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Agreements from Another Era

Production Sharing Agreements in Putin's Russia, 2000-2007

Timothy Fenton Krysiek

Oxford Institute for Energy Studies

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Timothy Krysiak
Cambridge, Massachusetts
November 2007

Abbreviations & Acronyms

AO	autonomous okrug
bcm	billion cubic meters (gas)
bpd	barrels per day (oil)
CNPC	Chinese National Petroleum Company
IOC	international oil company
IRR	internal rate of return
LNG	liquid natural gas
MNR	Ministry of Natural Resources
MIE	Ministry of Industry and Energy
NAO	Nenets Autonomous Okrug
PA	Piltun-Astokhskoye (oil and gas fields)
PSA	production sharing agreement
RFE	Russian Far East
Rosprirodnadzor	Russian Environmental Oversight Agency
Rostekhnadzor	Russian Technical Oversight Agency
SEIC	Sakhalin Energy Investment Corporation
SODECO	Sakhalin Oil and Gas Development Company
tcm	trillion cubic meters (gas)

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1. Introduction

Every so often a company signs an agreement so advantageous it becomes part of corporate lore and is analyzed in business school textbooks for years to come. In 1994, a consortium of foreign oil companies known as the Sakhalin Energy Investment Corporation (SEIC) believed it had signed just such a deal with the Russian government for the development rights to the Sakhalin-2 oil and gas fields in the Russian Far East (RFE). SEIC's former CEO Steven McVeigh claimed in a Harvard Business School case study that the production sharing agreement (PSA) for Sakhalin-2 included the 'best PSA terms that you will ever get in Russia'.¹ Twelve years later, Russian President Vladimir Putin summoned the CEOs of SEIC's remaining partners—Shell, Mitsui and Mitsubishi—to the Kremlin and forced them to sell a controlling stake in Sakhalin-2 to Gazprom, Russia's state-owned gas company.

The changing balance of power in corporate-government relations over Sakhalin-2 indicates how the dynamics of the Russian energy industry have changed in the past fifteen years. In the 1990s, Russia was weak and oil prices were low. In order to stimulate foreign investment in geographically isolated and technologically complex hydrocarbon projects, the Russian government signed three PSAs with major international oil companies (IOCs) between 1994 and 1995. The French company Total manages the Kharyaga PSA in the Timan-Pechora basin and the U.S. corporation ExxonMobil operates the Sakhalin-1 PSA in the RFE. The Anglo-Dutch conglomerate Royal Dutch/Shell led the Sakhalin-2 project until Gazprom joined the PSA in late 2006. Although the PSA projects vary in size, cost and production, they rank among the largest foreign investments in Russia and each is strategically significant in its own right.

Under Putin, the Russian government has reasserted its control over the commanding heights of the economy by restricting private and foreign investment in strategic sectors, particularly energy. The Putin administration's actions towards the PSA operators are often cited as evidence of Russia's resurgent resource nationalism. However, an examination of the corporate-government relations surrounding Kharyaga, Sakhalin-1 and Sakhalin-2 from 2000 through September 2007 reveals important differences in the government's approach towards each project. How can we explain this variation in behaviour? Is there a strategic purpose behind the Kremlin's actions towards the projects or are they simply a series of tactical manoeuvres?

The Putin administration's behaviour towards Kharyaga, Sakhalin-1 and Sakhalin-2 can be explained by a combination of operational, consortium, regional, industrial, technological, legal and geopolitical factors unique to each PSA project. The government has refrained from aggressively intervening against Kharyaga or Sakhalin-1 because forces within the Kremlin have yet to reach a consensus on the strategic direction of either project. In the case of Sakhalin-2, the Putin administration established a long-term vision for the project in accordance with its regional and strategic interests. The government then took systematic and decisive action to alter the project's management and ownership structure and bring it under the Kremlin's control.

¹ Rawl Abdelai, 'Journey to Sakhalin: Royal Dutch/Shell in Russia', *Harvard Business School*, 24 March 2004, 8.

The existing literature on Russian energy policy describes the PSA projects within the context of industrial dynamics and corporate strategy or analyzes the projects in isolation.² Until now there has been no consolidated, comparative study of the Putin administration's behaviour towards Kharyaga, Sakhalin-1 and Sakhalin-2. Identifying and analyzing the factors that have shaped the government's approach towards these strategically important projects provides insight into the Putin administration's energy strategy, the competitive dynamics of the Russian energy industry and the political risk to foreign investments in Russian hydrocarbons.

1.1 What Is a Production Sharing Agreement?

A production sharing agreement is an internationally binding commercial contract between an investor and a state. A PSA defines the conditions for the exploration and development of natural resources from a specific area over a designated period of time. According to the terms of a standard oil and gas PSA, the state retains ownership of the hydrocarbons and the investors bear responsibility for extracting the resource. The investors typically receive the majority of early revenue from the project, known as cost oil, as compensation for the cost of exploration and development. Once the project reaches the cost recovery stage, subsequent revenue, known as profit oil, is shared between the investors and the state according to a pre-negotiated formula.

PSAs were originally devised to protect weak states from the IOCs. Today, however, PSAs are generally used to protect foreign energy companies from the political risks associated with upstream investment in unstable and developing countries. By establishing the terms and conditions of exploration and development for the life of the project, PSAs are designed to protect foreign companies from risks such as arbitrary tax legislation, unpredictable regulation and rent seeking by government officials. PSAs exist throughout the world, but in recent years they have achieved special notoriety in Russia.

1.2 A Brief History of PSAs in Russia

In the 1990s, President Boris Yeltsin and various Russian politicians and business leaders sought foreign investment in the oil and gas industry. In December 1993, Yeltsin issued a presidential decree establishing the basic regulatory framework for PSAs. The Sakhalin-2 PSA was signed shortly thereafter, in June 1994. In 1995, the Duma passed legislation granting PSAs the status of legally binding contracts and establishing the basic provisions of the agreements in accordance with international standards. The Kharyaga and Sakhalin-1 agreements were signed later that year. In 1999, the Duma passed legislation harmonising the 1995 law on PSAs with existing Russian laws in an attempt to attract additional international investment in the flagging Russian oil and gas industries, but no additional PSAs were signed with IOCs.³

Under Putin, the Russian government has reasserted state control over the strategically important energy sector. The steady rise in global oil and gas prices and Russia's increasing

² Michael Bradshaw, 'Sakhalin-II in the Firing Line', *Russian Analytical Digest* 8 (2006); John D. Grace, *Russian Oil Supply: Performance and Prospects* (Oxford: Oxford University Press for the Oxford Institute for Energy Studies, 2005); Jonathan P. Stern, *The Future of Russian Gas and Gazprom* (Oxford: Oxford University Press for the Oxford Institute for Energy Studies, 2005).

³ Paul Chaisty, *Legislative Politics and Economic Power in Russia* (Basingstoke, England: Palgrave Macmillan in Association with St. Antony's College, 2006), 174-77.

hydrocarbon production have rejuvenated the federation's economy and enhanced its geopolitical power. The Putin administration has taken bold steps to bring privately owned and operated energy assets under its control. In recent years, the Russian government has systematically destroyed Yukos, built up state-owned oil and gas champions Rosneft and Gazprom and restricted foreign investment in Russian hydrocarbon projects. In 2003, Putin signed legislation that greatly reduced the number of oil and gas fields eligible for development under PSAs and adjusted the federal tax code to make future PSAs less attractive to foreign investors. The Kharyaga, Sakhalin-1 and Sakhalin-2 were unaffected by this wave of legislation, but Putin's actions made it clear that PSAs were no longer a viable method of foreign investment in Russian oil and gas. During Putin's second term, the Russian government increased regulatory pressure on foreign-owned energy assets, including the Caspian Pipeline Consortium, the Kovykta gas field and the three PSA projects.

1.3 Methodology and Sources

In order to analyze and explain the Putin administration's behaviour towards the PSA projects, this paper presents case studies of Kharyaga, Sakhalin-1 and Sakhalin-2. The PSAs governing these projects were each signed in the mid-1990s under the Yeltsin administration. Until December 2006, a foreign partner served as the operator of each project and all three are currently producing oil or gas. Kurmangazy, the fourth PSA in Russian territory, is not included in this study. The Kurmangazy oil field is located on the Caspian maritime border between Russia and Kazakhstan; it is being developed by state-owned firms Rosneft and KazMunaiGaz under the terms of a 50/50 PSA signed in 2002. Given Kurmangazy's timing, ownership structure and early stage of development, it is more useful to compare Kharyaga, Sakhalin-1 and Sakhalin-2 when analyzing the Putin administration's approach to the PSAs.

Each case study presents a brief historical overview of the project and describes the relations between the Russian government and PSA consortiums during the first and second Putin administrations. The following factors are considered when analyzing the Kremlin's behaviour towards each project:

- *Operational factors* – the project's management, development strategy, cost estimates, level of production and export markets
- *Consortium factors* – the relative strength of the investment consortium and the companies participating in the PSA; the presence or lack of a major Russian partner in the project
- *Regional factors* – the project's regional impact and the Russian government's interests in that region
- *Domestic industrial factors* – the relations between private and state-owned Russian energy companies as they relate to the project
- *Technological factors* – the presence of advanced technology in the project and the prospect of technology transfer
- *Legal factors* – the duration, structure and implications of the PSA itself
- *Geopolitical factors* – the importance of the project in the context of the Russian government's geostrategy and foreign policy

A great deal of commercial information, including the full texts of the PSAs themselves, is confidential and many Russian government documents related to energy issues are classified. The following case studies of Kharyaga, Sakhalin-1 and Sakhalin-2 are based upon information from a diverse array of sources, including reports from the international business media, energy companies, governments, consultancies, private intelligence firms and NGOs and articles from business, law and political science journals. Information obtained through interviews with Russian oil and gas experts and international energy analysts is incorporated throughout the case studies. Citations of Russian language sources are transliterated according to the U.S. Library of Congress system and oil and gas reserve and production figures are standardized using the conversion factors found in the 2007 BP Statistical Review of World Energy.

1.4 Explaining Variation in Government Behaviour

The Russian government's behaviour towards Kharyaga, Sakhalin-1 and Sakhalin-2 is based upon a combination of factors unique to each project. In the case of Kharyaga, the Kremlin's strategic indecision over its regional development strategy and its failure to intervene definitively in the regional rivalry between LUKoil and Rosneft has prevented it from adopting a long-term development plan for the field. Without a clear vision for the project, the government's behaviour towards the Total-led consortium has been incoherent and indecisive. The Putin administration's regulation of Sakhalin-1 has been steady but not overly antagonistic. The strength, competence and composition of the Sakhalin-1 consortium and the stalemate between Rosneft and Gazprom over the nature and direction of the project's future gas exports explain the government's reluctance to alter the project's management or ownership structure. In the case of Sakhalin-2, the government's decision to insert Gazprom forcibly into the consortium and revise the financial arrangements surrounding the PSA can be explained through several factors: Shell's weak competitive position, the legal structure of the PSA itself, the prospect of technology transfer and the Kremlin's geopolitical calculations in northeast Asia. This perfect storm of factors explains the government's bold and deliberate intervention against Sakhalin-2.

The Putin administration's behaviour towards Kharyaga and Sakhalin-1 has been less intrusive because the Putin administration has not yet reached a consensus on the strategic matters surrounding the projects, namely regional development issues or disputes between Russian energy companies. In the case of Sakhalin-2, the Russian government had several clear and compelling reasons to intervene in the project and alter its management and ownership structure. There appears to have been little or no discord within the Kremlin over the fate of the Sakhalin-2 project and it was clear that Gazprom would be the Russian company representing the state in the PSA. The Putin administration's ability to determine a long-term direction for Sakhalin-2 in accordance with its regional and strategic interests explains why the government took such decisive action against the project.

2. Kharyaga: Strategic Indecision in the Arctic

2.1 The Kharyaga PSA

Soviet geologists first discovered the Kharyaginskoye oil field (commonly known as Kharyaga) in 1970 and the field has been producing oil since 1986. Kharyaga is located in the Timan-Pechora basin on the border of Nenets Autonomous Okrug (NAO) and the Komi Republic. In 1995, the Russian government signed a PSA with a multinational consortium including Total (50%), Norsk Hydro (40%) and the Nenets Oil Company (10%) to develop the northern section of the Kharyaga field. The 29-year PSA agreement came into effect in 1999. The Total company manages the project and is responsible for relations with the Russian government. The Kharyaga PSA stipulates that Total and Norsk Hydro must each eventually sell 10 per cent of their shares in the project to a Russian company. In 2001, the Minister of Economic Development and Trade, German Gref, signed an appendix to the Kharyaga PSA designating LUKoil as the project's future Russian partner. LUKoil is the region's leading producer and is developing the southern section of Kharyaga as well as several adjacent fields. So far, LUKoil has refrained from formally joining the PSA, citing concerns over Kharyaga's operations, profitability and regional infrastructure. In response, the Ministry of Industry and Energy (MIE) has offered a tender for the 20 per cent share in Kharyaga to undisclosed Russian oil companies.⁴

The Kharyaga field contains approximately 400 million barrels of oil. The consortium plans to invest \$16.7 billion in Kharyaga over the life of the PSA, including \$9.4 billion worth of contracts for Russian firms.⁵ The project is forecast to produce 70,000 barrels per day (bpd), but in 2007 output from Kharyaga has averaged a mere 22,000 bpd, most of which is shipped to ports in Germany and the Baltic states. According to Total's development plan for Kharyaga, the field's production will remain at approximately 20,000 bpd through 2010 due to a lack of regional export capacity. Despite its low output, Kharyaga reached the cost recovery stage of the PSA in February 2006. By the end of 2006, the Russian Federation had received a total of \$169.1 million in revenue from Kharyaga, including \$107 million in profit oil, \$41 million in profit tax and \$21.1 million in royalty payments.⁶

Total is unwilling to accelerate the field's development until the Russian government addresses the need for additional export pipelines in Timan-Pechora. Federal and local officials have recognized this problem and are negotiating with Transneft, the Russian state-owned pipeline monopoly, to construct a 465-kilometre, 240,000 bpd-capacity pipeline from Kharyaga to the port of Indiga on the Barents Sea.⁷ In June 2007, former Transneft CEO Semyon Vainshtok reaffirmed his commitment to the pipeline and confirmed that the project is in the final stage of government approval.⁸ Vainshtok has indicated that once the Kharyaga-Indiga pipeline is complete, high-quality oil from Timan-Pechora could be exported through the new

⁴ Anatoly Medetsky, 'Rosneft and LUKoil in Running for Kharyaga', *The Moscow Times*, 21 February 2007.

⁵ 'PSA Agreements to Yield Billions of Dollars for Russia', *RIA Novosti*, 1 November 2006.

⁶ 'Kharyaga Spending Approved', *International Oil Daily*, 11 April 2007.

⁷ 'Barents Sea Becoming More Important for Nenets AO', *Barents Observer*, 19 April 2007.

⁸ 'Russia Prepares for Oil Pipeline to Barents Sea', *Barents Observer*, 12 June 2007.

pipeline, rather than being mixed with the low-quality Urals blend pumped through the rest of the Transneft system.⁹ Once additional export capacity is available, the Kharyaga field should be able to meet its production target of 70,000 bpd.

2.2 Relations between the Russian Government and Total

Under Putin, the Russian government has intensified its oversight of Kharyaga and consistently criticized the consortium for the project's steadily rising costs and low level of oil production. Serious disputes between Total and the government began when Russian tax officials refused to approve the project's 2001-02 cost reports. The government claimed that all revenue from the PSA was profit and therefore could not be classified as recoverable costs. Federal officials served Total with a \$48.5 million tax bill. Total responded by filing suit against Russia in international arbitration court in Stockholm. In 2003, the government and Total reached an out-of-court settlement and Total withdrew its suit in exchange for approval of its Kharyaga expenses.¹⁰

In 2006, the Ministry of Natural Resources (MNR) conducted a review of Total's compliance with the PSA. The MNR condemned the Kharyaga project producing only one-third of the 65,000 bpd quota stipulated in the PSA. The government also criticized Total for failing to introduce the latest in petroleum engineering technology to the Kharyaga field and blasted the French company for not selling a higher percentage of the project's gas production to domestic customers. According to the government, Total has vented or flared 60 per cent of the gas produced at Kharyaga in recent years rather than distributing it to local markets. The MNR forwarded its criticisms of the Kharyaga project to the Agency for Subsoil Use to determine if the consortium's development license should be revoked.¹¹ In order to withdraw the consortium's license, however, the Russian government would have been obliged to cancel the entire Kharyaga PSA, an action that almost certainly would have resulted in unpredictable international arbitration. Instead, the MNR launched inspections into Kharyaga through Rosprirodnadzor, its environmental oversight agency. In March 2007, Rosprirodnadzor announced it would not recommend revoking the consortium's development licenses for environmental infractions. Rostekhnadzor, the government's technical oversight body, presented Total with a fine of just \$1,150 for minor safety violations.¹²

Amidst compliance audits, environmental reviews and safety inspections by the MNR, Rosprirodnadzor and Rostekhnadzor, the MIE made several key decisions in favor of the Total-led consortium. In February 2007, the MIE approved Kharyaga's \$146.5 million operating budget for the upcoming year. In April 2007, the MIE completed a financial audit of the project and affirmed Total's claim that the \$199 million the consortium invested in the project in 2006

⁹ 'Transneft Demands Guarantees for Arctic Pipeline', *Alexander's Gas & Oil Connections*, 27 September 2006.

¹⁰ Nelli Sharushkina and Ruba Husari, 'Moscow Ready to Make Peace on Kharyaga, as Total Reaffirms Commitment to Projects', *International Oil Daily*, 18 November 2003.

¹¹ Alex Nicholson, 'Russia Threatens to Withdraw Oil Company's Arctic License', *The Washington Post*, 21 September 2006.

¹² 'Kharyaga Licenses Approved', *International Oil Daily*, 30 March 2007.

was indeed cost recoverable.¹³ Then, in July, the MIE increased Total's 2007 budget by 12 per cent, to \$164 million.¹⁴

2.3 Explaining the Government's Behaviour towards Kharyaga

How can we explain the Putin administration's incoherent and relatively reserved behaviour towards Kharyaga given its systematic and aggressive interventions against other foreign-owned energy projects in Russia, such as Sakhalin-2 and Kovykta? The government's approach towards the Kharyaga project can be explained by a combination of regional and industrial factors. The Putin administration's development strategy for Arctic Russia remains unclear; it is torn between the need to encourage private investment in oil and gas projects in the greater Barents region and the desire to increase its control over this future hydrocarbon province.¹⁵ Meanwhile, Russia's two largest oil companies, Rosneft and LUKoil, are competing for influence and resources in the Timan-Pechora basin. The Putin administration's indecision over the nature of regional development and its failure to intervene definitively in the LUKoil-Rosneft rivalry has prevented it from choosing a strategic direction for Kharyaga. As a result, the government has taken no serious action against the project or attempted to alter its management structure.

2.4 The Kremlin's Arctic Conundrum: Balancing Control and Development

The Arctic contains approximately one-quarter of the world's untapped hydrocarbon reserves and is widely regarded as one of the last great oil and gas producing regions on the planet. Within Arctic Russia, the greater Barents region is considered one of the federation's most important future oil and gas provinces. So far, significant hydrocarbon reserves have been discovered in the Barents, Pechora and Kara Seas and in the Timan-Pechora basin. In the coming decades, oil and gas production from these areas is expected to grow as production declines in traditional Russian hydrocarbon regions, such as the Volga and Urals. Altogether, the greater Barents region contains 18.4 per cent of Russia's oil reserves and 7.6 per cent of its gas. Total regional reserves of crude oil, gas and condensate are estimated at 53.3 billion barrels of oil equivalent.¹⁶ Despite the region's great promise, the Timan-Pechora basin, which includes the Nenets AO and parts of the Archangelsk Region and the Komi Republic, is the only part of Barents Russia currently producing oil and gas.

The cost of developing both offshore and onshore hydrocarbon reserves in the Russian Arctic is particularly high. Tapping the oil and gas reserves of the greater Barents region alone will require total capital investments of approximately \$65 billion: \$5 billion for geological surveys, \$50 billion for exploration and development and \$10 billion for vital infrastructure, such as railways, export pipelines and port facilities.¹⁷ Merely exporting oil and gas from developed

¹³ 'Kharyaga Spending Approved' *International Oil Daily*, 11 April 2007.

¹⁴ 'Russia: Cost Increased for Kharyaga Field', *Stratfor*, 12 July 2007.

¹⁵ The greater Barents Sea region or Barents Russia refers to five subjects of the Russian Federation: Murmansk Oblast, Arkhangelsk Oblast, the Republic of Karelia, the Komi Republic and the Nenets Autonomous Okrug.

¹⁶ Ilya Klebanov, 'A Region of Strategic Importance', *Oil of Russia*, no. 1 (2007).

¹⁷ Juri Tjuljubaev, 'Russian Oil Transit—Way to the North', *Barents Observer*, 14 April 2004.

onshore fields in the NAO and Timan-Pechora has been highly problematic. Until Transneft builds the pipeline from Kharyaga to Indiga, regional oil production will remain low. Much of the gas produced in Timan-Pechora is simply vented or flared due to the region's poor infrastructure. The cost and complexity of Arctic oil and gas development forced the Putin administration to renege on its vow to develop the Shotkman offshore gas field without foreign partners. In July 2007, Gazprom granted Total a 25 per cent stake in the venture and offered StatoilHydro a 24 per cent share in October. If the Russian government hopes to develop the hydrocarbon resources in the Barents region effectively, it must encourage private investment. Kharyaga is the premier foreign-owned energy project in the region. Excessive aggression towards the Kharyaga consortium could deter prospective investors.

Initially, the Putin administration encouraged investment in Barents Russia through a series of regional development programmes but this strategy produced disappointing results. In response, the government gave up on offering closed tenders for regional projects and opened the bidding to IOCs. Given the Putin administration's aggressive behaviour towards privately owned and -operated energy assets throughout Russia, IOCs interested in investing in the Barents region prefer to form partnerships with Russian companies to reduce their exposure to political risk. However, many Russian oil companies, particularly small and independent firms, have been reluctant to participate in regional projects due to the high development costs and the logistical obstacles associated with Arctic hydrocarbon development.¹⁸

LUKoil is one of the few private companies that has invested heavily in the Barents region and formed joint ventures with IOCs. From 2000 to 2006, the Russian company spent \$4.6 billion in regional projects and it plans to invest an additional \$15.5 billion in Barents Russia between 2007 and 2016. LUKoil's investment has been instrumental in increasing regional oil output. Between 2000 and 2006, LUKoil's production in Barents Russia increased from 175,000 bpd to 300,000 bpd; this figure is expected to reach 460,000 bpd by 2012. Naryanmarneftegaz, LUKoil's local joint venture with ConocoPhillips, is building critical infrastructure in Timan-Pechora, including the Nenets port of Varandey, which will soon have an export capacity of 240,000 bpd.¹⁹

In order for Barents Russia to realize its hydrocarbon potential, the Russian government must encourage private and foreign oil companies such as LUKoil and ConocoPhillips to invest in the region. However, factions within the Kremlin are intent upon increasing government control over the Barents region and promoting the interests of the state-owned national oil champion, Rosneft, at the expense of LUKoil and other private investors. The Putin administration has yet to determine its optimal balance between foreign investment and state control in Barents Russia. As a result of this indecision over the nature of regional development, the government has refrained from taking any severe regulatory action against the Kharyaga or attempting to manipulate the project's management or ownership structure.

¹⁸ Bjorn Brunstad, *Big Oil Playground, Russian Bear Preserve or European Periphery? The Russian Barents Sea Region towards 2015* (Delft, The Netherlands: Elburon, 2004), 44-47.

¹⁹ Klebanov, 'A Region of Strategic Importance'.

2.5 The LUKoil-Rosneft Rivalry in the Nenets Autonomous Okrug

During Putin's second term, the Russian government has taken a more assertive role in local politics in the oil-rich Nenets AO. Nenets contains 26 billion barrels of oil and gas reserves, but produces an average of just 350,000 bpd. Output is expected to reach 500,000-600,000 bpd by 2020.²⁰ In the past, Nenets' governors have been particularly effective at extracting concessions from oil companies operating in the okrug. Total and Norsk Hydro included the Nenets Oil Company in the Kharyaga PSA in exchange for the support of local authorities; the local firm is not responsible for financing its share of the project. According to the terms of the PSA, modifications to the agreement require the approval of both federal and local governments. This clause allowed former Nenets governor Vladimir Butov to extract concessions from LUKoil in exchange for ratifying the 2001 appendix to the PSA authorizing LUKoil to join the Kharyaga consortium.²¹ Under the Putin administration, federal officials have attempted to curb the power of local officials and to subordinate the NAO to the neighbouring Arkhangelsk Region. Political developments in Nenets betray the region's economic importance. Nenets has emerged as a focal point in the rivalry between Rosneft and LUKoil for control of energy assets in the Timan-Pechora basin.

The 2006 scandal surrounding former Nenets governor Alexei Barinov illustrates the chaotic circumstances surrounding the Kharyaga project—the tumultuous nature of local politics and business, contentious core-periphery relations and the ongoing regional rivalry between LUKoil and Rosneft. In May 2006, federal prosecutors arrested Barinov on charges that he embezzled \$700,000 from a geological prospecting company that he directed in 1999. Barinov's arrest is widely believed to have been politically motivated; the former governor was a key player in local oil politics and a critic of the Kremlin and Rosneft. Barinov has close ties to LUKoil and served as chief executive of one of the company's local subsidiaries, Arkhangelskgeoldobycha, until 2003. During Barinov's tenure as Nenets governor, local officials hailed LUKoil's contributions to the local budget while repeatedly accusing Rosneft and its local subsidiary Severnaya Neft of renegeing on their financial obligations to the region. Barinov himself filed a suit against Severnaya Neft alleging that the company owes the Nenets AO \$33 million under terms of a social responsibility agreement.²²

According to local officials, when federal prosecutors raided Barinov's office in 2006 they not only confiscated documents related to his alleged crimes, but also seized information about LUKoil's operations in the region. In the Timan-Pechora basin, LUKoil still maintains an advantage over Rosneft. The privately held company boasts 5.5 billion barrels of recoverable reserves in the region, while its state-owned rival controls only 650 million barrels. Rosneft is intent on improving its position in the region. The state-owned firm and its Kremlin allies clearly had the most to gain from Barinov's removal.²³

²⁰ 'Russia: Moscow's Profitable Anti-Corruption Drive', *Stratfor*, 25 May 2006.

²¹ Nelli Sharushkina, 'Lukoil Finally Joins Total's Kharyaga Project', *International Oil Daily*, 24 October 2002.

²² Arkady Ostrovskiy, 'Russia's Last Popularly Elected Governor Arrested', *The Financial Times*, 25 May 2006.

²³ Jeremy Page, 'Kremlin Ignores Democracy to Snatch Oil from the Wilderness', *The Times*, 8 July 2006.

Until his arrest, Barinov held the distinction of being the last elected governor in the Russian Federation. He easily defeated the Kremlin-backed candidate and former Rosneft executive Alexander Shmakov in February 2005, just before Putin began appointing regional governors. Barinov's victory over Shmakov was a blow to Rosneft's strategy of installing loyal politicians in regions where it operates. It was also a setback for the Putin administration as it attempted to install politically loyal governors in key provinces.²⁴ In June 2006, Putin formally suspended the imprisoned Barinov from office and appointed Valery Potapenko governor of the NAO. Before entering local politics, Potapenko served in the FSB directorate in St Petersburg. Given his professional background, Potapenko is generally regarded as a Rosneft ally and member of the *siloviki* faction.²⁵ During his brief tenure as Nenets governor, Potapenko has adopted a more conciliatory tone towards Rosneft's regional subsidiaries than Barinov. Potapenko has agreed to restructure Severnaya Neft's debt to the Nenets AO and delay its payments.²⁶

In addition to publicly criticizing and suing Rosneft's local subsidiaries, Barinov strongly opposed a federal restructuring plan that called for the Arkhangelsk Region to absorb the Nenets AO and take a greater share of its oil revenue. Shortly after his appointment as governor, Potapenko signed a revenue sharing agreement with Arkhangelsk governor Nikolay Kiselyov in accordance with the 2006 Federal Budget code. The accord stipulates that the NAO will pay its southern neighbour \$64 million in 2007 and 2008.²⁷ This accord represents a 200 per cent increase over previous payments from the Nenets AO to the Arkhangelsk Region. Federal attempts to integrate and eventually merge Nenets and Arkhangelsk are indicative of the Putin administration's strategy of integrating small but prosperous autonomous regions into larger, poorer regions with predominantly ethnic-Russian populations.²⁸

The prospect of a Nenets-Arkhangelsk merger has implications for the regional rivalry between LUKoil and Rosneft. Rosneft has invested heavily in ports and railways in Arkhangelsk as part of its attempt to create a unified export system for its oil fields in Timan-Pechora.²⁹ As liberal forces within the Putin administration attempt to facilitate much needed private investment in the energy-rich Barents region, Rosneft and its allies in the Kremlin are working to break LUKoil's hold over the Nenets AO and increase their control over Timan-Pechora. The Putin administration has not yet reached a consensus on a regional development strategy for the Barents region, nor has it decisively intervened in the regional rivalry between LUKoil and Rosneft. The strategic indecision in the Kremlin over the nature of regional development and the

²⁴ Catherine Belton, 'Protests Grow Over Barinov's Arrest', *The Moscow Times*, 26 May 2006.

²⁵ The *siloviki* is an influential network of government officials and businessmen led by Igor Sechin, Sergei Ivanov and Nikolai Patrushev. The faction supports the formation of a powerful Russian state, a strong military and security apparatus, centrally directed economic development and an assertive Russian foreign policy. Ian Bremmer and Samuel Charap, 'The *Siloviki* in Putin's Russia: Who They Are and What They Want', *The Washington Quarterly* 30, no. 1, 83-92 (2006-07).

²⁶ 'Nenets AO from Barinov to Potapenko', *Barents Observer*, 10 August 2006.

²⁷ 'Arkhangelsk and Nenets AO Reached Agreement', *Barents Observer*, 16 November 2006.

²⁸ Igor Dmitiev, 'Federatsiia Neravnykx Brakov', *Moskovskie Novosti*, 23 March 2007.

²⁹ Tjuljubaev, 'Russian Oil Transit—Way to the North'.

outcome of the LUKoil-Rosneft rivalry has prevented the Putin administration from deciding upon a long-term direction for Kharyaga.

2.6 Who Will Join Kharyaga?

Under the terms of the 2001 amendment to the Kharyaga PSA, the Russian government may select a domestic partner to assume a 20 per cent stake in the project. The uncertainty over which Russian company will ultimately join the PSA has added to the ambiguity surrounding the project and forestalled severe regulatory action against Kharyaga. It is in the interests of the Putin administration to insert a Russian partner into the PSA because Kharyaga may evolve into a flagship regional project. The inclusion of a Russian firm would give the Kremlin greater influence over the consortium. Initially, the Putin administration selected LUKoil to participate in the Kharyaga PSA. So far, however, LUKoil has refrained from exercising its option to join Kharyaga, expressing reservations over the project's high development costs, technological complexity and relatively low production. LUKoil and its President Vagit Alekperov generally act in accordance with the Kremlin's wishes. But in exchange for joining Kharyaga, LUKoil is demanding managerial and technical changes to the project. In November 2006, LUKoil First Executive Vice President Ravil Maganov revealed that the company would be satisfied with a 20 per cent stake in the Kharyaga PSA if changes were made to the consortium's decision-making process. According to some reports, LUKoil has refused a 20 per cent share in Kharyaga because it is holding out for a controlling share of the project.³⁰ LUKoil is also pushing Total to add a sulphur-cleaning unit to the project so that gas from Kharyaga could be exported through its local pipeline.³¹ Of course, LUKoil may simply be delaying its entry into the PSA while Total and Norsk Hydro work through the more challenging and expensive aspects of the project's development.

Whatever the reasons behind LUKoil's Kharyaga strategy, the private company may have pressed its advantage too far. The MIE responded to LUKoil's failure to officially join the Kharyaga PSA by offering the 20 per cent stake in the project to undisclosed Russian companies. According to industry analysts, Rosneft has emerged as a prime candidate to acquire the shares.³² Even Alekperov has tacitly acknowledged that another Russian company may soon join Kharyaga. In a March 2007 statement, he warned that if another company joins the PSA, he will seek compensation for the LUKoil-owned wells at Kharyaga that the consortium is currently operating.³³ If Rosneft joins the PSA and the Putin administration can coordinate a long-term direction for Kharyaga in accordance with its other strategic considerations in the region, then government regulators may be more likely to take decisive action against the project.

Transneft's decision to construct a new export pipeline and Gazprom's selection of Total as a minority partner in the Shtokman project will give the Russian government greater leverage over the Kharyaga consortium. Once the pipeline is complete, the Kremlin will expect a rapid

³⁰ 'Total to Share Kharyaginskoye License with LUKoil', *Kommersant*, 22 December 2006.

³¹ 'Northern Exposure: Lukoil Is Still To Decide On Kharyaga', *Nefte Compass*, 23 November 2006.

³² Medetsky, 'Rosneft and LUKoil in Running for Kharyaga', *The Moscow Times*, 21 February 2007

³³ 'Lukoil Wants Reimbursement For Kharyaga Wells', *Nefte Compass*, 1 March 2007.

increase in oil output from Kharyaga. Total will no longer be able to blame low production on insufficient regional export capacity. With 3.7 trillion cubic meters (tcm) of gas, Shtokman is one of the largest offshore gas fields in the world and important addition to Total's upstream portfolio. Total's participation in Shtokman has increased the Russian government's leverage over the French company. The Putin administration may use this influence to extract concessions from Total over Kharyaga.³⁴ So far, however, the Kremlin's indecision over its development strategy for the Barents region and the uncertain balance of power between LUKoil and Rosneft in Timan-Pechora has prevented any significant government intervention against the Kharyaga consortium.

³⁴ 'Russia: Sakhalin-1 and Kharyaga PSAs Are Safe, For Now', *Oxford Analytica*, 8 August 2007.

3. Sakhalin-1: Caught between Two Champions

3.1 The Sakhalin-1 PSA

The Sakhalin-1 project is located on the northern tip of Sakhalin Island in the RFE. In 1995, the Russian government and an international consortium of oil companies signed a 40-year PSA for Sakhalin-1. Exxon holds a 30 per cent share in Sakhalin-1 and, as project operator, is responsible for relations with the Russian government. Other partners include Rosneft (20%), India's ONGC Videsh (20%) and Sakhalin Oil and Gas Development Company (SODECO), a consortium of Japanese investors (30%). Rosneft's 20 per cent share in Sakhalin-1 is technically divided between its subsidiaries Sakhalinmorneftegaz (11.5%) and RN Astra (8.5%). Altogether, Sakhalin-1 includes three fields—Chayvo, Odoptu and Arkutun-Dagi—with combined reserves of 2.3 billion barrels of oil and 485 billion cubic meters (bcm) of natural gas. During the first phase of the Sakhalin-1 project, the consortium began extracting oil from the Chayvo field, built an onshore processing facility and constructed a 140-mile export pipeline. The pipeline runs west to east, from the project's wells on the Sea of Okhotsk, across the northern tip of Sakhalin Island and under the Tatar Strait to the DeKastri oil terminal in Khabarovsk Krai.

Sakhalin-1 is currently producing oil for export and gas for the domestic market. Crude production at Chayvo began in October 2005, just two months behind Exxon's development schedule. In February 2007, Sakhalin-1 reached its oil production capacity of 250,000 bpd. So far, most of the oil produced at Sakhalin-1 has been exported to markets in East and South Asia. Although it is predominantly an oil project, there is some gas production associated with Sakhalin-1. Most of this gas is currently pumped back into Chayvo to maintain the field's pressure, but some is piped to local gas markets at a discounted price. On average, Sakhalin-1 produces 1.7 million cubic meters (mcm) of gas per day for the domestic market. In order to meet increased demand during the winter of 2006-07, Sakhalin-1 more than doubled its daily gas production to 3.8 mcm. Under the terms of a 2004 agreement with the Russian government, the Sakhalin-1 consortium is required to export between 2 to 3 bcm of gas per year to Khabarovsk by pipeline in 2007. In the coming years, increasing gas production at Sakhalin-1 will make it possible for the consortium to export excess gas production to foreign markets. By 2009, annual gas output from Sakhalin-1 is projected to reach 12 bcm, with domestic consumers purchasing as much as 3 bcm per year. The remaining 9 bcm of annual gas production will be sold in international markets as export routes become available.³⁵ With the Chayvo field fully operational and the prospect of significant gas exports just over the horizon, the government's share of tax and royalty revenue from Sakhalin-1 will steadily increase. Altogether, the project is expected to yield \$52.2 billion for the Russian government by the time the PSA expires in 2054.³⁶

³⁵ Carter Tellinghuisen and Barbara Shook, 'Exxon, China Sign Basic Deal on Pipeline of Sakhalin Gas', *Oil Daily*, 24 October 2006.

³⁶ 'Gazprom Seeks Exclusive Purchase of Sakhalin I Gas Output', *RIA Novosti*, 28 April 2007.

3.2 Relations between the Russian Government and Exxon

Under Putin, relations between the Russian government and the Sakhalin-1 consortium have been relatively stable, especially considering the tumultuous relations between the Kremlin and Shell over the nearby Sakhalin-2 project. The MIE and the MNR have adopted similar regulatory approaches to Sakhalin-1. They have demonstrated their ability to delay the project but have stopped short of interfering with its management or ownership structure. In October 2006, Exxon announced that the total cost of the Sakhalin-1 project had risen from \$12.8 billion to \$17.8 billion due to external inflationary pressures on labour and materials and the weak U.S. dollar. The Russian Audit Chamber initially rejected Exxon's increased cost estimate and criticized the consortium for failing to diversify its revenue stream by marketing gas effectively from Sakhalin-1. The MIE eventually approved Exxon's revised cost estimate in April 2007, but then the ministry accused the Sakhalin-1 consortium of over-reporting its 2004 and 2005 project expenses by \$362 million.³⁷ In 2006, the MNR's Rostekhnadzor found safety violations at the DeKastri terminal and forced Exxon to delay Sakhalin-1's operations by a few months. As a result, Sakhalin-1 reached its peak oil production of 250,000 bpd in February 2007, not in October 2006 as originally scheduled. A new round of environmental inspections continues at Sakhalin-1. In March 2007, Oleg Mitvol, the deputy head of Rosprirodnadzor, began a review of the project's compliance with Russian environmental regulations.³⁸

So far, the most publicized dispute between the Russian government and Exxon has been their disagreement over the development rights to three oil fields adjacent to Sakhalin-1. Exxon discovered these fields and claims that gives it the right to develop them under the terms of the Sakhalin-1 PSA. The government has consistently rejected Exxon's demands to include the disputed fields. The 2003 law on PSAs bars Exxon from developing the fields under a separate PSA. Both Exxon and Rosneft claim that if the consortium is not permitted to develop these fields, Sakhalin-1 will be unable to maintain its current level of oil production beyond the medium term.³⁹ However, the fields have since been included in the Sakhalin-3 project, led by Rosneft.

The other major point of contention between Russian authorities and Exxon over Sakhalin-1 has been the consortium's failure to develop the project's gas reserves to the satisfaction of the Putin administration. In recent years, Exxon and its partners have struggled to do something constructive with the project's associated gas production. So far, gas produced at Sakhalin-1 has either been reinjected into the Chayvo field to increase future oil production or sold to Russian customers at below-market prices. In 2006, 377 mcm of gas, approximately one-third of Sakhalin-1's annual gas production, was flared. In April 2007, government authorities insisted that Exxon develop a marketing strategy for the project's gas so that less is wasted.⁴⁰

³⁷ Stephen Bierman, 'Russia Approved Increased Sakhalin-1 Budget', *International Oil Daily*, 16 April 2007 2007.

³⁸ Stephen Bierman, 'Sakhalin-1 Environmental Probe Begins', *International Oil Daily*, 2 April 2007.

³⁹ 'Output from Exxon Russia Field to Decline from 2008', *Reuters*, 9 October 2006.

⁴⁰ Andrea R. Mihailescu, 'Moscow Approves \$5B Increase at Sakhalin-1', *UPI Energy*, 18 April 2007.

The form and direction of future gas exports from Sakhalin-1 have emerged as the pivotal issues in corporate-government relations over the project.

3.3 Explaining the Government's Behaviour towards Sakhalin-1

During Putin's second term, the Russian government has delayed Sakhalin-1's operations by several months, denied Exxon's request to expand the PSA and forced the consortium to develop a new marketing strategy for the project's gas. So far, the Kremlin has refrained from taking harsher measures against Sakhalin-1 such as revoking the project's development licenses or manipulating the consortium's ownership. Given the government's relatively mild approach towards Kharyaga and its hostile treatment of Sakhalin-2, what factors explain the Putin administration's behaviour towards Sakhalin-1? The strength of the Sakhalin-1 consortium and the impasse over the form and direction of the project's future gas exports explain the government's firm but not overly hostile approach to the PSA project.

3.4 Strong in Sakhalin: Exxon and Rosneft

The strength and competence of the Sakhalin-1 consortium partly explain why the Russian government has refrained from aggressive intervention in the project. Exxon is the largest IOC in the world and it has proved to be a competent operator of Sakhalin-1. Despite strong inflationary pressures and harsh operating conditions, the Exxon-led project at Sakhalin-1 has proceeded more or less on schedule and at an acceptable cost. Aware of Shell's difficulties with cost overruns at Sakhalin-2, Exxon has endeavoured to minimize costs at Sakhalin-1. According to Exxon officials, the consortium has kept project expenditures within 10 per cent of cost estimates.⁴¹ Unlike Total and Shell, Exxon has maintained cordial relations with the Putin administration. With the exception of the dispute over the Sakhalin-3 blocks, Exxon has had no disagreements with the Russian government over major energy projects in recent years. Given Exxon's responsible stewardship of Sakhalin-1, the Putin administration may be reluctant to challenge the company. Exxon recently walked away from projects in Venezuela in response to strong-arm tactics by President Hugo Chavez. If a similar situation were to occur over Sakhalin-1, it could severely delay the project. Exxon is the only partner in the Sakhalin-1 consortium with the business and technical competence to manage the project.⁴²

With the Chayvo field producing oil at rate of 250,000 bpd, Sakhalin-1 is adding crucial supply to a tight Asian oil market, earning revenue for the consortium members and generating tax and royalty payments for the Russian government. As revenues from Sakhalin-1 increase and accumulate, the project will advance towards the cost recovery stage of the PSA, at which point Sakhalin-1 will begin generating profit oil for the state. As gas production from Sakhalin-1 rises, the project will play an increasingly important role in the government's regional gasification efforts. By the end of 2007, Sakhalin-1 is scheduled to produce 2-3 bcm of gas for the local Russian market. Furthermore, the project is expected to meet Khabarovsk's demand for gas until 2025.⁴³ The Kremlin must weigh any action against Sakhalin-1 with the project's

⁴¹ Gregory White and Jeffrey Ball, 'Exxon Strives to Stay on Russia's Good Side', *The Wall Street Journal*, 7 May 2007.

⁴² 'Global Market Brief: Lightning Will Not Strike Twice on Sakhalin', *Stratfor*, 29 March 2007.

⁴³ Project Information, Sakhalin-1 Project Web Site.

contributions to the federal budget and regional development. If future government inspections interrupt Sakhalin-1's operations, they will also interrupt the flow of tax revenue and cheap gas from northern Sakhalin Island.

Unlike the Kharyaga or Sakhalin-2 PSAs, the Sakhalin-1 consortium has included a major Russian partner since its inception. Rosneft's presence effectively guarantees the Russian government a voice in the consortium's decisions and ensures that the Putin administration is well informed on the project's development. Likewise, the consortium stands to benefit from Rosneft's numerous political allies within the Kremlin. According to Rosneft CFO Peter O'Brien, Rosneft and Exxon enjoy a productive working relationship that exemplifies the advantages of cooperation between national oil companies and IOCs.⁴⁴ At this point, Rosneft appears to have little interest in disrupting Sakhalin-1's management or ownership structure. The project is an important part in the company's upstream portfolio and is responsible for much of its recent production growth.⁴⁵ The strength, competence and composition of the Sakhalin-1 consortium in part explain why the Russian government has refrained from aggressively intervening in the project.

3.5 The Rosneft-Gazprom Rivalry and the Future of Sakhalin-1's Gas

As in the case of Kharyaga, the dynamics of the Russian energy industry are an important in explaining the government's behaviour towards Sakhalin-1. The pivotal issue in corporate-government relations over Sakhalin-1 is the future of the project's gas exports. By 2009, Sakhalin-1 is expected to export approximately 9 bcm of gas per year. Rosneft and Gazprom, their allies in the Kremlin and the members of the Sakhalin-1 consortium have yet to reach a consensus on the form or direction of the project's gas exports. The members of the Sakhalin-1 consortium are technically exempt from Gazprom's official monopoly on Russian gas exports. Under the terms of the PSA, they retain the right to export their share of the project's gas production independently. So far, countervailing forces within the Kremlin and the consortium have prevented disagreements over the future of Sakhalin-1's gas exports from reaching a breaking point. With the long-term direction of the project still unclear, the government has refrained from intervening in Sakhalin-1 decisively, by altering its managerial structure or forcing a reorganization of its ownership.

Rosneft and Exxon would like to assert their legal right to export gas from Sakhalin-1 independently through a pipeline to China, rather than selling it to Gazprom. Piping gas to China would allow Rosneft to increase its presence in the downstream gas business and access China's rapidly growing energy market.⁴⁶ Exxon shares Rosneft's desire to construct a gas pipeline to China. Under the right cost conditions, such a pipeline could increase Sakhalin-1's profitability without substantially raising the cost of the project. This is an important consideration for Exxon, given its self-imposed spending restraints.⁴⁷ Building a gas pipeline from Sakhalin-1 eastwards across the Tatar Strait to Khabarovsk and China would be far less expensive than

⁴⁴ Peter O'Brien, comments at the World National Oil Companies Congress, 26 April 2007.

⁴⁵ Lucian Kim, 'Rosneft Plans 12% Oil Output Surge Next Year, Aided by Sakhalin', *Bloomberg.com*, 25 December 2006.

⁴⁶ O'Brien, comments at the World National Oil Companies Congress.

⁴⁷ Jeff Gosmano, 'Cash Question Still Looms Over Exxon Mobil', *Oil Daily*, 9 March 2007.

constructing a southbound pipeline running over the Sakhalin Mountains to the Sakhalin-2 liquid natural gas (LNG) plant on the island's southern coast. In October 2006, Exxon signed a preliminary agreement to sell the excess gas from Sakhalin-1 to the Chinese National Petroleum Company (CNPC) and declared its intention to move forwards with sales contracts.⁴⁸

Gazprom is determined to preserve its dominance over Russian gas exports and has attempted to prevent the Sakhalin-1 consortium from marketing its gas independently. In April 2007, Gazprom's Deputy Chairman, Alexander Medvedev, responded to the preliminary agreement between Exxon and CNPC by announcing Gazprom's intention to purchase all the gas from Sakhalin-1.⁴⁹ While it is clear that Gazprom wishes to control the project's gas, its strategy for bringing the gas to market has changed over the past year. Gazprom was negotiating with Exxon as late as October 2006 over piping gas from Sakhalin-1 through Khabarovsk to northeastern China. However, in a meeting later that month with Khabarovsk governor Viktor Ishayev, President Putin declared that regional gasification efforts should take priority over the construction of export routes to foreign markets. In response, Ishayev abandoned his plans for an 8 bcm-capacity gas pipeline from Khabarovsk to China.⁵⁰ It is highly unlikely that either Rosneft or Gazprom will receive permission from the Putin administration to construct a gas pipeline from Sakhalin-1 to China. However, once regional gasification is complete, it is possible that a Sakhalin-Khabarovsk gas pipeline could be extended to serve China or Korea.⁵¹

Since acquiring a majority share in the Sakhalin-2 project in late 2006, Gazprom has stated its desire to export gas from Sakhalin-1 through its newly acquired LNG facilities in southern Sakhalin Island. Gazprom CEO Alexei Miller has suggested expanding the LNG facilities at Sakhalin-2 to accommodate gas from Sakhalin-1. Ivan Malakhov, the Governor of Sakhalin, supports Miller's plan: expanding Sakhalin-2's LNG facilities would generate approximately \$10 billion of additional capital investment in Sakhalin Oblast. Representatives of ONGC and the Japanese government have also expressed their desire to export Sakhalin-1's gas as LNG.⁵² Gazprom is determined to gain control of gas exports from Sakhalin-1. President Putin put Gazprom in charge of integrating Russia's gas grid by 2009, including a unified gas market for the RFE. Gazprom may attempt to use its gasification mandate as a pretext for purchasing the total supply from Sakhalin-1. After fulfilling its domestic gasification duties, Gazprom would almost certainly attempt to maximize its profits by exporting Sakhalin-1's gas via pipeline or, more likely, in the form of LNG.

So far, in summary, countervailing forces within the Kremlin and the consortium have prevented disputes over the form and direction of Sakhalin-1's gas exports from reaching a breaking point. The Putin administration has yet to adjudicate the dispute between Rosneft and Gazprom over gas from Sakhalin-1 or determine a strategic direction for the project. Exxon has taken no provocative steps on the gas issue for fear of aggravating either of the state champions or their political allies in the Kremlin. Under Exxon's leadership, Sakhalin-1 has proceeded

⁴⁸ Tellinghuisen and Shook, 'Exxon, China Sign Basic Deal on Pipeline of Sakhalin Gas'.

⁴⁹ 'Gazprom Seeks Exclusive Purchase of Sakhalin I Gas Output'.

⁵⁰ Sergei Blagov, 'Gazprom Tightens Control Over Far Eastern Gas Riches', *Eurasia Daily Monitor* 3, no. 204 (2006).

⁵¹ 'Role Player: Gazprom Eyes Big Role in Sakhalin Reserves', *Nefte Compass*, 4 May 2006.

⁵² 'India Plans to Liquefy Sakhalin Gas', *The Moscow Times*, 24 July 2006.

more or less on schedule and at a reasonable cost. With the Chayvo field fully operational, Sakhalin-1 is generating tax and royalty payments for the Russian government and slowly but steadily advancing towards the cost recovery stage of the PSA. The project is also playing a key role in the government's regional gasification efforts. Any government action against Sakhalin-1 that disrupts the project's operations would interrupt the stream of tax revenue to the federal budget and the flow of cheap gas to Khabarovsk. The strength, competence and composition of the Sakhalin-1 consortium and the unresolved questions surrounding the project's future gas exports have prevented the Putin administration from altering the project in any significant way.

4. Sakhalin-2: The Perfect Storm

4.1 The Sakhalin-2 PSA

In 1994, officials from the Russian Federation and Sakhalin Oblast (collectively known as the Russian Party) and representatives from five foreign oil companies signed the Sakhalin-2 PSA, the first of the three PSAs in Russia. The Sakhalin Energy Investment Corporation originally included Marathon (30%), McDermott (20%), Mitsui (20%), Shell (20%) and Mitsubishi (10%). In 1997, McDermott sold its 20 per cent stake in the project to its fellow investment partners. In 2000, project operator Marathon sold its shares in Sakhalin-2 to the remaining partners and Shell sold part of its stake in the project to Mitsubishi. By the end of 2000, the SEIC consisted of Shell (55%), Mitsui (25%) and Mitsubishi (20%). In December 2006, the remaining partners reached a preliminary agreement to sell half their shares to Gazprom, under pressure from the Russian government. In April 2007, the parties formally agreed to the terms of the equity transfer, giving Gazprom a 50 per cent plus one stake in the PSA and reducing the shares of Shell (27.5%), Mitsui (12.5%) and Mitsubishi (10%) accordingly.

Sakhalin-2 contains approximately 1.1 billion barrels of oil and 684 bcm of gas. According to Shell, Sakhalin-2 is the largest integrated oil and gas project in the world. It includes two major fields: the Piltun-Astokhskoye (PA) oil field (with associated gas) and the Lunskeye gas field (with associated condensate). Sakhalin-2 also includes an onshore processing facility and two 800-kilometre pipelines connecting the fields in northeast Sakhalin to export terminals in the south of the island. The onshore processing facility separates oil and gas from Piltun-Astokhskoye, combines it with gas from Lunskeye, then pumps the hydrocarbons south through the twin pipelines to the oil export terminal and LNG facilities at Prigorodnoye on Aniva Bay. The Sakhalin-2 LNG plant contains two LNG trains with a combined export capacity of 13.25 bcm per year. If the consortium decides to add a third LNG train, Sakhalin-2 could process 22 bcm annually.

The SEIC constructed Sakhalin-2 in two main phases. During Phase One, the consortium developed part of the PA field in order to secure an early flow of oil and to generate capital for Phase Two of the project. Sakhalin-2 produced its first oil in 1999. Initial production was expected to be 90,000 bpd, but averaged only 45,000 bpd due to inclement weather conditions. The offshore facilities at PA can only operate in ice-free conditions, but the field is located in a region of the Sea of Okhotsk that freezes between October and May. Initially, the cost of Phase One was estimated at between \$600 and \$780 million; the final cost of developing PA was between \$1.6 and \$2 billion.⁵³

Phase Two of Sakhalin-2 is in the final stages; it has been far more complicated and expensive than Phase One. The second stage included new offshore drilling platforms at PA and Lunskeye and underwater pipelines linking them to the mainland, thereby ensuring year-round production. Phase Two also saw the construction of the twin oil and gas pipelines that run the length of the island, with the oil export terminal and LNG plants on Sakhalin's southern coast. SEIC initially estimated the cost of Phase Two at \$8-8.5 billion dollars. However, Shell

⁵³ Ian Rutledge, *The Sakhalin II PSA—A Production 'Non-Sharing' Agreement* (Sheffield Energy & Resources Information Services, 2004), 11.

announced in July 2005 that cost overruns on Phase Two had pushed the total cost estimate for Sakhalin-2 from \$10 billion to \$22 billion. It also confirmed that the project's initial LNG exports would be delayed until the third quarter of 2008. When Phase Two of Sakhalin-2 reaches full production, the project is expected to produce 13.25 bcm of LNG per year and 340,000 bpd of oil. As of February 2007, 98 per cent of Sakhalin-2's LNG capacity had been sold in the form of long-term futures contracts.⁵⁴ More than 60 per cent of the LNG from Sakhalin-2 will be sold to Japan, while the remainder has been reserved for South Korea and the west coast of North America.

4.2 Relations between the Russian Government and Shell

From 2000 until late 2006, Shell served as the operator of Sakhalin-2 and was responsible for handling SEIC's relations with the Russian government. The major points of contention between the Putin administration and Shell over Sakhalin-2 were the project's escalating costs and its environmental violations. Relations between the government and the company deteriorated rapidly during the second Putin administration and culminated in Gazprom's provisional acquisition of a majority stake in the project in December 2006.

According to the terms of the Sakhalin-2 PSA, the consortium has the right to recover all of its development costs plus a 17.5 per cent return on its investment before the Russian government receives its share of the oil. Therefore, any increase in the cost of the project delays the state's profit. The sharp increase in global oil and gas prices in recent years has generated a flurry of upstream development around the world. The cost of material and labour for large-scale oil and gas projects has risen accordingly.⁵⁵ These inflationary pressures have had an acute impact on the complex and remote Sakhalin-2 project. Shell's attempts to appease environmental activists also added to its costs. In 2003, SEIC spent \$300 million to modify the route of the project's underwater pipelines and protect the region's Western Grey Whales.⁵⁶ SEIC's selection of local contractors and suppliers further increased the cost of Sakhalin-2 and its confrontations with the government. According to the terms of the Sakhalin-2 PSA, SEIC must grant 70 per cent of the project's construction contracts to Russian firms. In 2006, the Russian State Audit Chamber accused Shell of selecting inappropriate suppliers and contractors. Government officials claimed that the SEIC's selection of contractors cost the Russian government \$2.5 billion in revenue and demanded repayment.⁵⁷ For the Putin administration, the steadily rising cost of the Sakhalin-2 project and the Russian Party's ever-lengthening wait for profit oil made the terms of the PSA not just unfair, but unacceptable. Rising costs gave the government both a reason and a pretext to intervene against the SEIC and alter its management and ownership.

Widespread environmental violations at Sakhalin-2 presented the Russian government with a second pretext for intervention. Local environmentalists have criticized the project since

⁵⁴ Stephen Bierman and Erwin Chan, 'Japan's Osaka Signs long-term Sakhalin-2 LNG Deal, Starting 2008', *International Oil Daily*, 12 February 2007.

⁵⁵ 'Record High Oil & Gas Project Costs Expected for '07', *Cambridge Energy Research Associates*, 12 February 2007.

⁵⁶ Abraham Lustgarten, 'Shell Shake Down', *Fortune*, 23 January 2007.

⁵⁷ 'Sakhalin: That Sinking Feeling', *Stratfor*, 21 February 2006.

its inception. The construction of offshore platforms and undersea pipelines has upset the marine life in the Sea of Okhotsk. Onshore pipeline construction has resulted in widespread deforestation, increased the potential for mudslides and threatened the ecology of inland rivers and streams. After Shell's 2005 announcement that the cost of Sakhalin-2 had reached \$22 billion, the MNR intensified its environmental and safety inspections of the project. In September 2006, Rosprirodnadzor accused the SEIC of polluting local rivers and logging to excess, revoking Sakhalin-2's environmental license. In December 2006, the agency suspended Sakhalin-2's water permits. At the height of this dispute between the government and Shell, Rosprirodnadzor estimated the SEIC's liability for environmental damages at \$30 billion and threatened to revoke the project's development license altogether.

Faced with unrelenting pressure from the Russian government over escalating costs and environmental violations, Shell and its partners in the SEIC reluctantly agreed to sell a controlling stake in Sakhalin-2 to Gazprom. In addition to the public deal between Gazprom and the SEIC, the Russian government brokered a confidential corollary agreement between Gazprom and the consortium's foreign partners. Under its terms, the government approved an increase in the project's recoverable costs from \$12 billion to \$15.8 billion (\$6.2 billion less than Shell's cost estimate). Furthermore, Shell, Mitsui and Mitsubishi accepted responsibility for an additional \$3.6 billion in project costs beyond the \$15.8 billion in recoverable costs.⁵⁸ After assuming control of Sakhalin-2, Gazprom announced it would work with the MNR to repair the environmental damage caused by the project; official estimates fell from \$30 billion to \$5 billion.⁵⁹ In April 2007, Shell agreed to pay the Russian government an annual dividend of \$100 million in order to retain its stake in Sakhalin-2. Shell calls the payment a 'priority dividend' designed to give the Russian government more access to the project's revenue when oil and gas prices are high.⁶⁰ So far, the Russian government has arranged for a state-owned company to acquire a majority stake in the Sakhalin-2 PSA and then reduced the project's environmental liability by \$25 billion. It has also lowered the consortium's recoverable costs, increased the financial responsibility of the foreign partners and extracted an annual dividend from Shell. The government's intervention against Sakhalin-2 has been severe compared to its behaviour towards Kharyaga or Sakhalin-1.

4.3 Explaining the Government's Behaviour towards Sakhalin-2

Why has the Russian government taken such bold and decisive measures against the Sakhalin-2 consortium? The answer is a complex combination of consortium, legal, technological and geopolitical factors. Shell's weak competitive position, turbulent relations with the Russian government and failure to include a Russian partner in SEIC made the company vulnerable to the Putin administration. The legal structure of the PSA itself heavily favoured the consortium, facilitated cost overruns and substantially delayed the Russian Party's share of profit oil. Sakhalin-2's cutting-edge LNG technology made the project an appealing acquisition target for

⁵⁸ 'Shell Signs Secret Protocol on Sakhalin Project with Russian Government', *MosNews.com*, 28 December 2006.

⁵⁹ 'Gazprom, Sakhalin Energy Working to Repair Eco-Damage on Sakhalin-II', *RIA Novosti*, 21 February 2007.

⁶⁰ Steve Hawkes, 'Shell to Pay Russia £50m Dividend for Sakhalin', *The Times*, 27 April 2007.

Gazprom. These factors, combined with the overall geopolitical significance of Sakhalin Island, explain why the Putin administration intervened so aggressively against Sakhalin-2.

4.4 Susceptible in Sakhalin: Shell and the SEIC

In recent years, Shell's standing among the major IOCs has suffered due to its declining hydrocarbon reserves. From 2003-05, Shell's total oil and gas reserves declined 33 per cent. During the same period, its reserve replacement rate was just 70-80 per cent, well behind its major competitors.⁶¹ In addition to its participation in Sakhalin-2, Shell is heavily invested in Western Siberia. It has a 50 per cent stake in the Salym oil fields, where it has been active for over 10 years. In 2005, Shell reached a preliminary deal with Gazprom to acquire 50 per cent of the Zapolyarnoye gas field in Western Siberia in exchange for 25 per cent of the Sakhalin-2 PSA. However, shortly after the Zapolyarnoye-Sakhalin agreement was made public, Shell announced that the cost of Sakhalin-2 had risen to \$22 billion. Both Gazprom executives and government officials were furious and the state-owned company withdrew from the asset swap. Shell's low reserve replacement rates, extensive investment in other Russian projects and its poor relations with Gazprom made it vulnerable to the Putin administration over Sakhalin-2. Shell could not afford to lose access to its projects in Sakhalin or Salym or be denied future investment opportunities in Russia's vast untapped hydrocarbon fields. The company submitted to Putin's demands and ceded control of Sakhalin-2 to Gazprom, while retaining substantial managerial and technical responsibilities. Shell will have an opportunity to rebuild its reserve totals through planned projects on Sakhalin Island, but in the future it will be a junior partner or contractor to Russia's state champions, Rosneft and Gazprom.⁶²

4.5 The Antiquated Agreement

The legal details of the Sakhalin-2 PSA also help to explain the Russian government's aggressive behaviour towards the consortium. After Shell's 2005 announcement that the cost of Sakhalin-2 had ballooned to \$22 billion, the Putin administration regarded the antiquated and biased structure of the Sakhalin-2 PSA as unacceptable. Compared to other PSAs around the world, the Sakhalin-2 agreement is highly disadvantageous to the state. From the perspective of the Russian Party, four key features of the Sakhalin-2 PSA are unacceptable: its indefinite duration, asymmetrical revenue sharing formula, failure to set cost caps or define recoverable costs and relatively low tax rates. The Russian government has not altered the terms of the PSA itself through its regulatory assault on Sakhalin-2. However, by making Gazprom the majority partner in the project, the Putin administration has ensured that a state-owned company, not a foreign corporation, will be the primary beneficiary of the PSA.

The initial term of the Sakhalin-2 PSA is 25 years, but the agreement contains an unusual clause that allows the SEIC to extend the PSA indefinitely and to continue extracting oil and gas from PA and Lunskeye as long as the consortium deems the fields to be 'economically practicable'. The Russian Party could appeal against the consortium's decision to extend the

⁶¹ 'Royal Dutch Shell - Company Profile', *Datamonitor*, June 2006.

⁶² Miriam Elder, 'Gazprom Takes Control of Sakhalin-2', *The Moscow Times*, 22 December 2006.

PSA, but it would be forced to plead its case in international arbitration court. As long as the fields are still profitable, it is unlikely that the Russian Party would win such an appeal.⁶³

From the Russian standpoint, the most objectionable aspect of the Sakhalin-2 PSA is the agreement's production sharing formula. Under the terms of a standard PSA, the investors receive the majority of early revenue in order to recoup the costs of exploration and development. Once the PSA has reached the cost recovery stage, profit oil is distributed to the investors and the state according to a pre-negotiated formula. However, under the terms of the Sakhalin-2 PSA, the Russian Party would only receive its share of the profit oil once the SEIC partners recovered the cost of the project and earned a 17.5 per cent internal rate of return (IRR) on their investment. When Shell announced that the cost of Sakhalin-2 had increased to \$22 billion, it meant that the SEIC would receive nearly all the revenue from Sakhalin-2 until they recovered \$22 billion worth of capital investment and an additional \$3.85 billion in profit. In effect, the Sakhalin-2 PSA was designed so that the Russian Party would suffer disproportionately in the event of any major cost overruns. Based on Shell's 2005 cost estimate, it would take a decade of production from Sakhalin-2 before the members of the SEIC recovered their costs and designated IRR.

Given the inflationary pressures driving up the cost of upstream oil and gas projects around the world, it is not at all surprising that the Sakhalin-2 budget exceeded initial projections. However, from the Russian perspective, the terms of the Sakhalin-2 PSA have exacerbated the impact of external economic forces by allowing the consortium to claim excessive recoverable costs. A standard PSA includes 'cost caps' to ensure that if a project runs over budget, the state will receive some revenue from the field's early production, rather than being forced to wait until the cost recovery stage for its share of the profit oil. Cost caps ensure that the risk associated with cost overruns is shared between investors and the state. The Sakhalin-2 PSA contains no annual cost caps; it also grants the SEIC considerable discretion to determine which expenditures are recoverable costs.⁶⁴

Once the consortium partners have recovered their costs and achieved the specified rate of return on their investment, the Sakhalin-2 production sharing formula will enter its final stage. At that point, the Russian government's share of profit oil will be approximately \$2 billion per year.⁶⁵ In the meantime, the state's only revenue from the project will come in the form of royalty and profit taxes. These are enshrined in the PSA and are low by international and Russian standards. According to the terms of the PSA, the members of the consortium must pay a royalty tax of 6 per cent on gross revenues and a profit tax of 32 per cent on all oil and gas produced at Sakhalin-2. In comparable PSAs, the average royalty tax is 10-20 per cent. The profit tax of 32 per cent is 3 per cent lower than the Russian tax rate at the time the PSA was signed.⁶⁶ Shortly before Gazprom acquired a control of Sakhalin-2, MNR official Sergei Fyodorov claimed that with a market price of \$60 per barrel and a typical profit tax of 50-55 per

⁶³ Rutledge, *The Sakhalin II PSA—A Production 'Non-Sharing' Agreement*, 15.

⁶⁴ Jonathan Stern, as quoted by Jeremy Bransten, 'Russia: Energy Analyst Looks At Sakhalin-2 Takeover', *Radio Free Europe/Radio Liberty*, 22 December 2006.

⁶⁵ Andrew E. Kramer, 'Russia Halts Pipeline, Citing River Damage', *The New York Times*, 19 September 2006.

⁶⁶ Rutledge, *The Sakhalin II PSA—A Production 'Non-Sharing' Agreement*, 3.

cent, the Russian government would receive \$300-400 million per year from the project, rather than just \$20 million.⁶⁷ In 2006, the Sakhalin-2 project reportedly generated \$794.6 million for the SEIC.⁶⁸

4.6 The Importance of LNG Technology for Gazprom

The presence of LNG facilities at Sakhalin-2 and the prospect of technology transfer is another factor that helps to explain why the Putin administration intervened against the consortium and inserted Gazprom in the PSA. Until recently, fixed export pipelines and long-term contracts limited the size and scope of the international gas business. However, investment in LNG technology over the past decade has contributed to the growth of fungible gas markets across the world. With the advent of LNG, remote and previously underdeveloped gas reserves, like those in Sakhalin, can be efficiently exported downstream.⁶⁹ For Russia, a state with over 30 per cent of global gas reserves together with a hydrocarbon-fueled economy and foreign policy, LNG technology is vital. For Gazprom to become a world-class gas company, it is essential that it gains experience with LNG. To that end, Gazprom has developed LNG partnerships with Petro-Canada, Sonatrach and BP. In its 2007 corporate strategy document, Gazprom reaffirmed its commitment to achieve a leading position in the LNG trade in order to maximize the value of its reserves and to expand its presence in gas markets in the western hemisphere, Asia-Pacific and South Asia.⁷⁰ The LNG plant at Sakhalin-2 was the first on Russian territory, constructed by Shell, a global leader in LNG technology. For Gazprom, taking control of the cutting-edge facilities at Sakhalin-2 was a major step forward in its drive to acquire LNG experience. The Russian gas champion is now in a much better position to compete with producers in Qatar, Malaysia and Indonesia for a share of the lucrative Asian LNG market.

4.7 Sakhalin's Geostrategic Significance

Each of the PSA projects is significant in its own right, but Sakhalin-2 is a linchpin of future energy development on hydrocarbon-rich Sakhalin Island. Sakhalin's geostrategic significance was yet another factor behind the Putin administration's intervention against the island's flagship project. Over the coming decades, Sakhalin Island will emerge as a key source of energy for Asia for economic, security and environmental reasons. Sakhalin Island's onshore and offshore hydrocarbon fields hold approximately 12 billion barrels of oil and 2.5 tcm of gas. The Sakhalin-2 project alone contains roughly 10 per cent of the island's aggregate resources.⁷¹

Korea, Japan and Taiwan do not have a single major oil or gas field among them. China's energy resources are generally located its northern and western provinces, far from its rapidly growing cities in the east and south. Much of Asia's economic growth is in energy-

⁶⁷ Sergei Fyodorov, as quoted by John Helmer, 'Gazprom to Buy Shell Out of Sakhalin LNG Project', *MineWeb*, 15 December 2006.

⁶⁸ 'Sakhalin I, II Operators Post \$857 mln, \$749 mln Earnings', *RIA Novosti*, 12 April 2007.

⁶⁹ Daniel Yergin and Michael Stopgard, 'The Next Prize', *Foreign Affairs* 82, no. 6 (2003).

⁷⁰ 'Pravlenie Odobrilo Proekt Strategii OAO Gazprom v Oblasti Proizvodstva i Postavok SNG', *Gazprom.ru*, 26 April 2007.

⁷¹ Energy Information Administration, *Sakhalin Island Brief*, U.S. Department of Energy, 2007.

intensive industries such as steel, petrochemicals, fertilizer and plastics.⁷² In addition to economic issues, concerns over energy security and global warming are driving Asian demand for Russian hydrocarbons. Many consumers wish to reduce their dependence on oil and gas supplies from the volatile Middle East and escape the “Asian premium” that Persian Gulf producers charge on hydrocarbon exports to Pacific markets. Environmental concerns are also contributing to Asian gas demand. Decades of burning coal and oil have led to widespread air pollution in many Asian cities. In an effort to improve air quality and lower carbon emissions, many consumers and governments are turning to gas.⁷³ Gazprom’s acquisition of Sakhalin-2 has dramatically enhanced the company’s position in the lucrative Asian LNG market.

By assuming ownership Sakhalin-2, Gazprom has gained control over Sakhalin’s only LNG outlet, thereby reinforcing its gas export monopoly over the island. Given the high cost and technological complexity of LNG facilities, it is far more efficient to expand Sakhalin-2’s LNG plant rather than to construct additional export terminals. If gas production from other Sakhalin fields is exported as LNG, it will almost certainly exit via Sakhalin-2’s terminal at Aniva Bay. Gazprom and its allies in the Kremlin are working to ensure that gas from Sakhalin-1 is exported through Prigorodnoye. Sakhalin-3 and Sakhalin-5 also contain significant gas reserves and it seems plausible that gas from these projects could eventually be exported through expanded LNG facilities at Sakhalin-2. By inserting Gazprom into the Sakhalin-2 PSA, the Putin administration ensured the state gas champion a dominant position in Sakhalin Island’s LNG export market for the foreseeable future.

A key objective of President Putin’s energy strategy is diversifying Russia’s hydrocarbon customer base by reducing reliance on the saturated European market and gradually increasing exports to growing energy markets in Asia.⁷⁴ Increasing oil and gas production from Sakhalin has strengthened Russia’s geopolitical position in the northeast Pacific. For the past decade, China and Japan have attempted to influence the route of trans-Siberian oil and gas pipelines. By putting Gazprom in control of Sakhalin-2’s LNG facilities, the Putin administration has increased its influence over the other key flashpoint in northeast Asian energy geopolitics: the direction of gas exports from Sakhalin-1. The Chinese government supports proposals from Rosneft and Exxon to pipe gas from Sakhalin-1 through Khabarovsk to northeast China. Japanese officials and representatives from SODECO prefer that Sakhalin-1’s gas be exported through expanded LNG facilities at Sakhalin-2. The Korean government also wants gas from Sakhalin-1 to be exported as LNG in order to increase regional supply and drive prices down. Due to delays at the Kovykta gas project in Siberia, the state-owned company KOGAS has been forced to import high-priced LNG from Qatar.

By inserting Gazprom as the lead partner in Sakhalin-2, the Russian government is now in an even stronger position to maximize its energy leverage over its Asian neighbours. The geostrategic importance of Sakhalin Island, combined with consortium, legal and technological

⁷² Kent E. Calder. *The Geopolitics of Energy in Northeast Asia*, Johns Hopkins University, 2004. Unpublished working paper.pdf

⁷³ Selig S. Harrison, 'Gas and Geopolitics in Northeast Asia', *World Policy Journal* 19, no. 4 (2003).

⁷⁴ *Energeticheskaia Strategia Rossii na Period do 2020 Goda*, Minpromenergo, 2003.

factors, explains the Putin administration's decision to intervene against Sakhalin-2 and restructure the consortium's management and ownership structure.

5. Conclusion: Russia's New Rules

President Putin has spent much of his time in office correcting the excesses of the Yeltsin era. Putin has reasserted state control over the Russian energy sector by seizing key assets, restricting foreign investment and building Gazprom and Rosneft into major energy conglomerates. However, after more than six years in office, the Putin administration is still grappling with the PSA projects bequeathed to it by the Yeltsin administration. Given the intractable nature of the PSAs, the government has been forced to employ a variety of regulatory tactics against Kharyaga, Sakhalin-1 and Sakhalin-2 to extract concessions from the operators and increase the government's control over the projects. The nature of the Russian regulatory environment is such that the investor and the state are locked in a fundamentally confrontational relationship. Government officials have virtually unlimited freedom to review and investigate the activities of energy companies. The unique set of interrelated factors surrounding Kharyaga, Sakhalin-1 and Sakhalin-2 determined the government's behaviour towards each project and its level of success in extracting concessions from the operators.

The Putin administration's indecision over its Barents regional development strategy and its failure to intervene definitively in the regional rivalry between LUKoil and Rosneft explains its incoherent behaviour towards Kharyaga. Total's relatively clean environmental and safety record allowed it to use the threat of international arbitration, the so-called 'nuclear option', against the Kremlin in 2003 in order to get its recoverable costs approved. For the time being, Total is safe from official charges of underproduction at Kharyaga because federal officials have acknowledged the shortage of export capacity in Timan-Pechora. Furthermore, state-owned Transneft has not yet constructed an export pipeline from Kharyaga to Indiga. Finally, the Kremlin's failure to find a Russian partner to purchase the 20 per cent tender on the Kharyaga PSA has deprived it of a voice in the consortium's decision-making process. So far, the Putin administration has had little leverage on Total over Kharyaga and it has yet to extract any major concessions from the consortium.

The government's approach towards Sakhalin-1 has been firm, but not overly aggressive. The strength and competence of the Exxon-led consortium and the stalemate over the project's future gas exports explain the government's staid behaviour towards the consortium. Unlike Shell at Sakhalin-2, Exxon has not given the Kremlin glaring financial or environmental pretexts to intervene in Sakhalin-1. The company has proved to be a competent operator; it has succeeded in developing a very challenging project more or less on time and at an acceptable cost. The consortium has benefited from the presence of Rosneft and the support of its allies in the Kremlin. Rosneft enjoys a productive and mutually beneficial relationship with Exxon over Sakhalin-1 and the project has become an important piece of the state champion's upstream portfolio. With the first phase of Sakhalin-1 fully operational, the Exxon-led consortium is exporting Russian crude to a tight Asian oil market and generating tax and royalty payments for the government. The Putin administration succeeded in forcing Exxon to assist with regional gasification efforts by demanding that it pipe more gas from Sakhalin-1 to Khabarovsk. However, now that Sakhalin-1 is generating oil for export, taxes for the federal budget and cheap gas for local consumers, the Putin administration must weigh future actions towards Sakhalin-1 carefully, against the project's many benefits.

The factors surrounding Kharyaga and Sakhalin-1 have forestalled government intervention in these projects. Conversely, the factors surrounding Sakhalin-2 encouraged the Putin administration to take systematic action against the SEIC and to instal Gazprom as majority owner. The Russian government's behaviour towards Sakhalin-2 was based upon a variety of reasons, including Shell's weak competitive position, the legal structure of the PSA itself, the prospect of LNG technology transfer and the Kremlin's geopolitical calculations. Shell's low reserve replacement rates and longstanding investment in Russia made the company particularly vulnerable to the Putin administration. After Shell announced its \$22 billion cost estimate in 2005, the terms of the Sakhalin-2 PSA became so disadvantageous to the Russian Party that not even the threat of international arbitration prevented the government from taking bold action against the consortium. The Putin administration has used its leverage over Shell quite effectively. In less than a year, the Russian government has forced the company to sell half its shares in Sakhalin-2 to Gazprom, agree to an unfavorable corollary agreement and pay a \$100 million annual dividend to retain a minority stake in its former project. The Putin administration refrained from intervening against Kharyaga and Sakhalin-1 because it was unable to decide upon a strategic direction for either project. In the case of Sakhalin-2, the Putin administration was able to determine a long-term vision for the project in accordance with its regional and strategic interests. Gazprom's drive to acquire LNG technology made the high-tech Sakhalin-2 project an attractive acquisition target. Sakhalin-2's pivotal position on Sakhalin Island made it indispensable to the Kremlin's geostrategic interests in northeast Asia. This perfect storm of factors explains the government's decisive intervention against the Sakhalin-2 project.

The Putin administration has spent the past six years retroactively attempting to apply its standards for foreign energy investment to three production-sharing agreements from another era. The brief history of the PSAs in Putin's Russia has helped to clarify the new rules, both official and unofficial, for foreign investment in Russian upstream oil and gas projects. Recent anti-PSA legislation has made it clear that foreign owned and operated PSAs are no longer a viable method of investment in Russian hydrocarbons. IOCs will not receive such advantageous investment terms in Russia again for the foreseeable future. The Putin administration has indicated its preference for joint ventures and tax and royalty agreements. Whatever the mode of investment, it is highly unlikely that foreign investors will be permitted to purchase more than 30 or 40 per cent upstream projects in the coming years. IOCs will have little choice but to serve as junior partners or contractors to Gazprom and Rosneft and share their managerial know-how and technological expertise with the state champions.