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**THE CONUNDRUM OF ENERGY SECURITY
IN EASTERN AND WESTERN EUROPE**

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Paper presented at the International Conference on “The EU and the Eastern Neighbours: Democracy and Stabilization without Accession?”, in cooperation with the Polish Institute for International Affairs (PISM), Centre for Peace Conversion and Foreign Policy of Ukraine (CPCFPU), Rome, Centro Alti Studi Difesa (CASD), 29-30 May 2006

THE CONUNDRUM OF ENERGY SECURITY IN EASTERN AND WESTERN EUROPE

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I. Introduction

Energy supply and concomitant supply security have come a long way in the recent past. For more than a decade, issues of supply security have been hot spots for energy special-ists and political scientists only and the long period of stable oil and gas markets seems to have convinced politicians that the problem disappeared. This is especially so for issues concerning the European energy supply from the East and Russia, as the collapse of the Eastern block was rather seamless in what concerns energy and did not leave major re-percussions on the oil and gas supply of Europe.

But, since a few years, energy security has made it back on the political agenda, settling in as a top priority for leaders. From the 1998 Asian financial crisis and its consecutive oil bust on-wards, energy market events have been plentiful: after the bust the market saw something that could be framed an OPEC re-birth, the Sep11 events laying question marks on future developments in the Middle East, the Venezuelan strike in Dec02, the Iraq invasion in 2003 and ongoing military interventions, unexpected Asian demand rise, the Hurricanes and oil prices that seem to have settled at wobbling around 70-75\$/bbl. At the same time, as natural gas prices are linked to oil, attention was drawn to the topic of gas supply. Mega-deals of China and India with Iran and Saudi-Arabia and deals alike in Africa have increased worries about gas supply security and a future UNSC incapacity of finding G5 unanimity due to diverging national interests.

Moreover, one could notice a slow but quite distinct politicisation of oil and gas in recent years. There is Venezuela's Hugo Chavez, who since being putsched temporarily out of office in 2002 flexes his muscles with warnings of an oil export disruption to the US, with charming offensives towards China and with the threat of €-denomination of its oil exports; the same threats are currently being reiterated by Iran in a situation that does not seem to come to an end soon. Finally, the Russian-Ukrainian gas controversy, while hav-ing been lingering in the air for almost a year, mostly unnoticed by Western European governments, has then finally erupted early 2006. This was undoubtedly the event that sky-rocketed the Eastern European energy chess-board and the problems associated with natural gas to the top of the political agenda – of Western as much as Eastern European governments. Russia's G8 presidency, while it could have been a reassuring momentum for co-operation between the huge energy supplier and the consumers, received much skewed attention and disbelief, as Putin had just declared the main theme for St. Peters-burg, energy security.

At the same time, the Putin March 2006 trip to China seems to have realised some of the fears bred by European governments: a reorientation of Russian exports away from Europe towards China. The signed cooperation for linking China by pipeline from West-Siberian gas fields , which up until now have been uniquely serving the European mar-ket, reiterates Russia's power-play. Also, Gazprom's insinuating that it demanded access to European downstream gas companies or would otherwise seek different markets, was perceived as a direct threat throughout Europe. The tension is clearly rising.

Most of the energy supply concerns and the concomitant political problems in Europe are focused on natural gas, not crude oil. This is due to the fact that it is pipeline-bound , thus in need of long-term commitments and cross-border agreements, mostly between more than two parties, the supplier, the transit nation and the consumer. This outset is complicated by the fact that once the infrastructure is in place, natural gas from a certain origin has mostly no readily available alternative supply route – indicating a total de-pendence on the supplier.

This paper aims at highlighting some of the crucial issues of energy supply and supply security in Eastern and Western Europe. What is the energy/gas landscape looking like in Europe today, what are the main problems associated with the supply of gas, what can be learnt by analysing some of the key events of the past, what can and cannot do the Euro-pean Union in fostering political cooperative approaches and/or technical solutions for reducing energy dependence?

II. Gas supply security – fundamental issues

II.1. Reorientation of Russian supplies?

Europe is today by far the world's biggest natural gas import market and will continue to be the world's champion through 2030. Against common knowledge, it will not be Asia (China/India) nor North America (USA/Canada) that will be the main clients of world gas production and imports. According to projections, among others by the International Energy Agency , annual imports of North America will amount to just 140 billion cubic meters in 2030, China and India together some 80bcm and OECD Europe almost 500bcm/y. European imports will thus be more than double that of the two regions added together – a position that will have profound implications for the global gas markets, their supply infrastructure and security (and obviously also for the formulation of Euro-pean interests).

As a direct consequence of the pure numbers, Europe is highly concerned with its supply options and import origins. An announcement like that from Putin on his March 2006 visit to China, aiming at building a pipeline from the West Siberian gas fields to China, was sure to raise concerns in Europe. These gas fields have up until now been uniquely serving Western Russian and Eastern&Western European gas demands. However, the same pure numbers also indicate that it is highly unlikely Russia reorients significant parts of its gas exports to China/Asia. From an economic point of view, it would make absolutely no sense to miss out on the world's biggest market for a comparably smallish Chinese market. Also, the so-called Altai pipeline needs a 3000km construction through extremely harsh conditions at estimated costs of some 10 billion US\$ - a huge amount that can easily be thought of as prohibitive.

However, while these facts must be well known to the Kremlin, Putin announced the construction of the Altai pipeline in March this year, thus stepping international pressure on the politics of European gas supply. In doing this, Russia has moved just a little closer to being perceived as the Pivotal element of world energy supply.

II.2. Shrinking Russian share

Interestingly though, the bulk of Europe's future supplemental gas imports will likely not be supplied by Russia, but by other sources. According to the optimistic scenario in the 'Russian Energy Strategy to 2020' , Russian gas exports to Western Europe will rise by just 30-50bcm/y over the period . With European imports rising heavily by approxi-mately 10 times this amount (see table), Russia's share in European gas imports is to fall from 2/3rd to 1/3rd. Recent announcements of Gazprom have called the original estimates of the 'Energy Strategy' to be too pessimistic and production estimates have been ramped up consecutively, but the order of magnitude will stay the same: even with new produc-tion forecasts, the Russian share will fall to 40-50% .

For a secure European gas supply, this does evidently have significant implica-tions. New import origins for gas have to be sought and strategies for their se-cure integration into the European market must be planned. North Africa will certainly play an increasingly important role and so will more remote sources (eg. the Caribbean). But in the end, the resources of the Middle East come into focus, with regard to their reserves potential, but even more so due to their market distance. Iran, with 15% of total world proven gas reserves is geo-graphically closer to Europe than the West-Siberian gas fields and will soon share a common border with the EU (Turkey).

While in 2004 82% of gas imports into Europe came from just two origins, Russia and Algeria, this pattern is bound to change in the future. This does not insinuate irrelevance of Russian gas, au contraire, Russia is projected to stay the biggest individual import source for Europe. But possibilities of competition between different suppliers will emerge, as will diversification of sources and transit routes in Eastern and Western Euro-pean portfolios. As energy import dependence will clearly increase, the sole dependence on Russia is set to shrink.

II.3. The real threat: Gazprom's upstream gap & Russia's lack of reforms

In recent discussions about energy supplies in Eastern and Western Europe, a new aspect of energy security is stirring up concern: Gazprom's rather dark production outlook com-bined with Russia's lack of market reform in crucial areas is putting into question Rus-sia's capacity to deliver the quantities of natural gas it has committed. This may sound surprising, as Russia holds almost 30% of total remaining world gas reserves, but it only stresses once more the importance of regulation and politics over geology.

At the outset, several trends come together: Gazprom is facing heavy decline rates at its super-giant gas fields that have traditionally made more than 75% of total production. Falling production is currently offset by the new giant Zapolarnoye that came into pro-duction 2001 – however, most studies show the decline rates exceeding the new produc-tion from around 2008 on . New fields, all significantly more expensive than those cur-rently running (Zapolarnoye has been rightly termed as 'the last cheap gas'), have to be explored and invested in soon. But Gazprom does not seem to take up the challenge. In-stead, it overloads itself with tasks and expenses: development of oil and gas in East Si-beria, expansion across energy sectors in Russia into oil and electricity, overhaul of pipe-line systems in Central Asia and the notable downstream acquisitions in Eastern and Central Europe. At the same time, Russia is facing extremely high and rampant internal gas demand that Gazprom is obliged to satisfy – at below costs. Obviously, all these ex-penses weigh heavily into Gazprom's capacity to invest into new fields .

Currently, Gazprom's forecast is relying crucially on imports of cheap Turkmen gas that are to be redirected to Europe. However, adding up reports about quantities contracted for exports by Turkmenistan, the numbers wittingly exceed total production capacity; furthermore, neither has the pipeline system from Central Asia been fully renovated, nei-ther have the price negotiations with the quite volatile Turkmen-Bashi been successful. A disruptive future can be expected.

Last but certainly not least, the Kremlin seems to follow a strategy of (re-) monopoliza-tion of energy markets, with Gazprom at the forefront. Not only does Gazprom, instead of investing in new fields, buy up the shattered parts of Yukos and other non-gas ven-tures, but more importantly, it holds the pipeline infrastructure under strict monopoly control. Independent gas producers and oil companies with associated gas production have basically no access to the export infrastructure and are reportedly forced to vent the gas or sell it at far below market prices to Gazprom.

Market reform and especially third-party-access to the export infrastructure would rem-edy the situation and raise incentives for investment of independents. However, current Kremlin policies indicate that recent warnings about Russia's gas production gap may well turn out to be true. Some analysts figure this gap to be around 25bcm/y by the end of the decade and some 80bcm/y by 2020 . Independent of all geopolitical and strategic problems that gas supplies face in Europe, energy market reform in Russia may be a 'pre-requisite for Russian and European energy security' .

III. Gas and Politics

III.1. The Russian-Ukrainian gas dispute: The relevance of price and dispute settlement

The Russian-Ukrainian gas dispute earlier this year revealed quite an interesting string of issues that have been lingering on since a number of years, just waiting to surface one day or another. When

they finally did, Eastern and Western governments were taken by surprise, while actually, the underlying problems were long known. What had happened?

The conflict between Russia and Ukraine was certainly both, of political and economic nature. Politically, Russia has been following the events of the so-called Orange Revolution end 2004 with quite an unpleasant impression, as the Ukraine was and still is much closer related to the politics and culture of the Slavic home-base Moscow than were other coloured revolutions or the Baltic dismantlement of Russian influence. Ukraine's stated willingness to enter NATO and its attempts at opening towards EU accession / West co-operation were clearly not appreciated by the Kremlin. Rather early in 2005, Russia made first steps towards pressuring the new Ukrainian president by announcing gas price increases – a clear sign that was directed towards the Ukrainian public, preparing for the run-up to Parliamentary elections 2006. Following similar demands by Putin as early as April 2005, the Duma voted July 2005 a motion demanding that Ukraine, Georgia and Moldova pay world market prices for gas imports .

Economically, the demand for market-priced imports can be interpreted as a financial necessity for Gazprom, as a punishment for failed negotiations surrounding the ownership transfer of the Ukrainian pipeline network, as a consequence of heavily increased gas prices (due to oil prices) that could be obtained on the West European market or just as a continuation of pure monopolist market power visions. However, negotiations over the price were running with varying intensity over the second half of 2005, but both sides were hardly willing to compromise. Reportedly, initial Russian price demands were around 100-120\$/1000m³, up from 50\$, placing the Ukraine in the lot with most of the other CIS states (eg. the Baltics), quite a lot lower than the finally hardened position of December 2005 at 220-240\$.

The events have unfolded particularly badly towards the end of the year, the Ukraine demanding categorically a continuation of prices at 50\$, basing itself on an interpretation of current contracts and political will, while Gazprom and the Kremlin reiterated that the huge subsidies would not be paid to Ukraine anymore. The clash was predictable, however surprising was on the one hand the frightening Kremlin-managed pictures of the cut-off, which completely back-fired internationally, and on the other hand the Ukrainian PR-supremacy concerning the interpretation of events .

From an external, Western European point of view, the events lay shadows over the supply security of Russian gas. While it is true that in 30 years of imports, Russia has always fulfilled contracts – under Cold-War-conditions that were certainly more fragile than today's Europe – the events around the cut-off of gas deliveries to Ukraine and the Ukrainian illicit (or at least: non-agreed) gas-extractions from the pipeline have been engraved in the back of governments' heads for a long future to come.

However, the events exemplified the main problems of political cooperation and energy security in Eastern Europe and these can be summarized into three main cornerstones: 1) price issues, 2) dispute settlement and 3) sole country dependency. The price issue: from a market-based perspective, Russia's demand of a higher price for its exports to the Ukraine was a perfectly legitimate request. It is a normal fact of market behaviour that the owner of a good or resource sets the price at which the consumer may buy or refrain from buying or buy from elsewhere (see problem 3). If Russia has been subsidizing the Ukraine with prices far below market prices for historical, cultural and political reasons, this transfer can be interpreted as economic development aid and is thus quite honourable. Conversely, retracting these subsidies is difficult and painful, as we know in our own countries, but certainly not illegitimate. This may explain why the EU was hesitant in condemning the price rise itself. It is a conviction of the EU and its market members that market prices do give the proper signals to consumers and producers – and are finally the best tool for allocation of resources in the widest sense . More important than the increase would have been a discussion about the price-path to choose for transition into the non-subsidized world. From a political perspective, lessening reliance on transfers from Russia is a definite step towards increasing factual independence from Russia and restates own sovereignty – a link the Baltic States

have clearly understood by acknowledging very early on price-paths leading one day to market prices.

The core of the finally un-resolvable confrontation between Russia and the Ukraine was the complete lack of institutionalized or legalized dispute settlement. Other than intransparent and closed-door negotiations without procedural certainty, apparently no dispute settlement agreement had been in place between the two parties. Both Russia and the Ukraine have not ratified the Transit Protocol of the Energy Charter Treaty (Russia has not even ratified the Treaty itself) – a fact that was now noticed with regrets, as this Protocol explicitly states rules for settling international disputes between transit, producer or consumer country (or respective companies).

The dependency of the Ukraine on Russian gas supply and Russian infrastructure (for gas transits from the Caspian) was another of the cornerstones of fragile energy security. Maybe this case was a lesson that whatever the political good-will may be at the moment, in the long run an unduly high dependence on one single country (or supply infrastructure) poses high political risks. At the opposite end of the spectre, the same reasoning holds true for Moscow, which is actively looking for alternatives to the quasi-monopoly the Ukraine enjoys for gas exports to Western Europe. The fact that the Ukraine in Jan06 has 'diverted' pipeline gas to domestic use without paying the demanded price (as happened regularly in the 1990's), has certainly made Russia's determination in the NEGP even stronger.

Unfortunately though, the deal reached at the end of the dispute is marked by an utterly high lack of transparency and can thus merely be called a 'solution'. Contractual mystery and misery surround the details of the agreement and only recently some scattered information appeared about the involvement of the highly intransparent RosUkrEnergo. This Swiss-based, Austrian off-shore and Russian venture which is supposed to manage the gas imports of the whole country looks like a murky deal enriching circles of individual oligarchs on both sides (and a few involved foreigners), much more than a secure legal framework for energy imports. Unfortunately, from a European perspective, it seems obvious that this fragile solution won't hold for long. A return of dramatic price discussions and possible cut-offs is a highly probable future.

III.2. The EU: the magic stick?

That puts a headlight on the question what can possibly be done to avoid a future reiteration of the critical energy events of last winter – and, especially, what tools do the consumer countries of the European Union and/or the European Commission have in hand to avert another gas disruption.

The EU's common creed of market-based approaches inherently includes its commitment to the free evolution of market prices and excludes favouring subsidy solutions. Consequently, the EU's aim at solving price disputes can certainly not be to avoid the adaptation towards market prices – in the issue at hand, to aim at a long term avoidance of Western European market prices for gas imports into Eastern European countries (also: WTO accession does preclude this way). But, more importantly, the EU can offer help with negotiating the price path between Russia and the importing nations. This is particularly useful, as the macro-economic damage by higher prices is vastly determined by the time horizon over which the rise occurs. An EU offer to multilateralize the negotiations also reduces the impressions of the Eastern European country to be ('again') sitting alone at the negotiation table with the overwhelmingly powerful Russia. Additionally, should the negotiations yield a price path that would prove to be economically a burden too hard to cope with, the EU and its members could potentially offer the Eastern consumer country support in financing (parts of) the price path.

A good part of the problem in the cases at hand, the Ukraine but also Belarus, lies in the fact of their world-wide top scoring energy intensities. Huge inefficiencies in the industrial (and household) sector are compounded with a transformation sector that sees power and heat plants at efficiencies far below current technological standards (50% of total gas consumption is used for power-generation – a sector where efficiency gains are rather easy and most yielding). As a direct

consequence, gas import needs are outstandingly high. However, this can also be seen as an opportunity for the EU, as improving energy efficiency in (for example) the Ukraine has a huge potential for lowering imports from Russia and thus mitigate the price effects. At the same time, subsidies for such pro-programmes can come from the EC's environmental programmes (an EU-Ukraine Action Plan already lists efficiency measures) and, to make it even more 'sellable', is likely to be a push to further exports of European technology-based energy industry.

Further, the EU has been demanding ratification of the Energy Charter Treaty rather with rather low-key efforts recently. However, the Charter is a first-class tool to enhance energy security in Europe, not only due to its arbitration panels and dispute settlements, but also due to its underlying openness towards investment security in the energy sector (which would thus help to reduce the above-mentioned potential Russian supply gap) and open/transparent access to the pipeline infrastructure. The EU should thus make another attempt at stressing the importance of ratification. It could use the G8 presidencies of this and next year to clearly lay out a common European demand. Germany may well use its presidential opportunity to reiterate the project; if opposition from Russia is too strong to the red flag 'Energy Charter', then it may make sense to leave the dead-born child, adhere to the principles, rename it and run a similar process under a different tag. Ukraine, while a ratified Member to the ECT, has not ratified the subsequent Transit Protocol, owing much to the domestic red flag of a potential transfer of ownership and transit rights over the gas transmission pipelines to independent companies. However, discussions with the Ukrainian government should restart.

At the same time, the EU could vastly improve European energy security by institutionalizing and especially multilateralizing the Energy Dialogue with Russia. Projects like the Ukrainian-Russian-German pipeline consortium are a commendable example of multilateralized energy cooperation which offers all parties a comforting level of congruent interests. The EU can do good in supporting such projects and could quite well enhance their efficiency by entering the dialogue surrounding these.

III.3. NEGP and East-West disputes

Much discussion has been devoted to the NEGP, so just a few words about the subject. From a Russian perspective, the above mentioned bilateral monopoly between Russia and transit country Ukraine clearly indicates that it makes economic and political sense to seek alternative export routes. The NEGP allows Gazprom to save transit fees as it runs off-territory, to increase its bargaining power towards transit countries concerning the transit fee and may allow Gazprom to increase gas prices for exports to these Eastern neighbours without the dangerous stale-mate position of transit-monopoly that could be observed running up to the January 2006 events. From a geostrategic point of view, the NEGP could also be interpreted as yet another move of Kremlin/Gazprom towards its "great game" in its energy backyard in Eastern Europe.

At the same time, the pipeline makes also sense from a Western European perspective as it implies yet another diversification of import routes, increases the export capacity of Russia (by less than the projected additional gas imports from Russia for 2020 of some 30-50bcm/y, see above), saves the transit fees otherwise implicitly included in the border price and, to the dismay of Eastern Europe, decreases (by just a little) European dependence on price/transit disputes that may lead to supply disruptions. Counterproductively then, the Ukrainian-Russian gas dispute 2006 was an illustration of the latter and has done nothing but reinforcing Western arguments for the pipeline.

All compounded, the reasons in favour of the NEGP have lead the EU to promote the project to the status of a 'Trans-European Network' in late 2000, in an attempt to increase supply and transit routes. Consequently, much of the Polish debate about closed-door deals between Germany and Russia is completely off the point, as the pipeline and its project specifications were long known. Furthermore, it should be remembered that the pipeline agreement gave the involved companies the opportunity of upstream development of the Yushno Russkoye gas field, reportedly under a state-

granted licence scheme together with Gazprom. Other than on Sakhalin, no licenses have ever been granted in the Russian upstream gas sector. In this regard, the NEGP would also have made possible at least a partial opening to foreign upstream investment.