft corporation. To put it in a much abbreviated form, the laws provide that onshore oil and gas reserves starting from a size of about 70 million tons and 50 billion cubic meters respectively, all offshore reserves and the enterprises which exploit one or the other are considered to be "strategic" assets. Foreign investments in these domains need to receive state approval.

40 Piotr Buras and Jonas Grätz, *Energiepolitische Handlungsfähigkeit der Europäischen Union nach der Gaskrise*, Gütersloh: Bertelsmann Stiftung, 2009, p. 5, fn. 9.

41 *Federal'nyi zakon ot 29 aprelia 2008g. N 57-FZ "O poriadkie osushchestvleniia inostrannykh investitsii v khoziaestvennykh obshchestvakh, imeiushchie strategicheskoe dlia obespecheniia oborony strany i bezopasnosti gosudarstva znachenie"* [Federal Law of April 29, 2008, "Concerning the Rules on the Realization of Foreign Investments in Economic Organizations that are of Strategic Importance for the Defense of the Country and the Security of the State].

42 *Federal'nyi zakon ot 21 febralia 1992 goda N 2395-I* "O nedrakh" [Federal Law of February 21, 1992, ... On Natural Resources]. Several changes of the law were made. These include the changes of March 3, 1995, N 27-F3; February 10, 1999, N 32-F3; February 2, 2000, N 20-F3; May 14, 2001, N 52-F3; August 8, 2001, N 126-F3; May 29, 2002, N 57-F3; June 6, 2003, N 65-F3; June 29, 2004 N 58-F3; August 22, 2004, N 122-F3; April 15, 2006, N 49-F3; October 25, 2006, N 173-F3; June 26, 2007, N 118-F3; December 1, 2007, N 295-F3; April 29, 2008, N 58-F3; and July 18, N 120-F3.

The limitation of foreign investments in the energy sector is a constantly recurring bone of contention between Russia and the EU.

Competing Models of Political and Socio-Economic Order

For Moscow, Brussels as an interlocutor has always played a more or less secondary role. One of the reasons for this rests in the fact that the EU as an actor embodies multilateral and supranational structural patterns and projects these to the outside world. This stands in contrast to the idea prevalent in Russia about a multipolar world and world (dis)order formed by sovereign states. Whereas Russia strives to maintain the greatest possible freedom of action, the patterns for policy and cooperation of the EU are based on treaties and common norms whose observance is mandatory for all its members.

In the energy sector of the post-Soviet space, moreover, competitive integration takes place. As the most important supplier of energy, Moscow attempts to organize this space in accordance with its preferred principles through bilateral and exclusive treaties which, due to the existing asymmetries of power, primarily serve Russian interests. The EU with its initiatives for more intensive energy cooperation offers the East European countries an alternative framework for political and socio-economic order and integration. This does not only apply to energy policy but also to the geostrategic dimension. Due to the fundamental differences between the EU and Russia concerning the role of the market and the state (e.g. predominance of liberalization *versus* regulation and multilateralism *versus* bilateral approaches) competing structures and patterns of order do arise.

In the last few years, Russia has asserted its position *vis-à-vis* the EU ever more strongly and vigorously as a producer, and in that capacity it defines energy security primarily as security of demand. Correspondingly, Moscow is interested above all in the purchase of gas at prices which permit adequate investments, to amortize them and to derive the highest possible profits from them. This interest is connected with the strategy of extending the creation of value added, that is, also to profit from the transport, marketing and the sale of gas at the consumer end. This endeavor can easily be understood because of the fact that most of the money that is made in the natural gas sector is earned at the gas meter of the end user, not at the drilling hole. In fact, it is entirely rational for a gas producing enterprise to become active in the onward and final distribution phase by creating joint ventures and acquiring shares in firms which operate in that sector of the energy economy.

The more restrictive framework for foreign firms intending to operate in Russia and the parallel efforts made by Gazprom to extend its activities in Europe have fuelled a debate in the EU concerning reciprocal access to the Russian market and to the Russian energy infrastructure. Reciprocity, however, is not a valid principle of international law. That is one of the reasons why Russia, in the recent past, has reacted ever more insistently with the argument that the EU applies a double standard when it comes to providing access for foreign firms to its markets. The argument reveals a glaring discrepancy of perception but also the skill of Russian negotiating tactics.

Whereas the EU is aiming at the creation of equal starting conditions and a comparable framework by means of regulation, Russia's approach is more result oriented, that is, it looks at the mutual relationship from the perspective of whether investment obligations and profits are more or less equally distributed. This approach, as Moscow avers, signified "economization" of economic relations and priority for commercial rationality and profit maximization. Russia thereby has rejected charges by European countries that it subordinated energy relations to political calculations and, in turn, has argued that it were the EU and several of its member states who embarked on a "politization" and "securitization" of energy policy. Russia also strives to sell its strategy as "economically rational" and in the quarrels with Ukraine has amply used this explanation.

Thus, concerning the energy market in the whole of Europe, two irreconcilable principles of action and order are juxtaposed to each other, and to that extent, energy relations are indeed politicized. In this sphere, the EU had for a long time advocated the establishment of free and competitive markets. It has regarded the creation of a common legal framework as an important precondition for equality and universally valid rules which should help to avoid politization of energy relations. Russia until now has consistently shunned the creation of a common energy space based on regulation and the rule of law. Russia's political strategy thus clearly coincides with the commercial interests of Gazprom. Put differently, Gazprom's influence in and on the government has been co-responsible for the fact that important initiatives by the EU

to put energy relations on an international legal basis, such as the Energy Charter Treaty, have consistently been undermined.

Gazprom has also profited from fragmented and segmented international markets. Particularly on post-Soviet space, it can base its policies on traditional networks of relations. The establishment of universally valid market economic rules and the creation of improved legal security and predictability would, therefore, at least in the medium term, increase competitive pressures exerted by Western firms. Conversely, Gazprom's access to the resources of the Russian state allows it to adopt more risk prone approaches in the CIS countries. That is, even under the conditions of a global financial crisis, the Russian gas giant is able to enjoy comparative advantages.

It is against this background that one should interpret Russia's proposal to leave aside the institutional framework established by the ECT and create a new organization for energy markets in the European part of the post-Soviet space that would also include the most important gas firms.[43] Such a solution, however, would cement the present asymmetry of power between privately owned firms and companies controlled by the state. Russia has used the politization of energy relations in the power plays with the EU and its member states as well as in the cooperative games with energy producing countries which, like Russia, are often motivated by an anti-Western impetus and ready to conclude with Moscow far-reaching treaties in energy and military affairs.

The differences in politically motivated energy strategies by Russia and the EU do not stop at the role allocated to the state and the enterprises, they also manifest themselves in divergences at the levels at which the two sides prefer to act. The European Union, which aims at the creation of a common space of energy, would like to transfer basic norms and rules to the macro level. In relation to Russia that means that the EU is strongly interested in legal harmonization and a comprehensive and detailed set of rules on energy in the framework of the European-Russian Partnership and Cooperation Agreement and the concept of Four Common Spaces agreed upon in May 2003 and finalized in May 2005. Russia, in contrast, prefers to act on the micro level and, therefore, is focused on individual deals for the development of gas fields or the construction of pipelines and in the negotiation of such deals with a view to creating integrated joint ventures comprising all levels of the gas business. The PCA, according to these preferences, should be kept at the most general level possible. It is, for that reason, by no means a foregone conclusion that the new document will contain similarly far-reaching objectives as the previous one.

For Moscow, a psychological factor is probably involved here. The PCA, concluded in 1994 and ratified in 1997, like the ECT, signed in 1994, are considered relicts of the 1990s and symbols of tutelage and attempts at conditioning Russian behavior. From the Russian perspective, the agreements contained in the PCA's chapter on energy are, indeed, quite far-reaching. Thus, for instance, Article 65 (1) stipulates: "Cooperation is carried out in the framework of the principles of the market economy and the European Energy Charter against the background of gradual integration of the energy markets in Europe."[44] Developments in the real world, however, did not conform to the paper declarations, a fact of life that should counsel sobriety when looking at the current negotiations.

The Medvedev Initiative and the Fate of the ECT

On 20th of April 2009, on official visit to Finland, president Medvedev submitted a proposal for precisely such a treaty. Remarkably, the Russian president's proposal acknowledges that sustainable energy security is indivisible and that, therefore, all the participants in a prospective energy should gather around one table. On July 30, 2009, the Russian government took the decision to opt against the ECT by officially ending its provisional application. [45]

43 "Novyi ambitsionnyi projekt Rossii dolzhen zamenit' energokhartiiu," [A New Ambitious Project by Russia Should Replace the Energy Charter], *Kommersant*, February 24, 2009.

44 "Abkommen über Partnerschaft und Zusammenarbeit zur Gründung einer Partnerschaft zwischen den Europäischen Gemeinschaften und ihren Mitgliedstaaten einerseits und der Russischen Föderation andererseits – Protokoll 1 über die Einsetzung einer Kontaktgruppe für Kohle und Stahl – Protokoll 2 über Amtshilfe zur Einhaltung des Zollrechts – Schlußakte – Gemeinsame Erklärungen – Briefwechsel – Unterzeichnungsprotokoll zum Abkommen," *Amtsblatt der Europäischen Union*, L327, November 28, 1997, pp. 0003–0069.

45 The treaty stipulates, however, that Russia provisionally has to implement all the document's prescriptions and provisions that do not contradict national law. This is also the reason why Russia, during the gas controversy, attempted to justify its actions at two levels of law. First, it pointed after the fact to *force majeure*. Second, it declared that if gas would

Thus, on October 19, 2009, the long history of Russia's attitude to keep ratification of the ECT pending will come to an end. Since the year 2000, Russia time and again has asserted that it wants to renegotiate the treaty. The 2009 gas conflict with Ukraine was just another occasion for the Kremlin to put it in question. In February of that year, at the World Economic Forum in Davos, prime minister Putin demanded new negotiations on a framework for international energy security.[46]

Medvedev in making this proposal was most likely looking at the interstate level. In contrast, the idea of a Eurasian Energy Forum advanced by the chairman of the Duma's energy committee, Valery Yazev, appears to be focused exclusively on the energy enterprises. The Medvedev proposal in many ways picks up principles contained in the St. Petersburg G8 declaration of 2006 and thereby also of the ECT. Two points, however, illuminate the special Russian position and approaches: First, arbitration is to be conducted at the diplomatic level, not judicially. Second, the plan proposes the exchange of assets among enterprises. This shows that Russia wants to forge an instrument with which to provide access for its companies to new markets and external infrastructure. Gazprom is already constructing a network of strategically important firms.

Russia has confirmed several times, including at the St. Petersburg G8 summit and in the Partnership and Cooperation Agreement with the EU, that it adheres to the principles of the Energy Charter, the non-binding predecessor of the ECT. It is, therefore, difficult to gauge what the additional value of the Medvedev initiative could possibly be. For as long as implementation is lacking, constantly to have recourse to principles in a succession of documents actually contributes to watering down these very principles. Non-ratification of the Energy Charter Treaty, in the meantime, has been elevated by the leadership in Moscow to a symbol for the re-emergence of Russia as a Great Power and its regained freedom of action. The decision of July 30, 2009, may have a lot to do with the fact that the Medvedev proposal has hardly found any serious respone in the West. In the final analysis, however, the fact remains that Russia, above all on post-Soviet space, simply profits from the absence of rules and regulations for international transit, trade and investment.

continue to be delivered to Ukraine, this would be regarded as a violation of Russian laws and customs regulations. The Russian leadership made stringent efforts to portray the drastic cuts of deliveries, in view of the behavior of the Ukrainian leadership, as the only possible option; see "Predsedatel' pravitelstva Rossiiskoi Federatsii V.V. Putin provel rabochuiu vstrechu s predsedatelem Pravlenija OAO 'Gazprom' A. B. Millerom" [Chairman of the Russian Federation V. V. Putin Conducted a Working Meeting with the Chairman of the Board of the Stock Company Gazprom, A. B. Miller], January 5, 2009, www.government.ru/content/rfgovernment/rfgovernmentchairman/chronicle/archive/2009/01/05/1761134.htm (accessed on February 19, 2009).

46 "Putin Speaks at Davos," *Wall Street Journal*, January 28, 2009, http://online.wsj.com/article/ SB123317069332125243.html?mod= (accessed on February 1, 2009), and "Novyi ambitsionyi projekt Rossii dolzhen zamenit' energokhartiiu," [*op. cit.*, fn. 5].

Energy at the Core of Cooperation

The creation of a common energy space and thus a comprehensive legal and regulative framework is an important political goal of the EU because of the fact that the fragmentation and differing structures of the markets between Dublin and Vladivostok harbor many potential conflicts.

At present, the window of opportunity for an improvement of cooperation is wide open for a number of reasons. First, Russia and Ukraine are obliged after the 2009 gas conflict to show that they are reliable partners. Second, the global financial and economic crisis affects both countries. Third, there are a number of good arguments which advise intensive cooperation on problems of sustainability and energy efficiency but also price stability.

From the EU's perspective, there are at least two good reasons why it is advantageous to achieve integration of energy markets. First, sectoral cooperation can serve as the vehicle with the help of which progress can be made on the realization of more comprehensive projects such as free trade zones or association of Ukraine with the EU but also the strategic partnership with Russia. Second, in the sphere of energy there are many mutual dependencies, and the economies and infrastructures are often closely linked. Despite all the divergences of interest, then, pressures are created for improving cooperation. Moreover, the energy sector is an area where it is comparatively easy to achieve synergies within individual projects but also in the sphere of legal and regulative harmonization. Nevertheless, it is by no means evident that sectoral cooperation in energy matters at the "low politics" level will be any easier than cooperation in the realm of "high politics" of

foreign policy, where, for instance, the EU-Russia PCA and the EU-Ukraine association agreement are being negotiated. In the energy sector, existing structures are difficult to reform and they are costly, both politically and financially. Nevertheless, it could be expected that enhanced cooperation in that sector that is so important in domestic and foreign and security policy as well as for the economy will have positive spill-over effects.

Ukraine is a key country when it comes to the creation of a common space of energy as desired by the EU. The big challenge is constructively to bind Russia into the process of shaping that space. The gas conflict of January 2009, however, has further seriously damaged the already difficult relationship between Russia and Europe and it has accelerated the downward spiral of mutual disappointment evident for some time in Ukrainian-European relations.

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Conclusions and Policy Recommendations

The consensus in the EU to adhere to the strong preference for using the relatively clean and efficient gas as a source of energy should be maintained and not put in question because of the newly inflamed discussion on supply security. Modern gas power plants are highly flexible and for that reason easy to combine with fluctuating renewable energy.

Improvement of Networks and Regional Clusters. One of the measures that could be taken relatively quickly and could contribute to improved energy security in the EU consists in the elaboration and harmonization of crisis reaction plans. The EU Commission proposal makes provisions in the right direction. The preventive measures envisaged should go hand in hand with the construction of interconnectors, the build-up of storage capacity, creation of conditions for the utilization of alternative fuels and the installation reverse flow capacities.

This task could be performed by using the building block method and in different time frames suited to the needs of the individual participants. It would be important, in a first step, to find solutions for small geographical areas as, for instance, the improvement of regional networks in the Baltic, the Mediterranean and in Central and South-east Europe. The Agreement on the interconnector Turkiey-Greece-Italy of 5th July 2009 is important in this respect. In these regions, regional emergency plans should be developed and coordination centers be founded.

Diversification remains an inalienable imperative. In order to achieve it, LNG terminals will have to be built. At the same time, because of the high costs of corresponding investments, the construction of terminals could be an important element of cooperation on the road to forming regional networks.

The Nord Stream pipeline is an important contribution to diversification but is changes the balance of power between the eastern EU members and transit countries, on the one hand, and the Russian neighbor, on the other. The project, therefore, should be flanked by a pipeline connection with reverse flow possibilities from Germany to Poland.

Nabucco and the Central Asian Factor. The Nabucco pipeline is the central project of the fourth or southern gas corridor to Europe. In that endeavour, too, one can think of initially building a shorter pipeline connection between Turkey and Greece and create reverse flow capacities between Bulgaria and Turkey.

From a European perspective, not least because of the need for diversification, Nabucco should definitely have priority over the Russian-backed South Stream project. This is true despite the fact that, from the point of view of demand, the EU will most likely need both projects. Nabucco has in the meantime acquired a highly symbolic character. First, it is portrayed as a test case for the seriousness of the EU to achieve a common policy approach at greater diversification. Second, construction of the pipeline could be an important signal to Russia and Ukraine that the EU is determined to draw appropriate lessons from the perennial gas controversies between the two countries. Third, the realization of Nabucco could be instrumental to bind South-east Europe, which was so severely affected by stoppages of gas supply during the crisis, more closely into the European gas networks. Ultimately, this also applies to the member states of the energy community formed by the EU with the Balkan countries.

The Nabucco project promises another value added that is often overlooked: The present analysis has shown that the triangular relationship between Russia, Ukraine and Europe is influenced by the Central Asian factor. If Europe were to import gas from the Caspian region, this would have positive effects for promoting EU principles of political and socio-economic order. The notion of competition forms part of these principles. Competition enlivens business activity in the Central Asian countries, and the higher prices they would receive for their gas would diminish the profits which Gazprom has been making as an intermediary. This would also reduce the incentives for intransparent deals and for maintaining Russia's gas transport monopoly.

"Energy Charter Plus." The crisis has destroyed trust. The Russian step in opting against the ECT has added insult to injury. The ECT and the accompanying series of conferences form the only multilateral framework for exchanges between producer, transit and consumer countries.

In order to direct the dialog with Russia into constructive channels, Moscow's proposals for a new initiative in the sphere of global energy security should be taken at their word. Under the new circumstances, how can the EU react constructively to the Medvedev initiative? An international legally binding framework for core matter of energy business, such as investments, trade and transit, is needed – on a global scale but even more pressingly the regional level. Negotiations about a new framework could be conducted by using the energy charter process as a forum.

Only superficially does it appear useful to negotiate a new treaty, that is, so to speak, to assemble an Energy Charter Light. The difficulty remains, however, not actually to fall prey to Russian tactics. In the final analysis, negotiations on a new treaty could lead not only to interminable forum hopping but, more seriously, weaken the effectiveness of the energy charter conferences without at the same time creating any equivalent forum or substitute.

In the form of the EU-Russia Energy Dialog, since the year 2000, there is an institutionalized forum that the EU member states could use more strongly.

The Internal Market and Homework the EU Must Do. The first and foremost principle of the EU's internal market is the uniform and unambiguous application of the European competition and antitrust law. The third package for the liberalization of the European energy markets has to be tied in due regard for this principle. Although, from the EU perspective, increasing interconnections among European corporations and Gazprom with a view to improving European supply security is advantageous because the Russian company is making profits at the consumer end of the supply chain and thus would be averse to disrupt supply, the interconnections nevertheless put the objectives of competition at risk. To put it pointedly: Risk scenarios consist less in someone turning off the gas tap than in the tightening of the price screws. Concerning gas prices, the consumers are vulnerable, both in the short and the medium term. This is mitigated only by the fact that price hikes cannot really spin out of control because in the gas sector possibilities for substitution do exist. The problem is that Russia, particularly in the energy sector, looks at current relations less as a win-win game but as a zero-sum game. In Russia, too, the insight should gain ground that it may, indeed, be possible to reap comparative advantages in the "gray market" of its neighborhood but that Gazprom in the final analysis also has benefitted from the liberalization of the EU gas market and been able to develop new fields of activity. In order to emphasize this message, it is advantageous that that the third liberalization package does not contain special rules or regulations for domestic or for foreign enterprises but that it applies equal yardsticks to all.

Cooperation and Conditioning. Concerning the energy relations between the EU and Ukraine, instruments and fora are available but their constructive utilization by both parties is essentially absent. If progress is to be made on the implementation of existing agreements, both partners must be willing to bear the corresponding political and financial costs. Muddling on, as practiced at present, is a serious problem today and would continue to be one in the future. In order to change the current conditions, it would be advantageous to develop concrete projects with steps for the introduction of political and socio-economic principles. If the negotiations for Ukraine's accession to the energy community were to be completed, the granting of financial assistance, from ENPI funds, for instance, should be linked to individual stages of implementation but, in case of non-implementation, the imposition of sanctions should be envisaged.

Transparency in the Ukrainian Energy Sector: An Inalienable Precondition. The EU could make it clear to Kiev that it also has a political interest in the continuation of transport of the current volumes of gas through Ukraine but that this interest is valid only under the condition that the country finally gets serious about launching reform projects and willing to press ahead with integration of the energy markets.

Another inalienable precondition for European engagement in Ukraine should be better provision of information and increase in transparency through the restructuring of Naftogaz. The gas crisis continues to smolder also because of the precarious financial situation of the country. Without financial assistance by the IMF and other international financial institutions, Ukraine would have hardly been able to meet payment obligations and to fill the storages over the summer. The money made available, however, should be tied to a clear reporting mechanism as to how to meet conditions such as, for instance, the provision of information, including data on gas flows, pressure and storage. At present, the EU, as a result of decreased gas demand in the wake of the global economic crisis, has more room for maneuver and stronger means of pressure. Nevertheless, at the moment, addressing the problem of Ukraine's inability to pay is even more urgent than the need for the modernization of the pipeline network.

It is already foreseeable that, with the improvement of the global economy in the medium term, the demand for gas will again increase. For that reason, solutions have to be found for the problems of transit and storage in Ukraine. The compressor and measuring stations have to be checked and repaired. In the medium term, it is conceivable that Kiev, for an extended period of time, grants a concession to an operating consortium consisting of European, Russian and Ukrainian enterprises who would lease, operate and modernize the transit network. Concerning the problem of storage, the involvement of European gas firms for the medium and long term could be an option. One could think, for example, also of that involvement with the purpose of storing gas for the European market. However, all these endeavors could not be realized without a solution to the abovementioned basic ills of the Ukrainian energy sector, that is, lack of transparency, rampant corruption and lacking will for reform.

Sustainable Energy Security. The biggest and thus far still untapped potential for energy cooperation between Europe, Ukraine and Russia lies in an energy policy that were to put the emphasis on sustainability and a stronger orientation towards demand. The EU, in that sphere, can very well claim to be a role model, and this could be used in the energy relations with Ukraine and Russia for constructing win-win situations. The build-up of a more efficient energy system with renewable energy is in the interest of any gas exporter because modern gas power plants are highly flexible and for that reason can easily be combined with fluctuating renewable sources of energy.

There are concrete and promising signs that a window has opened for cooperation in this particular field. This includes the creation of the Russian-German Energy Agency (RUDEA) with a large share of its budget coming from the Russian side. Furthermore, Gazprom has announced that it will develop Joint Implementation Projects under the Kyoto Protocol and that it is embarking on a program to exploit the potential for energy savings in Russia, which is estimated to be in the range of 45 to 55 percent of total energy requirements, and to start with it in the gas sector also with a view to exporting more gas. Furthermore, in the current economic crisis, anticyclical investments make sense not only for the reason of modernizing industry and alleviating pressures on the labor market but also because the current relaxation on the energy market is unlikely to last long. When the global economy picks up again, there will again be risks of delivery shortfalls and price increases for fossil energy resources. To that extent, investments in gas networks now can be considered a bill of exchange for the future. It is in this realm where political leaders are called upon to act. Because of long-term investment cycles in the energy sector, they must help to develop a new regulative framework for the transformation of the energy system. In this sphere, too, big opportunities for the evolution of a constructive neighborhood energy policy can be found.

Abbreviations

CEPS	Centre for European Policy Studies (Brussels)
CIS	Community of Independent States
CMEA	Council of Mutual Economic Assistance
EaP	Eastern Partnership (of the European Union)
ECCS	European Community for Coal and Steel
ECFR	European Council on Foreign Relations
ECT	Energy Charter Treaty
EFTA	European Free Trade Association
ENP	European Neighborhood Policy
ENPI	European Neighborhood and Partnership Instrument
EU	European Union
EURATOM	European Atomic Energy Community
G8	Group of Eight (the seven leading Western industrialized countries plus Russia)
IEA	International Energy Agency
IMF	International Monetary Fund
INOGATE	Interstate Oil and Gas Transport to Europe
LNG	Liquefied Natural Gas
NATO	North Atlantic Treaty Organization
PCA	Partnership and Cooperation Agreement
TACIS	Technical Assistance to the Commonwealth of Independent States
UN	United Nations