American Enterprise Institute for Public Policy Research

Russian Outlook

Spring 2006

Russia's Oil: Natural Abundance and Political Shortages

By Leon Aron

With 6 to 10 percent of the world's known oil reserves, Russia pumped on average 9.4 million barrels a day and exported around 7 million last year—second only to Saudi Arabia and occasionally outstripping the desert kingdom in monthly production. In the past six years, the high prices for crude oil have added at least 15 percent to the country's GDP, brought billions of dollars to the treasury, boosted personal incomes by almost one-third, and significantly enhanced Russia's position in the world.

Capitalizing on these developments, President Vladimir Putin reportedly intends to place "energy security" at the center of the meeting of the seven leading capitalist democracies and Russia in St. Petersburg this July—the first G-8 summit to be hosted by a Russian leader.

There is little doubt that Russia will remain one of the world's leading exporters for many years. Yet, unless arrested or reversed, several structural tendencies may significantly jeopardize Russia's ability to meet the world's rapidly growing demand for oil.

The most troubling areas are transportation, taxation, domestic consumption, investments, and especially ownership. In the end, all of these issues are linked to the ideological change in economic policy over the past four years and thus are unlikely to be addressed effectively until the country alters its political direction.

Leon Aron (laron@aei.org) is a resident scholar and the director of Russian Studies at AEI.

Transportation

Without exception, all of Russia's largest deposits of hydrocarbons lie in often extremely inhospitable terrain thousands of miles away from terminals from which they can reach the key consumers. The state-owned monopoly, Transneft, operates over 29,000 miles of pipelines.[1] Yet despite its vast reach, the pipeline system is increasingly inadequate and constitutes the most obvious obstacle to a stable and increasing export capacity.

Today, of the 7 million barrels per day (b/d) that Russia produces for export, only about 4 million barrels can be transported via the pipelines, and the rest are shipped by a far more expensive, slow, and cumbersome means of rail.[2] As a result, between 1999 and 2003 the average cost of the transportation has doubled from approximately $5 per ton (approximately 7.35 barrels) to around $10 per ton.[3]

The bottlenecks are multiplying. By 2007, Russia's production for export may exceed its shipping capacity by between 220 and 294 million barrels per year.[4] The aging of the Russian pipelines—one-third are over thirty years old, and another third are older than twenty years—adds urgency to the need for a massive modernization, new construction, and increased efficiency.

In response to such a need, in 2002–2003 a consortium of the top Russian private oil companies, led by YUKOS, Sibneft, TNK, and Surgutneftegaz, lobbied the government to allow them to build Russia's first private pipeline that would carry an estimated 1 million b/d over 960 miles

from the main fields in western Siberia across the White Sea to the port of Murmansk on the Barents Sea for export primarily to the United States.

Because of the Gulf Stream, Murmansk is Russia's only northern port that does not freeze in winter. It is deep enough for the largest tankers (deadweight of over 200,000 tons), making the cost of transportation to the United States competitive with that from the Middle East. The pipeline was not going to cost Russia's treasury a single ruble: estimated by the members of the consortium to cost between $3.5 to $4.5 billion, the project was to going to be financed entirely by private investment.

Although the Russian oil majors had offered for Transneft to be the new pipeline's sole manager, with other companies (state-owned as well as private) having unhindered access to the route, after some hesitation and conflicting signals—and despite high-level lobbying from the U.S. government—the Kremlin decided against a private pipeline. The decision—among the first signs of changing economic policy—amounted to an effective veto of private construction of pipelines in Russia and the affirmation of the Transneft monopoly.

Yet apart from the usual and well-founded concerns of waste and corruption associated with total state-ownership of a vast and vital sector of the economy, the choice of Transneft as the sole operator and owner of the Russian pipelines raises serious questions about the availability of resources commensurate with the required volume of new construction, on the one hand, and the state monopoly's ability to deploy these resources most effectively by building infrastructure where the markets need it most.

Despite the revenue windfall of the past five years, Transneft is far short of the funds for approximately 4,000 miles of new pipelines the monopoly said it intended to lay down in the next six years. The price of such construction is estimated at $24 billion, but given the increasing cost of maintenance of the aging system, Transneft is not likely to be able invest more than $600 million a year.[5] It can try and raise the money on the financial markets, but if the past world experience serves, banks and investment funds tend to be leery of the length of time, complexity, and risks associated with pipeline construction. Thus Transneft is unlikely to raise more than $2 to $2.5 billion, while the traditional capitalization of such projects—by oil companies themselves in exchange for a share in the ownership—appears to be ruled out by the western Siberia-Murmansk ban.[6]

There is little doubt that Russia will remain one of the world's leading exporters for many years. Yet, unless arrested or reversed, several structural tendencies may significantly jeopardize Russia's ability to meet the world's rapidly growing demand for oil.

Eastern Siberia–Pacific Ocean

Those skeptical of Transneft's ability to effectively provide for the needed export capacities point to the firm's top project: the 2,500-mile pipeline from Taishet in eastern Siberia to the port of Nakhodka in the Perevoznaya Bay on the Pacific Ocean. While direct access to Asian (especially Chinese, Japanese, and South Korean) markets and to the West Coast of the United States holds enormous promise, the venture today appears to be a giant boondoggle-in-the-making: built in the wrong place, carrying a huge price tag, plagued by slow construction as well as environmental and legal concerns, and in the end, likely to make the oil almost too expensive to be profitable.

Projected to carry 588 million barrels a year, the pipeline will cost between $11.5 billion (by the government's estimate) and $15 billion (by that of independent Russian analysts).[7] The span of the pipeline will make the oil very expensive by world standards: between $6.40 a barrel (Transneft's estimate) and $9.80 (independent experts).[8] Transneft wants the costs to be borne by Russian taxpayers and has lobbied the government for tax relief until the pipeline becomes profitable.

Although Prime Minister Mikhail Fradkov "signed off" on the project in December 2004, the construction is yet to start, making very unlikely the planned completion in 2008 of the first 1,500-mile segment to the railroad station of Skovorodino from where slightly over one-third of the oil is to be taken by rail to China. (The Chinese oil monopoly, China National Petroleum Corporation, or CNPC, has reportedly offered Transneft a *liwu*, or "gift," of $400 million, ostensibly to conduct a "feasibility study" of the link to China.)[9]

In addition to the cost and the length of construction, the eastern Siberia–Pacific Ocean route has already

caused serious environmental and legal concerns. With millions of barrels of oil carried over hundreds of miles of the unique tundra and taiga preserves in an earthquake-prone area, the pipeline will come within half a mile of Lake Baikal, the world's largest natural freshwater reservoir, designated a World Heritage Site by UNESCO.[10] The route will terminate in the Perevoznaya Bay, which Russia's government's own environmental watchdog, the Federal Service for Environmental, Technological and Atomic Inspection, deems too shallow to accommodate an oil terminal and thus endangering to "land and sea nature reservers."[11]

The project may become legally complicated as well, since the license for developing the largest oilfields of eastern Siberia (Yurubcheno-Takomskoe) belongs to YUKOS, a company that is being systematically destroyed by the authorities for the political transgressions of its founder and former CEO, Mikhail Khodorkovsky, who is serving an eight-year prison sentence in eastern Siberia, not far from the pipeline's proposed route. Few in Russia doubt that the authorities will succeed in taking the license away from YUKOS in the same shameless exercise of unchecked executive power they had displayed in its prosecution of YUKOS and Khodorkovsky. Yet YUKOS may seek recourse in European and U.S. courts, delaying foreign funding and making the designated customers apprehensive of purchasing the oil that may well turn out to be stolen.

Yet the plan's biggest flaw is Transneft's apparent unawareness of the shortage of the oil the pipeline is designed to deliver. There is simply not enough oil in eastern Siberia to justify so hugely expensive an undertaking. Even with the all of the currently known major oilfields in eastern Siberia coming fully "on stream" by 2015, production will be no more than 287 million barrels per year—or less than half of the planned amount.[12] To make up for the shortfall, Transneft is likely to fill the pipeline by "borrowing" from the oilfields of western Siberia. Such strategy will add 1,250 miles to the route's length and may bring the cost per barrel to as high as $12.[13] (In addition, the largest producer of oil in the eastern part of western Siberia, Tomskneft, still belongs to YUKOS.)

Domestic Consumption

Another structural impediment to Russian oil exports is the way energy is consumed domestically. The badly outdated and, in many cases, nearly worn-out thirty- to forty-year-old equipment, continuing state subsidies, and price controls result in highly inefficient use of fuel—gas, coal, and oil. (Fuel oil, also known as "residual fuel oil," or "mazut," accounts for 20 percent of the Russian energy consumption. Last year, 56.4 million tons of fuel oil were produced: 12 percent of the total Russian oil production of 470.2 million tons, or 3.455 billion barrels.)[14] Russia's consumption of "oil equivalent" per dollar of GDP is estimated to be 2.5 to 5 times higher than it is in more developed capitalist nations.[15]

To attract investment needed to upgrade the country's electricity production—which along with gasoline accounts for most of domestic oil consumption—an ambitious and elaborate reform was designed between 2000 and 2003 by the CEO of the electricity monopoly RAO-UES, Anatoly Chubais, and approved by the parliament after a long and detailed examination. The largest privatization of electricity in history (analyzed in these pages several years ago),[16] the UES restructuring was to include the breakup and sale of the monopoly's power generating plants, a gradual price deregulation, and eventually the emergence of private, competing generator wholesale and retail companies.

Along with other key structural reforms—health care, utilities, housing, and education—the privatization of electricity was gradually frozen by a Kremlin bent on recapturing the economy's "commanding heights" after President Putin's reelection in 2004. The state continues to monopolize both the generation and the distribution of electricity, with no more than 15 percent of energy (mostly gasoline fuel) sold at market prices. In the absence of price incentives to conserve energy and to invest, the squandering of Russian electricity and oil continues unabated, greatly aided by obsolete technology. To sustain the current rate of economic growth, by 2015 Russia will have to increase oil production for domestic consumption by 955 million barrels—or reduce exports.[17]

Taxes, Foreign Participation, and Ownership

In addition to encouraging waste by precluding large-scale privatization, price liberalization, and modernization of domestic energy production, distribution, and consumption, the ideologically driven statist economic policy provides powerful disincentives for "green field" investments in exploration and development of new oil deposits vital to the continuing growth of exports.

Stable high prices tend to provide an economic incentive to funding exploration, but taxes in Russia today

virtually negate this stimulus. In addition to paying export duties and a "mineral resources" tax, Russian oil companies are subject to a 90 percent tax on the profits when the per-barrel price of the oil they export exceeds $25. (Russia's dominant brand, "Urals," which is "heavier" and more "sour" than the top "light sweet" oil because of the higher content of non-hydrocarbons and serum in the oil, fetched on the average around $50 per barrel in 2005.)

Furthermore, major foreign oil companies, generally eager to put up money for exploration in exchange for a share of oil exports, are effectively barred from the largest and therefore most profitable fields. A "Law on the Subsoil" (*Zakon o nedrakh*), which was introduced in the Duma last year but has not yet to passed, bars companies without Russian majority ownership from the fields containing over 1 billion or more barrels of oil deposits.

Once the law is adopted, the largest remaining privately owned Russian oil company, TNK-BP (which is 50 percent owned by the British Petroleum) may be forced either to reduce the BP ownership or give up on the development of the largest eastern Siberian fields, the Verkhnechonskoe, which could produce between 29 and 37 million barrels a year. (TNK-BP owns a majority of shares in the company that holds the field's development license.)

Private Oil Companies: A Brilliant Success

Yet the greatest impediment to maintaining the present level of investment and growth appears to be the graduate change in the ownership from private oil companies to state-owned or "state-affiliated."

There was a time when the editorial pages of elite U.S. newspapers were overflowing with righteous indignation about the privatization of the Soviet oil industry. Together with other "crown" jewels of the Soviet industry, the oil wealth was said to be taken away from the oh-so-innocent and benign Soviet state and given to the nasty bunch soon to be known as the "oligarchs" at "knockdown" prices. "Looted" was a cliché of choice to describe the fate of the privatized Soviet oil companies, and David Ignatius of the *Washington Post* and William Safire of the *New York Times* fulminated especially frequently and voluminously against the "looters."[18]

The future "oligarchs" were certainly no choir boys. They were hungry, extremely ambitious, and often unscrupulous men in their early thirties. There were no rules to play by: as in every great revolution, the state was weak, new civic institutions virtually nonexistent, and the way to the riches littered with bribing the state officials strong-arming the competition, riding roughshod over minority shareholders. The privatization was not fair by any measure, even the most lenient ones. (For instance, Mikhail Khodorkovsky's financial group Menatep purchased 33 percent of the then state-owned YUKOS at an auction that it itself ran through a front company.)[19]

Yet the real choice at the time was not between the ownership by these rough men on the one hand and the abstract "state" or the "clean" investors on the other, as imagined by U.S. columnists. The "state," in reality, stood for corrupt, incompetent, and thieving Soviet-era bureaucrats who had run the oil production virtually into the ground. (Throughout the 1980s, there was serious talk among the experts about the Soviet Union's and then Russia's becoming net importers of oil). After sixty years during which private entrepreneurship had been a criminal offense, no one in Russia had enough money to be considered a clean investor, and foreigners were hardly breaking down the doors to buy Russian state oil companies at a "fair price." Instead, they prudently stayed away from spending hundreds of millions of dollars on assets in a country that was teetering on the brink of communist restoration; with a sullen workforce which had not been paid in months, if not years; no independent courts to enforce contracts; declining output; and aging, often broken-down equipment.

The actual alternatives were the continuing de facto ownership of the oil industry by the bureaucrats or its transfer to the often unsavory but energetic entrepreneurs willing to risk millions of dollars—in the case of Mikhail Khodorkovsky, $159 million—they "loaned" to the state in 1995 in exchange for the shares of major state-owned enterprises. (By the conditions of the loans-for-shares auctions, in the case of the state's widely expected default, the owners of the collateral could not assume possession until after the 1996 presidential election, which the Communist Party candidate was, at the time, widely expected to win.)

When the Russian privatizers—led by Anatoly Chubais and protected by Boris Yeltsin against the Communist-led "people's patriots" in the Duma—chose the future "oligarchs," critics decried the imminent "stripping of the assets." Chubais countered that one does not steal from oneself. He hoped that instead the new private owners would try to maximize their personal profit by maximizing production.

Chubais has proven right. When Menatep took over YUKOS in 1996, salaries had not been paid for four months, output was declining, and the company was on the verge of bankruptcy. Four years later, YUKOS became the first Russian company to pay dividends to its nearly 60,000 shareholders: the ruble equivalent of $300 million in 2000, $500 million in 2001, and $700 million in 2002.

Between 2000 and 2004, YUKOS doubled oil production.[20] After it reported quarterly financial statements in accordance with U.S. Generally Accepted Accounting Principles (GAAP) in 2001 and had its annual reports audited by PricewaterhouseCoopers one year later, the company's capitalization increased twenty-fold.[21] YUKOS's top executives boasted that in the late 1990s and early 2000s the company's taxes accounted for 5 percent of the national budget. YUKOS began giving millions of dollars to charity, launched a nationwide Internet education project, and provided stipends for employees' children who were getting good grades in colleges.

YUKOS's brilliant success epitomized the larger story of Russia's privatized oil industry. Between 1999 and 2004, private sector production grew 47 percent.[22] According to the Russian official statistical agency, Rosstat, of the $41.4 billion in the net profits between 1999 and 2004, the private oil companies reinvested $36.4 billion—or 88 percent—in exploration, drilling, and modern technology.[23] During the same period, state-owned companies increased production by 14 percent,[24] with the largest state-owned company, Rosneft, essentially stagnant, its output barely holding its own from year to year.[25]

Nevertheless, last year Rosneft (whose chairman is Putin's chief of staff and confidant Igor Sechin) went on a shopping spree, buying several private oil companies. Its biggest acquisition was YUKOS's main oil-producing component, Yuganskneftegaz, which was seized by the state for alleged tax evasion and sold at a rigged auction to a front company, which was bought a few days later by Rosneft. (Reportedly, Rosneft's main source of the capital was a consortium of Chinese banks that put up a $6-billion "loan" against future oil deliveries to China.)

The success of the Russian oil boom is increasingly threatened by the government's economic policy of quasi-nationalization, which amounts to a short-term redistribution of oil wealth and asset control instead of the crucially needed long-term strategy of creating new riches and new resources.

In the same year, another star private producer, Sibneft, was bought by Gazprom, the giant natural gas monopoly and by far the most opaque and corrupt of major Russian firms. Gazprom's production has grown at no more than 2 to 3 percent over the past five years, during which the price of gas skyrocketed. The natural gas behemoth has not invested in a major "green field" development in years. (It is widely believed in Moscow that the fate of YUKOS and Mikhail Khodorkovsky had a lot to do with Sibneft's principal owners' willingness to sell.)

Thus some of the most productive assets of the Russian oil industry have been transferred from the most transparent and efficient companies (YUKOS and Sibneft) to the least transparent and least efficient: Rosneft and Gazprom. The state's share of oil production increased from less than 10 percent to 30 percent in the last two years. After expanding on the average 8 percent per year in the previous seven years, Russian oil production grew only by 2.4 percent in 2005.

Stagnation and High Risks?

Driven by private investment and high prices, the 1999–2004 Russian oil boom has greatly profited the country and the world. Yet the success is increasingly threatened by the government's economic policy of quasi-nationalization, which amounts to a short-term redistribution of oil wealth and asset control, instead of the crucially needed long-term strategy of creating new riches and new resources.

"The era of quick recovery and success of the Russian oil sector, led by private initiative and openness is over," concluded Vladimir Milov, a leading independent Russian expert on trends in the energy market. "It has been replaced by a new era of state domination, non-transparency, high risks and stagnation."[26] One cannot but agree with this pessimistic conclusion—certainly as a tendency if not yet the reality "on the ground."

It is this disturbing possibility that ought to be a key item in the in the discussion of the Russian contribution to "energy security," which President Vladimir Putin is so keen on making the centerpiece of the G-8 summit. Yet precisely because this alarming trend has been a

result of the policy set at the very top of the Kremlin administration, such a discussion is not likely to occur at this or other meetings of the G-8 until after 2009—the year after the Russian presidential election.

The author is grateful to research assistant Igor Khrestin and editor Scott R. Palmer for helping in editing, researching, and producing this essay.

Notes

1. Isabel Gorst, "The Energy Dimension in Russian Global Strategy" (speech, James A. Baker III Institute for Public Policy, Rice University, Houston, Texas, October 2004), 1.

2. Energy Information Administration, *Country Analysis Brief–Russia* (Washington, D.C.: U.S. Department of Energy, January 2006), 4, available at www.eia.doe.gov/emeu/cabs/Russia/Oil_exports.html.

3. "O vozmozhnykh variantakh razvitiya infrastruktury po eksportu nefti v Rossii" [On possible options of the development of export of oil in Russia] (paper, Tsentr Strategicheskikh Razrabotok [The Center for Strategic Research], Moscow, October 2004), available at www.energypolicy.ru/files/PresentationPipelines201022004.pdf.

4. Ibid.

5. Ibid.

6. Vladimir Milov and Ivan Selivakhin, "Problemy energeticheskoy politiki" [Problems of energy policy] (working paper no. 4, Moscow Carnegie Center, Russia, 2005), 18; and "O vozmozhnykh variantakh."

7. Peter Finn, "Russia Approves Divisive Pipeline Plan," *Washington Post*, March 7, 2006; "On Possible Options of the Development"; and Vladimir Milov and Ivan Selivakhin, "Problemy energeticheskoy politiki," 20.

8. Vladimir Milov and Ivan Selivakhin, "Problemy energeticheskoy politiki," 19.

9. Valeria Korchagina, "China Offers $400M for Oil Pipeline," *Moscow Times*, March 23, 2006.

10. Peter Finn, "Russia Approves Divisive Pipeline Plan."

11. Stephen Boykewich, "Transneft's Pipeline Faces More Scrutiny," *Moscow Times*, March 27, 2006.

12. Vladimir Milov and Ivan Selivakhin, "Problemy energeticheskoy politiki," 19, table 2.

13. Ibid.

14. International Energy Agency, "Share of Total Primary Energy Supply in 2003. Russia," *Key World Energy Statistics* (Paris: International Energy Agency, 2005), available at www.iea.org/statist/index.htm (accessed April 7, 2005); and Edgewater Group Ltd. *Crude Oil and Oil Products* (Chicago, IL: Edgewater Group, 2005), available at www.edgewatergroup.org/en/products.php (accessed April 7, 2005).

15. Vladimir Milov and Ivan Selivakhin, "Problemy energeticheskoy politiki," 6.

16. Leon Aron, "Privatizing Russia's Electricity," *Russian Outlook* (Summer 2003), available at www.aei.org/publication17983/.

17. Vladimir Milov and Ivan Selivakhin, "Problemy energeticheskoy politiki," 9.

18. See, for example, David Ignatius, "Who Robbed Russia," *Washington Post*, August 25, 1999; and William Safire, "Welcome to Kremlingate," *New York Times*, September 9, 1999.

19. Leon Aron, "The YUKOS" Affair," *Russian Outlook* (Fall 2003): 2, available at www.aei.org/publication19368/.

20. Vitaly Tsiplyaev, "Kampaniya protiv biznesa—eto kampaniya protiv Rossii" [The campaign against business is a campaign against Russia], interview with Andrei Illarionov (an advisor to the president of Russia), *Argumenty I Fakty*, November 30, 2005, 6.

21. Ibid.

22. "Neftianoe gosudarstvo" [The Petrostate], interview with Vladimir Milov, *Novaya Gazeta*, December 22, 2005, available at http://2005.novayagazeta.ru/nomer/2005/96n/n96n-s15.shtml.

23. As quoted by Vladimir Milov, "Russian Energy Policy in a Broader Context," (presentation, U.S.-Russia Working Group luncheon at the American Enterprise Institute, Washington, D.C., March 16, 2006).

24. Ibid.

25. Ibid.

26. Vladimir Milov, "Russia Ill-Equipped to Lead on Global Security," *Financial Times*, January 24, 2006, available at http://news.ft.com/cms/s/eeb4cda8-8d0e-11da-9daf-0000779e2340.html.