

**The Russian dimension
and Europe's external energy policy**

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1 INTRODUCTION

A striking feature of Europe's energy mix is its growing dependency on imported gas, and in particular its dependency on Russia as a source of supply. For some, this trend poses few new and special difficulties: Europe has always been dependent on imported energy, and the exposure in oil markets to the Middle East continues without much by way of special measures to ameliorate it. The Middle East embargoes (in 1967 and 1973) were more than a quarter of century ago, and in any event turned out to be very temporary. Since then, the oil market has withstood the Iranian Revolution, the Iran–Iraq War, two wars with Iraq, the attacks on the twin towers in 2001 and the re-nationalisation of much of the world's oil resources. For these optimists, there is no reason why gas dependency should be any different.

For others, oil dependency is not quite so unproblematic and there are at least three additional things that are special about the gas dependency: gas is a regional rather than a global commodity; gas is essential for electricity and electricity cannot be easily stored; and crucially the dependency is with Russia, with all the historical baggage that goes with Europe's long interaction with Russia, especially for the former East European members of the Soviet Union, for whom the Second World War effectively ended in 1989.

This paper argues that for these reasons, gas dependency matters, and it is against this background that European energy policy should be assessed. But rather than concentrate on the external challenges and develop a coherent response to Russia and Gazprom, for the past two decades the EU focus has been largely internal. And even in this, its approach has had limited success. It has tried to liberalise without first ensuring the physical European networks are in place through which competition might flow, and perversely the Commission has presided over (and at times even encouraged) a wave of mergers which have reduced scope for an effective competitive market.

Externally, as we shall see, the Russian strategy has run rings around the EU. Gazprom has nationalised reserves, monopolised pipelines, built up a bilateral special relationship

with Germany, and undermined the development of competitive pipeline proposals from the Caspian.

Meeting the external challenge posed by Russia requires a major re-orientation of EU energy policy, and a robust approach to security of supply. Fortunately the policy instruments are well known—including completing the European networks, building up strategic gas storage, and asserting an EU rather than purely national approach to bargaining with Russia. They are all recognised in the 2006 Green Paper (CEC 2006). These measures require a substantive shift in the locus for network development, network regulation and information about contracts, supplies and supply-demand balances. European solutions to the challenge of Russia are required, and that means a European energy policy and European institutions to deliver them.

The European dimension has already been accepted for climate change policy, with the EU Emissions Trading Scheme, and EU targets for carbon dioxide emissions and for renewables. Negotiations for a post-Kyoto international treaty are very much driven at the EU level. The reluctance of member governments to allow a similar role for the EU in security of supply matters has already had real costs to the EU, and the choice is now between the national interests of the dominant countries—particularly Germany and France—and the wider EU interest.

This paper makes the case for such a European policy framework. It is built up in a series of steps, the first of which is to demonstrate why energy (and particularly gas) dependency matters. Section two looks at the various arguments that energy optimists set out about the inability of suppliers to dominate oil and gas markets, and the unimportance of security of supply. None of these is shown to be persuasive. The next step—in section three—is to understand where Russia is coming from, and to show that its strategy towards the energy sector has been largely a rational one—and indeed one that is unlikely to change any time soon. Its interests are to maximise the economic and political leverage of its energy assets, and this is a reality that the EU needs to come to terms with—rather than continue to imagine that Russia will adopt an open third-party access regime to its gas pipes and open up its oil and gas reserves to all comers. This rational Russian strategy has been applied not just inside Russia, but externally too in a

strategy to limit the alternative competitive supplies to Europe. Section four looks at these alternatives to Russian supplies and the extent to which Russia has pre-empted European diversification options, by engaging with considerable success with the Caspian states, doing bilateral deals with Austria and Hungary over pipelines and gas supplies, engaging with Algeria, and most significantly building up the relationship with Germany and German companies and developing the Nord Stream pipeline.

Given the coherence and success of Russia's strategy so far, the next step is to consider how well current EU policy is designed to meet the considerable challenges. Section five reveals how the EU has been almost exclusively focussed in its energy policy on the *internal* market and with liberalisation, and how even this narrow focus has been far from successful. The external aspects of EU policy have been largely misguided too: diplomatic efforts have been largely directed at the almost hopeless attempts to get Russia to ratify the Energy Charter and the Transit Protocol, thereby adopting in Russia the preferred EU model of energy industry design. Fortunately there is a better way, and section six considers how, in the light of the failures of existing European policies in this area, greater traction might be gained, and insurance taken out. Finally section six concludes.

2 DEPENDENCY AND THE GAS MARKET

The first step is to establish whether, and to what extent, dependency matters. It has become fashionable to link oil and gas together in discussions about security of supply—and, as noted above, to argue that, *since* oil dependency has become a fact of life and not resulted in major problems, therefore we should also be relaxed about gas. These views have been reinforced by the claim that the liberalisation of energy markets has ushered in a competitive market which has depoliticised and commoditised both oil and gas. Finally, it is argued that the coming of LNG has introduced new competitive sources of gas supply at the global level and that this makes regional concerns much less threatening. If these arguments stand up to critical scrutiny, then we can be relaxed about Russia (at least on energy matters) and dependency on Russian gas.

Though oil and gas are intimately linked, and developments in oil markets are of great significance to gas, not least through the price-cost linkages, and though it is important to get the gas dependency problem into perspective and to appreciate the interests and exposure of Russia and other suppliers, all of these arguments are open to serious challenge. While liberalisation and LNG have changed the way gas markets operate, and influenced the scope and design of policy instruments, they have not changed the underlying security problems. Gas dependency is therefore a problem, and one that matters greatly to Europe.

2.1 The lessons from oil

After the sharp fall in oil prices in the mid-1980s, the failure of the 'oil weapon' in the first Gulf War, and the further falls in oil prices in the mid-1990s, it became fashionable to regard oil as just another traded commodity.² The oil pessimists of the 1970s had, it was argued, been proved wrong—not only did oil prices not carry on upwards after the Iranian Revolution in 1978–79, but the ratio of reserves to demand actually improved.

² See, for example, the discussion in Mitchell (2001).

The claim that we were 'running out of oil' proved at best premature. And the much-feared power of OPEC proved ineffective once Saudi Arabia demonstrated its inability to impose discipline on the other members.

As with the scare stories of the 1970s—when oil had derailed the major economies of the world, and oil supplies had been physically interrupted—the optimism of the 1980s and 1990s was also overdone. It turns out that three special factors explain much of the oil market weakness: investments in the new supplies and investment which the 1970s had triggered, bringing on new sources of supply such as the North Sea (which would not have been economically viable had the oil price not been increased in the 1970s by OPEC); the diversifications away from oil (especially in electricity, with nuclear investments, notably in Europe); and the de-industrialisation in developed economies, breaking their linkages between GDP growth and energy demand.

These primarily cyclical factors (given prominence by the so-called 'cyclical school') had political feedbacks.³ Lower oil prices weakened oil-rich economies, which in turn focused on the security of demand, and those with low marginal costs (largely in the Middle East) had strong incentives to boost output yet further. Their spending commitments (military, infrastructure and social) made in the high-revenue years of the 1970s and early 1980s, together with rapidly rising (and therefore young) populations, and the need to placate rising religious pressures, gave them little alternative but to increase supply. (Russia faced some of these pressures too, but for other reasons was unable to do much about raising its output in the chaos of the early 1990s.)

Other factors reinforced this benign world of excess supply. The collapse of the Berlin Wall not only induced a renewed confidence in capitalism and markets, but through privatisation it had also opened up the possibility of western access (and ownership) of Russia's vast energy resources. With the North Sea gradually beginning to decline, there appeared to be another new option opening up in front of the oil companies. The Caspian Sea also looked promising and in the early days of the collapse of the Soviet Union, a whole host of new sources of supply looked finally directly accessible—

³ See Maugeri (2006), for a broad defence of the cyclical position, and Stevens (2007) for an assessment of the merits and demerits of the cyclical and structuralist approaches.

notably in Kazakhstan, Azerbaijan, and Turkmenistan. Pipelines to the west via Georgia, the Black Sea and Turkey looked a new political possibility. And eventually there would be the Arctic itself.

By the end of the 1990s, it was the widely held conventional wisdom of the oil industry (and of the governments they influenced so intensively) that this low-price/excess-supply world would continue indefinitely. The *Economist* summed it up on its front cover, speculating \$5 a barrel, and wondered how oil companies might cope (The *Economist* 1999). It was less that oil companies could not get enough reserves to replace the depletion of their stocks, and more a question of whether they would want them. Oil prices looked like falling further in the direction of the marginal costs (for Saudi Arabia, \$2–\$3 a barrel), thereby rendering a host of higher-cost supplies uneconomic.

In response, the oil companies embarked on a strategy of asset-sweating, minimising operating costs, and cutting back of capital investment. Large-scale mergers were one chosen means; another was to reduce capacity in refineries; and a third was that pipeline maintenance was squeezed. The result has arguably been exemplified by the experience of BP, with much press and public debate about the causes of the Alaskan oil pipe leak and the Texas refinery explosion (*Financial Times* 2006 and 2007a).

But those oil companies that survived also looked to the future and that future was to a significant extent in Russia, as political turmoil in the Middle East—in part caused by low prices—kept them out. Iraq remained hostile territory, left largely to the Russian and Far Eastern oil companies (which lacked the technical capabilities and funds) and others, and Iran proved difficult too. Most of the area's resources were nationalised, preventing resource ownership for private companies (including in Saudi Arabia).

After the collapse of the Soviet Union, entry into Russia depended—as we shall see below—on the peculiar circumstances of Yeltzin's period of office, the shares-for-loans scheme to support Yeltzin's re-election in 1996, and the activities of the oligarchs who grasped the assets. It was not to prove the solution for the longer term that many private oil companies had hoped—again as we shall see below.

In retrospect, the new orthodoxy of the 1980s and 1990s looks naive—a product of two very peculiar decades in the history of the oil industry (and therefore for the gas industry too)—but not ‘the end of history’ itself.⁴ Both cyclical and structural features combined to confound the forecasts, with complicated political feedbacks too. The 1980s and 1990s were not a ‘return to normal’ after the aberration of the 1970s; rather they themselves were the aberration. While the conditions of the 1990s were peculiar to the particular political and economic circumstances of the time, there are several echoes in today’s oil and gas markets.

As the twentieth century drew to a close, the oil price started to recover, and then began the steady climb in oil prices towards \$70 a barrel. Oil prices rose from around \$10 to over \$20 a barrel in the winter of 1999/2000. First reactions were to treat this as little more than a blip. Major oil companies at the time predicted a fall-back in spring 2000 to around \$15 a barrel, and although the liberalisation (and de-regulation) of retail gas, due to be completed in the UK in spring 2000, gave them a vested interest in this prediction (and convinced the UK government that there was no reason to react), there are few reasons to think the expectation was not genuine.

Prices however did not fall back, but kept on rising, punctuated by acts of terrorism (such as the 2001 terrorist attacks in the US), and then the invasion of Iraq. Indeed, it was as if a series of individual events conspired to ratchet up the price. After the initial Iraq invasion, the country did not settle, and the oil from what has the potential to be one of the top three world oil producers did not flow. Venezuela turned hostile, and in Russia the demise of Yukos formed the backdrop to a new oil and gas nationalism. Nigeria too remained volatile, whilst hurricanes disrupted the Gulf of Mexico. Even the hopes of Caspian oil and gas proved much harder to realise.

As had happened in reaction to the 1970s, many commentators were quick to predict the end of oil and an ever-rising oil price as the oil reserves were used up. Though many of these contributions were alarmist, there were a number of structural changes in the oil market, and in technology, which gave weight to the idea that oil had entered its last

⁴ There was a linkage here between oil and gas optimism and the wider claim that, following the collapse of the Berlin Wall, capitalism and liberal democrats had triumphed—permanently. See Fukuyama (1992).

century. On the demand side, the extraordinary industrialisation of China offset the fall in the energy ratios in the developed countries. It turned out that this reverse was, in any event, less than it seemed—many energy-intensive industries had merely shifted to China and other developing countries. Demand had relocated, not fallen. Indeed, China was not alone: India emerged as a second rapidly industrialising country. Together the two countries contain one-third of the world's population (one billion each). By 2050, they may have slightly less than half—at two billion each out of a projected total of nine billion. If and when these two countries' immense populations reach the sorts of consumption and car ownership levels of the developed countries, this will translate into enormous oil demands, unless technology finds some other way of meeting the energy needs.

The industrialisation of China (and others) has led to a scramble for resources. China (and India) has used its state-owned companies to develop deep interests in Africa and to broaden and deepen Middle Eastern relationships.⁵ China competed too with oil-poor Japan, a competition which contributed to the downfall of Yukos, when its head took a view about southern pipelines without consulting the Putin regime.⁶ China pushed, too, into the Caspian, and began to compete with Russia to the north, Iran to the south, and the US and Europe to the west.

As demand increased, supply did not match it. The trend towards the nationalisation of oil (and gas) reserves accelerated, so that over 90% of total world reserves were in government hands by mid-decade—with Russia following the trend set earlier in the Middle East, and Venezuela, and Bolivia joining in. Norway, important for Europe, also kept the state's grip on its oil reserves.

Cyclical factors exacerbated these broader structural trends on the demand side and through nationalisation. The oil companies' two decades of asset-sweating caught up with them (as indeed had under-investment by *some* national oil and gas companies, notably in Russia). Refineries and pipelines were in many cases in a poor state: indeed

⁵ China had indeed been supplying arms to Saudi Arabia since the 1980s—see Bronson (2006).

⁶ The *Economist* (2004), 'In the pipeline: China and Japan are locked in a fierce diplomatic and economic struggle to win access to Russian oil', April 29th.

part of the price increases can be explained by lack of capacity downstream. Catching up would take time: no new refineries had been constructed in the West since the 1970s. Spending on E&P (exploration and production) had been suppressed too, for the reasons noted above: the returns did not justify the expenditure. It would take a decade to turn these neglected assets around and develop new sources.

Yet such a turnaround is not impossible: indeed it is well under way. Higher prices are having their effect. Just as it took OPEC in the 1970s to get the price high enough to make the North Sea economic, so it has taken rising prices to make more challenging sources available. The underlying supply-side claim of the structuralists—that we are rapidly running out of oil—is nonsense. At higher prices, new sources become economic. And whilst it might be true that the coming of new information technology has meant that major new finds are less likely, nevertheless there is a lot of oil left in existing fields and already discovered oil-rich areas. For most oil fields to date, recovery has been less than 50%, leaving over half in the ground—more expensive to get out, but nevertheless still there. And if carbon sequestration becomes viable for environmental reasons, enhanced oil recovery may become a significant factor. But, in addition, there are major areas that are grossly under-explored—like the Arctic, Antarctic, central Asia, and much of Iraq, Iran and Russia. Indeed, one of the paradoxes of global warming is that the Arctic seas around Canada, Greenland, north Norway and Russia may become much more easy (and cheaper) to develop.

These are all *conventional* sources. But oil is not a distinct, unique and separable commodity. Rather there is a continuum to close substitutes—to oil sands and bitumen. These sources are more expensive, but they are also extremely abundant. An appreciation of their scale is that, once tar sands are included, Canada now ranks in the top three countries by oil reserves.

Thus, there is little reason to believe that we are about to run out of oil. Indeed climate change constraints are likely to bite before such an eventuality—and substitute technologies will increasingly take up the demand for energy as the price rises. But this conclusion does not make oil *secure*, and it does not make it merely another commodity. On the contrary, although other sources of supply (and eventually other technologies)

will develop, the fact remains that most of the cheapest oil is in the Middle East, and that the concentration of production in this area (and Russia) is likely to increase over the coming decades. Whilst in the long run, we need not worry about security of supply as economic incentives will facilitate the substitutions, in the short to medium term, we face fairly inelastic supply and demand. Hence the irony: *the cyclicalists are broadly right in the long run; whereas the structuralists' argument has considerable force in the short run.* The capacity of the developed countries to absorb a sharp hike in oil prices—or worse, physical embargoes—is a short-run problem and it is limited. In the short run, supply is given and demand is inelastic. And, because oil (and gas) are complementary to the economy, security of oil (and gas) supplies matters.

Some may reply that the price increases since 1999 have not in fact had much effect, and that this suggests that oil (and gas) prices are no longer a serious concern. Indeed, as an empirical observation, this is broadly correct. But then oil prices have not risen very far, in part precisely because some of the institutional architecture from the 1970s survives. Oil prices today would have to be well over \$100 a barrel to match the real price in 1979, and the dollar has fallen sharply against the euro and sterling. The interesting question is less why prices have risen (for cyclical reasons) than why they have not gone up much more.

The answers to this question are several: the scale of the slack in the market leftover from the 1990s and in particular the output surges from the Middle East in response to the low prices as countries struggled to meet budget demands; the existence (and use of) strategic reserves; and the political relationships between Saudi Arabia and the US and the willingness of the US to use force to protect its oil interests. As we turn to gas, and gas dependency, it is noticeable that none of these factors is at present in place, notably in Europe. There is little gas slack as the North Sea reserves deplete; there are no significant strategic (as opposed to commercial) reserves; and the political relations with Russia are fraught with difficulties. Each of these will need to be addressed if Europe is to have an element of gas security.

In summary, the argument that we should be relaxed about gas dependency because oil dependency has not proved problematic, is flawed. Oil security in the long run will be

dealt with by markets—by economic substitution, by the effect of price on demand, and by better use of existing residual reserves. But in the short to medium term, oil is not secure in supply, and the scale of the threat is masked by the (partial) success of the architecture left over from the 1970s. Though it is not the main theme of this paper, oil security will also need to be looked at again, and at least for the new EU members who were formerly part of the Soviet Union (notably the Baltic States, and Poland), this has a powerful Russian dimension too.⁷

2.2 Comparing gas dependency and oil dependency

Gas and oil often occur together, and gas reserves are concentrated in similar countries to oil. The table below summarises the position:

Largest natural gas proven reserves, 2006

	Trillion cubic meters	Share of world total (%)	Oil share (% total)
Russia	47.65	26.3	6.6
Iran	28.13	15.5	11.4
Qatar	25.36	14.0	1.3
Saudi Arabia	7.07	3.9	21.9
UAE	6.06	3.3	8.1
USA	5.93	3.7	2.5
Nigeria	5.21	2.9	3.0
Algeria	4.50	2.5	1.0
Venezuela	4.32	2.4	6.6
World total	181.46	100.00	
EU25	2.43	1.3	

Source: BP Statistical Review of World Energy, 2007.

⁷ Even Germany has been affected by oil dependency on Russia, with unexpected reductions in supplies in August 2007.

The joint occurrence of oil and gas has meant that they share some common economic characteristics. Two critical ones are: relatively high fixed and sunk upstream costs; and the need for an infrastructure to get the product to market. Drilling for oil and gas is a speculative activity, and the risks and sunk costs associated with this sort of activity (which are shared with research and development in general) mean that there is no guarantee of economic success. Upstream costs have often as a result been 'shared' through production sharing agreements (as at Sakhalin II), and such risks have typically lent themselves to the search for secure markets—through long-term contracts or vertical integration. Large oil companies with market power have emerged as a result—from the early attempts by Rockefeller and Standard Oil, though to the Seven Sisters in Iraq, to today's dominance of the industry by the national oil companies,⁸ alongside the private companies.

Because gas came later, and its market was limited by the geography of pipes, the emergence of gas giants has been later too. Most of these have either been existing companies or have had national origins and in Europe significant elements of monopoly in their early history. Gaz de France, Ruhrgas (now part of E.ON) and Spain's Gas Natural are examples of national champions (as once was British Gas in its role as monopoly architect and guarantor). Indeed many of these were not historically dissimilar to Gazprom now, and the structure of all these companies is in large part an attempt to match the upstream fixed and sunk costs, and long-term contracts have been an integral part of the market—a point we return to below.

But gas has its own distinct features, which separate its economics (and its politics). Gas does not typically go through a complex refining process, and it is transported predominantly by pipelines. Though LNG (see below) allows for gas to be liquefied and compressed, so that it can be transported by tanker before being re-made into natural gas, it is an additional and costly activity, making economic sense only where the gap between source and market is long, and typically where it crosses seas and oceans. LNG is thus typically more expensive than pipelines, wherever pipes are a feasible supply

⁸ See Marcel (2006) on the Middle East national oil companies.

mechanism. Thus, where pipelines are feasible, gas markets are regional, not global as with oil.

Pipelines physically link suppliers to markets, creating a two-way dependency. This is the essence of the security of supply problem. For pipelines over considerable distance to make economic sense, they need to carry significant volumes: there are very considerable technical economies of scale. Thus it is not just the physical link, but the scale of the link which matters.

The regional nature of gas supply makes geography matter: the sort of gas dependencies created depend on precisely *where* the sources of supply are, and *where* demand is concentrated. For Europe, there are several sources: the North Sea (Britain, Netherlands and Norway); north Norway; Algeria and Libya; and Russia. Additionally, there are other potential sources, notably the Caspian. Russian supplies are assessed in section three; the others in section four.

Gas is the fuel of choice for electricity generation in Europe, and demand is projected to rise steadily over the next decade. There will almost certainly be another 'dash-for-gas' in electricity markets and for industry too.

Electricity and gas demand growth in EU25 (mtoe)

	1990	2002	2015	2030
Electricity	177	228	269	319
Gas demand	204	282	315	349

Source: IEA (2006).

The link to electricity increases the risk of dependency since electricity is an expanding energy source on which much of modern industry relies. Whilst in the long run, there are alternative sources of supply, in the short run security of supply is paramount.

2.3 Liberalisation and commoditisation

The greater reliance on a particular source of supply would not greatly matter if the supplier lacked market power—if energy prices were set in a competitive market. Yet despite the fashion in the 1980s and 1990s to view energy in these competitive commodity market terms, the conditions for competitive markets are not generally met. The obvious starting point is to observe that the price of oil has little to do with its marginal costs (which are around \$2–\$3 a barrel). Suppliers pick quantities according to their own energy policies and with a view to the preferred depletion path. Output is not driven by the marginal cost. Though there are exceptions—Britain pumped out its oil and gas as fast as possible—quantities are typically fixed by taking other non-price considerations into account.

Yet price is not irrelevant and the difficulty which OPEC has witnessed in cartelising the oil market suggests strong limitations, except perhaps in the very short run. The pivotal role of Saudi Arabia, and in particular the effect of its spare capacity margin in recent decades, has been reflected in market behaviour and in the politics of oil.

In gas, the position is much tighter because of the physical pipeline constraints and geography as noted above. Marginal costs vary considerably, but the relation of production to marginal cost is only a close one when there is little by way of tax and depletion policy. The North Sea provides perhaps the closest relationship, especially once the long-term contracts between British Gas and the upstream oil and gas companies had been broken through the gradual opening up of the industrial gas market, and then deregulation of the retail market in the late 1990s. This change of policy effectively wrote off the sunk costs and induced prices to fluctuate according to the balance of supply and demand. In the absence of much storage, the result was a very volatile one. Elsewhere in Europe, where the economics of long-term contracts was respected, prices were more stable.

How has the development of spot markets and trading affected market power? Whilst the volume of energy traded has increased, the physical control over supply has concentrated in the hands of national governments. Gas and oil prices have not

generally decoupled, and where they have temporarily, the reasons are to be explained to a significant degree in depletion policies—or the lack of them. The European experience has been driven by the surpluses in the North Sea after British Gas's long-term contracts were broken up, but for most the oil-to-gas price linkage has survived. Commodity trading has many advantages, but it is not the driver: that remains the physical market conditions, the behaviour of the (largely state-controlled) suppliers and their ability to impose their contractual terms on the marketplace. There is no evidence that, for example, Gazprom has been forced out of its long-term contractual preference. The fact that, within the EU, long-term contracts have been under pressure from policy-makers does not in itself affect monopoly upstream behaviour.

2.4 The impact of LNG

For some, LNG has potentially revolutionary implications for security of supply: by eliminating the physical connectivity (and therefore dependency) of pipelines, gas can be sourced from around the world. This globalisation of gas supplies in turn limits the ability of pipeline sources to hold their customers to ransom. The result, it is argued, is that gas will be commoditised, and the security of supply problems with therefore go away.

Though LNG provides a cap on pipeline prices, and in addition provides valuable alternative supplies, and hence diversifies security of supply risk, its impact is more muted than the LNG optimists suggest. First, LNG is still a small part of global gas supplies (less than 10%). Second, its economics is not so radically different from that of conventional pipeline supplies.

On the former, there has been a significant expansion of LNG import facilities across Europe, notably in the UK, Spain, and Italy. For the UK, this may rise in the next decade to over 20% of total gas demand. As these facilities increase over the coming decade, they will enhance security of gas supplies, but not sufficiently to offset the rise in gas dependency—in other words, they will reduce the rate of *increased* pipeline dependency. On the second, the economics of LNG involves both upstream and

downstream sunk and fixed costs (in the fields themselves, the liquefaction terminals, and the re-gasification terminals). The terminals at each end are largely *additional* to those for conventional pipeline supplies. The sunk costs of the pipelines are avoided, but these are merely offset against the costs of dedicated shipping.

These costs have a major consequence for the LNG market: as with pipeline gas, long-term contracts are an efficient mechanism to allocate the (equity) risk between producers and customers. They are likely to remain a core part of the global market (Jenson 2004). Furthermore, market power in pipelines is replaced by market power over terminals (at both ends) and over LNG-specific shipping.

Once these considerations—the small market share relative to (rapidly) increasing demand, and the sunk costs and market power—are taken into account, LNG can be seen not as a competitive panacea which ‘solves’ gas dependency in Europe, but rather as one useful part of the armoury in reducing the acceleration in import dependency on Russia. And to the extent that Russia influences or colludes with LNG suppliers, its effects on dependency are yet further limited.

3 THE RUSSIAN PERSPECTIVE AND STRATEGY

Gas security matters to Europe. But it matters to Russia too. Oil and gas are the key strategic assets for Russia. Its recovery from the chaos of the transition years of the 1990s after the Soviet Union collapsed, state finances, the rebuilding of its industrial base, and crucially the re-establishment of Russia as a global player with influence over its near neighbours, are all overwhelmingly dependent on its fossil-fuel resources. It is largely a carbon economy, and at the narrow political level, the success of Putin exactly corresponds with the recovery of oil prices from 1999.

To understand Russia's perspective and the strategy taken in the oil and gas sectors, the starting point is with the principal architect—Putin. In a highly centralised presidential political system, and one which may increasingly be best described as 'authoritarian capitalism' (Gat 2007) his role is crucial, and once understood, the next step is to trace through the way in which the strategy has played out: in the approach to pipelines; re-nationalisation of reserves; the new gas OPEC; and the bilateral supply deals. We now explore each in turn.

3.1 Russian political strategy since 2000

To understand Russian political strategy from 2000 requires, first, an appreciation of the mess that had been left by Yeltsin and the extraordinary power that he had allowed the oligarchs to accumulate; second, the role of the state and state power, its relation to the army and security forces and the nomenclature carried over from the Soviet Union; and, third, the particular diagnosis of the underlying problems of the Russian economy brought by Putin to the presidency.

The Russian state's—and Putin's—strategy has evolved, and at times has been extraordinarily opportunistic. In his early months in Putin's presidency, he could not know how much freedom of manoeuvre the oil and gas price rises would give him, and early on in his Presidency, the terrorist attacks on September 11th 2001 saw him reach

out to the US and the West. He did not know in 2000–01 that oil prices would continue upwards to \$70/barrel and beyond: in 2000, it was reasonable to assume a range of \$15–\$25/barrel, and hence an assumed continued weak financial position for Russia. The horrors of Iraq and the consequent weakening of the Bush presidency similarly could also not easily have been foreseen. Thus, the early Putin years were based on a continued weakened state and presidency, and the road to recovery appeared to be one which would require Western help and assistance. But, as events turned out much more favourable, they presented the opportunities, and Putin did at least have a well-thought-out strategy to guide his responses—at a more rapid and assertive rate.

Russia in 1999 was in a state of some chaos, a chaos presided over by an alcoholic and ill president, manipulated by a small clique of oligarchs and family members, who in turn had accumulated considerable wealth. By the end of the decade, some twenty-five men together were probably worth more than the entire state, and held almost all the main strategic assets—assets which had been acquired in the anarchy after the Soviet Union collapsed and then were consolidated through the ‘shares-for-loans’ scheme, which helped to ensure that Yeltsin was re-elected in 1996. Far from being on a transitional path from communism to a liberal democratic state based on competitive markets and the rule of law, it more closely resembled a corrupt, gangster state.

From 1996 until Yeltsin's resignation, the mutual dependency between the president and the oligarchs was considerable: each needed the other to hold on to their gains, but Yeltsin's personal weaknesses put him in a disadvantageous position, from where he could only try to hold on to the initiative by repeatedly sacking the leading figures in his government. When his health finally gave way, this tight group of oligarchs and ‘the family’ sought to preserve their positions by seeking an insider to carry on what they had created—and Putin, as Yeltsin's last prime minister, was not only thought to fit the bill, but was also in the right place at the right time. Indeed, he was to meet their expectations in protecting the family after he gained power—though not, as we shall see, all the oligarchs.

The rise of the oligarchs is a whole subject in its own right, and there have already been numerous studies.⁹ From the energy perspective, the primary one was Michael Khodorkovsky, who headed Yukos. Khodorkovsky had risen up through the university sector, first importing computers, then through the creation of Menatep, and its banking operation, and then through the acquisition of state oil and gas assets. He was to survive the collapse of the rouble in 1998 and the effective bankruptcy of the Russian state. As the Yeltsin years drew to a close, Khodorkovsky prepared to sell out part of his business, and began turning his mind to politics.

The destruction (or at least neutralisation) of the oligarchs was arguably inevitable if the Russian state was ever to regain control over the political landscape. This was one of Putin's key insights. Though he was not the first (Gusinsky and Berezovsky preceded him), Khodorkovsky became the exposed target of Putin because he went too far politically: from immense personal and industrial wealth, he turned his attention to politics. One of Putin's early initiatives was to hold the now famous meeting with the oligarchs in July 2000: in effect, Putin indicated that the price of keeping their assets acquired under Yeltsin was to keep out of politics. This was political realism in action: Putin was far too weak at this stage to go much further.¹⁰

For most—like Abramovich—this was a warning they heeded, even when a stronger Putin later started to expropriate (or, in his terms, repatriate) their assets. For Khodorkovsky, this represented a challenge that he took up through many of the usual Russian routes, including seeking to gain influence in the Duma. Putin's ruthless response was completely successful: Khodorkovsky ended up in gaol (possibly for the rest of his life, likely to be shortened by the health effects of Russian prisons), and almost all the Yukos assets ended up in the state's hands.

Though the marginalisation of the oligarchs started slowly and carefully, given Putin's initially quite fragile position, it gradually gathered pace, using a combination of tax laws, licensing and the power of Gazprom to squeeze out all serious opposition. Gazprom even 'purchased' media outlets to reinforce Putin's power. The gap between

⁹ See Hoffman (2003), Jack (2005) and Freeland (2005).

¹⁰ See Jack (2005), p. 193.

'business' and 'politics' in Russia is a small one, not surprisingly, given the centrality of the state, and the absence of the intermediate features of liberal democracies. Property rights—the basis of market capitalism—have traditionally been (and remain) contingent on the state in Russia.

In a highly centralised state, where a small number of individuals occupy the key posts, with all the associated powers and discretions, it matters what their broad outlook is, and this in turn depends upon the shaping of their ideas, loyalties and common experiences. For Putin, there are two: the KGB and St Petersburg. The former gave him a discipline and a methodology; the latter under the liberal mayor, Anatoly Sobchak, created bonds of loyalty—initially to Yeltzin and his colleagues (and hence the step up to the post of prime minister at the end of Yeltzin's period)—as well as a powerful group of friends to call in to key posts in his own administration. Both have had major impacts on energy policy and the energy sector.

The KGB operated as a state within the state for much of the period from Stalin's ascent to power and indeed the secret services played a core role under the Tsarist regime. Its members shared secrets (as all 'secret' services do) and the extra-legal activities provide a powerful sense of complicity and loyalty. The methods, too, are shared—the seeking out of personal weaknesses (which Putin has put to good effect in dealing with foreign heads of government); threats to family members; curtailing employment; and even murder. Secret agents never really leave their services: they carry too many secrets, which their colleagues know too.

Putin spent his formative years as a spy in East Germany, with first-hand experience of suppressing a population on the front line of the Cold War. He developed an affinity to Germany in the process, which has helped in shaping the 'special relationship' with Germany, and the attempts to use Germany to drive a wedge between Poland and the Baltic States, on the one hand, and Germany, on the other. (We turn below to further develop these points.)

Past (or probably continuing) membership of the KGB's successor, the Federal Security Bureau (of which Putin was head in the late 1990s), is the single most common characteristic of those in the upper ranks of the Putin regime. Termed the *siloviki*,

present and former numbers of the security forces occupy many key positions in the state and dominated the higher ranks of Gazprom.

Putin's background helps to explain his actions, but in his case we have a much more authoritative source—his thesis written in his period between the KGB in Dresden and his subsequent rise under Yeltsin (Putin 1997). Whether he actually wrote it himself is probably not important¹¹—it sets out, in remarkable clarity, a political strategy that he has broadly followed ever since. Whilst another president might have followed a similar analysis, Putin was very clear on both the nature of the underlying weakness of the state and the role of natural resources in solving it.¹²

The core objective is to restore the Russian economy and military, and Russian prestige in the world generally, and particularly in Russia's near neighbours, most of which were formerly in the Soviet Union. This was, contrary to much wishful thinking in the EU, never a liberal democratic programme. Putin has said that the collapse of the Soviet Union was the 'greatest disaster' in recent history, and there is no reason to doubt his sincerity on this assertion. Restoring such prestige from the perspective of an economy little more than the size of the Mexico in the mid-1990s,¹³ and in a state of chaos—and then, in 1998, bankruptcy—would be no small challenge. Putin's means is the energy sector. Fossil fuels would provide the revenues on which to reconstruct the Russian state, and its industrial (and military) base.

To do this, the energy reserves needed to be wrestled back from the oligarchs, and the shares-for-loans exercise needed to be reversed. In due course, the chosen instrument would primarily be Gazprom, using a series of 'legal' reforms (Putin studied law whilst writing his thesis), and that in turn would require control of the Duma. More broadly, the carbon revenues would be used to reassert control of the broader commanding heights of the economy in heavy industry.

¹¹ See Rosefielde (2007), p. 194 for references to the debate about plagiarism.

¹² See Olcott (2004) for a comprehensive analysis of Putin's energy strategy and thesis.

¹³ Shleifer and Treisman (2005) calculate GDP per capita in both 1990 and 2003 to be comparable with that of Argentina in 1991 and Mexico in 1999. For them, 'Russia is quite normal' and its 'remaining defects are typical of countries at its level of economic development' (p. 152).

In practice, as we shall see, there were lots of twists and turns and events. Opportunism and luck played a role, but the objective of restoring prestige and the use of energy resources provided a guiding—and, in Russian terms, successful—template for what followed. Putin's thesis was not about 'making things better' and a gradual transition to a European-style democracy: it was a much more ambitious—and, in an historical sense, *Russian*—project.

3.2 Control of pipelines (including the Baltic Pipeline)

The clawing back of control over the energy sector has been played out in a gradual, dogged series of steps, starting with the central role played by pipes and pipelines. Putin began by first gaining greater political control of Gazprom,¹⁴ and then changing the law to strengthen the company's position through a legal monopoly, and then used that *de facto* monopoly over the high-pressure transportation network and the *de jure* monopoly over exports to weaken its rivals. The pipeline effective monopoly as a mechanism of control in many ways merely mirrored what the British had done with British Gas in the development of the North Sea,¹⁵ and such state-owned (or state-influence) pipeline monopolies have been common across Europe.

In the 1990s, Gazprom was a sprawling empire, riddled with corruption. Putin's starting point was to put his own people in charge, and for this he brought in 2001 Alexei Miller, Deputy Energy Minister, from amongst his St Petersburg associates. The existing chairman Rem Vyakhirev was forced aside, with Miller becoming chairman in 2005. The next step was a legal one—to assert a legal monopoly over all exports in favour of Gazprom.¹⁶

¹⁴ For a summary of Gazprom's ownership structure, see Stern (2005), p. 171. Note that the foreign ownership level is capped by law.

¹⁵ Britain gave British Gas a legal monopoly over all gas landed from the British sector of the North Sea—and compelled North Sea companies to land it in Britain. British Gas also had a monopoly over transmission, distribution and supply. See Helm (2004), chapter 6.

¹⁶ A bill allowing Gazprom a monopoly on exports was overwhelmingly approved by the state Duma on July 5th 2006, and passed into law on July 20th. Lobbying efforts by private companies even failed to have LNG excluded from the legislation.

Gas producers needed access to pipelines, and therefore Gazprom held a stranglehold over other companies. In the case of BP-TNK, this proved decisive: the licence for the Kovykta field required that the company produce a minimum output.¹⁷ But since Gazprom did not provide the supporting infrastructure, BP was argued to have violated the licence and hence had to 'negotiate' its way out.

But Gazprom's attention was not only internal and upstream: it set about controlling downstream access to markets too. This extended to its near neighbours, notably Ukraine and Belarus (though the latter was initially more concerned with oil). The 'negotiations' in these cases focused first on price. The Soviet system in Eastern Europe depended in large measure on the control of energy supplies. Physical dependence meant at the limit they could be cut off (and the early examples of Hungary and Czechoslovakia's attempts at revolution formed part of this legacy); but economic dependency was created through subsidised prices, particularly to consumers.

As oil prices rose after 1999, Russia (encouraged by Europe) tried to move towards market-based prices, starting with the newly independent states (not risking the consequences domestically). This had a good economic rationale, providing a proper return on investment and reducing the large-scale waste of energy which had characterised the Soviet Union.¹⁸ But to Ukraine (and others subject to the same demands), energy prices had always been political and the coincidence of the Orange Revolution in the Ukraine, and the loss of power by the Russian east, provoked obvious national concerns.

The Russians proposed a tripling of the price of gas to Ukraine in March 2005 (from \$50 to \$160 per 1,000 cubic metres) and then to \$230. Negotiations focused not only on price, but also on transit fees and control over the pipelines within the Ukraine—and hence to the west. Russia eventually cut off supplies on January 1st 2006, provoking widespread condemnation from the EU and the US. Within three days, supplies were restored and a complex deal put in place. As Yekelchik (2007, p.223) comments: 'many

¹⁷ See Stern (2005, pp. 152–155) for background on Kovykta.

¹⁸ Economic pricing was also encouraged by the EU—as part of the conditions for support for Russian entry into the WTO. (See Stern 2005, chapter 3.)

observers saw these moves as punishing Yushenko [President of the Ukraine and leader of the Orange Revolution] for his pro-Western orientation and, perhaps, calculated to promote pro-Russian political forces in Ukraine's March 2006 Parliamentary elections.' In the latter regard, Russia was partially successful, and the deal also involved a complex arrangement for the future control of the pipeline. Most disturbing for the Ukrainians, Russia saw the deal as very much an interim one, promising to return to the price, and also actively sought to bypass the Ukraine through the Nord Stream pipeline and also via alternative routes to the south (see below). Whatever the longer-term consequences of the exercising of the power to physically interrupt supplies, the immediate effect was to extend Gazprom's downstream control over the Ukrainian pipelines.

In effect, Gazprom now had control over the major gas artery to the main European markets. Since then, the pipeline strategy has been further refined in response for the demand for significantly more capacity and the future pipeline diversification strategies Europeans might choose to promote. Two major developments stand out—the Baltic Pipeline and the Austrian deal—one giving Gazprom control over supplies to Germany, bypassing the Ukrainian route, and hence increasing Russia's influence there; the other undermining Europe's attempts to create an alternative supply route from the Caspian. The Baltic Pipeline to Germany and the Caspian issues are dealt with in section four below.

3.3 Re-nationalisation of reserves

Control over the pipes provided one significant lever in the energy sector. It was to play a part in the bigger game of taking back energy reserves into state hands—the re-nationalisation of resources. It was a path which other major oil and gas producers had followed—from Saudi Arabia in the 1970s and 1980s, through to Iran after the fall of the Shah and more recently Venezuela. Indeed, the nationalisation of reserves is the norm, with around 90% of the global reserves in state hands. Thus, there is nothing new or original in the path Russia has followed in recent years.

What is novel is the methods employed. The desire to bring the oligarchs to heel—or at least tame their political ambitions—coincided with the fact that Yukos had managed to get a significant share of oil and gas reserves. The typical Putin tactic of using the legal framework as an instrument of state policy, rather than an impartial and independent process, has a long history in Russia and Putin himself learnt this in his years between jobs in St Petersburg. As noted above, it was employed against Khodorkovsky and Yukos—in this case tax law. Khodorkovsky was first fined and then imprisoned, whilst Yukos was bankrupted and forced to dispose of its prime assets in rigged auctions which Rosneft duly won. A series of sales began from May 2007 onwards, with TNK-BP withdrawing from the bidding within ten minutes (thereby creating through Western involvement the fiction of an open auction). Subsequently the gas assets went to Gazprom via a third party while other assets found their way to Rosneft via US hedge funds and others (Financial Times, 2007c).

In the case of Sakhalin II and Shell, environmental law was deployed, to force Shell to sell part of its stake to Gazprom—and, in effect, end the production sharing agreement (PSA) signed originally on extremely favourable terms by Shell.¹⁹ The environmental concerns were themselves not without merit, and environmental groups, such as WWF, have continued to highlight them.²⁰ However, given the low priority that such environmental concerns have received elsewhere in the Russian oil and gas sector, and given the cost overruns on the project which would be shared through the original PSA, there can be little doubt that it was the PSA and not the environment which motivated the steps taken against Shell.

Other examples followed a similar pattern, in the BP-TNK case, as noted above, it was failure to meet licence conditions on the production of gas in the Kovykta field—a consequence as much of the exercise of Gazprom's monopoly over pipes as the failure of the company to deliver on its side of the contract. In the Shtokman field case, the process of moving towards greater state control played out gradually. The initial intention was to develop the giant offshore field through the traditional methods of

¹⁹ See Stern 2005, pp. 145–52 for background..

²⁰ In August 2007 WWF sought a judicial review of the British government's export credit support for Shell's project. (Financial Times 2007b).

foreign participation, and an auction was duly organised, with LNG a key part. But then the auction was called off, with Gazprom taking direct control—and the mainly American companies kept out—and, in 2007, Total was selected as Gazprom's preferred partner.

The re-nationalisation of oil and gas reserves was then a clear strategy which has been played out with both determination and opportunism, and along the way the oligarchs have been tamed. It is a strategy which is yet to be completed, and indeed it is unlikely even to be neatly completely tidied up. But the outcome is not in much doubt, creating a new 'settlement' in the sector. This was, however, not new in global energy markets: the basic building blocks had already become common across many oil and gas producing states. The government, through its controlled companies, would own the reserves, and it would determine the depletion policy, the pipeline routes and the downstream contracts. The international private sector would be welcomed to provide the skills to explore, develop and produce. The large oil companies would have to move to the new role of contractors, not owners.

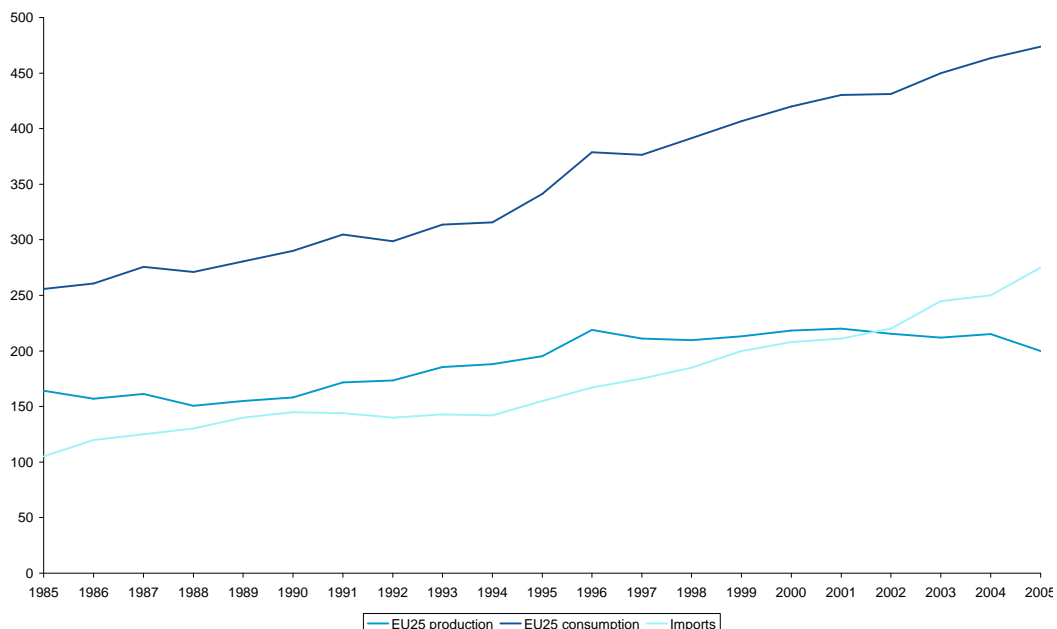
This re-nationalisation has a clear political rationale, curbing the power of the oligarchs, reversing the loss of control under Yeltzin and rebalancing the terms with foreign companies. But it has economic consequences too: in the ability to manage and develop its gas reserves. From Europe's perspective, what matters is whether Gazprom will invest efficiently at sufficient speed to meet Europe's demands. The evidence so far is not encouraging: its three major fields (Urengoy, Yamburg and Medvezhye) are reported by the IEA to be declining at a combined rate of 20 billion cubic metres (bcm) per annum (IEA 2006, pp. 122–123). The IEA also claims that Zapolyarnoye, which came on stream in 2001, has peaked, and concludes that investment is significantly below the required level. Shtokman (Barents Sea) and Bovanenskoye (Yamal) are still some way off. Thus there is an indirect consequence of Putin's political strategy for Europe—supply may not be sufficient to meet (European) demand—a problem for Europe but not necessarily for Russia.

4 ALTERNATIVE SUPPLIES TO EUROPE—AND THE RUSSIAN RESPONSES

So far we have established that energy dependency matters, and that Russia has refined its strategy to extract the maximum political and economic value from its carbon resources—through a mix of asserting greater state control through its unique model of Russian authoritarian capitalism, and opportunism. But many in Europe remain unfazed by all these developments, pointing to the fact that Europe currently only takes around 30% of its gas from Russia. Although that dependency is set to rise, it is argued that there are other options—that Europe is in fact surrounded by gas producers, notably Norway, North Africa and the Caspian states, with LNG from the Middle East as well. The argument has two parts: that there are alternative sources of supply; and *crucially*, that Russia is not in a position to influence them. It is to the validity of these lines of argument that we now turn. We begin by listing out very briefly the main alternatives, before looking at the Russian response.

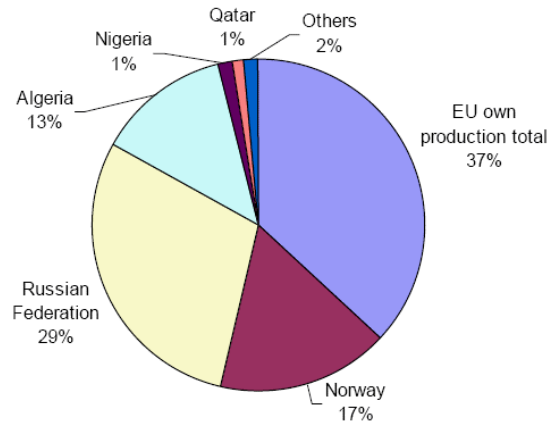
First, the trend in gas imports to the EU is summarised below.

Gas imports to Europe (bcm)



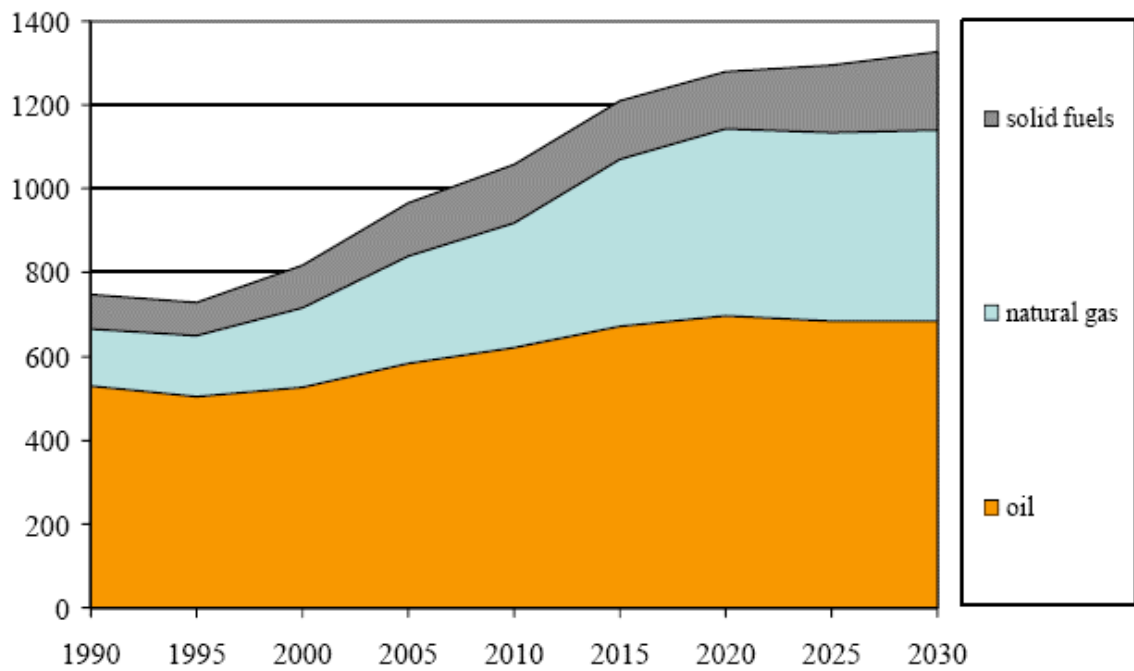
Source: BP Statistical Review of World Energy, 2005.

EU27 original of natural gas



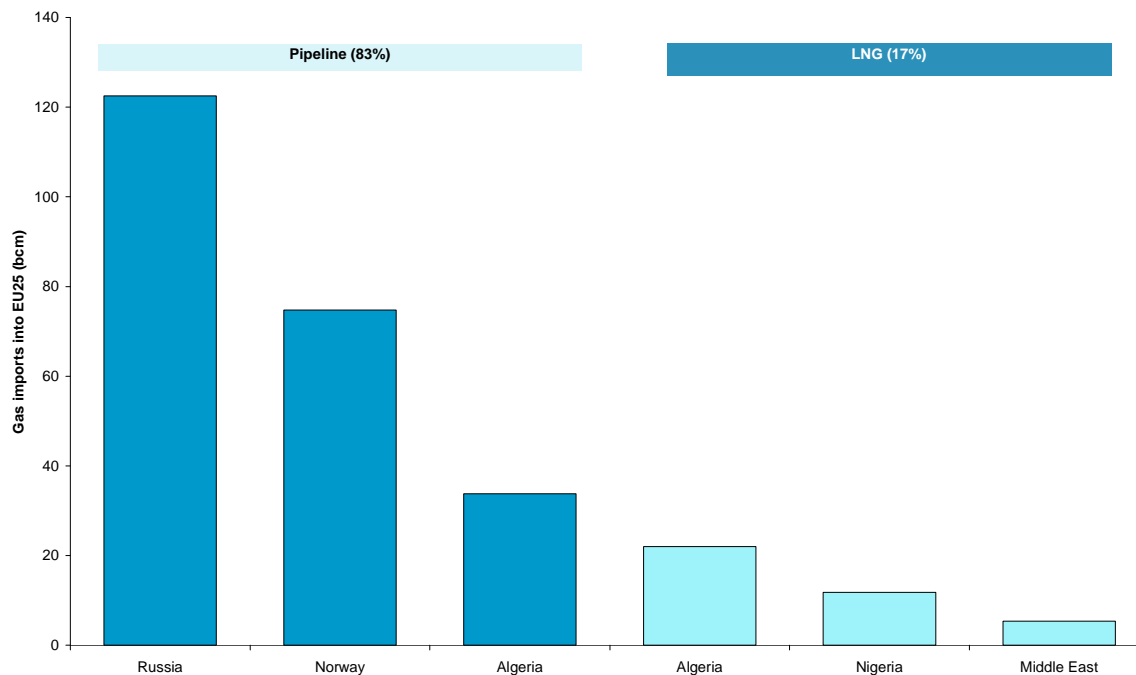
Source: CEC (2007c).

EU27 net imports of fossil fuels (baseline scenario, Mbtu)



Source: CEC (2007c).

Main sources of European gas supplies (bcm)



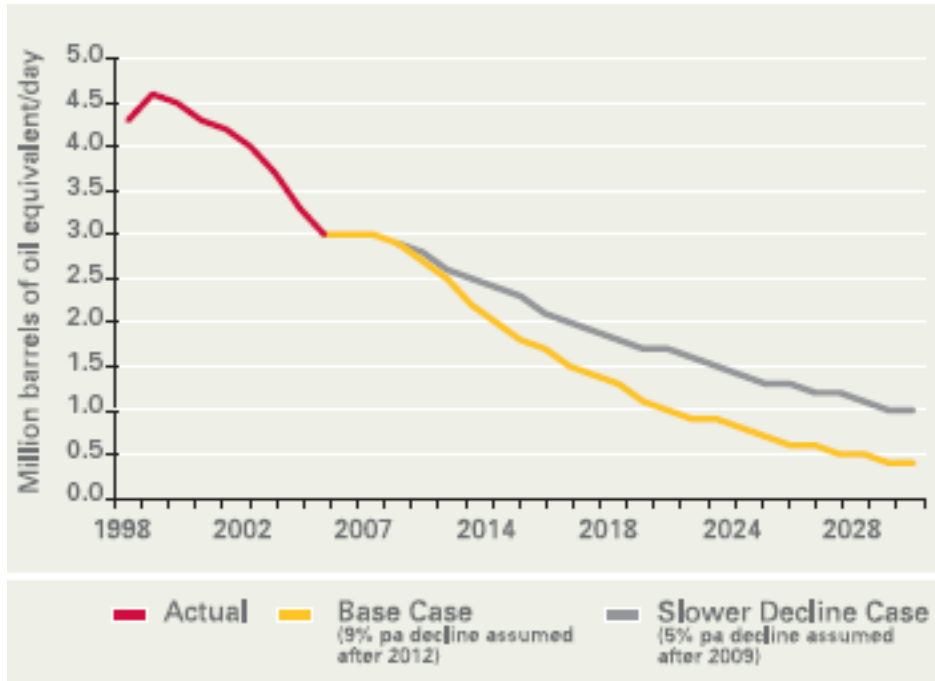
Source: *BP Statistical Review of World Energy*, 2005.

4.1 Europe's internal reserves—the North Sea

The North Sea has provided Europe with gas and oil supplies from the 1970s onwards, and the combination of new technologies and the OPEC oil shocks of the 1970s turned it from a marginal to a mainstream source. It provided gas from the Netherlands' fields and then oil and gas from the UK sector, and continues to provide long-term reserves from Norway.

The history of the North Sea is beyond the scope of this paper. Our concern here is its contribution to European energy security going forward—and as an alternative to Russia. Of the main countries involved, the UK is rapidly moving into import dependency, a position the Netherlands is already in. (We deal with Norway separately below.) This position reflects the (in retrospect at least) extraordinary depletion policy pursued by the UK—in effect, as fast as possible, and in a period which turned out to be one of historically low prices.

Outlook for UKCS oil and gas production



Source: DTI (2007).

The result will be, on current trends, around 80% import dependency for the UK by 2020 (DTI 2007, p. 116). A further dash-for-gas in the UK electricity sector will exacerbate the shift towards gas in the fuel mix. This is also reflected across Europe, with around 70% of the projected increase in gas demand in Europe coming from the electricity sector of the next 20 years (Honoré and Stern 2007).

The Netherlands sector was depleted earlier, although a more effective depletion policy was applied, with the main field, Groningen, holding up into the next decade, and thereafter declining.

4.2 External sources of supply

For Northern Europe—and especially the UK—Norway is a major supplier with very considerable reserves, howbeit in often difficult and deep offshore locations. Its key characteristic is that its population is very small—4.7 million. Hence it has no urgent need for additional revenues from a fast rate of depletion. On the contrary, its economic

problem is how to manage the trade off between reserves now in the ground as assets versus its international investment portfolio fund²¹ (valued at around £317 billion in April 2007). Thus, whilst the new Langeled Pipeline provides a competitor source from 2006 to Gazprom, Norway's interests are in a depletion and pricing policy which maximises the value of its total resources over the long run, and the optimal strategy is to gradually develop its fields under the umbrella of Russian prices. Price competition is clearly not in its interests. Furthermore, by maintaining public ownership of its major oil and gas companies, it does not face the problems of the shorter-term corporate profit-maximising objectives of the private companies. The contrast with the UK's depletion policy could hardly be starker.

From the south of Europe, the main reserves and sources of supply are North African—in particular, Algerian. (Libya is yet to develop after years of international isolation.) Algeria does not have the luxury to time in its depletion objectives faced with a difficult and often unstable internal political situation.

Pipeline gas to Spain and Italy is the obvious route into the European market. It is therefore far more likely to offer competition to Russia, and it is no accident that Putin has been cultivating the Algerians. Sonatrach, Algeria's natural oil and gas company, has signed a Memorandum of Understanding with Gazprom on cooperation in upstream activities (IEA, 2006, p. 123).

From the East, the sources of competitor gas supplies lie in the Caspian area, and it has been a major objective of European (and perhaps more forcefully US) policy, following the independence of the Caspian states, to develop pipelines to the West for oil first and then gas. The problem—as even a cursory look at the geography illustrates—is that the pipelines have to pass through some very unstable political territory—including Georgia, but also navigating the conflicts between Azerbaijan and Armenia, and addressing the territorial rights across the Caspian Sea itself, which the bordering states (including Russia in the North and Iran in the South) dispute on the argument about whether it is a sea (and hence international laws of the seas apply) or an lake (in which

²¹ Previously called the *Petroleum Fund of Norway*, it is now called the *Government Pension Fund*.

case they would not). And even if the pipelines get as far as Georgia, there is then the tricky question of Turkey—and hence the diplomatic attempts by the US and some Europeans to bind Turkey into Europe via membership of the EU.²²

So far, there has been one notable success—the BTC oil pipeline from Baku in Azerbaijan via Tbilisi in Georgia to Ceyhan in Turkey. This has encouraged other options to be explored—notably the Nabucco pipeline project, taking gas from Turkey, via Bulgaria, Romania and Hungary, all the way to the Austrian border, and, hence, connecting via Turkey to the Caspian suppliers.

A final source of competition is LNG—in particular, from Qatar. As noted in section 2.4 above, LNG will almost always have higher costs than pipeline gas, and it will be limited in volume by the shipping and LNG facilities available. But on the other hand, LNG offers storage and therefore an additional element of security of supply, reducing the threat of a physical interruption from Russian pipeline supplies.

4.3 The Russian response to potential competitors

Russia has complemented its internal strategy to gain control over pipelines and reserves, with an external strategy of engaging with each of its competitors in respect of European gas supplies. As with the internal strategy, the approach has been a (fairly) rational one: to gain as much market power as possible. It has been conducted through active engagement with each of the alternative sources of supply identified above.

Given the Norwegian interests are largely coincidental with those of Russia—and its small population and association depletion policy—the main focus of attention has been on the Caspian, and in heading off European independent pipeline options. The Russian response here has been astute and effective—Putin has concluded a bilateral agreement for supplies with the Austrians, promising to use Austria as a further hub for European

²² Turkey first applied to join the European Community in 1987, and has been a candidate for membership of the EU formally since December 1999.

supplies (alongside Ruhrgas and the Baltic route, and the Netherlands).²³ In addition, Hungary has been brought into the alternative Blue Stream pipeline (which takes Russian gas to Turkey), which is in Russian control. More recently Russia has been promoting a South Stream pipeline proposal to complement the North Stream (Baltic) pipeline. South Stream will take Russian gas to Italy.²⁴ There can be little doubt that the Russians intend either to kill off the Nabucco pipeline, or through Austria to neutralise it by gaining a direct stake.

For the Caspian supplies to provide competition, the pipelines are a necessary but not sufficient condition. The Caspian states would have themselves to have to prefer to send directly to Europe. But they have other options—to China to the East, Russia to the North, and Iran to the South. Putin has therefore concentrated on two strategies—to persuade the former Soviet states to send their gas north (through the existing Central Asian Pipeline), and to keep open the diplomatic options of collaborating with Iran to the South. So far the strategy has worked well with the Kazaks, and in May 2007 Gazprom secured an agreement with Kazakhstan and Turkmenistan to route gas through Russia (hence cutting off potential supplies which might go through Nabucco).²⁵

Russia needs access to Caspian gas not just because it heads off direct European supplies: gas for Turkmenistan has been crucial to meet Russian demands—given its own production problems and its contractual commitments to Europe. But although the Caspian states live in the shadow of renewed Russian military power (and, of course, the memory of the Stalinist policies of wholesale deportation of ethnic groups and settlements of Russians, and Khrushchev's disastrous attempts to turn Kazakhstan's steppe into a new grain and cotton bowl for the Soviet Union), they have themselves begun to assert their own brand of energy nationalism.

Russia has, as a result, not been entirely successful in reasserting its influence in the Caspian: it face competition from China for Turkmenistan's reserves. Kazakhstan has

²³ In a new deal with Austria, Gazprom acquired in May 2007 a stake in Central European Gas Hub (CEGH) owned by Austria's OMV at Baumgarten, which is also the proposed terminus for Nabucco (in which OMV and Hungary's MOL, have a stake).

²⁴ A Memorandum of Understanding between ENI and Gazprom was signed in June 2007.

²⁵ *Financial Times* 2007d.

begun to flex its energy muscles too and has struck uranium deals, notably with Toshiba, taking a stake in Westinghouse and it has mimicked the Russian pressures on Shell at Sakhalin and on BP, in threatening ENI's oil licence for the Kashagan offshore field—where the cost overruns echo those at Sakhalin (again on environmental pretexts).

Beyond the Caspian, Russia has been working on relations with Algeria (as noted above) and on the Russia–Qatar relationship, encouraging discussion on a new 'gas OPEC'. In addition, Russia itself will gradually become a major LNG player in its own right, particularly as the Shtokman gas field develops and further out the Arctic becomes increasingly accessible.

Taken together, the obvious way to interpret the Russian strategy is to use diplomatic and other means to create as much market power as possible, to extract for Russia the maximum economic rents for its reserves. A policy of encirclement best meets this, and the chosen mechanism has been to exploit the mutual self-interests of the gas suppliers to Europe—with Putin taking the lead in coordinating them. As the authoritarian nature of Russian capitalism develops on the back of a resurgence of state power, the strategy is very much politically driven, while Europeans rely on the market rather than political power and influence in response.

4.4 Russia, Germany and the Baltic Pipeline

Complementing Russia's external strategy to potential competitors, it has also focused more directly on Europe and its pipelines. At the heart of the European gas market is Germany, and in particular Ruhrgas. The commercial common interests between Ruhrgas and Gazprom are obvious: Gazprom needs a counterparty to long-term gas supply contracts, and Ruhrgas needs long-term supplies. An element of vertical integration via contract is therefore in both sides' interests, and this is further cemented through equity stakes that Ruhrgas took in Gazprom.

This obvious mutual interest is nested within a wider—and historically much deeper—political relationship. A significant proportion of Germany (East Germany) was

occupied by Russia for half a century, and Germany has had to come to terms with this, in the face of uprisings and instability across the Soviet European territories (from Hungary in 1956, the building of the Berlin Wall in 1961, through to the Czechoslovakian rising under Dubcek in 1968, and the Solidarity movement and the military coup in Poland in 1981²⁶). Not surprisingly, German politics has been concerned with the search for an accommodation with Russia, and Ostpolitik under Brandt formed part of that search. Soviet Europe has had therefore to grope towards freedom from Russia in the context of the overarching special relationship that has built up between Germany and Russia, whilst France has sought to bind Germany into Europe. Thus, on the one hand, whilst the Polish reaction to the Baltic Pipeline—in calling it a modern Hitler–Ribbentrop pact—might seem to the western members of the EU an overreaction, Poles themselves remember the German support for Jaralelski's coup in 1981 (when Schmidt was the first to legitimise it), and on the other, monetary union in Europe was one of Mitterrand's requirements of Kohl as a price of German reunification.²⁷

In the case of energy, the fear in other European countries is that Germany's national interests in energy are rather different from those of Europe as a whole, and the bilateral relationships which Germany has been pursuing with Russia are at the expense of the European wider interests.

Of all the manifestations of this tension, the Baltic Pipeline is the most obvious example. This pipeline—from Vyborg near the Russian–Finnish border, and Greifswald in the former East Germany—has, at first sight, a major benefit to Europe as a whole, in that it provides an additional route for Russian gas, therefore reducing reliance on the Friendship pipelines through Ukraine and Belarus. Should the existing routes be disrupted through technical problems, terrorism or economic rent seeking by transit countries, Europe could receive gas supplies in any event.

But these advantages have a corollary—they isolate particularly the Ukrainians, and allow Russia to exert political pressure on what was once the core territory of the early

²⁶ See Judt (2005), especially pp. 497–500. On Germany and Poland after the coup, see Schmidt (1987).

²⁷ See Judt (2005), p. 640.

Russian empires. Though, as noted above, the below-market pricing to Ukraine, Belarus and other former Soviet states is economically inefficient, and therefore there is a justification in moving towards market pricing, these moves cannot be divorced from Russian interest in the Orange Revolution in the Ukraine and the political battles between the predominantly Russian-leaning east of Ukraine, and the EU-leaning west, and also from Putin's more general political objectives of reasserting Russia power over its near neighbours.

The Baltic Pipeline not only increases Russian power in respect of the Ukraine, but it also serves to remind Poland and the Baltic states of their historically somewhat precarious position sandwiched between Russia and Germany—a position which has wreaked havoc on them for most of the twentieth century, from the First World War, through the Second, to occupation for the second half of the century. Unsurprisingly, then, there is suspicion that the Baltic Pipeline is a German–Russian enterprise, rather than a European–Russian one, and a divisive rather than inclusive step.

The way the Baltic Pipeline proposal has been developed has done little to assuage these concerns. It was agreed by Gerhard Schröder in his last two weeks in office, and then he almost immediately became its chairman. He had developed a deep personal relationship with Putin (Putin had gone as far as to find two orphans for the Schröder family to adopt).²⁸ With Merkel, the relationship has been publicly more formal, but again there have been continuous attempts to keep the special relationship going, with its bilateral summits as a focal point. It helps too that the Baltic Pipeline will come ashore in her constituency and bring jobs and industry to an area of high unemployment in the former East Germany.

None of this suggests that a Baltic Pipeline is not a 'good idea' for Europe and European gas security. If, as intended, the Shtokman field eventually connects to it, in the longer term it will enable Europe to benefit from supplies in the Arctic north which might otherwise have gone via LNG to the world markets. The issue is less whether the Baltic Pipeline should be built, but more whether the political umbrella for it should be

²⁸ See Schröder (2006), especially p. 461.

German or European. And the way this plays out in the European policy debate is over control of pipelines—the great unbundling debate which we discuss below in the next section. The European intent is to have open access to third parties to gas pipelines on transparent and non-discriminatory terms—so it does not matter whether the pipes are in Germany or elsewhere. To achieve this, the Commission argues, they need to be separately owned and regulated from Brussels. Ruhrgas (and its owner E.ON) resists this, and it has done so for almost two decades with the tacit (and sometimes even overt) support of the German government. Thus the unbundling argument is more than just a arcane technical debate between economists about how to maximise competition—it goes to the heart of the questions as to whether pipes should operate to the benefit of Europe over and above those which accrues to national interest (or even more narrowly, the implicit franchise areas of particular companies), and therefore whether energy policy should be designed in Europe's interests, or continue to be driven by national interest. As we will now see, so far the nationalists have won, fending off the Commission.

5 EUROPE'S RESPONSES AND EUROPE'S ENERGY POLICIES

Confronted with the external position in respect of Russia, European energy policy is poorly prepared, in large measure because the agenda it has been pursuing since the late 1980s is a rather different one—completing the internal energy market. It has been ‘internal’, not ‘external’ and it has been primarily focused on the market in the sense of maximising competition. This lack of overlap between the internal policy and the external challenges outlined above is a major reason for the rethink which is now going on in Europe—but it is further complicated by the fact that even within its own narrow terms, the Commission's strategy has been remarkably unsuccessful even in delivering its narrow objectives. Despite almost two decades of effort, the EU remains characterised by a series of national markets linked bilaterally, and even within these national markets, national champions have in most countries retained their grip.

5.1 The European internal market policy since 1990—looking inwards, not outwards

The energy utilities were left largely outside the domain of the Common Market at the Treaty of Rome. The process of bring them back inside began with the Single European Act in 1987 prepared the way for the implementation of the White Paper on the *Completion of the Internal Market* (CEC 1985) through the strategy of a portfolio of measures so constructed that members accepted them as a whole even if they disliked particular parts (the so-called 1992 Programme). Again the energy sector was initially excluded from these liberalising measures but, in part spurred on by the British example, debate begun about whether the energy (and other) utilities might also be subject to the competitive market European framework.

The Commission pushed forward an initiative to complete the internal energy market even before the 1992 programme was completed, with the first round of directives projected for the early 1990s (CEC 1991). Thus began the great battle between the incumbents—then led by Ruhrgas and EDF—and the Commission. Early optimism on the part of the Commission ran up against determined political opposition in France and

Germany, with the result that it was only in 1996 and 1998 (CEC 1996 and 1998) that two directives—one for gas and one for electricity—were finally passed, and each in a very weak form.

The impact on competition was correspondingly mute, and the Commission worried away at them, with the aim of producing a second package of legislation, which finally was forthcoming in further directives (CEC 2003a, 2003b), as part of the implementation of the wider by the 2000 Lisbon Summit strategy focused on competition. In 2007, after the Commission's 'January Package' report, the March 2007 Summit initiated a further attempt to open up European energy markets, a further set of measures in September 2007.

The directives did finally achieve a *formal* liberalisation, but they did not produce much by way of competition. Whereas the UK model had tackled structure first, and then liberalised, the Commission had tried liberalisation without structural reform. And, behind this lay a yawning gap in the physical infrastructure through which competition and energy trade could flow. Indeed, worse still, not only were the existing companies left intact, but the process of liberalisation threw up a host of opportunities to consolidate, which the Commission did virtually nothing to impede.

There followed a large-scale concentration of the European market, with a small number of companies emerging as energy giants, on a scale comparable to the oil companies. It was a process which saw the merger of VEBA and VIAG in Germany to create E.ON, and then the acquisitions by E.ON, EDF and RWE across the EU, in the process taking over a significant proportion of the UK market, E.ON incorporating Ruhrgas, and all three moving into Eastern Europe. Only ENEL, ENDESA, Iberdrola and Vattenfall provided much challenge, and ENDESA was itself to be taken over in 2007 after a long and fraught takeover battle by ENEL and E.ON, in tandem with other Spanish interests.

The remarkable feature of this large-scale merger wave was that the Commission not only failed to stop it, but at times even actively encouraged it. The Commission's Competition Directorate used a *national* measure of markets, and therefore as each of the big players pushed into each other's markets, and those of others, since they

increased competition by their entry, this was deemed positive in competition terms. The fact that the *European* dimension was ignored—that in increasing competition in national markets they were eliminating potential competitors on the European stage—seems to have passed the competition authorities by. The extreme example was the green light given by the Commission to E.ON's bid for ENDESA: ENDESA was one of the few longer-term potential competitors to E.ON in the broader European market. But since E.ON was not in the Spanish market—in part because Spain was very poorly interconnected to the rest of Europe—on a national basis the Germans increased competition in Spain.

The net result of this merger wave was that the electricity sector ended up resembling the oil industry structure—but without a global market since electricity can only be transported regionally. Therefore, as the Commission pushed on to create the conditions for competition, it increasingly found that there were less and less players to take part. Unsurprisingly, the dominant players remains reluctant to open their markets to other competitors through greater interconnection, and access to the incumbents pipes and wires became a core concern of new entrants, to the extent that there were any significant ones left. The fact that state ownership remained a feature too—especially in the French case—further undermined competition, given the cost of capital effects.

It was into this context that the great unbundling debate has been played out. Initially, back in the early 1990s, the debate had been between regulated third-party access (rTPA) to networks and negotiated third-party access (nTPA). The former would be led by regulators setting rules on a common basis; the latter bilaterally between the parties. For anyone seriously interested in competition there was really no issue between the two: the latter actively reinforced market power and implicit (if not explicit) collusion between the oligopolists—and as a result slowed down the incentives for interconnections. So the former (rTPA) was the preferred route.

But it became increasingly apparent that the informational asymmetries between the incumbents and the regulators, together with the lack of common accounting rules and asset valuations left the incumbents in a very powerful position, and unsurprisingly very little competition resulted. Belatedly—towards the end rather than the beginning of the

process of creating the internal energy market—the Commission recognised that structure was key. Ownership unbundling was, it argued, a necessary condition for genuine third-party access, and that the appropriate way forward was to create a series of grid companies, along the lines of National Grid in Britain, and for good measure to unbundle distribution networks too. It was this conclusion which emerged from the January Package Report of the Commission in 2007 (CEC 2007a), ahead of the March Summit—a position which the March Summit prevaricated (see below).

5.2 Hampton Court, the Green Paper and the January Package—first steps towards a new energy policy

Ownership unbundling was designed to make the European energy markets more competitive, but even this was premised on the assumption that there was a grid to have access too. In fact, the national champions had over the post-Second World War period looked after their own national interests, and interconnections were constructed bilaterally to the benefit of the national incumbents. This bottom up process was analogous to the process by which local utilities in the 1920s and 1930s had similarly protected their own patches and linked up only on a bilateral basis. The great transformation around the Second World War in Europe was to create *national* grids, designed with the national—rather than local—interest in mind. In Europe, the most efficient were those built in France and England and Wales, as acts of nationalised industries.

By the end of the century that domain of the grids had in economic terms moved to the European level, and the potential existed to gain the portfolio advantages to capacity margins which interconnection brings, and the additional security and mutual protection, thereby lowering costs and increasing competitiveness, as well as enhancing achievement of the security of supply objective. This opportunity faces both the US and the European markets, and in each case there is a struggle between the respective countries and states (and their incumbent companies), on the one hand, and the European and US federal interests, on the other.

At the Hampton Court Summit in October 2005, a blueprint for a European energy policy was tabled which set out how such European grids might be made the centre piece of a new European energy policy (Helm 2005). It was the first time that the agenda of competition had been brought together with the external concerns about Russia and import dependency within the EU. Completing the European grids not only made for a more competitive market, it lowers costs *and* facilitated greater resilience to external shocks and more by way of physical mutual support to any Member State isolated by Russian actions. The subsequent lesson of the Ukrainian crisis was that it was the very weakness of the European grids which had meant that Russia had not only been able to pressurise Ukraine into effective submission, but also in the process had a real physical impact on several other European countries at the same time.

The Hampton Court Summit paper was followed by a Green Paper in 2006 (CEC 2006). This largely endorsed the Hampton Court position, and echoed an earlier Commission Green Paper in 2000 (CEC 2000). The Green Paper recognises 'a new energy era', identified the 'urgent need' for investment in the face of rising import dependency, the concentration of reserves and rising prices. It called for 'a common European response'. It appeared that security of supply was now the driving factor in European energy policy, augmented by energy efficiency and renewables initiatives to take on the climate change challenge—that there was now a new paradigm for energy markets and energy policy (Helm 2007). But the content of actual policy edged forward only very gradually.

The fact that the 2006 Green Paper was 'green' not 'white', and short too, reflected the lack of political traction energy policy still held. Indeed, the Green Paper 2006 was not much of an advance on the earlier 2000 Green Paper: both diagnosed the problem of security of supply, but neither delivered a step change in policy.

The January Package—a Communication from the Commission to the March Council of Ministers (CEC 2007a)—was the next step in the evolving approach to energy policy. The Package, together with the substantial supporting evidence, was complicated by European politics and sought to bridge three Commission interests: the (dominant) interest of the Competition Directorate-General in the competition/liberalisation agenda; climate change; and security of supply. The January Package was in practice largely an

attempt by the Commission to push through unbundling, but it was not surprising that by the March Summit the ministers felt more comfortable with objectives, particularly climate change ones which were over a decade away.

The January Package was, however, a 'package' and in attempting to meet the broad swathe of political interests and it claimed that the policies it recommended to the Council of Ministers were mutually compatible. Thus:

an effectively functioning and competitive Internal Energy Market can provide major advantages in terms of security of supply and high standards of public service. The effective separation of networks from the competitive parts of the electricity and gas business results in real incentives for companies to invest in new infrastructure, inter-connection capacity and new generation capacity, thereby avoiding black-outs and unnecessary price surges. A true competitive market promotes diversity (CEC 2007a, p. 6).

In other words, competition requires unbundling and then will deliver security of supply. Yet nowhere is a 'true' 'competitive market' defined, and while unbundling would increase some kinds of competition, it does not follow that the dominance of a small number of very large energy companies, noted above, would thereby be broken—in part, because unbundling does not solve the problem of access to upstream gas supplies from Gazprom and other external sources; and in part because (as RWE has demonstrated in Britain) lack of transmission assets has not proved a competitive disadvantage as against EDF, E.ON and Iberdrola in the British market. Indeed, unbundling in Britain has not led to a divergence in the European trend towards concentration.

And, finally, the link between 'true' 'competition' and diversity is far from obvious. Given that investors can diversify risk, why should companies opt for divergent investment strategies? Indeed, in a perfectly competitive market, they are more likely to imitate each other. In Britain, it is notable how imitation in investment strategies has led to a common focus on gas.

If the sub-plot of the January Package was to get the Council of Ministers in March to focus on competition and unbundling (which, as we see below, was at best only partly successful), the January Package did bring forward a range of other measures which

went well beyond competition—in effect recognising that monopoly and market power are not the sole (or even perhaps the most important) market failures in the post-2000 European energy markets.

In classic European style, this wider set of concerns is reflected in a host of separate individual measures designed to hit each of the (separate) problems. These include climate change (which we return to below), interconnections, European regulation, technology, data-sharing, and the external policy. The package proposes that: the priority grid interconnections are taken forward, with a recognition in planning of a 'European special interest'; a menu of options on levels of European regulatory cooperation is considered; a European Strategic Energy Technology Plan; and a European Office of the Energy Observatory is set up and specifically funded.

There is merit in all of these proposals, but here the focus is on the external perspective—the weakest part of the package. That weakness in part reflects the broader failure of the European Constitution proposals, and the state of limbo ahead of agreement on a common European foreign policy and the functions of the European representative (or foreign minister in all but name) under the subsequent proposed Treaty (from the July Summit 2007). But it also reflects a failure to rethink what an external energy policy might look like, specifically in the Russian case.

The January Package advocates 'speaking with one voice'. But it cannot even reflect this in its proposals for international agreements: it states that 'the EC and *its Member States* should be a key driver' (emphasis added) in the design of international agreements (p. 19), not the Commission alone. It then reiterates the view that it is for neighbouring states to converge on the EU approach, not to negotiate treaties of mutual recognition of different paths and policies. Thus, 'the EU should aim to build up a wide network of countries and the EU acting on the basis of shared rules or principles *derived from the EU energy policy*' (p. 19, emphasis added)—an approach the Russians explicitly—and, not surprisingly—rejected in respect of unbundling, TPA and long-term contracts.

In Annex 1 of the Package, this is explicitly applied to Russia (p. 24) as one of the priorities of the EU external energy policy during the next three years:

Enhancing relations with *Russia* through the negotiation of a new robust, comprehensive framework agreement, including a full-fledged energy partnership benefiting both sides and that creates the condition necessary for new investments. This should emphasize the mutual long-term benefits to both Russia and the EU and be based on market principles and those of the Energy Charter Treaty and draft Transit Protocol

In other words, a new Partnership and Cooperation Agreement (PCA) with Russia should continue to be negotiated on the basis of the clearly rejected Transit Protocol, to which we turn below. Given the strategies of Putin and Gazprom, and given their understandable desire to maximise the economic rents from their oil and gas reserves, it is very hard to see why the Russians should want to radically reverse the main planks of their policies to meet the 'rules and principles derived from the EU energy policy'. This would not necessarily be in Russia's long-term interests and, even if it were, it is hard to think of a current or future Russian political leader who would come to this conclusion.

The January Package not only failed to address the realities and 'Realpolitik' of the relationship with Russia, but it also failed to demonstrate why unbundling (however desirable) *solved* the climate change and security of supply problems. And although it was presented as a 'package' for ministers to take or leave *as a whole*, because it lacked a coherent logic linking the market failures together, it inevitably left ministers in what for them has a politically desirable position—to 'pick and mix' the various individual proposals—which they duly did.

The March Summit in 2007 should have provided the opportunity to learn the Ukrainian lessons, to take on board the seriousness of the external energy position, and to build a coherent and consistent European *policy* response. The Commission (and the Competition Directorate-Generale) had, however, a rather different priority. As we have seen, the January Package aimed at the narrow and precise target of unbundling. The Heads of Government had at their disposal the detailed analysis of the impediments to competition in the European market, and they had too the Hampton Court arguments, which had been carried forward into the 2006 Green Paper.

There followed a haggles between the Commission's position on unbundling, supported notably by Britain, set against French and German (and others) reluctance to undermine their national champions, with the result that a compromise was cobbled together, roughly along the lines that although the eventual ownership unbundling was not ruled

out, nevertheless the main emphasis now would be on internal unbundling—the so-called the Independent System Operator (ISO) model within incumbents.

The real reasons for this compromise were never formally articulated, but they were those which had dominated the attempts to create an internal energy market from the outset—that it did not fit easily with the French nuclear programme and Germany's special relationship with Russia. France and Germany were therefore not in favour. Subsequently, a 'letter' signed by the French and German energy ministers reinforced the compromise.

The January Package did, however, present the 'pick-and-mix' opportunity and politicians chose to major on climate change rather than security of supply. The fact that the March Summit went on to take historic decisions on climate change—and in particular the adoption of a unilateral EU 20% target for 2020—publicly masked the failure of the summit to adequately deal with security of supply. For some, the climate change agenda was helpful to security of supply, given the focus was on non-fossil fuels. But although the climate change issues are of fundamental importance, the reality on security of supply was rather different: around the world the fuel of choice for security of supply purposes is now coal, and coal's market share has been increasing. Relying on renewables (mainly wind) and energy efficiency will have an impact on emissions, but in the process the main effect will be to leave open a capacity gap in the next decade which will probably be filled by gas. Though the climate change imperatives needed to be addressed, and the March Summit decisions were truly historic, the implications for security were not carried through. A strong climate change policy makes the need to address the security agenda even more pressing. Europe's energy policy has unwittingly provided the context of another dash-for-gas which will not only increase the exposure to Russia, but also in the process lock in for the next three decades a new fleet of fossil fuel-based generation (better than coal, but not low carbon).

5.3 Europe's relations with Russia

As noted above, the Russian strategy has been to pursue bilateral agreements with individual EU Member States, against the backdrop of the 'special relationship' with Germany. In this, it has been largely successful. The reasons for this success for Russian strategy have been many and various, but at the core has been a fundamental misperception by the Europeans of the developments of Russia and how to handle them.

The Commission's approach to Russia has been largely premised on the assumption that Russia is on a path to a western liberal democracy, and that it would gradually converge on the legal, institutional and market rules of the EU. In part, this reflected the over-inflated optimism about liberal democracy that followed the collapse of the Berlin Wall in 1989—and, with it, the idea of the 'end of history' with the triumph of democracy and capitalism. The chaos of the Yeltzin years reinforced this view. In part too, the negotiations with candidate members from the former Eastern Europe focused attention on transition issues. Finally, the belief that energy had in fact become a normal commodity and therefore that regulated TPA was the desired 'norm' encouraged the Commission to push for ratification by Russia of the Energy Charter and, in particular, the Transit Protocol as the main negotiating position with the Russians on energy.

European engagement with Russia takes place in a number of different ways, and from an energy perspective, the Partnership and Cooperation Agreement (PCA) provides an overarching framework. Coming into force from 1997 for an initial ten-year period (but negotiated and concluded in 1993 and signed by Yeltzin in Corfu on June 24th 1994), the PCA continues after December 2007 unless either side gives notice to cancel.

During Putin's first term of office there was much optimism about the willingness of Russia to engage positively with the West (the high point having been the Russian reaction to the terrorist attack on the US in 2001 and its support for the actions in Afghanistan immediately thereafter). At the 2003 St Petersburg Summit, the EU and Russia agreed a pragmatic way forward, comprising 'common spaces' (economics and trade; foreign and security policy; science, education and culture; and internal security). Very gradually, these were fleshed out into 'roadmaps for each'. But since the re-

election of Putin in 2004 the momentum has been lost—indeed in many areas, it has actually been reversed.

But from the energy perspective, the PCA negotiations about its post-2007 future have at least provided the framework for the formal engagements between the EU and Russia, and have given the EU a locus, as opposed to bilateral national discussions. Energy matters have taken place within a specific 'dialogue'—with the creation of the EU–Russian Energy Dialogue in October 2000.

But the Dialogue and the PCA require *content*, and there are two reasons why progress has ground to a halt. First, Russia has increasingly wanted to be treated as an equal with the EU, and hence the PCA no longer matches Russia's expectations as to its status. International powers sign Treaties rather than Agreements. Second, the Dialogue and the PCA have the Energy Charter and the Transit Protocol as their preferred basis—the former which Russia has signed but not ratified, and the latter it rejects outright.

The Energy Charter Treaty was signed by Russia in 1994 (and by 50 other countries), but it did not ratify. For those that have ratified, it came into legal force in 1998 and provides binding protection for foreign investors against key non-commercial risks, such as discriminatory treatment, direct or indirect expropriation, or breach of individual investment contracts through multilateral rules for international cooperation in energy matters.

It is immediately obvious why the EU would want Russia to ratify the Charter—to prevent such discrimination and expropriation against EU companies in Russia—and it is also clear why the Russians might be reluctant to ratify during the process of gaining control over pipelines and reserves described in section three above. The Charter might have proved a useful tool to Shell, BP and others on the receiving end of the Russian strategy to regain control and to renegotiate or withdraw licences. Only once the process of establishing the new settlement in Russia has been completed might it be in its interest to ratify—and indeed this might eventually follow (and also help with the WTO membership issues more generally).

But if Russia has prevaricated with ratifying the Charter, the Transit Protocol would be a much greater threat which it has resolutely rejected. The Charter does impose the principle of freedom of transit and an obligation to establish transit flows, but in an 'Understanding' included in the Charter Treaty. Its provisions 'do not oblige any Contracting Party to introduce mandatory third-party access'. But the Transit Protocol goes further: Article 8 of the Protocol would require Gazprom to make its pipeline capacity open to third parties. The implications for Gazprom are not just related to what happens in Russia, but rather how the EU might access gas supplies from other countries, using transit through Gazprom's Russian pipes. Thus Caspian gas from, for example, Turkmenistan might be transited under the Charter and the Protocol, in direct competition to Gazprom—unlike now when Gazprom can buy the gas from Turkmenistan, and then control its supply and sale onwards to the EU.

6 TOWARDS A COHERENT EXTERNAL EUROPEAN ENERGY POLICY

The results of nearly two decades of European effort to construct an energy policy have been meagre. Electricity and gas were finally liberalised by 2007, but this probably would have been achieved in almost all the major EU countries by 2007 anyway. The European grid remains not even a blueprint, let alone a reality. Competition has not matured, and as a result price disparities are the norm not the exception. It is a sorry tale which the January Package energy report documents in remarkably clear terms. By the time liberalisation had been achieved, the market had already been concentrated.

The fault lay in the original conception as well as the politics. The key was structure: liberalisation without physical interconnection and structural change is never likely to be successful: the Commission should have started with the physical conditions first which turned out to be necessary before competition could take place. Vertical separation has been proposed at the end, not the beginning. And worse still, horizontal integration has been permitted (and sometimes encouraged). Instead of separating out the grids, and then building up the interconnections from a European perspective, it was as if the Commission believed in spontaneous competition: allow customers to switch and then automatically they will, with a army of new entrepreneurs chasing after them with merchant plants.

We are however where we are, and not where we could have been had the Commission taken the external position more seriously, taken a more realistic view of Russia, and paid more attention to security of supply. This sorry tale of the European attempts to complete the internal market is noteworthy not only from an historical and academic perspective, but it also is the very imperfect starting point from which to shape a European energy policy which responds to the Russian challenges outlined in this paper.

A more coherent external European energy policy would have a number of key components. These include in outline, the following.

(i) A refocusing of objectives

A more coherent central European energy policy would begin with a clear statement of objectives and priorities. The old paradigm concerns of liberalisation and competition, whilst arguably appropriate to the historical context of the 1980s and 1990s, have been substantially displaced by security of supply and climate change. These two are the challenges of the next decade and beyond. In any context, competition is not an objective, but rather a means, and the competition agenda needs to shift from a focus on asset-sweating and operating costs towards investment. So the starting point is a clear statement of objectives and priorities, rather than a muddling of objectives and instruments.

(ii) Creating robustness: the European grids

Security of supply has many dimensions, and here we are mainly concerned with the impact of Russia. As discussed, Russia has pursued a rational strategy to maximise its economic and political leverage over the European market. In response, the EU needs to look to its leverage.

A significant component of the EU's leveraging power comes from its ability to absorb shocks, both in physical supplies and costs. At the heart of the EU's internal market lies its infrastructure—the electricity and gas networks. At the European rather than the national level, these are primitive. As a result of each member country pursuing its own energy policy, the incentives on the incumbents to protect their own geographical monopolies, and the underlying incentive problem in creating what are European public goods. Competition and unbundling will not, on their own, produce an optimal grid. Grids require an element of planning from a European perspective: a series of bilateral links do not produce the optimal the optimal system.

As set out in the Hampton Court paper (Helm 2005), the way to think about the European grid is from a top down European perspective. It is a public good to the systems *as a whole*, and needs to be designed with the interests of the whole in mind—just as in mid-century the national grids were designed from a national perspective. It is quite hopeless to expect a bottom up process to lead to a well designed system, for the very good reason that it is not necessarily in the incumbents (or even necessarily

national) interest to take a European perspective. Europe would be better off in aggregate with a European grid, but individually some would be worse off.

To date, the Commission has made a number of attempts to encourage grid interconnections and to identify priority investments. The 2006 Green Paper proposed a European grid code, a European Centre for Energy Networks, encouraging Member States to identify their own measures and building on the Trans-European Network instruments. These steps, whilst helpful, do not go to the heart of the problem—which is to start with the map of the European wide grids, and then work backwards to the existing system, rather than focus exclusively on ad hoc, evolutionary and marginal additions to the existing national-focused systems.

What is required is therefore a Europe-wide, top down approach to the network requirements, and this will require a degree of cooperation and indeed relinquishment of national control which Member States have assiduously opposed so far. But without such a move towards a European perspective, progress will continue to be piecemeal and slow, with the result that resilience in the European energy markets to security of supply shocks will remain weak. In turn this will enhance Russia's bargaining power—and as an incidental effect continue to undermine the delivery of the competition agenda and the equalisation of prices.

(iii) Unbundling to create a European grid

The unbundling agenda has been focused on competition issues and has not been approached from the perspective of the European grid. Of those at risk from a national perspective by unbundling, two stand out: Germany and France. Germany has well developed gas and electricity systems designed to meet its own purposes, and which may well deliver it a national competitive advantage over time. It has built this on the back of its special relationship with Russia, and the Baltic Pipeline is the most advantageous fruit of this relationship. Germany is the Russian hub, with all the strategic, industrial and security benefits that follow. France has a major strategic asset in its nuclear industry—around 60 PWRs. As carbon prices rise, and as external security pressures from Russia and others continue, the relative security of France and its carbon competitive advantages are obvious. For both countries, a European grid approach

would decrease their own strategic relative advantages and it is to their benefit to develop bilateral linkages. It is rational for them to take the position they did at the March Summit—even if their reasoning was more complicated and diffuse.

Ownership unbundling has considerable advantages as an incremental step towards a Europe-wide approach to networks. By separating out networks from dominant incumbents, the new entities no longer have an economic interest in protecting the incumbents' generation assets from competitors. Their (regulated) returns would come from maximising the utilisation of their networks (if suitable incentives are given) and from making a return on investments.

Ownership unbundling would then change incentives. However, there would still remain a patchwork quilt of transmission companies, and the most important step could remain—to enhance cooperation at a European level. Here the incentives are complex. New grid links may in some cases render some existing assets redundant, or at least reduce their use. To avoid a perverse incentive to protect existing transmission lines, the regulatory regime would need to explicitly recognise potentially standard costs. As discussed earlier, it matters greatly whether the regulatory body approaches this from a European or a national interest perspective.

Thus the preoccupation of the Commission with unbundling is not necessarily in conflict with the security of supply objectives, but it is unlikely to be sufficient. It may not even be a necessary, and it leaves open how the European perspective would be achieved through a number of individual companies. The history in some countries of building national grids after the Second World War from a host of local monopoly utilities is not an encouraging one. Unbundling without a European network approach generally, and to regulation in particular may make little real difference—and in any event it will take some years to implement.

(iv) Strategic European gas storage

If networks are one necessary way to increase resilience to shocks, access through the networks to storage provides the physical supplies in a period of shortfall. It is however in the nature of strategic—as opposed to commercial—storage that on average it will

not be used. Strategic storage therefore has additional costs to provide security of supply in abnormal times.

The observation has a profound consequence: in a competitive market strategic storage will be underprovided. Indeed, worse still, its very existence means that at times of shortage when it would be released into the market, prices will not be so peaky—thereby reducing profits to incumbents. As a result, it is hardly surprising that companies lobby against strategic storage.

The policy response is not only to provide for storage, but also to ensure it is paid for. But this requires two further steps: first, to set up a mechanism to define the level of strategic storage and to regulate its release under clear rules which market participants can understand; and second, to pay for it through an efficient mechanism. The latter is best achieved by auctioning the required capacity from time to time, so that a market in strategic gas storage can develop.

(v) Centralising European the framework for energy negotiations with Russia

Unbundling and strategic storage enhance physical robustness, but this needs to be carried through into negotiations with Russia, and here the challenge is to get away from bilateral bargaining between member countries and move towards a European-wide position. The correct response to Putin's strategy of encirclement by agreements with his potential competitors to the European market (Norway, Algeria, Qatar and the Caspian producers) is to introduce an element of centralisation in European bargaining.

There have been several attempts to provide such a European position. To date the main emphasis has been on the—hopeless—attempts noted above to get the Russians to open their pipes to third-party access through the Energy Charter and its Transit Protocol. As discussed above, this runs counter to the (rational) Russia strategy of monopoly control of pipelines through the Gazprom monopoly. It was never likely to happen—and it is extraordinary that the Commission wasted so much time trying to achieve this. Indeed, had the Commission really wanted to achieve this, it could have opposed Russian membership of the WTO—but it would have been unrealistic to limit WTO negotiations to the cause of energy, because the WTO negotiations were tied up with first the attempt

to get Russia to ratify the Kyoto Protocol and later because the Europeans wanted the Russians to help with Iran. The WTO negotiations are inevitably multi-issue in focus.

The gains from centralisation are considerable, but achieving these has proved extremely difficult to date, for two reasons. First, inevitably, an important element of national economic sovereignty would be transferred to the Commission. Second, given that a large number of companies and governments are involved on a day-to-day basis, coordination could be very difficult to achieve. For these reasons a number of incremental steps might be considered. These include: a requirement to exchange information through a Commission-led process; a co-representative role for the Commission; and a set of principles and guidelines set by the Commission for all negotiations.

(vi) The next PCA

Enhancing the role of the Commission in central energy negotiations with Russia requires a framework for engagement, and the Partnership and Cooperation Agreement (PCA) negotiations for its extension is an obvious starting point. The original agreement was struck during the Yeltzin years, with Europe in the driving seat. At this stage, Russia was weak, and the Europeans could assume that the transition to a normal market economy would involve Russia gradually adopting European norms. But as the agreement comes up for expiry in December 2007, Russia no longer sees itself in the position of a weaker supplicant. Its core demand is to be treated as an equal—to reassert Russian pride and prestige. A PCA between equals requires a rather different approach, with each side identifying its core interests and negotiating accordingly. Energy is clearly a part of this negotiation, and the two steps from the European side are first to recognise the reality (and rationality) of Russia's approach to the energy sector inside its borders (and to take this as given, rather than waste time in trying to change it); and second to look to a coordination of the European interests through a single negotiating point. The first recognises Russia's equality of status and its rights to do as it pleases internally (whether or not Europeans like the consequences); the second is designed to force Russia to move from a bilateral set of deals to a single main interface.

(vii) Reciprocity on ownership, strategic assets, golden shares and ring-fencing

Given a more realistic appreciation of Russia's energy strategy, the pressures on alternative sources of supply, the treatment of EU companies in Russia and the failure to ratify the Energy Charter or agree the Transit Protocol, the issue of Russian ownership of EU energy companies requires a more robust response. Russian control through ownership of EU pipelines and electricity transmission assets is—in this context—probably undesirable, as is the extension of Russian ownership to power stations, gas storage facilities and downstream supply businesses.

The problem is that such acquisitions have already begun, and indeed EU companies are already negotiating asset swaps—including BP and EON. Furthermore, in an attempt to reduce state protection within Europe, golden shares have gradually been removed. The starting point to reassess ownership rules is therefore already substantially compromised.

A first step is to establish the principle of ownership reciprocity: that any assets and asset classes in Russia which are closed to EU ownership should attract an equal closure within the EU. Such a principle would have substantial effects: it would for example close off pipelines.

In addition, there may be a range of 'strategic assets' for which some form of ownership controls may be deemed appropriate. The possibilities include: 'fit-and-proper person' tests; reasserting golden shares; designating strategic assets, and ring-fencing assets in the EU.

Under the first, it was noted above that many of the top ranks of Gazprom are closely linked to the security services and the FSB. It is far from apparent that directors of companies in the EU should have such links (as would for example CIA membership), since it creates a divided loyalty in exercising their functions as directors. Whilst such a prohibition might be hard to enforce, nevertheless the EU might look at company law and the particular responsibilities and duties of companies which run strategic assets.

Golden shares have had a long history—implicitly in state owned companies, and explicitly in the private sector. Whilst they have had an impact on competition, it is

nevertheless reasonable to designate some assets for which some forms of foreign ownership might not be appropriate. It is for example hard to imagine that EDF's nuclear programme could be substantially owned by a foreign player, and there may well be a rationale for making such limitations explicit and transparent, rather than sheltering this control implicitly through state holdings.

But to the extent that these possible controls have been already been weakened, there remains an alternative approach to foreign—and Russian—ownership. It is to licence such strategic entities, and place through licences special requirements in respect of conduct, obligations and financial security. This is the model followed for UK utilities, and it has survived a number of tests, the most notable being the consequences of the collapse of Enron at a time when it owned Wessex Water.

Thus, whilst reciprocity as a principle and some element of explicit golden shares/strategic asset protection may therefore be desirable, a more robust and longer-term approach would be to reduce the importance of ownership by increasing the protection and control of strategic assets through a licensing regime. It could be simple, limited but nevertheless effective, imposing European rules on any company owning and operating key energy assets in the EU.

(viii) Diversification, climate change and security of supply

This paper is not primarily concerned with the extremely important policy issues in relation to climate change, nor with assessing the effectiveness of EU climate change policies. But climate change policy inevitably affects the composition of electricity generation and the demand for fossil fuels, and hence will have an impact of diversity and hence security of supply. We noted above that the simplistic claim that climate change policies are consistent with security of supply objectives is incorrect: the overlap is far from complete, since coal improves security but is bad for climate change. Energy efficiency measures will reduce demand, but expansion of wind generation will have at best marginal impacts on external security of demand, and indeed as also noted above, the pursuit of wind generation might have the ironic effect of encouraging a renewed dash-for-gas for power generation in the next decade.

But of the large scale technologies to address climate change, nuclear and clean coal with carbon sequestration are the main candidates (one much earlier than the other). Access to nuclear power through the European grid would increase its potential market, and indeed France's nuclear power capacity provides a potential base load to Europe, making others' investments in renewables less disruptive to system stability and security. Common licensing regimes for nuclear technologies, and European streamlined planning and regulation processes would help to bring down the costs of nuclear.

(ix) European energy institutions

The steps recommended above have a common requirement: that energy policy and energy regulation is increasingly conducted at the European level, with inevitably more power to the Commission and less to the Member States. This may be politically difficult, but the European focus on grids, the implementation of strategic storage and a future PCA agreement require expertise, information, regulation and the ability to deliver.

There have been a range of proposals for such institutions, and the detailed specification is beyond the scope of this paper. The 2006 Green Paper and the 2007 January Package proposed some form of a European Energy Observatory, named and presented as primarily an informational exchange. Then there is the proposal to bring together the independent energy regulators into a single European energy regulatory body.

These proposals are designed with the politics very much in mind, and the pressures not to concede further powers to Brussels. But the results are fragmentation, and the inevitable institutional competition which might follow between the Competition Directorate-General in the Commission, sectoral regulators and informational bodies. A better and bolder approach is to create a single body—a European Energy Agency. This would not only avoid the conflicts, but also provide the basis for creating a single European voice in energy policy matters, and the basis for supporting a unified voice in respect of Russia.

7 CONCLUSIONS

Taken together, these considerations give rise to a clear and much more robust strategy for Europe's response to gas dependency and the rise of a more assertive Russia. It begins at home with the European grid, which has the considerable practical (and political) advantage of meeting not only the need to build external robustness, but also to provide a significant (and necessary) boost to the competition agenda. It would additionally increase Europe's competitiveness with the US, as it struggles to gain federal control over state regulation of utilities. The robustness to shocks is further enhanced by strategic storage, as outlined above. This would put at the disposal of the Commission (or new European Energy Agency) the means to respond to crises—and to withstand them.

Stripped of the rhetoric and diatribes about modern Russia under Putin, a dispassionate analysis of Russia's energy policy points to a core logic in the disparate individual events. Russia's monopolisation of its pipelines and its re-nationalisation of reserves is a rational way of exploiting its resources—of maximising its rents. In doing so it has been remarkably successful, through a mix of deliberate steps and opportunism. After seven years, Putin has suppressed the power of the oligarchs, built Gazprom into the central controlling company in the gas sector and regained control over most of Russia's oil and gas reserves. Putin facilitated a Gazprom strategy of striking bilateral deals, undermining attempts by the European Commission to provide a unified front, he has seen off the Energy Charter and the Transit Protocol, and he has built up the special relationship with Germany. He has, in short, run rings around the Europeans.

Europe's failure has been deep and historically rooted. The European nations have failed to subsume their own national interests—and those of the national champions—for the greater European good. They have kept energy largely national, and as a result the costs of energy have been higher and security lower. There is no European grid, and no European storage. There is not much of a European energy market.

Compounding the failures at the political level, as Europe faces up to a major period of replacing electricity generation capacity, its individual national policies (in the absence of a European energy policy) point in most cases to a new dash-for-gas. In part, this is because Europeans have opted in the main for renewables and energy efficiency as the primary ways of addressing climate change, and avoided the bigger challenge of how to replace the core base load capacity, and in part it is because no one is taking account of the consequences to everyone of each other's narrow interests in choosing gas. The national approach has the consequence of reducing diversity.

The first step in constructing a European energy policy is to recognise the scale of the past failures. The history of energy policy suggests that such a reassessment only takes place as the result of a crisis. The Ukrainian episode provided a warning. But the evidence from the 2007 March Summit is that this was no more than an early warning: the results are not sufficient to the challenges ahead. Indeed, since the March Summit bilateral deals have continued apace, steps towards interconnection have been very slow, and strategic gas storage has made almost no progress at all.

It does not have to be like this. The components of a European energy policy framework which addresses the Russian question are relatively simple and straightforward. The solutions are political, and will require the EU members to subsume their immediate interests to the greater good.

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