Russia's evolving energy policy for its eastern regions, and implications for oil and gas cooperation between Russia and China

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1. Introduction

Cooperation between Russia and China began in the early 1950s when the Soviet Union provided China with the technology and skills required to develop a modern oil industry. This assistance was withdrawn in 1958 as Sino-Russian relations deteriorated. During the following decades, each country developed its oil and gas industries independently of each other. Russia became a major exporter of natural gas to Europe, whilst China became a significant exporter of oil, mainly to East Asia.

This situation changed in the early 1990s for two reasons. First, the collapse of the Soviet Union triggered a transformation of policies and incentives within the newly independent states, including within the Russian Federation. Second, China itself was becoming a net importer of oil and was starting to understand the potential benefits of increasing the use of natural gas for its energy supply. By the mid-1990s, government agencies and energy companies in both Russia and China had identified that an undeniable logic existed for the construction of major oil and gas export pipelines from Russia to China.[1] Such projects appeared to address a wide range of economic, commercial, energy and diplomatic priorities for both nations, not least because other forms of economic interaction were progressing only very slowly at that time.[2] By the late 1990s, considerable optimism existed that decisions were imminent on a number of important projects, especially in relation to the construction of pipelines to bring oil and natural gas from Russia to China.

This optimism was exemplified by the specific identification of energy as a key form of collaboration in the Treaty of Friendship signed in 2001.[3] But this optimism was misplaced. Despite the continued growth of demand for and of imports of oil and gas

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1 KW Paik, 'Sino-Russian oil and gas development cooperation: The reality and implications' (1998) 22(2) J Energy Dev, 275–84; P Andrews-Speed, 'Natural gas in East Siberia and the Russian Far East: A view from the Chinese corner' (1998) XII(1) CRIA 77–95.

2 G Rozman, 'Sino-Russian relations in the 1990s: A balance sheet' (1998) 14(2) Post-Soviet Aff 93–111; D Kerr, 'Problems in Sino-Russian economic relations' (1998) 50(7) Eur–Asia Stud 1133–56.

3 P Andrews-Speed, X Liao and R Dannreuther, *Strategic Implications of China's Energy Needs* (International Institute for Strategic Studies, London 2002), Adelphi Paper 346; I Rogachev, 'The Russian–Chinese Treaty of Good Neighbourliness, Friendship, and Cooperation: The results of the first year' (2002) 30(2) Far East Aff 1–11.

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on China's part during the late 1990s and early years of the twenty-first century, a clear direction for energy collaboration between China and Russia only started to emerge after 2004. By the middle of 2009 some progress has been made, but still no new pipeline has yet been completed.

It has been argued that a key factor in the ability of Russia and China to work together depends on their respective identities and how they view each other. In 1998, Rozman concluded that ''national identities appear to be driving the two countries apart''.[4] But the subsequent decade saw a transformation of Russian domestic politics, and by 2007 Ferdinand was able to describe a progressive convergence of outlook between the two governments in respect of their preference for the state playing a strong role in managing key sectors of the economy. As a consequence, he argued, the foundation for collaboration between the two nations was now much stronger than before.[5]

Yet, the energy sector seemed to flout this trend. Even in 2008, the 13 million tonnes of oil from Russia to China flowed mainly by rail, and no flow of gas occurred at all. From the Chinese perspective it appeared that Russia was repeatedly reneging on promises and plans. As a consequence, China's oil companies continue to enhance their engagement with the countries of Central Asia, investing in the exploration and development of oil and gas fields and in the construction of import pipelines, despite the fact that these fields are more distant than those in eastern Russia.

That the energy sector may not follow wider trends of collaboration should come as no surprise. Energy is a commodity of critical importance to both producers and consumers. As a consequence, collaboration may occur quite independently of political values and of issues of identity. Of much greater importance are the respective priorities within energy policy and, to a lesser extent, in industrial and economic policies. The archetypal example is the willingness of the Soviet Union and Europe to conduct substantial trade in natural gas, even in the shadow of the Cold War.

The aim of this paper is to examine how the evolution of Russia's domestic energy policies has been instrumental in determining the pace and nature of oil and gas collaboration with China and, in particular, to explain how Russia's changing domestic priorities have delayed the long-promised flows of oil and gas to China. In particular, it documents the impact of the transfer of power from the regime of President Yeltsin in the 1990s to that of President Putin in the early 2000s. The paper starts with a brief description of the early proposals for export pipelines from Russia to China which were developed under President Yeltsin. This is followed by an examination of the policies introduced by President Putin's government from the year 2000 onwards and an analysis of how these new policies have determined the progress of different forms of collaboration in oil and gas.

This paper does not address a range of issues relating to wider Sino-Russian relations, nor those relating to the impact of Russia's relations with third parties such as Japan and the European Union on Sino-Russian energy cooperation.

[4] Rozman, 'Sino-Russian relations in the 1990s: A balance sheet'.

[5] P Ferdinand, 'Russia and China: Converging responses to globalization' (2007) 4 Intl Aff 655–80; P Ferdinand, 'Sunset, sunrise: China and Russia construct a new relationship' (2007) 5 Intl Aff 841–67.

2. The early project proposals

The Russian oil and gas industry in the 1990s

The early- and mid-1990s saw a complete transformation of the Russian oil and gas sector from its previous and long-standing dominance by the state. A large section of the oil industry was privatised between 1992 and 1996 as part of a much wider programme of divestment of state-owned enterprises. In contrast, much of the gas industry remained in the hands of the state-owned giant, Gazprom. At the same time, the government gradually reformed the systems for pricing crude oil and oil products, and for allocating export quotas. Taxes on oil and gas companies were raised dramatically in order to provide revenue for the state. Yet, these taxes were excessively directed at production volume and revenue rather than at profits, and the application rules were ambiguous and confusing.[6]

The direct consequence of these reforms was the creation of oligarchic groups which owned and controlled a substantial proportion of Russia's oil and gas industry. The priorities for most of the owners of these new groups were to maximise profits in the short term through raising production from existing fields, through minimising investment in exploration, through maximising exports and through evading taxes, and to export these profits overseas for personal use.[7] The economic and political influence of the groups extended to the federal government and the State Duma. Senior managers of these companies became heads of administration in the oil and gas-producing regions. These regional heads were able to promote the advancement of their companies through providing concessionary terms for licensees for hydrocarbon exploration and production, through a reduction in payment of taxes and by the granting of other privileges.[8]

After this re-allocation of property rights and powers, Russia had no effective oil and gas policy in several respects. First, the energy strategy to the year 2010, which was published in 1994, bore no relation to the reality of the oil and gas industry in Russia and overseas. Second, the federal government had, through the privatisation process, ceded control over the industry to the newly privatized companies, for it failed to establish adequate laws and institutions to govern the sector. Finally, and as a consequence, the companies developed their own profit-maximising strategies which took no account of the needs of the country with respect to revenue raising, domestic energy supply needs and social and environmental priorities.[9]

It was in this rather chaotic environment that the first proposals emerged for active collaboration with China in the field of oil and gas. The years 1993 and 1994 saw, respectively,

[6] J Considine and WA Kerr, *The Russian Oil Economy* (Edward Elgar, Cheltenham 2002); C Locatelli, 'The Russian oil industry between public and private governance: Obstacles to international oil companies' investment strategies' (2006) 34 Energy Pol'y 1075–85; DB Reynolds and M Kolodziej, 'Institutions and the supply of oil: A case study of Russia' (2007) 35 Energy Pol'y 939–49.

[7] J Considine and WA Kerr, *The Russian Oil Economy*; C Locatelli, 'The Russian oil industry between public and private governance'; CG Kara-Murza, *The Lost Mind* (EXMO, 2007) (in Russian).

[8] E Volkova, 'Life or purse? The taxation of oil and gas business in 2004' (2005) 1 Oil & Gas Vertical 24–7.

[9] Kommersant. The appendix – Oil, 'Petroleum industry privatization' (No 121, 06 July 2000) (in Russian); C Locatelli, 'The Russian oil industry between public and private governance'; V Milov, LL Coburn and I Danchenko, 'Russia's energy policy 1992–2005' (2006) 47(3) Eurasian Geography and Econ 285–313.

proposals for oil and gas pipelines from Russia to China. The improvement in the relationship between Russia and China was highlighted by the declaration of a 'Strategic Partnership' in 1996.[10] From the Chinese perspective the timing of these initiatives was determined by its transformation in 1993 from being an exporter of oil to becoming an importer. At the same time the Chinese government was starting to realise that an increased use of natural gas would bring significant benefits and that, with limited domestic resources of gas, it would be necessary to import gas in the future.[11]

Proposed oil exports by rail and pipeline

As a result of privatisation, Yukos became one of the leaders of oil production and processing in Russia, and also gained considerable political and economic influence over the country's leaders. Yukos was one of the first companies to start to formulate a corporate strategy for the east of the country. The aim was to develop the resources of Eastern Siberia and to export them to the markets of Asia-Pacific region. In order to launch exports of oil to China, Yukos acquired the company Tomskneft in 1999 and thus gained the rights to exploit one of the largest oil deposits in Eastern Siberia, the Yurubcheno-Tohomsky field.[12]

At the same time, Yukos began to carry out trial deliveries of oil from Western Siberia through Eastern Siberia and then onto China by rail. These exports by rail followed two routes. One route crossed directly from Russia to China at the frontier post of point of Zabajkalsk and delivered oil to the China National Petroleum Corporation (CNPC). The other traversed Mongolia delivering oil to Sinopec. The former route, which by passed Mongolia, was more profitable.[13]

In September 2001, Yukos's persistence was rewarded when Russia and China signed a general agreement to carry out the engineering design for an oil pipeline. It was planned that the total annual throughput would be 30 million tonnes and that Yukos would provide not less than 50 per cent of this supply. The oil would be delivered from Angarsk to Daqing in the north-east of China and the pipeline would be commissioned in 2005. The total length of the pipeline would be about 2,400 km, with more than 1,500 km on Russian territory and about 800 km on Chinese territory. Thus, Yukos succeeded in gaining approval to construct this oil pipeline, even though it was forbidden to build private oil pipelines in Russia at the time.[14]

The Yukos plan had a number of advantages. The oil resource base was well prepared, a feasibility study had been completed and the relatively direct routing of the pipeline kept the length and therefore the costs of the pipeline low. From the Chinese perspective, the pipeline would provide a substantial quantity of crude oil imports within a relatively

[10] Paik, 'Sino-Russian oil and gas development cooperation: The reality and implications'; Ferdinand, 'Sunset, sunrise: China and Russia construct a new relationship'.

[11] P Andrews-Speed, X Liao and R Dannreuther, *Strategic Implications of China's Energy Needs*.

[12] A Kontorovich and A Korzhubaev, 'Strategy of Russia in the markets of oil and gas of the Asia-Pacific market' (2001) 4 The Torch 25–9 (in Russian).

[13] 'Yukos will increase oil deliveries by rail' *Business Press* (22 November 2002) (in Russian); P Arbatov, 'Yukos hastens to China by rail' (26 December 2003) Vedomosty 6–7 (in Russian).

[14] S Azarova, 'The route of oil export oil should be chosen from Eastern Siberia by politicians' (2003) 2 Oil & Gas Vertical 23–6 (in Russian).

short time frame and would supply this oil into an already important oil-producing region which had significant oil refining capacity.[15]

Proposed gas export pipeline

The Kovytke field near Irkutsk was discovered in 1987. By 1993 the rights to this gas field were held by Rusia Petroleum. The main shareholder of Rusia Petroleum was Sidanko. Other shareholders included local governments and enterprises, as well as the East Asian Gas Company of Korea. At this time the gas reserves of Kovytke stood at 870 billion cubic metres. In 1994, CNPC and Russia's Ministry of Fuel and Energy signed a Memorandum of Understanding to export gas from Kovytke to China by pipeline and in 1997 this was reinforced by an intergovernmental agreement.[16]

In late 1997, the international company, BP, bought a 10 per cent share of Sidanco with the specific objective of gaining access to Rusia Petroleum's oil and gas exports to China. In 1999, Rusia Petroleum and CNPC began to prepare a feasibility study for the proposed gas pipeline. They were joined by Korea's KOGAS in 2000. At this stage three options for a pipeline route were being considered: a direct route through Mongolia to China, a route eastwards to South Korea traversing North Korea and a route to South Korea which passed under the Yellow Sea, thus avoiding North Korea.

The final feasibility report was published in 2003 and it favoured the third option on the basis that it avoided the perceived transit risks associated with Mongolia and North Korea. By this time the proven reserves of the Kovytke field had risen to 2.13 trillion cubic metres. The project was planned to deliver 4 billion cubic metres per year to local markets in Eastern Siberia, 20 billion cubic metres per year to China and 10 billion cubic metres per year to South Korea.[17]

In addition to supplying a significant quantity of gas to China, the project would also provide much needed energy to the Irkutsk region as well as stimulating local economic development and generating export revenues. The key risk was perceived to be the ability and willingness of customers in China to pay a price for the gas which was acceptable to the Russian suppliers.[18] It was for this reason that an extension to Korea was included in the final feasibility report.

3. Reform of priorities and structures after 2000

When Vladimir Putin took power as President in the year 2000, the Russian oil and gas sector was in a parlous state. The new government began to take steps to re-establish control over the sector through centralising authority over the allocation of rights to exploit resources, through raising tax revenues, through increasing state control over the oil and

[15] See n 11.

[16] Official site of company Rusia Petroleum <http://www.rusiap.ru> (in Russian); I Filimonov, 'Problems and prospects of development of the Kovyktinsky gas deposits, the largest in Eastern Siberia' (2007) 3 Oil & Gas Journal Russia, 51–8 (in Russian); JP Stern, *The Future of Russian Gas and Gazprom* (OUP, Oxford 2005); Paik, 'Sino-Russian oil and gas development cooperation: the reality and implications'.

[17] Stern, *The Future of Russian Gas and Gazprom*.

[18] P Andrews-Speed, 'Natural gas in East Siberia and the Russian Far East: A view from the Chinese corner'; Paik, 'Sino-Russian oil and gas development cooperation: the reality and implications'.

gas companies, through enhancing control over export networks and through more careful consideration of the domestic energy needs of the country.[19] These initiatives were led by the President himself, supported by his senior officials, and not by the relevant ministries and agencies which tended to oppose this reversal of earlier liberal policies.[20] This new approach resulted in new organisational structures and systems in the oil and gas sector, and in a change in the nature of the players. Further, a policy for the development of the resources of the eastern part of the country was drawn up for the first time.

New structures, systems and players

The new ''Energy Strategy of Russia'', which was approved in 2003, together with other documents provided the framework for the new approach and established the new priorities for energy development. Decisions on concrete actions of strategic value were to be conducted by the President, the Prime Minister and their assistants.[21] The overall direction for the oil and gas industry was to be set by President Putin.[22] In 2008 the Prime Minister appointed Vice-Premier Sechin, who was already Chairman of Board of Directors of Rosneft, as the Chairman of the commission concerning the energy industry and the development of petroleum resources, and charged the Vice-Premier with working with the oil companies to raise production levels, to improve tax collection and to build an oil pipeline from Eastern Siberia to the Pacific.[23]

The dismantling of Yukos and other moves of consolidation have resulted in the oil and gas industry being dominated by seven vertically integrated companies (Fig. 1): the two state-owned companies, Gazprom (including Gazprom Oil and Slavneft) and Rosneft; two Russian private sector companies loyal to the state, Lukoil and Surgutneftegaz; two Russian regional companies, Tatneft and Bashneft; and the international joint venture, TNK-BP. These companies provide about 93 per cent of the oil production and about 94 per cent of the gas production in the Russia. All large oil refineries, except for group of plants in Bashkiria, are owned by the major Russian oil companies.[24]

The building of private oil and gas pipelines is forbidden in Russia. All pipelines belong to the state.[25] The government of Russia also defines policy in the field of expansion of capacity and the building of new oil and gas pipelines. The operator in the field of building and operation of the oil pipeline network in Russia is the state company, Transneft.

[19] Locatelli, 'The Russian oil industry between public and private governance'; Milov, Coburn and Danchenko, 'Russia's energy policy, 1992–2005'.

[20] P Hanson, 'The Russian economic puzzle: Going forwards, backwards or sideways' (2007) 5 Intl Aff 869–89.

[21] H Balzer, 'The Putin thesis and Russian energy policy' (2005) 3 Post-Soviet Aff 21–4.

[22] M Kroutikhin, 'Energy policymaking in Russia: From Putin to Medvedev' (July 2008) 9 NBR Analysis, Russian Energy Pol'y & Strategy 23–31.

[23] Order of the Government of the Russian Federation of 25 August 2008, No 1261-r, 'Structure of the Governmental commission concerning the energy industry and minerals sector' (in Russian); L Podoboedova 'Igor Sechin has extracted oil. Oil industry workers it is entrusted to be enclosed in development' RBC Daily (22 May 2008) <http://www.rbcdaily.ru/2008/05/22/tek/345119> (in Russian).

[24] A Korzubaev, *The Oil and Gas Industries of Russia During Transformation to the International System of Energy Supply* (Geo, Novosibirsk 2007) (in Russian).

[25] The Federal Government of the Russian Federation, *About the Major Pipeline Transport,* State Duma Decision No 4322-II (21 October 1999) (in Russian).

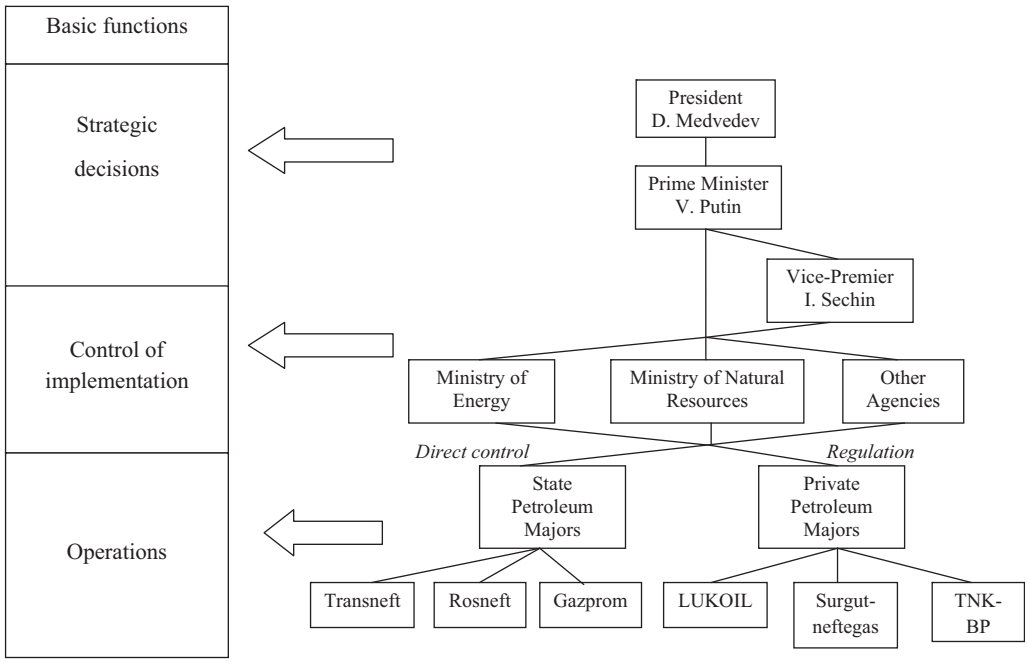

Fig. 1. The main players in the Russian petroleum industry.

Gazprom is the main producer and supplier of natural gas in Russia and is the world's largest state company. Gazprom accounts for 84 per cent all gas production and 100 per cent of gas exports. The balance of the gas production is accounted for by Surgutneftegaz, Rosneft, TNK-BP, Lukoil, and the largest independent manufacturer of gas, Novatek. The national system of gas supply is supervised by Gazprom, and the construction of new gas pipelines is carried out by subsidiaries of Gazprom.

In Eastern Siberia and in the Far East the largest oil companies in terms of production, refining and capitalisation are the two state companies, Rosneft and Gazprom (through Gazprom Oil). Surgutneftegaz and TNK-BP are also active, as is the East-Siberian Oil and Gas Company, which until 2006 was a subsidiary of Yukos and which operates the Yurubcheno-Tohomsky field in the Krasnoyarsk region.[26] The oil fields of Eastern Siberia and the Sakha Republic are being developed with explicit aim of exporting the oil to the Pacific. The coordination of commercial terms and of volumes of oil feeding the pipeline is the responsibility of the Ministry of Natural Resources.[27]

[26] A Kontorovich, V Kashirtsev, A Korzhubaev and A Safronov, 'Questions relating to the development of the petroleum industry of Eastern Siberia and the Far East' (2007) 1 Probs Far East 31–40 (in Russian).

[27] Ministry of Natural Resources of Russia, *Programme for the Geological Surveying and Granting in the Use of the Hydrocarbon Resources of Eastern Siberia and the Far East,* No 1737 (31 December 2004) (in Russian); 'The Ministry of Natural Resources of the Russian Federation carries out complex check of readiness of a oil resources for filling of the oil pipeline Eastern Siberia – Pacific Ocean' (22 March 2006) The Russian information agency 'Siberia' <http://ria-sibir.ru/viewnews/14245.html> (in Russian).

Gazprom has natural gas licenses in the Krasnoyarsk and Irkutsk regions, and participates in a number of projects on the Sakhalin Island shelf. In July 2002, the federal government appointed Gazprom as the official co-coordinator for ''the development of new projects in Eastern Siberia and in the Far East for the extraction, transportation and supply of gas, taking into account the possible export of gas to the markets of China and other countries in the Asia-Pacific region''.[28]

One of the stated aims of this industrial consolidation is to encourage investment, if necessary with the injection of foreign capital, in the development of new oil and gas fields in remote parts of Russia and to construct pipeline networks to export to international markets.[29] The costs of defining the oil and gas prospectivity of Eastern Siberia and the Far East have been incurred by the state. Therefore, priority in distribution of hydrocarbon licenses will be given to the state-owned oil and gas companies Rosneft and Gazprom which are the official instruments of the state interests in the east of the country.[30]

This preference for domestic companies was reinforced in 2005 when the Ministry of Natural Resources defined new criteria for classifying a mineral deposit as being 'strategic'. The thresholds were lowered, from 150 to 70 million tonnes of proven reserves for oil, and from 1,000 to 50 billion cubic metres for natural gas.[31] According to the classification of resources in Russia, all large and especially significant oil and gas fields are classified as 'strategic', and access to such accumulations by foreign companies is severely restricted. These constraints to foreign participation were reinforced by a new law passed in May 2008 which limited foreign ownership to 50 per cent in the case of companies with oil reserves greater than 70 million tonnes and gas reserves greater than 50 billion cubic metres.[32]

Official energy policy for eastern Russia

The Russian federal government has issued a number of documents which together set out the new energy strategy for the eastern regions of the country and which highlight the importance of Eastern Siberia and the Sakha Republic as a new, large oil- and gas-producing region.

In June 2002, the government of the Russian Federation approved the 'Strategy for the economic development of Siberia'.[33] This document emphasised the necessity to create new centres of oil and gas production in Eastern Siberia. The strategy paid particular attention to development of oil and gas transport networks: ''The construction of major

[28] Ministry of Nature Resources of Russia (3 September 2007, No 340) (in Russian).

[29] National Energy Security Fund, Strategy for the development of the Russian oil and gas companies during the period before and after 'wide ranges' (5 March 2007) (in Russian).

[30] 'Gazprom and Rosneft have pressed private and large western companies in the east of Russia', The Independent Newspaper (11 September 2007) (in Russian).

[31] Ministry of Natural Resources, Federal Law of the Russian Federation No 455354–4, *About the modification of separate acts of the Russian Federation* '*The Law of the Russian Federation – The Subsoil Law*' *and* '*About the continental shelf of the Russian Federation*' (2005) (in Russian).

[32] I Panov, 'Constraints of foreign investments to subsoil use in Russia' (2008) 1(3) JWELB 224–38; The Federal Law of the Russian Federation No 57, *About a Procedure for Foreign Investments into the Economic Resources having Strategic Value for the Maintenance of the Defence of the Country and the Safety of the State* (7 May 2008) (in Russian).

[33] *Strategy for the Economic Development of Siberia*, approved by the order of the Government of the Russian Federation No 765-r (7 June 2002) (in Russian).

west-to-east oil and gas pipelines for export will promote the development of a fuel and energy complex in the East Siberian region and in the Far East, and will allow the solution of the major strategic problems connected with establishing a route to the prospective markets in the countries of the Asia-Pacific region''.

One year later, in August 2003, the government approved the 'Energy strategy of Russia to 2020'. This document defines the reserves and provides forecasts for oil and gas production and consumption in different parts of Russia. It also identifies possible volumes and routes for oil and gas exports and the major investment required in production and transport.

This strategy provides for an expanding role for the eastern regions of the country in Russia's oil and gas industry, and for the diversification of export routes with an exit to the markets of Asia-Pacific region. The oil and gas fields of Western Siberia, Eastern Siberia and the Sakha Republic are to provide supplies to satisfy domestic Russian energy demand as well as contributing towards exports, especially to China. The fields on the Sakhalin shelf are to be developed mainly for the Asia-Pacific export markets. Further documents were issued, in 2004 and 2007, respectively, to confirm the decision to construct an oil export pipeline to the Pacific Ocean and to export gas to China and the Asia-Pacific.[34] By this time, Gazprom had already been appointed by the government to be the coordinator of the gas export programme.[35]

The specific strategic objectives for the development of the oil industry in the eastern region of Russia were stated in these documents to include:

- The formation and development of new large centres of oil production in Eastern Siberia and the Sakha Republic.
- The development of transport infrastructure in Eastern Siberia and in the Far East Russia to increase the efficiency and capacity for exporting crude oil and oil products, and to ensure diversification with respect to modes of transport, direction and routes of deliveries to domestic and foreign markets.
- The strengthening of state regulation of the oil industry, the improvement of the tax laws and the enhancement of the legislation covering the exploitation of oil in order to accelerate exploration, particularly in Eastern Siberia and in the Far East.

For the gas industry, the objectives include:

- The development of unified system of gas supply and its expansion into the east of Russia, thereby strengthening the regional integration of the country.

[34] Ministry of Natural Resources of Russia, *Programme for the Geological Surveying and Granting in the Use of the Hydrocarbon Resources of Eastern Siberia and the Far East,* No 1737 (31 December 2004) (in Russian); Ministry of Energy of Russia, *Programme for the Creation in Eastern Siberia and in the Far East a Unified System for the Extraction and Transportation of Gas, Taking into Account Possible Export of Gas to the Markets of China and Other Countries of Asia-Pacific Region,* No 340 (3 September 2007) (in Russian).

[35] Ministry of Energy of Russia, *On the Appointment of Gazprom as the Coordinator of the Programme to Create in Eastern Siberia and in the Far East a Unified System for the Extraction and Transportation of Gas Taking into Account Possible Export of Gas to the Markets of China and Other Countries of the Asia-Pacific Region*, No 975 (16 July 2002) (in Russian).

- The maintenance of political interests and the strengthening of economic position of Russia in Europe and also in Asia-Pacific region.
- Rational use of the proven resources of gas.
- Increased exploration to maintain the level of gas reserves.
- The formation and development of new, large gas-producing areas in Eastern Siberia and in the Far East.
- The establishment of Liquefied Natural Gas (LNG) plants for export, especially in the Far East, in Sakhalin.
- The organisation of export deliveries of natural gas by pipeline from the fields of Eastern Siberia and the Far East to China and to other countries of the Asia-Pacific region, and also as LNG from fields of Sakhalin.

These official documents were approved by the President, and the Ministry of Natural Resources and the Ministry of Energy have been charged with formulating the implementation details together with the oil and gas companies and with the relevant scientific organisations.

Immediate implications for cooperation

The new policies and structures had immediate implications for the existing plans for cooperation between Russia and China. Though Russia's government appeared to remain keen to export oil and gas to China, the new policies required that projects be under tight state control and be managed by one of the major state-owned enterprises. It was also necessary that Russia's own energy needs to be placed above the desire to export and that a wide range of export options be evaluated before final commitments were made. As a consequence, both Yukos's plans to build an oil pipeline and Rusia Petroleum's plans for a gas pipeline were suspended.

From 2001, Yukos gradually began to lose economic and political levers of influence over the government. In 2002, Transneft proposed an alternative project which would transport the oil from Eastern Siberia to the Pacific coast, rather than to China. Instead of running to the south of Lake Baikal, the new route lay to the north of the lake. The planned annual capacity was 50 million tonnes and the length was 3,765 km. Construction was intended to be completed by 2010.[36]

The Kovytke gas project, which by 2004 was controlled by TNK-BP, suffered a similar fate. According to Gazprom, the gas pipeline from the Kovykte deposit should be constructed not to the east for export but to the west in order to create a unified system of gas supply in Russia. Simultaneously Gazprom prepared its own plans for the gasification of eastern regions of the country drawing on gas reserves in other fields. The company also sought to gain control over the Kovytke field. As a result, the export plans were suspended and the government threatened to withdraw TNK-BP's license for Kovykte, as terms of the license were not being fulfilled.

[36] V Elgin, 'The transport infrastructure in the East of Russia' (2005) 7 Oil & Gas Vertical 47–54 (in Russian).

4. Developments in oil cooperation since 2005

Despite the suspension of these two pipeline projects, collaboration in the oil industry between Russia and China has progressed under the new policy regime. Exports by rail and by sea have increased, revised plans for an export pipeline have been agreed and Chinese companies have been able to form joint ventures with Russian companies to exploit oil fields in Russia and to build a refinery in China.

Ongoing oil exports

Deliveries of oil from Russia to China rose dramatically from 3 million tonnes in 2002 to 16 million tonnes in 2006 and have stabilised at 13 million tonnes (Table 1). These deliveries follow five different routes:

- On the East Siberian railway *via* the frontier post at Zabajkalsk;
- On the Far East railway *via* the frontier post at Gridekovo;
- *Via* the Atasu–Alashankou pipeline through Kazakhstan;
- By marine tanker from Sakhalin;
- By pipeline and then tanker from Iran.

The largest share of oil exports comes from Western Siberia *via* the East Siberian railway. At 9 million tonnes, per year, this comprises more than 60 per cent of all deliveries of Russian oil to China (Table 1). Since 2005, after the nationalisation of Yukos, these deliveries have been managed by Rosneft and rose from 4 million tonnes in 2004 to a peak of 10 million tonnes in 2006. This increase can be directly linked to a loan granted by CNPC to Rosneft.

After bankruptcy of Yukos, its assets were sold by auction. In 2005, Rosneft succeeded in acquiring for US$ 9.3 billion Yukos's most valuable subsidiary, Yuganskneftegaz, through a company called Baikalfinansgroop. As Rosneft was unable to raise this amount of cash from domestic sources, CNPC agreed to lend Rosneft US$ 6 billion as an advance payment for the future deliveries of 48.4 million tonnes oil between 2005 and 2010. CNPC passed the US$ 6 billion credit through China's Eximbank to the Russian Vneshtorgbank, which in turn gave the credit to Rosneft. As a consequence, all subsequent deliveries of oil to China made by Rosneft have been carried out under the terms of this arrangement. If the level of oil exports by rail in 2009 remains at the same level as 2008, then Rosneft will have satisfied the requirement to supply 48.2 million tonnes to China.[37]

Deliveries on the East Siberian railway reached a record of 10.3 million tonnes in 2006. Of this, the basic 8.9 million tonnes required of Rosneft crossed at Zabajkalask (Fig. 2). The additional 1.4 million was delivered on the route crossing Mongolia *via* the frontier post at Naushki. The following year, deliveries of oil by rail were reduced to 9 million tonnes even though the plan required that total exports to China not fall below 15 million

[37] Analytical Service of the Oil and Gas Vertical, 'Yukos wreck' (2005) 18 Oil & Gas Vertical 18–23; Analytical service of the Oil and Gas Vertical, 'Under the care of the State' (2005) 18 Oil & Gas Vertical 23–6; 'Rosneft has received credit of US$ 9.35 billion for the purchase Yuganskneftegaz' *RBC News* (5 February 2005) <http://top.rbc.ru/economics/05/02/2005/82832.shtml> (in Russian).

Table 1. Deliveries of crude oil from Russia to China in 1999–2008, in million tonnes

Route	1999	2002	2003	2004	2005	2006	2007	2008
The East Siberian railway	0.5	3.0	4.0	4.0	6.4	10.3	8.9	8.9
Other	0.0	0.0	1.0	2.0	5.6	5.7	4.1	4.1
Total	0.5	3.0	5.0	6.0	12.0	16.0	13.0	13.0

Statistics of Federal Customs service of the Russian Federation, InfoTEK Consalt, No 1–12, 2008 (in Russian).

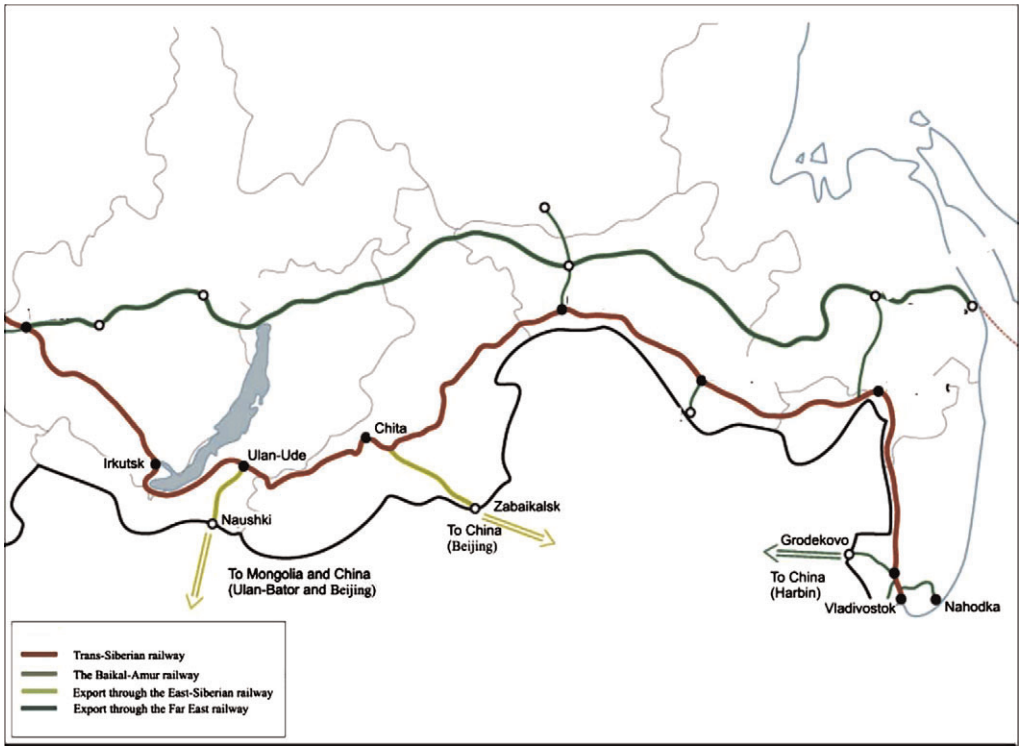

Fig. 2. The systems for delivering crude oil and oil products from Russia to China through Eastern Siberia and the Far East by rail (source: Russian Railways).

tonnes. This reduction was connected with the rail freight rates and the subsequent complete cessation of deliveries to Sinopec *via* Naushki through Mongolia. At the same time, oil deliveries for CNPC through Zabajkalsk were stabilised at pre-existing levels.

In July 2007, the tariffs for the Naushki route were lowered by 22 per cent in the hope of reactivating these exports. But Rosneft considered that this reduction was insufficient. Given that Sinopec was unwilling to renegotiate the price for the oil it received, Rosneft preferred to send the oil *via* pipeline to traditional markets to the west.[38]

[38] A Krasinskaia, 'Rosneft and Sinopec have not agreed' *RBC News* (28 March 2007) <http://www.rbcdaily.ru/2007/03/28/tek/269828> (in Russian).

Russian companies also deliver oil from Western Siberia to China through Kazakhstan. Of the oil which is exported from Russia to Kazakhstan, part goes to the domestic market *via* the refineries at Pavlodar and Shimkentsky, and the other part goes through the Atasu–Alashankou pipeline for export to China. This route sees deliveries to China of about 1 million tonnes per year and these are carried out mainly by TNK-BP. It is likely that Rosneft, Gazprom Oil and Lukoil will also contribute to these exports in the near future. An increase in deliveries of oil in this direction will be made possible through the commissioning of an oil terminal at Barabinsk in the Novosibirsk region of Western Siberia where TNK-BP has oil fields.[39]

Recent years have seen a growth in the amount of crude oil delivered from Sakhalin to the Asia-Pacific region by tanker, from about 3.5 to 12 million tonnes in 2007. These exports are carried from the ports of the Khabarovsk and Primorsk to China (Dalian), South Korea (Pusan, Inchon), Japan (Muroran) and the USA (Anacortes). The operators of these deliveries from Sakhalin include Exxon Neftegaz Limited (the operator of the project Sakhalin-1), Rosneft-Sahalinmorneftegaz and Sakhalin Energy (the operator of the project Sakhalin-2).

Small volumes of Russian and Kazakhstan oil are delivered to the Asia-Pacific region through Iran and also through Black Sea ports by super-tanker round the Cape of Good Hope, and, since 2003, *via* the Israeli Ashkelon – Eilat pipeline.[40]

In addition to crude oil, Russia also supplies middle distillates and a smaller quantity of fuel oil to China. These oil products are delivered from the Angarsk, Khabarovsk and Komsomol oil refineries by rail and by sea from the ports of Primorsk and Khabarovsk. In 2007 the quantity of oil products exported to China reached 3.1 million tonnes.[41]

Despite this variety of operational export routes for oil, the main route continues to be the East Siberian railway *via* Zabajkalsk which accounts for about 9 million tonnes per year, delivered to CNPC. The likelihood of a significant increase in volumes along this route or *via* Naushki to Sinopec is small for both commercial and technical reasons. In the absence of a direct pipeline from Eastern Siberia to China, the most likely source of growing oil export volumes is through Kazakhstan *via* the Atasu–Alashankou pipeline.[42]

New export pipeline projects

The original Yukos plan for an oil export pipeline had a number of deficiencies. Ecological risks arose from its closeness to the world heritage site of Lake Baikal and its passage across the Tunkinsky National Park. The proposed route also crossed an ethno-culturally sensitive area of indigenous communities living in the mountain-taiga territories of Tunkinsky and Zakamensky. Finally, the project ran the risk of excessive dependence

[39] *Statistics on Petroleum Export with Differentiation between the Companies*, InfoTEK Consalt, No 1–4, 2009 (in Russian); 'Gazprom oil and TNK-BP have acquired the right to deliver oil to China through Kazakhstan' *RIA News* (19 September 2008) <http://www.rian.ru/economy/20080919/151440305.html> (in Russian).

[40] Korzubaev, 'The oil and gas industries of Russia during transformation to the international system of energy supply'.

[41] A Korzhubaev, 'Russia–China: A trunk-call position' (2008) 1 Oil & Gas Vertical 55–61 (in Russian).

[42] A Kontorovich and L Eder, 'Prospects of development of a transport infrastructure for oil in Russia' (2008) 7 Econ Man Prob Oil & Gas Complex 35–7 (in Russian).

on a single market, which could allow China, as the sole consumer, to dictate the price and terms of delivery, as occurred in Russia's 'Blue Stream' gas pipeline to Turkey.[43]

The Transneft proposal to construct the pipeline to the Pacific coast had the advantages of avoiding reliance on a single market and of traversing regions with other oil fields which could be tied into the pipeline at a later date. The defects of the Transneft project included the lack of a feasibility study, the seismic risks along the route, the commercial risks associated with the great length and cost of the pipeline, and the lack of sufficient reserves to fill the pipeline.[44]

The Russian government could not accept either of these proposals on account of their associated risks. In 2004, President Putin asked the government to carry out a systematic appraisal of options for constructing oil export pipelines from the eastern regions of the country to the Pacific coast, with a branch to Daqing in north-east China. This feasibility study was to take into account all the various risks, most especially the risks of environmental damage in the region of Lake Baikal.[45]

In 2006, after long consultations, President Putin made the decision to construct an oil pipeline which would pass at least 200 km to the north of Lake Baikal.[46] The following year, all the preliminary studies were completed for the construction of an 80 million tonnes per year pipeline from Taishet in Eastern Siberia to Nakhodka on the Pacific coast.[47] The first stage involved a branch to Daqing with a capacity of 30 million tonnes (Fig. 3).

This route has the advantages that it lies a considerable distance from the Lake Baikal, that it traverses territories with low seismicity and that it passes through regions which are highly prospective for new oil and gas fields. This last factor is of great importance to the development of proven and potential future oil and gas resources across a wide area. The construction of the pipeline would accelerate the development of these fields, would lower the cost of bringing the new oil to market, would provide a larger resource to supply the oil pipeline to China *via* Skovorodino and would allow the oil from these new fields to be sent both to the west and to the east. The alignment of the oil pipeline along the river Lena would allow the use of river transport to deliver cargoes and technical equipment, in addition to rail and air (Fig. 3).[48]

In the early years of operation, the pipeline to the Pacific Ocean would be filled mainly with oil from Western Siberian fields. As production from Eastern Siberia rises, deliveries of oil from Western Siberia would be gradually reduced. The anticipated resource base of

[43] V Suslov, 'Energy transport routes and transport infrastructure in Siberia and the Far East' (2005) 8 EKO 51–62 (in Russian); L Slavinskaya, 'Blue stream: Policy opposing economics' (2001) 8 Oil & Gas Vertical 33–7 (in Russian).

[44] A Kontorovich and A Safronov, 'Superfluous pipes will not be built. Creation of a unified system of transportation of hydrocarbons in the east of Russia' (2004) 6 Oil & Capital 33–9 (in Russian).

[45] V Ott, 'Vectors of transport of oil and gas' (2004) 14 Oil & Gas Vertical 25–31 (in Russian).

[46] A Korzhubaev, I Filimonova and L Eder, 'Strategy for the development of the Russian oil and gas industry of in first half of the twenty-first century' (2007) 4 Oil & Gas J Russia 33–41 (in Russian).

[47] V Izarov, 'On the way to developing the oil and gas resources of Eastern Siberia there will still be many obstacles' (2007) 9 Oil Russia 51–7 (in Russian).

[48] A Kontorovich, A Korzhubaev and L Eder, 'Possibility of resource maintenance for building the oil pipeline from Eastern Siberia to the Pacific Ocean' (2007) 11 Energy Prospects 19–28 (in Russian); V Sedih, 'Building ESPO will give a powerful spur to the development of the Irkutsk oil province' (25 December 2006) <http://www.vstoneft.ru/analit.php?> No 46 (in Russian); N Timakova, 'The oil pipeline will not help' (25 September 2008) Rusenergy (in Russian).

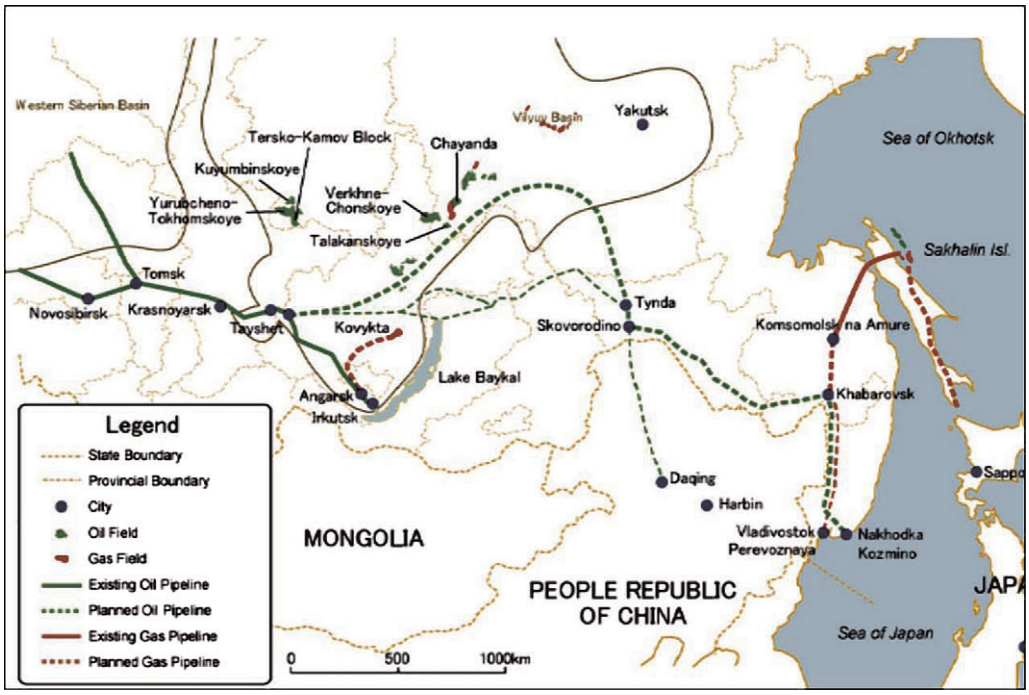

Fig. 3. Oil and gas pipelines in East Siberia and the Far East (source: Transneft).

Eastern Siberia is expected to provide only about 30–40 million tonnes per year. Thus, even at the peak of production, the fields of Eastern Siberia would only be able to fill the branch line to China. Filling the second stage of the oil pipeline to Pacific Ocean would require an additional 50 million tonnes. This incremental volume would be partly delivered from Western Siberia and partly from existing fields in Eastern Siberia.[49]

The original deadline for the completion of the first stage of the project, to China, was the end of 2008, but this was then postponed by at least 1 year. The main causes of this delay were the failure by contractors to honour their contractual obligations and difficulties in constructing the pipeline across the major rivers of Eastern Siberia and in the Far East. In other locations, progress has been delayed by unforeseen complexities of geology and landscape.[50]

The construction of a pipeline to Russian ports on Pacific Ocean was intended to form the second stage of the project. However, in the summer 2008 the President of Rosneft proposed that the first stage of the project should take the pipeline to the coast and only then should the branch line be laid to China.[51] This potential change of plan was linked to

[49] A Kontorovich, A Korzhubaev, I Filimonova and L Eder, *Strategy for the Development of the Oil and Gas Industry of Russia and Export to New Foreign Markets: Asia-Pacific and North America* (IEF RAS, Moscow 2008) (in Russian).

[50] 'Khristenko: the first stage ESPO will be provided by oil' *ITAR-TASS News* (10 July 07) (in Russian); S Shmatko, 'Branch to China will not be completed in 2009' (24 October 2008) Rusenergy (in Russian).

[51] 'Bogdanchikov suggests Chinese to wait' *RBC Daily* (6 September 2007) (in Russian).

the failure to agree a price for the oil to be delivered to China. In October 2008, China agreed to provide Rosneft with an additional loan of US$ 15 billion and Transneft with US$ 10 billion, in return for a guarantee that the branch line to China would be completed and that shipments would reach 15 million tonnes per year by 2011. Negotiations to finalise the deal quickly stalled in late 2008 over the high level of interest proposed by the Chinese, but by May 2009 the plans appeared to be agreed with a completion date in late 2010.[52]

Joint ventures in the oil sector

When China became a net importer of oil in 1993, its national oil companies started to invest in overseas oil exploration and development. Though the initial investments were small, by 1997 CNPC had made major commitments in Sudan and Kazakhstan. By the early years of the twenty-first century, all of China's national oil companies were active internationally and together had investments in more than 40 countries. The primary aim of these operations was to address the commercial ambitions of the companies, but they were also seen as assisting in China's quest to enhance its security of oil supply.[53] The priority targets for this outward investment lay along what the Chinese referred to as a belt of oil and gas, running from the Middle East through Central Asia to Russia. Yet, 10 years after China became a net importer of oil, its oil companies had failed to make a single substantial investment in Russia.

The first real opportunity for a Chinese company to take a stake in a Russian oil company arose in 2002. The Russian oil company Slavneft was to be partially privatised in December of that year through an offering of 75 per cent of its shares. Despite the high initial price of US$ 1.7 billion, the auction attracted great interest from Russian companies. Both Sibneft and TNK-BP declared an interest, and Lukoil, Rosneft and Surgutneftegaz were all believed to be interested.[54]

Later, Lukoil stated that the purchase of Slavneft was not part of its strategic plan. The government forbade Rosneft from joining the auction, as it would contravene legislation which prohibits companies with more than 25 per cent state ownership from participating in privatisations. Surgutneftegaz also decided not to participate for a variety of financial, economic and legal reasons.[55]

Among the Russian participants the greatest chance of success lay with TNK-BP and Sibneft, for, besides the state, the principal shareholders in Slavneft were Sibneft (10.83 per cent) and a trust (13.17 per cent) which represented the interests of Sibneft and TNK. Given the limited range of credible bidders in the auction, the government decided to invite foreign companies. In November the head of the Russian Federal Property Fund gave a series of presentations on Slavneft to foreign investors. CNPC showed interest and

[52] S Blank, 'The Russo–Chinese energy follies' (8 December 2008) 8(23) China Brief; 'Chinese envoy to Russia says pipeline serves strategic goals of both sides' *Xinhua News Agency* (Beijing 10 May 2009).

[53] X Ma and P Andrews-Speed, 'The overseas activities of China's national oil companies: rationale and outlook' (2006) 21(1) Minerals & Energy 1–14.

[54] 'Echo of Slavneft' (5 February 2003) Vedomosti (in Russian).

[55] K Tremasov, 'The annual analysis of trends in Russian markets' (2003) 2 Russian Businessman 14–7 (in Russian).

approached the Russian Ministry of Antimonopoly Policy for permission to acquire 75 per cent of Slavneft at the auction.[56]

Directly before the auction, administrative measures were used to prevent CNPC's participation. A majority of deputies in the State Duma was opposed to the participation in the auction by a foreign state-owned company and wrote a letter to the Russian government. Subsequently, representatives of the government let it be known publically that the participation of a Chinese national oil company in the privatisation of the Russian state company was undesirable. As a result CNPC did not take part the auction.[57] Thus, predictably, the alliance of TNK-BP and Sibneft purchased the state share in Slavneft for US$ 2.5 billion dollars.[58]

Despite this setback and despite the restriction of foreign capital entering the Russian oil and gas sector, since 2006 both Sinopec and CNPC have succeeded in establishing joint activities with the wholly state-owned Rosneft. These include a joint venture oil production company, Udmurtneft, a joint development of the Veninsky block on the Sakhalin shelf, and a refining and marketing joint venture in north-east China. Possible future opportunities may be offered on the shelf off Magadan, in the Arctic seas of Russia and at various locations across Eastern Siberia and the Sakha Republic.[59]

The first step was taken in November 2006, when the Presidents of Rosneft and Sinopec signed a joint-stock agreement defining the principles for the joint management of Udmurtneft, an oil production company in which Sinopec had just purchased a 50 per cent share. Udmurtneft accounts for more than 60 per cent of the oil output in the Volga–Ural region of Russia, with a total annual oil production of about 6 million tonnes and a proven reserve of 78.4 million tonnes.

Rosneft and Sinopec are also jointly exploring the Veninsky license of the Sakhalin-3 project. Rosneft has a 74.9 per cent share of the project and Sinopec 25.1 per cent.[60] Rosneft obtained the license in April 2003 and it has since been extended till 2010. According to Rosneft, the total gas resource in the North Veninsky structure may exceed 100 billion cubic metres. The first well on the South Ajjashsky structure drilled in 2006 also confirmed presence of hydrocarbons.

In October 2007, CNPC/PetroChina (51 per cent) and Rosneft (49 per cent) established in China the Russian–Chinese East Petrochemical Company. The initial objective of the joint venture is to construct a new oil refinery near Tianjin and to operate some 300 gasoline retail stations. The engineering design for the refinery started in late 2008 and the plant is due to go into operation in 2011.[61]

[56] A Sedov, 'The Chinese companions will not receive Slavneft!' (16 December 2002) Komsomol Truth (in Russian).

[57] D Baturin, 'Slavneft will not be given to the Chinese communists' (16 December 2002) Kommersant (in Russian).

[58] U Alexandrov, 'Slavneft: After auction' *Pol News* (21 December 2002) (in Russian).

[59] Rosneft, 'Rosneft and Sinopec have signed agreements on the acquisition of Udmurtnefti' (17 November 2006) Rosneft Official Website <http://www.rosneft.ru/news/pressrelease/11891.html> (in Russian).

[60] Rosneft, 'Rosneft and Sinopec have entered into the joint-stock and operational agreement on the Veninsky block of the project Sakhalin-3' (29 March 2007) Rosneft Official Website <http://www.rosneft.ru/news/news_in_press/12107.html> (in Russian).

[61] Shorthand report of a session of an intergovernmental meeting between Russia and China led by II Cechenym, 26–27 July 2008, Beijing (the Official site of the Prime Minister of the Russian Federation VV Putin) <http://premier.gov.ru/pda/events/310.html> (in Russian); 'Vice-Premier Igor Sechin goes to China for participation in power dialogue' *RBC News* (25 July 2008) (in Russian).

Outlook for oil cooperation

After a faltering start, the extent of oil industry collaboration between Russia and China has grown significantly since 2005. This has occurred despite the new policy approach of the Russian government which emphasis the preference for direct state intervention in the oil and gas industry and the need to constrain the involvement of foreign companies in the exploitation of strategic deposits. Russia's willingness to move ahead with this cooperation probably reflects a combination of factors. First, Russia's export revenues are highly dependent on oil, more so than on gas, and the eastern regions provide an opportunity to raise the level of oil exports.[62] Second, Russia has, in China, a nearby buyer for the oil which already has a track record of importing oil from Russia and which is accustomed to paying international prices for crude oil. Third, Rosneft has been deepening its relations with Chinese oil companies since it took over Yukos's interests in the deliveries of oil by rail. These relations were further cemented by a fourth factor, the financial weakness of Rosneft which required a loan from CNPC to allow Rosneft to purchase Yuganskneftegaz. This financial weakness has been exacerbated by the financial and economic crisis of 2008–09, and the Russian oil companies approached China for yet another loan. Finally, the Russian government and oil companies realise that the oil fields of Eastern Siberia and the Sakha Republic cannot be developed without outside capital and labour.[63]

Despite this progress, the date of completion of an oil export pipeline to China may still be subject to change. On the one hand, Russia seems to be in no hurry to raise its exports to the Asia-Pacific region. On the other hand, China has access to alternative sources of oil supply and has repeatedly shown that it is prepared to spend billions of dollars building oil import pipelines from Central Asia rather than wait for Russia.[64]

5. Developments in gas cooperation since 2005

In contrast to these steps taken in the oil industry, cooperation in the field of natural gas has progressed very little, despite the repeated insistence by the Russian government that it wishes to build one or more export pipelines to China. This section describes the current state of the Kovytke project and a range of other export proposals, and examines the outlook for future collaboration.

The Kovytke project

In June 2007, 3 years after the gas export plans for the Kovytke field were suspended, TNK-BP and Gazprom reached an agreement that Gazprom should purchase 62.8 per cent of the shares of Rusia Petroleum which holds the license for the field and 50 per cent of the activities of the East-Siberian Gas Company which is responsible for regional gasification in the Irkutsk region.

[62] Hanson, 'The Russian economic puzzle: going forwards, backwards or sideways'.
[63] Ferdinand, 'Sunset, sunrise: China and Russia construct a new relationship'; Blank, 'The Russo–Chinese energy follies'.
[64] P Andrews-Speed, X Liao and R Dannreuther, *Strategic Implications of China's Energy Needs*; Blank, 'The Russo-Chinese energy follies'.

It was expected that the parties would close the transaction by 1 December 2007 within a price range of US$ 600–900 million. However, as of June 2009, Gazprom and TNK-BP still have not concluded their negotiations. The main obstacle remains the price, and Gazprom seeks different ways to reduce the price as much as possible.[65]

The existing Memorandum of Understanding signed by Gazprom, TNK-BP and BP states an intention to create a joint venture with investments of not less than US$ 3 billion. Gazprom would have a 50 per cent share, and the balance would be allocated to TNK-BP and BP. Gazprom has agreed to bring the Kovykte field into the joint venture, and BP has agreed to transfer in Rospan, as a subsidiary of TNK-BP which processes, stores and transports natural gas.[66]

Thus, 15 years after the idea of exporting gas from Kovytke to China was first proposed, no concrete progress has been made. The main causes have been the belated involvement of Gazprom in the project and the Russian government's preference for using the gas initially for local consumption. A further obstacle has been the failure to agree a price for the gas to be delivered to China, as will be discussed below.

Alternative export routes from eastern Russia

In June 2007, the Ministry of Industry and Energy of Russia approved a document which evaluated a number of options for developing the gas resources of Eastern Siberia and the Far East, and for exporting the gas to China and other countries of the Asia-Pacific region.[67] Gazprom was to be the coordinator of the programme, following the government's earlier order.[68]

The proposed programme sought to balance three priorities: satisfying the demand for gas by Russian consumers; optimising the fuel and energy balance in Eastern Siberia and the Far East; and developing a coordinated system for exporting gas at price conditions favourable to Russia. To this end it provided fifteen options for developing the regional gas industry offering different sources of supply and different transport routes for domestic consumers and for export, and options for creating a unified national gas network.

The recommended option, 'East-50', does not result in a unified national grid, but rather focuses on satisfying local demand from local gas supplies. Annual production of 5.7 billion cubic metres from Irkutsk (including the Kovytke field) and 5.4 billion cubic metres from Krasnoyarsk would satisfy demand in East Siberia. Production in the Sakha Republic of 35 billion cubic metres per year would provide sufficient natural gas for the republic and allow deliveries to other regions of the Far East and for export (Fig. 4).

Gas from Sakhalin would be transported to consumers in the Sakhalin region, and in Khabarovsk territory with an annual volume of 8.3 billion cubic metres and to an LNG

[65] A Mihailov, 'Kovyktinsky knot: Gazprom and TNK-BP' (5 April 2008) Rosbalt Business (in Russian).

[66] Gazprom, 'Gazprom, BP and TNK-BP have signed an agreement on the basic conditions of cooperation' (22 June 2007) Gazprom Official Website <http://www.gazprom.ru/news/2007/06/221700_24138.shtml> (in Russian).

[67] Ministry of Energy of Russia, *Programme for the Creation in Eastern Siberia and in the Far East a Unified System for the Extraction and Transportation of Gas, Taking into Account Possible Export of Gas to the Markets of China and Other Countries of Asia-Pacific Region,* No 340 (3 September 2007) (in Russian).

[68] Ministry of Energy of Russia, *On the Appointment of Gazprom as the Coordinator of the Programme to Create in Eastern Siberia and in the Far East a Unified System for the Extraction and Transportation of Gas Taking into Account Possible Export of Gas to the Markets of China and Other Countries of the Asia-Pacific Region*, No 975 (16 July 2002) (in Russian).

Fig. 4. Existing and projected gas pipelines in Eastern Siberia and the Far East (Source: Ministry of Energy).

liquefaction plan in south Sakhalin at a rate of 27.6 billion cubic metres per year. Additional volumes of gas would be exported by pipeline as follows:[69]

- from 2010 to consumers of the Primorski Territory at a rate of up to 5.1 billion cubic metres per year;
- from 2012 to China, *via* a branch line, and to South Korea, through a submarine pipeline beneath the Sea of Japan, at a rate of 25 billion cubic metres per year;
- from 2016, the level of natural gas exports can rise to 50 billion cubic metres per year by connecting the gas fields of Yakutia to the Sakhalin–Vladivostok pipeline at Khabarovsk.

A recommended variant of the 'East-50' option explicitly excludes the expansion of gas production in the Irkutsk region. Implementation of this policy would suspend operations on the Kovytke field indefinitely. Deliveries of gas from the Krasnoyarsk region would be directed towards a unified system of gas supply in Russia and would in this way satisfy demand across Eastern Siberia. At the same time, the gas fields of Sakhalin would provide supplies to the Khabarovsk and Primorsk regions and would supply LNG for export. Later, gas would be exported to South Korea on a route from Vladivostok to Seoul and to China on a route from Dalnerechensk *via* Harbin to

[69] Ministry of Energy of Russia, *On the Appointment of Gazprom.*

Shenyang. This would require a pipeline from the Yakutia region to be in operation from 2012. The total volume of gas exports to China and Korea would rise to 50 billion cubic metres per year.

The proposals for a network of gas export pipelines envisaged by the ''East-50'' programme are not sufficiently mature to be realistic at present. There are no detailed studies of the proposed routes nor of likely production volumes, no detailed plans relating to gas-processing and petrochemical plants, and there have been no discussions on prices and commercial terms.

Moreover, the recommended variant of 'East-50' proposes freezing the development of the Kovytke field, the largest and best prepared project in the region. This is unlikely to be acceptable from the perspective of the social and economic development of the Irkutsk region and in the context of the strategic interest of the State to create in Eastern Siberia and in the Far East a unified system of gas extraction, transportation and supply.[70]

Gas export from west Siberia

In March 2006, during the visit of the President Putin to China, the idea of building of an 'Altai' gas pipeline to deliver West Siberian gas to the western areas of China was announced for the first time.[71] Assuming that the parties could reach agreement on quantity and price, the proposed pipeline would run through the Altai Region and the Altai Republic and connect to the west-to-east pipelines in Xinjiang, north-west China. The distance to the Chinese border would be about 2,670 km. Since that time no other announcements have been made concerning this proposal.

Outlook for gas cooperation

Although Gazprom has the role of official coordinator for all gas export pipeline projects, it is evident that neither the company nor Russia's government has a clear strategy for managing the exports of gas to China. As a result, official proposals for export pipelines to China are repeatedly changed and postponed. A number of other factors also act to prevent a firm decision being made on a pipeline.

Firstly, despite rapid growth of consumption of gas in China in the early years of the twenty-first century, the domestic market for natural gas is not sufficiently developed. The main centres of consumption are concentrated in the coastal areas of southern and eastern China, as well in the main cities of northern China. But gas from East Siberia or the Far East would be delivered to north-east China where the market for natural gas is underdeveloped. In this respect, China has not given guarantees concerning the terms and volumes of deliveries of natural gas from Russia.

Secondly, China has offered the price for natural gas from Russia which is only 30–50 per cent of price of natural gas sold by Gazprom in Europe. Under such terms, the

[70] A Kontorovich, A Korzhubaev and L Eder, 'Prospects for deliveries of natural gas from Russia to the countries of the Asia-Pacific region' (2008) 1 Min Res Russia 21–31 (in Russian).

[71] A Korzhubaev and L Eder, 'The gas market of the Asia-Pacific region. The strategy of Russia in the question of deliveries' (2008) 1 Econ Mgmt Probs Oil & Gas Complex 9–15 (in Russian).

construction of a gas pipeline from Russia to China does not appear to be a commercially attractive undertaking.[72]

Thirdly, although the Kovykte field has been well appraised and is uniquely well placed to deliver gas to China, no decision to develop and export gas from this field can be made until the issue of ownership is resolved.

Finally, it appears that Gazprom's efforts are being directed at gaining strategic control over the gas fields of Eastern Siberia, and at investing in new capacity in Yamal and Sakhalin, rather than at constructing export capacity for China.

In the absence of concrete arrangements between Russia and China for gas deliveries, China has taken practical steps to secure supplies of natural gas from Central Asia. In July 2008, Turkmenistan and China signed a contract for purchase of 30 billion cubic metres per year of gas for a period of 30 years. The pipeline will pass from Turkmenistan, through Kazakhstan, into China's Xinjiang and from there to the industrial regions of south-east China. The length of the trunk line is 4,860 km and the total length of the network will be 7,000 km, including the branch lines. Within China it will follow the route of the existing West-to-East pipeline. Construction is due to start in 2009 and the first deliveries of gas are planned for 2010.

Thus, it appears that China's requirement for gas may be satisfied until the year 2020, drawing on its growing domestic supplies, rising LNG imports from Australia and the Persian Gulf, and pipeline imports from Central Asia.[73] In these circumstances, the incentive for Russia to embark in the near future on a major programme of gas development and pipeline construction in East Siberia and the Far East is dramatically reduced. The most likely outcome is that gas from Kovytke is used locally and that gas from Sakhalin is exported in the form of LNG. The development of further gas deposits in Eastern Siberia may be postponed till 2020.

6. Conclusion

This paper has taken an historical approach to examine how and why changes in Russia's domestic energy policy has affected the progress of cooperation between Russia and China in the field of oil and gas. For many years economic logic seemed to suggest that such cooperation between these two countries would increase rapidly as Russia sought to expand its exports of oil and gas, and China to expand its imports. This economic logic was complemented by a much heralded strategic partnership.[74] The evidence presented in this paper is consistent with the argument that the relationship between Russia and China, far from being partnership of deep strategic significance, is rather an 'Axis of

[72] O Vinogradova, 'What to do with Kovykta?' (2006) 11 Oil and Gas Vertical 44–9 (in Russian); E Cirlina, 'Gazprom and China could not agree about the price for gas. Russia defines it taking into account oil cost, and China – coal' *RBC Daily* (17 July 2006) (in Russian).

[73] Analytical Service of Oil and Gas Vertical, 'Oil and gas of Turkmenistan 2007' (2008) 7 Oil & Gas Vertical 31–37 (in Russian); U. Nazarova 'Promises of Turkmenistan' *RBC Daily* (28 July 2008) (in Russian).

[74] Paik, 'Sino-Russian oil and gas development cooperation: the reality and implications'; Ferdinand, 'Sunset, sunrise: China and Russia construct a new relationship'; P Andrews-Speed, X Liao and R Dannreuther, *Strategic Implications of China's Energy Needs*.

Convenience' and a relationship which is limited in scope and depth by divergent priorities and mutual distrust.[75]

Despite the general improvement in Sino-Russian relations since 2005, progress in the field of energy cooperation continues to develop slowly, some 15 years after the two governments first identified the opportunities for collaboration in this field. The Chinese side has been particularly disappointed, for its priority was the construction of pipelines to deliver oil and gas from Eastern Siberia to China. Although oil continues to be shipped to China by rail and although Russian and Chinese companies have formed joint ventures, neither an oil nor a gas export pipeline has yet been completed. In the case of the oil pipeline, the construction plans have been finalised, yet the completion of the branch line to China has been delayed by construction problems, and actual deliveries of oil may be further delayed by disagreements over price. In the case of gas, the Russian side continues to have no firm strategy for the development of gas in East Siberia and the Far East, let alone concrete plans for exports to China.

This divergence between overall political and economic relations between the two governments and cooperation in the field of energy has been caused principally by features of Russia's oil and gas policy. Two phenomena require explanation. The first is why the original enthusiasm in the 1990s for building export lines has disappeared. The second is why elements of Russia's strategy continue to be so unclear several years after new policies and structures were put in place.

The first phenomenon can be explained by the sudden change of approach to the management of the oil and gas industry brought in by Vladimir Putin after taking over the Presidency in 2000. The initial plans for cross-border pipelines were developed by individual companies, CNPC and Yukos for the oil pipeline and CNPC and Rusia Petroleum for the gas pipeline. These proposals had the broad support of the federal government and of the regional governments. However, the plans for these projects were drawn up at a time when Russia possessed no coherent energy policy and, indeed, had very little control over its oil and gas industry.

President Putin sought to tighten state control over the sector and to improve the management of the country's oil and gas resources. Appraisals of these early export plans carried out by the Russian government showed that they failed to address a number of national and regional concerns, for example environmental protection, local energy requirements, linkages with other hydrocarbon deposits in the region and risks associated with the export market, namely China. After 3 years of feasibility studies and consultation, the revised plans for an oil export pipeline were published. These included a trunk line to the Pacific Ocean and a branch line to China. The line to China was due to be completed by the end of 2008, but has been delayed by construction problems and by a failure to reach agreement with China over the price for the oil. Over the same period, the quantity of oil shipments by rail to China has been raised, facilitated by a large loan made by CNPC to Rosneft, and Chinese and Russian companies have established a number of significant joint ventures in both countries.

[75] B Lo, *Axis of Convenience. Moscow, Beijing and the New Geopolitics* (Chatham House, London 2008).

In this respect, the slowness to establish substantial cooperation in the field of oil may be explained by the much needed policy shift made by the new government after the year 2000, as it sought to gain control over the industry and to set new policy priorities which addressed the needs of the country. Once the new policies and structures were in place, Russian and Chinese oil companies were able to establish joint ventures. But the Russian government itself continued to appear to be ambivalent or at least have no sense of urgency over the construction of an oil export pipeline to China.

In the case of Russia's gas sector, policy ambiguity and confusion appear to persist, even 7 years after Gazprom was appointed as the official coordinator for the development of the gas sector in the eastern part of the county and for the nation's gas exports. Despite the publication of many plans and proposals, the government and Gazprom appear to have reached no conclusion over how to develop the gas resources of East Siberia and the Far East. One official reason is stated to be the failure to agree a price with the Chinese which is acceptable to Russia. But behind this lies the more important factor which is that Gazprom's immediate priority in Eastern Siberia is to gain control of the Kovytke project. As a result, no substantive collaboration currently exists between Russia and China in the gas industry.

Repeated delays and changes in Russia's export plans for oil and gas have caused China to see Central Asia as the preferred source of overland oil and gas imports. Given the much larger distances involved, this makes little commercial or economic sense, but addresses the Chinese government's desire to increase the supply of oil and gas *via* pipeline in order to constrain its dependence on imports by sea. These projects also provide China's national oil companies with substantial upstream investment opportunities, as well as giving the Central Asian states access to a large and growing market.

In the case of oil, China will be able to receive and use any crude oil delivered from Russia by pipeline, whenever construction is completed. This will not be the case for gas. The recent decisions by China to expand its imports of LNG and to build a gas import pipeline from Central Asia may postpone by a decade or more the realisation of a gas import line from Russia.