

Fueling the Future: The Prospects for Russian Oil and Gas

FIONA HILL AND FLORENCE FEE

Following the terrorist attacks against the United States on 11 September 2001, growing tensions in American relations with Middle East states coincided with the efforts of the Organization of Petroleum-Exporting Countries (OPEC) to impose production cuts to shore up petroleum prices. U.S. plans to overthrow Saddam Hussein's regime in Iraq, the worsening crisis in Israel and Palestine, a backlash in Saudi Arabia against long-term U.S. military presence, and the possibility that it would become the staging ground for an attack on Iraq all led to questions in Washington, D.C., about the wisdom of continuing to rely on Middle East oil. Discussions of possible alternatives threw the spotlight on Russia, along with other oil-producing areas in the Caspian Basin and West Africa.

Since 1998, Russia's oil industry has experienced a significant revival after a cataclysmic collapse in output in the 1990s. Some of its oil companies have achieved significant production increases, produced ambitious plans to break into new energy markets, expanded into international upstream and downstream operations, and launched a public relations offensive to present themselves as players in the global economy.¹ Against this backdrop, Russia, which is not a member of OPEC, mounted a fierce public resistance to the organization's demands that it cut its production and exports. Ultimately, in December 2001, Moscow agreed to a token export reduction of 150,000 barrels per day for the winter quarter. That reflected normal seasonal cuts implemented by Russian oil companies operating in the extreme cold of Siberia and bottled in by winter port restrictions. Moscow's snub to OPEC was obvious.

Russia suddenly became one of the new great hopes of Western efforts to diversify U.S. and world oil supplies beyond the Middle East and Persian Gulf. As American energy secretary Spencer Abraham noted during a November 2001 visit to Moscow, Russia seemed to be "emerging as a separate nucleus of the energy equation."² In the *Washington Post* in December 2001, David Ignatius asserted that "Moscow is on its way to becoming the next Houston—the global capi-

Fiona Hill is a fellow in the Foreign Policy Studies Program at the Brookings Institution, in Washington, D.C. Florence Fee is the CEO of F. C. Fee International, a private energy consulting company based in London.

tal of energy.”³ By January 2002, Russia’s President Putin had been hailed by a Canadian newspaper as the “world’s new oil Czar,”⁴ and the Russian media was replete with commentary on Russia’s role as the new power broker in international energy markets. In an extended article in the March/April 2002 issue of the preeminent American journal *Foreign Affairs*, two energy analysts went so far as to suggest that Russia—together with the energy-rich states of the former Soviet Union clustered around the Caspian Basin (Azerbaijan, Kazakhstan, Turkmenistan, and Uzbekistan)—was poised to challenge Saudi Arabia for global energy dominance. Russia, they argued, could soon displace Saudi Arabia and OPEC in oil markets in the United States, Europe, and Asia.⁵ The authors, along with media commentators, saw increases in Russian oil production and new reserve finds in the Caspian Basin as evidence of substantial future export capacity. In addition, they depicted the Russian energy industry as an independent actor, emancipated from state control (unlike the state-held oil companies of OPEC members), which was eager to help the United States and the West break free from OPEC dependency by becoming a reliable, long-term energy partner.

Certainly, the Soviet Union was a major international energy player in the 1980s, and Russia has assumed much of that mantle since its dissolution, but in 2002 Russia’s grip on the attention of the media and international energy analysts is due more to a confluence of events and circumstance than a serious assessment of the country’s energy capabilities. In most discussions of Russian energy, the extent of Russian oil production capacity is not questioned. Differences between Russian gas and oil assets are not distinguished. Little distinction is made between Russian energy and that of other Caspian Basin states, and the relationship between the Russian energy industry and the state is not questioned. The idea that Russian energy can take on Saudi Arabia and OPEC has become a cherished media myth, despite even the protestations to the contrary of Russian industry figures such as YUKOS chairman and CEO Mikhail Khodorkovsky.⁶

Countering the Myths of Russian Energy Capabilities

As a counterpoint to those discussions—on the combined basis of a decade of research on Russian and Caspian energy issues, many years of on-the-ground experience in the oil industry in Kazakhstan and Russia,⁷ and numerous personal interviews with members of the Russian energy sector—in this article we review recent developments in Russia’s oil industry. We offer an analysis of the evolution and current state of Russia’s energy sector, the challenges that Russia faces in expanding its reach into global energy markets over the next two decades, and an assessment of the prospects for Western investment in the Russian oil and gas industry.

Although Russia does have the potential to break into some specific global energy markets as a supplemental supplier to unstable states in the Persian Gulf, it cannot displace the Middle East as the world’s primary supplier of oil, either in the near term or the long term. Even if Russia’s oil production can be increased, its oil reserves are considerably smaller than those of the key countries of Saudi Arabia, Iraq, Kuwait, the United Arab Emirates, and Iran. However, Russia is to

gas what Saudi Arabia is to oil. Over the next decade, continued crises in the Middle East and increasing concerns about pollution and global climate change will inevitably focus attention on Russia's vast reserves of cheaper, cleaner natural gas.

Securing reliable, high-growth twenty-first-century markets for its pipeline gas and liquefied natural gas is among Russia's top priorities. But success in international gas markets will not come easily in spite of Russia's potential. It can only be assured through major increases in Russia's current production, significant international as well as Russian investments in infrastructure, and the timely development of fully functioning gas markets in Asia. The development of Russia's own economy will also have an effect on its gas production. Over the last decade, gas has been the main source of value to subsidize and sustain the vast portion of Russia's economy that it inherited from the Soviet Union, which has been unable to make the transition to a market economy environment. In the absence of major structural changes in the economy, the demands on the gas industry will continue to increase, impinging on its ability to improve efficiency and boost exports.

Energy is also one of the few strategic assets that Russia has left after the collapse of the Soviet Union. As players in the world economy, Russia's oil and gas corporations give Russia a voice in the outside world, especially in Russia's immediate region and in Europe. Over the last two years, following a period of privatization in the 1990s, the Russian government has gradually and steadily increased its ties with and influence over Russian energy companies, effecting, in essence, a creeping renationalization of the sector. Energy, and energy companies, are important tools for the state in promoting Russian foreign policy. That fact, and the vital importance of oil and gas to the domestic economy, may not augur well for the future of foreign investment in the industry.

Petrodollars and the Russian Economy

Both oil and gas have been the mainstays of the Soviet and now Russian economy for decades. Indeed, a direct correlation can be made between oil prices and government revenues. In 1981, after the 1970s OPEC oil embargoes sent oil prices to as high as \$39 a barrel, the USSR became the world's largest oil producer, with the bulk of its production exported for hard currency.⁸ World oil price declines later in the 1980s struck a major blow to the Soviet economy. From 1999 to 2001, Russia experienced the reverse fate: an economic bonanza, as oil prices increased from around \$10 a barrel in December 1998 to a peak of around \$33 a barrel in September 2000.⁹

Oil and gas account for nearly a quarter of Russian GDP, about half of its export earnings, and around a third of government tax revenues. Every dollar increase in the world market price of a barrel of petroleum translates into as much as \$1.5 billion of additional yearly budget revenues.¹⁰ Thanks in large part to high oil prices, at the end of 2001 the Russian economy experienced a major boom, which replenished state coffers and enabled the government to balance its budget, pay wages and pensions, and meet its international debt repayment obligations.

The Doldrums of Russian Oil

High prices helped Russia's oil industry to rebound after a major slump. The 1990s were the doldrums of the Russian oil industry. Beginning in 1993, the sector was gradually carved up and partially privatized, starting with the creation of a Russian state oil company, Rosneft. A series of vertically integrated oil companies were then established, combining oil exploration, production, refining, distribution, and retailing. The first of these were LUKoil, YUKOS, and Surgutneftegaz. A total of eleven such companies were eventually created, some on a regional basis, such as Tatneft in Tatarstan and Sibneft in Siberia.¹¹ This division and privatization of the sector opened the door for new players to enter the previously restricted arena of Russian oil.

The decade was marked by the rise of new Russian oil barons or "oligarchs," such as Mikhail Khodorkovsky of YUKOS and Boris Berezovsky and Roman Abramovich of Sibneft. These were men with no previous experience in the Soviet oil industry. They used capital from private banks, close political connections to the Russian government, and financial support to Boris Yeltsin in his presidential campaign to secure title to the crown jewels of Russian energy assets. Instead of investing in their new holdings in Russia, energy oligarchs focused on developing new ways of evading taxes, stripping cash from assets and moving cash offshore, and eviscerating minority shareholders' rights.¹²

In many respects, the oligarchs' behavior was perfectly rational. Oil production in Russia in the 1990s was unprofitable, although there was still some money to be made in refining. Between 1990 and 1995, because of the sharp contraction of the Russian economy, domestic demand for oil declined by more than 40 percent, causing a glut on the internal market. Lucrative oil exports were constrained thanks to capacity limitations in the country's pipeline system. In spite of production declines in the 1990s, Russia's export pipelines and the Black Sea and Baltic ports serving them continued to operate at full capacity (often exceeding industry safety limits), with no room for additional volume. Given full export pipelines, low domestic demand, and a lack of investment capital, there was little incentive, or opportunity, for Russian oil companies to try to increase production. Between 1988 and 1998, Russian oil production dropped by about 50 percent from over 11 million to around 6 million barrels per day (bpd).¹³ In that period there was a sharp reduction in drilling and little or no investment in new wells or in new technology to increase recovery from depleted wells.

International investors who made exploratory forays into the Russian oil industry were increasingly scared away. They saw their profits threatened by unstable regulatory regimes and constantly changing export taxes, and they frequently had their ownership stakes in Russian oil companies diluted through the creative legal and accounting practices of their partners. In one celebrated case, British Petroleum's stake in a Russian oil company, Sidanko, was completely undermined when another Russian company, TNK (backed by the Alfa financial group), took over one of Sidanko's subsidiaries. The subsidiary held an important gas field that had been the main reason for British Petroleum's initial investment. By 1999, many international investors, including pioneering U.S. compa-

nies such as Phibro Energy and Anglo-Suisse, which had been involved since 1990 in one of the first joint ventures in the Russian oil industry, had pulled out of Russia entirely. Russian oil seemed like a money-losing proposition.¹⁴

Out of the Doldrums

A sea change came after Russia's August 1998 financial crisis and the devaluation of the ruble, and the subsequent—although entirely unrelated—increase in world oil prices. The devaluation drastically lowered ruble-denominated input costs for Russian energy producers, while an oil price rise of almost 300 percent (from the lowest to highest point) between 1998 and 2001 boosted revenues even without new investments and increases in production.¹⁵ The years 2000–2001 saw the revival of the Russian oil industry and the attempt of Russia's oligarchs to transform themselves into international oilmen.

Low input costs and high energy prices gave Russian oil companies the capital to improve production efficiency without infusions of new investment. New pipelines and port facilities helped to ease the pipeline export constraint. In 2001, individual oil companies significantly increased production over 2000 levels, with the largest increase coming from TNK at 42 percent. YUKOS, Russia's second largest oil company in terms of reserves and output after industry giant LUKoil, increased its production by over 17 percent between 2000 and 2001, and it has based its future strategy on increasing production by 33 percent by 2005.¹⁶ The international reach of Russian companies expanded along with production. Russian companies increased their stakes in upstream production in the Middle East and in downstream ventures in the United States and Europe. Russian oil companies are exploring for oil in Algeria, Sudan, Libya, Colombia, and Vietnam. In 2000, LUKoil acquired a chain of gas stations along a stretch of the American East Coast and planned to strengthen its position in the United States by refining crude oil.¹⁷ In Eastern Europe, LUKoil acquired refineries in Ukraine, Romania, and Bulgaria; and YUKOS purchased a 49 percent stake in Transpetrol, a Slovak crude pipeline operator overseeing a network that includes part of the main export pipeline from Russia to Western Europe.¹⁸

In the same period, YUKOS chairman and CEO Mikhail Khodorkovsky launched an aggressive public relations campaign to transform himself from the bad boy of Russian oil into a respected member of the international corporate community—including becoming a major donor to charitable causes in Russia.¹⁹ Sibneft head Roman Abramovich became the literal savior of Chukotka, a bankrupt, isolated, but energy-rich region on the Bering Sea surrounding Sibneft's holdings. In 2000, he ran for governor and then proceeded to supplement the region's meager budget with his own money.²⁰ Russian oil companies also reformed their management and governance structures to placate, if not entirely accommodate, the interests of international minority shareholders. Western senior managers were hired and independent Western directors appointed to boards by firms such as YUKOS and TNK. LUKoil has considered similar additions.²¹ New regulatory instruments and fixed tax rates were implemented by the Putin government, which seemed to indicate an improvement in the investment climate for international operators. In

August 2001, British Petroleum brokered an agreement with TNK and the Alfa Group to guarantee its 10 percent stake in Sidanko.²² And in October 2001, Exxon Mobil announced a \$4 billion commitment over the next five years to its Sakhalin I oil and gas development project in the Russian Far East. That was Russia's largest single foreign investment to date in any economic sector.²³

By the end of 2001, Russia's oil industry seemed to have the wind back in its sails. Oil production had increased by around 1 million bpd to stand at just over 7 million bpd. New stretches of export pipelines, including the Baltic Pipeline System, had been completed, and a new Russian oil terminal at Primorsk on the Gulf of Finland had been brought into operation to increase export capacity by a projected 12 percent. Plans to construct additional port terminals and expand existing pipeline networks were under way.²⁴ Russia also concluded an ambitious agreement with the European Union (EU) on long-term energy cooperation that would increase its oil exports to its neighbor. The EU currently imports 53 percent of Russia's total oil exports, accounting for some 16 percent of EU oil consumption.²⁵ With the potential future enlargement of the EU to the east and countries like Poland (already a major importer of Russian crude after Germany and Italy), Russia was poised to be a major force in EU oil supply.

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The Limitations of Russian Oil

This progress notwithstanding, the Russian oil industry still had limitations at the end of 2001—a fact that was subsequently lost in the euphoria of Moscow's standoff with OPEC. Although Russia falls into the category of top producing and exporting countries, it ranks much lower in proven oil reserves. Russia ranks seventh in the world in proven oil reserves, with only 5 percent of world oil supply in contrast to Saudi Arabia with 25 percent, Iraq with 11 percent, Kuwait, the United Arab Emirates, and Iran all with 9 percent, and Venezuela with 7 percent. Those six countries are all OPEC members.²⁶

Although OPEC's share of the world oil market has dropped from 70 percent to 40 percent since 1970, as production levels have stagnated and other international suppliers have expanded their exports, OPEC collectively still accounts for 77 percent of total world oil reserves.²⁷ Because of this reserve base, institutions that keep a close eye on energy developments—such as the International Energy Agency (IEA)—fully expect OPEC's market share to increase again over the next two decades. According to the IEA, although there will be a short-term increase in non-OPEC oil production in 2000–2010, further long-term increases in world production in 2010–20 will primarily be from Middle East OPEC countries.²⁸

Saudi Arabia is anticipated to account for a significant proportion of that increase. It already has a spare production capacity of 3 million barrels per day and a highly competitive cost structure with only about \$1.50 per barrel production costs. In contrast, Russia has little spare capacity, total production costs that run at an average of \$10–\$12 a barrel, and no single seaport capable of handling two-hundred to three-hundred-deadweight-ton tankers, which would make transportation more economical.²⁹

Russia's limitations are further emphasized by the fact that oil price increases, not production increases, were mainly the boon of the oil industry in 1999–2001. Although Russia increased its oil production by 1 million barrels per day in those two years, it cannot easily continue to increase oil output at the same annual rate of half a million bpd. In fact, in spite of production increases by individual companies like TNK and YUKOS, the Russian oil industry as a whole does not seek to boost production in the immediate future. LUKoil, the company with the largest reserves, only increased its output by about 1 percent in 2001 over 2000 and its business strategy is concentrated on more lucrative oil refining and asset expansion outside Russia.³⁰

Russian energy analysts consider recent increases to have been a short-term improvement thanks to the reactivation of idle wells, drilling improvements, and the exploitation of some new fields, among other factors. Although most would agree that Russia can reach 8 million bpd by 2005, there is not yet sufficient evidence to support further production gains.³¹ Even though, at its peak, Soviet production was around 12 million bpd, this was *Soviet* production, not Russian production. With the collapse of the USSR, Russia has lost the rich Caspian Basin offshore and onshore oil fields in the Central Asian states and Azerbaijan. Although the reserves of Kazakhstan and other Caspian Basin states may increase in coming years, outside Sakhalin Island, the Northern Seas (including the Barents and Beaufort Seas), and some fields in the smaller Russian sector of the Caspian, there are no expectations of new reserve finds in Russia. Existing fields in western Siberia will not yield much incremental production.

Switching from Oil to Gas in Europe

Many in Russia's own energy complex share this pessimism about future reserve potential. As a result, Russian oil companies such as LUKoil, YUKOS, and TNK are expanding their activities in the gas sector. Russia's gas reserves far exceed those of any other country. With 32 percent of proven total world reserves, Russia outranks Iran at 15 percent, Qatar at 7 percent, Saudi Arabia and the United Arab Emirates at 4 percent, and the United States and Algeria at 3 percent.³² Single-handedly, Gazprom, Russia's giant gas company, holds 25 percent of the world's gas reserves. It controls 90 percent of Russian gas output and is Russia's largest earner of hard currency (with 60 percent of these earnings generated through sales to Europe). Its tax payments account for around 25 percent of total federal government tax revenues.³³

Although oil remains the dominant global fuel source, natural gas is increasing in importance. Gas now accounts for about 23 percent of world energy con-

sumption and will soon displace coal (at just over 24 percent) in world markets.³⁴ Increased use of liquefied natural gas, or LNG, and improvements in pipeline and ocean-going transportation (such as LNG carriers) have transformed gas from a local commodity into an international business. According to British Petroleum's 2001 *Statistical Review of World Energy*, 27 percent of gas consumed globally now crosses international borders. LNG produced in Southeast Asia is now transported as far as Western Europe.³⁵

Environmental concerns and significant local reserves have made natural gas the fastest-growing energy source in the EU. Gas accounts for 22 percent of EU energy consumption (although oil still accounts for 44 percent), and Russia has long been the dominant supplier of European gas. For its part, the EU purchases 62 percent of Russia's total gas exports, which in turn accounts for 20 percent of the EU's overall gas consumption.³⁶ Since 1997, Russia has also been the major supplier of gas to Turkey, now accounting for around 70 percent of its gas imports.³⁷ The Russian government seeks both to increase its exports to Turkey and double its exports to Europe over the next twenty years through its energy cooperation agreement with the EU.

In the 1990s, the Russian gas industry avoided some of the most acute problems faced by the oil industry. The gas sector was not divided into a myriad of smaller companies and remained a monopoly in which the state retained the dominant share. But Gazprom has had its own share of corruption and asset-stripping scandals. In the 1990s, prime Gazprom assets were transferred to Itera, an off-shore company of dubious provenance that industry analysts suspected to be a front for Gazprom management and their family members. Major European gas companies made considerable investments in the industry, including Germany's Wintershall and Ruhrgas and the Italian company ENI, which helped to cement Gazprom's ties with Europe and the EU, as well as with other regional markets. However, those companies have found it difficult to ensure guarantees for their investment and to secure production-sharing agreements, and in early 2002, Wintershall "temporarily withdrew" from a major Gazprom-Rosneft joint venture as a result of concerns over its position.³⁸

However, ENI, together with Gazprom, is now involved in one of the most ambitious and challenging projects in the international gas industry, the Blue Stream project, to construct an underwater pipeline across the Black Sea to transport Russian gas to Turkey. The pipeline is scheduled for completion in 2002. Gazprom also intends to construct a huge trans-European pipeline from its Yamal peninsula in northwest Siberia to Germany; construct a bypass pipeline around Ukraine to avoid siphoning and illegal gas sales from the existing line; and enlist Finland in the construction of another pipeline across the Baltic Sea from northern Russia to Germany.³⁹ All of this underscores Gazprom's efforts to consolidate its position as the primary gas supplier to Europe.

Expanding into Asia

In addition to Europe, Northeast Asia has emerged as an important prospective market for Russian gas since 2000. The region already accounts for about 20 percent

of world energy consumption, and its energy demand is projected to rise sharply over the next twenty years.⁴⁰ Although China is almost completely self-sufficient in coal, its domestic gas reserves are extremely small. Japan and South Korea are also energy poor. All three countries would like to meet their energy demand through increased gas consumption to mitigate the costs of pollution from coal and dependency on Middle East oil. China is especially eager to shift from coal to gas due to the heavy environmental toll associated with burning coal, as well as intense international pressure on environmental standards. The expansion of the domestic gas network is a major priority in the Chinese government's current five-year plan.

In 2001, the Chinese government announced the construction of a \$14 billion,

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four-thousand-kilometer-long pipeline from its own gas fields in the western province of Xianjiang to Shanghai by the end of 2003.⁴¹ Gazprom joined China’s PetroChina in an agreement with Shell and the Russian gas pipeline construction company Stroitransgaz to participate in the construction of this pipeline.⁴² Gazprom also concluded deals with three

of China’s largest energy companies to create another series of joint ventures and put forward several serious options to construct other overland pipeline routes to serve the Chinese, and possibly South Korean and Japanese, markets from Russian fields. These initiatives signaled Russia’s and Gazprom’s intent to tap into Asian demand to secure important future markets.

Indeed, Russia’s geographic location straddling Europe and Asia and the location of its gas fields seem to offer considerable prospects for breaking into Asian markets. Three main gas-bearing regions considered too remote from Europe for exports west—Yakutiya in eastern Siberia, Kovytka near Lake Baikal, and Sakhalin Island—are reasonably well situated to serve Northeast Asia. Sakhalin is particularly promising in both oil and gas, with access to world sea routes, close proximity to the Chinese, Korean, and Japanese coasts, considerable LNG potential, a consortium of international investors including Exxon and Shell, and export pipelines to Japan already planned.⁴³ In early 2002, with such ambitious export and construction plans, record high export revenues of \$14.5 billion, and net profits of \$3.32 billion, the future for Gazprom and Russian gas seems particularly promising.⁴⁴

More Ambition Than Capability? The Limitations of Russian Gas

Although Russia’s location favors its expansion in Asian gas markets, the economic picture is not quite so rosy. Gazprom’s hopes to penetrate European and Asian markets simultaneously are not likely to be realized soon. In spite of its huge reserves, Gazprom’s gas production has decreased slightly over the last few years

as western Siberian gas fields—which accounted for 80 percent of Russian output in 2000—have begun to decline. Production from these fields is expected to fall sharply over the next two decades.⁴⁵ In 2001, although export revenue and net profit increased, Gazprom's export volume was actually 4 percent short of its targets and had fallen by 3 percent over 2000 volumes.⁴⁶ As in the case of oil, high commodity prices, not increased production, boosted Gazprom revenues in 1999–2001.⁴⁷

Over the last decade, Gazprom has failed to upgrade its existing pipeline infrastructure or to develop new fields. Siberian fields have particularly difficult geological profiles, not to mention serious climatic challenges. Only one new natural gas field, Zapolyarnoye, in the Yamal peninsula has been brought on line. This production is slated for the Blue Stream pipeline to Turkey, and Blue Stream will be the first major new export project that Gazprom has completed in more than a decade. Industry analysts question Gazprom's ability to increase its natural gas exports to Europe, as well as to construct new pipelines and meet the anticipated long-term contracts with Northeast Asian countries. They conclude that Gazprom will need to access additional gas reserves in neighboring Central Asia, where regional gas production already flows into the Russian system.⁴⁸ In addition, Gazprom has an estimated \$11–13 billion in debt, which means that if it is to develop new fields, construct pipelines, and rehabilitate existing corroded pipelines it will have to acquire international investment partners that are able to provide significant capital investment.

In Northeast Asia, in addition to supply constraints, Gazprom faces considerable competition from other pipeline gas and LNG exporters, including Qatar, Australia, Indonesia, and Malaysia. Even if it can provide the supply, demand is uncertain in the near-term. Japan, China, and South Korea still need considerable deregulation and domestic infrastructure improvement to allow energy markets to develop. Japan lacks a domestic natural gas pipeline network and is in the midst of a financial crisis. For South Korea, although it already has substantial gas infrastructure in place, the overall size of the market is too small at present to justify the construction of overland pipelines from Russia through China, which would also have to traverse North Korea. In spite of government priorities, China lacks the infrastructure for major domestic gas usage and the country still needs natural gas transportation and urban distribution networks.⁴⁹ China's goals are also to increase its natural gas use from 3 percent of total energy consumption to 10 percent by 2020, which means that the most significant increases in demand still lie well in the future.⁵⁰

Consolidating in the Caspian Basin

Given the limitations of its existing oil and gas reserves, Russia has increasingly looked south to the former Soviet fields of the Caspian Basin over the last several years. Here, energy reserves are primarily located in Azerbaijan and in three Central Asian states: Kazakhstan, Turkmenistan, and Uzbekistan. Kazakhstan and Azerbaijan have the most significant oil reserves, but all four countries have substantial natural gas resources that have yet to be fully developed, with Turkmenistan accounting for the largest reserves.

The Caspian Basin was the birthplace of the Russian oil industry before the Russian Revolution. Its deposits were developed by the USSR but Soviet energy planners increasingly shifted their focus to the Volga and Urals regions, as well as Siberia after World War II, leaving behind substantial untapped resources equivalent to the volume of the North Sea. Russia's own oil reserves in the Caspian are smaller than those of Azerbaijan, Kazakhstan, and Turkmenistan. Although the Caspian Basin energy resources represented a single unit under the Soviet Union, they do not today. Since the collapse of the USSR, Azerbaijan, Kazakhstan, Uzbekistan, and especially Turkmenistan have tried to nurture their own independent aspirations for export production and to some degree offer potential competition to Russia in regional markets. The governments of Azerbaijan, Kazakhstan, and Turkmenistan have all tried to find ways of bypassing Russia in oil and gas exports and of penetrating the same energy markets in Europe and Asia where Russia wants to expand.

In the 1990s, the growing interest and investment of U.S. and international energy companies in the rich Caspian oil and gas deposits led to sharp differences between Russia and the United States, as well as to struggles between Russia and regional countries over the demarcation of the Caspian Sea, title to oil fields, and the direction of export pipelines. For most of the decade, Russia tried to preserve the old Soviet-era legal regime of the Caspian, which would have precluded the division of the subsea natural resources as well as the surface body of water. Moscow also mounted a resistance to U.S. plans to break Russia's monopoly over export routes by assisting Kazakhstan, Turkmenistan, and Azerbaijan to construct new pipelines that would transport Caspian oil and gas across the Caspian Sea and the Caucasus to Turkey.

The discovery of more substantial reserves than anticipated in the Russian sector of the northern Caspian and the sudden increase in world oil prices led to a shift in Russia's position. The Russian government became more amenable to the delimitation of the Caspian Sea to secure title to its own assets. It engaged in bilateral negotiations and concluded demarcation agreements with other littoral states. As they prospered and transformed themselves into international players, Russian oil companies also searched for new production and export opportunities in the region. Companies such as LUKoil became members of international consortia exploring and exploiting Caspian fields, and they began to advocate engagement with U.S. energy firms in the development of the Caspian Basin.

Over the last two years, Russian oil and gas companies have steadily consolidated their positions in the region. In October 2001, a new pipeline to transport oil produced by a Chevron-led consortium in Kazakhstan's Tengiz field to Russia's port of Novorossiisk came into full operation after considerable delays and disagreements. The final agreement on the pipeline made the Russian government the largest shareholder and reserved 25 percent of capacity for Russian crude oil exports, once a link to the main Russian export pipeline network is constructed.⁵¹ The Russian government has also begun to pursue closer cooperation with Kazakhstan on other upstream oil and gas projects in the Kazakh sector of the Caspian.

In addition, at the end of 2001, again after years of dissent, LUKoil indicated that it was considering participation in the U.S. government's pet project, the Baku-Tbilisi-Ceyhan pipeline (BTC) from Azerbaijan's fields across the Caucasus to Turkey. LUKoil, which has a 10 percent stake in the principal Azerbaijan oil-producing consortium, had initially pushed for the old Soviet route from Baku through Russia to Novorossiisk to remain the major export pipeline for Azeri oil. Support for BTC also came from YUKOS, which is seeking to increase its stakes in the Caspian and has signaled interest in greater cooperation with U.S. oil companies.⁵² YUKOS head Mikhail Khodorkovsky indicated that the construction of BTC would relieve increasing pressure on the Bosphorous Straits, through which the bulk of Russian crude exports are transported by tanker from Novorossiisk to Europe, and that BTC—along with planned trans-Balkan pipelines—would eventually provide additional export opportunities for Russian producers. In March 2002, a semiformal announcement was made by Azerbaijan's state oil company, SOCAR, indicating that LUKoil would soon formally join the sponsor group of the BTC.⁵³ A month later, in April 2002, LUKoil backed away from participation in the sponsor group, apparently having not received approval from the Russian government to proceed. LUKoil leadership did express, however, the company's interest in eventually using the completed pipeline to ship oil from the Caspian.⁵⁴

The Geopolitics of Caspian Gas

Oil was the focus of the 1990s in the Caspian, but gas will be the subject of this decade. The Caspian Basin has emerged as a major new global source of gas. Gazprom, in conjunction with ENI, is already exploiting Russia's Caspian gas reserves in Astrakhan, marking the first major expansion of a Russian company into Caspian gas.⁵⁵ Iran, with the world's second largest gas reserves after Russia, is also a Caspian state and has ambitions to increase its exports to regional markets. Together, Russia and Iran hold about half of proven world gas reserves and are likely to dominate regional production and markets.

Although substantial new gas fields have been discovered off the coast of Azerbaijan, offering export opportunities to Turkey that will compete with Russian gas supplies, Russia's ability to dominate Central Asian gas production and exports is much more significant and extensive than its hold over Caspian oil. Central Asian gas fields are poorly situated for European markets and equally distant from markets in Northeast Asia. All existing gas export pipeline routes run through Russia, and international energy companies have failed to make the same inroads into Central Asian gas production as they have in Caspian oil.

As a result, Gazprom has developed a strategy to export Russian gas at high cost to markets in Western Europe and leave Turkmenistan to supply gas at low cost to former Soviet states such as Ukraine, which have fallen behind in their energy payments to Russia. Ukraine has opted to purchase Turkmen gas through a combination of cash and in-kind payments on a long-term contract basis, but Turkmenistan's exports to Ukraine through Russian-owned pipelines have high transit tariffs and restrictions imposed on them. In 1997, Gazprom denied Turkmenistan access to the Russian pipeline network in retaliation for a payments disagreement, completely

rupturing its gas exports. Since then, Turkmenistan's gas exports have faced additional hurdles. In November 2000, for example, the Turkmen government had to threaten to sue Azerbaijan and Kazakhstan to secure payment of gas debts.

Uzbekistan's prospects are also limited. Its gas is exported to the local Central Asian market to supply energy-poor Tajikistan and Kyrgyzstan (which can also barely maintain their payments) and the population centers of southern Kazakhstan. Some Uzbek gas also flows to Russia through the Central Asia-Central Russia pipeline system. Although Kazakhstan has the potential to become a major gas exporter, its vast gas reserves are underutilized even for the domestic market, as the major fields have yet to be connected to the existing gas pipeline network.

“President Putin’s proposal for a Eurasian gas alliance emphasizes the tight relationship between the Russian energy sector and the state.”

Kazakhstan is thus dependent on both Uzbekistan and Russia for gas imports.⁵⁶

In short, lack of pipeline infrastructure is the main impediment to increased gas production and exports from Central Asia, constraining Turkmenistan's and its neighbors' efforts to become independent, low-cost suppliers of gas to regional consumers.⁵⁷

Unlike oil, Central Asian gas cannot be shipped by tanker and rail across alternative routes until new pipelines are built. In the late 1990s, China briefly flirted with an idea to construct a gas pipeline from Turkmenistan through Uzbekistan and Kazakhstan to Beijing, and ultimately Korea and Japan. The project was quickly shelved when China resolved to concentrate on pipelines from its own fields and from Russian fields in Siberia.⁵⁸ U.S.-backed plans in the 1990s for a trans-Caspian gas pipeline from Turkmenistan to Azerbaijan and then to Turkey also stalled in 2001.⁵⁹

Although the prospects for routes west to Turkey and east to China seem gloomy, Turkmenistan has made some small progress on expanding its export options south. Shortly after the dispute with Russia in 1997, it opened a gas pipeline to Iran. In the same period, the Turkmenistan government also backed a proposal from an energy consortium headed by U.S. company Unocal to construct a Central Asian gas pipeline from Turkmenistan across Afghanistan to supply Pakistan and then India. The proposal was abandoned in 1998, with the intensification of civil war in Afghanistan, but has since been revived by Afghan and Pakistani leaders as plans for the postwar reconstruction of Afghanistan progressed in early 2002.⁶⁰ Although the discussions in Afghanistan and Pakistan led to a great deal of renewed speculation in the media about the prospects for a Central Asia-Afghan pipeline, Turkmenistan seems likely to be cut off at the pass yet again, unless such a pipeline is made a particular priority by regional and international governments.⁶¹ Iran, as well as Russia, has plans to break into the gas markets of South Asia.

In spite of past offers to act as a transit country for Turkmenistan's gas, Iran has engaged in intensive negotiations with both Pakistan and India to export its own gas. It has proposed pipelines to Pakistan that would bypass Afghanistan⁶² and explored pipelines to India that would also bypass Pakistan using a deep-sea route under the Persian Gulf.⁶³ Although current insufficient gas demand and war-mongering between India and Pakistan make pipelines from Iran as well as from Central Asia difficult to contemplate in the short-term, Russia could also be poised for participation if they are constructed. Gazprom is heavily involved in Iranian gas development and has formulated its own southern pipeline plans. The Russian government has also stressed the importance of developing a north-south trade and communications axis among Russia, Iran, and India, linking Asia and Europe in what they present as a cheaper, more cost-effective transport corridor to other sea and overland routes.⁶⁴ In its public announcement of priorities for 2002, Gazprom sketched out three, not just two, major markets for the company: Europe, Northeast Asia, and South Asia.⁶⁵

In line with these priorities, in January 2002, in meetings in Azerbaijan and Turkmenistan, Russian president Putin announced a proposal for the creation of a Eurasian gas alliance among Russia, Uzbekistan, Kazakhstan, and Turkmenistan. Headed by Moscow, the alliance would coordinate Caspian Basin gas production, ensure Central Asian access to Russian export pipelines, and guarantee long-term Russian purchases of Central Asian gas for its domestic market.⁶⁶ The thrust of the proposal would address concerns about falling Gazprom production by feeding Central Asian gas into the Russian domestic and export system and would ensure the Russian energy industry a major role in the construction of any gas pipelines south to Pakistan and India, as well as east to China from Central Asia. Indeed, Russian energy experts speculate that Russia will try to feed Central Asian gas through the Russian pipeline system and then into future gas pipelines from Russia to China rather than let Kazakhstan or Turkmenistan construct their own export pipelines to China.⁶⁷ Russia's pipeline construction company, Stroitransgas, is emerging as an important player in these projects.

Creeping Renationalization: The Russian Energy Sector and the State

President Putin's proposal for a Eurasian gas alliance emphasizes the tight relationship between the Russian energy sector and the state. In spite of the breakup of the Russian oil industry after 1993, the energy industry as a whole remains state dominated. In the oil sector, the government maintains majority control over Rosneft (100 percent) and Slavneft (50 percent, with Russia's neighbor and close ally Belarus owning the other 50 percent). It has a significant stake in the Eastern Oil Co. (37 percent) as well as in LUKoil (14 percent).⁶⁸ However, individual companies have very different relations with the state that do not always reflect the state's share in the enterprise. Some companies take their direction from the state, such as Zarubezneft, which functions more or less as an arm of the Russian Foreign Ministry. Others, like Rosneft and Slavnet, in spite of their majority state-ownership, try to straddle political and commercial imperatives by fighting continuous battles with the government bureaucracy to operate as independently as possible

but still access investment capital from state sources. Meanwhile, other private companies, such as YUKOS and LUKoil, with commercial, market-driven business investment strategies, continue to be strongly influenced by the state.

In the gas sector, although the Russian state's stake in Gazprom is technically only 38 percent, the government is the largest shareholder in the company and the close linkages between the two are clear. The most telling indication of this was the appointment of Viktor Chernomyrdin as Russia's prime minister under Boris Yeltsin between 1992 and 1998. Chernomyrdin was Soviet gas minister from 1985 to 1989 and then the first chairman of Gazprom from 1989 to 1992. In 1995, he founded the centrist political party "Our Home is Russia," or *Nash dom Rossiya*, which was seen as the government party or "party of power" and was jocularly termed *Nash dom Gazprom*—"Our Home is Gazprom"—by Russian political commentators.⁶⁹

The joke underscored what many Russian analysts see not so much as the close association of the giant gas company with the state, as a virtual "state within a state," but as the state's dependency on the company—"the state within Gazprom." Indeed, at the beginning of Putin's presidency, Gazprom was seen to be slipping out of state control: a dangerous proposition for a company that accounts for 7 percent of Russia's GDP.⁷⁰ Not only had critical Gazprom holdings been "sold" to Itera without the knowledge of Gazprom's board, but the company's management under Chairman Rem Vyakhirev was suspected of transferring other funds and assets to Gazprom insiders. In essence, Gazprom's managers were turning the jewel in the crown of Russia's energy industry into their own personal fiefdom. The state fought back.

In 2001, with Vyakhirev's contract coming up for renewal, Gazprom board members, led by former Russian deputy prime minister and finance minister Boris Fedorov, with the clear backing of the Russian government, led a public relations offensive against the company's managers in Russia and the West.⁷¹ Bringing Gazprom back under control was presented as a test case of the new Russian government's commitment to economic reform. Eventually, in a surprise move spearheaded by the Russian president in May 2001, Rem Vyakhirev was replaced by a young Putin protégé from St. Petersburg, Alexei Miller, an outsider to the gas industry who was expected to clean up Gazprom operations. Vyakhirev was transferred to the company board and deprived of direct control over assets.⁷²

Gazprom and oil companies with a major Russian government stake have become particularly prominent in sensitive energy ventures and regions of strategic importance to the state. Rosneft and Gazprom, for example, have established a new joint venture, Sevmorneftegaz, to exploit offshore and onshore deposits in areas such as Shtokmanskoye and Prirazlomnoye in Russia's "Northern Seas" and fields in western Siberia.⁷³ The Northern Seas, which encompass the entire Russian sea coast along the Arctic shelf, are believed to hold the majority of projected Russian oil and gas reserves potential.⁷⁴

The Russian government has also pushed Gazprom to become the dominant gas producer and transporter in East Siberia and the Russian Far East, with a view to capturing the Chinese gas market. Although Gazprom announced a formal

“Gazprom East” strategy in 1997, and Vyakhirev declared that he saw a prime market for Gazprom’s growth in Asia, where the gas market was absolutely empty or devoid of competition,⁷⁵ the former chairman had focused almost exclusively on Gazprom’s expansion in European markets. Vyakhirev did initiate some modest plans to build a new gas production center in the eastern Irkutsk region (which could eventually be linked by pipelines to China, North and South Korea, and Japan) and created an eastern subsidiary in Tomsk, Vostokgazprom, which acquired companies holding licenses to gas fields in East and West Siberian fields. But these efforts were undertaken largely to placate critics in the industry and government.⁷⁶ Vyakhirev’s removal and Miller’s appointment, which preceded the conclusion of a friendship treaty between Russia and China in July 2001, underscored a new determination in the Russian government to move aggressively east as well as west.

The Russian government has become increasingly concerned about the uneven nature of its relationship with China over the last decade and is keen to redress the imbalance. In 2000, total trade between Russia and China amounted to around \$8 billion (a major increase over previous years), in stark contrast to a trade volume between China and the United States of \$116 billion.⁷⁷ The July 2001 Sino-Russian treaty called for increased sales from the Russian oil, gas, nuclear, and armaments industries to China and laid particular emphasis on future close cooperation in the energy sector. But, even more than trade, Russia is concerned about China’s demographic boom and its own population decline in Siberia and the Russian Far East along the border with China, a region where significant oil and gas and other strategic Russian mineral deposits are located. Russia’s Primorsky Krai, for example, has a population of just 2.2 million, in contrast to 36.9 million in the neighboring Chinese province of Heilongjiang.⁷⁸ Russian analysts, especially in the Far East, have raised fears of Chinese encroachment through migration into Russia and eventual claims on Russian territory (given violent territorial disputes between the two countries in the 1960s).⁷⁹ As a result, the Russian government wants to promote the optimal development of the energy resources of the region and to increase positive interdependencies with China.

Russian energy companies are important tools in the implementation of this and other state policies. Energy companies and the government are very closely tied together through formal and informal networks. Government appointments related to the energy sector are made carefully. In June 2001, for example, besides replacing Vyakhirev as the head of Gazprom, Putin appointed a new energy minister and a new minister for natural resources, both with government experience stretching back to the Soviet period and ties to the security services from which Putin himself originates.⁸⁰ The two positions oversee the operations of Russian energy companies and oil and gas production. Many heads of Russian oil companies, such as Vagit Alekperov, president of LUKoil, are former government officials. Alekperov, a respected veteran of the Soviet oil industry, was the former deputy and first deputy of the Soviet Oil Ministry.⁸¹

Those like Mikhail Khodorkovsky of YUKOS who entered the industry in the 1990s did so only with the blessing of the government and have roots in the Sovi-

et elite. Khodorkovsky was a leader in the Soviet youth organization, the *Komsomol*, in the 1980s, then an advisor to former Russian prime minister Ivan Silaev, before becoming the head of MENATEP, one of Russia's first financial conglomerates, in 1990–91. In 1993, he also briefly served as Russia's deputy minister of power.⁸² In contrast to Khodorkovsky, who has maintained good relations with state officials, oil barons who have subsequently openly opposed the Russian government and state policies, such as Boris Berezovsky, the erstwhile head of Sibneft, have been squeezed out. Berezovsky now lives in exile in London.

Since Putin assumed the Russian presidency in January 2000, there has been what amounts to a creeping renationalization of the Russian oil industry. LUKoil

frequently promotes state interests, as is evident from the tone and thrust of speeches by its president, Vagit Alekperov. In an interview with a Russian newspaper in April 2001, for example, he was explicit in making the connection between Russian foreign policy and the activities of Russian energy companies. He discussed how the expansion and investment

“The real power in the Russian oil sector lies with the Russian ‘oil generals,’ the inheritors of the Soviet tradition.”

of the Russian oil industry in neighboring states of the former Soviet Union and Eastern Europe over the previous two years had helped to strengthen political ties with Russia, noting, “As an example, I am certain that Bulgaria, whose oil sector is almost entirely owned by Russian companies, will not conduct an anti-Russian foreign policy in the foreseeable future.”⁸³

In early 2002, Alekperov underscored the linkage between Russian energy and the state even further by acting as an intermediary to help improve a contentious relationship between Moscow and Baku. Alekperov is an ethnic Azeri who was born in Baku, graduated from the Azerbaijan Institute of Oil and Chemistry, and then made his career in the Tyumen oil fields of western Siberia. In January 2002, he was instrumental in paving the way for a visit by Azerbaijan's President Heidar Aliyev to Moscow that resulted in the conclusion of a number of important agreements on a long-disputed radar installation and the division of the Caspian Sea, which are seen to have stabilized Russian-Azeri relations.⁸⁴

Like Alekperov, other Russian energy figures have assumed quasi-commercial, quasi-political stances—with the strong backing of the government—which strengthen the position of the Russian state. In the standoff between Russia and OPEC over production cuts, for example, it was YUKOS head Mikhail Khodorkovsky who was the most outspoken opponent of production and export reductions. But his comments and interventions were closely coordinated and orchestrated with the government, and his arguments against cuts were echoed by Russian government officials, including Prime Minister Mikhail Kasyanov.⁸⁵

“Oiligarchs” and Oilmen

Oil barons like Khodorkovsky have become the most prominent figures in the Russian energy industry in the West. But although they dominate media discussions of Russian oil, they are only part of the picture. The real power in the Russian oil sector lies with the Russian “oil generals,” the inheritors of the Soviet tradition. Vagit Alekperov and Vladimir Bogdanov, head of Surgutneftegaz,⁸⁶ are among them; Michael Khodorkovsky is not. The former are “Siberian-tested” oil veterans who have close ties to other principals in the sector and possess considerable power and influence within the oil industry. Khodorkovsky and other newcomers might be referred to as “*oiligarchs*” rather than oilmen.

Before the collapse of the USSR, the Soviet energy sector was a huge and imperfect industry, but it was also very professional, competent, and innovative. Its greatest impediment was the imposition of central planning (Gosplan) production directives and investment constraints. Soviet oilmen knew how the industry worked (and still works today) and were rooted in regional networks of other energy professionals. What they lacked after the dissolution of the USSR was technology, capital, and international contacts. They were not well traveled, although most of them, again like Alekperov, had studied, trained, and then worked across the whole of the Soviet Union, including in places like Grozny in Chechnya, Kazan in Tatarstan, Baku in Azerbaijan, and in Tyumen and other energy-rich areas of Siberia. Khodorkovsky, Berezovsky, and others with political connections in Moscow and St. Petersburg and contacts abroad quickly filled the vacuum that the oilmen left internationally, but they still remain today more political than industry figures.⁸⁷ As a result, there is a divergence in goals and methodology between the oilmen and the “*oiligarchs*.”

The oilmen (and they are all men) have well-thought-out business investment strategies encompassing reserves potential, cost factors, infrastructure issues, and commercial sales factors. Their business decisions are driven by solid industry criteria. They have clear technical, economic, and commercial goals. They set considerable store on being respected members of the Russian oil and gas community, and they look up to the “oil generals” like Alekperov, the men from the “oil patch,” who carved out vast areas of the Soviet wilderness for oil production before the breakup of the USSR. The oilmen are networked by the educational institutions they attended (such as the Gubkin Russian State University of Oil and Gas in Moscow, and the oil and gas institutes in Grozny, Kazan, and Baku) and by the region they worked in (such as the Caucasus, Volga, Urals, and western Siberia). Although some are more politically adept than others and have more connections in Moscow, they all share the ambition to build world-class Russian international energy companies on the scale of a Shell or an Exxon that will prove the durability of the Soviet energy industry. In addition to Alekperov and Bogdanov, some of the oilmen include Sergei Bogdanchikov, head of Rosneft, and former Russian oil and gas minister Yuri Shafranik.

The oilmen view oiligarchs like Khodorkovsky as pure creatures of the state. They see them as being driven primarily by political, financial, or state security factors and, as a result, confused about their objectives and lurching between

strategies. The oiligarchs have no background in the upstream Soviet oil and gas industry, and their networks are very different. Thus, although Sibneft head Roman Abramovich was trained in oil marketing, he is not seen as an oilman. The oilmen also consider that the oiligarchs, given their backgrounds and goals (to achieve enormous wealth and power as quickly as possible), are not really committed to building world-class oil companies. They believe that members of this group will eventually move into politics or sell their companies and expand into another industry to create a second fortune. Khodorkovsky's efforts to become the first great Russian philanthropist and Abramovich's activities as governor of Chukotka and his possible presidential ambitions are seen as cases in point.

This being said, all leaders of the Russian energy industry share highly developed survival skills. To succeed in what all agree to be the back-stabbing, cut-throat, political "parquet floor battlefields" of Moscow takes some skill and daring and acumen. The fate of Alexei Miller, the new chairman of Gazprom, may ultimately illustrate the last observation. Miller, who was brought to Moscow from St. Petersburg by Putin, without any background in the industry beyond a short stint as a deputy energy minister, is viewed by the Russian media as failing in his new position and likely to succumb to the stress of trying to maneuver through the ruthless world of Russian energy politics. Moscow analysts expect him to be eventually replaced as chairman of Gazprom, potentially by one of the oilmen, if he fails to establish himself as a player.⁸⁸

An Ill Wind for Western Investment in Russian Energy?

The nature of the Russian energy industry, its personalities, and its peculiarities may not bode particularly well for the future of Western investment in the sector, in spite of the initial optimism of U.S. and other international energy companies and a general perception that Western investment is key to the success of the Russian oil industry.⁸⁹ Although international investors have made relatively successful forays into Azerbaijan and Kazakhstan, with industry giants Chevron and British Petroleum, for example, engaged in major Caspian offshore and onshore ventures, and many other large and small international companies holding stakes in Caspian consortia, few companies have made significant inroads in the upstream Russian oil sector. As discussed earlier in the article, the failings of Russian oil in the 1990s did much to frighten investors away. But in spite of the evident improvements since 1999, Russian oil industry insiders see few prospects for major foreign investment in Russian energy when it comes to securing equity in Russian reserves.

In many respects, this is due to the repercussions of the 1998 Russian financial crisis and ruble devaluation, which proved to be such a boon for the Russian oil industry. In 1999–2001, with the sudden increase in world oil prices, Russian oil companies became cash rich while sitting on top of huge reserves. This changed the calculus for foreign oil companies that sought a significant upstream foothold in Russia. Prior to 1999, Russian oil companies had been reserve rich but cash starved. They desperately needed capital and had been forced reluctantly into a series of joint ventures with international oil companies. The Russian government

also introduced production-sharing agreements (PSAs) to provide the basic legal and contract arrangements for foreign companies to invest in energy projects in Siberia and the Russian Far East. But ultimately, neither the government nor the Russian oil companies wanted to share reserves, and as world oil prices rose there was a political backlash in Russia against the idea of permitting foreign companies to acquire control and ownership of Russian strategic energy assets.⁹⁰

In spite of nominal support for PSAs from President Putin, influential figures such as Anatoly Chubais, former vice prime minister and current head of Russia's electricity monopoly, Unified Energy Systems, German Gref, Russia's minister for economic development and trade, and Alexei Kudrin, Russian deputy premier and finance minister, have all spoken out against production-sharing agreements, asserting that neither they nor the involvement of multinational energy companies are necessary for the future development of Russia's oil and gas industry. Crucial amendments to the 1995 law on PSAs, which would facilitate their implementation, have yet to be passed by the Russian parliament. And only three international oil companies have made substantial progress in the Russian energy sector on the basis of PSAs, two of which are on Sakhalin Island: Exxon for the Sakhalin I project, and Shell for Sakhalin II. In each case, the PSAs were agreed with the Russian government in the early 1990s—in December 1993 for Exxon, and in March-April 1994 for Shell.⁹¹ France's Total-Elf-Fina's Kharyaga oil field project in the Timan Pechora region of western Siberia is also in production under the terms of a PSA.

Although beyond PSAs there seems to have been progress on other fronts for foreign investors, some of the changes will not necessarily result in an improved business climate for international oil companies. For example, although Russian companies have recently improved relations with minority shareholders and tried to present themselves as responsible corporate citizens, they have undertaken those steps primarily to enable themselves—Russian companies—to break into foreign markets and international upstream and downstream ventures. Russia's oil companies want to cast off the stigma of the scandals of the 1990s and operate on a level playing field with other international firms. Russia's oil industry executives see themselves taking over Western businesses in the next ten to fifteen years—not letting Western firms break further into Russian oil. At a minimum, Western oil companies will have to brace themselves for a head-to-head competition with Russian oil companies in the coming decades.

Even companies that already have a solid footing in the Russian energy sector, such as British Petroleum, face considerable challenges in conducting business. British Petroleum's consortium with TNK and other companies, Russia-Petroleum, which is developing the giant Kovykta gas field in Irkutsk, may eventually find itself embroiled in a struggle with Gazprom for the operator license to the field. Gazprom has announced plans to bring all major gas fields in eastern Siberia under its direct control, including those already owned by other producers, as part of its strategy to tap into the Chinese gas market. Russian industry analysts anticipate that Gazprom will attempt to gradually squeeze out British Petroleum, first by trying to acquire a blocking stake in the Russian operator of

Kovykta, and then by trying to secure full control over all future pipelines from the field.⁹²

The consensus among many in the Russian energy industry is that only Shell has had real success in Russia, and then because of some very specific factors that cannot be easily replicated. Shell established itself early in Sakhalin as operator of the Sakhalin II project through the “Sakhalin Energy” entity, in deep, off-shore projects that required the modern technologies that Russian energy companies lacked. The Sakhalin fields were close to export markets with short transportation routes and offered particularly rich oil and gas reserves. From the start, Shell was very careful in handling the issue of acquiring a Russian partner. It neither enlisted one nor foreclosed the possibility. It subsequently managed to avoid the issue by becoming the first PSA to achieve production and demonstrate the potential success of foreign investment. Although the Russian oil industry assumes that a Russian company will eventually join the Sakhalin II project, it also anticipates that Shell will charge a major premium for the privilege.⁹³ In addition, Shell was immediately solicitous of the needs and aspirations of the regional Sakhalin administration, securing the crucial backing of the Sakhalin governor from the beginning of the project. In contrast, many other Western oil companies in Russia have seen their projects die on the vines of obstructionist regional administrations who have pressed increasing demands until Russian companies, in which the regional administrations usually have an equity stake, assume control of the venture.

Finally, Shell paid unusual attention to Russian sensitivities. With the exception of the standard benchmark celebrations to mark the installation of the first rig, the signing of the first Russian vendor contract, and the production of the first oil, Shell avoided drawing attention to itself as the pioneering project in Russia (again in contrast to other foreign oil companies). As a result, Shell has flown under the radar screen of nationalist Russian politicians thousands of miles away in Moscow. Interestingly, this success has been difficult to replicate even for Shell. The company’s investments in western Siberia have been more difficult, and Shell has failed to become the operator of any major Caspian projects, unlike British Petroleum or Chevron.

Beyond the Shell and Exxon projects in Sakhalin, analysts conclude that there are few other significant opportunities in upstream production for international oil majors that seek to develop their own Russian reserve base. Western investment is not the crucial element for the success of the Russian energy sector. Its absence will not serve as an ultimate constraint to the development of Russian oil and gas—although its presence will certainly help to further long-term development. Foreign investment will be an essential component of the huge new gas projects proposed for exports to China. These are instances where the required financial outlays are enormous and Russian companies and the state know they cannot go it alone. Gazprom, as noted earlier, is so heavily indebted that it will have to secure international partners for some of the more costly exploration projects, including those in the Northern Seas. Russia’s energy industry also needs Western technology. International oil field service companies, such as Hallibur-

ton and Schlumberger, have already made considerable inroads in Russia, but they do not have equity, production, or export interests in Russian energy. Russian oilmen may have to look for partners to undertake the most challenging projects, but they do not need foreign equity investors to succeed in their own industry. Russian oil and gas principles will develop and expand themselves, both at home and abroad.

Conclusion

Russia will have a significant role to play over the next two decades in helping to diversify world energy supply away from the Middle East, but the euphoria of early 2002 over Russian oil is misplaced. Russian oil has great potential but limited capabilities, and its oil industry is more restricted than its gas sector. Although Russia may seek to oust OPEC in some regional markets—especially by trying to increase its share of the European and Asian oil markets, it lacks the reserves over the long term to displace OPEC. When demand for gas increases in these markets, Russia has a greater prospect of becoming the primary supplier, but there are still many obstacles to overcome—not least the need to control gas production and flows from Central Asia. As Russian oil and gas companies expand their operations outside, they will increasingly become the primary means for the state to exert influence abroad. This will leave little room for further foreign penetration of the industry. In the coming decades, Russia's energy companies are likely to become major competitors with U.S. and other international principals. Russian oil might not be able to take on OPEC in 2002, but Russian energy companies will likely be able to give Shell and Exxon a run for their money in 2020.

NOTES

1. Sabrina Tavernise and Peter S. Green, "Oil Concerns in Russia Branch Out: Big Companies Look Abroad for Assets," *New York Times*, 2 April 2002, W1.

2. Sabrina Tavernise, "U.S. Sees Russia in Oil Catbird Seat," *New York Times*, 29 November 2001.

3. David Ignatius, "Russia Wins the War," *Washington Post*, 23 December 2001.

4. Frank Dabbs, "Putin Emerges as Powerful Oil Czar," *Calgary Herald*, 4 January 2002.

5. Edward L. Morse and James Richard, "The Battle for Energy Dominance," *Foreign Affairs* 81, no. 2 (March/April 2002): 16–31.

6. Mikhail Khodorkovsky, "Stabilizing World Oil Markets: Russia's Role in Global Recovery," presentation given at the Carnegie Endowment for International Peace, Washington, DC, 8 February 2002, <www.ceip.org/files/events/events.asp?EventID-454>.

7. Florence Fee was manager of Tengizchevroil Joint Venture in Tengiz, Kazakhstan, in the early 1990s and president of Mobil Russia Ventures in Moscow, Russia, in the late 1990s.

8. U.S. Energy Information Administration, "Selected Oil Crude Prices (Brent)," <<http://www.eia.doe.gov/emeu/aer/txt/tab1106.htm>>.

9. U.S. Energy Information Administration, "OPEC Fact Sheet," 8 January 2002, <<http://www.eia.doe.gov/emeu/cabs/ope.html>>.

10. See Clifford Gaddy, "Has Russia Entered a Period of Sustainable Growth?" presentation given at the Carnegie Endowment of International Peace, Washington, DC, 17

October 2001; and Clifford Gaddy and Fiona Hill, "Putin's Agenda, America's Choice," Brookings Institution Policy Brief 99, April 2002.

11. See International Energy Agency, "Russian Energy Survey 2002," March 2002, 66–70.

12. For a discussion of the behavior of Russia's energy oligarchs over the course of the 1990s, see Lee S. Wolosky, "Putin's Plutocrat Problem," *Foreign Affairs* 79, no. 2 (March/April 2000): 18–31.

13. Statistics from "BP Amoco Statistical Review of World Energy," June 1999.

14. For more information on Russia's poor investment climate, see the U.S. Energy Information Administration's report on "Russia: Energy Sector Restructuring," October 2001, <www.eia.doe.gov/emeu/cabs/russrest.html>. For additional details on the Sidanko controversy, see Jeanne Whalen, "Potanin Reaps Big Gain on Sidanko Sale," *Wall Street Journal*, 3 August 2001.

15. U.S. Energy Information Administration, "World Oil Market and Oil Price Chronologies: 1970–2001," <<http://www.eia.doe.gov/emeu/cabs/chron.html>>.

16. Anna Raff, "Oil, Gas Production Grows 7.7 Percent in 2001," *Moscow Times*, 9 January 2002, 5; Sabrina Tavernise, "A New Western Focus on Russia, 'Where the Oil Is,'" *New York Times*, 5 December 2001.

17. Thomas Kellner, "Now in America," *Forbes*, 5 March 2001, 115.

18. Peter Trafalgar, "Yukos Plans to Move into Eastern Europe," *Russia Journal*, 7 December 2001, 10.

19. Paul Klebnikov, "The Oligarch Who Came In from the Cold," *Forbes*, 18 March 2002, 110–14.

20. John Lloyd, "A Miracle Worker," *Financial Times*, 6 January 2001, 1; "The Oligarch's Secret: Is Roman Abramovich after Eventual Presidency?" *Moskovsky Komsomolts*, 31 March 2001.

21. Torrey Clark and Anna Raff, "LUKoil Taps Mobius, Good Governance Trend," *Moscow Times*, 18 January 2002, 5.

22. Whalen, "Potanin Reaps Big Gain." British Petroleum has recently increased this stake to 25 percent; see Terry Macalister and Patrick Collinson, "BP and Shell Fuel Rush to Invest in Russia," *Guardian* (UK), 17 April 2002.

23. Sabrina Tavernise, "Exxon Says Way is Cleared for Development in Russia," *New York Times*, 30 October 2001.

24. CNN Web site, "Russia to Profit from New Oil Line," 27 December 2001, <<http://www.cnn.com/2001/WORLD/europe/12/27/russia.pipeline/index.html>>.

25. "EU/Russia Energy Dialogue: An Overview," 1 June 2001, <http://europa.eu.int/comm/energy_transport/library/russia_energy_Dial-over.ppt>.

26. Statistics from "BP Statistical Review of World Energy," 2001.

27. U.S. Energy Information Administration, "OPEC Fact Sheet," 8 January 2002, <<http://www.eia.doe.gov/emeu/cabs/opec.html>>.

28. "Oil: A Dangerous Addiction," *Economist*, 15 December 2001, 15–16.

29. Mark .Katz, "Big Decisions Loom for Russian Oil Production," *Eurasianet*, 26 November 2001, <<http://www.eurasianet.org/departments/business/articles/eav112601.shtml>>. Paul Starobin, "An Opportunity for Russian Oil?" *Business Week*, 2 December 2001, 42. Note that a deadweight ton is the measure expressed in metric tons (1,000 kg) or long tons (1,016 kg) of a ship's carrying capacity, including bunker oil, fresh water, crew, and provisions.

30. Raff, "Oil, Gas Production Grows," 5.

31. Such as Robert Ebel of the Center for Strategic and International Studies in Washington, DC, during a roundtable seminar at the Brookings Institution on "The Impact of Middle East Trends on Oil Supply," 19 March 2002. This point will also be featured in a forthcoming piece by Robert Ebel in the *Oxford Energy Forum*.

32. Statistics from "BP Statistical Review of World Energy," June 2001.

33. See section on Gazprom in "Russian Energy Survey 2002," International Energy Agency, March 2002, 109–48.

34. CSIS Energy Initiative, "The Geopolitics of Energy in the 21st Century. Volume 1: An Overview and Policy Considerations," November 2000, 5.

35. Peter Davies, "Testing Times in World Energy Markets," presentation to mark the publication of the "2001 British Petroleum Statistical Review of World Energy," New York, 27 June 2001, 7.

36. This increases to 24 percent of Europe's gas consumption if non-EU members are factored in. See "EU/Russia Energy Dialogue: An Overview," 1 June 2001, <http://europa.eu.int/comm/energy_transport/library/russia_energy_Dial-over.ppt>.

37. U.S. Energy Information Administration, "Turkey Country Report," July 2001, <<http://www.eia.doe.gov/emeu/cabs/turkey.html>>.

38. "Prirazlomnoye Moves without Wintershall," *Hart's European Offshore Petroleum Newsletter*, 6 February 2002.

39. For a summary of Russia's gas export pipelines, pipeline projects, and international investors, see Peter Trafalgar, "Boom for Russia's Gas-Export Pipelines," *Russia Journal*, 3 December 2001, 16–17.

40. U.S. Energy Information Administration, "East Asia: The Energy Situation," June 2000, <<http://www.eia.doe.gov/emeu/cabs/eastasia.html>>.

41. Michael Lelyveld, "Russia: Moscow Promises Energy Exports to China," *RFE/RL*, 19 July 2001.

42. Winnie Lee, "Petrochina Confirms Talks Underway with Shell on Big Gas Line," *Platt's Oilgram News* 80, no. 25 (6 February 2002): 2.

43. Other international investors in Sakhalin include Japan's Mitsui and Mitsubishi and the Indian State oil company, ONGC. This membership composition reflects the importance of the future Japanese and Indian gas markets. Both Japan and India are hedging their political risks by securing equity stakes in gas (and oil) production consortia in the Russian Far East.

44. Michael Lelyveld, "Russia: Financial Maneuvers Recall 'Bad Old Days' of 1998," *RFE/RL*, 28 December 2001.

45. See International Energy Agency, "Russian Energy Survey: Natural Gas," March 2002, 112.

46. Michael Lelyveld, "Russia: Oil Companies Shift Towards U.S.-Backed Routes," *RFE/RL*, 15 January 2002.

47. As a general rule, gas prices follow world oil prices.

48. "Gas Deal Could be Russia's 'Magic Wand' in Central Asia: Analysts," *Agence France-Presse*, 14 February 2002.

49. See Fiona Hill, "Energy Integration and Cooperation in Northeast Asia," *NIRA Policy Research (Japan)* 15, no. 2 (25 February 2002), also at <<http://www.brook.edu/views/articles/hillf/20020225.htm>>.

50. William Chandler and Jeffrey Logan, "Energy Trends in China with Reference to the Caspian Region," presentation given at the Brookings Institution conference on the "Caspian Basin and Asian Energy Markets," 24 May 2001.

51. Christopher Pala, "CPC Cuts Ribbon on \$2.6 Billion Pipeline," *Moscow Times*, 28 November 2001, 1.

52. Michael Lelyveld, "Russia: Oil Companies Shift Towards U.S.-Backed Routes," *RFE/RL*, 15 January 2002.

53. "Russian Oil Giant to Sign Up to U.S.-Backed Caspian Pipeline: Azeri Oil Chief," *Agence France Presse*, 6 March 2002; "Russia's LUKoil May Help Build Azerbaijan-Georgia-Turkey Pipeline," *BBC Monitoring International Reports*, 22 March 2002. In April 2002, in a further move, the Russian government gave guarded approval for Russian companies to participate in the BTC venture; see Michael Lelyveld, "Russia Government Approves Investments in Baku-Ceyhan Pipeline Project," *RFE/RL*, 17 April 2002.

54. Michael Lelyveld, "Russia: LUKoil Withdraws from Deal on Baku-Ceyhan Oil

Pipeline," *RFE/RL*, 1 May 2002; "LUKoil Pulls out of Plans to Join BTC Sponsor Group (April 26)," *RFE/RL Business Watch*, 7 May 2002.

55. "ENI to Play Starring Role in Astrakhan Field," *NEFTE Compass*, 6 July 2000, 4; "ENI to Start Drilling in Astrakhan," *NEFTE Compass*, 22 November 2001, 3.

56. U.S. Energy Information Administration, "Kazakhstan Country Analysis Brief," January 2002, <<http://www.eia.doe.gov/emeu/cabs/kazak.html>>.

57. For a detailed discussion of Central Asian energy issues, see the Energy Information Administration country analysis briefs at <<http://www.eia.doe.gov/emeu/>>.

58. Michael Lelyveld, "Kazakhstan: Pipeline Projects to China Become Pipe Dreams," *RFE/RL*, 8 July 1999.

59. "Gas Scandal between Azerbaijan and Turkmenistan," *Central Asia Caucasus Analyst*, 24 October 2001.

60. Raja Asghar, "Pakistan, Afghanistan Links to Central Asia," *Reuters*, 27 February 2002.

61. See, for example, Pepe Escobar, "Pipelineistan, Part 1: The Rules of the Game," *Asia Times*, 25 January 2002; and Pepe Escobar, "Pipelineistan, Part 2: The Games Nations Play," *Asia Times*, 26 January 2002.

62. "Pakistan Starts Survey for Gas Pipeline Project," *AsiaPulse News*, 15 March 2002.

63. "India to Get Iranian Gas Direct," *Agence France-Presse*, 18 March 2002.

64. "Federation Council Approves North-South Transportation Corridor," *ITAR-TASS*, 27 February 2002.

65. "Gazprom Publicizes Its Strategy," *RFE/RL Newsline*, 18 December 2001.

66. Anna Raff, "President Get a Grip on Central Asia Gas," *Moscow Times*, 22 January 2002, 1; Vladimir Socor, "Move Over OPEC. Putin's Got a Bigger Idea," *Wall Street Journal*, 1 February 2002; Michael Denison, "Putin Aims to Lock Up Caspian Gas with or without Niyazov," *Central Asia Caucasus Analyst*, 27 February 2002.

67. Conclusions based on private interviews with Russian energy industry officials in Moscow.

68. U.S. International Energy Agency, "Russian Energy Survey 2002," March 2002, 66–70.

69. See profile at <<http://www.cnn.com/resources/newsmakers/world/europe/chemomyrdin.html>>.

70. Alan Cullison, "Gazprom Needs Big Changes to Draw Foreign Investors," *Wall Street Journal*, 22 August 2001.

71. Boris Fedorov, "Gazprom: A Test Case For President Putin," presentation given at the Carnegie Endowment for International Peace, Washington, DC, 18 April 2001.

72. Anna Raff, "Millet Takes Up Gazprom Gauntlet," *Moscow Times*, 1 June 2001, 1.

73. "Prirazlomnoye Moves without Wintershall," *Hart's European Offshore Petroleum Newsletter*, 6 February 2002.

74. See All-Russia Petroleum Research Exploration Institute (VNIGRI), "Atlas. Northern Onshore and Offshore. Russia. Oil, Gas, Coal. Resources and Development," <<http://www.vnigri.spb.ru/enindex.html>>.

75. "Russia: Gazprom Chief Sets Out Key Tasks for Russian Gas Giant," *Interfax*, 28 June 1997; transcribed by FBIS.

76. Based on private interviews with Russian energy analysts in October 2001.

77. "This Year Trade Between Russia and China Will Approach Ten Billion Dollars," *Pravda.ru*, 17 October 2001, <<http://english.pravda.ru/economics/2001/10/17/18280.html>>; "China's Trade with the World," <<http://www.uschina.org/press/tradetable.html>>.

78. China's official government statistics agency puts the population of Heilongjiang province at almost 37 million; see <<http://www.stats.gov.cn/english/newrelease/statistical-reports/200204230085.htm>>. However, Russian sources typically almost double this figure to 70 million when discussing the demographic pressure on the Russian Far East from China. See, for example, Mikhail Nosov, "Rossiiskii Dal'nii Vostok i Kitay: problemy segodniashnego dnia i perspektivy sotrudnichestva," Moscow Carnegie Center, 1996, 8.

79. For a detailed discussion of this issue, see Mikhail Alekseev, "Socioeconomic and Security Implications of Chinese Migration in the Russian Far East," *Post-Soviet Geography and Economics* 42, no. 2 (2001): 95–114.

80. Ivan Chelnok and Andrei Litvinov, "Putin Appoints Two New Ministers," *Gazeta.ru*, 18 June 2001, <www.gazeta.ru>.

81. "Vagit Alekperov—Lifetime Devotion to Oil Industry," *RFE/RL Business Watch*, 26 March 2002.

82. "Russia's Who's Who," *RussiaToday.info*, <http://www.russiatoday.info/en/top100/most_fam/2742.html>.

83. Grigory Volchek, "Ekonomika: My razgovarivaem s Trutnevym na odnomazykye," *Zvezda* (Perm), 4 April 2001, 4; English translation of citation by author.

84. "Moscow, Baku Clinch Important Deals," *UPI*, 26 January 2002. Conclusions also based on private discussions with Azeri officials in Washington, DC, in February 2002.

85. Andrew Jack, "Export Cut Helps Russia out of 'Winter Reality,'" *Financial Times*, 7 December 2001; "Russia and OPEC: Oilman's Bluff," *Economist*, 8–14 December 2001. Conclusions also based on private interview with Mikhail Khodorkovsky in Moscow, 5 February 2002.

86. See Andrew Jack, "Russian Group Goes against the Oil Flow: Surgutneftegaz Faces Mounting Criticism for Failing to Keep up with the Big Changes in the Industry," *Financial Times*, 1 May 2002.

87. The information in this and subsequent sections is based on extensive interviews with members of the Russian oil industry.

88. Michael Heath, "Denials Don't Halt Speculation on Miller," *Russia Journal*, 2–8 November 2001, 5.

89. See, for example, Jan Kalicki, counselor to the U.S. Department of Commerce and U.S. ombudsman for energy and commercial cooperation with the Newly Independent States, "U.S. Perspectives on NIS Energy Transportation," presentation at "Pipeline Projects in Russia and the CIS: Investment Opportunities Today and Tomorrow," Moscow, 6 October 1999, <http://www.ita.doc.gov/media/Speeches/kal1027_3.htm>.

90. Todd Prince, "Firms Wait on Laws in Russia's Black Gold Rush," *Russia Journal*, 5 June 2000.

91. "Sakhalin 2 Talks Finished by Year's End," *Platt's Oilgram News*, 10 December 1993, 3.

92. Conclusions based on private interviews with Russian energy industry executives in Moscow. British Petroleum's recent decision to increase its share in Sidanco to 25 percent and to gain a 25-plus-1-percent share in the company is clearly intended to confront just this kind of attempt, by giving British Petroleum blocking rights against such hostile moves under Russian law. See "BP Raises Stake in Sidanco," *RFE/RL Business Watch*, 23 April 2002.

93. Shell entered into discussions with Gazprom in April 2002 about possible participation in its Sakhalin II project; see "Kasyanov, Shell's Watts Discuss Oil Investment," *RFE/RL Business Watch*, 23 April 2002.