

Russian Pipelines

Back to the Future?

Edward C. Chow

In Soviet mythology, the health of the country's economy, national power, and influence in the world are directly linked to the performance of its oil and gas industry. It is ironic, then, that peak oil and gas production in the U.S.S.R. was reached in the late 1980s just as economic collapse brought political disintegration. At the time, the Soviet Union was the biggest oil producer in the world, generating 12 million barrels per day, 11 million in Russia alone. Peak consumption at this time was over 8 million barrels per day in the Soviet Union and 5 million barrels per day in Russia. Considerable volumes of crude oil and petroleum products were exported by the Soviet Union, first to other countries in the Eastern Bloc, and then approximately 3 million barrels per day to those outside of the Comecon.¹ Oil and gas were part of the important barter trade in the Communist block and provided economic leverage for Russia in maintaining cohesion of the sphere. Moreover, they served as principal sources of hard currency and geopolitical assets in the Soviet Union's relationship with the outside world.

Given the remote location of many Russian production fields, pipelines have always played a critical role in transporting oil and gas. The construction of a vast system of pipelines was often cited as a crowning achievement of the Soviet oil and gas

Edward C. Chow is Visiting Scholar at the Carnegie Endowment for International Peace.

industry. They were designed to move production primarily within the Soviet Union and Eastern Europe and secondarily for export to the West.

Today's Russia inherited from the U.S.S.R. 46,000 km of these crude oil pipelines, 15,000 km of petroleum product pipelines, and 152,000 km of natural gas pipelines, almost all of which are still owned and controlled by the state. By contrast, the United States, with only 55 percent of Russia's land mass, has over four times more oil pipelines and two times more natural gas pipelines, almost none of which are owned or controlled by the government.²

The Russian oil industry privatized and modernized throughout the mid-1990s. A more competitive cost structure after the ruble collapse of 1998, improved property rights protection leading to greater reinvestment, and the introduction of Western technology and business practice allowed Russian oil production to recover from a low of 6 million barrels per day to nearly 8 million barrels per day. This is still far below the level achieved in the peak production year of 1988. Nevertheless, domestic oil consumption has dropped to only about 2½ million barrels per day with lower economic activity and better energy efficiency. As a result, much more oil is being exported today, and Russia has become the second largest oil exporter in the world after Saudi Arabia.³

Russian oil production is forecast to maintain this rapid growth while domestic consumption is expected to be relatively flat in spite of better economic performance. The existing pipeline system was, however, designed to move oil to now diminished domestic markets and less desirable markets in Eastern Europe. Thus, Russia is desperately in need of

new export facilities—large-diameter pipelines and deep-water marine terminals—to transport increasing volumes of oil to higher-value world markets in the large ocean-going tankers favored in international trade. Otherwise, both the performance of its petroleum industry, which has been the growth engine for the Russian economy in recent years, and its ambitions of playing a larger role in world oil trade will suffer.

In order to harness the potential of its energy sector and capture new markets, three key projects on the drawing board are being discussed widely. These include new pipelines to Murmansk, to Daqing in northeast China, and to Nakhodka on Russia's Pacific Coast. The way in which Russia handles these pipelines and its petroleum resources will signal the likely direction in which its uncertain economic future will unfold.

Multiple Pipelines: The Answer?

November 2002 saw an unprecedented display of unity by usually-competitive oligarchs. The four heads of Russia's major private oil companies announced an agreement to build a pipeline from their booming oilfields in West Siberia (and high-potential fields elsewhere) to the arctic port of Murmansk on the Barents Sea. From Murmansk, crude oil (and perhaps one day oil products and liquefied natural gas) would go to markets primarily in the United States and Europe. Only a year old and still unproven by rigorous commercial evaluation, the Murmansk pipeline proposal has already come to represent a number of trends in Russia, including its economic and political transition, and integration with the world.

Fundamentally, Murmansk is a milestone that challenges Russia to make crit-

ical decisions that will permanently shape the relationship between the state and the economy. For example, it raises questions of whether it is better to maintain strong elements of central planning and control by expending public effort and scarce financial resources to manage the alloca-

pany, marked the threshold of something new: the possible end of the post-Soviet scrap for assets, and a new era marked by business cooperation in which the whole is greater than sum of the parts, with a true and concrete partnership with the United States and Europe at the heart of

Russia has become the second largest oil exporter in the world after Saudi Arabia.

tion of economic resources (such as pipeline capacity or upstream petroleum investment), when the private sector is perfectly capable of doing so efficiently. Or should Russia leapfrog these vestiges of the Soviet era and adopt the proven international market economic model? Indeed, the public can entrust the private sector to conduct business while "controlling" the private sector through taxes, fair regulation, and publicly enacted legislation rather than through state ownership and intrusive state planning. Another issue is whether expanding production to seize greater oil market share is sustainable in the face of weak world demand growth and a disciplined OPEC—a possible recipe for confrontation. And finally, it is not clear that Russia's own public institutions are capable of transforming fast enough to live by the international model. Can they capture only the economic rent necessary to provide for the public welfare and defense while celebrating "useful greed" rather than ostracizing businessmen that make a lot of money?

Yet, that unique moment of cooperation in November 2002, followed by the merger of TNK and BP in Russia and the news of a potential merger between YukosSibneft and a major U.S. oil com-

Russia's key industry. From Murmansk to Nakhodka on the Pacific Coast, and Samara to Novorossiysk on the Black Sea, to the refineries of America, Europe, and Asia, and the hallways of decision-making in the Persian Gulf and OPEC headquarters in Vienna, people are waiting for President Putin's decisions on how to cross this threshold.

Central Planning: Last Throes or Retrenchment?

In October, Minister of Energy Yusufov made some economically-bizarre statements about the Far Eastern pipelines and Murmansk in calling for a Nakhodka pipeline before any consideration of either a Daqing pipeline or even a Murmansk pipeline, which, he claimed, could at best be considered simultaneously with one in Nakhodka. In the same interview, he claimed that "Murmansk will definitely develop...[but] we should do it in stages." He noted that the uncertainty over which pipeline would obtain political approval was the result of a "need to assess the balance of our supplies to the international and the domestic markets." Moreover, he claimed that a Japanese offer to commit to one million barrels per day of oil imports from Nakhodka to help finance the line is actually unnecessary, given the wide array of

potential customers in the Pacific Basin.⁴ Yet, the state-run oil pipeline monopoly Transneft excuses the delay of the Murmansk line by citing the need for the United States to commit to volume purchases from the pipeline even though any port serving the Atlantic basin would have an equally broad market at its disposal.

The Nakhodka proposal and the Murmansk initiative are two entirely different creatures—any state effort evaluating the merits of Nakhodka versus Daqing cannot provide a guide in comparing Nakhodka and Murmansk. For example, the private Russian companies have pledged publicly up to 3 million barrels per day of crude oil to the Murmansk line from their future growing production in West Siberia and the Timan Pechora region. No one has pledged any oil from anywhere to the Nakhodka line. Additionally, the private companies are now prepared to finance Murmansk, but everyone, even the government, agrees there are not enough resources in the eastern half of Russia to commercially guarantee throughput for the line to Nakhodka. And while five private sector companies are clamoring for Murmansk (with several more Russian and international ones in the wings), absolutely no private companies are yet backing Nakhodka.

This is all a rather sad reminder that Russia remains committed significantly to some degree of central planning. Indeed, these pronouncements come just as the Murmansk and Daqing pipelines were about to emerge as the first major post-Soviet examples of the state allowing the private energy companies to allocate their economic resources as the market dictates, while paying their dues through taxes and obedience to regulatory and legislative authority.

Japan Inc., the Manchurian Candidate, Eastern Supporters.

Japan has offered to finance the Nakhodka line up to \$5 billion, with another \$2 billion for exploration of East Siberian resources to fill the line. As justification for a willingness to commit such huge sums from a beleaguered Japanese economy in such an undeveloped idea, Japanese officials claim that diversification of supplies is paramount for the future of the Japanese economy.

But this argument is highly suspect, for a number of reasons. First, since Japan has a huge economy concentrated on relatively small islands it has already ideal diversity of supply—they can buy from anyone in the world by tanker. If Japan thinks Russian supplies from Nakhodka will somehow be lower priced than competing supplies arriving by ship, it should rethink the numbers: A simple net present value calculation coupled with reasonable assumptions about demand growth in Japan indicates that \$5 billion of Japanese money spent today on a pipeline would add about \$2/barrel to every imported barrel the country consumes for the next 40 years. Put another way, if it does not invest \$5 billion in Nakhodka, Japan could afford to pay a \$2/barrel premium for every barrel to give it a competitive edge against every other oil consumer on the market, and still come out even.

In fact, their prices would arguably be lower because Middle Eastern crude oil, otherwise destined for China, would be seeking other Asian markets if some Chinese demand were absorbed by Russian supplies. Moreover, Japanese taxpayers and oil consumers may also question the legitimacy of basing the energy security of the future Japanese economy on untested results of prelimi-

nary estimates of unknown and unproven resources in an unfamiliar and remote part of the world.

Finally, this Japanese initiative is completely out of synch with the history of the oil industry. It is oil supplies, not demand, that push pipelines into existence. The opposite is usually true for gas, but there is nothing fundamental about the Nakhodka pipeline, even geographic distance, that makes it any different from the hundreds of other pipelines that have preceded it in the history of oil.

With the economic rationale for Japanese support absent, suspicion naturally turns to geopolitical motivations, which suggests that Japan is pursuing a strategy of denial. First, undermining the pipeline to Daqing denies supply diversification to China, which has the fastest growing energy markets in the world. This makes the Chinese arguably more concerned with diversity of supply than Japan, which has both longstanding supply relationships and stagnant energy demand. Secondly, it would deny China a stronger economic and political relationship with Russia; a relationship the Japanese have watched warily as it has strengthened in recent years. Indeed, the Putin administration has marked considerably more state visits between Moscow and Beijing than between Moscow and Tokyo. Thirdly, it would deny Russian companies a near-term outlet for proven crude oil reserves and force them to work instead with Japanese companies to develop resources in the Russian east until enough volume exists for the Nakhodka line. This arrangement would compel Japanese entry into the Russian upstream where so many other international investors have failed.

Nevertheless, the fact remains that a pipeline from Angarsk to Nakhodka would be roughly twice the distance of a

pipeline from Angarsk to Daqing, cost twice as much to build as a consequence, and require double the throughput guarantee and proven oil reserves to be supported. If Japan chooses to subsidize a more expensive project and Russia accepts this offer, the Chinese strategic objective of diversifying its oil import sources can still be achieved *if* a pipeline is completed within a reasonable period of time since China can always buy Russian oil from Nakhodka. However, if Japan's objective were strategic denial, then prolonged delay from exploration in East Siberia and the arrangement of financing would suit its purposes just as well.

Ultimately, Russia's action should be driven by its own economic needs—not the motivations or machinations of foreign countries.

Reform in Russian Oil and Gas Industry: Is It Over?

As of this writing at the end of November 2003, it is difficult to assess the arrest on 25 October of the former head of Yukos, Mikhail Khodorkovsky. It is unclear whether his arrest, along with the campaign against his business associates and company since early summer, is a temporary phenomenon connected to the December Duma elections and the March 2004 presidential election or if they represent a fundamental shift in Russia's decade-long economic transition. It should be noted, however, that Yukos was the Russian company sponsoring an early pipeline to China and a major proponent of a privately-financed pipeline to Murmansk.

What is definitely transitory is the high global price of oil, which is presently above \$30 a barrel. High oil prices tend to cover up a multitude of economic sins in oil exporting coun

tries, and Russia is no exception. The positive lessons of productivity gains through the privatization of the oil industry itself are easily forgotten, but the memory of the admittedly flawed process of privatization that enriched a politically-favored few is well-remembered and examined selectively.

Reform of the chief remaining barriers to growth and economic efficiency in the Russian oil and gas industry—the state owned monopolies in major oil pipelines, Transneft, and in the production, transportation, and export of natural gas, Gazprom—has either stalled for the foreseeable future or been abandoned

with the state in the natural gas industry." And, "The gas pipeline system is a child of the Soviet Union, and only we are in a position to maintain it in working condition, even if you're talking about the sections that lie outside Russia."⁵

It is easy to understand the appeal to those who favor a centrally-planned command economy of government-controlled oil and gas pipelines. For one, it permits the government to control supply and direct investment flows not only in the pipeline sector, but also in the economy as a whole. It also maintains a system of differential pricing and preferential access to resources, allowing the govern-

Russia is not a substitute for the Persian Gulf in oil production. FIX THIS PQ

permanently. Both oil and gas pipeline sectors suffer from enormous investment deficits and operating inefficiencies. Meanwhile, the state is missing an opportunity to pursue restructuring and liberalization at a time of high world energy prices. When oil prices inevitably return to a more sustainable level of around \$20 per barrel, reform will be more difficult to execute and with lower asset value, be less beneficial to the state. As it stands, chronic under-investment in both sectors will persist to the detriment of oil and gas production and exports.

To compound matters, President Putin's statement to Chancellor Schroeder of Germany on the gas sector in their meeting on 9 October seems particularly ominous. Putin told Schroeder "We are not going to breakup Gazprom. The European Commission should have no illusion: they are going to be dealing

ment to hand out rewards and punishments for both economic and political reasons. Additionally, it is a more convenient tool of foreign policy than a pipeline system owned and operated by private owners governed by market competition and transparent regulations. Even the fact that non-transparent business operations often lead to rent seeking can be seen by some as beneficial to political institutions or well-positioned individuals.

It is, however, one thing to want to extract economic value for Russia from natural gas production in Central Asia and to better manage transit through countries like Ukraine; it is quite another to abandon the much larger economic benefits of capturing associated gas production from Russian oilfields and oil industry investment in the gas sector by not reforming the vertically integrated

monopoly of Gazprom. At a minimum, natural gas transportation by pipeline could be separated from production and regulated as a monopoly with fair tariffs and access rules.

There are equally gradual reforms that could also be enacted in the oil pipeline sector in order to mobilize private capital in much needed infrastructure investment. Partnership between government and domestic and international oil companies to build new trunk oil pipelines, along the lines of the Caspian Pipeline Consortium, can be encouraged. Instead this new model for Russian pipeline investment is perceived currently as an obstacle to government control and its success and future expansion are being threatened by the Russian government.

Thus, a Russia that is profiting from rapidly growing oil exports as a result of oil industry privatization in the 1990s and enjoying temporarily-high world oil prices may not see the benefits of continual economic reform and reduced state control-policies that could enable the transition to a full market economy integrated with the international system. However, as proud successor to the Soviet Union, all Mr. Putin has to do is draw lessons from the Soviet economy of 1988, when Russian oil production was a third higher than it is now, when price distortions and false market signals led to wasteful consumption and nonproductive

investment, and when the Soviet system soon fell under the weight of economic inefficiency and corruption.

Conclusion. Russia's long term economic significance lies in the integration of its population of 145 million into the world market and its potential as a progressive force in the economic integration of its neighbors from the former Soviet Union into the global system. With 5 to 6 percent of the world's proven oil reserves and a production /reserve ratio of about 20 years, Russia is not a substitute for the Persian Gulf when it comes to oil production, but enjoys better economic options than those countries thanks to its agricultural and industrial potential. Development of Russia's larger natural gas resources will require greater openness to foreign direct investment due to the high investment costs and assured market access necessary for the remote gas projects around the world with which it will be competing.

Other countries, especially the United States, Germany, Britain, China, and Japan, will have to decide for themselves the meaning and value of building an energy relationship with Russia. In doing so, there is no better touchstone than Russia's pipeline policy at home and abroad. The path it takes, be it a statist or market-oriented, will tell us much about the economic future Russia has chosen.

NOTES

1 All production and consumption statistics for this piece can be accessed online through the online B.P. Energy Reserves and Energy Consumption Review at <http://www.bp.com/centres/energy/index.asp>.

2 Central Intelligence Agency, *The World Factbook 2003* (New York: Brassey, 2003), accessed online at <http://www.cia.gov/cia/publications/factbook>.

3 B.P. Energy Reserves and Energy Consumption Review, 2003, online.

4 Transcript of Minister Yusufov, ITAR-TASS

online; see also Bayan Rahman and Andrew Jack, "Japan Offers Russia \$7 Billion to Build Oil Pipe," on *Rusnet News* (13 October 2003), available online at http://www.rusnet.nl/news/2003/10/14/business_economics_02_3532.shtml.

5 ITAR-TASS online (9 October 2003), available at <http://www.itar-tass.com>.

The author would like to acknowledge Geoffrey Lyon, of the United States Department of Energy in Moscow, who was a font of information in the preparation of this article.

AD