

The Geopolitics of Russian Energy

Looking Back, Looking Forward

A Report of the CSIS Energy and National Security Program

AUTHOR
Robert E. Ebel

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Library of Congress Cataloging-in-Publication Data

Ebel, Robert E.

The geopolitics of Russian energy : looking back, looking forward / Robert E. Ebel.

p. cm.

"July 2009."

Includes bibliographical references.

ISBN 978-0-89206-582-0 (pbk. : alk. paper) 1. Energy policy—Russia (Federation) 2. Geopolitics. 3. International economic relations. 4. Russia (Federation)—Foreign economic relations—European Union countries. 5. European Union countries—Foreign economic relations—Russia (Federation) 6. Russia (Federation)—Foreign economic relations—United States. 7. United States—Foreign economic relations—Russia (Federation) I. Title.

HD9502.R82E243 2009

333.790947—dc22

2009025026

Center for Strategic and International Studies
1800 K Street, N.W., Washington, D.C. 20006
Tel: (202) 775-3119
Fax: (202) 775-3199
Web: www.csis.org



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ABOUT THE GEOPOLITICS OF ENERGY SERIES

In November of 2000, CSIS published *The Geopolitics of Energy into the 21st Century*. The report was the culmination of a two-year effort conducted under the auspices of the Strategic Energy Initiative (SEI), designed to identify and examine significant geopolitical shifts that could impact future global energy security, supply, and demand. The effort, which was cochaired by Senator Sam Nunn and Dr. James Schlesinger, was undertaken on the premise that the relatively “benign” global energy situation that had persisted for the previous 15 years was masking emerging changes in both markets and international realignments and consequently allowing policymakers and the public at large to become complacent about making hard choices with respect to energy, foreign and security policy, the economy, and the environment.

The time horizon for the SEI report was the first two decades of the twenty-first century. Many of its conclusions, in hindsight, look remarkably prophetic and remain critically relevant almost a decade later, though events of the past several years also point to some clear omissions. Central to our (and a variety of other) forecasts at the time, the SEI report projected that energy demand over the time period would be met in essentially the same ways as it was at the turn of the century, but in increasingly larger quantities.

For example, the report concluded that fossil fuels would continue to provide the overwhelming majority (in excess of 85 percent) of global energy needs for the next several years; that the Persian Gulf would remain the key marginal supplier of oil to the world (cautioning, however, that massive investment would be needed to realize increases in future production output); that the anticipated growth in energy, especially natural gas, use would both tax the delivery system and raise a new series of geopolitical issues that could lead to new political alignments; that production from the Caspian would be important at the margin, but not (in this time frame) a pivotal source of global supply; that Asian demand would increasingly look to the Persian Gulf for energy; that Europe’s overreliance on Russian natural gas would become a “worrisome” dependency; and that U.S. oil imports would continue to grow.

Three broad conclusions were drawn from the SEI analysis—namely, that as the world’s only superpower, the United States must accept its special responsibilities for preserving worldwide energy supply; that ensuring adequate and reliable energy supplies would require enormous investments that needed to be made “immediately”; and that decisionmakers in this century would face the special challenge of balancing the objectives of sustained economic growth with concerns about the environment. The 2000 report even identified Osama bin Laden by name in a discussion of terrorism and the rise of dangerous nonstate actors.

Missing from the analysis, however, was the recognition of how quickly China’s energy demand would grow, how dramatically prices would change over a relatively short time period, or how precipitously climate change, carbon constraints, and renewable fuels initiatives would move to center stage.

Nonetheless, the SEI report emphasized the concerns surrounding the political fragility in key energy-producing countries and regions, predicted an increase in resource competition, and articulated how weakened U.S. alliance relationships with Europe, the Persian Gulf, and Asia, coupled with a resurgence of conflict and power politics, could adversely affect global energy security and promote geopolitical realignment.

At the time of its publication, portions of the SEI assessment were characterized as unduly pessimistic. Events of the last eight years suggest that they were anything but.

The intent of the Geopolitics of Energy series is not to assess the accuracy or shortcomings of our previous report or to develop a new bottom-up projection of supply/demand forecasts from now to 2030. Rather, our current work is designed to focus on relevant drivers that will dictate future trends in energy consumption, supply sources, geopolitical relations, foreign policy, and environmental choices. This report—*The Geopolitics of Russian Energy* by Robert E. Ebel—is our first publication in CSIS’s updated Geopolitics of Energy series.

1

BACK TO THE FUTURE

The West, particularly the European Union (EU), seems not to know how to handle Russia, how to respond to its increasing sense of greatness, or how to respond to the rhetoric, and now the military moves, from the Kremlin that remind one of the Cold War that ended years ago. Nor does the West have a confident measure of Russia's true military, financial, and economic strengths.

President Vladimir Putin had sensed this uncertainty and sought to use it to divide members of the EU and to separate the EU and the United States. Success has been secured in playing to those individual EU members concerned more with adequate supplies of oil and natural gas and less about the good of the EU as a whole.

The matter of a U.S. missile defense shield to be set up in Poland and radar support in the Czech Republic to protect Europe against missile attack from the Middle East rogue states (read Iran) has raised the hackles of the Kremlin to the point where re-targeting Russian missiles, to be deployed in Kaliningrad, toward Europe was threatened.

Russia announced in late January 2009 that it had halted plans to install Iskander cruise missiles in Kaliningrad, apparently a gesture toward the new U.S. president. Were those plans little more than an empty threat? The Russian media were unusually quick to point out that the missiles Russia had in mind—Iskander tactical missiles—are widely known for their shortcomings and that the country was not in a position to deploy them within the next four or five years.

Not long after he was sworn in, President Barack Obama in effect suggested a trade: if Moscow would help curb Iran's nuclear program, building the missile defense system would become unnecessary. President Obama denied that the letter offered some sort of quid pro quo, and the proposal remains open, waiting for the much-publicized reset button to be pushed.

Why did Russia find it necessary, against the background of the Georgia-Russia conflict, to respond not with rhetoric but with actions that carry more worrisome implications? President Dmitry Medvedev deliberately used the twice-postponed version of his first "state of the nation" address to, among other matters, blame the United States for causing the world financial crisis and for provoking the war between Russia and Georgia. This confrontational speech, coming just one day after the successful presidential campaign of Barack Obama, could be taken as a warning to the new president-elect, or, as others have opined, was meant more for domestic ears. If the former, then there will likely be no honeymoon period between Russia and president-elect Obama.

This kind of one-upmanship is too dangerous to be allowed to continue, and means must be found to cool the tempers and control the tongues of participants. The United States reportedly wanted to sign a long-term agreement with Russia covering relations between the two countries, noting that it would be much more difficult to reach such an agreement when the new occupant

Figure 1.1. Who Is in Charge?



Source: Russian president Dmitry Medvedev and prime minister Vladimir Putin, AP Photo/ Alexander Zemlianichenko, available at <http://www.medvedev2008.ru/downloads/3.jpg>.

of the White House arrived.¹ Unfortunately Russia has a number of objections to current U.S. proposals, and there can be no assurance an agreement of substance will be signed.

All that would have been enough for the West to try to digest, but then came the short war with Georgia, followed not long thereafter by the January 2009 dispute with Ukraine over past debts and gas prices for the year. This dispute cut gas deliveries to many European importers of Russian gas at a time of unusually cold weather and caused widespread shortages.

It was in his “state of the nation” speech that President Medvedev also put forward the proposal to lengthen the presidential term to six years from four, but excluding the incumbent president. Quick approval was expected—and given. Limited political opposition to the approval process emerged, saying that the constitution requires a full year before an amendment can be voted upon, but as Western media reported, the protestors recognized their efforts probably would be ignored, and they were.

Speculators immediately saw the prospect of Vladimir Putin returning to the presidency in relatively short order and holding that position for the full 12 years. However, Prime Minister Putin is keeping his plans to himself, while continuing to play with a variety of options. The question then arises, who is really in charge (figure 1.1)?

What was this speculation based upon? The prime minister is held responsible for what happens to the country, politically and economically. If Prime Minister Putin’s assessment of Russia’s

1. Stephen Fidler et al., “Bush seeks diplomatic pact with Putin before stepping down,” *Financial Times*, March 24, 2008.

near-term future is dim, then he may conclude that it is time to turn that post over to someone else and to return to the position of president.

If Russia's near-term future is regarded as promising, having weathered the financial crisis, then Dmitry Medvedev's chances of another successful run at the presidency will have improved considerably. Prime Minister Putin would stand aside, recognizing that both could not be candidates, for that would probably be too divisive for the country.

The European Union, for one, finally realizing perhaps that Russia has become a power to be recognized and with hopes buoyed by prospects of a "new look" in the Kremlin, is trying once again to enter into a positive relationship with that country. NATO, conversely, was much more hesitant but has since moved to restore normal relations. Unfortunately NATO members are not in unanimous agreement on how to go about it, just as Russia has not yet decided how to view NATO's actions—whether as a friend or a foe.

The resumption of partnership talks with Moscow was driven by recognition that, given the energy dependence on Russia, the EU has no other option. Who are the drivers behind the push to return relations to a more normal condition? They are Italy, Germany, and France—the leading importers of Russian oil and gas. But Russia seemingly disregarded this dependency in January 2009 (see below) when it halted natural gas flows in varying degree to consumers in Western and Eastern Europe, all because of disputes with Ukraine, the key transit country between these consumers and Russia. Although Ukraine had been the original target, others unavoidably were caught up in the Russian punitive action.

Other obstacles—particularly those deriving from the August 2008 Georgia-Russia confrontation and the brief shooting war that followed—have not disappeared, however. It will take considerable give by both sides if hopes are to become a reality.

Will President Dmitry Medvedev be able to calm the political waters, or could his attention be consumed by developments on the Russian periphery—for example, in the Caucasus, Ukraine, or Central Asia—or by the reluctance of Vladimir Putin, former president and current prime minister, to share power and decisionmaking? Medvedev is doing what he can to convey that he is acting as a president should and is taking orders from no one. In particular, he has moved ahead to put into place an almost unprecedented re-do of the Russian military force. To do so in the face of the financial crisis now engulfing Russia, and in face of opposition from the military, puts Russia at risk.

More important, the ranks of the unemployed, which are rising, stood at some 6.4 million by February—or 8.5 percent of economically active Russians. Citizens are less reluctant to take to the streets, the ruble is steadily losing value, the stock market is down by some 70 percent, the real estate market is suffering, hard currency has been fleeing the country, and budget officials are watching the falling price of crude oil with fingers crossed—all because of the financial crisis that caught up with Russia beginning in the summer of 2008.

Not only that, the World Bank foresees a shrinking of the Russian economy by 4.5 percent during 2009, with a decline of the gross domestic product, or GDP, by 7.4 percent. The budget deficit may reach 10 percent. Russia has managed to placate outlying regions with financial resources but even that has its limits, and those limits will be sorely tested this year. Indeed, Russian finance minister Alexei Kudrin stated in late April 2009 that Russia's reserve fund, designed to protect against economic downturns and currently worth \$US121 billion, would be completely spent next

year.² Another fund, the National Wellbeing Fund, which is currently worth \$US85.7 billion, is being held in abeyance.

Russian officials had every good reason to fear 2009, when the budget will run a deficit for the first time in a decade. Their fears were realized when Finance Minister Alexei Kudrin stated in a late December 2008 TV interview that the budget deficit for 2009 could reach in excess of \$US128 billion, or 6 percent of the country's GDP. These conditions in turn provide an opportunity for Moscow to reclaim portions of the industrial sector that had been lost to the oligarchs in the 1990s. There are more than ample scenarios, now and in the future, to occupy the minds of Russia watchers everywhere.

One such scenario came into play when a financial crisis that first struck the United States spread rather quickly to embrace Western Europe and then Russia. Russia had held ideas of becoming the world's financial center, but its hopes were dashed when it felt the full impact of falling oil prices. Large amounts of foreign capital fled the country while many oligarchs watched their paper wealth disintegrate. As investment funds began to dry up, longer-term implications became apparent.

Gazprom was particularly hit hard. In June 2008 it was the world's third largest company in terms of market capitalization; valued at about \$US350 billion, it had thoughts of reaching \$US1 trillion. Then prices fell, and funding dried up. Today Gazprom is worth considerably less than \$US100 billion.

What if crude oil prices rebound and hold in the \$US65 to 70/barrel range through 2009? If that should happen, then the Russian budget for the year would barely break even.

Russian oil companies in particular are quick to point out that the impact of the financial crisis will be evident in their capital spending and that cuts will in turn be reflected in reduced production levels even beyond next year. Beyond that, East Siberia and offshore areas, where exploration is extremely expensive to begin with, will suffer, as will the future of Russia oil, deemed by Robert Dudley, then head of TNK-BP, to be at the start of a gentle decline.

Can Gazprom, for example, weather the credit storm? Heavily in debt, at least one-third of which is short term, can it respond to the financial requirements of searching for, finding, and developing those new gas fields needed to meet future export and domestic requirements? Opinion may be divided, but the next several years will be difficult for the gas sector.

The West was recently reminded of constraints on its ability to respond to crises in the making or at hand. Georgia's incursion into South Ossetia on August 8, 2008, in response to a bombardment of Georgian villages by Ossetian separatists, was followed almost immediately by the appearance of Russian troops "to protect Russian citizens." That action triggered warfare—thankfully limited—against the background of Western strongly worded demands for a truce.

Russia's offensive theoretically ended on the fifth day, declaring that the aggressor (Georgia) had been punished. Georgian military capabilities had been severely damaged, but withdrawal of Russian troops did not move as fast as had been predicted for reasons unclear but probably because some of Georgia's diminished military strength still remained. Indeed, Russia had no intention of withdrawals to positions held before its invasion of Georgia. Two surprises followed: first, the carving out of two security or buffer zones inside Georgia (one around Abkhazia and another around South Ossetia); and second, President Dmitry Medvedev recognizing the independence of Abkhazia and South Ossetia. It was this latter action that drew the anger of most Western observers.

2. See <http://www.moscownews.com/monmey/2009/04/22/1252/>.

Against this background, it should be kept in mind that the Russian military had crossed the borders of an independent and sovereign nation, although the full story may not be known for some time. If Georgia had already succeeded to NATO membership and had called for support, would NATO have immediately responded?

Apart from that, had U.S. officials made promises to Georgia that aid would be forthcoming? No, the United States had clearly signaled to Georgia not to fall into a Russian trap, and, if they did, little help should be expected, or so the U.S. side continued to stress after bullets began to fly. Georgian president Mikheil Saakashvili apparently set his own trap by a military incursion into South Ossetia, bringing about an almost an immediate Russian response, utilizing forces that that had been building just north of the Russian border with South Ossetia.

What is the message the West should read into Russian actions and reactions? Is this the beginning of an effort to reassert control over certain former Soviet republics? Georgia's value lies in its position as a transit country. But what about the Crimea (part of Ukraine), Chechnya (part of Russia), Nagorno-Karabakh (part of Azerbaijan), or other territories—all lumped under the common term of “frozen conflicts”—that may now see their opportunity for independence? President Medvedev has let it be known that Russia has “regions of privileged interests,” and the West should understand that Russia will do whatever it takes to defend its citizens abroad.

Are speculators overreaching? Will NATO move ahead and extend a membership invitation to both Georgia and Ukraine, knowing full well that Russia will respond in some fashion? If so, how might Russia respond—by placing missiles in Cuba or perhaps by fostering among the “frozen conflicts” a renewed struggle for independence?

There is another reminder to be recognized. Geopolitics is perhaps another word defining the circumstances under which a nation will always act to protect its national interests, whatever those interests may be. Protecting its interests is exactly what Russia has done, but those interests are not yet fully satisfied. Yet, some comfort can be found in the aftermath of the Russian military offensive against Georgia. It has served to bring the West together in a way and at a time when unity was badly needed. Now, that unity—a unity that undoubtedly caught Russia by surprise—has to be put to work to keep political temperatures from rising to a boiling point.

But a particular advantage has also accrued to Russia. The conflict revealed serious weaknesses in the Russian military readiness. The Russian air force lost six planes to enemy fire, and its lack of air cover meant losses on the ground. President Medvedev responded by outlining a broad upgrading of Russian military forces to put them into a state of permanent combat readiness.

Unfortunately for Russia, the global financial crisis has intruded upon the plans for military reform. For example, parts of that reform, such as reductions in numerical strengths, have been postponed for four years, and the target date now stands at 2016.

Russia very much needs an enemy, or something similar expressed in a more acceptable term, to justify this military buildup, and the United States fits the bill. Indeed, the draft energy security strategy through 2020, recently prepared by Russia's Security Council, singles out the United States as its main rival. The draft also refers to struggles over control of global energy resources, undoubtedly with the United States, China, and India in mind.

The challenges are multiple and very real from the Russian perspective. But a threat is building on the home front, and the country would perhaps be better served if it spent equal time and funding with the aim of avoiding social turmoil.

Looking Back, Looking Forward

The Russian oil and gas sector can be seen as “living off the past”—that is, living off the wealth it had inherited when the Soviet Union broke up in December 1991. This wealth is of enormous scope, although the infrastructure—pipelines, refineries, and the distribution network—was found to be in a sadly neglected state, as were the oil fields themselves, many of which had been produced at levels well above those called for by good reservoir management practices. Although overproduction allowed annual goals to be exceeded and bonuses paid to workers, the life of the field was shortened.

There is perhaps no better example of the damage overproduction causes than that offered by Samotlor, purportedly one of the five largest oil fields in the world. Development began in 1969, and by 1980, just a short 11 years later, crude oil output had reached 3.3 million barrels a day (b/d) (see figure 1.2).

That year—1980—turned out to be the peak year, because production immediately entered into a steep decline, bottoming out in the year 2000 before slowly recovering to 583,000 b/d.³ TNK-BP assumed operation of Samotlor in 2003 and has provided much of the expertise and technology responsible for extending the life of the field.

Russian oil field depletion rates may likely average at least 8 percent a year, which means that some 700,000 b/d in new producing capacity must be added annually just to hold output at the same level, let alone allow for increases. Others accept a much higher rate of decline of 15 percent—up, they say, from 12 percent in 2006.⁴ Application of a 15 percent decline rate implies that the Russian oil sector faces a yearly decline approaching 1.5 million b/d before any new oil is taken into account.

Media headlines pointed to a shortage of crude oil for delivery to domestic refiners.⁵ Is it because of the slight decline in crude oil production? More likely, it is because of a growth in demand and the then very attractive prices available in the world market, although it would seem that it is those independent refiners who may be running short.

Cutting taxes will help, but it may not be enough. The sector must be reoriented toward exploration and development and away from maximizing output through overproduction of existing fields. If delayed, then a plateau can be anticipated, followed by decline. The situation is very similar to 1988, when peak production was followed by a steady and prolonged decline, for the same reasons.

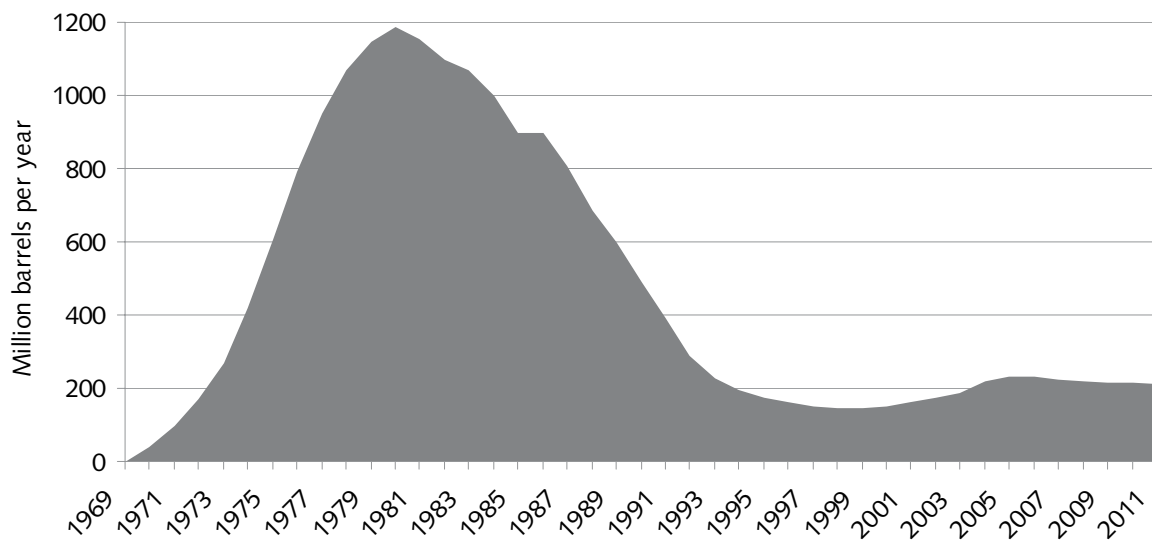
Privatization of the oil sector following the December 1991 breakup of the Soviet Union had eventually led to the introduction and broad application of Western know-how and advanced technology, with oil companies Yukos and TNK-BP in the forefront. Idle wells deemed to be good producers were quickly worked over and output restored. Minimal effort was devoted to exploration, while maximizing yields from easy-to-produce horizons was encouraged. Relatively stable domestic requirements allowed most of the incremental oil to be exported.

3. Alan Petzet, “Russia’s Samotlor to produce 90 more years, says TNK-BP,” *Oil and Gas Journal*, April 20, 2009.

4. Nadia Rodova, “New technology, not tax cuts, said needed for Russia,” *Oilgram News*, April 21, 2008.

5. Tatiana Chebotarevskaya and Anna Shiryayevskaya, “Russian refiners face June crude shortage,” *Oilgram News*, May 27, 2008.

Figure 1.2. Crude Oil Production at Samotlor, 1969–2011



Source: TNK-BP (<http://www.tnk-bp.com>).

The rapid expansion in production and exportable surpluses seemingly faced just one constraint—export pipeline availability and capacities at ports of export. But then another constraint appeared: the use of pipelines and rail transport to deny oil, and natural gas, to buyers historically dependent on regularly scheduled deliveries. Even the most casual observer would conclude that geopolitical issues were behind the denial, and not just problems with the delivery systems.

Nonetheless, with only minor exception, Russian oil and gas exports have moved to consumers on time and in the volumes contracted for. But these exceptions have attracted attention and, though undeniably justified, were out of proportion to deliveries denied and to the lengths of denial.

All oil (crude oil and petroleum product) pipelines, including those carrying oil for export, come under the control of Transneft, the state-owned monopoly. With Transneft always arguing that there was no shortage of pipeline carrying capacity and firmly opposed to the construction of any privately owned line, exporters had to turn to rail, water, and truck to handle increasing volumes, particularly of petroleum products. There are no petroleum product pipelines linked to importing countries.

Oil market watchers, reflecting upon the continuing uncertainties regarding Venezuelan, Nigerian, and Iraqi oil exports and attempting to more correctly judge the future, ask: What can Russia offer that these suppliers cannot? What is it that Russian oil exports could build upon?

For Russian officials, the answer is quite obvious. Russia offers reliability, security, and diversity of supply, distancing itself from the Persian Gulf. Russia does play politics from time to time by interfering in scheduled oil and gas deliveries to certain republics of the former Soviet Union. But rarely has Russia ever employed oil as a political tool in its dealings with customers in the West. Income derived from the export of crude oil, petroleum products, and natural gas and its reputation as a reliable supplier are far too important for Russia to contemplate actions that might disturb these advantages.

Yet denial will come into play when and if such actions would serve Russian national interests. Past experience should not be taken to mean that Russia will *always* be a reliable supplier. If an interruption in exports would serve a particular Russian national interest, then the order to do so goes out. The EU, mindful of its relatively high dependence on Russia for oil and gas, hopefully had learned its lesson in January 2006 when natural gas deliveries were reduced, ostensibly not by Russia, but by the transit state Ukraine. Russia had cut gas deliveries to Ukraine for failure to agree to a supply contract for 2006 that set out market rates for the gas supplied. In January, the weather is cold in Ukraine, so Ukraine just helped itself to volumes needed to keep warm. But that meant ongoing deliveries to Europe were reduced. As a result, energy security and diversity of supply became themes of the day in Brussels.

Russia also has avoided reducing oil sales as a way of supporting higher prices. Although Russia has thought now and then about membership in the Organization of Petroleum Exporting Countries (OPEC), economic disadvantages to date have outweighed the advantages. It has advised OPEC that it is supportive of high market prices for oil, but nonetheless has stood by while OPEC acted alone. Indeed, Russia's approach over the years has been to sell whatever volumes of oil were considered surplus to domestic needs, at whatever price prevails at the moment. In sum, Russia is a market follower, not a market maker.

A slight shift in oil policy was noted in late September 2008, when Russia said that it wished to become more involved in global oil markets by using its position as a leading oil producer and exporter to influence prices. One way to accomplish that would be through the release of oil and gas forecasts that hopefully would moderate volatility as well as delay the development of newly discovered fields. Influencing prices not surprisingly can also be quickly translated into controlling prices—that is, parlaying the country's energy wealth into greater political influence.

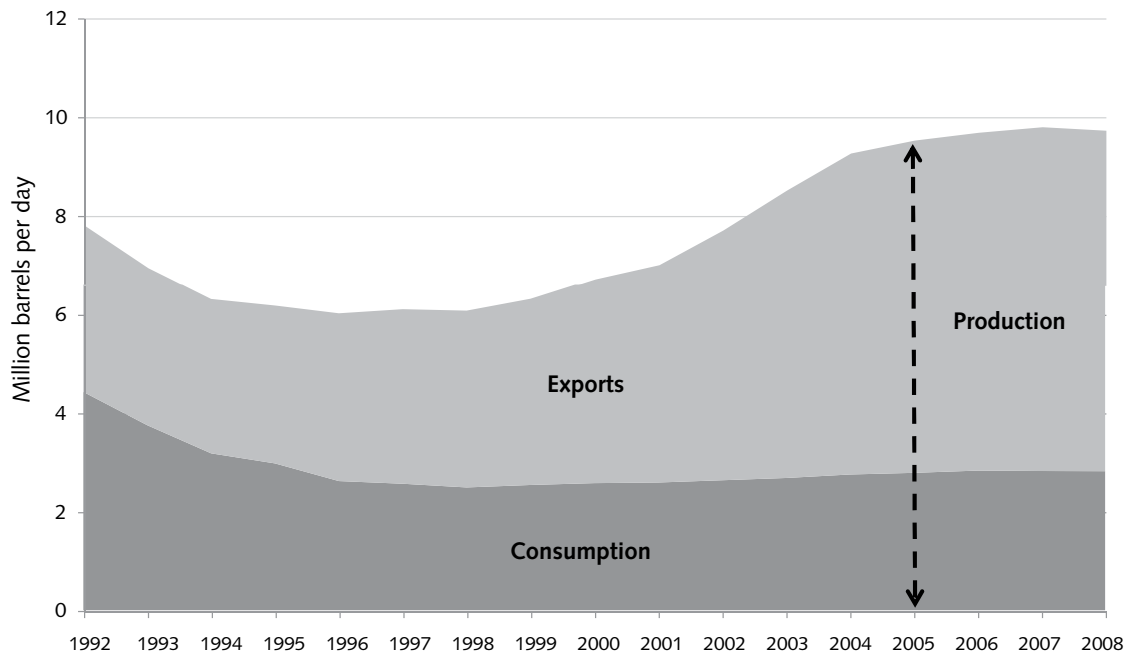
Russia apparently believed that its position was not being properly recognized. But it may also have accepted that future crude oil and natural gas production levels may not achieve what planners had hoped for, with the result that prices had become more important. At the same time, growing economic concerns cast doubt on future world oil and gas demand and could have contributed to staking out this new policy position.

Could Russia ever regain its past glories? Could it return to the latter part of the 1980s, for example, when Russian oil production—averaging 11.4 million b/d in 1988—exceeded Saudi Arabia's by millions of barrels daily? If that could be accomplished and if domestic needs were not much above current levels, then Russia might well be in a position to challenge Saudi Arabia for world leadership in oil exports.

Domestic use of oil has not been growing much, so that most of the incremental output has become available for export, pushing sales beyond 7 million b/d but still short today of matching Saudi Arabia. Figure 1.3 illustrates the minimal influence of domestic consumption on the level of exports. Only marginal increases have been demonstrated during the last handful of years, and use still falls considerably short of what took place in the first half of the 1990s.

Longer-term prospects appear better but only if Russia is successful in establishing large new crude oil production centers in West and East Siberia and offshore as well as measures to offset declines at the producing West Siberian fields. And only if Saudi oil failed, for resource reasons, to expand as it said it would, could Russia ever hope to match Saudi Arabia's in both production and export levels. Yet there is no reason not to accept Saudi statements regarding its oil resource base. This is a challenge that Russia cannot win, and need not win.

Figure 1.3. Russian Petroleum Balance, 1992–2008



Source: Chart compiled using data from the Energy Information Administration (EIA) and Platts Oilgram. Please note that data for 2008 are provisional.

But the situation should not be taken to mean that the game is over, for it is not. Alexei Miller, the chief executive of Gazprom, views the world in a different light. He viewed Gazprom as becoming the world's most powerful energy company.⁶ But he also held out the premise that, for the foreign investor, it is better to invest jointly with the state if success is to be ensured and that means dealing with Gazprom in natural gas matters and with Rosneft, the country's largest oil company.⁷

Geopolitics and Energy—Russian Style

Prime Minister Vladimir Putin has been quoted as saying “Russia enjoys vast energy and mineral resources which serve as a basis to develop its economy; as an instrument to implement domestic and foreign policy. The role of the country on international energy markets determines, in many ways, its geopolitical influence.”⁸

The Ukraine-Russia gas dispute of January 2009 offers a prime example of the mixing of politics and energy supplies and the unintended consequences of this dispute for Russia, for Ukraine, and for consumers of Russian gas in Europe.

6. Ed Crooks et al., “Gazprom chief sets out vision as biggest power in world energy,” *Financial Times*, June 27, 2008.

7. Carola Hoyos and Ed Crooks, “Gazprom sitting on top of the world, says Miller,” *Financial Times*, June 27, 2008.

8. Roman Kupchinsky, “LNG—Russia's New Energy Blackmail Tool,” *Eurasia Daily Monitor*, April 22, 2009.

January 1, 2009, began on a particularly sour note, with Russia's cutting of natural gas flows to Ukraine in the absence of an agreed price and volume contract covering deliveries for the approaching 12 months and for Ukraine's failure to settle debts for gas delivered in late 2008. Not surprisingly, cutoffs have happened before, more prominently in January 2006 and for the very same reasons. This time, however, the impact would extend well beyond Ukraine and to most importers of Russian gas in Europe. Russia had put forward a number of suggested natural gas prices covering the imports, but all were rejected. At the same time, Ukraine was holding out for higher transit fees to be collected and the removal of all intermediaries.

There is an interesting—and puzzling—sidelight to this failure to agree. Alexei Miller of Gazprom has pointed to RosUkrEnergo, a shadowy intermediary, who intervened when the prime ministers of Ukraine and Russia had agreed to a price of \$US235 for 1,000 cubic meters of natural gas. In its intervention RosUkrEnergo proposed a price of \$US285. Why the intervention, especially inasmuch as RosUkrEnergo is half owned by Gazprom? Was the intervention blessed by Moscow to negate the agreement and thus set up the rationale for the clash of interests that was to follow?

Deliveries to Ukraine were cut on January 1, and soon thereafter Alexei Medvedev, deputy chairman of Gazprom, set out on a tour of European capitals to argue that any gas shortages would be Ukraine's fault, not Russia's, and to do what he could to protect Russia's reputation. Russia had lost the public relations battle in January 2006 and was not about to let that happen again.

Ukraine, meanwhile, began to withdraw volumes of gas reportedly needed to fuel the compressor stations on the transit pipelines moving the gas across Ukraine to European customers. These amounts averaged about 22 million cubic meters per day. Russia used these losses, or thefts as Russia put it, as an excuse to further cut transit volumes. Extra deliveries of Russian gas were made through other pipelines, but these volumes were not fully sufficient to offset the losses. Larger countries have natural gas in storage; smaller countries do not. These volumes can be helpful, but their contributions are limited.

Prime Minister Putin on January 5 ordered Gazprom to reduce deliveries to Ukrainian pipelines by as much as 20 percent in retaliation for Ukraine's continuing theft of natural gas.⁹ The cuts by then totaled 65.3 million cubic meters, or equivalent to the volumes taken by Ukraine. Gazprom subsequently accused Ukraine of shutting down three export pipelines, and a fourth followed later. Accusations and finger-pointing continued unabated. Eventually even the United States came in for its share of criticism, as Prime Minister Putin weighed in as the month of January came to a close, blaming the United States for virtually everything that had gone wrong in Ukraine in recent years.

By Wednesday, January 7, Prime Minister Putin had had enough and ordered all natural gas exports to be cut off. The importance of this action cannot be dismissed. Fully one quarter of European gas imports originate with Russia, and 80 percent of these imports transit Ukraine. Eleven importers of Russian gas were now completely shut out, and even major importers such as Germany, Italy, and France found their supplies of Russian gas sharply reduced.

The EU, heretofore remaining in the background to what they had called a commercial matter, was becoming visibly upset and declared Russian actions to be unacceptable. Additionally,

9. Philip P. Pan, "Putin Orders Reduction in Gas Sent to Europe through Ukraine," *Washington Post*, January 6, 2009.

Ukraine was urging the EU to act as a mediator between the two parties. After several false starts, all parties agreed to position monitors at key points along the Russia-Ukraine transit pipeline network to ensure that natural gas was entering and exiting the network in the prescribed volumes. Pumping of the gas was to begin the morning of January 13. Very likely, impetus for the Russian signature on the agreement was provided in part by the losses in sales at that time of about \$US800 million suffered by Gazprom.¹⁰

Flows were to have resumed on January 13, but only to European customers and not to Ukraine. Left unresolved were questions of price and volumes for the natural gas Ukraine would import during the year, transit fees, payment for volumes directed to compressor stations, and whether RosUkrEnergo, an opaque intermediary, would be retained.

Yet this first day of resumed gas deliveries did not go as planned, and Russia charged that Ukraine was blocking shipments out of the country while Ukrainian president Viktor Yushchenko explained that his country's multiple pipeline system made it impossible to direct gas flows fully in one specific direction.¹¹

Not necessarily surprising, no Russian gas reached European consumers on January 13 through January 17, with Russia blaming Ukraine and Ukraine responding it was all Russia's fault. Europeans, tired of the gas shortages, were quick to conclude that trust in Russia was at risk, with the International Energy Agency stating that Russia had lost its status as a reliable gas supplier to Europe. Others questioned Ukraine's viability as a transit country. Gazprom losses, which now stood at \$US1.2 billion, were increasing by \$US120 million every day.¹²

Trying to find some acceptable way out of this standoff, Russian prime minister Putin and Ukrainian prime minister Yulia Tymoshenko agreed to meet in Moscow on Saturday, January 17. At the same time Russian president Dmitry Medvedev had called for a gas summit to take place that day in Moscow. But the summit completely failed, as all leaders of Russian gas-importing countries, except for Slovenia, stayed away. Tymoshenko and Putin were able to reach the outlines of an agreement early Sunday morning, presumably solving the standoff. Prime Minister Tymoshenko returned to Moscow on Monday to witness, together with Prime Minister Putin, the formal signing ceremony.

The Agreement Resuming Natural Gas Flows

What did that agreement call for?

- The agreement covers a 10-year period, 2009 to 2018 inclusive.
- Russian gas deliveries will resume immediately.
- The price paid by Ukraine will be calculated by a formula used by European customers, but Ukraine will be granted a 20 percent discount during 2009. The first quarter 2009 price, taking into consideration the 20 percent discount, will be \$US360 per 1,000 cm, nearly double what Ukraine paid in 2008. The average for the year 2009 will be around \$US250 per 1,000 cm.

10. Isabel Gorst, "Russia to resume gas supplies," *Financial Times*, January 11, 2009.

11. Reuters, "Russia, Ukraine PMs to Meet for Gas Dispute," January 15, 2009.

12. Roman Olearchyk et al., "Conflict over supply highlights murky nature of energy trade," *Financial Times*, January 10, 2009.

- The intermediary RosUkrEnergo will disappear.
- But the matter of who provides and pays for the natural gas to fuel the compressors remains unsolved.
- The transit fee paid by Russia for gas deliveries across Ukraine will stay unchanged during 2009, but afterward will follow the standard European fee, increasing to \$US2.50 per 1,000 cm per 100 kilometers.
- If Ukraine falls behind in payment for gas received, then advance payments will be required before new volumes arrive.

The agreement was not yet a done deal. The National Security and Defense Council had to meet and decide whether the deal met the Ukrainian national interests. The council is controlled by President Yushchenko, political rival of Prime Minister Tymoshenko, who already had questions as to the agreement's content, viewing it as a defeat.¹³ The president, following the intervention of EU president José Manuel Barroso, backed off from his earlier position at EU headquarters. It is very likely that the Ukrainian desire to join the EU played a central role in the discussion.

On January 22, 2009, *Pravda* carried on its Web site the 19-page agreement signed by A.B. Miller of Gazprom and O.V. Dubin of Naftogaz on January 19. A quick perusal of the contract finds a number of instances not in agreement with, or in addition to, what the media had provided. Four examples suffice:

- The agreement covers 11 years, not 10—that is, from January 1, 2009, to December 31, 2019.
- Deliveries of gas by quarter during 2011–2019 will require agreements additional to the present contract.
- The contract price effective for the first quarter of 2009 will be \$US360 per 1,000 cubic meters (that is, 80 percent of the base price of \$US450 per 1,000 cubic meters).
- The volumes of gas to be delivered during the first quarter of 2009 are barely 31 percent of those volumes scheduled to be delivered during the first quarter of 2010. In other words, volumes not delivered during January 2009 are not to be made up.

The issues that originally led to the gas dispute—that is, debts incurred for gas deliveries to Ukraine in the latter part of 2008, plus the matter of technical gas—remain unresolved. However, an article by Anders Aslund, carried in the *Moscow Times* of January 28, clearly stated that Ukraine had paid all its gas bills by December 30, implying that Russia then had no legitimate reason to justify the supply cutoff.

Kiev possibly had in mind that by relatively early in 2009 natural gas prices would be much lower, reflecting the linkage between oil and gas prices—that is, gas prices in the spring would reflect the lower oil prices in the second half of 2008. Most certainly, Russia understood that as well. Who could hold out the longer—Russia or Ukraine?

Clearly, Russia was using its natural gas exports to bring political pressure on Ukraine, but to what ultimate end—to stop Ukraine's desire to join NATO and the EU, to seek international support for the planned Nord Stream and South Stream gas pipelines, to gain possession of the transit pipelines themselves, or to vent personal dislike of Ukrainian political leaders?

13. Vladimir Socor, "Russia Seeks Control of Ukraine's Gas Transit System through a Consortium," *Eurasia Daily Monitor*, January 15, 2009.

Probably all these factors had some role to play. Russia has long thought about how it might gain control of the transit pipeline system, but Ukrainian law expressly precludes a transfer of ownership.¹⁴ Then there is another rationale, as some have suggested. This issue could be a dominant one and could be nothing more than a financial dispute between UkrGazEnergo and RosUkrEnergo. Both are uniquely opaque, both are privately held trading companies, and both are most likely corrupt to the core. RosUkrEnergo is half owned by Gazprom and half owned by two Ukrainian businessmen. UkrRosEnergo is half-owned by RosUkrEnergo and half-owned by Naftohaz Ukrainy, itself a Ukrainian state entity.¹⁵

RosUkrEnergo acquired from Gazprom natural gas that the latter has purchased in Central Asia, largely from Turkmenistan. The Gazprom pipeline network was utilized to move this gas to the Russia-Ukraine border where it was transferred (sold) by RosUkrEnergo to UkrRosEnergo. For its services, RosUkrEnergo received 15 billion cubic meters (bcm) of the transported gas, while the remainder was sold to UkrRosEnergo. Sales in Ukraine are made at a small loss (although how that loss is calculated is not known), whereas sales in the EU earn a healthy profit.

Where did the debt claimed by Russia originate? The debt ostensibly owed by Ukraine consisted of funds owed by UkrRosEnergo to RosUkrEnergo. Russia and Ukraine apparently were not involved directly in these business transactions. Ukrainian Prime Minister Tymoshenko had long wanted to see middleman RosUkrEnergo eliminated, and she can claim victory in that regard, but there is no assurance that another vehicle or other opportunities will not emerge to take its place and to provide funds to be used for political purposes.

This is a game where both sides—Russia and Ukraine—are easily viewed as losers—Ukraine because European consumers of Russian gas have lost confidence in its viability as a transit country and Russia because of damage to its reputation as a reliable supplier. It can be said that Russia has the natural gas while Ukraine has the pipelines, thus resulting in a standoff in terms of advantage.

But that line of thinking does not take into account the importance of natural gas to the importers. Natural gas is far too important a fuel for households and industry in Europe for interruptions to be other than very short term. Longer-term interruptions simply must be avoided. Thus, advantage rests with Russia. Europe may look for alternate supplies and alternate routings, but from where and at what cost in money and time? Advantage Russia.

In January 2010 Ukraine is scheduled to hold presidential elections where the key opponents will be President Yushchenko and Prime Minister Tymoshenko. At that time, the stakes will be higher. Tymoshenko gained political advantage as a result of the agreement to resume gas supplies, and she also gained warm words from Prime Minister Putin. Will these be sufficient to swing the election?

Will Ukraine have the continuing financial ability to make payments on time and in the sums needed? If Ukraine did not have the means to pay when the price was low, how then will it be able to afford natural gas when prices are 50 percent higher?

A minor crisis was averted in early March 2009 when at the last moment Naftogaz found enough money to make the final payment on a debt to Gazprom of \$US360 million that had ac-

14. Stacy Closson and Jeronim Perovic, "Hope Won't Keep Europe Warm," *Radio Free Europe/Radio Liberty*, January 8, 2009.

15. Siobhan Hall, "EU should not bypass Ukraine," *Oilgram News*, January 23, 2009.

crued for gas delivered but not paid for.¹⁶ Russia, as might be expected, had threatened to cut off gas supplies if payment was not made by March 7. Is this what can be expected in the coming months as customers fail to pay Naftogaz for gas consumed? Naftogaz cannot pay if consumers do not pay them.

Or, might Moscow have learned its lesson from the January experience when the failure to calculate the political risks and practical consequences of the cutoff at that time was subsequently acknowledged? There is always hope. Prime Minister Putin took the benevolent approach to Ukraine after Ukraine had indicated it wanted to cut its imports this year—from 40 bcm to 33 bcm. The contract apparently is take-or-pay—that is, if the importer does not want the contracted volumes, the customer still pays. It is understood that importers of Russian gas can take 15 percent to 20 percent less than the volumes called for, and do so without penalty. Putin responded this time by forgiving the fines, because Ukraine had no means to pay. But the question remains: how long will that attitude prevail, given the poor financial status of Ukraine?

In the meantime, RosUkrEnergo has disappeared and its place taken by RosGas, now the seller of Russian gas. RosGas reportedly is controlled by Gazprom. Would a rose by any other name smell the same?

Ukraine-Russia relations, particularly as they relate to natural gas, cannot long endure without some crisis emerging. Just when temperatures had cooled a bit, there was an agreement between the EU and Ukraine to renovate the Ukrainian gas pipeline system, without the participation of Russia. Russia strongly objected, and Ukraine saw it to their advantage to invite Gazprom to participate in any renovation and upgrading efforts. But the damage had been done.

Lessons Learned

With all this in mind, the EU revisited the question of energy security, but this time it was fully convinced that steps must be taken, and soon, to secure reliable energy supplies for EU member countries. Renewed attention is being given to the proposed Nabucco natural gas pipeline whereas the recently agreed pact, in the Russian judgment, supports Nord Stream and Blue Stream gas pipelines.

Nuclear power received renewed attention, as might be expected and, in fact, all forms of energy must be considered, as must expanded storage capacities and the construction of cross-border links, while recalling that little had been done since January 2006, as thoughts turned inward.

Not too much confidence should be placed on construction of the Nabucco pipeline. Natural gas supplies and financing have yet to be secured. Moreover, Russia was quick off the mark. Recognizing that the EU would be trying to enhance its energy security, President Medvedev was quickly sent off to Uzbekistan, a major Central Asian producer, to help keep that country in Moscow's corner and to lock up future gas exports, which he was able to do.

Then, EU energy commissioner Andris Piebalgs took a different tack, seemingly downplaying the development of new pipelines bypassing Ukraine. Instead, he suggested that Ukraine should not be bypassed, but investments should be directed to the Ukrainian system to make it safe, reliable, and more efficient.¹⁷ Will the EU ever be able to speak with one voice on energy matters?

16. Nadia Rodova and Alexander Bor, "Ukraine pays Gazprom for February natural gas," *Oilgram News*, March 6, 2009.

17. See <http://themoscowtimes.com/articles/detail.php?ID=373776&print=Y>.

The essence of the statement by Piebalgs visibly upset Russia, which complained how any discussion related to the pipeline network's transiting Ukraine could occur without Russia's direct involvement.

Russia also took away several lessons, including the need to prepare its military for future conflicts and the need to diversify among its oil and gas importers. The first major step in securing that diversification came near the end of March 2009 with the loading of the initial LNG tanker from the Sakhalin-2 project.

Russia and the West

The casual newspaper reader and watcher of TV evening news programs could easily find bits of evidence pointing to a rebirth of the Cold War. Confronted by a feisty, aggressive, sometimes testy, but always self-confident then president Putin, the West did not know quite how to respond. It does not help when governments themselves cannot agree on actions to take. Nor does it help when Russia complains of being thwarted in its efforts to return to superpower status by those who wish to keep Russia in second-class status and who wish to see its influence minimized.

Take Russia and Germany, for example. Putin, sensing an advantage to be had because of Germany's dependence upon Russia for supplies of oil and gas, worked the divide between those who support a close relationship with Russia and those who prefer to deal at arm's length. It is even more difficult within the EU, where new members Poland (plus the four other East European countries) and the Baltic states have little reason to be supportive of Russia.

Relations between Moscow and Washington and between Moscow and London are not much better and have been seen to be at their worst since the Soviet Union collapsed in December 1991.¹⁸ Clearly Russia continues to be emboldened by foreign exchange earnings from oil and gas sales that have given it a new lease on life. But Russia is inclined to use this new lease on life to advance its own national interests, often to the detriment of others. Playing to the nationalistic feelings of Russians, using its control of the media, and suppressing opposition movements evoke memories of the old Soviet Union, itself a failed state. Continuation of current policies and concomitant rising rhetoric could easily lead to confrontations reminiscent of the dark days of the Cold War. Such confrontations would serve the national interests of no one. Until the EU can find a position supported by all member-states, however, that prospect will hold.

President Putin played the June 2007 G-8 summit to his advantage by offering President George W. Bush the joint operation of the Gabala early-warning radar station in Azerbaijan, thus making redundant the planned U.S. construction of a radar station in the Czech Republic and the deployment of interceptor missiles in Poland. He did so, knowing full well that his offer would be rejected, but his gesture nonetheless took the edge off the meeting and calmed discussions centering on the prospective return of the Cold War atmosphere. Yet that edge would soon reappear, led by an acrimonious dispute between London and Moscow concerning the murder, in London, of former intelligence agent Aleksandr Litvinenko.

London had identified the probable killer and requested that Moscow arrange for him to be extradited to London for trial. Moscow refused, stating that the Russian constitution did not per-

18. Andrew Osborn and Marc Champion, "Why Tensions with Russia Endure," *Wall Street Journal*, May 18, 2007.

mit extradition of a citizen. London then expelled four Russian diplomats, and several days later Moscow responded in kind. Normally, this exchange of actions would mark the end to whatever dispute started it, but in this instance the stakes may be higher. Regarding Litvinenko's murder, the story may be over, but it has no end.

Still, despite all the political rhetoric, Russia takes great pains to remind Europe that it has never, even during the days of the Cold War, failed to meet contract commitments for deliveries of oil and gas. It knows that European and world markets are just as important to its producers and exporters of oil and gas as are the markets offered by the importers. In the Russian view, interruptions in oil and gas deliveries, limited as they may be, are always the fault of someone else.

2

THE CRUDE OIL AND
NATURAL GAS SECTORS

Oil and Natural Gas Exports

Russia is a major player in both oil and gas exports, and much of the country's economic current and likely future growth is based on the income these exports will generate, particularly when high market prices prevail. When prices and demand decline drastically as they have, dependence upon export income becomes a burden.

Oil exports have been a cash cow for the federal and regional budgets. For example, beginning February 1, 2008, crude oil export duties reached US\$45.72 per barrel, and moved slightly higher, to \$US46.58, for the months of April and May.¹ With oil prices continually increasing, Russia's crude oil export duty reached \$US54.79 a barrel effective for the months of June and July.²

A new level of \$US66.54 a barrel effective October 1 was established, down 2 percent from \$US67.90 a barrel covering August and September.³ The duty is based on the average price of Urals export grade crude oil during the preceding two months. Two more reductions were forthcoming, down to barely \$US16 a barrel effective January 1, 2009, all reflecting the fall in the crude oil price after July.

This form of windfall profits tax strongly discouraged investment in expanding production. The high crude oil export duty leads to an expansion of domestic refining and to the export of products rather than crude oil.⁴ Because light petroleum products face a much lower export duty and because of rising domestic demand, exports of petroleum products are a reported 60 percent more profitable than the export of crude oil.⁵ Not surprisingly, one oil official estimated a decline in crude oil exports of 400,000 b/d to 600,000 b/d by 2010.⁶

As the world oil price continued its decline, Russian oil producers and exporters loudly complained that the high export duties made it almost impossible to show much of a profit, if any, let alone accumulate funds for investment in exploration for and development of new fields. These complaints were heard and accepted.

1. Anna Shiryaevskaya, "Russian crude exports fall on high taxation," *Oilgram News*, March 4, 2008.

2. Nadia Rodova, "Russian crude export duty to hit high of \$400/mt," *Oilgram News*, April 25, 2008.

3. Nadia Rodova, "Russian crude export duty expected to fall for the first time since April 2007," *Oilgram News*, September 2, 2008.

4. An official of TNK-BP recently noted that Russian refineries have reached the limit of capacity and require additional investments into the sector. See Nadia Rodova, "Russian refineries at capacity limit, need investment to relieve bottlenecks: TNK-BP," *Oilgram News*, February 20, 2008.

5. Anna Shiryaevskaya, "Russian export dip due to market, not politics: Lukoil," *Oilgram News*, September 1, 2008.

6. Ibid.

Even that substantial reduction was not enough to satisfy the oil sector. Why? It was reported that crude oil for delivery to the domestic market in November traded as low as \$US10.30 a barrel, with these prices based on the return received per barrel supplied to the export market.⁷

A further reduction in the export duty for crude oil was granted at the beginning of November 2008, to \$US39.35 per barrel, made necessary as the oil price decline had left the oil companies virtually without earnings from oil exports.⁸ It was still not enough, as exporters complained that crude oil exports were being sold at a loss.

With no other option, exports were held back, waiting for the government to set the export duty even lower. Indeed, exports of crude oil were down 6 percent during January-October 2008⁹ and fell even further in November, when deliveries to buyers in countries outside the Commonwealth of Independent States (CIS) declined by 16 percent compared with sales in November 2007.¹⁰ Financial losses continued because the export duty was higher than the export price less the costs of transport.

On December 1, the export duty was cut to \$US26.31 a barrel, or down by a full one-third.¹¹ Comparable cuts were made in the export duties for light products and for heavy products. Still not enough, the companies responded, as crude oil prices continued their decline.

The future may look somewhat better, however, as the price of the Urals blend will now be calculated monthly, so that the duties can more closely reflect developments in the marketplace. Despite the implied financial losses, exporters have begun to return to their normal markets, having recognized that the risks of selling to the domestic market, where demand is uncertain and liquidity an issue, exceed those risks associated with sales outside Russia.¹²

Understanding what lies ahead offsets this somewhat positive outlook. The impact of the high export duties alone cannot be lightly dismissed. It has been said that at present 93 percent of the new oil field development projects are not profitable because of the fiscal burden and high export duties that together take about 70 percent of the price of crude oil.¹³ Further, an oil company manages to keep only 7 percent of the price of oil; everything else is taken away.

If this assessment is reasonably correct, then near-term growth, if any at all, in crude oil production and exports will be severely restricted.

All Russian natural gas exports and virtually all oil exports move in a westerly direction, the exception being relatively small volumes of oil exported by rail to China. Oil producers in Russia complain that the shortage of export pipeline capacity forces them to use more expensive rail and waterways. In 2004, crude oil exports by rail averaged more than 800,000 b/d, while refined product exports by rail rose to 1.32 million b/d. There are no refined product pipelines crossing international boundaries.

7. See "Russia Cuts Oil Duty but Exporters Disappointed," *Radio Free Europe/Radio Liberty*, November 3, 2008.

8. Nadia Rodova et al., "Russia slashes crude export duty to \$39.35/b," *Oilgram News*, November 4, 2008.

9. Isabel Gorst, "Russia to cut oil export duty by third," *Financial Times*, November 17, 2008.

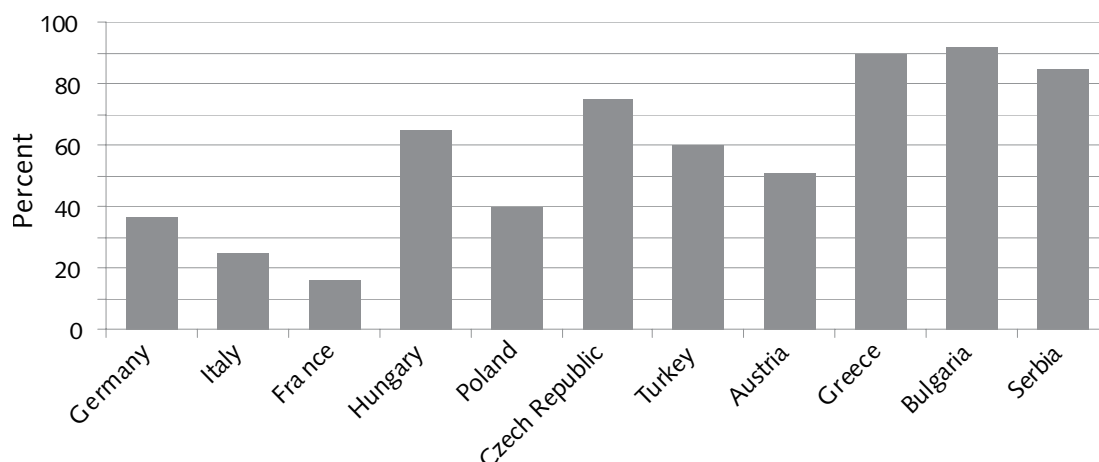
10. Nadia Rodova, "Russian oil output fall in 2008 inevitable," *Oilgram News*, December 3, 2008.

11. Nadia Rodova, "Russia slashes crude export duty, third cut since October," *Oilgram News*, December 1, 2008.

12. Tatiana Phillips, "Oil price slump dents Russian oil demand, freezing domestic products trading," *Oilgram News*, December 3, 2008.

13. See <http://peakoil.com/modules.php?name=News&file=article&sid=47514>.

Figure 2.1. European Dependence on Russian Gas



Source: Data from a report of the Energy Policy Research Foundation Inc., which appeared in Lucian Pugliese et al., "Is it time for Gazprom to hit the reset button?" *Oil and Gas Journal*, March 10, 2009.

Deference is given to the Russian oil sector, to developments in production and exports, but it is the natural gas sector that leads the world in terms of reserves, in levels of annual production, and in levels of exports. Russian natural gas deserves far more attention than currently received, in large part because of the influential role these reserves will be playing in world energy supply and demand.

Just how much crude oil, petroleum products, and natural gas did Russia export in 2006 and how much might be expected over the near term—say, out to 2015?

Working with Russian oil data can be, and is, very frustrating because of incompleteness and lack of transparency. In 2006, Russia exported roughly almost 70 percent of domestic oil supply, defining that country as a major player in the world oil market.

For natural gas exports, the reporting is much better, perhaps because of the presence of just one dominant player—Gazprom. Natural gas exports to buyers outside the former Soviet Union totaled some 180 bcm in 2006, out of a total domestic production of 634 bcm, of which Gazprom provided 547 bcm. Dependence on Russian gas imports can be quite high, as figure 2.1 illustrates, with this dependence carrying strong political overtones.

Both in 2007 and in 2008, natural gas production was off slightly, with the blame placed on unusually warm weather. Exports continue to expand, but only marginally, reaching an expected 208 bcm in 2009.

Even that level has now been reduced, as time passes and the seriousness of the financial crisis becomes more obvious. By April 1, Gazprom was projecting a further decrease in its gas exports to Europe. The new level of exports was now placed at 140 bcm, compared with 178 bcm exported in 2008.¹⁴ Undoubtedly these new forecasts reflected new calculations based on the severe drop in exports, placed at 51.3 percent during the first quarter of 2009.¹⁵

14. Nadia Rodova, "Gazprom signals large EU gas export cuts," *Oilgram News*, April 1, 2009.

15. Nadia Rodova, "Russia sees oil output up slightly in March," *Oilgram News*, April 3, 2009.

Results for the first four months were even more damaging for the natural gas sector. Natural gas exports during January–April 2009 were down by more than one-half compared with exports during the first four months of 2008¹⁶—not because of problems on the supply side, but rather because of falling demand coupled with high gas prices.

The government, proceeding from that cut, expects a 10 percent decline in gas production this year, because of lower demand, with production holding at that reduced level for the next four to five years.¹⁷ Gazprom, against the decline in demand for what it has to sell, expects its output to be at about 492 bcm.

The Gazprom future is not all that bright, given the very high depletion rates of major producing fields. In fact, Gazprom had anticipated production by 2020 of 580 to 590 bcm, not that much of a gain over current levels. Then, and possibly reflecting acquisition of new assets such as Kovykta, Gazprom recently announced new production levels of 620 to 646 bcm for the year 2020, up just marginally over the 610 to 615 bcm forecast for 2015.¹⁸

But that may not be the real story. Russian natural gas production is expected to total 940 bcm by the year 2020. Of that volume, Gazprom would provide just 67 percent, considerably down from the 84 percent contribution in 2007. In other words, Gazprom's loss is someone else's gain, and that gain goes to the independent gas producers.

Locking in the European gas market is key to the future of Gazprom. Pipeline construction plans to serve that market include, among others, a so-called North European pipeline or Nord Stream to Germany, to be laid on the Baltic Sea bed, bypassing Latvia, Lithuania, and Poland, largely for political reasons. Also included is a pipeline to carry Central Asian gas through Russia and a South Stream line to carry gas from Russia across the Black Sea to Bulgaria and onward to Europe, bypassing the transit state of Ukraine. The rationale for these lines may be as much related to diversion away from troublesome transit countries as the need to expand gas sales.

The prospect of natural gas production shortfalls in Russia should not be overlooked. Chronic underinvestment in exploration and development, falling prices, and the financial crisis enveloping the world all have an impact. Current developments, however, indicate that reductions in the use of natural gas at home and abroad will hide declines in production, at least for 2009, if not longer. Domestic demand is expected to fall by at least 5 percent this year¹⁹ and will be at least matched by consumer declines in Europe.

With the loss of sales in mind, Gazprom now has the task of coordinating production cuts among the various producers, particularly the independents.

A new chapter in the export of natural gas was opened on February 18, 2009, with the commissioning of the country's first facility to move natural gas in liquefied form (liquefied natural gas, or LNG) to foreign buyers not reachable by pipeline. The liquefaction facility, built on the southern tip of Sakhalin Island, will see most of the output directed to Japan. This may be the only good news for Gazprom during the year. Exports will support diversification among importers. But 2009 will not be looked upon as a good year for the natural gas sector.

16. Anna Shiryayevskaya, "Russian gas exports plunge in first four months," *Oilgram News*, May 6, 2009.

17. Anna Shiryayevskaya, "Gazprom predicts gas output cut on demand," *Oilgram News*, April 13, 2009.

18. Nadia Rodova, "Russian crude output falls again in March," *Oilgram News*, April 3, 2008.

19. Anna Shiryayevskaya and Amanda Rayborn, "Gazprom sees 'much lower' capex in 2009," *Oilgram News*, April 30, 2009.

Maximizing Oil and Gas Wealth

Russia understands how the world oil market works and wants to take advantage of the market by maximizing its oil wealth, other than through taxes, through an expansion of its refining capacity. In 2006 less than half the crude oil produced was refined—just 4.4 million b/d out of 9.6 million b/d. Of the refinery yield, 2.06 million b/d of products were exported, implying a domestic demand of about 2.3 million b/d. Refinery yields are of relatively poor quality, meaning these products are not particularly competitive outside Russia. The year 2007 showed only marginal improvement. Crude oil sales to the domestic market averaged 4.5 million b/d while exports averaged 5.1 million b/d.²⁰

Change will not come overnight. Crude oil refining is to grow to 4.7 million b/d by 2010, up by 7 percent, while product exports are to average 2.2 million b/d during that year, leaving an estimated 2.5 million b/d for the home consumers.²¹ Plans center on refinery modernization, with new construction mentioned more in passing.

The country knows that oil and gas revenues cannot and should not form the sole foundation for growth in the coming years. But if not oil and gas, what? First deputy prime minister and once potential Putin successor Sergei Ivanov, in remarks presented to the St. Petersburg International Economic Forum, stated that Russia would pursue dominance in five critical industries—nuclear energy, civil and military aviation, space, specialized shipbuilding, and nanotechnology.²² Will his scenario materialize? It is doubtful, for there are too many challenges that must first be overcome, including, as noted elsewhere, corruption, a shrinking population,²³ poor health care, alcohol abuse, deteriorating infrastructure, income inequality, and stresses of everyday life.

The New Strategic Assets Bill

For the strategic assets bill to become a working law is a long and arduous road. The bill must pass a third and last reading in the Duma, then needs to be approved by the upper chamber of Parliament and, finally, to be signed by the president. The draft does not contain restrictions on foreign ownership *per se*, but does allow the Ministry of Natural Resources to set up auction rules, and it will be the Ministry's policy to restrict bidders for so-called strategic deposits to companies more than 51 percent Russian-owned,²⁴ where foreign investors can hold no more than 49 percent. The bill also makes amendments to the subsoil law.

What constitutes a strategic oil or gas field? An oil field holding reserves at or greater than 70 million tons (511 million barrels) and any gas field holding at least 50 bcm would be classified as "strategic."²⁵ All offshore fields are considered strategic, regardless of size. Any field or project cur-

20. See <http://en.rian.ru/russia/20080218/99523225.html>.

21. Nadia Rodova, "Russia poised for refining boom on capacity growth, incentives," *Oilgram News*, June 25, 2007, p. 6.

22. Victor Yasmann, "Russia: Glimpsing the Future through Rose-Colored Glasses," *Radio Free Europe/Radio Liberty*, June 20, 2007.

23. Russia's population is shrinking by 700,000 people every year.

24. Russia has canceled a number of auctions for the rights to develop three oil fields in Siberia. Media reporting attributed this action as a move to keep TNK-BP from snapping them up. Other observers saw the action as a move to keep foreigners out and to tighten control over natural resources.

25. Anna Shiryaevskaya and Nadia Rodova, "Duma limits foreign access to strategic assets," *Oilgram News*, March 25, 2008.

rently under way will be grandfathered. But if a foreign company would discover a new major field fitting the description of a strategic field, it would have to be handed over to the state.²⁶

These “strategic” fields are likely to be those where development is fundamental to Russia’s energy future. But will Russia have the financial, technical, and know-how capacities to move forward with these strategic fields? The prospective development of offshore oil and gas is very real, but of the 7,600 exploration licenses granted during the 1991–2006 period, only 2 percent were for offshore fields.²⁷

How will TNK-BP fare, given that the bulk of its assets are in oil fields where the water cut is extremely high? Indeed, 92 percent of the entire company’s fluid output is water.

How will TNK-BP continue growing? Its CEO believes that the application of sophisticated technology will enable his company to grow throughout this decade, but after that, its transformation, as for all companies, must come through new projects. It is important, though, that the rules of the game be clear and secure. For many potential investors and for many commentators and observers, Russia remains a dark and hostile place, a land of risk rather than opportunity.

The law limiting foreign investment in strategic industries, which include oil and gas fields, was signed into law on May 5, 2008.²⁸ There were no surprises in the final language, and none were expected. One amendment, however, suggested that if a foreign company discovered a strategic field, at least 50 percent would have to be sold to a Russian company to receive rights to develop the field.

Is Growth in Russian Oil Production and Exports Sustainable?

In recent months, oil market watchers have been trying to find reasonable answers to three simple questions. Is the growth in demand for imported oil by China, India, and the United States sustainable? Will OPEC member countries, particularly those of the Persian Gulf, cut production, leading to development of meaningful and sustainable spare producing capacity? Is the growth in Russian crude oil and natural gas production and exports sustainable?²⁹

Additions to Russian oil export levels over the past several years, at least through mid-2008, have helped allow the marketplace to absorb high demand growth attributed to China, the United States, and India, though sufficient only to maintain a necessarily relative tight balance between world supply and demand. Any downward fluctuation in these supply additions, for whatever the reason, would concomitantly shift greater responsibility to OPEC—that is, to adjust supply in a way to match demand. Failure to do so, for whatever the reason, would be cause for higher prices.

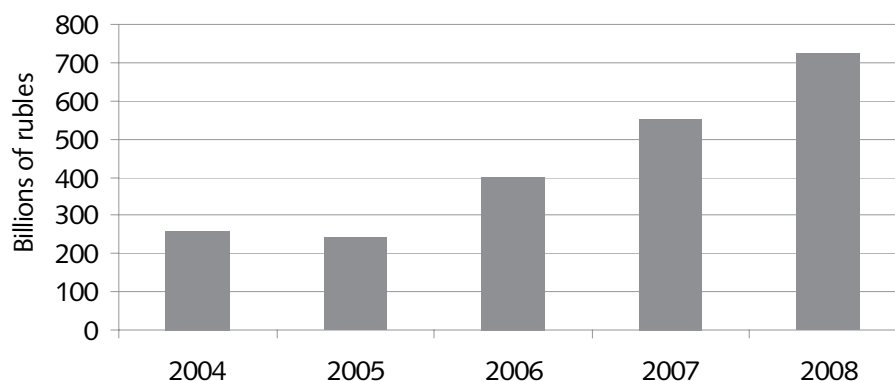
26. Anna Shiryayevskaya and Nadia Rodova, “Russia says to reveal ‘strategic’ oil and natural gas field list in June,” *Oilgram News*, May 30, 2008.

27. Nadia Rodova, “Russian development of offshore oil and gas hangs in balance,” *Oilgram News*, August 16, 2007. The key issue seems to be the question of granting tax breaks to foreign companies exploring for oil offshore. Russia looks to get 200,000 b/d of crude oil and 30 bcm of natural gas from offshore fields by 2010 and further to 1.9 million b/d and 300 bcm by the year 2020.

28. Nadia Rodova, “Putin signs measure limiting foreign access,” *Oilgram News*, May 6, 2008.

29. Russia is not alone when the issue of the impact of sharply reduced investment in oil and gas exploration and development is discussed. An internal report on Nigeria stressed that unless the government raised investment, the production of oil and gas will fall by 30 percent by 2015. See Matthew Green, “Nigeria warned on oil spending,” *Financial Times*, April 17, 2008.

Figure 2.2. Russian Oil Upstream Investments



Source: Data from OAO Gazprom (<http://gazprom.com>).

Concurrently, high oil prices have led to reductions in demand, not only in the United States but worldwide. OPEC became sufficiently worried that low oil prices would continue unless and until OPEC took steps to reduce supply, which it did. Supplies sharply contracted, but then, trying to anticipate which direction geopolitical issues are moving can be particularly frustrating, as past unsuccessful efforts have shown.

Higher export duties (what U.S. companies might term a windfall tax), fluctuating with oil prices, plus the attraction of continued high market prices, led Russian companies to forgo exploration in favor of developing producing fields³⁰ as well as keeping a bit more of its oil at home for the domestic market. These taxes held for two months when a new tax was calculated based on the average price of Urals crude oil, the country's main export grade, for the previous two months.³¹

The punitive export tax has led some Western analysts to conclude that, once these taxes are paid, very little will be left over to fund investment in new oil fields.³²

Data in figure 2.2 are given in billions of rubles. Conversion at the rate of 33.33 rubles/\$US1 for the year 2008 indicates that investment upstream that year approached \$US21.7 billion. A very substantial gain had thus been registered over the preceding years, implying that perhaps the export duties had not been so punitive after all. But high costs make these data misleading.

Putin himself has recognized that the total tax take from the oil sector approaches 75 percent to 80 percent of company income.³³ Does that mean the government prefers investments to be made in the oil-refining sector? Perhaps so, for there are generous tax concessions for refineries, and export duties on petroleum products are much lower than for crude oil. It may also mean that at least near-term prospects for new oil discoveries are dim.

Russian oil producers had paid a mineral extraction tax of \$US9 per barrel. The Ministry of Finance offered some relief, proposing that the tax would start from a price of \$US15 a barrel, saving the oil sector \$US4.2 billion.³⁴ The lower tax would become effective in 2009. Would this

30. Some producers have been accused of overproducing—that is, producing in excess of agreed-upon levels.

31. Nadia Rodova, "Russia hikes crude oil export duty to record \$45.72b," *Oilgram News*, January 10, 2008.

32. Rachael Graham, "At the wellhead," *Oilgram News*, February 4, 2008.

33. Neil Buckley, "Putin puts Medvedev on sidelines," *Oilgram News*, May 9, 2008.

34. Anna Shiryayevskaya and Nadia Rodova, "Russia to cut oil-sector tax burden by \$4.2 billion/year," *Oilgram News*, March 28, 2008.

cut, making additional income available to the industry, revitalize investment, especially upstream? Probably not. Oil companies sought a much higher cut, on the order of \$US25 a barrel.

Vladimir Putin, as prime minister, has indicated that the oil companies should repay the tax break, still in place, by raising output, thus reversing the current decline.³⁵ He added that the country could not maintain the past years of production growth from existing deposits, that new territories must be explored.

Lukoil vice president Leonid Fedun has been adamant that the indicated tax initiatives would help stabilize output at existing levels. But if Moscow wanted to see production increases, then a further reduction in oil sector taxes would be required.³⁶ He also underscored the comparatively tenuous position of the country's oil reserve base when he noted that these reserves were sufficient to raise crude oil output from the present 9.7 million b/d to some 10 million b/d. However, new investments would be needed to develop supplies in East Siberia, Timan-Pechora, and offshore fields in the Arctic.

When President Medvedev signed the package of tax incentives into law in July 2008, at a time when oil prices had reached their peak of \$US147 a barrel, to take effect January 1, 2009, the mineral extraction tax formula was raised from \$US9 a barrel to \$US15 a barrel, tax holidays were introduced for a number of remote regions, and tax relief was provided for fields producing high viscosity crudes and for fields having depletion rates higher than 80 percent.³⁷

Will these tax moves sufficiently stimulate the oil and gas sectors to find and develop new fields? Not as long as Rosneft and Gazprom are awarded the bulk of new licenses without tenders. But then, that question became moot as the price began to slide during the ensuing months, falling to below \$US40 per barrel as the year 2008 came to an end.

Prospective Short-Term Future

In a report that looked at budget and tax policy for the year 2007,³⁸ the Ministry of Finance had provided an outline of Russian crude oil production, demand, and export levels through 2009. The Finance Ministry report contained two scenarios—a base case (constrained short term) and a more optimistic scenario shown in table 2.1.

If the estimates in table 2.1 prove out, now considered very unlikely, then crude oil production growth will have risen by 500,000 b/d over 3 years, and, of that growth, 3 out of 4 barrels will be exported. But crude exports are already declining.

In fact, exports of crude oil to CIS countries fell by 9.4 percent during August 2008, compared with August 2007, while exports to the rest of the world dropped by 5.2 percent.³⁹ It would not be unusual to see this decline in crude oil exports continue, because of punitive export duty rates (see below). In this case, exporters hold back on volumes, waiting for the export duty to decline.

35. Denis Dyomkin, "Russian oil firms to repay tax breaks, boost production," *National Post*, July 12, 2008.

36. Nadia Rodova, "Russia's Lukoil forecasts 2.3% oil, gas production hike in 2009," *Oilgram News*, June 5, 2008.

37. Anna Shiryayevskaya, "Russia's Lukoil eyes \$27 billion in tax relief," *Oilgram News*, September 1, 2008.

38. Interfax, "Russian Finance Ministry forecasts slowdown in oil production growth," August 16, 2006.

39. Nadia Rodova, "Russian crude output falls again in August," *Oilgram News*, September 3, 2008.

Table 2.1. Russia's Short-Term Oil Future, 2006–2009
(million barrels/day)

	Actual 2006	Plan 2007	Plan 2008	Plan 2009
Production	9.64	9.84*	10.0	10.14
Crude oil exports	5.1	5.28	5.4	5.48
Refinery charge	4.54	4.56	4.6	4.66
Product exports	2.06	2.07	2.07	2.07
Apparent demand **	2.48	2.49	2.53	2.59

*In early January 2008 Russia reported that crude oil production during 2007 averaged 9.83 million b/d, up by 2.3 percent. See Nadia Rodova, "Russian oil output up 2.3% to 9.83 million b/d in 2007," *Oilgram News*, January 10, 2008. A subsequent report noted crude oil production would hit 10 million b/d in 2008 and that exports of crude and condensate would average 5.12 million b/d, down some 300,000 b/d from the earlier thinking. The crude oil export tax apparently is having an impact. See <http://rbcnews.dcom/free/20080205193058.shtml>.

**By inference, and includes losses, direct burning, and changes in stocks.

In sharp contrast, natural gas exports, although declining by 3.3 percent during August, were up by 16.4 percent during the first eight months of 2008, to 111.109 bcm. Yet, natural gas production was up only 3.1 percent during the first eight months of 2008, reaching 443.869 bcm.⁴⁰ Very likely, increasing domestic demand cut into the export level.

Product exports should hold at least relatively constant, and apparent demand may rise slowly. But what happens after 2009? Fuel oil, or residual fuel oil, is perhaps the main petroleum product that is exported, and it is sold abroad for further processing. Light product yields at Russian refineries averaged just 71.4 percent in 2007,⁴¹ which of course means that Russian refineries lag those in the West by a considerable margin. The West squeezes each barrel of crude to maximize light product yields, but Russia cannot, for the needed secondary refining capabilities are lacking.

The answer to the question of what the future holds is of particular interest—and concern—to Russian officials. In the interim, the Russian Far East—that is, offshore Sakhalin Island—upped crude oil production in 2007 by 174,000 b/d, reaching an average of 298,000 b/d.⁴²

Did that growth hold any implications for the 2007 national output level? Yes, it did—very much so. National output expanded by a reported 190,000 b/d that year (see notes to table 2.1, above). In other words, absent the expansion offshore Sakhalin Island, the Russian oil sector would have essentially been marking time. But it would appear that Sakhalin-1, for example, will not be able to compensate for production declines during 2008 as it did during 2007. Output for 2008 had been projected at around 185,000 b/d, but a slight decline of 20,000 b/d has been projected for the year 2009.⁴³ Sakhalin-2 produced just 33,600 b/d during 2007, but this field has been active only during the ice-free months.

40. Interfax, "Russia oil extraction down by 0.6% and gas output up by 3.1%," September 3, 2008.

41. See http://kommersant.com/p905653/petroleum_product_prices/.

42. See <http://en.rian.ru/business/20080205/98391022-print.html>.

43. "Exxon Hikes Sakhalin-1 Forecast for This Year," *Moscow Times*, September 3, 2008.

It is perhaps because of these developments, and others, that crude oil production at the end of the first eight months of 2008 was off 1 percent, compared with the first eight months of 2007.⁴⁴ The usual reasons for the decline prevail, including an export duty of \$US66 per barrel for August and September 2008.⁴⁵ Exports were down, while deliveries to domestic refineries were up.

What about the year 2008 as a whole? Prospects for meeting the annual production goal appeared slim, considering that not too much dependence should be placed on Russian statistics.⁴⁶ The best that could be hoped for, under almost any circumstances, would be for the year 2008 to hold flat against 2007—a hope that soon disappeared.

The price of crude oil continued its decline after hitting a peak of \$US147 in July 2008, eventually falling below \$US40 a barrel in December. Russian oil producers were complaining loud and long. The price decline brought the market value of their barrel below the cost of moving the fuel to consumers and paying taxes,⁴⁷ exclusive of operating costs. Moscow quickly responded, and Prime Minister Putin advised that the export duty was being lowered, saving producers \$US4.5 billion and refiners \$US1 billion⁴⁸ over a two month period beginning October 1. In sum, the crude export duty would come down by 23.4 percent and for light petroleum products by slightly less.

But that effort was not enough, and the crude oil export duty was cut three times since October, with the last cut to \$US26.31 a barrel, effective December 1. Did these cuts resolve the problem? They did not, as exporters in early December were losing more than \$US9 for every barrel sold abroad. The impact of oil price declines is very clear: Russia's budget loses \$US2.2 billion a year when one barrel of crude oil becomes cheaper by one U.S dollar.⁴⁹ When 2008 came to an end, Russian crude oil production had declined by slightly more than 1 percent⁵⁰—to 9.73 million b/d.⁵¹ Crude oil exports were not spared, dropping 6.2 percent to countries outside the CIS and 5.6 percent to CIS member states, for an average of 4.74 million b/d.

Is the prospective short-term future defined more by what has been achieved in the recent past and less by what is planned for the coming years? If so, then that future should be secure, if measuring that future for oil by upstream investments. Oil upstream investments have increased markedly during the past five years (2004 to 2008), as noted above, but have been marginalized.

Although the growth in investments has been impressive, the results have been disappointing. High depletion rates at major oil fields (about 20 percent in West Siberia)⁵² plus high costs of equipment and services have often more than offset gains achieved.

2009—An Uncertain Year

The fourth cut in the export tax came into effect on January 1, 2009, when it was reduced to \$US16.2 per barrel, with the intent of placing the exporters in the black. Even that drop was not

44. See http://www.energia.gr/article_en.asp?art_id=18694.

45. Nadia Rodova, "Russian crude export duty to hit record high," *Oilgram News*, June 25, 2008.

46. Tanya Mosolova, "Oil Output Has First H1 Fall in Decade," *Moscow Times*, July 3, 2008.

47. "Oil Firms Producing at Loss Due to Lower Crude Prices," *Moscow Times*, September 17, 2008.

48. See <http://www.rbcnews.com/free/20080919095529.shtml>, September 22, 2008.

49. See http://English.neftgaz.ru/info/press_rev.php?id=5471, December 10, 2008.

50. Nadia Rodova and Anna Shiryaevskaya, "Russia proposes overhaul of oil tax regime," *Oilgram News*, February 13, 2009.

51. Nadia Rodova, "Russian oil output drops 1% to 9.73 million b/d in 2008," *Oilgram News*, January 5, 2009.

52. Grigory Vygon, "Russia redesigns fiscal policy to boost E&P," *Oil and Gas Journal*, April 20, 2009.

sufficient in the minds of the oil sector, and a further cut—15 percent—to \$US13.76 a barrel was fixed to take effect on February 1.⁵³ Export duties are now recalculated every month, based on average oil prices over the period December 15–January 14, for example.

The oil export duty was raised slightly, beginning as of March 1, based on a slight jump in crude oil prices during January 15 to February 14. The new export duty is \$US15.70 a barrel, up 14.3 percent.⁵⁴ Petroleum product duties were also raised, but by somewhat smaller percentages.

The crude oil export duty was cut again as of April 1 but only slightly, down from \$US15.70 a barrel to \$US15.06 a barrel,⁵⁵ reflecting a small drop in the price of the Russian marker crude. But how much do these duties matter? Not very much, in the words of one Russian oilman. He complained that “the government takes almost everything when the oil price goes above \$25/barrel.”⁵⁶

Oil and gas companies have been arguing for some time that the oil tax regime must be changed. The system has been centered on earnings from the development of existing fields,⁵⁷ meaning there is little incentive to develop production in new regions. Under the current tax regime, about 36 percent of existing fields and 94 percent of new fields are unprofitable. Absent a change in the tax law, crude oil production was forecast to decline, as it has indeed.

A good portion of that decline can be charged to funds that were not invested during 2008. Investment fell 16 percent last year as production costs increased and oil output declined.

Meanwhile, the natural gas sector saw its future in higher domestic and industrial rates. An increase is coming, but the measure of that increase is not yet clear. Too small an increase would fall well short of what is needed.

In mid-1988, Russia was producing at the rate of about 11.4 million b/d, well above Saudi Arabian output. Then the sector began an unprecedented collapse in production. Unprecedented because it was not caused by developments in the market place or by war, but rather by a lack of investment capital and by mismanagement of the oil fields. The production collapse took the oil sector to a low of some 6 million b/d in 1996 before the sector began a slow recovery.

By 2005 production had returned to about 9.4 million b/d, close to matching Saudi Arabia (although Russian production includes natural gas liquids whereas Saudi Arabia does not). Despite the recovery, signs of trouble had begun to appear, all bearing on rates of growth that had begun to slow beginning in 2004. The causes of this slowdown—underinvestment in oil field exploration and development and overproduction of active fields—matched the causes behind the collapse of 1988. Additionally, past successes in expanding oil output derived in large part from the massive application of advanced technology. These one-time gains were no longer available.

53. See “Government to Cut Oil Duties by 15%,” *Moscow Times*, January 16, 2009, <http://www.themoscowtimes.com/articles/detail.php?ID-373613&print=Y>.

54. See “Russia to raise oil export duty to \$115.3 per ton from March 1,” *RIA Novosti*, February 15, 2009, <http://en.rian.ru/russia/20090215/120149288.html>.

55. Anna Shiryaevskaya, “Russia to cut crude export duty to \$15/b from April,” *Oilgram News*, March 17, 2009.

56. Stuart Elliott, “No new major tax breaks for Russian producers: Tatneft official,” *Oilgram News*, April 13, 2009.

57. “Oil Exploration Investment Falls 16%,” *Moscow Times*, March 26, 2009.

Although oil production in 2007 was more than respectable at 9.8 million b/d, the slowing growth trend continued to prevail. Clearly, the near-term years are likely to be defining ones for the Russian government. If the forward-looking Russian estimates are reasonably correct, then crude oil production by 2009 will essentially have demonstrated an annual increment in production during the intervening years of 140,000 b/d.⁵⁸ Nonetheless, it is important to note that for both production and exports, the issue has now become one of absolute declines. That is little comfort to importing nations, as it foreshadows the prospect of an eventual return to higher crude oil and petroleum product prices,⁵⁹ given the fall in oil and gas field exploration and development.

If the growth rate further slows, what will these modest negative increments mean for the Russian federal budget? Might other oil-exporting countries step in and do what they can to offset the drop in Russian oil export growth? It is doubtful, for why should they? Reduced exports translate, it is hoped, into higher prices.

The base case scenario prepared by the Russian government is, of course, a bit more pessimistic, as production in 2009 does little more than match 2007. What does this scenario show?

- Crude oil output of just 9.8 million b/d in 2009,
- Crude oil exports stabilizing at 5.26 million b/d by 2009, and
- Product exports declining from 2.06 million b/d in 2006 to 1.98 million b/d in 2009.

The difference between the base case results and the more optimistic results is minimal, especially when viewed against a probable world oil demand then considered to be approaching 88 million b/d by 2009. Yet this minimal difference cannot be dismissed so easily, given the continuing volatility in the world oil market. It does not take much to swing prices up or down, and, unfortunately, little respite is available over the near term at least.

Then, these Russian forecasts were set aside in July 2008 and replaced by new ones calling for crude oil production in 2008 to reach 9.8 million b/d, for a very slight gain over 2007 output.⁶⁰ Additionally, the government forecast oil production for 2009 to fall between 497 million tons and 503 million tons (9.94 million b/d to 10.06 million b/d), marginally less than the previously planned 10.14 million b/d. Crude oil exports were also impacted, down in 2008 to 249 million tons (4.98 million b/d) as against 251 million tons–256 million tons (5.02 million b/d–5.12 million b/d), and a further decline in 2009 from the original planned 259 million tons (5.18 million b/d) to 253 million tons–255 million tons (5.06 million b/d–5.1 million b/d).

Yet, all these concerns have been overcome by the rapid spread of the financial crisis and the accompanying fall in oil demand and, in turn, in crude oil production levels that declined a bit more than 1 percent. What is not known, however, is the extent to which declines will continue in the coming years.

Nonetheless, declining crude oil output during 2009 has become a given, with continuing difficulties cited at Sakhalin 1⁶¹ and Sakhalin 2 as well as cuts in capital expenditures. The size of

58. Representing but a fraction of anticipated world demand growth.

59. Some observers are inclined to attribute continued high prices to the influence, partially at least, of renewable fuels such as ethanol and biodiesel.

60. Amanda Rayborn and Nadia Rodova, "Russia economy ministry cuts oil output forecast," *Oilgram News*, July 30, 2008.

61. Stuart Elliott, "Russian crude output faces 1% 2009 decline," *Oilgram News*, December 8, 2008.

the anticipated national decline could be particularly significant—possibly exceeding 4 percent, as put forward by the Russian Energy Minister Sergey Shmatko.⁶² The range of implications resulting from the decline will directly influence Russia's political and economic standing.

Through 2009 at least, if not longer, the world oil market will have to accept that past high growth rates in Russian oil production and exports are *not* sustainable—not because of Russian support for OPEC, but because of difficulties in the producing sector. Ronald Nash, chief strategist at Renaissance Capital, has drawn a simple analogy between investment and oil output. When investment is rising, so then is oil output. Conversely, output falls when investment falls⁶³—the situation that held as the sector entered 2009.

Moreover, because Russia is not isolated from the world oil market, the political and financial impact of the financial crisis is not Russia's alone to determine.

Another factor may influence Russian oil output and exports. OPEC met in mid-December 2008 and agreed to a coordinated step—that is, the cutting of oil export levels by 2.2 million b/d—in the hope of raising oil prices. Success is not necessarily guaranteed, as cuts in the preceding months were ignored. OPEC also sought the participation of non-OPEC members Norway, Mexico, and Russia in cutting exports. Only Russia responded, but with a caveat. The country would reduce its output by 320,000 b/d, if current low oil prices persist. Most observers recognized that there was little difference between this indicated cut and the decline in production anticipated for 2009.

The slow downward slide in crude oil production continued during January and February of 2009, but to the surprise of many, output during March grew by a reported 0.4 percent compared with March 2008.⁶⁴ And crude oil production during the month of April demonstrated a gain of 0.5 percent over March.⁶⁵ It is likely, however, that production for the year 2009 as a whole will continue to decline, and that decline is accepted by Russian officials. By mid-March, estimates of the fall put crude oil production for the year at 9.64 million b/d, down by 1.1 percent, with crude oil exports falling by the faster rate of 2.5 percent, to 4.74 million b/d.⁶⁶

Natural gas was not spared, and the fall in demand was clearly reflected in those estimates coming from the office of the prime minister. Natural gas production for the year was placed at 620 bcm to 644 bcm, including Gazprom and independents, and exports to all buyers outside Russia would amount to 190 bcm–196 bcm.

After 2009, What?

But what happens after 2009? Will those *negative* rates of growth continue on, or will the oil sector plateau for a handful of years before securing the basis for a return to a period of growth once

62. Stephen Bierman, "Russian Oil Output May Fall as Much as 7% in 2009, Merrill Says," *Bloomberg*, January 23, 2009.

63. Kate Dourian et al., "Russia to cut oil output by 320,000 b/d in 2009 if low prices hold," *Oilgram News*, December 18, 2008.

64. Stephen Bierman, "Russia's March Oil Output Rises as OPEC Asks Non-Members to Cut," *Bloomberg*, April 2, 2009.

65. Nadia Rodova, "Russian crude output climbs 1.3% in April," *Oilgram News*, May 5, 2009.

66. Nada Rodova, "Russia forecasts decline of 1.1% in crude production this year," *Oilgram News*, March 19, 2009.

again? There is little upon which to base judgment for what the future might hold. The potential is unquestionably there, but to develop that potential wisely and expediently does not play to the strengths of those national oil companies that define the Russia of today and tomorrow. Although some oil and gas companies continue to speak confidentially of output levels in the coming years, the Russian government does not always accept that level of confidence.

Yet, some do. A report issued by Energy Minister Sergei Shmatko and directed to Prime Minister Vladimir Putin stated that oil production in Russia will reach 10.3 million b/d by the year 2010.⁶⁷ A senior official of the Natural Resources and Ecology Ministry recently stated that although oil production during 2008 might stay at the same level as 2007, by the year 2020 production could reach 600 million tons (12 million b/d)⁶⁸—a prediction that is not necessarily unreasonable, but only if investments fully respond.

One outspoken official of Lukoil was perhaps being more realistic when noting that the cuts in investments, brought about by the financial crisis and low crude oil prices, will affect production levels starting from the middle of 2010.⁶⁹ Of perhaps more immediate concern, Deputy Prime Minister Igor Sechin said that Russia would reduce its oil supply by 320,000 b/d in 2009 if oil prices stay low.⁷⁰ OPEC would like to have Russia commit to a cut in output of that magnitude beginning on January 1, but failed as noted to gain assent. Nonetheless, the world oil market should plan for both reduced production levels and reduced export levels from Russia during the year.

It is this debatable future of the Russian oil sector that concerns oil exporter and importer alike.

One emerging new development in the politics of oil will only expand during the coming years—the lesson taken by Russia from the efforts of oil- and gas-importing countries to diversify among their sources of imports. The need to diversify grew out of increasing concerns over security of supply and worries over the reliability of Russia as a supplier of oil and gas.

What would appear to be the first major move by Russia to diversify among the buyers of the oil it has to sell came with the signing in mid-February 2009 of a \$US25 billion deal with China. Smaller volumes of crude oil have been moving to China by rail, but under this deal China will loan Russia \$US25 billion that would be used in part to finance construction of a pipeline linking China with the east-bound oil line to the Pacific coast now under construction from Taishet, to the west of Lake Baikal. The link will originate at the Russian city of Skovorodino, about halfway on the Pacific pipeline, and extend to the Chinese border.

In return, China is to receive 300,000 b/d of crude oil through this pipeline link for a period of 20 years. China will construct a 600-mile pipeline to supply the crude oil to Daching. Russia has been supplying 300,000 b/d of crude by more expensive rail transport. Because the pipeline link between Skovorodino and the Chinese border is less than 40 miles in length, one can only speculate how most of the \$US25 billion will be used.

The move to commit Russia to provide China with oil over a 20-year period is but part of a larger effort to line up commodity supplies worldwide, recognizing that these commodities will only become more expensive over the longer term. China has the foreign reserves to back this shopping spree and is putting these reserves to good use.

67. See <http://www.peakoil.com/modules.php?name=News&file=article&sid=41302>, July 28, 2008.

68. See <http://www.redorbit.com/modules/news/tools.php?tool=print&id=1406893>.

69. Nadia Rodova, "Lukoil may halt some Russian oil projects," *Oilgram News*, December 19, 2008.

70. Ibid.

Before the collapse of the Soviet Union, the Caspian Sea had been viewed as representing the oil future of the country. But the December 1991 collapse took that future away and gave it to Azerbaijan, Kazakhstan, Uzbekistan, and Turkmenistan. Accepting that, where does Russia see its oil future today? The future rests in West and East Siberia and offshore, but several obstacles stand in the way of converting this future to reality. At the same time, Russia is also working to recover what it can of its lost future in the Caucasus and Central Asia.

Exploration offshore, in East Siberia, and in the Arctic will be more demanding in terms of time and know-how than elsewhere in Russia, in part because of weather conditions, in part because of the lack of experience in working offshore in Arctic waters, in part because of the lack of supporting infrastructure and the absence of a resident population base—all adding up to higher costs and slower progress. Then came a report that the Prirazlomnoye oil field, the first to be developed in the Russian Arctic, would start to decline just one year after it reached its peak production of 130,000 b/d in 2016.⁷¹ Production startup has now been set for 2010, five years later than originally planned. Delays in construction of the offshore platform have been one reason for the timetable slippage.

71. Anna Shiryaevskaya, “Russian Arctic oil field to have short peak,” *Oilgram News*, August 11, 2008.

3

OIL AND GAS INDUSTRY ISSUES

Peak Oil and Gas

The question of peak oil seemingly does not overtly concern Russia. Russian leaders seem quite confident that its holdings of the world's oil and natural gas reserves, coal reserves, and uranium are more than adequate to protect the country's future.¹

Although the August 2007 venture to plant the Russian flag on the seabed underneath the North Pole has been attributed by some to the need to stake out new and promising areas for exploration, Russia more probably has the distant future in mind, a future when global warming opens up the Arctic waters to exploration. Five nations border Arctic waters—Russia, Norway, Canada, Denmark, and the United States—and the game is just beginning.

It would appear that Russia was first off the mark, at least in terms of the Arctic Shelf, and has signed off a revised Arctic law that allows the Kremlin to pick those companies to develop these Arctic reserves.² Naturally, these companies will be Russian.

The UK, protecting the interests of Canada, is not far behind, at least in terms of political rhetoric. The United States has dismissed the Russian claims as having no political significance, but Russia thinks otherwise and will be submitting claims this year to the UN that would secure legal rights to an area close to the North Pole.³

What does concern Prime Minister Putin and others is the current dependence on oil and gas revenues and the need to diversify the economy, plus the need to reform the electric power grid system.⁴ Electric power generation is to be increased by two-thirds by the year 2020. Part of the increase will be provided through the construction of 26 nuclear power reactors. Whereas nuclear reactors today provide 16 percent of the country's power supply, by 2030 that share should climb to 25 percent. For comparison, coal, a readily available fuel, provides only about 17 percent.

The Oil Sector

The oil sector is characterized by a rather high number of idle wells—almost one out of every four oil and gas wells is not operating—and that means sizeable frozen assets. These wells can be returned to production if warranted by anticipated levels of output and by anticipated prices for crude oil and natural gas. But the desire to do so has to be there.

1. See http://english.pravda.ru/print/russia/economics/93835-russia_oil-0.

2. See <http://www.cnbc.com/id25733248/for/cnbc/print/1/displaymode/1098/>.

3. Anna Shiryayevskaya, "Russia plans to research Antarctic resources," *Oilgram News*, May 6, 2008.

4. As part of that reform, a new organization—Atomenergoprom—will be established, with complete control over the nuclear power sector, including the mining of uranium.

Export pipelines remain a bottleneck and constrain growth. Where is the new producing capacity to come from? Companies are reluctant to develop new production, as it is uncertain whether capacity would be available to move that oil to export. The reverse is also true, as pipeline construction should not precede oil or gas availability.

The construction of oil pipelines and construction of gas pipelines are driven by differing considerations. Neither Transneft nor Gazprom are willing to act unless and until all preconstruction requirements have been met.

It would appear that a number of Russian oil companies are guilty of overproduction, as they try to respond to market developments, while others underproduce, hoping to take advantage of higher prices in the future. Moscow pays strict attention to production quotas allowed by the license agreements, supposedly giving the companies no such flexibility, but inspectors cannot be everywhere.

Russia was not able to replace those reserves produced during 2004. The replacement rate was given to be 72 percent. Indeed, the reserve replacement between 1999 and 2003 averaged just 85 percent. To replace its reserves, Russia will need to invest some \$US91 billion over the next 10 to 20 years. Again, the Natural Resources Ministry has volunteered that almost all existing major fields are likely to be depleted by 2015.

Dating the Second Post-Soviet Crude Oil Downturn

There has been a variety of earlier statements by senior Russian officials that point to the strong likelihood of a slowdown and even a plateauing of crude oil and natural gas extraction during the last half of the current decade. The director of the Federal Energy Agency, the government's energy regulator, was, in May 2004, the first official to note that Russia's largest production growth was over and that the period of easy-to-recover oil was finishing. He was supported by the deputy minister of economic development and trade adviser who stated that a slowdown in the growth of oil production had been planned for the period 2005 to 2008, in part because a growth in number of idle wells reflected a drop in (proved) oil reserves of 30 percent.

Had these officials been reading from the same page—that is, was there a document being circulated that laid out, in cold facts, that the future was not all that bright? Oil company officials, seeing the light, joined in with their own assessment that in general terms paralleled evaluations put forward by the government. Should it have been expected that these company officials would say otherwise? The naysayers were correct—over the near term at least.

In the post-Soviet era, the percentage growth in Russian oil production began its slow decline during the beginning years of the twenty-first century. Whether that reduction will be continued beyond this decade will depend upon the relatively rapid discovery and development of new sources of supply. Under other circumstances, this growth decline would not be particularly newsworthy—in either absolute or relative terms.

Unfortunately perhaps for importers, the slowdown came at a time when worldwide spare producing capacity had essentially disappeared, when refining capacity was facing its own limitations, and when China, India, and the United States were making unexpected and continuing large demands on available supplies.

Table 3.1. The Struggling Russian Natural Gas Sector, Base Case, 2006–2009
(billion cubic meters)

	Billion cubic meters		
	Actual 2006	Plan 2007	Plan 2009
Production	646	652 *	670
Demand	449	459 **	462 **
Exports	200	193	208

*Later revised upward to 561 bcm, then downward to 557 bcm because of warm weather. Independent gas producers will also cut their production, but by an unspecified volume. Independents provide about 16 percent of total Russian gas output. See Anna Shiryayevskaya, "Gazprom, BP chiefs meet for Moscow talks," *Oilgram News*, June 1, 2007.

**By inference, but excluding additions to or withdrawals from storage.

The general acceptance by Russian authorities that oil production will stagnate through 2008–2009 at least may be nothing more than an honest appraisal of the physical limitations of the sector. The Russian government is accepting of that limitation, perhaps recognizing that relatively stagnant Russian oil production, translating into slight reductions in oil exports, would help support high oil prices while buying time during which the search for and development of new oil fields can be accelerated.

Doom and Gloom

The report by the Finance Ministry (see above) did little to dispel the gloom surrounding the prospect that the near-term future of the Russian oil industry was disappointing at best. But could Russian officials look to expanded natural gas exports to make up at least a portion of anticipated lost foreign exchange earnings? German Gref, Russian minister of economics and trade, noted to the contrary that, in the base case, growth in domestic demand for natural gas was expected to outstrip growth in domestic production.⁵

Table 3.1 appears to indicate that 2007 would be a somewhat difficult year for the natural gas sector, with the estimated jump in domestic demand of 10 bcm barely matching additions to supply. Following several revisions, the gap was reduced to 7 bcm.

As noted, the optimistic scenario varies but little from the base case. Production expands by 10 bcm, demand by 6 bcm, and exports by 4 bcm, implying that only marginal changes could be expected even under improved circumstances. The more optimistic scenario for the natural gas sector also reflects access by the independent gas producers to the pipeline system owned and operated by Gazprom. Even so, such access does not guarantee much gain over the base case.

5. *Oilgram News*, August 18, 2006.

Revisiting the role of Gazprom is essential if problems facing the gas industry are to be understood. Gazprom's production of natural gas essentially marked time during the years 2003 through 2007:

<i>Year</i>	<i>Billion cubic meters</i>
2003	547.6
2004	552.5
2005	555.0
2006	556.0
2007	548.5

Annual increments declined rapidly from 13.6 bcm in 2001 to 2.5 bcm in 2005 to a loss of 7.5 bcm in 2007. The decline in that year has been attributed to reduced demand because of a relatively warm winter. In reality, the decline was more likely due to a lack of supplies than to higher temperatures, although the gas sector worked enthusiastically to place the blame on warm weather. Sales totaled 572 bcm in 2007, including supplies from other sources. Of that volume, 307 bcm were delivered to domestic customers,

Late in 2008 Gazprom decided to cut the gas production estimate for the year by about 10 bcm, reflecting a total output of 552 to 553 bcm.⁶ The reasons given were the same as those offered in 2007, plus the effects of the financial crisis. The original plan for the year had been 561 to 563 bcm. Perhaps of more concern to Gazprom will be its ability in the coming years to cover domestic demand while meeting export commitments.

On top of these challenges, Gazprom stock has fallen 76 percent since the beginning of 2008. The company finds itself \$US49.5 billion in debt, with a market cap of about \$US85 billion, and looking for a financial bailout from the government.⁷

A possible bright spot on the horizon is the Shtokman gas field, located offshore in the Barents Sea. The first phase of this project is expected to produce 23 to 24 bcm a year beginning in 2013, with LNG deliveries starting in the following year. Even so, some question 2013 as the start of production, and the time frame does not address the interim supply gap. Shtokman management understands the need to continue to portray the gas field in positive terms and has stated that it will be viable even with crude oil at \$US50 to \$US60 per barrel. Yet management was also forced to note that the startup schedule depended on securing financing for 2009—that is, on the situation in the global financial markets.⁸

It should be noted that at least 70 percent of Gazprom's output originates from just four fields, three of which—Yamburg, Urengoy, and Medvedze—are in decline and have been for some time. The future clearly rests on Gazprom's ability to develop known fields, such as Bovanenkovo, and new fields on the Yamal Peninsula to both offset these declines and provide for growth in production. Indeed, some 25 percent of Gazprom's annual investment budget is currently directed at Yamal, and that share will be higher in the coming years.⁹

6. See <http://www.asianews.it/view4print.php?1=en&art=13878>.

7. Andrew E. Kramer, "Gazprom, Once Mighty, Is Reeling," *New York Times*, December 30, 2008.

8. Anna Shiryayevskaya, "Shtokman field seen viable at \$50–60/barrel," *Oilgram News*, December 9, 2008.

9. Anna Shiryayevskaya, "Gazprom readies giant Yamal development," *Oilgram News*, December 4, 2008.

But prospective returns warrant that concentration of extraction to 310 to 330 bcm on the Yamal Peninsula are expected by the year 2030, up from a mere 7.9 bcm in 2011.¹⁰

But something is missing from the above tabulation. What happens to natural gas imports from Turkmenistan, Uzbekistan, and Kazakhstan, and how should they be treated statistically? These are basically transit volumes, ostensibly en route to other countries, but nonetheless are major contributors to total Russian natural gas supply. These volumes are added to supplies provided by the independent gas companies, with the total identified in Russian natural gas supply outlook as “non-Gazprom production.”¹¹

The larger Central Asian natural gas supplier is Turkmenistan. The 2008 contract called for about 50 bcm of gas to be sold at the border to RosUkrEnergo, which is a Gazprom-controlled intermediary charged with moving the gas across Russia to the Russian-Ukraine border, where it will then be sold to Naftogaz, a Ukrainian organization, for delivery to the Ukraine domestic market. Ukraine paid \$US179.50 per 1,000 cubic meters, at least during 2008. Naftogaz now controls all imports of natural gas.¹²

Although that may take care of 2008, the contract for 2009 will be far more difficult to negotiate, and far more expensive for Ukraine, given the intent of the Central Asian suppliers to charge Russia market prices for the gas volumes supplied. It could easily be January 2006 all over again, and it was.

Gazprom in early June 2008 indicated an interest in buying gas from the Azeri offshore field of Shah Deniz and a willingness to pay market prices less transport costs.¹³ The offer included a commitment to long-term supplies. Was this further indication that all was not well on the Russian gas supply side, but also confirmation that Russia wished to be the sole supplier of natural gas to Europe? Yes, on both counts. Was this also an indication of efforts to divert Azeri natural gas away from the planned Nabucco gas pipeline, the latter designed to reduce European dependence on Russian gas? Yes, it was. The Azeri side has yet to respond but has indicated in the past that it will be prepared to accept whoever offers the best price.

New estimates of the natural gas future come out on a very regular basis. Gazprom, who should have the better feel for the years ahead, recently said that by the year 2010 its natural gas production would reach 570 bcm, expanding to 610 to 615 bcm by 2015 and 650 to 670 bcm by 2020.¹⁴ Gazprom then looks to raise production by a roughly 111 bcm over a period of 13 years. Is that growth achievable?

Yet the Web site for Gazprom cites a production schedule of 550 to 560 bcm by 2010, 580 to 590 bcm by 2020, and 610 to 630 by 2030. These latter goals appear much more realistic, all things considered, although the date of release is not known.

Gazprom has indicated plans to invest about \$US30 billion annually between now and the year 2020.¹⁵ The release of these investment plans was accompanied by a repeat of the output goals of 615 bcm by 2015 and 670 bcm by the year 2020.

10. Ibid.

11. See <http://www.Gazprom.ru>.

12. Roman Olearchyk, “Ukraine premier fails to ditch gas trader,” *Financial Times*, April 12, 2008.

13. See <http://en.rian.ru/russia/20080604/109215278-print>.

14. See <http://www.forbes.com/afxnewslimited/feeds/afx/2008/05/14/afx5006611>.

15. Anna Shiryayevskaya, “Gazprom to invest \$30 billion/year to 2020,” *Oilgram News*, June 17, 2008.

Gazprom believes that by 2020 nearly half the natural gas output will originate at new fields, for the simple reason that the majority of the key gas fields today are in decline. The major new contributor will be the Bovanenkovo gas field, scheduled to provide 115 bcm by 2014. The Yamal Peninsula, where Bovanenkovo is located, is projected to yield 250 bcm to 300 bcm a year after 2020. Yet, if exploration for and development of new fields were to lag, where might replacement supplies be found? Could tax cuts have any influence?

Moscow clearly understands that the task ahead involving the exploration for and development of new gas fields will be particularly trying. Prime Minister Putin underscored these difficulties in his remarks to the December 2008 gathering of the gas exporters forum when he underscored the remoteness of the unexplored areas and the absence of supporting infrastructure.

The natural gas sector pays a mineral extraction tax just as the oil sector does. The current tax on natural gas is \$US5.70 per 1,000 cubic meters. It appears that this tax will remain unchanged until 2011. In contrast to oil, however, an increase in the mineral extraction tax for natural gas will be forthcoming at that time.¹⁶

What else can be done to increase natural gas supply? How about development of coalbed methane, not the same as burning coal to produce gas, but rather the drilling of wells to tap gas held within the coal beds? Apparently Russia has a sufficient potential for coalbed methane to warrant the investment. Gazprom in a statement on March 21, 2008, claimed Russia's total forecast methane resources to be 49 trillion cubic meters.¹⁷ Yet the drilling of hundreds of wells would be an expensive undertaking that would require state support, probably in the form of subsidies and tax breaks.

There is always the matter of flaring of associated natural gas and a continuing effort to curtail losses. Officially, Russia produces about 60 bcm of associated natural gas annually, of which 25 percent is flared.¹⁸ No one believes these official figures, and a much, much higher percentage is accepted as being flared. The government has now decided to consider a near five-fold increase in fines for flaring, and a new limit of 5 percent for flaring is to come into play in 2011.

Acknowledging that not all the world markets for natural gas can be serviced by pipeline, Gazprom has indicated that it wants to supply a quarter of the world's LNG needs by the year 2030. Markets envisaged include the United States, Europe, and Asia Pacific. To do so, Gazprom will add about 90 million tons of this fuel to its production,¹⁹ representing an investment of \$US45 billion.²⁰ Adding up where the LNG might be produced falls well short of the desired 2030 goal.

Finally, perhaps the best approach to increasing natural gas supply is to be found in offering the producers a higher price for what they have to sell. Gradual increases in price have been planned but prices will still fall short of export prices. Separate tariffs are in place for industry and for residential and municipal consumers, but with only marginal increases separating the two. For industry, if the plans work out, the gas price in 2011 will be 2.69 times the 2007 level. For

16. *Oilgram News*, August 18, 2006.

17. Anna Shiryayevskaya, "Gazprom looks at coalbed methane to boost gas reserves, provide regional supplies," *Oilgram News*, March 25, 2008.

18. Nadia Rodova, "Russian body proposes hike in fines for flaring of gas," *Oilgram News*, March 17, 2008.

19. See <http://upstreamonline.comlive/article151492.ece>.

20. Anna Shiryayevskaya and Nadia Rodova, "Gazprom plants \$45 billion LNG spending," *Oilgram News*, April 24, 2008.

the residential and municipal sector, the 2011 price will be 2.84 times the 2007 level.²¹ Will these increases, if carried through, be sufficient to allow Gazprom to earn a profit from sales on the domestic market?

Exploration and development costs are on the rise, and the search for new gas fields leads to onshore and offshore areas is much more technologically demanding than in the past. The jury is still out.

Natural Gas Pipelines

The role of the natural gas pipeline system in Russia should not be underestimated. As in other countries, pipelines are the only means of moving natural gas volumes from the producing field overland to the consumer. But only in Russia have pipelines become an integral means of advancing and protecting the national interests. Yet pipelines require considerable volumes of natural gas “behind the pipe” to carry to consumers if they are to be financially viable.

Therein lies the problem. Gazprom believes that 63 percent of new reserves it expects to add in 2008–2030 would come from offshore fields, concentrating particularly on exploration in the Barents Sea (both within and outside) and the Pechora Sea.²² The onshore target is the Yamal Peninsula, which is rich in natural gas resources but foreboding by all other measures.

Successful and timely exploration and development efforts will result in the need to construct new and expensive pipelines to carry gas both to domestic consumers and for export. If these efforts are not successful, or are delayed for whatever the reason, there does not appear to be a plan B.

Natural gas pipelines corral gas production in Turkmenistan, Uzbekistan, and Kazakhstan and channel that gas to Russia where it may displace equal volumes of Russian gas that now become available to satisfy export contracts in Western Europe. Or, these volumes may themselves be exported to meet commitments in Eastern Europe. The latter case is the more common. Western European markets are far more profitable, and these profits are meant for Gazprom, and not Central Asia.

Two of the natural gas projects to ensure continuing access to European gas markets are the Blue Stream and South Stream natural gas pipelines (see figure 3.1). Blue Stream is an operating pipeline while South Stream is still under construction.

Gazprom will do what it can to continue to maximize sales to Western Europe. It has been planned to gradually shift gas supplies for domestic consumers from Gazprom to independent producers through to 2020.²³ That shift, together with Central Asian gas supplies, and possibly Azerbaijan's, should help ensure the satisfaction of long-term supply contracts while keeping the right to export to Gazprom.

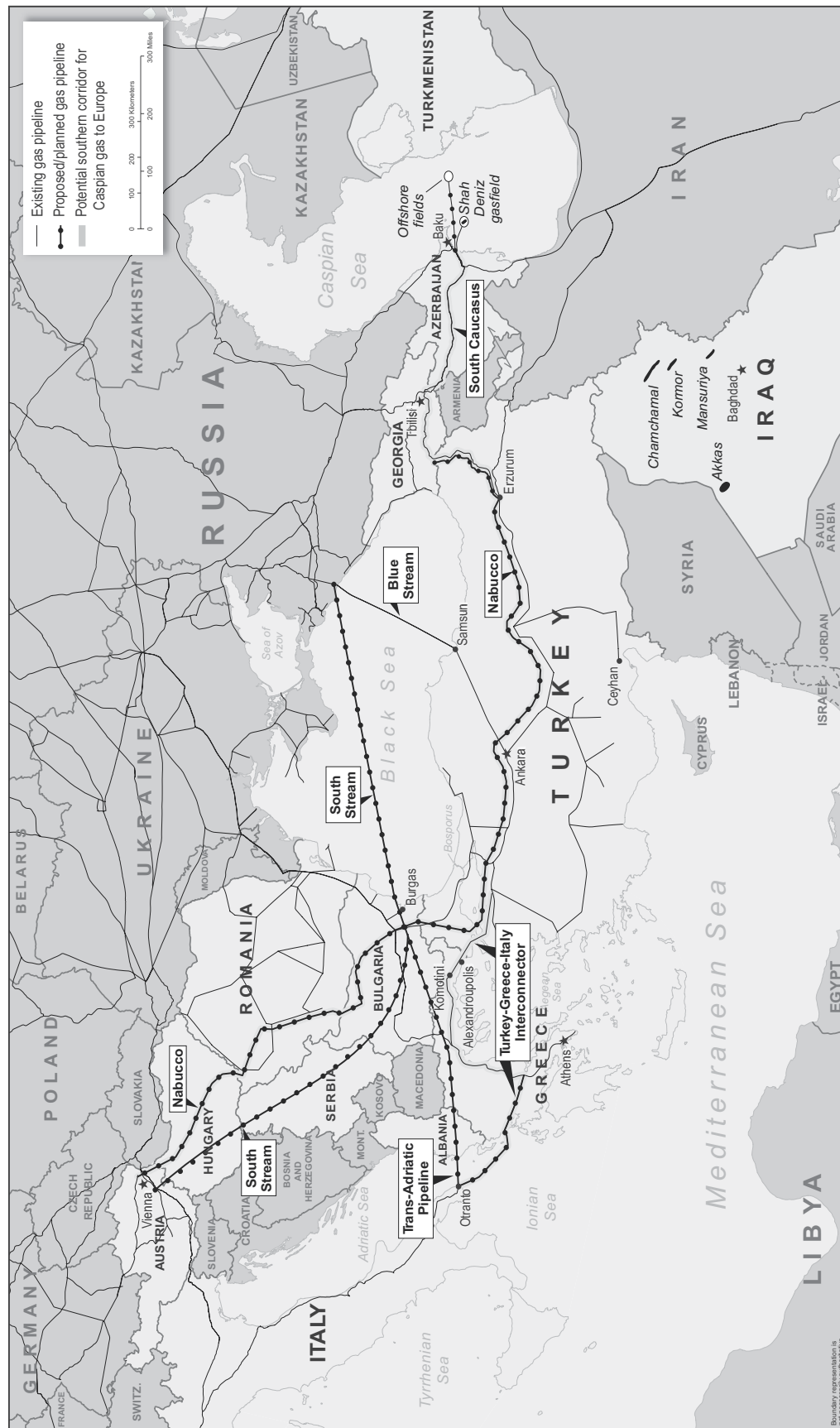
With a relatively high share of world natural gas reserves, or about 27 percent of the world total, Russia has explored the possibility of establishing a natural gas counterpart to OPEC. Inter-

21. Anna Shiryaevskaya, “Russia plans gradual domestic gas price hikes,” *Oilgram News*, May 6, 2008.

22. Anna Shiryaevskaya and Nadia Rodova, “Gazprom to set up unit for offshore projects,” *Oilgram News*, September 18, 2008.

23. Nadia Rodova, “Rosneft and Gazprom to control Russian offshore fields: Khristenko,” *Oilgram News*, June 4, 2007.

Figure 3.1. Competing Pipelines in the Southern Corridor for Eurasian Gas Exports to Europe



Source: U.S. Central Intelligence Agency (unclassified).

ested countries gathered in Moscow in late 2008 to discuss the idea. Because natural gas is still a regional, not an international, commodity, little progress was achieved other than to give importing countries another cause for worry.

What Next?

The program for development of natural gas projects in East Siberia and the Far East, though details are not known, may contain the recommendation that development of Kovykta, a huge natural gas field in East Siberia, be postponed until 2017. Even so, the desire of the Energy Ministry and Gazprom is to market the gas domestically, allowing gas from Sakhalin to be exported.²⁴ Conversely, the Economic Development and Trade Ministry hold out for earlier development.

Could possibly more be involved than just regaining control of strategic deposits? Accumulating evidence appears to make the case that there may be. The Institute of Energy Policy, based in Moscow, believes that by the year 2010 Russian and European customers face a natural gas supply deficit of 100 bcm,²⁵ owing to consistent underinvestment in the exploration for and development of new producing fields. In other words, the Russian natural gas sector will fall short by that amount of meeting domestic and export demands. Other observers foresee that deficit doubling during the subsequent five years, to at least 200 bcm by 2015.

A gas supply deficit of that scale would carry worldwide implications and would likely lead to fierce competition—and higher prices—among importing nations for volumes to meet consumer needs. EU member countries dependent on the steady flow of Russian natural gas would be among those most directly affected. Whereas considerable publicity has been attached to the prospect of “peak oil,” little attention has been given to physical constraints on natural gas supply and to the consequences for economic growth. That time may now have arrived. Unfortunately, the described gas shortages, if true, would be upon Russia before any remedial efforts could show results.

Can natural gas imports from Central Asia, plus LNG from Russian developed gas fields in Nigeria, for example, help save the day? Nigeria flares about 24 bcm of gas annually,²⁶ and a gas collection scheme proposed by Russia would be of particular benefit to both parties. What should be read into the offer by Gazprom to buy all of Libya’s future exports of crude oil, natural gas, and LNG²⁷ and to pay market prices for these purchases? Nothing more, or less, than locking up supplies around the world that could be utilized to compete against Russian supplies for access to European markets.

It would be relatively easy to conclude that indeed Russia is facing an apparently severe problem of attempting to match domestic natural gas production and the claims on that production. Russia’s internal consumption of natural gas has been growing at a rate exceeding that of export

24. Anna Shiryayevskaya, “After delay, East Siberia’s gas plan to be sent to Russian government,” *Oilgram News*, April 10, 2007.

25. Thomas Gomart and Tatiana Kastueva-Jean, *Russie.Nei. Visions 2007* (Paris: Institut français des relations internationales [Ifri], 2007). Ifri is headed by Alexander Milov, who served as deputy minister of energy for a short time in 2002 before resigning voluntarily.

26. Rachael Graham, “Gazprom looks to develop gas in Nigeria,” *Oilgram News*, January 8, 2008.

27. Nadia Rodova, “Gazprom makes offer for all future Libya oil, gas exports,” *Oilgram News*, July 10, 2008.

commitments, and both domestic consumption and exports exceed additions to supply. But the scale of the effort to line up outside supplies—similar approaches have been made to Algeria, Azerbaijan, and Turkmenistan—would seem to indicate Russia may have a broader purpose in mind. Next on the list is Iran, and possibly Iraq. It should be noted, however, that these countries have as yet to make a firm commitment to Russia. Discussions continue.

Meanwhile, the West anxiously watches all these moves to corral future gas supplies, worries what it all means, and wonders what counter efforts if any could be taken.

Where Is the Future?

Where is Russia's oil and gas future? In the years before the collapse of the Soviet Union in December 1991, the Caspian Sea basin had been regarded the next area of promise after West Siberia had been explored. But that future was taken away, and Russia's oil and gas future is now to be found in East Siberia and offshore. Offshore for Russia means Sakhalin Island and the Barents Sea. Additionally, part of that offshore is found in the Russian sector of the Caspian Sea.²⁸

But, for Russia this future stands somewhat apart from domestic experience and capabilities. Investment needs and technological challenges may lead Russia to the conclusion that, if the country is to maintain, if not expand, its world leadership position in oil and gas, then an acceptable way for foreign involvement must be found. If it is not found, or if foreign companies do not respond for whatever reason, then that future may well fade away.

For the near term, national output will fluctuate between 9.7 to 10.1 mmb/d, although the prospect for the year 2009 is more worrisome and production may drop by 300,000 b/d or more. Beyond 2010, new pipelines will be necessary and will encourage development of new oil and gas regions, which in turn could add as much as 2 million b/d in new output. Pipelines and production are intimately dependent upon one another, but financing pipeline construction depends first of all upon the availability of oil and gas in sufficient volumes to ensure that these pipelines will be financially viable operations.

For natural gas, is the future to be found in a natural gas cartel embracing all the major gas-producing countries of the world? Is that what Prime Minister Putin has in mind? Not necessarily, although at a meeting of gas-producing countries in December 2008, he took pains to stress that the days of cheap energy, including natural gas, are ending.²⁹ Although the meeting in Moscow garnered considerable media attention, the world natural gas market, dealing with low prices, took note but little more. Indexing natural gas prices to those of crude oil plus selling natural gas under long term contracts, works against the cartel concept.

28. Lukoil foresees that production in the Russian sector may total about 1 million b/d as soon as 2016, to compensate for declining production from depleted fields elsewhere. To the east, onshore and offshore Sakhalin Island could be providing 1 to 1.2 mmb/d of oil and 65 to 85 bcm of gas by the mid-2020s, according to the director of the Sakhalin Research and Design Oil and Gas Institute. Offshore production for the country as a whole, according to the Russian natural resource minister, is expected to amount to 600,000 b/d by 2010 and 1.9 million b/d by 2020, with gas production of up to 90 bcm in 2010, and 320 bcm in 2020.

29. Guy Chazan, "Gas Exporters' New Alliance in Moscow Makes Few Waves amid Low Prices," *Wall Street Journal*, December 24, 2008.

Russia by the Year 2015, and Beyond

Consider the rise of Russian oil to world leadership, then its fall, followed by recovery to again join the ranks of world leaders, all within a period of less than 20 years. At almost any point during this period, oil market analysts would have extrapolated from past and current trends, only to learn later that the findings were wrong. When it comes to forecasting, it is not only what is known, but equally what is not known that is important, and in that regard it is not known what the future truly holds. Yet there is every reason to try.

A somewhat different picture of Russia emerges for the longer term, a picture that very much depends on the timely discovery and development of new oil and gas fields.

An oil and gas sector development strategy reportedly was drawn up in 2004 and covers the 10-year period between 2005 and 2015. According to an official of the ministry, in 2015 Russia will be able to produce 10.6 million b/d. That would call for a cumulative 460,000 b/d increase during the years 2010–2015, or less than 80,000 b/d per year average. Although exploration and development would continue, little would seem to be accomplished other than offsetting oil field declines.

To reach the level of 10.6 million b/d would require up to US\$270 billion investment in the sector. The official later added that in 2015 Russia may export 6.2 million barrels a day of crude oil alone, for a gain in crude oil exports of roughly 1 million b/d in a decade. Even if that level were reached, and considering the prospective growth in world oil demand, the Russian contribution to world oil supply would fall behind.

In the end this plan has now been set aside and a new plan will emerge in 2009. The Ministry of Economic Development and Trade released its plan on August 6, 2008, which called for a general crude oil slowdown in the years out to 2030 that would be outpaced by the domestic oil consumption.³⁰ The plan contained three scenarios, and the key elements of the basic scenario for the oil sector are set out in the following:

	<i>Million barrels/day</i>			
	<i>2010</i>	<i>2015</i>	<i>2020</i>	<i>2030</i>
Crude oil production	10	10	10	9.8
Crude oil exports	5.12	5.1	5.1	4.9
Charge to refining	4.7	4.7	4.7	n.a.
Product exports	n.a.	n.a.	1.94	n.a.

Under the best-case scenario, crude oil production would peak at 10.7 million b/d by 2020, hold at that level until 2025, and then decline to 10.6 million b/d by 2030.³¹ Even the best case scenario is not at all promising for the world oil market, forecasting a slow but steady decline in crude oil exports.

Calls on investment funds will be quite high, as might be expected. Capital expenditures on oil production are forecast on the order of \$US722 billion just out to the year 2020. A considerably

30. Nadia Rodova and Anna Shiryayevskaya, "Russia forecasts slowing crude production through 2030," *Oilgram News*, August 7, 2008.

31. See <http://en.rian.ru/russia/20080806/115810162-print>, August 7, 2008.

smaller sum, \$US255 billion, is projected for the gas sector, again out to 2020. Thus, these two sectors alone will require almost \$US1 trillion over the coming 12 years. What would happen should oil prices not fully recover in the years ahead if needed funds are not available? Both producer and consumer would face an extended period wherein fuel supplies sufficient to meet demand would be questionable.

In late 2008 the Energy Ministry released its own so-called strategy forecasts or draft energy strategies, covering draft production and export levels for both crude oil and natural gas out to the year 2030 (see table 3.2).

The forecasts for crude oil are perhaps of more interest both to exporter and importer, for beyond 2015 production holds constant, whereas exports to countries outside the Commonwealth of Independent States (CIS) begins a slight decline.³² The indicated small decline in exports may reflect higher calls to meet domestic demand.

It is important to note that the production and exports of petroleum products are excluded. The charge to refining can be roughly defined as the difference between the production and export of crude oil, but the export of crude oil to CIS member countries is also not given. Absent all these factors, plus not having any guidance relative to domestic demand growth, then the possible impact on the world oil market cannot be described.

The drafts submitted by the Energy Ministry are not binding, and although government approval may be secured, the current financial crisis will certainly delay implementation and probably call for revision.

The Russian media points out that the Vankor oil field, now under development in eastern Siberia, is to begin producing in the second half of 2009 and could reach as much as 500,000 b/d by 2015. Unfortunately, there is a problem with the pipeline construction necessary to move the crude oil to where it is needed. Shorter, warmer winters in the past three years have hampered the laying of pipeline across the marshy territory close to the Arctic Circle.

The basic scenario for the natural gas sector submitted by the Ministry of Trade and Economic Development differed somewhat from those put forward by the Energy Ministry in the estimates offered for natural gas production in the more outlying years, being slightly less optimistic in terms of production but more optimistic in terms of exports. Table 3.3 illustrates the natural gas future as seen by the Energy Ministry.

Natural gas exports grow rapidly out to the year 2020, with growth slowing notably from then on. Implied natural gas consumption jumps from 520 bcm per year in 2010 to 601 bcm in 2020 and to 625 bcm in 2030. However, the omission of natural gas imports prevents any further analysis.

Former president Putin had been quoted as saying that by 2015 transportation of hydrocarbons in the western part of the Arctic is expected to increase significantly to reach a forecast 40 million tons (800,000 b/d)³³—but only if that much crude oil was available from East Siberia. It is a stretch to give Russia that volume of oil in the western Arctic within such a short time frame.

The head of Lukoil, the largest oil company in Russia, was asked about the prospects for foreign investment in Russia's petroleum sector. His reply was forthright: "You are doomed to invest

32. Stuart Elliott, "TNK-BP downplays Russia-OPEC connection," *Oilgram News*, December 9, 2008.

33. Anna Shiryayevskaya, "Putin mulls tax holidays for Arctic field development," *Oilgram News*, May 4, 2007.

Table 3.2. Crude Oil Production and Export Forecasts, Selected Years, 2010–2030
(million barrels/day)

Year	Million barrels per day	
	Production	Exports outside CIS
2010	10	4.28
2015	10.6	4.58
2020	10.7	4.5
2025	10.7	4.42
2030	10.6	4.42

Table 3.3. Russian Natural Gas Sector, Selected Years, 2010–2030
(billion cubic meters)

	2010	2015	2020	2025	2030
Natural gas production	701	800	880	910	935
Natural gas exports	181	237	279	310	310

in Russia.” Yes, international oil company (IOC) investment will be made in Russia if the risks of doing business in that country are judged manageable and if a reasonable profit can be made.

That statement, however, can work both ways, for Russia is equally “doomed” to seek that investment. But what if, for whatever the reason, that investment is not forthcoming or is limited? What then? As Russia moves inexorably toward nationalization of major elements of the oil—and gas—sector, that outcome could well mean less favorable opportunities for the IOCs and reduced supplies for export.

Importing countries nonetheless seem less concerned about future exports of Russian oil and more concerned about Russia’s ability to meet increasingly higher foreign demands for natural gas. This concern arose in part out of a drop in gas exports to buyers in Western Europe that came about in early January 2006. Was this drop deliberate, using energy supply disruption as a means of seeking some desired political gain? No, cutoffs had been made in the delivery of natural gas to Ukraine for failure to agree to a new gas supply contract that carried a higher price for volumes delivered. Ukraine reverted to old habits and took what it needed out of the pipeline, leaving reduced volumes for onward delivery to Western Europe. The delivery shortfalls focused European attention on the larger question of level of dependence upon Russian natural gas and whether European energy security was under threat. And, if so, how can that threat be minimized, other than by making a concerted effort to develop imports from other sources, bypassing Russia?

The experience in January 2009 of Russia's cutting off natural gas deliveries first to Ukraine and then European consumers refocused the EU's attention on energy security. Will positive steps be taken this time?

Russia's Natural Resources Ministry brought the very future of the oil, gas, and coal sectors into sharp question when in early April 2008 a senior official stated that existing oil reserves will be depleted by 2022 and natural gas and coal reserves by 2025, adding that some experts forecast that existing oil reserves will be exhausted as early as 2015.³⁴ The performance of the oil sector during the first five months of 2008 appeared to lend support to what this official had said. Crude oil production during these months was down 0.2 percent compared to first five months of 2007. Has the bad news just started? What if the decline continues for the year as a whole, and beyond? And what would it take in terms of investment just to hold production levels constant? Lukoil vice president Leonid Fedun had an answer—\$US300 billion—and that would be sufficient to take the industry out to the year 2015.³⁵

Faced with the prospect of a decline in production, the government has sharply reduced those export taxes imposed on the oil sector. But, even so, the results may fall short of those desired. It has been reported that Russian oil fields are declining at an annual rate of 15 percent, up from 12 percent in 2006.³⁶ Although this rate may apply more to certain large, older fields and not to the oil sector as a whole, nonetheless, the message is clear and investments must be made now, not next year.

The Natural Resources Ministry official also pointed out that in East Siberia the mineral resources base was absolutely not ready to provide the volumes expected to be pumped in the area. Although not referencing the oil pipeline scheduled to run from Taishet to Skovorodina and then beyond to a port of export near Nakhodka on the Pacific Ocean, this is precisely what he had in mind. There is a rule of thumb that crude oil pipelines should not be built until and unless there is sufficient oil behind the pipeline to guarantee the line's financial viability over its operating lifetime.

Russia knows that, or should know it, and the future of the oil export line to the Pacific Ocean must stand in doubt.

Like all statistics, but particularly those relating to the longer-term future, care must be taken in their handling. The Natural Resources Ministry has not been saying that the resources were no longer available. Rather, the case was being made that exploration and development programs must be undertaken, and now, if a severe crisis is to be averted. In the past, for example, oil reserves had been added not through exploration but simply by raising recovery factors. That approach would no longer work. Now it will be up to expanded exploration and development programs to be successful; if they are not, the future will itself be unacceptable.

Is There Life after Oil?

Russia's oil and gas earnings have been reduced because of shortfalls in production and declines in the world price of crude oil and eventually natural gas. Consider that Russia received an additional

34. Nadia Rodova, "Russian ministry calls for more exploration," *Oilgram News*, April 7, 2008.

35. Catherine Belton, "Russia paying price of oil strategy," *Financial Times*, April 20, 2008.

36. Nadia Rodova, "New technology, not tax cuts, said needed for Russia," *Oilgram News*, April 21, 2008.

\$US475 billion in revenue between the years 2000 and 2007 as a result of high world oil prices. Of that sum, 72 percent was paid to the budget.³⁷ Is Russia truly prepared to withstand another oil shock, should one occur?

Russia understands the need to save for a rainy day and has established a stabilization fund that currently holds the equivalent of US\$127 billion in oil revenues that have accumulated since 2003 when the fund was first established.³⁸ But there the funds sit while authorities debate on how and where to invest these earnings. Another portion is directed to a so-called investment fund for infrastructure projects, higher pensions, and public service salaries. What is left over is invested abroad, largely in foreign bonds.³⁹

Putin took great pleasure in keeping the West off balance with political proposals or actions. Witness his counterproposal to the East Europe missile shield or the planting of a Russian flag on the seabed directly under the North Pole. Although the latter can be regarded as much a publicity gimmick as anything, it quickly caught the attention of the other four other nations bordering on the Arctic,⁴⁰ including the United States, as they tried to ascertain just what Russia was up to.

It soon became clear that Russia was seeking evidence to support its earlier claim that the Lomonosov Ridge and the Mendeleev Rise were really a geologic extension of Russia's Siberian continental shelf.⁴¹ This supporting claim must be submitted by May 2009 to the relevant UN body. If accepted, Russia would have a basis for claiming rights to mineral resources that might be discovered on the Ridge. But then Canada and Denmark could make the same claim. In other words, the right of access has become an imminent geopolitical issue. At the same time, the United States has yet to ratify the 1982 United Nations Convention on the Law of the Sea, an omission that limits its scope of action.

Russia is not yet concerned that it must prepare for a life after oil. Rather, it must prepare for control of the future of oil.

Electricity

Although the oil and gas sector may attract the headlines in the media and the interests of foreign investors, do not overlook the importance of electric power. No country, including Russia, can continue, let alone expand, its current way of life without access to adequate, affordable, and reliable electricity supply, beginning with the right forms of fuel to burn in its generation to the transmission and distribution to the ultimate consumer.

Electricity generation in 2007 totaled 1,016 billion kilowatts (kw), of which 16 percent was provided by nuclear power plants, 67 percent by coal and gas-fired stations, and 18 percent by hy-

37. See <http://www.inform.kz/showarticle.php?lang=eng&id=162476>.

38. Catherine Belton, "Russia torn over how to invest its oil riches," *Financial Times*, September 18, 2007.

39. Mary Dejevsky, "Russia will not cut oil and gas production, Putin says," *The Independent*, September 17, 2007.

40. The four, in addition to Russia, are Canada, the United States, Norway, and Denmark.

41. The earlier claim of Russia was rejected by the UN Commission on the Limits of the Continental Shelf for lack of supporting evidence. This commission has the responsibility for implementing the UN Convention on the Law of the Sea.

droelectric plants.⁴² The generating capacity of the 31 nuclear reactors, located at 10 different sites, was 21,743 megawatts, or about 10 percent of the total national capacity of 211 gigawatts.

Growth in annual electricity demand to 2020 has been placed at 4 percent. The question then arises, how can electricity demand growth be met against the background of questionable natural gas supplies? The answer is simple, at least in Russian minds: build more nuclear power plants while maximizing the shares of electricity from coal and hydro and reducing the contribution of natural gas. To help bring that about, a new organization—Atomenergoprom (Atomic Energy Industrial Complex)—was established, combining all aspects of the industry under one state-owned entity.

The plan for addition of new nuclear reactors is quite ambitious. A total of 4,800 MW is currently under construction. An additional 12,000 MW is planned for completion mostly by 2016, and another 16,000 to 20,000 MW have been proposed by 2020. This would seem to indicate a total of 40 reactors or so within the coming 25 years. Not doable, for Russia may have the technical capability of building just one reactor every four years.⁴³

Whether these plans can be carried out within the time frames indicated may be doubtful, given an aging workforce, the lack of technical personnel, college engineering graduates bypassing the nuclear field, and the unresolved question of what to do with the spent fuel.

Prime Minister Putin recently said that Russia will invest \$US40 billion in the nuclear power sector over the next seven years, after which he hopes the industry will become self-financing.⁴⁴ One year ago then president Putin spoke of raising nuclear power's share of electricity to 25 percent or more by the year 2030, basing his statements on the fact that Russia was already starting to experience electricity shortages.⁴⁵ At that time, reference was made to the construction of just 26 new reactors and as well to the export of as many as 60 nuclear power plants in the next two decades.

In recent years, Russia has depended on UES, the national power generation and transmission monopoly. UES disappeared on July 1, 2008, with transmission to be run by a new state-owned entity, and the Energy Ministry will now oversee the sector as a whole. Generation facilities have been transferred into private hands.⁴⁶

Prime Minister Putin laid down the law to the private investor, in language not necessarily representative of a prime minister. His point was clearly made—profits are acceptable, but irresponsible behavior is not. The road ahead will not be an easy one. Demand for electricity is to increase by 70 percent by the year 2020, and investments in new generation and transmission facilities could reach the equivalent of \$US845 billion,⁴⁷ or an annual average of \$US70 billion. Much of that burden has now been transferred to the private investor.

42. See <http://www.world-nuclear.org/info/inf45>. Much of the information presented in this discussion of nuclear power was taken from the report "Nuclear Power in Russia," cited in this Web site.

43. Carmen Eller, "The Monologue of Nuclear Power," *Spiegel Online*, July 31, 2008.

44. See <http://travel.asia.ru/travel2russia/news/document22738>, July 31, 2008.

45. See <http://www.uranium-stocks.net/putin-signs-to-double-russian-nuclear-power>, July 17, 2007.

46. "Putin Threatens New Power Players," *Moscow Times.com*, June 19, 2008.

47. Ibid.

4

LOOKING EAST

It is not the question of sufficient demand that is worrisome for Russian planners when considering oil pipeline construction timetables. For example, will there be sufficient supply when the first phase of the East Siberia–Pacific Ocean (ESPO) pipeline is completed for operation in 2009? Oil pipelines are not built—or rather should not be built—unless and until suppliers commit volumes sufficient to guarantee that the project will be financially viable. In this particular instance, the demand is, and has been, there but not the crude oil to fill the pipeline.

The first phase of ESPO embraces the 1,700-mile Taishet-Skovorodino portion, the latter site located near the border with China. Supplier quota applications more than cover the 600,000 b/d carrying capacity of this section.¹ A spur will be built by China off this first section at Skovorodino to import oil to help meet that country's growing requirements. Ultimately, volumes in excess of Chinese import commitments and refinery needs at Komsomolsk-on-Amur and at Khabarovsk will be moved further east to an export terminal on the Pacific Ocean.

One important question: where will the oil come from? For the first phase, one out of five barrels will originate in East Siberia; the remainder will come from West Siberia.² Meanwhile, exploration continues in East Siberia, but has not yet turned up any notable finds. That means extending ESPO beyond Skovorodino to the Pacific Coast should not be expected before 2015–2017. At the same time, commissioning of the first leg, originally planned for December 2008, has been postponed to late 2009. Harsh construction conditions, environmental concerns, and subcontractor delays were blamed for the need for more time.³

As earlier noted, the Ministry of Natural Resources completed a comprehensive review of Russian oil and gas companies in January 2004. The conclusions contained in its report were disheartening. It was noted that oil and gas fields were being developed inefficiently, and significant damage had occurred as a result. Problems included delays in placing fields into production, and there had been serious deviations from levels of production set by the licenses.

The state has the responsibility to outline the necessary levels of production for every year of a project. Observance of these levels is an important measure of the company's work. What the ministry had found, unfortunately, were significant upward deviations from approved levels of production.

It appeared that selective production had become the order of the day. Selective production is used to produce oil quickly and with minimal development cost. In sum, the company determines the most prolific and cost-accessible formations and exploits only them. Any natural gas is flared,

1. Nadia Rodova, "Transneft says sufficient demand for East Siberia crude pipeline," *Oilgram News*, July 20, 2007.

2. Ibid.

3. See <http://en.rian.ru/russia/20080207/98613723.html>.

and low-yield wells are simply shut in. Much of the recoverable oil, up to 90 percent, remains behind.

What about export levels? Did the Natural Resources Ministry attempt to estimate what the future might hold? It did, but with specific emphasis on the Asia-Pacific region.

Russian crude oil production, 2020	520 million metric tons (mmt) (10.4 million b/d)
of which, from East Siberia	80 mmt (1.6 million b/d)
from Sakhalin Island	26 mmt (520,000 b/d)
Crude oil exports in 2020	310 mmt (6.2 million b/d)
of which, to Asia-Pacific	100 mmt (2 million b/d)
Natural gas production, 2020	700 bcm
Natural gas exports, 2020	280 bcm
of which, to Asia-Pacific	42 bcm

Another report at the same conference stated that oil reserves were declining both in volume and in quality and that recovery was becoming more difficult because of inadequate exploration. The annual growth in reserves had not compensated for production in more than a decade.

Declining levels of oil recovery are also a decisive factor in the oil sector performance. The average recovery rate has fallen from 42 percent at the start of the 1990s to 27 percent.⁴

Gazprom loses money on every cubic meter of gas it sells on the domestic market as it does not charge enough to cover the full cost of production. That cuts dramatically the funds available to search for, find, and develop new fields. Significantly, Zapolyarnoye was the last giant gas field placed in production. Discovered in 1965, initial production began in September 2001. Peak output will be 200 bcm. The impact of the continuing failure to discover and prove up new gas fields was apparent in 2007, when Gazprom had expected a decline of 1.4 percent, to 548 bcm, in the production of natural gas under its control. The decline was largely blamed on abnormally warm weather cutting into demand.⁵ Nevertheless, to offset customer fears, Gazprom stated that its producing capacity was 630 bcm a year.

The future will reflect the results of investment in exploration and development. Russia's energy strategy, at least as perceived in late 2004, called for oil output to reach 9.9 million b/d in 2010 and 10.5 in 2020.⁶ What data had been available to government officials then that pointed to a relative plateauing in crude oil production during the next decade? Nonetheless, Russia expected to produce 500 million tons or 10 million barrels per day in 2008, for a comparatively small increase

4. "Russian oil dwindles despite discoveries," *Financial Times*, April 8, 2007. For comparison, recovery rates in the United States average 41 percent.

5. Nadia Rodova, "Gazprom sees 2007 gas production 1.4% on year," *Oilgram News*, December 27, 2007. The original plan for the year had been set at 561 bcm, but was reduced several times.

6. The International Energy Agency, or IEA, projected oil output at 10.6 mmb/d by 2010, but then declining in 2012 to 10.5 mmb/d. See "Russia to Pump Up Oil Production by 2010," *Agencia Informativa Latinoamericana Prensa Latina S.A.*, June 13, 2007. The IEA noted that it would be premature to extend the production trend over the next five years.

of 1.6 percent.⁷ That goal, unfortunately, was missed, setting the stage for larger declines over the next few years.

Oil companies complain that the crude oil export duties sharply reduce those funds needed to support expanded exploration projects. Russian officials quite naturally discount oil company charges that these duties have a serious impact on the producers. Nonetheless, the government takes an overwhelming share of export revenues above \$US25 a barrel. Given that costs in the oil sector have risen substantially over the years, reaction of the oil companies is understandable. Only for those Russian companies that refine a larger share of their production is the end profit much greater. For others, making a profit means maximizing output at existing fields. Alternatively, it is understood that developing a new field in Western Siberia, for example, will be a money loser.⁸

In early 2005, the Russian Academy of Sciences noted that about 60 percent of proven oil reserves in Western Siberia were nearing depletion. The huge area lying east of Western Siberia and extending to the Pacific Ocean was producing less than 20,000 b/d during 2004. It was estimated that by 2010 output will reach 100,000 to 200,000 b/d and 1.1 to 1.2 million b/d not earlier than 2020. At the same time, local consumption would rise from 300,000 b/d in 2003 to 0.7 to 0.8 million b/d by 2030, underscoring the problems that lie ahead in developing exportable surpluses sufficient to support an oil pipeline to the Pacific Ocean.

In mid-June 2007, Russia released plans for the development of natural gas in East Siberia and the Far East.⁹ These plans envisaged natural gas extraction exceeding 200 bcm by the end of 2030. Within the plan, supplies to the East Siberia and Far East domestic market would reach 27 bcm by 2020 and 32 bcm by 2030. Production from the giant East Siberian Chayandinskoye gas field is scheduled to begin in 2016. By that year a natural gas pipeline is to be available to move gas eastward to Khabarovsk and Vladivostok, both cities located on the Russian Pacific Coast.¹⁰ Of particular interest, the natural gas will be for the domestic consumer. Exports are not envisaged at this time.

Exports to China and South Korea were planned at 25 to 50 bcm, beginning in 2020, while LNG deliveries might amount to 20 bcm a year, but with no timetable given. (For comparison, gas exports to Western Europe will reach 180 bcm by 2015, according to Gazprom deputy chairman Alexander Medvedev.)¹¹ Investment in the gas sector was placed at \$US92 billion. Although the complete details of the plan have not yet been released, simple addition of the data provided clearly fails to account for a sizable portion of the anticipated production volume.

Russia's oil reserves had declined by 7.3 billion barrels between 1994 and 2005, and the level of extraction (recovery) fell from 42 percent at the start of the 1990s to 27 percent.¹² The reserve base quality is deteriorating while new fields are geologically complex and more costly to develop.

7. Nadia Rodova, "Russia eyes crude output of 9.97 million b/d in 2008," *Oilgram News*, December 31, 2007.

8. Alexander Koliandre, "Russia Oil Tax Could Damp Output Growth," *Wall Street Journal*, November 14, 2007.

9. Anna Shiryayevskaya, "Russia OKs Eastern gas development plan," *Oilgram News*, June 18, 2007.

10. Anna Shiryayevskaya, "Gazprom to pay market price for Azeri gas," *Oilgram News*, June 4, 2008.

11. See <http://www.abcmoney.co.uk/news/142007164938>.

12. "Russian oil dwindles despite discoveries," *Financial Times*, April 8, 2007.

Then, in July 2007 the Russian Ministry of Economic Development released a report that, among other things, had oil production stabilizing at about 10.6 million b/d by the year 2020.¹³ That forecast seems reasonable in view of current circumstances, especially when compared to others found in the ministry's report. To illustrate, per capita GDP was placed at \$US30,000 by the year 2020, supported by a natural gas production level of 900 bcm and export earnings of about \$US516 billion, again by 2020. On the basis of available evidence, these are not credible forecasts.

13. See http://english.pravda.ru/russia/economics/25-07-2007/95229-russia_economic_power-0.

5

IT HELPS TO UNDERSTAND WHAT RUSSIA WANTS TO DO

Russia has laid out a very ambitious program of expansion for itself, but with this expansion has concentrated on seeking the highest possible commercial and political gain from deployment of its very rich natural resource base. After all, what else can it export—other than armaments—in volumes that would earn even a fraction of what comes in from the sale of oil and natural gas? And what has that sale done for Russia? Nothing more and nothing less than having allowed Russia to regain its past political and economic bravado, which former president Putin employed to his fullest advantage. That future has now been interrupted by a global financial crisis and by oil price volatility.

The country's "wish list" is long and includes the following:

- Russia wants to sell more oil to the United States, via a port to be built on the Barents Sea, linked by pipeline to oilfields in Northwest Russia.
- Russia wants to expand its share of the European gas market.
- Russia wants to take advantage of the growing thirst for oil and gas in the Far East and South-east Asia and hopes to gain access through pipeline exports.
- Russia looks to import substantial volumes of Central Asian gas so that its export commitments in Europe can be met and so that Central Asian gas will not become a competitor in European markets. Importantly, imports of Central Asian gas buy Russia time during which new gas fields, north of the Arctic Circle, onshore and offshore, can come into production.
- Russia wants to reduce its dependence on transit countries that stand between it and the European market by developing pipeline routes that would minimize the influence of these transit countries, especially Ukraine, Belarus, the Baltic states, and Poland.

The list is ambitious but doable, and a review of current and proposed plans indicates varying progress in all the indicated directions.

What Is Russia Not Doing?

What is Russia not doing that prudence and forethought would seem to require?

- It is not yet using its newly found wealth to create a diversified economy that would protect the country during those times of oil price fluctuations certain to occur.
- Although Russia recognizes that its society has been corrupt and is still corrupt, there is little real evidence that the country is moving to erase this illness.

- Russia is moving to bring the energy sector under state control. It is not freeing up companies, but doing just the reverse—in effect re-nationalizing assets and creating national champions.
- Steps are not being taken to protect property rights, to ensure protection under the law, to preserve contract sanctity, and to enhance transparency.
- The issue now is time-limited exploration and production licenses. Moscow complains that foreign license holders often want only to book the reserves rather than develop them rapidly.
- Russia is not yet taking positive steps to stop harassment of business by predatory tax inspectors, viewed as one of the greatest hazards faced by business in Russia, both domestic and foreign.

Russia clearly understands what drives international oil companies today—that is, access to replace past production and to prepare for the future. That in turn means the foreign oil companies will more readily accept stricter terms, especially when market prices are high, measurably less so when prices are low. Russia also understands that it lacks the managerial expertise, the required technology, and the financing capability to take on exploration and development of geologically promising but nonetheless challenging areas onshore and offshore.

Given revenues from oil and gas exports, Russia is in a position to hire such services and to purchase required technologies, although for the latter Russia will always be behind times, for few if any companies would be willing to part with their very latest. Off-the-shelf technology is a different matter.

Trouble on the Home Front: Russia Is Growing Older, and Shrinking

The life expectancy for Russian men is low, probably 15 years less than their counterparts in the United States. The population is shrinking, as deaths exceed births, and extrapolation of current trends out to the year 2050 has the Russian population falling to around 100 million. By that year, it is thought that almost 24 percent of the country's population will be over the age of 65. For comparison, by 2050 the United States will have more people of working age and fewer seniors as a percentage of its population than Russia, Europe, Japan, and even China.¹ On that basis alone, it is difficult to envisage the United States relinquishing its current leadership position in the world.

The low birth rate, plus alcoholism, smoking, poor medical care, stress, and violence come together to present Russia with a demographic crisis. Then president Putin, who had recognized what all this means for his country, said that Russia must put out the welcome mat for what he called “economic” migrants from former republics, or its shrinking population will drag down the economy.

President Putin, speaking on February 8, 2008, to a session of the State Council, addressed at some length the issue of a shrinking population. He stressed stabilizing the population, reducing the death rate, and lengthening the average life expectancy to 75 years by 2020.² These goals are commendable, to be sure, but prospects for fulfillment were not improved much over earlier efforts toward achieving them.

1. Mark L. Haas, “Golden Oldies,” *Washington Post*, February 10, 2008.

2. Pavel Felgenhauer, “Russia will regain demographic, economic, and military strength, Putin claims,” *Eurasia Daily Monitor*, February 14, 2008.

Labor problems are emerging even today, not with general shortages per se, but rather with shortages of skilled labor—too many projects, too few experienced hands.³ Yet the working age population has passed its peak and will steadily decline. Various approaches to resolution have been put forward, but the future looks exceedingly grim.

Putin Tries to Calm the Oligarchs

President Putin met with his country's business leaders early on in his presidency and said he would back a proposal that those privatizations that took place more than three years ago should be put out of reach of judicial investigation. But, in return he asked that these oligarchs stay out of politics. All but one did, and that one was Mikhail Khodorkovsky, who either failed to fully understand what Putin had said or was prepared to disregard the warning and pursue building a political backing, presumably to compete for the office of the presidency in March 2008.

Moreover, Khodorkovsky had held discussions in early October 2003 with ExxonMobil and ChevronTexaco regarding their interest in acquiring partial—25 percent—ownership of Yukos,⁴ a probable fatal error on his part, in that Putin's agreement had not been sought. Western observers are inclined to accept that Khodorkovsky's failure to run such meetings by the Kremlin was the beginning of the end for him. He had crossed the line drawn by Putin and must be punished, if only as a message to the other oligarchs.

Once that message had been delivered, via the courts, attention could now turn toward finding a means to take back those major fields being developed by foreign companies, but the means needed to have a sense of legitimacy. Contract terms provided the answer.

The question then became: Were the contract terms being honored? But the question was not asked before the answer was relatively certain. It was, and is, re-nationalization by stealth. The affected Western investor clearly knew what was happening, but he could only stand by and smile.

The Trials and Tribulations of Yukos

The Khodorkovsky–Yukos–Kremlin contest was watched closely as it played out over time, beginning with his arrest in October 2003 as his private plane landed in Smolensk. As months passed the mood of interested observers shifted from amazement to concern to asking, will it ever end? It did end, with Khodorkovsky not surprisingly found guilty and sentenced in June 2005 to eight years in prison and his company auctioned off to satisfy back taxes. Time in prison has not cooled Khodorkovsky; three years later he was speaking out publicly and defiantly, defining himself, from behind bars, as a political prisoner.⁵

The West of course tried to gauge the trial's impact on future foreign investment. Russia will be accepting of foreign investment, under certain conditions and constraints, with control resting

3. Stefan Wagstyl and Neil Buckley, "Russian revival plagued by shortage of skills," *Financial Times*, April 18, 2008.

4. See http://business.timesonline.co.uk/tol/business/industry_sectors/natural_resources/article11, May 29, 2007.

5. Neil Buckley, "Khodorkovsky still defiant," *Financial Times*, February 6, 2008.

in Russian hands, but will the potential investor respond?⁶ Identifiable risks of doing business in Russia, for those companies with risk-averse management, may preclude the likelihood of an acceptable return on investment. For other companies, access to new supplies may well be the driver, and this goal may dominate to the extent that lower returns on investment have to be accepted, especially so as national oil companies of importing nations become more active and more willing to cut deals involving less favorable terms.

Khodorkovsky applied for early parole in July 2008, hoping to take advantage of Moscow's supposedly new attitude of the courts. Unfortunately, the application is tainted by new charges of laundering some \$US30 billion and misappropriating 350 million tons of oil.⁷

Although the latter charge appears somewhat ridiculous—350 million tons is equal to Russia's total annual oil exports at the time—the charges may be sufficient in themselves for the courts to deny parole.

Western eyes were on the outcome, not so much out of concern for Khodorkovsky, but more for signs as to how to read Dmitry Medvedev's position as president. That position today distances the president from the court's decision. Nonetheless, the parole application was turned down.

First to Go, after Yukos, Was Sakhalin-2

Sakhalin-1 and Sakhalin-2 are two of the three remaining production-sharing projects in the country. The third, Kharyaga, yielded about 20,000 b/d in 2007. All three are being investigated for failure to meet their 2007 production targets.⁸ There really is no future for production-sharing projects in Russia.

It was perhaps more the reports of cost overruns at Sakhalin-2 that brought down the wrath of Russian officials—costs were reported to be \$US22 billion, or double the original plan. That meant Russia would not receive any profits from the Sakhalin-2 venture for a number of years, which was wholly unacceptable.

Russian authorities had begun to discover a number of environmental violations along the north-south pipeline routing—so severe, at least in their judgment, that laying of the pipeline would have to be halted. Royal Dutch/Shell, the operator, got the message. In December 2006 Shell agreed to sell a controlling interest to Gazprom for \$US7.45 billion, and, not long after, those problems confronting the project began to go away.⁹

A natural gas liquefaction facility, Russia's first for LNG, has been constructed at Prigorodnoye on Aniva Bay and will be supplied by the 500-mile pipeline carrying natural gas produced at fields offshore Sakhalin. The facility's LNG will be delivered primarily to Japan as part of the latter's

6. Andrei Illarionov, economic adviser to President Vladimir Putin, viewed the Yukos case as the "biggest economic and political event in the country in the past 14 years" and calling the partial re-nationalization of Yukos as the "scam of the year." See Neil Buckley, "Yukos oil affair has damaged Russia, says Putin adviser," *Financial Times*, June 3, 2005.

7. Michael Schwartz, "Former Oil Executive Seeks Parole, Citing Kremlin's New Attitude toward Courts," *New York Times*, July 17, 2008.

8. Amanda Rayborn, "Russian Audit Chamber slams crude output from three PSAs," *Oilgram News*, July 16, 2008.

9. In addition to handing over a controlling share of Sakhalin-2, the Russian government will receive an annual dividend payable by the project beginning in 2010.

desire to diversify away from the Middle East. First deliveries were made early in 2009. Limited volumes will seek buyers in the United States.¹⁰

Then Came Kovykta

Kovykta is a giant natural gas field located in Eastern Siberia to the north and west of Lake Baikal. Its reserves, placed at 2 trillion to 3 trillion cubic meters, are comparable to total Canadian reserves. The license rights to Kovykta were held by Rusia Petroleum, with TNK-BP as controlling shareholder with its 62.89 percent stake.¹¹ Kovykta is more than just another gas field to BP. Rather, it has been described as representing “tomorrow” for the company.

The license called for an annual production of 9 bcm, whereas TNK-BP had been producing just 1.2 bcm, claiming the domestic market was far too small for any higher volumes. There is only one small diameter pipeline, built by TNK-BP, to serve local consumers. TNK-BP could not export natural gas from Kovykta even if a pipeline were available; only Gazprom has the right to export natural gas from Russia.

TNK-BP was held in breach of its license and, accepting the seemingly inevitable, in June 2007 sold its holdings of Rusia Petroleum to Gazprom at a price to be determined later, based on market levels, but in the range of \$US1 billion. Not all was lost. TNK-BP has the option of buying a 25 percent plus one share in Kovykta, but only after a significant joint investment or asset swap has been agreed upon. Nonetheless, in retrospect, BP made out much better than many analysts had thought.

Then matters changed. In mid-October 2008, Minister of Natural Resources Yuri Trutnev stated that TNK-BP risked losing its license for Kovykta for failing to comply with the terms of its permit.¹² Gazprom then weighed in with its assessment that the stake held by TNK-BP in the Kovykta gas field was likely to be worthless.¹³ Following up on that assessment, Gazprom wondered why it should pay for a potentially worthless asset, an asset likely to be taken away from TNK-BP anyway.

Analysts view both Sakhalin-2 and Kovykta as part of the broad effort to return control of the country's strategic oil and gas fields to the government. At first glance, BP came out of the dispute reasonably well, but what lessons current and future investors in Russia might draw from these actions are not clear, for the door is not yet closed. For example, efforts could be made to convince the three Russian owners of TNK that it would be in their best interests to sell out to Gazprom. But TNK-BP would still remain as a 50-50 joint venture. BP would have to give up something, just one share, for example, if Gazprom was to take control.

10. “Shipments of Sakhalin LNG due to reach Japan early next year,” *Japan Times*, October 20, 2008.

11. TNK-BP is a 50-50 joint venture. Three Russian businessmen hold 100 percent of TNK. BP paid \$7.7 billion to TNK shareholders for its one-half of the joint venture.

12. Anna Shiryayevskaya, “New threat to TNK-BP's license for Kovykta field,” *Oilgram News*, October 17, 2008.

13. Ed Crooks and Catherine Belton, “Stake in TNK-BP site labeled ‘worthless,’” *Financial Times*, October 17, 2008.

Next Up, Sakhalin-1

Now that matters involving Sakhalin-2 and Kovykta have been resolved in favor of Russia, who or what is next on the agenda? Sakhalin-1 makes for a good prospect. In sum, Gazprom wants to persuade ExxonMobil, the operator, not to export natural gas to China but instead to send the gas to Russian domestic markets in its Far East. An alternative would be to pipeline the gas south to liquefaction facilities under Sakhalin-2 control. In fact, Gazprom wants to purchase all the gas becoming available at Sakhalin-1 and to export this gas to markets of its own choosing, which would include China. Allowing ExxonMobil to sell to China would, so Gazprom argues, interfere with ongoing negotiations relating to Gazprom's desires to sell into that market.

At present only Gazprom has the authority, and the needed access to export pipelines, to sell natural gas outside the country. Competition is not welcome, and Gazprom would like to keep it that way. Sakhalin-1, the largest U.S. investment to date in the Russian economy, has Russian participation in the form of Rosneft. Sakhalin-2, conversely, had no Russian participation until December 2006 when Gazprom secured its controlling share.

Interestingly, the project operator of Sakhalin-1, ExxonMobil, has the right to export the gas without Gazprom involvement and planned to send all the gas to China. But experienced observers would likely advise against it, given that such would challenge Gazprom's general authority to export all natural gas from Russia. Gazprom has already given notice of its intent regarding any gas produced from Sakhalin-3.

TNK-BP Travails

The joint venture between TNK (the acronym for Tyumen Oil Company) and BP became a reality in February 2003. TNK was owned by four Russian billionaires, and BP paid these individuals roughly \$US7.7 billion to bring about the merger. Their interests in TNK-BP are represented by three companies (Alfa with 25 percent, Access Industries with 12.5 percent, and Renova with 12.5 percent) known by the acronym AAR. Then president Vladimir Putin and then British prime minister Tony Blair both blessed the joint venture on the occasion of the signing ceremony held in London in June 2003. It was the ultimate feather in his cap that John Browne, who was then running BP, had been looking for, something that would set him apart from other rival international oil companies. Yet he had his reservations about the joint venture and especially about the risks involved. "The question is whether you can work there," he noted.¹⁴

Putin later could be seen as backtracking from his initial position regarding the joint venture when in a later newspaper interview he was quoted as warning the joint venture it would run into trouble. He observed that one side needs a majority stake lest there be problems.¹⁵ Was there a change in heart that brought about this negative assessment or, if Putin had always held this position, why had he not made it known to the prospective partners before the signing?

The early years of the joint venture went smoothly, and both AAR and BP seemed pleased with the results. But just when matters seemed to have quieted down regarding other issues with foreign investors in the Russian oil and gas sector, an employee of TNK-BP and an official of the

14. See <http://www.spiegel.de/international/business/0,1518,569490,00>, August 2, 2008.

15. Stephanie Baker-Said and Torrey Clark, "BP Losing 23% of Production Looms as Russians assail Investment," *Bloomberg*, July 23, 2008.

British Alumni Club (who is also the brother of the TNK-BP employee) were arrested on charges of industrial espionage on March 20, 2008.¹⁶ Speculation was rife about what was behind these charges, running from a takeover of the TNK portion of the TNK-BP joint venture to nothing more than part of a long-running criminal case, later said to be tax evasion, against Sidanco, now a unit of TNK-BP, to a continuation of the diplomatic battle between the United Kingdom and Russia.¹⁷

Subsequent reporting seemed to lend credence to the supposition that a Kremlin power game was under way, with the ultimate victor ending up controlling TNK-BP.¹⁸ Importantly, Russian environmental officials stated on March 21 that they would investigate TNK-BP's Samotlor oil field.¹⁹ The reasons for the investigation were not given, but the approach was consistent with past negotiating techniques. Is Samotlor important to TNK-BP? Samotlor reportedly is more than 80 percent depleted.²⁰ In fact, the BP stake in TNK-BP provides 22 percent of BP's oil production and 19 percent of its oil and gas reserves²¹ and has provided for nearly all of BP's reserve growth in recent years.²²

Then, adding more fuel to the fire, a \$US257 million back tax claim was levied against TNK-BP in April 2008.²³ This claim covered the years 2004 and 2005, adding to the speculation that the Russian shareholders in the joint venture with BP were under pressure to sell out. These tactics have a familiar ring to them.

A Russian newspaper, citing unidentified sources from both companies, carried a story dated April 24, 2008, to the effect that Gazprom would buy control of TNK-BP for \$US20 billion by the end of the year.²⁴ This speculation was quickly denied by those Russian shareholders. But then, it is not unusual for strong denials to precede confirmation that a deal had indeed been made.

In the succeeding weeks, charges and countercharges, lawsuits, and visa problems for BP carried the day and were given front-page coverage by the media. Both sides took advantage of the media and public interest and had no hesitancy in using the media to state their positions and concerns. In the latter part of July, BP withdrew 148 of its staff that had been seconded to TNK-BP but had been unable to work since March because of visa problems.

Four days later, Robert Dudley, the chief executive officer (CEO) of TNK-BP, departed Russia because he could not get a work visa. He cited continued harassment of himself and BP, but vowed to continue carrying out his responsibilities while outside Russia.

16. Nadia Rodova and Anna Shiryaevskaya, "TNK-BP under pressure as employee arrested," *Oilgram News*, March 24, 2008.

17. Gregory L. White and Guy Chazan, "Russian Charges Fuel Worry over BP Venture," *Wall Street Journal*, March 21, 2008.

18. See <http://www.taipetimes.com/News/worldbiz/archives/2008/03/24/2003406914>.

19. Jonas Bernstein, "Kremlin moves against U.K. interests in Russia," *Eurasia Daily Monitor*, March 24, 2008.

20. Nadia Rodova, "TNK-BP Holding sees 2007 profits fall 11% on sale of upstream unit," *Oilgram News*, June 27, 2007.

21. Catherine Belton and Ed Crooks, "BP recalls workers from Russia," *Financial Times*, March 26, 2008.

22. Andrew E. Kramer, "Denied Visa, Chief of BP Joint Venture Is Forced to Leave Russia," *New York Times*, July 25, 2008.

23. Nadia Rodova and Anna Shiryaevskaya, "Pressured TNK-BP hit by \$257 million back tax claim," *Oilgram News*, April 24, 2008.

24. Simon Shuster, "Gazprom to buy control of TNK-BP," Reuters, April 24, 2008.

At that time, it could have been asked: Is this the beginning of the end, or the end of the beginning? Dudley, understanding that he could not run TNK-BP for long from afar, noted his departure was only temporary. Several days later the chief financial officer of TNK-BP submitted his resignation, noting that it had become difficult to continue working independently, as his position required.²⁵ His resignation was soon followed by the departure of TNK-BP executive vice president for downstream. Then what? Had the time come for the Kremlin to become involved, or were events proceeding in the desired direction? Several weeks after the departure of Mr. Dudley, a Moscow court disqualified him for two years on labor violations,²⁶ meaning he could not return for that period of time.

Media coverage of the Georgia-Russia shooting war replaced the TNK-BP issue for most of August 2008 except for a comparatively brief story late in the month that Lamar McKay, a BP troubleshooter, had been brought in to help resolve matters.²⁷

Without reviewing all the accusations and rebuttals individually, it seems quite clear that the ultimate struggle is for control of TNK-BP. Investors are watching the story unfold very closely, for they too could well be the next to be caught up in the struggle for ultimate control of the country's natural resources. President Medvedev and Prime Minister Putin have not overtly become involved in the issues, regarding the matter to be simply between the two respective parties, TNK and BP. But what transpires behind Kremlin walls or in the Russian White House is quite another matter.

AAR continued to press the need for change, which included replacing Bob Dudley with an independent CEO, achieving parity on the governing boards, and replacing British secondments to the extent possible by hirees from other IOCs. Moreover, the Russian shareholders wanted greater dividends at the expense of exploration and development funds. What was the BP position? It was to hang tough on all issues and pursue whatever actions might be appropriate under the circumstances.

What would it take to bring the standoff to an end? The Russian shareholders have since the beginning insisted on the departure of Robert Dudley. In their judgment he had treated TNK-BP as a subsidiary of BP, too many BP employees were seconded to the joint venture, and the performance of the joint venture itself badly lagged that of other major Russian oil companies. BP of course rejected all these complaints.

Then it was reported that Tony Hayward, CEO of BP, and Mikhail Fridman of the Alfa Group and chairman of the TNK-BP board, had met on July 30 and reached agreement on bringing the whole issue to an end. To do that, Robert Dudley would be replaced by a Russian-speaking individual who was not an employee of BP, and a new team of senior managers would be nominated. In addition, three independent members would be added to the board.²⁸ Would Fridman also step down as chairman of the board? When might the other desired changes come about, and what would happen if agreement was not reached on a new CEO? There are perhaps too many unre-

25. Catherine Belton, "TNK-BP finance chief quits amid dispute," *Financial Times*, August 4, 2008.

26. Anna Shiryayevskaya, "TNK-BP chief economist joins Russian government," *Oilgram News*, August 20, 2008.

27. "TNK-BP Deal Seen in 'Weeks,'" *Moscow Times*, August 28, 2008.

28. Nadia Rodova, "TNK-BP shareholders move toward dispute resolution," *Oilgram News*, August 4, 2008.

solved questions to anticipate an early resolution, yet most observers were of the opinion that BP came out surprisingly well.

BP may want to review, if it has not already, the experience of Hermitage Capital Management, one of the largest UK investors in Russia only a few years ago, and its chief executive, Bill Browder. Browder had criticized the operations of Gazprom, his reentry into Russia was denied, and over time his companies were effectively destroyed.

Was it nothing more than coincidence that on July 24, 2008, a front-page *New York Times* story appeared that provided in-depth coverage of the times and tribulations of Mr. Browder and his company? Or was the release designed to convince the reader that the travails suffered by BP were just a reflection of the way business is conducted in Russia, that a similar fate may await BP? The answer to both questions would appear rather obvious.

Nonetheless, the conflict between BP and the Russian shareholders reportedly was duly resolved at the end of September 2008, with the shareholders getting what they had wanted and with BP continuing as a 50-50 partner.²⁹ Mr. Dudley relinquished his position as of December 1, 2008, but he may have had the last word when he noted that BP-TNK was positioned for its best performance this year. A new board of directors was put together, four from TNK and four from BP, together with one independent. All went back to work—AAR with smiles on faces and BP with relief at surviving.

In late May 2009, BP nominated a Russian businessman as its candidate to serve as TNK-BP's chief executive, but several days later it was announced that one of the Russian shareholders, Mikhail Fridman, would take over as interim chief executive. A permanent replacement would be put forward by the end of the year. Mr. Pavel Skitovich and Mr. Maxim Barsky, former managing director of West Siberian Resources, will serve as executive vice presidents until one is chosen to be the chief executive officer.³⁰

29. Nadia Rodova, "TNK-BP says shareholder dispute resolved," *Oilgram News*, October 6, 2008.

30. Anna Shiryayevskaya, "TNK-BP appoints Fridman as interim CEO," *Oilgram News*, May 28, 2009.

6

RUSSIA WITHOUT PUTIN?

“We are not at the end of the Putin era, the Putin era is just beginning.” So exclaimed Sergei Moronov, speaker of Russia’s upper house of parliament, setting the stage for what the world might expect during the next two decades.¹

On March 2, 2008, Russians went to the polls to vote for a new president to succeed Vladimir Putin, who would be completing his second four-year term in office. The Russian constitution stipulates that no president can serve more than two consecutive terms, but then is free to compete again for the presidency after a newly elected president has served one term. Speculation inside Russia, and outside, has revolved around how Putin will be able to keep control even while not in office, how he will return to office and when, and what form that office will take. Public support of Putin is quite high, let alone his control of the Russian political system and the media, and his successor likely will find it not easy to earn and keep the same level of approval. Growing dissatisfaction would make Putin’s return that much easier.

President-elect Dmitry Medvedev assumed his new role on May 7 and the following day named Vladimir Putin to the position of prime minister. In some countries, these events would mark the end of the story, but in Russia the story is just beginning.

Would Russia without Vladimir Putin as its leader be noticeably different? It may be quite some time before that situation has to be addressed. As long as Putin remains active politically, whether overtly or covertly, he will be perceived to be the center of power. The matter of the Russia-Georgia confrontation appeared to remove all doubts as who was in charge, as Western media quickly conferred the title to Putin.² Prime Minister Putin was visibly angry at Georgian president Mikheil Saakashvili possibly because of the latter’s desire to see the country join NATO and because of NATO’s successful efforts to gain independence of Kosovo from Serbia. Putin took considerable delight in the one-sided military battle.

Where was President Medvedev during the tension-filled days of the Ukraine-Russia gas debacle? He had called a “gas summit” in Moscow to which EU country leaders were invited. Only one came. Meanwhile, Prime Minister Putin and Ukrainian prime minister Yulia Tymoshenko were committing a deal to paper, if nothing less than marginalizing the efforts of the president.

What is it that Prime Minister Putin wants above all else? He wants nothing more than the recognition and respect due Russia as a great power.

1. Neil Buckley, “Putin camp looks ahead to 2012 for return of its leader,” *Financial Times*, July 31, 2007.

2. Ellen Barry, “Calling Shots, Putin Salves Old Wounds,” *New York Times*, August 12, 2008. See also, Frederick Kunkle, “Conflict Makes Clear Who Rules in Russia,” *Washington Post*, August 14, 2000.

How Russia Got Where It Is Today

The Russian media had given considerable coverage to two individuals that appeared to be the chosen contestants for the presidency—first deputy prime ministers Dmitry Medvedev and Sergei Ivanov. Support varied over time; one ascended, one fell in the public eye. Both are confidants of Putin, but do not dismiss the struggles for power inside the Kremlin and beyond the public eye. Much was at stake, including access to financial wealth. It could well be, some opined, that Putin would spring a surprise with his choice of candidate, and that person may be just as unknown as Putin was when he was selected in August 1999 to succeed then president Boris Yeltsin.

Was that surprise revealed in mid-September 2007 when Putin nominated relatively unknown Viktor Zubkov to be the new prime minister? Putin had dismissed the government just a few hours earlier, and the Russian media had been wildly speculating as to who would take Prime Minister Fradkov's position. None were even close. Putin later commented that there were five potential successors to him; he said that he wanted to retain power and influence in the Kremlin after departing in March 2008,³ but without indicating just how he would do that.

On the first of October 2007, Putin then dropped not one but two surprises—first, that he would head the Unified Russia list of candidates⁴ for December's elections to the State Duma and, second, that he would consider becoming prime minister in the future.⁵ Remember, Putin had been prime minister before, under President Boris Yeltsin. To take that post, he would be nominated by the newly elected president to the position of prime minister and then would be approved by the parliament.

Has Putin thus defined for the foreseeable future his role in the Russian government? The Duma can of course amend legislation to give the prime minister the degree of control he would need to be the de facto head of government. Changes in the constitution would be in order, but again that would not be an issue, just as electing a compliant president would not present a problem.⁶ In early November the idea of recognizing Putin as “national leader” or “father of the nation” began to take shape across the country. A look back through media coverage shows that Putin told journalists on October 18, 2007, that Russia's political system will need to remain “under manual control” for the next 15 to 20 years.⁷ Setting aside the prospect of any more surprises, Putin, whether president or prime minister, would seem set to guide Russia through the next decade at least, if not beyond.⁸

3. Stefan Wagstyl and Neil Buckley, “Putin eyes a ‘strong leader’ as successor,” *Financial Times*, September 15, 2007.

4. Putin is not a member of the United Russia political party, or of any political party, in that he believed the president should be above politics.

5. See Brian Whitmore, “Russia: Putin Makes Next Move in ‘Operation Successor,’” *Radio Free Europe/Radio Liberty*, October 2, 2007.

6. Putin, in making his surprise announcement, set out two conditions that must be met for him to become prime minister. First, the United Russia political party must win the December 2 parliamentary elections and, second, a “decent, capable, efficient, modern person must be elected president.” See Brian Whitmore, “Has Russian President Vladimir Putin finally shown his hand?” *Radio Free Europe/Radio Liberty*, October 2, 2007.

7. Victor Yasmann, “The Soft-Power Foundations of Putin's Russia,” *Radio Free Europe/Radio Liberty*, November 9, 2007.

8. The Russian media are working hard to convince the population that Putin is the right man for Russia. Analogies with Peter the Great were drawn early in Putin's service as president, and more recently with the 32nd president of the United States, Franklin D. Roosevelt. Both came onto the scene when their countries

There has to be a growing sense within the U.S. administration that Vladimir Putin will be around for some time, barring any unforeseen circumstances. But what bothered the Kremlin watchers was Putin's reluctance to lay out, in no uncertain terms, how he plans to retain his position as the center of power. But then, who in the Kremlin, other than Putin, would know? Would the world find out on March 2, 2008, or would frustrations continue?

There were internal rumblings afoot. The position and power of the so-called *siloviki* must neither be overlooked nor underestimated. Composed of former and current intelligence officers, the *siloviki* fill almost every imaginable government position, and their influence, whether political or economic, though not that obvious, is clear, considering that President Putin is "one of them."

Putin answered one of the questions on everyone's mind when on December 10, 2007, he backed first deputy prime minister Dmitry Medvedev as his successor. Yes, there was an election on March 2, 2008, but all that remained was to mark the ballot in the right place.

One more surprise awaited: what would President Putin do after leaving office in May 2008? The element of surprise may have been taken away when the future president announced that he wanted Vladimir Putin to stay on in the government, taking over the position of prime minister.⁹ He very likely could have made this statement only with the permission of President Putin. This prospect had come up earlier in the game, and Putin laid out several conditions that have since been met. One week later, on December 10, President Putin confirmed he would become prime minister under the man he supported to succeed himself as president.

Yet questions must be posed: Will this arrangement work? Speculation is as rampant as before. Would Putin be prepared to give way, immediately or otherwise, to Medvedev? The answer is uncertain, at least during Medvedev's first term, for the world does not know what transpires behind the Kremlin walls. Could Russia flourish under two leaders? Unlikely. One scenario, among those currently being postulated, is a unifying of Russia and Belorussia, with Putin becoming prime minister of this unification, thus outranking Medvedev. But then, there are multiple other scenarios as well.

Putin, in a speech given in early February 2008, laid out what he had accomplished as Russia's president. Then, in what the Russian media described as "Putin's will," he went on to define, for his successor, what next needed to be done.¹⁰ It was billed as setting Russia's growth strategy until 2020.¹¹ Putin did not mention his successor—he did not have to—but the message was clear: Putin will still be in charge.

Then, in his last press conference before the March elections and speaking to 1,000 reporters, Putin acknowledged authorship of Russia's development strategy for the next 12 years and added that he would stay on as prime minister as long as he could implement the strategy he had laid out.¹² Would his position as prime minister give him enough power to do that?

needed them. See Peter Finn, "Putin Finds Expedient Hero in Four-Term U.S. President," *Washington Post*, October 19, 2007.

9. Peter Finn, "Probable Successor to Putin Backs Him as Next Premier," *Washington Post*, December 12, 2007.

10. Brian Whitmore, "Russia: 'Putin's Will' Includes Praise for Accomplishments, Harsh Words for West," *Radio Free Europe/Radio Liberty*, February 8, 2008.

11. Catherine Belton, "Russia forced into new arms race, says Putin," *Financial Times*, February 9, 2008.

12. Catherine Belton, "Putin maps out strategy to retain powerful role," *Financial Times*, February 15, 2008.

Clearly he thought so. Moreover, outgoing President Putin would be nominated to lead the United Russia political party when it met in mid-April 2008. If confirmed, and there could be no doubt that he would be, his position could be used to add to his political power. Putin underscored that he would have sufficient power to lay out Russia's economic course, control the budget, and ensure national defense. There would be no conflict with Dmitry Medvedev but neither would he subordinate himself to whom he called his protégé.¹³ Early speculation held that Putin could use this new position heading United Russia to cut the term of president-elect Medvedev by two years, Putin would stand again for the presidency and be returned to office.¹⁴

Russians voted on March 2, 2008, and to absolutely no one's surprise elected Dmitry Medvedev to the post of president. Now the world, and the Russians, wait to see how the future will work out. More surprises may be expected from Putin. Would the "honeymoon" be over by the time the 2008 meeting of the G-8 took place? Who will be seen as conducting Russia's foreign policy, recognizing that only one individual can represent Russian interests?

President Medvedev attended the G-8 meeting alone. Prime Minister Putin stayed home. Medvedev stood his ground during the discussions and refused to become involved in matters he described as administrative, such as the TNK-BP dispute—an interesting take, in that TNK-BP issues had come to be regarded as the most controversial aspect of Russia-UK relations. He established himself as the Russian president and gave no ground to anyone.

Will that approach be set in place to the extent that the options of the incoming U.S. president are limited? Could President Medvedev ever emerge from Putin's shadow? No one knows the answers to these questions, but little change should be expected over the near term.

Putin clearly enjoyed playing the role of the energy supply country out to save every importing country. While speaking in Zagreb on June 24, 2007, he stressed that "all states of Southeastern Europe must be provided with guaranteed access to energy resources. . . . [Russia] is one of the world's leaders in the production and delivery of energy [and will try to] do everything to solve the energy problems of the region."¹⁵ He was referencing a just-signed memorandum on the possible construction of a gas pipeline under the Black Sea (called the South Stream) that had the support not only of Italy and Russia but also the Commission of the European Union.¹⁶ Russia clearly wants these countries to know that if a gas shortage develops, it will be there to help.

But of course more is involved than just postulating a readiness to offset possible gas shortages. Influence comes with pipelines, and Russia is out to strengthen its influence, wherever and whenever the opportunity may present itself. If such pipeline construction thwarted Europe's desire to diversify away from Russia as a supplier, so much the better.

13. Ibid.

14. Jonas Bernstein, "Analysts expect a powerful prime minister and a weak president in Russia," *Eurasia Daily Monitor*, April 9, 2008.

15. Whitmore, "Russia: Putin Makes Next Move."

16. It developed several days later that the gas pipeline would run under the Black Sea from Russia to Bulgaria and be built in response to a predicted European shortfall in gas supply and power generation capability by 2020. Beyond Bulgaria the line would split, running north to Austria and south to Italy. Moreover, it was noted that the line, capable of carrying 30 bcm, would complement the Nabucco gas line, not replace it. Keep in mind, however, that only a Memorandum of Understanding had been signed, and no studies had been undertaken.

When president, Vladimir Putin conducted himself as the polished politician where the audience was international.¹⁷ It is only when speaking to particular home audiences that he reverted to language that would be unseemly on other occasions. Putin likely will continue to play to the nationalistic feelings of the Russian people.¹⁸ Yet by other actions he raises political tensions at home and abroad. For example, U.S. plans to set up a missile defense shield in Eastern Europe have been used as an excuse to strengthen military capabilities, expand espionage activities, and aiming nuclear missiles at Ukraine—all unpleasant reminders of the past Cold War.¹⁹

Will Putin's current and likely future maneuverings in the field of international politics seem like a rebirth of the Cold War—or perhaps resemble a “cold peace”?²⁰ But then, a future of assured peace and prosperity is not assured at all. A display of military might, on May 9, 2008, trundling across Red Square, gave rise to all sorts of speculation. The sobering spectacle, ostensibly celebrating, for the first time in 17 years, the victory over Nazi Germany, was presented as a demonstration of the country's defense capability and was as much designed for the foreign audience as for the Russian people. Whatever the real purpose, it clearly smacked of a Soviet revival.

Will President Medvedev push a softer position for Russia and would the West be accepting of this more agreeable line? Probably not, at least in the early months of his tenure. Little is really known of President Medvedev other than as a protégé of Putin and his years as chairman of Gazprom. That is not yet sufficiently comforting to Western leaders for them to accept that Russia is changing. The West has no particular insights into Russia's ambitions. Nor does it have any particular insights as to who really rules, Putin or Medvedev. Unfortunately, events portray Russia as changing in ways that make for a more nervous and unsettled world.

17. See also his comments given at the signing of the Burgas-Alexandropolis pipeline agreement when he spoke of the worldwide implications the pipeline would hold.

18. See, in particular, Peter Finn, “New Manuals Push a Putin's-Eye View in Russian Schools,” *Washington Post*, July 20, 2007. “Sovereign Democracy” is the title of one of the new history manual's chapter and is a phrase to describe the centralization of power under Putin as essential to the building of a stable Russian state, free from outside interference.

19. President Putin took advantage of these U.S. plans to make a political point by comparing them to the 1962 Cuban missile crisis that brought the world to the brink of nuclear war. See Tony Barber, “Putin invokes Cuban missile crisis,” *Financial Times*, October 26, 2007.

20. Martin Wolf, “Why Putin's rule threatens both Russia and the west,” *Financial Times*, February 13, 2008.



ABOUT THE AUTHOR

Robert E. Ebel is senior adviser in the Energy and National Security Program at the Center for Strategic and International Studies, where he offers his views on world oil and energy issues, with particular emphasis on the former Soviet Union and the Persian Gulf. He was project director for a number of nuclear-related reports, including the Global Nuclear Materials Management project, and for the three-volume report, *The Geopolitics of Energy into the 21st Century*, cochaired by Senator Sam Nunn and Dr. James Schlesinger. At CSIS he is also codirector of the Caspian Sea Oil Study Group and of the Oil Markets Study Group.

Previously, Ebel served with the Central Intelligence Agency for 11 years and spent more than 7 years with the staff of the Office of Oil and Gas in the Department of the Interior. For the Federal Energy Office, he worked in the international energy area. In March 1974 he joined ENSERCH Corporation as vice president, international affairs, and for some 14 years advised the corporation and its subsidiaries on international issues relevant to day-to-day operations.

Ebel, who has traveled widely in the former Soviet Union, was a member of the first U.S. oil delegation to visit that country in 1960 and in 1970 was in the first group of Americans to inspect the new oil fields of Western Siberia. In November 1997 he led an International Energy Agency team examining the oil and gas sector of Turkmenistan and Uzbekistan.

In August 2002, Ebel participated in the Sudanese peace talks, held in Machakos, Kenya, and from December 2002 through April 2003, worked with a group of former Iraqi oil officials, under the Department of State “Future of Iraq” project, to produce an assessment of the Iraqi oil sector. Again at the request of the Department of State, he traveled throughout Canada in September 2003 to speak to interested groups on U.S.-Canada energy relations.

Ebel is a past chairman of the Washington Export Council and past member of the board, American Near East Refugee Aid. He received the Department of State’s Distinguished Public Service Award in April 2002. He is the author of a number of books, including *Energy Choices in Russia* (CSIS, 1994), *Energy in the Near Abroad* (CSIS, 1997), and *China’s Energy Future* (2006). He was coeditor, with Prof. Rajan Menon, of *Energy and Conflict in Central Asia and the Caucasus* (2000) and edited *Caspian Oil Windfalls: Who Will Benefit?* (2003). His earlier books include *The Petroleum Industry of the Soviet Union* (1961) and *Communist Trade in Oil and Gas* (1970).

Ebel holds an M.A. in international relations from the Maxwell School at Syracuse University and a B.S. in petroleum geology from Texas Tech. A graduate of the United States Air Force Russian language program, he served in Air Force intelligence during the Korean War. A widely acclaimed speaker, Ebel is a frequent commentator on national and international radio and television, and his views on energy issues appear regularly in U.S. newspapers and abroad.