

European Union-Russia Relations: The Oil and Gas Sector in Mid-2002

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Monthly statistics on global energy trends show that in February 2002 the Russian Federation temporarily overtook Saudi Arabia as the world's premier oil producer.¹ This development was made possible both by the vigorous expansion of Russia's major oil companies over the last two or three years (see Table 1) and by the decision of Saudi Arabia, host to the greatest crude oil reserves of any single country, to obey an OPEC-sponsored cut in production. The Russian Government, while officially supporting that cut, refrained from meddling in the affairs of its listed oil companies. It was in its best interests to allow Lukoil, the sector leader, to ignore international pleas for constraint and instead to drive up production. Among other motives, the Federal Property Ministry had signalled its wish to auction off a 5.9 percent stake, part of its residual shareholding in the company. Any increase in Lukoil's productivity would be reflected in its value on Wall Street and therefore in the eventual rewards for the Ministry.

Russia's reemergence as a significant oil producer and exporter is nothing less than historical continuity from both the late nineteenth century and the recent communist past. Tsarist Russia, thanks to its rich fields in the Caucasus, surged ahead of the US to become the world's leading producer by 1898, but that momentum perished in the labour disturbances of the 1905 revolution. Soviet oil production peaked much later, in 1987-88, following heavy investment in the 1950s and 1960s in the oil and gas provinces of Western Siberia, the source of 418 of the record 624 million tonnes yielded at that time. With regard to the future, Mikhail Khodorkovsky, the chief executive of YuKOS, Russia's second-ranking oil company, is on record as assessing Russia's proved oil reserves at 20 billion tonnes.² For many years Russia has also led the world in natural gas production, delivering at a slightly higher rate than its only rival, the US, but laying claim to as much as forty percent of global reserves of a clean energy source whose use is increasing the world over.

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The European Union's hydrocarbons sector, by contrast, is in a very weak position. The EU as a whole was able to cover from domestic resources just over one sixth of its crude oil needs in 1990 and just over one fifth by 2001, respectively 17.6 and 21.8 percent (see Table 2). The largest consumers, Germany, France, and Italy — three of the world's key economies — are almost totally dependent on external supplies. The only significant oil producer within the EU is the UK, which, along with Denmark, fulfils its requirements from its North Sea licences. The UK's production levels, which peaked in the mid-1980s and again in the late 1990s, stood on average at least 40 percent above the levels of domestic consumption between 1980 and 2001. However, this shift had the consequence of eroding almost two thirds of the UK's proved reserves. These same trends are reflected in the wider context of the EU, except that around 1990 the UK moved to self-sufficiency (where the ratio of production divided by consumption exceeds 1), while, in stark contrast, the EU's other fourteen members made no real progress towards subordinating demand to domestic supply. In 2001 more than 96.25 percent of their oil requirements still

originated outside the Union. To put the situation in another way, the reserves of those fourteen members in 2001, some 300 million tonnes, equated to less than one quarter of the reserves of Norway. Aside from the fact that Norway has been a very modest consumer, Statoil, its national oil and gas corporation, has been an even more successful explorer and producer in the North Sea fields than its British peers. It has become a large-scale exporter of both oil and gas. Norway, moreover, is an international hydrocarbons player that sees few advantages in joining the EU in the medium term.

Proved natural gas reserves within the EU, despite the discoveries made by the UK and the Netherlands, are also very slight, having shown no overall enhancement during the past two decades. As with oil, the UK has expanded both gas production and consumption while still strengthening its trend towards self-sufficiency. However, both the Netherlands and the other thirteen members of the EU are heading inexorably in the opposite direction in the virtual absence of bankable new gas discoveries within their territories and off-shore licences. Although its oil reserves are stronger than its gas reserves, Norway continues to consume only a slender fraction of its total hydrocarbon production.

The US is also subject to declining oil reserves, as well as deteriorating levels of self-sufficiency across both the oil and gas sectors. Fortunately, it has ready access to oil from Central America and to gas from Canada, while also being dependent on Middle Eastern suppliers. The latter are significant energy partners of the European Union and nothing less than crucial for Japan. In 2001 the US sourced almost a quarter (24.05 percent) of its imported crude from the Middle East, while the corresponding figure for Europe was above three-tenths (30.92 percent, along with 31.18 percent from the former Soviet Union) and for Japan more than four-fifths (81.18 percent).³

Thus, it is not surprising that the countries of the European Union can claim only four fully-fledged vertically integrated oil majors. They are Royal Dutch/Shell, BP, ENI — the conglomerate in which the Italian government retains a cornerstone shareholding — and Paris-based TotalFinaElf.⁴ The reality is that, aside from wells in the North Sea, the significant exploration and production activities of all these companies take place outside the very modest prospective pockets of hydrocarbons that are spread across the European peninsula. Similarly, British Gas, whose interests include oil prospecting, is actively exploring for gas off Trinidad and in the Nile Delta and is a partner in the Karachaganak oil and gas condensate field in north-western Kazakhstan, alongside Lukoil, ENI, and other interests.

A survey of oil and gas production and consumption among states applying for EU membership merely reinforces this picture. Romania alone produces crude oil domestically on any scale, while nevertheless ranking ahead of Italy in that sphere (see Table 3). However, despite reductions in consumption, its reserves are small and shrinking (200 million tonnes in 2000 and only 100 in 2001).⁵ Yields declined from 8.1 million tonnes in 1990 to 6.3 in 2000 and 6.2 in 2001, while consumption exceeded production 2.31, 1.41, and 1.63 times respectively. Five other key candidate members, Poland, the Czech Republic, Slovakia, Hungary, and Bulgaria, on average consumed in excess of 40 million tonnes of crude oil annually in the period 1990-2001. With regard to gas, only two of these six nations, Hungary and Romania, can be described as domestic producers (see Table 4). Although Romania increased its reserves in the 1990s, it did so in a context of declining consumption and increasingly conservative levels of production. Consumption among the other five countries rose from 33.1 billion cubic metres in 1990 to 35.2 in 2000 and 42.2 in 2001.⁶

Thus, aside from the five transnational hydrocarbons players already mentioned (Shell, BP, ENI, Total, BG), the typical company in this sector in either Western or Central Europe has a rudimentary exploration affiliate and is otherwise a downstream operator — an oil refiner, a petrochemicals concern, or a retailer of a mix of water, electricity, and natural gas. Examples of each within the EU are refiner and retailer ÖMV of Austria, polyethylene terephthalate (PET) plastic bottle manufacturer Resilux of Belgium, and utilities transnational RWE of Germany. Typical companies among the candidate members are Poland's Rafineria Gdańska and Hungary's BorsodChem. In the countries applying for entry to the EU there are to date no significant multi-commodity utility retailers, as in Germany, but they will no doubt come into being as the privatisation process in Eastern Europe moves to completion.

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Investment in Russia's oil and gas sector by EU member countries has happened in fits and starts. Since the Russians operate on a scale befitting the size of their country, it is only the truly global players that have been successful. Indicative of this approach was Lukoil's 2001 takeover offers for the shares in Russian fields held by Aminex and SOCO, small British oil companies, and by Bitech, a Canadian oil explorer. In each case the Russian side swiftly consolidated its acquisitions, including Bitech's petroleum exploration licences in Egypt, Tunisia, Morocco, and Colombia.⁷

Shell, at present Russia's principal foreign direct investor (FDI), has focused on Sakhalin-2, one of only two among the six production blocks of the giant Sakhalin Island offshore oil and gas project that have been opened up to foreign corporations on the basis of a production-sharing agreement (PSA). Following the first commercial production of oil from Sakhalin-2 in July 1999, Shell raised its status to operator and 55 percent stakeholder. Its other interests include a joint 7.5 percent venture with state-owned Rosneft on the Caspian Pipeline Consortium and a strategic alliance with Gazprom, firstly in the super-giant Polar gas field in the Ob-Taz Gulf in the far north of Western Siberia, but most likely in due course as well in the co-development of Sakhalin-2. The gas deposits at Sakhalin-2 are estimated at 530 billion cubic metres, the equivalent of Gazprom's entire annual production in recent years.

BP's engagement has been primarily with Irkutsk-based upstream operator Sidanko, currently ranked in terms of production as ninth or tenth among Russian oil companies. In 1997 BP took a 10 percent stake in the company, only to spend the next few years in legal wrangling with domestic shareholders. In mid-April 2002, after reviewing the global energy situation, BP resolved to increase its holding in Sidanko to 25 percent. The company also holds a one-third stake in RUSIA-Petroleum, a Sidanko affiliate that is planning to build a gas pipeline to China from its Kovykta gas field, whose reserves are estimated at up to 1.6 trillion cubic metres. BP's profile in Russia is most visible in its chain of three dozen filling stations throughout Moscow.

ENI is known as the first organisation to negotiate the reticulation of natural gas from the Soviet Union to Western Europe. Regular supplies from Gazprom fields to Northern Italy began in 1974, with the extension of the Eastern bloc's pipeline to Austria. In recent years ENI's upstream subsidiary has established joint ventures with Lukoil and Astrakhan Region, while its gas-engineering subsidiary has been at the forefront of the development of Blue Stream. That joint venture with Gazprom is tasked with laying a 380-kilometre gas pipeline on the seabed at depths up to 2,150 metres from the Russian Black Sea coast to Turkey. Blue Stream, which is capable of

delivering 16 billion cubic metres of gas annually, will become a powerful new factor in the energy equation of the Black and Caspian Seas on its launch late in 2002.⁸

TotalFinaElf is currently committed to four projects in Russia. They are first of all co-development with Gazprom of the super-giant Shtokman gas field in the Barents Sea and a PSA linked to the Kariaga prospect in the Timan-Pechora oil and gas province. The third is oil prospecting alongside Rosneft on the Black Sea shelf adjacent to the Russian city of Tuapse, the site of an oil pipeline terminal and refinery. In addition, in late May, TotalFinaElf gained control of Anglo-Siberian, a small UK-listed company whose major asset is a stake in a project for developing the Vankor oil and gas field in Krasnoyarsk Region. This field has been assessed as containing 125 million tonnes of oil and 79 billion cubic metres of gas.⁹ TotalFinaElf is also considered an ally of YuKOS, Russia's most dynamic hydrocarbons company.

Although it is the leading economic power within the EU, Germany has engaged with the Russian hydrocarbons sector almost exclusively by way of joint ventures with Gazprom. While Ruhrgas, the leading investor, has accumulated a five-percent shareholding in Gazprom — mainly direct but also indirect — and with it a seat on the board for the company's executive chairman, Burckhard Bergmann, its role, curiously, remains that of a regional distributor and marketer of natural gas. The building of this very expensive stake was well timed, but it is hard to see the rationale for such a passive investment when Ruhrgas has perfectly functioning long-term contracts for the 35 percent of its gas that comes from Russia (equating to 17.885 billion cubic metres in 2001). Indeed, the alliance seems to be helping Gazprom most of all, in particular in the two companies' successful joint bid with Gaz de France for a 49 percent stake in SPP (Slovenský plynárenský priemysel), the Slovak natural gas network.¹⁰ The dynamics of the Gazprom-Ruhrgas relationship could change, however, if German utilities giant E.ON (formerly PreußenElektra) is granted permission to take over Ruhrgas. For a time, it was rival German gas company Wintershall, a subsidiary of leading chemicals group BASF, that advanced Germany's limited international exploration and production activities. Wintershall, which has been working the Urengoi gas field in Western Siberia with Gazprom for several years,¹¹ in September 2001 pulled out of another joint venture development, the super-giant offshore Prirazlom oil field in the Barents Sea. The immediate response from Gazprom was to sign on local partners, so that commercial production could begin on schedule in 2004.¹² In such a context it is difficult to envisage how Germany, notwithstanding its financial strengths and acknowledged engineering expertise, will gain visibility among Europe's vertically integrated hydrocarbon companies.

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A significant consequence of the high price of crude in 2000 and 2001 was the opportunity for Russia's oil majors to acquire downstream assets in various East European economies as a springboard to direct access to the economies of the EU. In December 2001 various international groups, including TNK (Тюменская нефтяная компания), lost out to local fertiliser manufacturer Agrofert in the privatisation of 62.99 percent of Unipetrol, the Czech Republic's key refining and petrochemicals concern. However, in late January 2002, TNK did reach agreement with Petrol, Slovenia's national oil refiner, to cooperate in oil processing and marketing throughout the successor states to Yugoslavia, with the Russians refining their crude in Slovenia and the Slovenes handling marketing and sales.¹³

And in December 2001 YuKOS won a 49 percent stake and management rights in Transpetrol, operator of Slovakia's 512 km oil pipeline. This underutilised line, whose annual transport capacity is 21 million tonnes of crude, forks on Slovak territory. One branch heads north into the Czech Republic and Germany while the other crosses Hungary to join the Adria oil pipeline. Adria terminates at the Croatian deepwater port of Omišalj, which can accommodate tankers of up to 500,000 dead weight tonnes. This move will enable YuKOS not only to gain access to new foreign customers and to advance its market share in Eastern Europe, but also to make "transatlantic delivery of Russian crude on a large scale realistic for the first time."¹⁴

An equally prospective strategy is Lukoil's development of an oil shipment route from Novorossiisk, Russia's major port on the Black Sea, which avoids access to the Mediterranean via the congested Bosphorus and Dardanelles. Tankers will carry crude oil to Burgas on the Bulgarian coast, to be refined at Lukoil's 58 percent-owned refinery, Bulgaria's only such facility and at the same time the largest on the Balkan peninsula. A pipeline with an annual capacity of 35 million tonnes currently under construction will then transport both crude oil and oil refined at Burgas to the eastern Greek port of Alexandroupolis. The same line will carry crude as far as the Thessaloniki refinery of Lukoil's new affiliate, Hellenic Petroleum.

Global leader Gazprom has also built up its East European assets in the past couple of years. A particular focus has been the petrochemical industries to which it has traditionally provided raw materials in conjunction with its Russian affiliate, Sibur. In a complex series of manoeuvres using associated companies such as CE Oil and Gas of Austria and Milford Holdings of Ireland, Gazprom seized control of Hungary's leading petrochemicals enterprise, Borsodchem, early in 2001. Borsodchem in turn holds a stake in the next largest such company in Hungary, TVK (Tiszai Vegyi Kombinát). The chain of cross-shareholdings extends to MOL (Magyar Olaj és Gázipari), Hungary's oil and gas company, which has retail interests in other parts of Central Europe. In turn, MOL signed an agreement in February 2002 with YuKOS to develop the Zapadno-Malobalyk oil field in Western Siberia. A further recent Lukoil development in relation to candidate members of the EU should also be noted. The company has broken into petroleum retailing in Cyprus by winning a tender to develop a network of filling stations. It controls more than 25 percent of the market and plans oil storage and transportation developments.

The key feature of Russia's hydrocarbon exports to the EU itself has been Gazprom's large-scale and long-standing delivery of natural gas by pipeline, not just to the former Eastern bloc countries, but also to Austria, France (where it has a large underground storage facility), Finland, Greece, Italy, Sweden, and Western Germany. At Rehden in Lower Saxony, Gazprom's joint venture with Wintershall operates a 4.2 billion cubic metre underground gas storage reservoir, the largest in Western Europe. Gazprom typically engages a downstream operator in each country to share an equity stake in a joint venture, such as FRAGaz (with Gaz de France) and Gasum OY (with Fortum of Finland). Within this same framework, Gazprom has since the late 1990s held a 10 percent stake in Interconnector, the pipeline linking Bacton in the UK with Zeebrugge in Belgium, making politically as well as technically feasible the delivery of Siberian gas by pipeline as far as Ireland.¹⁵ Gazprom's most recent new customer is Gasunie of the Netherlands, which has committed to 4 billion cubic metres of Russian gas per year from 2002, enough capacity to guarantee the management of demand peaks in Western Europe.

The exporting of Soviet oil to the EU was a more modest operation. New initiatives began only after the collapse of the USSR, with the formation of a dozen or

so Russian oil companies, which today are all still barely a decade old.¹⁶ Concentrating initially on building their corporate structures and identities, they spread their exporting wings only in the late 1990s. The earliest external aspirations focused on the traditional oil-bearing regions of the Caucasus and the Caspian Sea, areas which Soviet oilmen knew well. Such engagement began with Lukoil's joint ventures in Azerbaijan and has continued with exposure to the new on- and off-shore oil and gas prospects of Kazakhstan.

The levels of Russia's oil exports to specific EU countries before the last few years are less easy to identify than those of gas. Russia does not deal in liquified natural gas (LNG) on a large scale, instead delivering the fuel almost exclusively via the various pipelines. By contrast, Russian oil leaves the country not only by pipeline, but also by train and major ports to various western destinations. The product may either be refined oil or crude which is refined in the importing country or in an intermediary country. Lukoil, in particular, follows the latter practice by using its three large refineries in Romania, Bulgaria, and Ukraine to process oil destined for Western Europe. Its 49:51 joint venture with UK-based Rotch Energy as sole bidder for a three-quarters stake in the impending privatisation of Rafineria Gdańska opens up further such opportunities.¹⁷ TNK makes similar use of its Lysychansk refinery in Ukraine, while other Russian oil majors are expected to follow suit as they too acquire refining facilities abroad.

Russian oil corporates have so far made only one significant incursion into the EU itself. In April 2002, Hellenic Petroleum, Greece's largest corporation, chose Lukoil and the Latsis family as cornerstone stakeholders in its recently privatised vertically integrated enterprise, with respectively 16.10 and 7.07 per cent of the outstanding capital. This is an excellent match, because the Russians are guaranteed access to three refineries (with a maximum throughput per year of 12 million tonnes), export facilities throughout southern Europe and a large retail operation, while the Greek partners are assured ample refinery and petrochemicals feedstock. As well, the Latsis family wishes to merge its refining company, Petrola (whose annual capacity is 5 million tonnes), with Hellenic's other operations. This move has given Lukoil a foothold in all four of Greece's oil refineries.

YuKOS has adopted a quite different strategy, the acquisition of knowledge-based infrastructure, including pipeline management companies. In November 2001 it purchased the hydrocarbons and process technology subsidiaries of Aker Kvaerner, the debt-ridden Anglo-Norwegian oil and gas engineering company. In a similar vein, in March 2002 the company announced the appointment of Lord David Owen, the former British Foreign Minister, as head of its London-based affiliate, Yukos International UK.¹⁸ And finally, there is the prospect that a large Russian oil company, most likely Lukoil or YuKOS, will win spoils in the rationalisation of Germany's downstream oil industry as a consequence of a complex series of asset swaps among Deutsche BP, E.ON, and Ruhrgas in mid-2001. In order not to gain excessive market share, BP must shed some of its refining and retail interests, with a cashed-up Russian oil major as the likely bidder. Such a move would mark a breakthrough for Russia's oilmen into their largest single European retail market yet, as well as an important destination for their crude.¹⁹

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Russia's trading relations with the EU have shown explosive growth in recent times. In 2001 Russia exported goods and services valued at €54.4 billion — up 20.9

percent on 2000 — and imported €27.7 billion worth — up 40.6 percent on 2000. Thus it is not surprising that Norbert Walter, the high-profile chief economist of Deutsche Bank, remarked recently that, despite the existence of formal links, Russia is “partner number 1” of the European Union. He believes that a common economic area embracing Russia and Europe “will be established in a natural way.” Further, he stated that recent changes in relations between Russia and NATO should create new areas for cooperation. In this regard he remarked: “it is pointless for the Europeans to create their own military transport aviation when Russia already has such a technology at a reasonable price.”²⁰ Since Russian airframe manufacturers are pre-eminent in the heavy lift category and since both Boeing and Airbus have already engaged Russia’s aeronautical engineering expertise quite intensively,²¹ this assessment rings true.

More compelling still is the view that the EU, especially in its enlarged form, should step up its imports of Russian oil and gas. It is paradoxical that various submissions to the EU’s *Green Paper* on energy security²² propose a diversification of natural gas supplies away from such a reliable long-term contractor as Russia, in the direction of providers who have modest finite reserves or who deliver LNG rather than reticulated gas.²³ Curiously, the *Green Paper* is silent on the question of oil imports from Russia or, indeed, from any of the successor states of the former Soviet Union. The rationale for a shift of strategy is not merely that the transportation lines from the Russian fields are already in place, in the case of oil across to the Baltic, Black and Adriatic Seas and, in the case of gas, right across to Ireland. Nor is it just that Russia’s hydrocarbon deposits — and those in neighbouring Kazakhstan (mainly oil) and Turkmenistan (gas) — will outlive all others in close proximity to the EU, namely the North Sea²⁴ and North African fields. Moreover, considerable shortfalls will occur as a result of both Germany’s policy decision to phase out nuclear power generation over the coming two decades and of the EU’s resolutions regarding the closure of the Soviet Chernobyl-model (RBMK) nuclear reactors that are still in use at the Ignalina electricity plant in Lithuania. The EU has also expressed disquiet regarding the Soviet-designed VVER nuclear power generators at Jaslovské Bohunice (Slovakia), Kozloduy (Bulgaria), and Temelin (the Czech Republic). Ignalina will have to be completely shut down and the other plants at least partially closed or converted in the process of those countries’ accession to the Union.²⁵ Alternative energy sources will therefore be needed — in the case of Lithuania, a new source for the three-quarters of the country’s electricity that is currently provided by Ignalina.²⁶ The obvious answer to shortages of electricity generation feedstocks in both Germany and the former Eastern bloc states following the closure or phasing out of nuclear electricity plants is to switch to natural gas, with Russia as the logical long-term supplier.

Should the EU resist forming such a closer relationship with Russia, there are several alternative markets for Russia’s oil and gas. Lukoil is working on projects that would make economically feasible the exporting of Russian crude by tankers with a deadweight of 300,000 tonnes or more from one or more of Russia’s ports on the Barents Sea or from a Russian port on the Baltic Sea such as the recently opened terminal at Primorsk, near St. Petersburg. That company successfully operates small tankers from such ports year-round, thanks to its many years of experience in these harsh conditions, supported by multi-purpose vessels and a nuclear-powered icebreaker. The destination of the giant tankers would be the seaboard of the thirteen original American states, where it already owns a chain of 1,263 filling stations operating under the Getty Petroleum brand and holding a four percent share of the

market in this heavily populated region. As noted above, YuKOS hopes to export to the US from the Croatian deepwater port of Omišalj.

The US, which already imports small quantities of Russian oil, has been anxious to enhance that relationship in the post-September 11 environment in order to spread its oil importing risks among a range of large-scale suppliers. US-Russia relations have improved significantly since that time, with the US Commerce Department granting Russia market status on June 6, 2002, a move that will enhance Russia's opportunities to export to the US.²⁷

What for quite some time appeared to be merely wishful thinking and journalistic speculation suddenly came about on July 3, 2002. On that day, in the wake of the signing of a Declaration on an energy dialogue between Russia and the United States by Presidents Putin and Bush in Moscow on May 24, the supertanker *Astro Lupus* delivered on contract to YuKOS a 240,000-tonne shipment of Russian crude directly from Novorossiisk via the Dardanelles to the Port of Houston. Although the route is not ideal, US officials hailed the delivery as a step toward reducing dependence on Middle Eastern oil, while the vice-president of YuKOS, Mikhail Brudno, stressed that five of six more shipments on that scale would follow before the end of 2002.²⁸ The European Union should not lose sight of the significance of this development. One cautious American assessment of the Declaration is that, while Russian oil imports will help US security of supply, "the natural market for Russian oil is predominantly European."²⁹

With the leading American oil company, ExxonMobil, already active in the Sakhalin-1 project, the US might demand deeper involvement in oil and gas exploration and production in Russia. Such pressure could easily be accommodated and would no doubt be met by increased levels of Russian oil importing to the US. By the same token, the Russians are likely to insist on greater access to downstream activities in the EU before its vertically integrated oil companies themselves gain more exposure to Russia's vast hydrocarbons sector. In any event, the current US administration is fully apprised of the significance of Russia's oil and gas sector. Vice-President Dick Cheney came to the White House from the position of chief executive at Halliburton, the global oil services company, which has offices in Moscow, Nizhnevartovsk, the West Siberian oil centre, and on Sakhalin Island. It has been contracted by Lukoil and fifth-ranking Sibneft for several years now. National Security adviser Condoleezza Rice, in turn, was a director of Chevron from 1991 to 2001, and James A. Baker, Secretary of State in 1989-92 and long-time Bush family adviser, heads the law firm that advises such oil majors exploring in the Caspian region as ExxonMobil, Pennzoil, BP, and Unocal.³⁰

In the case of gas, Russia boasts several large fields in Eastern Siberia which give relatively ready access to the energy-starved industrial bases of China, Japan and South Korea. Since the infrastructure costs are very high, the pipelines would be dedicated to taking large volumes of gas in a single direction. There would be no economic rationale for building a spur line headed westwards. EU documentation shows an awareness of the risks of such a development, mainly in terms of higher prices for gas piped to Europe. Meanwhile, YuKOS is preparing to construct an oil pipeline into China.

The European Union should therefore act to ensure that its interests are protected in the course of these developments. One way or another, the EU, particularly following its next stage of enlargement, will confront the question of attaining new levels of cooperation with Russia. Should such developments eventuate,

they would undoubtedly strengthen Russia's longstanding political, economic and cultural affiliations with Europe, to the benefit of all parties.

Table 1: Russian oil and gas production, from 2000 to mid-2002

	crude oil produced million tonnes	crude oil exported beyond CIS million tonnes	oil refined million tonnes	gas produced billion m ³
LUKoil (domestic) 2000	75.60	28.40	36.30	4.75
LUKoil (domestic) 2001	76.10	33.00	29.00	
LUKoil (domestic) 1H02	37.38	13.32		2.18
	+19.04%	+14.68%		+19.44%
YuKOS 2000	49.55	22.40	26.70	1.50
YuKOS 2001	58.01	28.00	29.00	
YuKOS 1H02	32.43	11.74		0.96
	+16.99%	-5.51%		+15.20%
Surgut 2000	40.62		15.96	11.20
Surgut 2001	44.03		15.87	11.10
Surgut 2002 target	48.00			
Surgut 1H02	23.70	8.52		6.49
	+11.58%	+10.62%		+16.99%
TNK 2000	26.98		12.41	2.90
TNK 2001	26.47	13.19	11.80	2.60
TNK 1H02	18.02			1.00
	+13.3%			
Sibneft 2000	17.20	5.59	12.56	
Sibneft 2001	20.67	7.26	13.26	
Sibneft 2002 target	26.70			
Sibneft 1H02	12.21		7.91	
	+28.90%			
Rosneft 2000	26.75			11.26
Rosneft 2001	29.67			
Rosneft 1H02	7.85		4.20	3.22
	+10.20%		17.1%	+5.60%
Tatneft 2000	23.12			
Tatneft 2001	24.61			
Tatneft 1H02	12.21			
	-0.01%			
Slavneft 2000	12.27		16.79	0.72
Slavneft 2001	14.93		17.16	1.39
Slavneft 1Q02	3.845			.253
	+7.99%			
Gazprom 2000	9.50			523.20
Gazprom 2001				510.88
Gazprom 2002 target				530.00
Gazprom 1H02				264.64
				+1.26%
Russia total for 2000	323.30	128.30	173.00	555.16
Russia total for 2001	348.10	137.05	178.36	550.83
Russia target for 2002	365.00			
Russia 1H02	182.17	74.36	59.27	302.74
	+8.52%	+3.13%	+1.0%	+2.57%

Sources: Russian State Statistics Committee data; company press releases; RusEnergy, Russia Business Consulting, and *Vedomosti* reports. The 1H02 (first six months of 2002) preliminary figures for LUKoil, YuKOS, Surgut, TNK, Sibneft, Tatneft, and Russia are from AK&M, AFX News, and TatNews.ru (all July 3), for Rosneft from Dow Jones (July 10) and Bclyx.ru (July 12), for Slavneft 1Q02 (first quarter of 2002) from RusEnergy (4 April), and for Gazprom from Interfax (July 22). The figures for TNK reflect the acquisition and/or disposal of various affiliates such as Chernogorneft and elements of Sidanko at various times.

Table 2: World Oil and Gas Exploration, Production and Consumption

Domestic comparisons for 1980, 1990 and 2001

Area	proved reserves	production (p)	consumption (c)	p/c
Oil (Million tonnes)				
UK 1980	1975	80.5	80.8	0.996
UK 1990	510	91.6	82.9	1.105
UK 2001	700	117.9	76.1	1.549 +
Other EU 14 1980	25	12.8	562.8	0.023
Other EU 14 1990	390	10.7	497.2	0.022
Other EU 14 2001	300	21.0	561.0	0.037 +
Norway 1980	733	25.8	9.3	2.774
Norway 1990	1013	81.7	9.2	8.880
Norway 2001	1300	162.1	9.7	16.711++
USA 1980	4867	484.1	794.1	0.610
USA 1990	4507	417.1	781.8	0.534
USA 2001	3700	351.7	895.6	0.393 –
USSR 1980	8400	603.0	436.0	1.383
Russia 1990	<i>est.</i> 6054	515.9	249.7	2.066
Russia 2001	6700	348.1	122.3	2.846++
Total Middle East 1980	48240	927.4	129.4	4.115
Total Middle East 1990	89662	846.8	164.7	5.142
Total Middle East 2001	93400	1075.6	206.4	5.211 +
Gas (Billion cubic metres)				
UK 1980	700	36.0	46.5	0.774
UK 1990	560	45.5	52.4	0.868
UK 2001	730	105.8	95.4	1.109 +
Netherlands 1980	1760	77.4	34.0	2.277
Netherlands 1990	1720	60.6	34.4	1.762
Netherlands 2001	1770	61.4	39.3	1.562 –
Other EU 13 1980	800	35.3	118.4	0.298
Other EU 13 1990	930	44.3	162.0	0.274
Other EU 13 2001	650	45.7	246.8	0.185 –
Norway 1980	1210	26.5	n/a	-
Norway 1990	1720	27.8	2.1	13.238
Norway 2001	1250	57.5	4.5	12.778
USA 1980	5410	556.2	569.8	1.025
USA 1990	4710	514.2	540.3	0.952
USA 2001	5020	555.4	616.2	0.901 –
USSR 1979	25485	379.3	360.3	1.053
Russia 1990	<i>est.</i> 35625	597.9	420.1	1.423
Russia 2001	47570	542.4	372.7	1.455 +
Total Middle East 1980	21290	47.1	38.3	1.230
Total Middle East 1990	37500	101.2	97.5	1.038
Total Middle East 2001	55910	228.0	201.5	1.132

Sources: *BP Statistical Review of World Energy*, 1986, 1991 and 2002 and *BP Review of World Gas*, 1986 and 1995. Where necessary, barrels of oil figures have been converted to tonnes at the TotalFinaElf rate of 7.5:1.

Table 3: European oil production and consumption in 2000

Million tonnes				
	domestic production	domestic consumption	imports from Russia	proved reserves
<i>EU members</i>				
Austria	-	11.5	-	
Belgium-Luxembourg	-	33.1	-	
Denmark	17.8	10.4	0.125	100
Finland		10.5	1.535	
France		95.1	1.972	
Germany		129.5	22.303	
Greece		19.1	1.221	
Ireland		8.3	0.047	
Italy	4.6	93.0	18.994	100
Netherlands		41.8	4.667	
Portugal		15.3	-	
Spain		70.1	2.669	
Sweden		15.2	0.075	
United Kingdom	126.2	<u>77.6</u>	<u>0.715</u>	700
Total		630.5	54.323	
<i>EU applicant nations</i>				
Bulgaria		5.0	0.295	
Cyprus			3.463	
Czech Republic		7.9	3.988	
Estonia			1.025	
Hungary		6.9	6.304	
Latvia			0.206	
Lithuania	0.3		6.116	
Poland		20.6	19.464	
Romania	6.3	8.9	2.840	200
Slovakia		2.8	5.538	
Slovenia		<u>0.3</u>	<i>est.</i> <u>0.250</u>	
		52.4	49.489	
<i>Other European states</i>				
Iceland		0.9	-	
Norway	157.5	9.4	-	1200
Switzerland		12.2	5.461	
Turkey		31.5	0.993	
Russia	323.3	123.5		6700

Sources: *BP Statistical Review of World Energy 2001*, Russian Government data; and Владимир Разуваев, 'Зачем России становится мировой державой?', *Мировая энергетическая политика*, 2002, no. 2. [cited 1 May 2002]. Available from World Wide Web: <http://www.wep.ru/arhiv/2002/2/356.shtml>

Table 4: European gas production and consumption in 2001

Billion cubic metres						
	domestic production	domestic consumption	Russia	<i>imports by pipeline from</i>		Algeria
				Norway	Netherlands	
<i>EU members</i>						
Austria		7.4	5.22	0.50		
Belgium-Luxembourg		14.7		5.12	8.00	
Denmark	8.4	5.1				
Finland		4.1	4.54			
France		40.7	11.18	12.87	5.80	
Germany	17.0	82.9	33.20	19.89	20.20	
Greece		1.9	1.48			
Ireland		4.0				
Italy	15.5	64.5	19.50	1.10	7.10	21.85
Netherlands	61.4	39.3	0.13	5.50		
Portugal		2.5				2.20
Spain		18.2		1.22		6.54
Sweden		0.8				
United Kingdom	105.8	95.4		2.20	0.50	
Unspecified	4.8	-	-	-	-	-
Total EU	212.9	381.5	75.25	48.40	41.60	30.59
<i>EU applicant nations</i>						
Bulgaria		2.6	2.90			
Cyprus						
Czech Republic		8.9	7.50	1.70		
Estonia						
Hungary	2.7	11.9	7.95			
Latvia						
Lithuania		2.8				
Poland		11.4	7.50	0.40		
Romania	12.6	17.5	2.80			
Slovakia		7.4	7.90			
Slovenia		-	0.68			0.36
		62.5	37.23			
<i>Other European states</i>						
Croatia			1.08			
Norway	57.5	4.5				
Switzerland		2.8	0.40		0.60	
Turkey		15.5	10.93			
Russia	542.4	372.7				

Sources: BP Statistical Review of World Energy 2002 and Russian Government (Gazexport) data

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- ² "Oil deficit in Europe could reach 2 mln barrels a day by 2010," Interfax report, May 29, 2002.
- ³ *BP Amoco Statistical Review of World Energy 2002*, 18.
- ⁴ The next largest company of this type within the EU is Madrid-based Repsol YPF.
- ⁵ *BP Amoco Statistical Review of World Energy 2001*, 4 and *BP Amoco Statistical Review of World Energy 2002*, 4.
- ⁶ *BP Amoco Statistical Review of World Energy 2001*, 25 and *BP Amoco Statistical Review of World Energy 2002*, 25.
- ⁷ John Helmer, "Lukoil buys 3 foreign oil stakes in 6 weeks," *The Russia Journal*, 4, no. 35 (128), September 7-13, 2001.
- ⁸ Douglas Frantz, "Russia's New Reach: Gas Pipeline to Turkey," *New York Times*, June 8, 2001, A1; and Kemal Ilter, "Blue Stream Closes Door to Turkmen Gas," *Turkish Daily News*, July 14, 2001, Features Section.
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- ¹¹ Darius V. Snieckus, "Russia prominent in Wintershall's plans," *Oil & Gas Journal*, 99, no. 20 (May 14, 2001): 46-48.
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- ¹⁷ RIA Novosti report, July 24, 2002.
- ¹⁸ Radio Free Europe/Radio Liberty Newswire, 6, no. 43 (March 6, 2002).
- ¹⁹ Anon., "Lukoil zieht es nach Deutschland (Russen bekunden großes Interesse an Joint Venture mit der E.ON Tochter Veba Öl)," *Handelsblatt*, June 29, 2001; and anon., "Yukos nimmt deutschen Markt ins Visier," *Die Welt*, May 4, 2002.
- ²⁰ RIA Novosti report from Washington, May 23, 2002.
- ²¹ See Lyuba Pronina, "Airbus Spreads its Russian Business Wings," *Moscow Times*, May 22, 2002, 5; and Joseph Boris, "Boeing envoy urges end to aircraft tariffs," *The Russia Journal*, 5, no. 20 (163), May 31-June 6, 2002.

²² *Green Paper – Towards a European Strategy for the Security of Energy Supply* (Luxembourg: Office for Official Publications of the European Communities, 2001), *Technical Document*, 26-30 and *passim*.

²³ [Cited 30 May 2002]. Available from World Wide Web: http://europa.eu.int/comm/energy_transport/livrevert/default_en.htm.

²⁴ See David Knott, “North Sea reserves life pegged at 25 years,” *Oil & Gas Journal*, 95, no. 37 (September 15, 1997): 26; *Green Paper...*, 25.

²⁵ In its four-page response to the *Green Paper*, the Bulgarian Nuclear Society has voiced a range of concerns about the environmental and economic flow-on effects of closing Kozloduy.

²⁶ *Green Paper...*, 34. Consumption in 2001 from Ignalina and Kozloduy was equivalent to 2.6 and 4.5 million tonnes of oil respectively: *BP Amoco Statistical Review of World Energy 2002*, 34.

²⁷ Sabrina Tavernise, “U.S. decides to Recognize Russia as a Market Economy,” *New York Times*, June 7, 2002, W1.

²⁸ Kristen Hayes, “Houston Gets First Russian Oil Shipment,” Associated Press; and Arkady Orlov, “First Consignment of Russian Oil Comes to the US,” RIA Novosti (both July 3, 2002); and Михаил Классон, “Наша нефть — в Америке,” *Vremia MN*, July 5, 2002.

²⁹ Editorial, “Russia, the US, and oil,” *Oil & Gas Journal*, 100, no. 22 (June 3, 2002), 17.

³⁰ See Armen Georgian, “U.S. Eyes Caspian Oil in ‘War or Terror’,” *Foreign Policy in Focus*, April 30, 2002. [cited 3 May 2002]. Available from World Wide Web: http://www.fpif.org/outside/commentary/2002/0204oil_body.html