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POLICY BRIEF

BEYOND DEPENDENCE: HOW TO DEAL WITH RUSSIAN GAS

Pierre Noël

SUMMARY

The gas relationship with Russia has become an extremely contentious issue among EU Member States. It is a major reason for the EU's failure to develop the common policy approach towards Moscow it so badly needs. Yet the relationship is often misunderstood. Russia is the largest external gas supplier to the EU, but it is far from a monopoly provider. Since 1980, Europe's diversification of its gas supply has seen Russia's share of EU gas imports roughly halve, from 80% to 40%. Russian gas represents just 6.5% of the EU primary energy supply, a figure that has remained essentially unchanged over 20 years. And contrary to widely held belief, Russian gas exports to Europe are unlikely to increase significantly in the foreseeable future.

So calls for Europe to diversify its energy supply even further miss the point. The problem is divisiveness, not dependence. Russian gas is divisive because Europe's gas market is dysfunctional and segmented. Most of the EU's imports of Russian gas go to a few countries in western Europe, where supply is diversified, while several Member States in central and eastern Europe consume relatively little Russian gas but have no other external suppliers. Only the emergence of a single competitive European gas market can create real solidarity between consumers and 'Europeanise' the current large bilateral contracts between European importers and Gazprom.

To address the specific concerns of central and eastern European Member States, the EU should build on the 2004 directive on security of supply in natural gas, and help these Member States devise and implement national action plans for gas security.

Introduction

Europe's dependence on Russian gas has become a central issue in the European Union's internal debates about its relationship with Russia and its energy policy. The recent war between Georgia and Russia has added a sense of urgency to the EU's search for a better Russia policy, fuelling fears that Moscow might use its power as a major energy supplier to blackmail Europeans into submission. Following the war, Gordon Brown, the British prime minister, wrote: "No nation can be allowed to exert an energy stranglehold over Europe, and the events of August have shown the critical importance of diversifying our energy supply."[1]

Such concerns are exaggerated — and miss the real problem. Two essential figures should inform the debate. First, Russian gas accounts for just 6.5% of the EU's total primary energy supply, a share that has barely changed since 1990. Second, Russia's market share of EU gas imports has been halved since 1980, from 80% to just over 40%. Contrary to popular perception, overdependence on Russia is not a pressing issue for Europe[2] as a whole.

Yet there are important differences between EU Member States. The EU's eastern national gas markets are, for the

1 Gordon Brown, "This is how we will stand up to Russia's naked aggression", The Observer, 31 August 2008.

2 Unless otherwise stated, "Europe" refers to the current membership of the EU (27 members).

most part, small but highly dependent on Russia, whilst the bigger western markets benefit from greater supply diversity. And while the countries that critically depend on Russia for their gas are to be found among the new Member States, Gazprom's big clients are Germany and Italy, which together account for almost half of all Russian gas consumed in the EU.

These national differences would not matter too much if there were a single European gas market. But the reality is that Europe's gas market is segmented along national lines. There is little cross-border trading within the EU, and when supply disruptions occur – as in January 2006 at the height of the gas crisis between Ukraine and Russia, or, two months later, when a fire at the Rough storage facility disrupted the UK market – we see very little reallocation of supply between national markets.

The result is that Russian gas has become an extremely divisive issue in European politics. The highly dependent countries in eastern Europe resent the German, Italian or French pro-Russian stance, which they largely ascribe to the strategic partnerships between Gazprom and importers in these countries. Conversely, Moscow's self-declared strategic partners in the EU resent the anti-Russian approach of some eastern Member States and argue that cultivating good relations with Russia is essential to the EU's energy security.

Current attempts to use direct diplomacy to solve Europe's problem with Russian gas are unlikely to succeed because the EU and Russia have divergent interests. Europe wants to depoliticise the EU-Russia gas relationship in order to integrate Russian gas imports into a competitive pan-European gas market and to maximise the volumes it can import from Russia. But Russia - or its current leadership, at least – wants precisely the opposite: to keep the politics in the gas relationship. A depoliticised EU-Russia gas relationship would be a disaster from the Russian leadership's point of view, as it would leave Russia in something like the position of Norway vis-à-vis Europe or Canada vis-à-vis the US. From Russia's perspective, a stagnant or even declining gas relationship with Europe is preferable to an expanding but depoliticised gas trade.

A politicised gas relationship is a central part of Russia's European strategy. This explains the failure of the EU-Russia "energy dialogue" of the late 1990s, the failure to secure Russia's ratification of the Energy Charter Treaty, and the failure to link Russia's entry into the WTO to liberalisation of its gas sector. At the EU-Russia summit in Sochi on 25 May 2006, Russia explicitly rejected proposals advanced by the EU to restructure and depoliticise the gas relationship[3]. Russia's vested interest in the status quo drives its fierce opposition to the European pursuit of gas market liberalisation and integration.

What about oil?

As well as relying on Russia for a significant part of its gas imports, Europe is highly dependent on Russian crude oil and petroleum products. But while the gas relationship has significant implications for EU-Russia political relations, this is not true for oil - even in the case of those EU countries that are highly reliant on Russia for supply of crude oil or refined products.

The reason for this lies in the different structures of the oil and gas market and the varying nature of the products. Oil is a highly fungible commodity that can be transported by pipelines, tankers, barges, railway and trucks; and it is traded on a deep and liquid global market in which Europe is fully integrated. In the case of a supply disruption, a refinery or large consumer can almost invariably turn to the spot (short-term) market. Furthermore, the cost of storing oil products is only a fraction of that for natural gas, which means importers with limited oil supply diversity have a strong incentive to maintain big inventories (or can be forced to do so by regulation).

In 2006, Russia turned off the oil taps to Lithuania; more recently it did the same to the Czech Republic. These were regrettable events, but they have had very limited, if any, lasting impact on the energy supply of these two countries or their overall economic welfare.

The most effective way for the EU to counter Russian attempts to divide Member States is to restructure its internal gas market, making it much more difficult for Russia to advance its political interests. This paper will argue that European policymakers should focus on building a single, competitive European gas market by aggressively pursuing legislative and regulatory reforms that will lead to continental-wide competitive trading.

Over the past three years, the debate has evolved around three equally unsatisfactory proposals for EU responses to the Russian gas challenge:

- *Regain energy independence from Russia by developing alternatives to natural gas, especially nuclear power and renewables*. This is not a credible option. Although nuclear and renewables are competitors to natural gas, they cannot marginalise it in the medium term. Pushing for alternatives to Russian gas will not keep it from dividing Member States.

- *Further diversify Europe's gas supply through aggressive pursuit of sources of non-Russian gas*. The record shows that Europe's gas supply has considerably diversified in recent years, and Russia's share of EU imports has declined continuously since 1980. Yet during this time

3 See Vladimir Putin's comments in: "Press conference following the Russia-EU summit", 25 May 2006 (kremlin.ru).

Russian gas has become *more* divisive politically, not less. So it is unclear how further diversification would help resolve the issue.

- *Bind Russia's hands by having it accept treaty-backed policy and behavioural disciplines*. Such an approach depends entirely on Russian goodwill, which has lately been in short supply. The EU is powerless to force a sovereign state of Russia's might to bend to treaty-backed disciplines Moscow sees as detrimental to its national interest.

The solution to the Russian gas challenge lies not in foreign energy policy but in reform of the European gas market itself. An integrated and competitive European gas market would:

- *Create the maximum possible degree of solidarity* between European gas consumers.

- *Improve collective supply security* by allowing the price mechanism to re-allocate physical supply across the entire market in times of supply or demand shocks.

- *Make Member States' bilateral relations with Russia largely irrelevant* to the conditions of access to Russian gas for consumers. An integrated market would 'Europeanise' bilateral commercial relationships with Gazprom, without the need for political involvement from the EU.

There are no serious physical, infrastructural or legal barriers to European gas market integration. The tools are provided by the second gas directive of 2003 and will be reinforced by the forthcoming third directive. The EU's task now is political: key Member States, especially France and Germany, must live up to the spirit of the "Energy Policy for Europe" document adopted at the European Council of March 2007, which stated that "a truly competitive, interconnected and single Europe-wide internal energy market... will have major benefits for the competitiveness of EU consumers as well as security of supply (...)"[4].

The first section of this paper analyses the dynamics of the European gas supply, with special reference to the level of dependence on Russia. The second explains the link between the fragmentation of the European gas market and the political divisiveness of Russian gas in Europe. The third examines the EU's failure to build an integrated gas market. The fourth evaluates the gas security situation in central and eastern Europe. The fifth and final section summarises the policy recommendations.

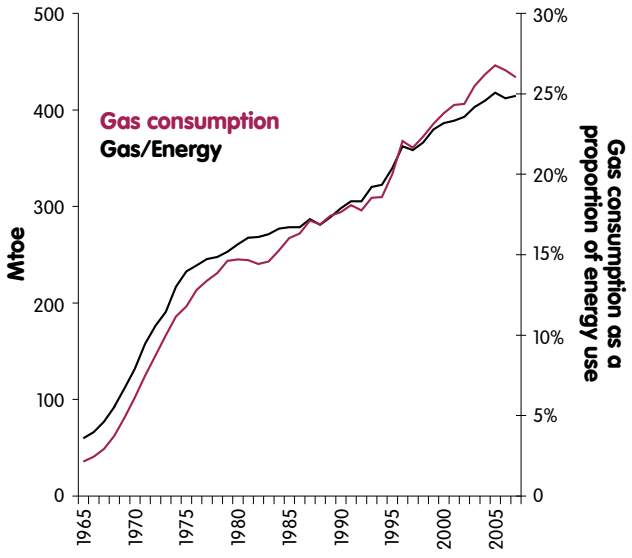
How dependent is Europe on Russian gas?

Conventional wisdom has it that Russia dominates Europe's natural gas market, and that European imports of Russian gas are growing and can only continue to grow. This supposedly places the EU in a dangerous state of dependency and compromises its strategic position towards Russia[5]. All sides of the debate over Europe's Russia policy share these premises, including those "realists" who argue that dependency on Russian gas makes it irresponsible for the EU to pursue policies that antagonise Moscow[6].

But the conventional wisdom is wrong: Europe's gas supply is not dominated by Russia, or, for that matter, by any other exporter. Since 1980, and particularly since 1995, Europe has considerably diversified its sources of gas imports. Today, for the EU as a whole, gas supply diversity is not a pressing problem.

As figure 1 shows, over the past 40 years, natural gas consumption has grown steadily in Europe, and much faster than primary energy consumption. (Gas now accounts for around a quarter of energy use in Europe.) Since the mid-1970s, imports have covered all this growth. In 2007, Europe imported 300 billion cubic metres (bcm) of gas, accounting for 60% of consumption (figures 2 and 4).

Figure 1. EU27 gas consumption, 1965-2007



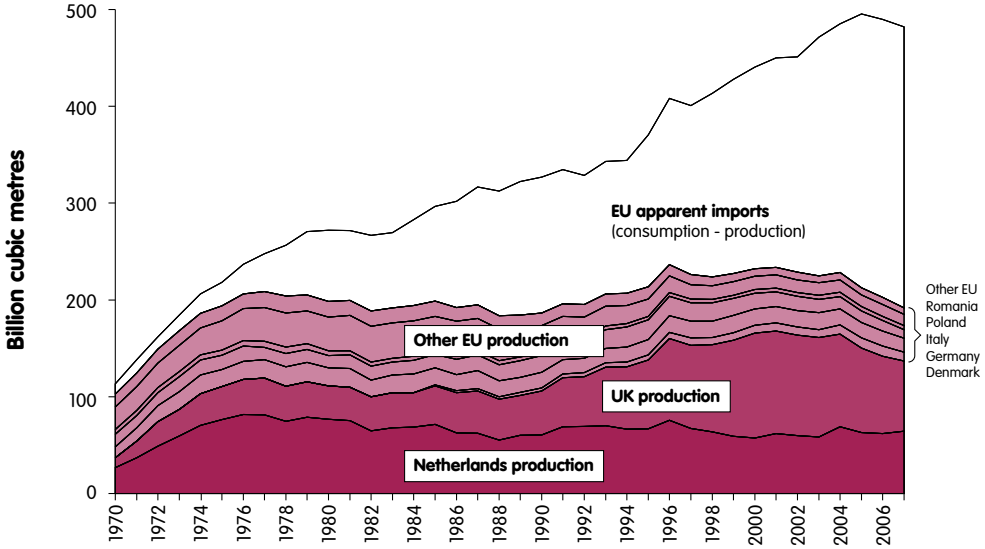
Source: BP Statistical Review of World Energy (from Cedigaz)

4 Energy Policy for Europe (EPE), Annex to the Presidency Conclusions, European Council, 8/9 March 2007, p. 16.

5 See for example Frank Umbach, "Europe's Next Cold War", IP, Summer 2006, p. 64-71; Zeyno Baran, "EU Energy Security: Time to End Russian Leverage", The Washington Quarterly, Autumn 2007, p. 131-144.

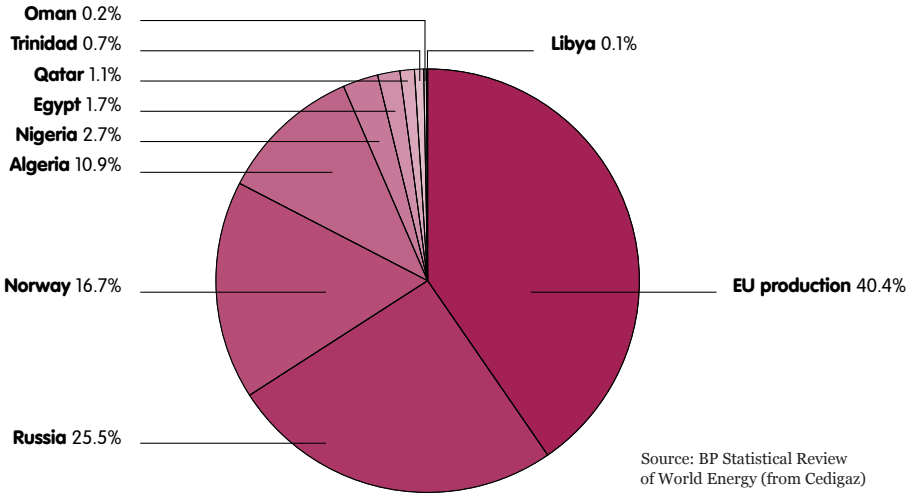
6 For a recent example from the US, see F. Leverett and H. Mann Leverett, "Wrong on Russia", The National Interest Online, 20 August 2008 (www.nationalinterest.org).

Figure 2. EU27 gas supply, 1970-2007



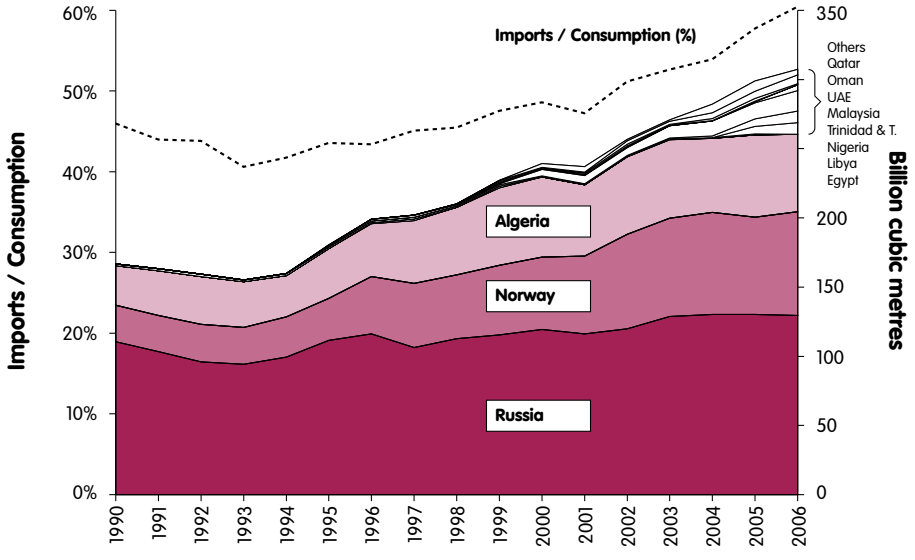
Source: BP Statistical Review of World Energy

Figure 3. Structure of the EU gas supply, 2006



Source: BP Statistical Review
of World Energy (from Cedigaz)

Figure 4. EU27 gas imports, 1990-2006



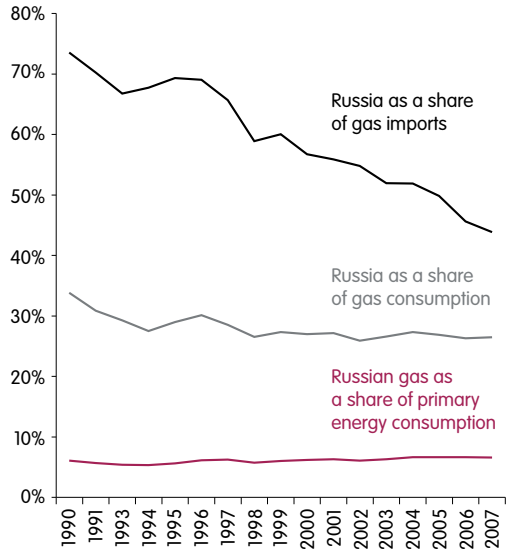
Source: BP Statistical Review; Eurostat

Russia remains the largest exporter of gas to the EU, with total annual exports of 130 bcm today. But since the early 1980s, and particularly over the past decade, import growth from other countries has outpaced that from Russia. Since 1990, 80% of the growth in European gas imports has originated from countries other than Russia, especially Norway, Algeria, Nigeria and middle eastern countries. Accordingly, Russia's share of EU gas imports has declined sharply, from 75% in 1990 to just over 40% today (figure 5).

The share of EU gas consumption covered by Russian imports grew rapidly in the 1970s and 1980s, peaking at 30% in the early 1990s before stabilising at about 25%. Yet as a share of Europe's primary *energy* consumption, gas imports from Russia have stabilised since 1990 at around 6.5% (figure 5). In other words, 93.5% of the energy consumed in Europe is covered by sources other than Russian gas – and natural gas, unlike oil, faces direct competition from other fuels and technologies.

Transport modes and routes for gas have also diversified. Until the early 2000s, most of Europe's imports came via pipelines[7]. But over the past decade, Europe has become a major customer in the rapidly growing market for liquefied natural gas (LNG), which is transported by sea. Since 2002, LNG from new suppliers such as Nigeria, Egypt, Trinidad or Qatar has accounted for most of the rise in EU gas imports. The share of LNG in EU gas imports has grown from 15% in 2000 to more than 20% in 2007[8]. Even pipeline routes from Russia itself have diversified: the "Yamal-Europe" pipeline, which was opened in the 1990s, has reduced reliance on the Ukrainian corridor.

Figure 5. EU27 dependence on Russian gas, 1990-2006



Source: Eurostat; BP Statistical Review of World Energy

There may be no problem of European overdependence on Russian gas, but this is not to say that all is well on the supply front. Over the next 15-20 years, Gazprom faces serious supply challenges, and the international gas market is likely to experience considerable tightening[9]. These issues, combined with declining indigenous production, mean that in the coming decades Europe could face a gas supply crunch, leading to stagnant or even declining consumption.

Despite controlling the world's largest gas reserves, Gazprom will find it difficult to maintain its current supply levels. Production from the three "super-giant" west Siberian gas fields, which account for the bulk of Gazprom's output, is now in steep decline (figure 6). The company's ability to maintain, let alone increase, production in the coming decades depends on the development of a new generation of fields on the Yamal Peninsula in northwest Siberia. Gazprom's official line is that Yamal will come on stream in 2010 (as illustrated in figure 6). But independent analysts and most of the European gas industry think this is highly unlikely. Some mention 2015 as a more realistic date for Yamal's completion[10].

In fact, Gazprom's production is already insufficient to meet all the company's commitments. It depends on two other sources of gas – "independent" Russian producers and imports from Central Asia, especially Turkmenistan – to make up the shortfall. This "bridge"[11] is supposed to supply Gazprom's needs until the Yamal fields come online. But there is uncertainty over whether Gazprom will be able to source sufficient volumes from Turkmenistan, while independent Russian producers have little incentive to increase their production in the absence of access to Gazprom's transmission network, which would enable them to reach consumers directly. Moreover, domestic gas consumption in Russia is growing[12], driven by economic expansion and a gas-intensive electricity mix. So there is at least a risk that Gazprom's "bridge" to Yamal could collapse. Industry assessments vary from a tight but manageable supply situation to an impending crisis[13].

As long as Gazprom relies on the Turkmen/independent supplier "gas bridge", it is unlikely that exports to Europe, at least those under long-term contracts, will increase at all. Depending on how quickly Gazprom can get the Yamal fields on stream, there could be room for increased exports to Europe in the second part of the next decade, though any additional commitments are unlikely to be large. In 2006, major long-term contracts with European importers

7 Though Algeria has been exporting liquefied natural gas to Europe since the late 1960s.

8 Source: data from BP Statistical Review of World Energy 2007.

9 Several discussions with Jonathan Stern from the Oxford Institute for Energy Studies have informed the analysis presented in this section. I also rely on J. Stern, "The new security environment for European gas: worsening geopolitics and increasing competition for LNG", Oxford Institute for Energy Studies, NG15, 2006.

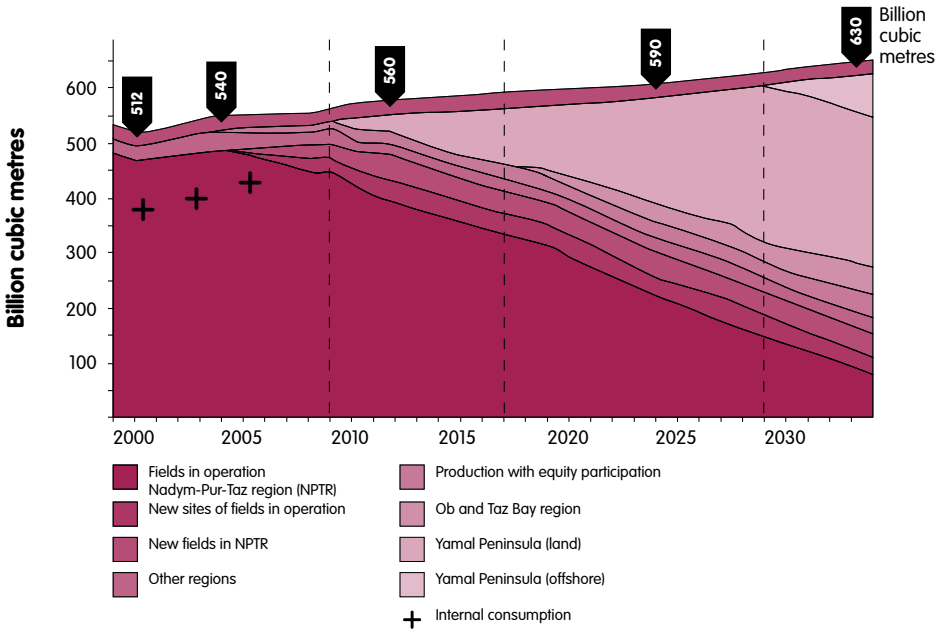
10 Interviews in energy companies in Norway, France and the UK, May-June 2008.

11 I owe the bridge analogy to a conversation with Thane Gufstanson of Georgetown University.

12 Though growth seems to have slowed in 2007 compared with the previous three years.

13 For a recent analysis developing a moderately pessimistic view, see Nadejda Makarova Victor, "Gazprom: Gas Giant under Strain", Stanford University, Programme on Energy and Sustainable Development, January 2008.

Figure 6. Gazprom's gas output (2000-2035)



Source: Gazprom's output graph from gazprom.ru;
Russia's natural gas consumption from BP Statistical Review of World Energy

were renewed until 2030-35[14]; as west Siberian production declines, these contracts will be serviced increasingly from Yamal, limiting the volumes available for new contracts. Finally, Russia's political willingness to expand exports to Europe beyond current levels remains unclear[15].

What are the implications of Gazprom's supply difficulties for the EU? Indigenous production will not be able to take up the strain. Today, the UK and the Netherlands together account for three quarters of total EU gas production. But output from both countries is decreasing - rapidly in the case of the UK - and this is driving a general decline in indigenous EU production. This, along with stagnant Russian exports, suggests that imports of non-Russian gas will have to increase even faster to allow for continued growth in consumption. Such imports have grown rapidly over the past 25 years, mainly thanks to Algerian and Norwegian pipeline gas, and LNG from countries in north Africa, the middle east and sub-Saharan Africa. But in a tightening global market, continuing this trend may prove challenging.

Concerning pipelines, the potential for expansion from Norway is limited, and rising internal consumption will limit export growth from Algeria. One of the few bright spots is Libya, where substantial recent gas discoveries and the government's positive attitude towards foreign investor-led gas export projects, along with the general thawing in relations with the west, all bode well for future expansion of exports to the EU.

With regard to LNG, Europe has largely benefited from the rapid expansion of the international market since the late 1990s. Throughout the 2000s, the share of LNG in EU gas imports has increased more than the share of LNG in the international gas trade. In theory, Russia's supply difficulties should accentuate this trend. Yet the global LNG market is becoming increasingly integrated, something which may not work in Europe's favour. Contracts have become more flexible, and cargoes, even contracted ones, tend to go where the spot price is highest. In this context, the EU's attractiveness as an LNG importer may be hindered by the absence of a single wholesale gas market in continental Europe.

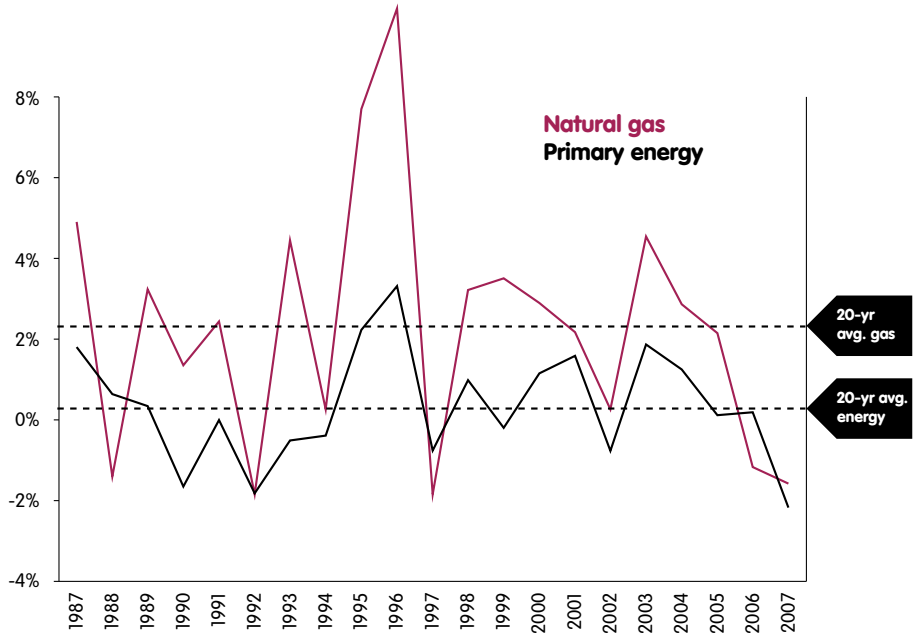
Moreover, there is a growing industry consensus that the current tightness of the global LNG market will be sustained to 2015 and beyond[16]. LNG supply growth, though impressive, has not flooded global markets. Gas-short buyers, especially in Asia and at times Europe or North America, are bidding up the price. On the supply side, resources are still plentiful but a combination of political barriers to large international gas export projects and the sheer scale of the industrial challenge is keeping supply growth behind global demand. Some of these barriers

14 2036 for E.On-Ruhrgas, 2035 for ENI, 2030 for BASF-Wintershall, 2026 for OMV and 2030 for GDF. See Dominique Finon and Catherine Locatelli, "Russian and European Gas Interdependence. Could Contractual Trade Channel Geopolitics?", Energy Policy (36) 2008, p. 430.

15 See J. Stern, "The new security environment for European gas", op. cit., p. 7.

16 See Deutsche Bank Global Market Research, "Global LNG: Sink without a Tap", 18 June 2008.

Figure 7. Year-on-year energy and natural gas consumption growth (EU27, 1987-2007)



Source: BP Statistical Review of World Energy

are becoming higher, notably in Iran, where multilateral sanctions and growing political isolation have effectively killed the prospects of LNG development for the foreseeable future[17].

Gazprom's supply problems, the tightening international market and a decline in indigenous production mean that continued growth in European gas demand cannot be taken for granted. It is true that over the past 20 years, demand for gas in the EU27 has grown much faster on average than overall energy consumption (by 2.2% and 0.23% per year respectively). But more recently, high prices seem to have had a significant impact on consumption, triggering fuel substitution, conservation measures and efficiency improvements. Gas consumption in the EU declined in 2006 and 2007 by 1.6% and 1.8% respectively (figure 7). Since 2000, the electricity generation sector has been responsible for more than 80% of the growth of gas demand in Europe[18]. Yet at current prices, natural gas faces tough competition from coal and even nuclear power for new generation capacity.

Still, one should not write off entirely the possibility of gas demand growth in Europe. The recent collapse of the oil price will boost the competitiveness of natural gas, since gas prices in European long-term contracts are indexed on the prices of oil. In addition, the EU's climate change policy should help boost demand for gas. The emissions trading scheme has introduced an incentive for more intensive use of gas-fired power plants at the expense of coal[19]. And even if the EU does meet its targets on renewable energy and energy efficiency – which is far from certain – Europe will still need new gas-fired capacity to reach its goal of a 20% reduction in CO_2 emission levels by 2020 (compared with 1990)[20]. Finally, the need for new gas-fired capacity would be significantly increased if Germany carries on with the early phasing out of its nuclear reactors fleet.

Yet none of this lends support to the simplistic view that Europe's dependence on Russian gas is destined to grow because the EU needs gas and Russia has huge resources. Demand for gas in Europe will grow only if it can be supplied at a competitive price compared with other energy sources. Russia, as we have seen, is in no position to significantly increase exports to Europe. There may be welcome surprises to come on the supply side from outside Russia. But looking ahead, the least likely scenario of all is a growing European gas market increasingly dominated by Russia.

17 In May 2008, Shell and Repsol announced that they were pulling out of their LNG project in Iran, followed in July by Total.

18 Author's calculations from Eurostat data.

19 See the evidence presented in M. McGuiness and Denny Ellerman, "CO_2 abatement in the UK power sector: evidence from the EU ETS trial period", MIT, CEEPR Working Paper 08-010, September 2008.

20 See Deutsche Bank Global Market Research, "Abatement statement: a big need for fuel-switching over 2008-2020", 10 March 2008.

Why is Russian gas so politically divisive?

The problem for Europe is not overdependence on Russian gas, but political division stemming from a fragmented market. This hinders the development of a common European foreign policy towards Moscow.

The most efficient solution to the Russian gas problem lies not in the development of an external energy policy, but in further restructuring of the EU's internal gas market. The emergence of pan-European competitive trading, and therefore of a single European gas market, would create solidarity among European consumers and significantly improve Europe's ability to speak with one voice to Russia. Far from being a distraction from other, supposedly more pressing challenges[21], the building of a single competitive gas market should be a crucial part of Europe's strategic energy policy.

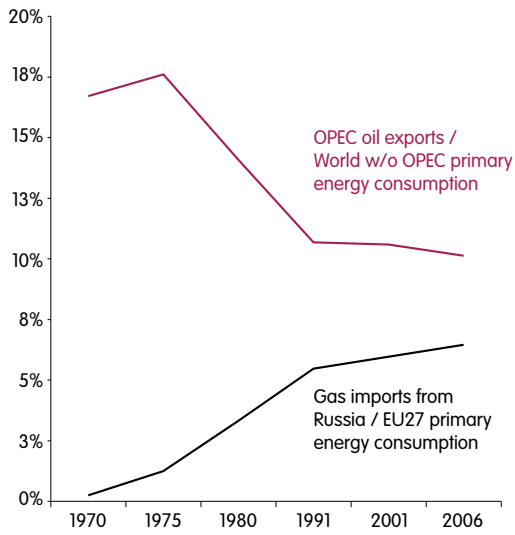
To understand better the link between energy market organisation and the politics of energy dependence, it is useful to compare Europe's reliance on Russian gas with the world's dependence on the Organisation of Petroleum Exporting Countries (OPEC).

The world is more reliant on OPEC oil than the EU is on Russian gas. Oil exports from OPEC cover 10% of global primary energy consumption (excluding OPEC countries) while, as noted above, gas exports from Russia account for only 6.5% of Europe's primary consumption (figure 8). Furthermore, natural gas is a more "substitutable" fuel than oil — roughly half of global oil demand (and up to 70% in the United States) is in the transport sector, where oil products enjoy a near monopoly.

Yet OPEC is for the most part politically benign; contrary to the predictions of most observers in the early 1970s, it has not emerged as a global political force. Neither OPEC as an organisation nor its member governments tie their oil export policies and contracts to the pursuit of specific foreign policy objectives. The reason for this is simple: the oil market does not allow it. The market for oil is globally integrated; it is not possible for a single exporter to threaten individual importers with reduced or suspended shipments in the event of a dispute, political or otherwise. Exporters can reduce volumes, but this drives up the price for *all* consumers. The market always reallocates available supply instantaneously and anonymously.

Importers of OPEC oil understand that their political relationships with large exporters have no impact on the conditions of their oil supply. They therefore feel no need to look for "strategic partnerships" with OPEC countries,

Figure 8. EU dependence on Russian gas and world dependence on OPEC oil



Source: BP Statistical Review of World Energy (from Cedigaz)

or to accommodate exporters' political demands[22]. When a particular bilateral commercial relationship is broken – be it for political or technical reasons – the market simply transforms a local supply shortage into a global price increase. For oil-importing countries, therefore, OPEC's role is an economic issue, not a geopolitical one.

Bilateral relations between European gas importers and Gazprom, on the other hand, really do matter. European gas importers forged their first relationships with Russia in the 1970s, when western European countries (Austria, France, Germany and Italy) signed their first gas import contracts, following the first large-scale exports of Soviet gas to eastern Europe. The western clients of the Soviet Ministry of Gas (Gazprom's precursor) were large utility companies with a dominant, often monopolistic, position in their national markets. They were able to agree contracts for large volumes of gas over two or three decades under a rigid contractual structure designed to support massive investment in infrastructure, especially the 5,000-km pipelines from west Siberia to Europe. These contracts benefited from strong political backing; they often amounted to government-to-government agreements.

The gas relationship between Europe and Russia developed into the largest such relationship in the world. The penetration of natural gas in Europe contributed to the diversification of energy balances after the first oil shock in 1973. But the industrial and contractual model under which the relationship grew was incompatible with

21 Several interviewees in the European gas industry expressed the idea that reform of the internal gas market was a "distraction" from "real" energy policy challenges, such as climate change or energy security.

22 One might object that China links its oil procurement policy to political relations with exporters. But the energy benefits of these policies are dubious. France had a similar approach in the 1960s and 1970s, but later abandoned it, as did Japan. China will (and has actually started to) move along the same "learning curve". See P. Noël and M. Meidan, "L'approvisionnement énergétique de la Chine: marchés et politiques", in F. Godement and S. Boisseau du Rocher (eds.), Asie. Annuaire 2005-2006 (Paris: La Documentation Française), 2005.

the development of a competitive, continental market for gas. The whole system was based on the *absence of competition* between national gas companies. The idea of a single European gas market was explicitly rejected by the industrial players that had built up gas relationships with the Soviet Union.

But as gas consumption increased and western European markets matured, the economic inefficiencies of this model became apparent, strengthening the case for restructuring and liberalisation. Furthermore, a strong *political* rationale for reforming Europe's gas market gradually emerged. First, it became clear that market segmentation was impeding the flow of gas across Europe, limiting collective supply security. And when Russia under Vladimir Putin embarked on a more ambitious and aggressive foreign policy, the full political cost of the segmentation of Europe's gas market became clear. The nature of the European gas market made it extremely difficult for the EU to develop a common foreign policy approach towards Russia — and very easy for Moscow to fuel Europe's divisions.

At the root of the problem is the variation among EU Member States in the size of their gas markets and their levels of dependence on Russian gas. When it comes to gas, the Iron Curtain still seems to cut Europe in two. In the western EU, markets are large but diversified. In the east, the markets are smaller but much more dependent on Russia. The old 15 member states (EU15) account for 86% of EU gas consumption (figure 9). The UK, Germany and Italy each consume more gas alone than the 12 new member states combined. Yet Russian gas represents, on average, just 20% of the EU15 primary gas supply, and more than 50% of supply only in Finland, Greece and Austria – three of the smallest gas markets in the EU15 (figure 10). Conversely, all ten eastern European NMS, apart from Romania, rely on Russia for at least 50% of their gas. For six of them the figure is 80% or more.

But the size of the western European markets means that slightly more than two thirds of Russian gas consumed in Europe is imported by the EU15, despite their lesser dependence on Russia. Two countries, Germany and Italy[23], together account for nearly half of the total (figure 11). (France is the third biggest importer of Russian gas, but imports less than half the Italian total and only a quarter of that of Germany.) As a result, roughly 40% of Gazprom's entire profits are generated by exports to Germany and Italy. The large gas-importing companies in these countries truly are strategic partners for Gazprom. Eastern European countries, meanwhile, though highly dependent on Russia, amount to a tiny share of the Russian company's exports and profits.

The extreme variations throughout Europe in gas import volumes and dependence on Russia – as illustrated in figure 12 – present the EU with a strategic challenge. In the absence of an integrated European market creating effective solidarity between gas consumers across national markets[24] – especially between the big western importing countries and the smaller eastern European ones – Russia is able to exploit these variations to divide EU governments. Moscow extends privileged energy "co-operation" offers to its strategic partners – inviting the German companies involved in the building of the Nordstream pipeline to participate in gas field projects in Russia, for example - something European governments find very hard to refuse, even with the political strings that are always attached to such offers[25]. Because Germany and Italy can effectively capture the economic benefits of their cosy political relationships with Moscow, they have a strong incentive to accommodate Russia politically at the expense of European unity.

If, however, Europe had an integrated and competitive gas market, bilateral contracts between Gazprom and German, Italian or French importers would be "Europeanised". They would no longer bring gas to Germany, Italy or France, but to Europe. Physical allocation would be left to competitive trading, just as, increasingly, LNG contracts bring gas to the world market while LNG cargoes physically go where the short-term price is the highest. In an integrated European market, political and energy relationships would be decoupled: Germany and Italy would still be Gazprom's largest clients, but they would no longer feel the same incentive to accommodate Russia's political views.

Furthermore, European market integration would help highly Russia-dependent countries in eastern Europe to overcome their gas supply insecurity syndrome, even in the absence of new infrastructure. Existing east-west pipelines would enable gas swaps with the diversified markets in western Europe, moving non-Russian gas east without having to physically reverse the flow. Countries like Hungary, Slovakia and Poland would be especially well placed to benefit[26].

In short, market integration and the emergence of pan-European competitive trading would turn Europe into a single export market for Gazprom, making bilateral relations with Moscow much less critical to accessing Russian gas. Large importers of Russian gas in western Europe would have less incentive to accommodate Moscow politically, while highly dependent eastern European countries would feel less insecure. As a result, Europe would face fewer obstacles in speaking with one voice to Moscow.

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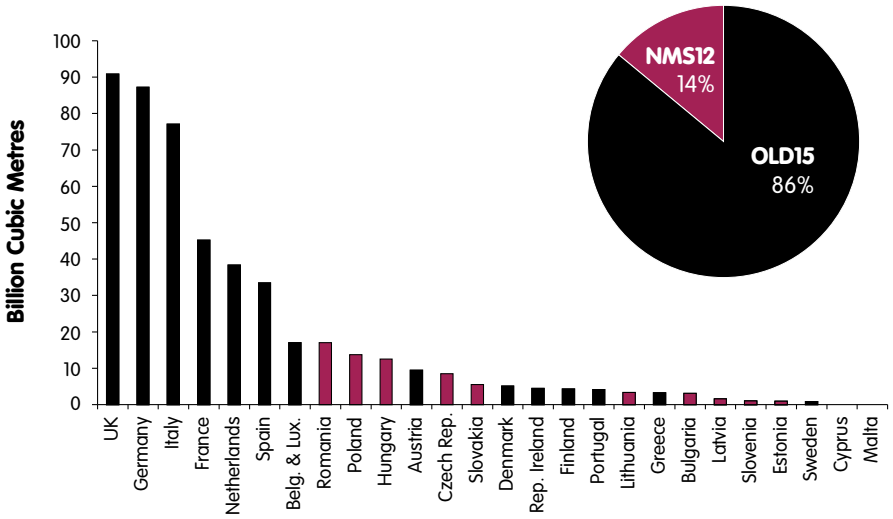
23 According to gazprom.ru, Gazprom makes around 80% of its profits from exports to Europe.

24 As the North American example demonstrates, competitive gas trading in a single market is both necessary and sufficient to create a very high degree of de facto solidarity between consumers, even in times of supply or demand shocks. See Jeff D. Makholm, "Seeking Competition and Supply Security in Natural Gas: the US Experience and European Challenge", Boston, NERA Economic Consulting, 2007, p. 8-11.

25 The rationale for the Nordstream and Southstream projects, which bypass the Ukraine-Slovakia and Belarus-Poland corridors, is not to bring additional Russian gas to Europe but to preserve and consolidate the conditions of Gazprom's differentiated gas export policy, which is inseparable from Russia's differentiated foreign policy towards Europe.

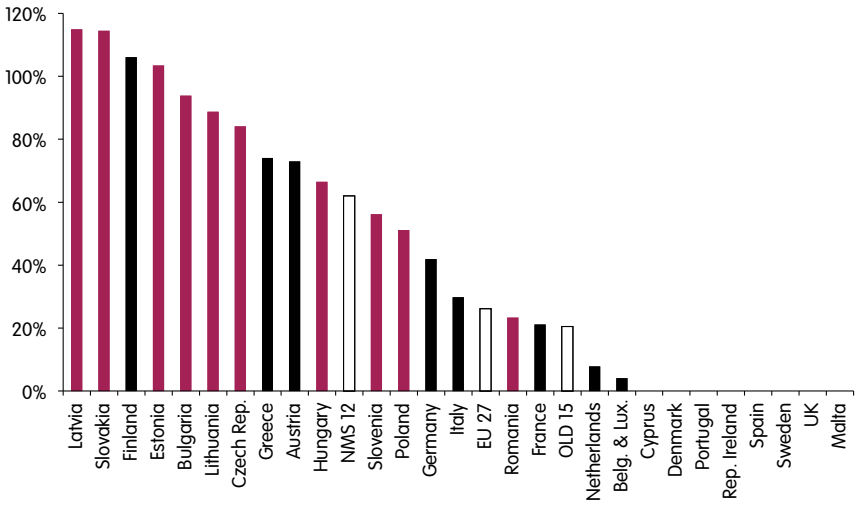
26 An integrated competitive gas market would also create a rationale for investing in new transmission capacity to exploit price differentials between regional markets. See International Energy Agency, Development of Competitive Gas Trading in Continental Europe, Paris, OECD/IEA, 2008, p. 80-81.

Figure 9. Natural gas consumption in the EU (2006)



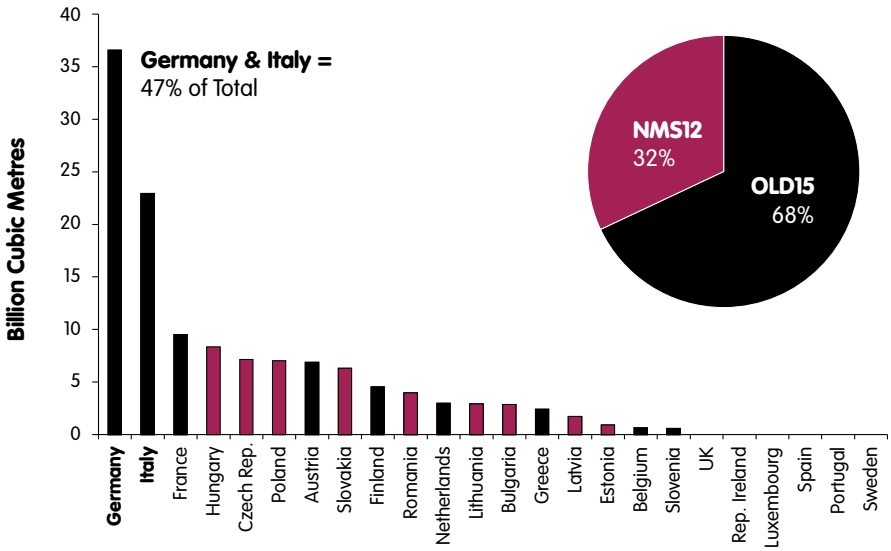
Source: BP Statistical Review of World Energy (from Cedigaz)

Figure 10. Russian gas as a share of primary gas supply (2006)



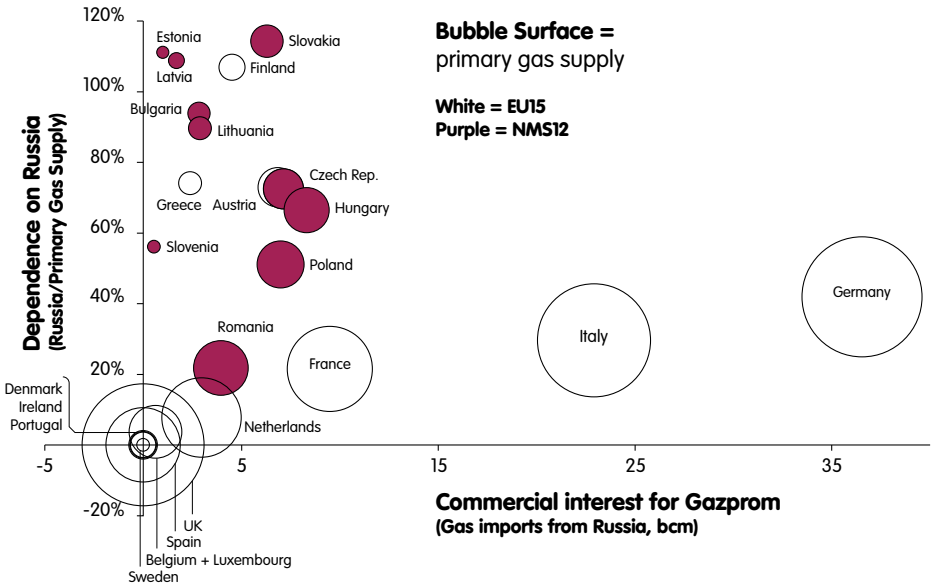
Source: BP Statistical Review; Eurostat

Figure 11. Gas imports from Russia (2006)



Source: BP Statistical Review; Eurostat

Figure 12. Imports of Russian gas, rate of "dependence" on Russia and size of the gas market (2006)



Source: BP Statistical Review; Eurostat

Barriers to a single gas market

Integration of the European gas market has been a stated goal of EU policy for almost fifteen years, but so far the story has been one of failure. This cannot be explained simply by pointing to the technical limitations of the EU gas directives or to their improper implementation. There is a deeper, political problem: some key Member States, especially Germany and to some extent France, continue to have reservations about a truly integrated, competitive European gas market. The third gas directive, now being drafted by the European Commission, contains important new technical provisions. But the fate of the European gas market integration project depends on a full political commitment from Germany and France.

European efforts towards building a single gas market took shape with the first gas directive, enacted in 1998. A second followed in 2003. Each focused on realising the two main conditions for a competitive gas market to develop: first, separating gas transmission facilities from the supply and marketing business of gas companies, a process known as "unbundling", and second, establishing independent regulation of transmission system operators.

Yet despite these unbundling and regulatory provisions, the European gas market has remained highly dysfunctional, and market integration has not progressed meaningfully. Such were the findings of the sector enquiry conducted by the Directorate General for Competition of the EU Commission in 2005-06[27].

Now, following 18 months of intense European gas policy debate, a third gas directive is in preparation[28], which will follow the second in aiming towards more effective unbundling and more independent regulators. The Commission's original proposal for the directive would have mandated separation of transmission ownership from supply, a rule that would effectively have forced "vertically integrated" European gas companies like Gaz de France, E.On, RWE and ENI to split. But France and Germany opposed this ownership unbundling[29], and the directive will now not mandate it.

Still, the new directive, or "third gas package," will introduce regulatory provisions aimed at making unbundling more effective by ensuring greater independence for those transmission system operators still owned by vertically integrated gas companies. These provisions, together with greater co-operation between transmission system operators, should lower some of the barriers that stand in the way of investment in transmission capacity, especially cross-border pipelines, and should therefore smooth the process of market integration. The third package also includes the creation of an Agency for the Co-operation of Energy Regulators (ACER) – something that in theory could be the embryo of a European regulator, but that as envisaged under the directive will have limited powers.

In March 2007, the European Council reaffirmed that Europe should move towards an integrated and competitive gas market[30]. A superficial reading of the European gas debate of the last two years might suggest that the 27 EU Member States share this vision and that the only disagreement is over how to achieve it. Unfortunately, this is not the case. Behind the battle over the technicalities of the third package, there is a more fundamental divide in the debate: between those Member States who fully embrace the vision of a single competitive gas market, and those who still have reservations.

Ever since the beginning of the European restructuring effort, large gas utility companies in continental Europe and their national governments, especially France and Germany, have resisted the move towards integration. They see liberalisation as a dangerous leap into the unknown, potentially endangering the security of Europe's gas supply by calling into question the organisation of the links with external suppliers[31]. What is at stake is not whether this or that regulatory or ownership regime is more conducive to market integration so much as whether a competitive European gas market is desirable in the first place.

It is no exaggeration to say that the fate of Europe's gas integration project depends on France and Germany. Whatever the technical merits of the third package, the vision of an integrated competitive market will not be realised as long as these two governments fail to fully embrace it. As for gas companies, they have for some time now been hedging against the possibility of a revolution in European gas; the mega-mergers of recent years are evidence of adaptation and anticipation as much as of resistance.

Europe needs its key Member States to take a leap of faith on the benefits of market integration. The decisive change will come when political elites come to appreciate how the segmentation of the European gas market not only costs Europe economically and reduces security of supply but also impedes the development of a united European foreign policy towards Russia.

27 European Commission, Inquiry pursuant to Article 17 of Regulation (EC) 1/2003 into the European gas and electricity sectors (Final Report), COM (2006) 851 final, 10 January 2007.

28 See the "Room Document" drafted by the Slovenian Presidency at the Transport, Telecommunication and Energy Council of 6 June 2008 and available on euractiv.com. See also European Parliament, Texts adopted by the Parliament, Internal market in natural gas, P6_TA (2008)0347, 9 July 2008.

29 See the letter from the energy ministers of Austria, Bulgaria, Germany, France, Greece, Luxembourg, Latvia and Slovakia to Angelika Niebler, Chairwoman of the ITRE Commission, European Parliament, dated 29 January 2008, and the attached document entitled "Efficient and Effective Unbundling of Transmission System Operators" (available from www.euractiv.com).

30 See Council of the European Union, "Brussels European Council 8/9 March 2007. Presidency Conclusions", 7224/1/07 REV 1, CONCL 1, 2 May 2007, p. 16.

31 For an account of the opposition between the two visions for European gas, see Jonathan Stern, "Traditionalists versus the New Economy: Competing Agendas for European Gas Markets to 2020", The Royal Institute for International Affairs, Briefing Paper New Series No. 26, November 2001; little has changed since.

How exposed is central and eastern Europe?

Integrating Europe's gas market would enhance the security of gas supply in central and eastern Europe. But it is a medium-term prospect, depending on political and industrial processes over which governments in the new member states have little control. In the short term, a more direct approach is needed to address gas security issues in the most exposed EU Member States.

As we shall see below, the gas security situation in central and eastern European countries is probably better than it is generally thought to be, even if a few countries face serious challenges. But markets vary considerably across the ten new Member States, and there is a need for in-depth economic analysis in each of them. Such analysis would inform market-specific policies that could be implemented to improve the security of gas supply in each country.

Six of the ten new member states in central and eastern Europe import more than 80% of their gas supply from Russia. But as figure 13 shows, on average, the rate of *energy* dependence on Russian gas – the share of total primary energy covered by imports of Russian gas – is about 15% (the figure for the EU15 is about 5%). Russian gas supplies a particularly high share of total energy in only four countries - Lithuania, Latvia, Hungary and Slovakia - each of which is reliant on Russian gas for around a third of its energy use. Specific attention should be paid to these four countries.

Diversity of supply does not tell the whole story; the structure of gas consumption is another important determinant of gas security. Countries like Lithuania, Estonia, Bulgaria and Poland consume relatively large volumes of gas as feedstock for the petrochemical industry (figure 14). This type of consumption is highly interruptible; in the event of gas supply disruption, the plants can simply be shut down and petrochemical products imported.

Similarly, Lithuania, Estonia, Bulgaria and Latvia consume virtually no gas in the household sector (home heating), the least interruptible of all (figure 15). But in Hungary, the Czech Republic, Slovakia and Poland, this sector represents between 25% and 35% of gas consumption, suggesting a greater need for storage capacity in these countries. Hungary and Slovakia in fact already have significant storage capacity (85 and 100 days of baseload demand respectively)[32].

Finally, it is worth noting that, in absolute terms, gas imports from Russia amount to relatively small amounts of energy in the four highly exposed countries, especially Latvia and Lithuania (figure 16). This suggests that it may be possible for these countries to implement policies of partial substitution away from natural gas, in favour of oil products and imported electricity, given the relatively small volumes involved.

This analysis suggests that the gas security situation in most central and eastern new Member States is not as bad as is often suggested. But much more detailed research is needed to obtain a precise picture in the countries that are highly dependent on Russian gas, and to determine what the most cost-effective policy measures to improve security of supply would be[33].

There is a clear role for the EU to play, especially as only four of the ten new member states in eastern Europe (the Czech Republic, Hungary, Slovakia and Poland) are members of the International Energy Agency[34]. Brussels should build on the 2004 directive on the security of gas supply (2004/67/EC), the fourth article of which rightly states that security of supply - ensuring that non-interruptible gas demand can be met in the face of extreme weather events, or various categories of supply disruptions - is a responsibility for member states. The directive lists a series of instruments member states can employ to ensure supply security: from diversification of import sources to development of interruptible contracts, from back-up fuels for power generation and industrial demand to investment in new storage capacities. But the directive does not define a legally binding minimum standard of gas supply security - something for which there is a strong case.

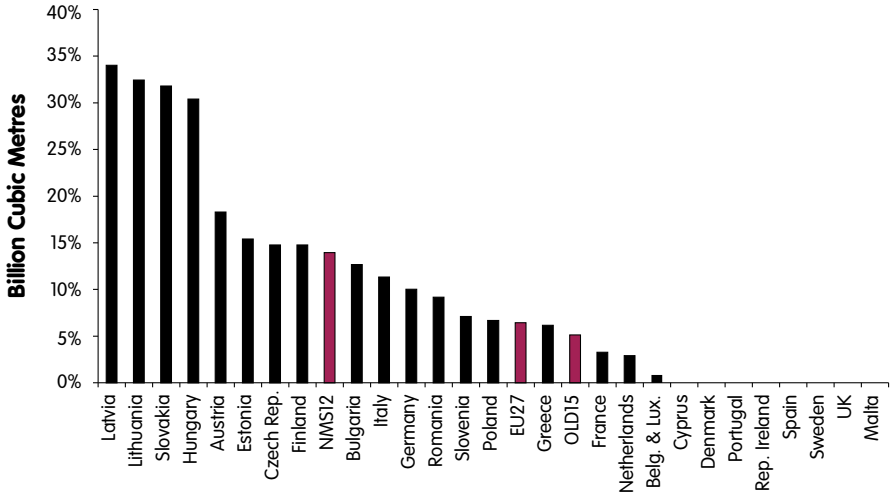
Building on the 2004 directive, the EU should now extend an offer to finance an in-depth economic study of the gas security situation in all new Member States, determining the relative costs and benefits of various measures to improve security of supply. Brussels should then negotiate and co-finance national action plans with those member states that agree to comply with a minimum standard of security of supply.

32 International Energy Agency, Hungary 2006 Review, Energy Policies of IEA Countries (Paris, OECD/IEA, 2007), p. 105. See also IEA, Slovak Republic Energy Policy Review 2005 (Paris, OECD/IEA, 2006), p, 62 ff. After the Russian-Ukrainian crisis of January 2006, the Hungarian government decided to construct a strategic gas storage facility.

33 The IEA review of Hungary implicitly suggests that developing strategic gas storage is an expensive way of improving the country's security of supply, but does not present the economic analysis.

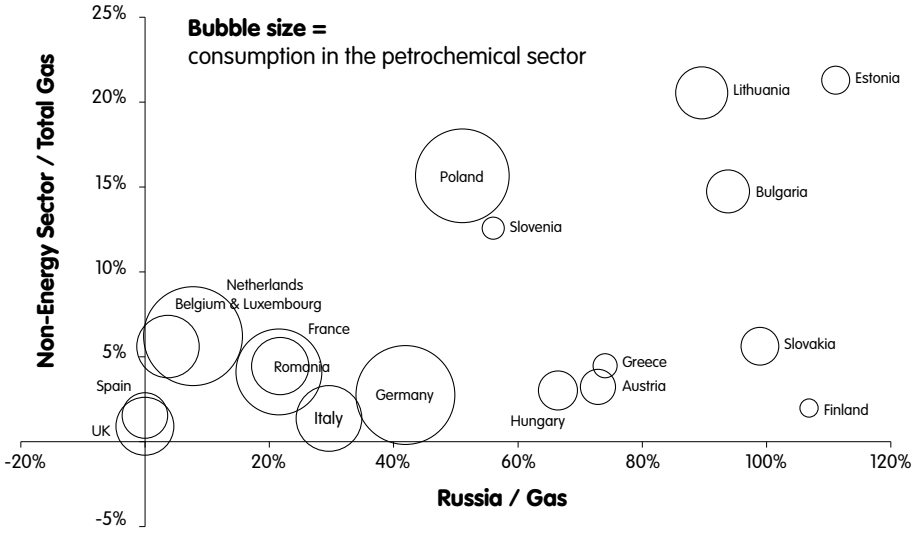
34 Poland joined the IEA on 25 September 2008.

Figure 13. Russian gas as a share of primary energy supply (2006)



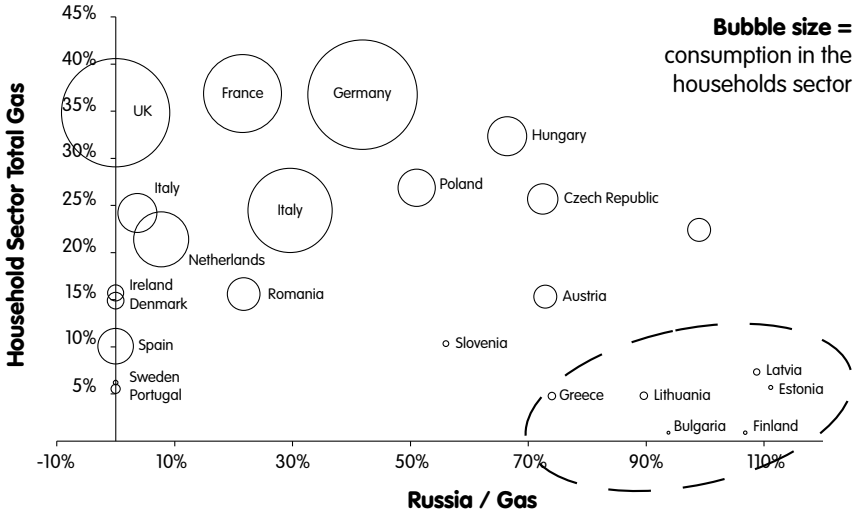
Source: BP Statistical Review of World Energy (from Cedigaz)

Figure 14. Dependence on Russian gas versus gas consumption in the petrochemical sector (2006)



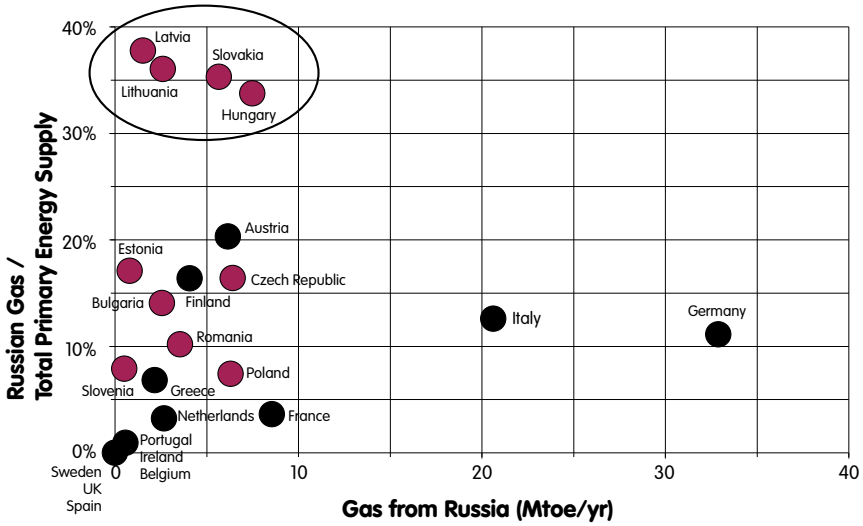
Source: BP Statistical Review; Eurostat

Figure 15. Dependence on Russian gas versus gas consumption by households (2006)



Source: BP Statistical Review; Eurostat

Figure 16. Imports of Russian gas: absolute volumes versus share of total primary energy supply (2006)



Source: BP Statistical Review; Eurostat

What should the EU do?

In the post-Georgian war environment, with Member States divided over what approach the EU should take to its political engagement with Russia, it is of critical importance that Europe deals with its Russian gas problem. The Czech government has made clear that energy security will be one of the priorities of its presidency of the European Council, which runs for the first half of 2009. On 12 November 2008, the European Commission will publish its second Strategic Energy Review, with a focus on energy security. The review will form the basis of the next phase of EU energy policymaking, going beyond the "climate and energy package," currently being negotiated.

The EU's Russian gas problem has two related dimensions: the political divisiveness of the EU-Russia gas relationship, and the specific risks to the security of gas supply to the highly dependent Member States in central and eastern Europe. Based on the analysis presented in this policy brief, we recommend that the EU:

- makes gas market integration the priority of its strategic energy policy. A single competitive gas market would help de-politicise the EU-Russia gas relationship, with major foreign policy benefits for Europe. It would also improve the security of supply for all European gas consumers, wherever they are.

- helps Member States, especially those in central and eastern Europe who are highly dependent on Russia, to develop and implement national action plans for improving their gas security. This would be required regardless of Russia's foreign policy towards Europe. But in the current geopolitical context, alleviating eastern Europe's "energy insecurity syndrome" would also help make Russian gas less politically divisive in the EU.

1. The EU should make gas market integration the priority of its strategic energy policy

The EU must put an end to what amounts to more than a decade of policy failure on gas market integration. The following steps should be taken:

- *The regulatory provisions of the forthcoming third gas directive should be implemented fully and strictly*, especially those that aim to ensure effective independence of transmission system operators.

- *The proposed powers of the new Agency for the Co-operation of Energy Regulators (ACER) should be increased.* Without the creation of effective pan-European regulatory oversight, it is unlikely that the third gas directive will succeed where the second failed. What is needed is a powerful regulatory co-ordinator with a clear political mandate to deliver market integration. The new agency must be adequately staffed and financed, but the current proposals do not go far enough: ACER should have the authority to force national regulators to work towards common rules, standards and network codes and then to control their implementation. A true, powerful and independent European energy regulator should be the long-term goal. Furthermore, the new Strategic Energy Review should be the occasion to launch a political debate on pan-European regulatory oversight of energy markets.

- *The Directorate General for Competition (DG Competition) should continue to investigate abuses of dominant position in the gas industry* and, where appropriate, demand that companies sell their transmission networks[35].

- As suggested by DG Competition's 2007 sector enquiry, *EU authorities should seek to remove the anticompetitive effect of long-term import contracts and long-term transmission capacity contracts*. ACER and DG Competition should work towards generalising the auctioning of unused capacity rights (the so-called 'use-it-or-lose-it' rule). Auctioning a small share of gas volumes exchanged under long-term contracts should be studied as a way to boost liquidity at continental European gas hubs[36].

- Russia has a vested interest in market segmentation. Allowing Gazprom to acquire European transmission or storage assets carries the risk of reinforcing barriers to market integration. *Therefore the authorities in charge of the European market should screen all proposed takeover projects*. Typically this would be a task for a European energy regulatory agency, or for national energy regulators as co-ordinated and controlled by ACER. The European competition authorities should also be involved. The agreement on the third directive reached on 10 October 2008 would leave the screening of Gazprom's downstream acquisitions in Europe entirely to national authorities[37]. This is problematic: national regulatory authorities do not have a mandate to protect the European market, and their autonomy may be tested in the case of gas deals supported at the highest political level. As part of its call for stronger pan-European regulatory oversight, the Strategic Energy Review should propose that responsibility for screening downstream investments by companies from third countries be vested in the new ACER rather than in national authorities.

35 As part of settlement packages to close enquiries involving E.On and RWE, the two major German energy companies have agreed to sell their electricity and gas transmission networks respectively. Ongoing competition enquiries in the gas sector may lead to more such decisions.

36 I owe this idea to Patrick Heren.

37 See "EU weakens 'Gazprom clause' on foreign energy investors", EU Observer, 13 October 2008.

2. *The EU should help each central and eastern European Member State assess its gas security situation and devise a national action plan for gas security.*

A well-functioning European gas market would in itself enhance supply security in the highly dependent new Member States. But there is also a strong case for specific gas security measures in those central and eastern European countries where supply is concentrated, market and regulatory institutions are underdeveloped or weak, and energy insecurity is a major determinant of foreign policy attitudes towards Russia.

The EU should be involved in helping Member States devise and implement these gas security measures. The directive from 2004 on security of natural gas supply offers a good conceptual and legal framework for Brussels to build upon; the Strategic Energy Review will include a review of how this directive has been implemented by Member States and how it can be improved. The Commission and the future ACER should:

- *Finance in-depth economic analysis of the gas security situation in each eastern European member state* to determine the relative costs and benefits of different measures to improve security of supply. A one-size-fits-all approach would not work, given the huge differences across Member States in the structure of gas demand, electricity and gas interconnections, geological conditions relating to underground storage and other physical or institutional factors.

- *Negotiate national action plans with Member States' governmental and regulatory authorities.* The EU should offer co-financing of the national action plans to those Member States who agree to comply with a minimum standard of security of supply, negotiated on the basis of article 4 of the 2004 directive.

Nabucco and the southern gas corridor

The mooted introduction of a "southern gas corridor" through Turkey, and particularly the proposed Nabucco pipeline, are attempts to address long-term gas supply availability and diversity, as well as wider European geopolitical interests, such as consolidating central Asia's political and economic independence from Russia. It is beyond the scope of this paper to assess the various conditions that would need to be met for such a project to succeed, but suffice to say Nabucco would not directly address the political divisiveness of Russian gas in Europe, and is no substitute for direct action on central and eastern European gas security.

For these reasons, the debate about the EU's response to the Russian gas challenge needs to be rebalanced. Success on the southern gas corridor is desirable but is not the key to relieving the EU from the political burden imposed by its gas relationship with Russia.

About the author

Pierre Noël is a Senior Policy Fellow at the European Council on Foreign Relations, specialising in energy security and EU energy policy. He is also a Research Associate at the Electricity Policy Research Group, University of Cambridge.

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Contact: london@ecfr.eu