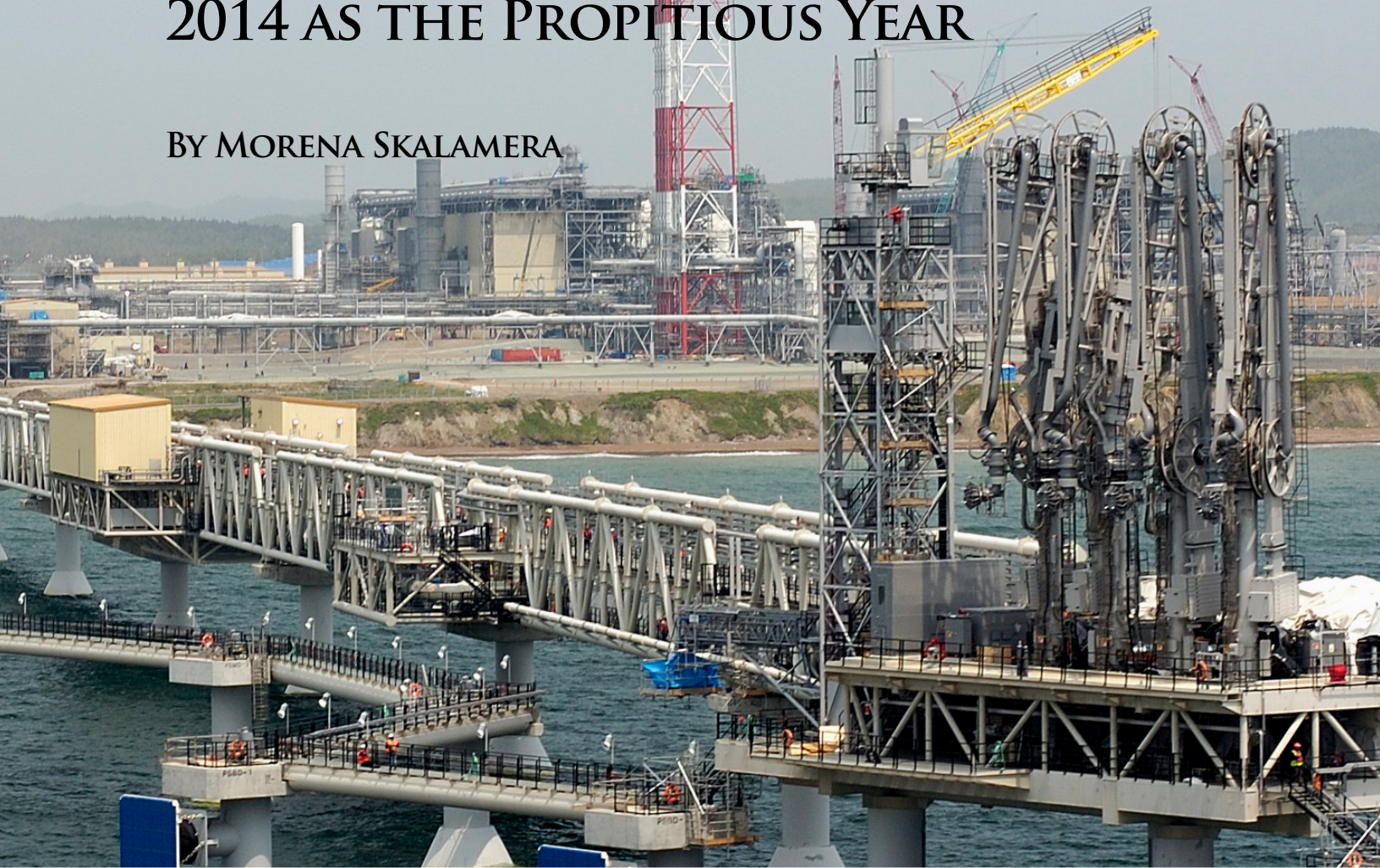


THE GEOPOLITICS OF ENERGY PROJECT

BOOMING SYNERGIES IN SINO-RUSSIAN NATURAL GAS PARTNERSHIP

2014 AS THE PROPITIOUS YEAR

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The Geopolitics of Energy Project
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Cover photo: A Gazprom liquid natural gas shipping plant off the coast of Sakhalin, in the Russian Far East.
(Photo courtesy Gazprom)

Abstract

A central debate in the study of energy geopolitics concerns the relative importance of the Sino-Russian energy alliance and the lack of the long awaited deal in natural gas. The deadlock in natural gas is all the more puzzling when contrasted to the two countries' flourishing ties in oil. I explore these developments by comparing the outcomes of the two deals and highlighting the distinctiveness of oil trade vis-à-vis gas trade. I subsequently describe the interplay of different domestic, regional and international policy changes currently taking place, which may pave the way for a breakthrough in the two countries' gas talks in 2014. I then turn to two scenarios, one optimistic and the other pessimistic, to highlight the increasingly binding forces and some residual fault-lines in the relationship. I conclude by assessing the implications that the two countries' increased energy synergies might have for the broader world.

After stagnating throughout most of the 1990s and 2000s, the Sino-Russian efforts to conclude a gas deal are finally gathering momentum. In March 2013 at the Russia-China summit in Moscow, the two countries signed a large number of energy deals and crucial compromises have been reached setting the stage for a breakthrough by May of 2014. Further details have been settled in October during Russia's Prime Minister Dmitry Medvedev's state visit to Beijing. Russia has abandoned its initial resolve in pushing the Altai route in favor of the 'eastern' route for the Power of Siberia gas pipeline. With that decision, Moscow decided to forego some arbitrage opportunities between the European and Chinese markets and opted for a more pragmatic approach. At the same time, China has recognized that in the short-medium term its shale gas production may not be as buoyant as it initially seemed, due to a series of "above ground" obstacles. Faced with a pattern of increasing gas imports, China has been fostering the much needed gas price reform. This, of course, works in favor of a deepening gas relationship between the two giants. Moreover, Russia also offers an ideal combination from China's security perspective: greater energy independence from sea lanes dominated by the U.S. Navy, and enhanced leverage in dealing with the United States in the South China sea. In sum, this article strongly supports the suggestion that despite persisting residual tension, powerful drivers on both sides have been in motion to bridge the price gap and concretize the deal by the end of 2014.

The Historical Setting

Cooperation between Russia and China began in the early 1950s when under the framework of socialist allies, China was given Soviet aid, including the sharing of secrets necessary for the production of atomic and nuclear weapons and the skills required to develop a modern oil industry, which was at the time regarded as aid to oneself.¹ In the 1950s when the Soviet power and technology were ascendant, China remained a premodern periphery in need of a vanguard Moscow. China was seen by the Soviets as subordinate both intellectually and technically, but as the Soviet Union's oldest little brother, China aspired to become just like its elder and better. The fundamental differences went to the essence of the two societies' images of themselves and turned into an ideological clash, when Nikita Khrushchev, in his famous secret nocturne speech denounced Stalin for a series

¹ Hopf, T. *Identity Relations and the Sino-Soviet Split*, in *Measuring Identity – guide for social scientists*, Abdelal and Herrera ed., Chapter 10, pp. 279-316

of crimes. After that speech, the self-confident Mao openly challenged Moscow's predominance, considering now himself as the true leader of the socialist movement.² In October 1959 Mao and Khrushchev met the last time. Relations deteriorated quickly, and by 1962, economic activity between the two countries had been reduced to 5 per cent of 1959's level. From 1965 to 1973, the Soviets engaged in a sustained and massive military buildup in the Far East, as China became in the Soviets eyes, a potential adversary. Henry Kissinger shrewdly took advantage of the situation to push forward his most brilliant achievement, a triangular relationship involving the Soviet Union and China with the United States at the center.³ Mao's moves towards the United States in fact froze Sino-Russian relations into an adversarial posture from which they did not recover until the breakup of the Soviet Union. Given this peculiar background, any serious discussion of relations between China and Russia must take account of both history and geography. Even the energy relations, where admittedly profit and interests appear to be the main drivers, ought to be unpacked keeping in mind these important historical legacies. For instance, an Irkutsk-to-China gas pipeline was proposed far back in Soviet times. However, the dream only started to take shape in 2003, when both Russian and Chinese leaders and political elite recognized that the total breakdown of relations in the 1960s and 1970s, constituted a tremendous strategic mistake.⁴

It has been argued that relations between the two giants are the best they have ever been. In March 2013 Xi made Russia his first stop on his maiden foreign trip as China's leader and in 2013 Putin and Xi met no less than five times.⁵ In the last decade their worldviews and national identities have converged on a number of strategic issues including Asia-Pacific security, Iran's nuclear program, Syria, and other global hot spots.

To get a more concrete sense of how the Sino-Russian interests increasingly cohere is useful to look at bilateral trade patterns. Total trade between Russia and China has grown from 6,181 billion \$ in 2000 to 78,031 in 2011⁶ and trade volume is expected to hit 100 billion U.S. dollars in 2014.⁷ However, in the last two decades China has mostly bought Russian raw materials while selling Russians value-added consumer and industrial goods, fueling Russian fears about becoming a natural-resource appendage of resource-hungry China. In fact, China is Russia's largest trading partner, while Russia is China's ninth largest. To placate such worries China has in recent years rapidly increased cooperation with Russia's military, making the development of military technology and cooperation between the two countries' militaries⁸ a significant aspect of this relationship.

² As Hopf writes, "In sum, the growing identity gap with the Soviet Union's very Closest Other resulted in the transformation of Soviet interests in China and elsewhere in the world." Ibid.

³ For Kissinger's personal analysis of these events see "Mao, Khrushchev, and the Sino-Soviet Split", pp. 161-172, in Kissinger H. *On China*, NY: The Penguin Press, 2011

⁴ Yet the "strategic partnership" established in 1996 by Yeltsin and Chinese President Jiang Zemin, appeared long on rhetoric and short on substance. It was only with Putin when it has taken on considerable weight as economic and political cooperation deepened.

⁵ They are already scheduled to meet again five times in 2014.

⁶ Source: International Monetary Fund, Directions of Trade Statistics, <http://elibrary-data.imf.org/DataReport.aspx?c=1449303&d=33061&e=170921>, Accessed in January 2014

⁷ According to Xinhua, the Chinese official news agency: http://news.xinhuanet.com/english/china/2013-06/14/c_132456315.htm

⁸ On July 8-10 2013 the two countries held their biggest joint naval exercise in the Sea of Japan, the "Joint Sea-2013 exercises," to which China reportedly sent four destroyers, two guided missile frigates, and a support ship. Russia dispatched 11 surface ships, including a guided-missile cruiser, and one submarine.

But strategic partnerships are not just about the convergence of certain interests; they are about the fundamental principles of internal and international order. Continued authoritarianism and a willingness to pursue economic liberalization without embracing democracy and enhancing society's freedoms, could be a joint concern that only strengthens the bond of this partnership. Despite their mutual concern about American strategic ambitions, a genuine desire for mutually advantageous economic cooperation dominates the relationship. And the economic relationship is indeed based heavily on China buying Russian oil and the two sides trying to agree on a much-anticipated deal in natural gas. Reaching an agreement on gas would be consistent with Russia's 'pivot' to China, but also with China's "Marching West" as an a response to Obama's military "pivot to Asia" that many in Beijing perceive as policy of containment. While Sino-Russian relations have been the best in their centuries-long history, failure to reach an agreement on gas in the last fifteen years has been striking. Many observers have attempted to understand why the two actors have not reached the level of development their geographical proximity and apparent energy complementariness implies.

Natural gas trade has been hostage to lingering frictions whose background determinants are: historical mistrust, Russia's perceptions of China's demographic threat and growing competition in Central Asia. All those impediments still cause mutual suspicions and should not be discounted. Nonetheless, despite competition in Central Asia, once Russia's imperial backyard, or Russia's concerns about a Chinese invasion of sparsely populated East Siberia, under similar circumstances a deal on oil has been reached, and recently even largely expanded.⁹ The oil deal indeed suggests that mutual distaste can be overcome when the economics look good and perhaps some other circumstances are in place. A growing body of literature has speculated over these *other* incentives factoring into the relationship.

As this analysis is about to show the two single most important obstacles in gas cooperation have been price disagreements and Russia's refusal to allow Chinese investment in Russian upstream, which, as I show, are interlinked. Very little analysis has so far considered the catalytic link between the gas price deadlock on one side, and Chinese demands about stakes in Russian upstream on the other.

Hence, the analytically interesting question is why has cooperation in oil been so successful, and in contrast, after more than 15 years of negotiations there is no cooperation in gas? Why has the oil relationship flourished in line with a regained Sino-Russian political dynamism while the gas relationship has stagnated? Why has the gas relationship become so politicized? What recent political and economic forces, in particular, are acting as immediate catalysts toward a breakthrough in gas? To explain what I consider a decisive transformation in the two countries' gas relations, I argue that strategic decision-making at critical, historic turning points, profoundly shapes ultimate economic cooperation. I believe that, for a number of reasons that I will now turn to, year 2014 could be such a turning point in Sino-Russian natural gas relations.¹⁰

⁹ For example, if we take the largely unfounded but highly emotional concerns that the borders of the Russian state are sooner or later going to be redrawn by a Chinese demographic tidal wave and the more realistic fears of growing Chinese competition in Central Asia, the booming Sino-Russian cooperation in oil provides empirical evidence that these impediments could be overcome when the economics of the deal are good and there is sufficient political will to make it happen.

¹⁰ I rely on over 30 interviews with energy executives and energy specialists from Russia and China. Most of them have been involved in the policy processes and discussions relating to the Sino-Russian cooperation in gas and oil.

The pricing issue

Between 2004 and June 2013, the China National Petroleum Corporation (CNPC) and Russia's Gazprom (and their governments) concluded no less than eight agreements for gas trade but have yet to reach a deal on actual deliveries. In March 2013 Gazprom and China National Petroleum Corporation (CNPC) signed a memorandum of understanding for the delivery of 38 bcm¹¹ of natural gas to China over 30 years starting in 2018 with the option of expanding deliveries to 60 bcm.¹² At the beginning of September 2013, Gazprom and the CNPC signed basic conditions for the long-term deal. The agreement terms cover the start date and volume of gas deliveries,¹³ the take-or-pay level, the amount of guaranteed payments, and the gas transfer point. However, the companies did not specify a solution to, what is known as the main stumbling block – the issue of price.

In June 2013, CNPC proposed linking the gas to the Henry Hub liquefied natural gas price (LNG).¹⁴ Gazprom replied that it was not prepared to coordinate its prices with those for American LNP.¹⁵ In October 2013, Gazprom and CNPC were able to agree on a binding contract to a basket of oil products in Singapore instead of gas prices in the United States, as urged by China. But even this compromise did not bring the parties to a final agreement: the key question of the relationship between the prices of oil basket and the contract price of gas is still not settled. According to a Chinese industry insider, Beijing suggests a final price close to the purchasing price of Turkmen gas on the border between Kazakhstan and China, but Gazprom wants about \$ 100 more.¹⁶ Thus, final price terms were not agreed, meaning that talks ran into 2014.¹⁷ Much of existing analysis has stressed that the main obstacle to moving this pipeline off the drawing board has been, indeed, a price disagreement. However, in the last fifteen years of talks, most observers missed a great deal of the ongoing negotiations dealing with issues accompanying price disagreements.

Apparently China cannot afford the price Gazprom has been offering due to strict regulations on China's domestic retail gas prices. Yet, if we take the oil deal as a precedent, in 2009 Rosneft and Transneft closed an oil-for-loans deal with CNPC in which Russian companies borrowed \$25 billion from China in exchange for crude supplies. In 2011 when Russia started pumping oil to China through the newly build pipeline, China's NDRC¹⁸ also had in place strict regulations over oil prices.¹⁹ When international crude oil prices increased in 2010-2011, the NDRC did not increase downstream fuel prices at the same rate, causing refiners, especially NOCs, profit losses on their downstream businesses and forced them to increase their fuel product exports. In fact, Chinese NOCs experienced negative margins in 2012, and used their upstream and other business

¹¹ Bcm = billion cubic meters

¹² Financial Times, "A cap on Gazprom's ambitions", June 5, 2013

¹³ Which is, at least 38 billion cubic meters of gas per year to China

¹⁴ Itar-Tass News Agency "Russia's Prime Minister visits China with official delegation", October 22, 2013

¹⁵ Liquid Gas Products

¹⁶ Initially Russia was offering the price of 400 \$/ 1000 cm, late reduced to 350 dollars. China imports the gas from Central Asia at 200 \$/1000cm. Although both sides made concessions and the gap has been closing, the difference is still around 100\$.

¹⁷ Kommersant.ru, «Газпром» привязался к Сингапуру Но все еще далек от соглашения о поставках в Китай, October 23, 2013

¹⁸ China's National Development and Reform Commission

¹⁹ The pricing system allowed the NDRC to adjust retail prices when the moving average of imported crude prices fluctuated outside of a 4 percent range within 22 consecutive working days for diesel and gasoline.

segments to offset losses on downstream sales.²⁰ In natural gas the situation is very similar. In July 2103, the NDRC has announced that for non-residential users gas prices will increase by an average of 15 percent across the country.²¹ These Chinese government's new reforms in gas reflect a needed move to rise prices in order to make up for losses from selling high-priced imported gas at fixed domestic rates.

In fact, if we take the oil deal once again as a yardstick of comparison, in the spring of 2011 a dispute between Rosneft and CNPC began over price. China was unhappy with the price it had to pay for the transportation of oil through the ESPO pipeline. The conflict lasted more than a year and it was solved in 2012 when Rosneft agreed to grant a discount of \$1.5 per barrel for its oil,²² on the condition that CNPC pays its debt of \$134 million.²³

Hence, price disagreements occurred both in oil and gas cooperation, but in oil both sides compromised and moreover, recently even expanded their trade volumes.²⁴ Meanwhile, a consensus in gas has been still missing.

Given the similarities in China's domestic hurdles to liberalize both markets, and considering that China already buys expensive gas at the international markets whose price is kept artificially low domestically, (thus causing losses in the retail sector), it is not entirely clear why China and Russia agreed on the pricing of Russian oil while have not reached a consensus over the pricing of Russian gas. Over a decade of unsuccessful negotiations in gas stand in sharp contrast to the two countries fruitful cooperation in oil. Why have gas negotiations proven so elusive, while Sino-Russian oil cooperation is growing in scale and profits? To solve this puzzle, I first propose to look at how oil and gas differ in terms of their production and transportation processes and associated value-added chains. Second, I show how the Russian and Chinese governments evaluate their energy security, given these differences. Third, I show how timing is crucial for such grand energy projects to be implemented. And finally, I detail, what have been the crucial impulses at a global, interregional and domestic level in both countries, that make a strong case for reaching a gas deal in 2014.

²⁰ See EIA: <http://www.eia.gov/COUNTRIES/cab.cfm?fips=CH>, Last Revised April 22, 2013

²¹ See Energy Manager Today, China Raises Gas Prices 15%, July 12, 2013

²² According to some sources, the Chinese demanded a discount up to \$ 10 a barrel, and agreed to a \$ 1.5 only because of the outbreak of the "Arab Spring", which threatened the security of supply of oil to China from the Middle East.

²³ RT, China gets oil discount, April 16, 2012

²⁴ With a promise to double Russia's oil export to China.

Interpreting pipeline Oil vs. Natural Gas trade

While addressing why oil cooperation has worked, it is important to highlight the distinctiveness of the economics of oil and gas. Gas pipelines are different from oil pipelines in three important ways. First of all, since the value of what is being transported is a lot lower in gas than in oil, the economic hurdle is higher. The second factor is that with oil, it is only necessary to get it to the sea, where its economic value can be pretty easily calculated even without committed buyer(s) since it is an internationally traded commodity with well-known quality and location differentials. Given that gas is a regionally traded commodity, no large international gas pipeline is built (or indeed gas field is developed) until bankable sales agreements are signed with creditworthy purchasers who financially commit to buy the gas.²⁵ The final factor is that because of the predominance of transportation by pipeline, gas is a less fungible commodity than oil, which can be divided and shipped easily. Due to a higher level of risk, investments and sunk costs involved, gas contracts often include specific provisions allocating risk between seller and buyer, typically long-term contracts and take or pay provisions.²⁶ Everything else being equal, due to the inherent characteristics of gas, the consumers' relative vulnerability to disruptions is higher than in oil, because as a resource it cannot be replenished as easily. The different characteristics of these two commodities also explain why a degree of trust is more needed in natural gas cooperation than in oil trade. Also, absolute material gains from cooperation are greater in oil.

²⁵ Author's Interview with Edward Chow, February 2014.

²⁶ For a more detailed analysis on the differences between oil and gas and their impact on market and value-added chains, see Balmaceda (2013) "Politics of Energy Dependency: Ukraine, Belarus, and Lithuania between Domestic Oligarchs and Russian Pressure", University of Toronto Press, p. 33

How did the oil deal happen?

Since the breakup of the Soviet Union neither the Russian government nor the management of the big national oil companies (NOCs) sought active involvement in the Eastern direction. For great part of the 1990s Russia's preferred option was to lean west. It was only in the early 2000s that Khodorovsky has made its first independent moves to China with his company Yukos. On China's side, in early 2000s the leadership's growing interest in Russian oil was driven by the rising international price of oil.²⁷ Around that time, the Chinese government had included the Russian oil pipeline in its five-year plan and was lobbying hard for it in Moscow. In February 2003, Putin met with the members of the Russian Union of Industrialists and Entrepreneurs (RSPP) at the Kremlin. In what was essentially a meeting where Putin has enunciated the principle of "equal distance," according to which private businessmen would refrain themselves from interfering in state politics. While the majority of the oligarchs seemed internalizing the new rules, Khodorovsky engaged in a denunciation of the system's corruption, while pressing Putin to approve Yukos's pipeline to China. Putin refused, saying that he supported Transneft's plan to build a pipeline to the Pacific. At that point, Khodorovsky warned Putin that by turning away from the China oil pipeline, the Kremlin was insulting a rising great power. By openly accusing the president of incompetence and vocally taking a stance in foreign policy towards China, Khodorovsky had pushed too far.²⁸ He was arrested on 25 October 2003 and Yukos assets were sold at auction to cover its tax debts, and were acquired by Rosneft in December 2004.²⁹ In 2005, against the background of higher oil prices, the Russian government indeed decided to build ESPO to the Pacific, with a spur to China. This solution was Putin's favored; a route that in order to grant access to other Asian markets, at a larger cost added an extra three thousand kilometers and reached the Pacific, at the port of Nakhodka.³⁰ The deal with China was signed in October 2008, when Russian-Western relations were at their post-Cold War low due to Russia's invasion of Georgia. It was only sealed, however, in February 2009, when China agreed to provide credits to Rosneft and Transneft. Indeed, in 2009, the China Development Bank extended a \$25 billion credit to Rosneft, which produces oil, and Transneft, which runs Russia's oil pipeline network. In exchange for the Chinese loans, Russia pledged to sell China 15 million tonnes of oil annually for 20 years, starting in 2011. In the aftermath of the global financial crisis, which hit the Russian economy severely, Moscow was compelled to resort to a Chinese source for funding to repay debts and refinance loans in the short term.³¹ The Russian GDP contracted by 8 percent while the stock market lost about 60 percent of its value,³²

²⁷ According to some observers, China's Prime Minister Zhu Rongji have for most of the 1990s miscalculated by relying on cheap oil from the Middle East and not setting Sino-Russian oil cooperation higher on the agenda. Nevertheless, by 1999, Rongji was in Moscow injecting new enthusiasm into the Sino-Russian oil cooperation.

²⁸ For a fascinating and detailed account on the Yukos Affair, please see Gustafson T., *Wheel of Fortune – the battle for oil and power in Russia*, Harvard University Press, 2013

²⁹ China Daily, "Russia's Rosneft new owner of main Yukos subsidiary", 23 December, 2004

³⁰ This route was chosen partly as means of avoiding dependency on one single buyer of oil namely China, partly as a way to boost Russian influence in the Pacific region, and partly because construction of the EPSO pipeline would also speed up socio-economic development in the eastern part of the country.

³¹ Putin's marketizing reforms during his first term helped sustain growth, but if one discounts the GDP effects of rising energy prices, the underlying growth rate has been modest.

³² For a detailed analysis see Rutland P, *The Impact of the Global Financial Crisis on Russia*, Russian Analytical Digest n.48, October 2008; Mankoff J., *The Russian Economic Crisis*, Council on Foreign Relations, Special Report No. 53 April 2010; Gaddy C. and Ickes B. *Russia after the Global Financial Crisis*, Eurasian Geography and Economics, 2010, 51, No. 3, pp. 281–311

which marked a blow to Moscow's quest for playing China and Japan off each other, while gaining a more dominant role in the Asia-Pacific region and balancing the investment of both partners. Indeed, the financial crisis ended Russia's triangularism³³ and marked a historic turning point in Sino-Russian oil cooperation; Russia was finally pushed into agreeing with China as, following the economic collapse, Moscow needed immediate financial help.

According to an industry insider,³⁴ Rosneft had debt of USD 13 billion that it had to pay back by the summer of 2009.³⁵ As the Russian government also suffered from the financial crisis, it was too, looking for new revenues. The Russian government and Rosneft approached the Chinese government. CNPC, which had been negotiating with the Russians for 15 years, benefited and got the pipeline it had long desired into China's Northeast. In exchange, the China Development Bank agreed to provide the financing Russia needed. The interest rate was 5.69%, a very favorable rate given that few commercial banks were lending at that time.³⁶ These developments are important because, ever since China started to import oil in 1993, securing a reliable source of petroleum and natural gas have both been energy security interests. Yet, while the Russian government has welcomed Chinese loans for Rosneft and Transneft, it has ruled out (until recently) any possibility of China controlling hydrocarbon deposits in Siberia. The Russians have been particularly reluctant to give the Chinese significant equity shares of upstream oil production, viewing the hydrocarbon resources as a national patrimony. On the other hand, Moscow's energy industry has had a poor performance record. While Russia has vast reserves in Siberia, it lacked the capital for proper development raising questions over how will Russia manage to put all this newly contracted oil on stream.³⁷ This brings us back to the core question of this section: Why did China agree to take such a high risk by contracting uncertain oil supplies and has been reluctant to do the same in gas?

The explanation is rooted in the inherent differences of oil and gas as commercial commodities and as potential foreign policy assets.³⁸ In gas, due to the predominance of transportation by pipeline and the higher level of risk, investments, and sunk costs involved, the dynamics in the relations of the actors involved are different than in oil.³⁹ Just like in gas trade, the Sino-Russian

³³ See Lo, B. *A Fine Balance – The Strange Case of Sino-Russian Relations*, IFRI Working Paper, April 2005 p.5

³⁴ Author's Interview; Moscow, Summer 2013.

³⁵ Hence, a plausible explanation for the timing is that funds were needed to develop the Eastern Siberian fields and infrastructure in orders to supply the Asian market.

³⁶ As this was a bundled package deal, CNPC would gain the right to buy 300 mt of crude oil at market price for 20 years. CNPC would deposit the payment for oil into a designated account at CBD so that CBD could be guaranteed to receive payments from Rosneft. The USD 10 billion deal with Transneft worked the same way. Jiang J. and Sinton J. *Overseas Investments by China's National Oil Companies*, IEA Information Paper, February 2011, p. 23

³⁷ Russia's oil production has stagnated in recent years, especially in East Siberia and the Russian Far East, and large-scale investment in exploration and equipment will be needed. Several Chinese experts have raised concerns about Russia's ability and willingness to invest the necessary resources.

³⁸ The comparative level of "sunk cost" or capital investment required for gas transportation relative to the actual revenue or expected profits is much higher for gas than for oil. Also, building alternative infrastructure such as liquefaction terminals for gas shipment via LNG tankers reduces the possibilities for cut-offs, but these facilities are much more expensive than utilizing pipeline gas and require time and careful planning to be built. On the other hand, a cargo of oil destined for one country can easily be switched and sent to another country; this is actually an everyday occurrence, whereas for gas this flexible switching does not happen. Therefore, the importers' ability to respond to disruptions of supply by switching to other suppliers is much quicker in oil than in gas.

³⁹ It is meant the dynamics concerning profit and risk sharing, control over shipments, and winners and losers. See Balmaceda (2013) *Politics of Energy Dependency: Ukraine, Belarus, and Lithuania between Domestic Oligarchs and Russian Pressure*, University of Toronto Press, p. 31-33

oil pipeline has been dogged by disagreement and controversy ever since it was first proposed by Mikhail Khodorkovsky's Yukos. However, the two parties' clash over price that happened in May 2011⁴⁰ did not provoke a complete breakdown. Most conspicuously, it was because in 2009 China did not need Russian gas as badly as it needed Russian oil. But also because there is one fungible global oil market and pricing for oil is global, hence the investors can easier predict their returns. Also, diversification in the case of oil disruptions is much easier than with gas.⁴¹ Hence, although Chinese actors were not given substantial equity guarantees in Russian oilfields at the time of these contracts, this did not inhibit their decision to forge cooperation. Most recently, Rosneft offered the Chinese energy companies access to Russia's fields, letting them profit from high selling prices to offset losses on domestic sales. Following that decision, in June 2013, a \$270 billion deal with Rosneft to more than double oil shipments to China for the next 25 years was announced, with Russia receiving a \$70 billion immediate payment.⁴² In October 2013, Rosneft and CNCP signed the MoU, which gives China its first direct access to East Siberia's rich hydrocarbon fields for joint development.⁴³ The agreement will give Rosneft a 51-percent stake and CNPC a 49-percent holding in a joint venture for upstream developments.⁴⁴

New transformations as catalysts for the Sino – Russian Gas Partnership

Considerable attention has been given in the scholarly and policy literature on how and why pricing has thus far impeded the closing of the long-awaited gas deal. Much has been written recently on the Sino-Russian growing competition in Central Asia, a deterrent to cooperation that is also considered as coming into calculations over pipeline routes. Very little analysis, however, has so far considered the recent domestic, regional and global binding forces that have been at work to strongly increase the likelihood of a pipeline delivery contract in 2014.

Impulses from Russia

1. Friction with Europe

The swift development of shale gas in North America has forced Russia to respond, as LNG shipments were re-routed from the US to Europe. This massive arrival of gas in Europe resulted in a drastic drop in spot gas prices, which in turn has encouraged European consumers to ask Gazprom to ease the conditions of its long-term gas supply contracts. The oversupply of gas in Europe, combined with severe drops in demand as a result of the recession, meant that Gazprom has been unable

⁴⁰ Asia Times Online, "Russia, China clash over oil price, supply", May 5, 2011

⁴¹ Despite disagreements on price both sides decided to compromise given required lower levels of sunk transportation infrastructure costs and lower level of risks in case of voluntary or involuntary oil suspensions.

⁴² As part of the agreements the two countries pledged to increase the amount of oil flowing from Russia to China by around 700,000 barrels a day from the current 300,000 barrels a day. Reuters, *Russia to lift oil exports to Asia at expense of Europe*, July 11, 2013

⁴³ OilPrice.com, "China Gets Access to Siberian Oilfields", October 21, 2013

⁴⁴ Although, Russia had previously resisted giving China direct stakes in its oil fields and instead preferred to strike long-term contracts in exchange for loans. The Rosneft deal, thus signals an epic change in Russia's business model. -The Moscow Times, *Rosneft Cedes Fields to China*, 21 October 2013

to deliver the volumes it has become accustomed to in the recent past. The Russian behemoth has been slow in recognizing the importance of the American shale gas revolution and in adapting to the new situation. Failure to recognize the importance of these developments has cost Gazprom dearly. Citibank estimates that for every \$1 drop per mbtu,⁴⁵ Gazprom loses \$4 billion in annual revenues.⁴⁶ Although Gazprom's market share in Europe fell by 8 percent in 2012, it has since then recovered by reaching 30 percent from the 25.6 percent in 2012.⁴⁷ Demand has, nevertheless, recovered but at lower renegotiated prices. On top of that, in September 2012, the European Union launched an investigation into whether Gazprom is hindering competition in Central and Eastern European gas markets, in breach of the EU anti-trust rules. If it loses the case, it could face a fine of up to \$14 billion and its long-standing business model of selective pricing and arbitrary rewards may be threatened. Europe's long recession, its anemic recovery and Gazprom's troublesome position, all seem to signal that the company badly needs two things: new sources of gas, and new markets. With China's declared goal to massively increase natural gas use,⁴⁸ China seems the natural answer. The Russian Energy Strategy to 2030,⁴⁹ published in 2009, had already emphasized that the future growth of the country's gas industry would be focused to the East, taking advantage of the opportunities presented first and foremost by the rapid gas demand growth in China. However, it has been only since 2011 that the Kremlin has decidedly embraced the idea of an Asian energy Pivot, in parallel with the crisis of Gazprom's business model in Europe.⁵⁰ According to Sergey Karaganov (who has advised Yeltsin, Putin and Medvedev on grand strategy), *"until recently we didn't have a single pipeline to the East, we underestimated the American shale gas revolution and the global surge in LNG. Therefore we have lost time and part of the Asian market, but the Eastern Siberian gas and the surging Chinese demand are still there, as our growth engines for the future."*⁵¹

2. The equity stakes dilemma – two important precedents

Russian resource nationalism has meant that Russian companies want to remain in operational control. Most notably until 2008, Russian resource nationalism was growing in pace with the surging oil prices. But even after the 2008-2009 financial crisis and the subsequent signing of the oil deal, Moscow consistently refused to allow Chinese companies to acquire equity in Russian energy projects. In fact, as noted by leading observers the Kremlin often appears to regard Beijing as the investor of last resort - the "partner" it turns to only when all other possibilities have been exhausted. To the extent foreign companies are allowed to participate in the development of the Russian hydrocarbon sector, Western businesses have a significant advantage over Chinese firms,

⁴⁵ Million of British thermal units

⁴⁶ See Riley A. Gazprom on the Ropes, The New York Times, October 11, 2013 and The Economist, Gazprom: Russia's wounded giant, March 23, 2013

⁴⁷ According to Gazprom's won estimates: <http://www.gazprom.com/about/marketing/europe/>

⁴⁸ Promoting natural gas is a top priority in China's 12th Five-Year Plan (2011-2015)

⁴⁹ Also because production in Western Siberia has peaked, and the Russian government expects the eastern reserves to make up for the former's gradual decline

⁵⁰ For much of its history, for cultural, geographic, and economic reasons, Russia's gas industry like Russia itself have focused almost exclusively on the West. This equation is now abruptly changing. Mounting tension with several European customers is the main driver leading Gazprom (and Russia) to focus on the Asian market. For a detailed analysis on Europe's renegotiations see: Skalamera, M. *EU-Russia Cooperation in a Rapidly Changing Interregional Gas Market*, Economics and Policy of Energy and the Environment, 3/2013, Franco Angeli.

⁵¹ Interview with the Author, Moscow, August 2013

due to their useful management experience and technical expertise.⁵² This issue has been particularly important because upstream is where risk taking in the petroleum industry happens and where companies expect to earn a higher return. In 2008 the Sino-Russian oil deal succeeded despite Russia's limited acceptance of Chinese involvement in upstream projects because of three key reasons: 1. As evinced before, oil and gas are quite different commodities, meaning that building gas pipelines has much higher sunk costs.⁵³ 2. At that time, China was striving to reduce its oil vulnerability by deepening reliance on congenial nations thereby reducing reliance on sea-lanes dominated by the U.S. Navy. 3. Natural gas was not so high on China's diversification agenda like it appears to be today.⁵⁴ As in oil, Russia has been reluctant to allow Chinese companies into its upstream gas investments. However, the Chinese reaction to this decision has been different given that gas revenues are not as high as oil revenues and, as a result, the cost of the pipeline without gaining a discount or obtaining access to Russian gas upstream production was probably considered excessive. Finally, the importers' ability to respond to supply suspensions is much easier in oil than in gas, hence from a security perspective, by being directly involved in the upstream business, the Chinese had aimed to avoid relying on Russian promises or good will. To quote a Chinese energy expert: "*China fears potentially disruptions from Russia. Remember the Ukrainian crises? China is not totally comfortable with Russian intentions; Russia is a bully. Thus, collaborating with Russians is not worry-free even if you pay the all the expenses. Some conditions need to be still satisfied and offering Chinese energy companies access to Russia's fields would certainly facilitate the negotiations.*"⁵⁵ Zha Dajiong, the most influential Chinese energy scholar puts it this way: "*To commit yourself and build a gas pipeline, you must count on significant proven reserves. But Russian point of view is – 'you don't start digging until a pipeline is agreed.'*" *Some Chinese companies would like to do experimental drilling, but Russians do not allow assessments of the Chinese by themselves on their territory. There are some small projects where Chinese companies are allowed to enter Russia and assess on their own – but in principle China shouldn't complain because it doesn't allow independent assessments either.*"⁵⁶ For the Chinese leadership, facing Moscow's use of its oil trade as diplomatic leverage to exert influence on Beijing during the Sino-Soviet conflict of the early 1960s is still fresh in their memory.⁵⁷ While rooted in deep seated mutual mistrust, China's efforts to gain upstream access are also driven by profit considerations: access to Russia's upstream would let them mitigate the losses of sales on the subsidized domestic market. Most recently there have been two groundbreaking precedents on this front: the Yamal LNG deal and the CNPC-Rosneft joint venture in Eastern Siberia.

The Yamal LNG case amply illustrates that Sino-Russian cooperation in gas can move in cooperative directions under certain circumstances. In June 2013, Russian President Vladimir Putin

⁵² See Lo B. and Hill F. *Putin's Pivot*, Foreign Affairs, (2013) and Kuchins A. *Russia and China: The Ambivalent Embrace*, CSIS, (2007)

⁵³ Pipelines are like utilities that should earn a utility rate of return above covering the cost of capital. No oil and gas company goes into the pipeline business alone to make money. A pipeline is a tool to monetize oil and gas production, which is the value creation and profit making part of the petroleum business

⁵⁴ In 2009 China's gas demand wasn't huge: China was able to meet their needs with domestic production and even though it saw that larger imports were coming, China didn't have the same urgency to expand the role of natural gas in the energy mix that we see today.

⁵⁵ China's civil servant; Interview with the Author, July 2013.

⁵⁶ Energy expert, Beijing, July 2013

⁵⁷ Itoh, S. *Russia Looks East: Energy Markets and Geopolitics in Northeast Asia*, July 2011, CSIS

signaled the gradual end of state-controlled Gazprom's monopoly on natural gas exports, opening the way for rivals (Novatek and Rosneft) to compete for huge new Asian markets.⁵⁸ According to media sources, he made the announcement minutes after Novatek signed a deal to supply at least 3 million tonnes of liquefied natural gas (LNG) annually to China. In fact, CNPC's acquisition of a 20 per cent stake in Yamal LNG, paved the way for a supply pact.⁵⁹ At the end of October 2013, the Russian government approved legislation to liberalize LNG exports.⁶⁰ Meanwhile, in a separate deal in October 2013, Igor Sechin, the Chairman of Rosneft, belonging to Putin's closest circle,⁶¹ signed a strategic memorandum of understanding (MoU) with CNPC, which gives China its first direct access to East Siberia's rich hydrocarbon fields for joint development.⁶² However, Keun Paik⁶³ warns that Moscow's renegeing on similar earlier agreements, demonstrates that little can be taken for granted, even if endorsed at the highest level. Up until now, no real progress on the front of Rosneft's opening the upstream sector has been made besides the signing of this formal agreement.

When speaking about Russia's pipeline gas exports to China, we actually refer to two mammoth fields: the Sakha Republic (chiefly the Chayanda field) and the Irkutsk region (chiefly the Kovykta field). As map 1 shows, these fields lie in remote areas with little infrastructure and require billions of dollars of investment. The Chinese financing seems the logical answer to develop East Siberia's gas fields.

⁵⁸ For example Reuters, "Putin signals end to Gazprom's Russian gas export monopoly" June 21, 2013

⁵⁹ Reuters "Russia can find niche in Asian gas market: Putin: July 17, 2013

⁶⁰ Gazprom has had a monopoly on exports of both pipeline gas and LNG under a 2006 law. A preliminary agreement was signed during an official visit by Medvedev to Beijing, which will see the CNPC ship 3.5 million tonnes a year of LNG from the project. The deal covers a period of 15 years, with pricing linked to the so-called Japanese crude cocktail.

⁶¹ By many considered the second most powerful man in Russia

⁶² OilPrice.com, "China Gets Access to Siberian Oilfields", October 21, 2013

⁶³ Interview with the Author; March 2014.

Map 1. Russia's Eastern Gas Strategy



Source: *Through the Dragon Gate? A Window of Opportunity for Northeast Asian Gas Security*, Paik, K.W. Chatham House, December 2012

The earliest production date that Gazprom has projected for the onshore Siberian fields is 2016, but 2017–18 currently looks more realistic. As mentioned previously, Gazprom has not proven particularly eager to welcome Chinese companies' participation to help develop those fields and speed up production. The Kovykta field, containing 2.5 trillion cubic meters (tcm) of gas ultimately destined for China, is considered one of the globe's best gas resources. TNK-BP controlled it for some 15 years and intended to supply gas from the field to China. However, in the early 2000s the Russian authorities started asserting greater control over natural resources and dropped their previous plans to liberalize access to Gazprom's pipelines.⁶⁴ Finally, in March 2011 Gazprom has won its 10-year "struggle for assets" to take control of Kovykta, marking a victory over the TNK-BP.⁶⁵ The asset's previous owner, TNK-BP, itself has been captured by Rosneft.⁶⁶ The Chayanda field contains an estimated 1.3 tcm of reserves, with the potential to produce 25 billion cubic meters a year of gas. In October 2012, Vladimir Putin ordered the move to exploit the giant Chayanda deposit 'within the

⁶⁴ In Russia, Gazprom's main advantage is its ownership of the gas pipelines that is enshrined in a 2006 law. Since 2005 a number of new legislative initiatives have been put forward: gas export monopoly, strategic sector law limiting national regime for foreign investments in upstream as well as a take over of Gazprom by the State.

⁶⁵ The Telegraph, "Gazprom wins long Kovykta battle over TNK-BP gas", March 2011

⁶⁶ The takeover happened in March 2013, in a \$55 billion deal. See, for example: Rosneft pays out in historic TNK-BP deal completion, Reuters, March 21, 2013

tightest possible timescale'.⁶⁷ To deliver Chayanda-produced gas, Gazprom will build the 61 billion cubic meters, 3,200 kilometers long Yakutia – Khabarovsk – Vladivostok pipeline.⁶⁸ In sum, Putin has put a strong geostrategic emphasis in developing Gazprom's Eastern Gas Program partly as a way to boost Russian influence in the Pacific region and also as a catalyst for a socio-economic development of the Russian Far East and East Siberia. The Program aims to combine two trunk pipelines – the recently constructed Sakhalin-Khabarovsk-Vladivostok and the above-mentioned Sakha Republic-Khabarovsk-Vladivostok. The selection of these expensive eastern options has to a great degree been affected by strategic considerations.⁶⁹ It can be fairly said that the Russians have hoped to find an export destination other than China partly as means of avoiding dependency on one single Eastern buyer of gas, but paradoxically, have ended up investing \$80-90 billion on new fields and pipes, without having secured a deal with China, the only buyer that can make these huge expenditures justifiable.

Given Gazprom's wariness of putting all its eggs in the China basket, it hoped to involve the Japanese in the construction of the Sakhalin-Khabarovsk-Vladivostok, but the Japanese had no interest in putting their initially offered 6 million \$⁷⁰ in a pipeline mainly designated to cover the needs of domestic customers in Primorye and Khabarovsk. It seems that by overestimating its leverage vis-à-vis both Japan and China that, Gazprom has overplayed its hand in the East, in efforts to promote Russia's broader geostrategic interests. However, there are reasons to believe that this situation is in the midst of a change. After the Fukushima catastrophe, despite the Kuril Islands dispute (in Russian terms), instead of inviting Chinese partners to invest in Eastern Siberia upstream, Moscow proposed that Russia and Japan jointly develop the Eastern Siberia gas fields. No real progress on this front has been made but Putin's very significant decision to end Gazprom's monopoly over LNG exports,⁷¹ is already acting as a catalyst for the regeneration of the Sakhalin 1 project, that along with Sakhalin 2, that are more economically feasible projects to transport Russian gas to Japan. Therefore, given that economically speaking a pipeline from Russia is not the optimal solution for Japan, and considering the current dire state of Japan's finances, the latter has no interest nor practical means to help underpin Gazprom's Eastern Program. On the other hand, Gazprom will almost certainly need a substantial loan to finance the entirety of its \$80-90 bn Eastern Gas Program.⁷² The Russian side is hoping for a large upfront payment without any interest - a sum up to 50 billion \$ was mentioned. Obviously, the only deep-pocket financier who could

⁶⁷ The Siberian Times, "Gazprom unveils major \$38 billion Siberian gas development in Asian export drive", 30 October 2012

⁶⁸ The cost of the Power of Siberia Yakutia- Khabarovsk-Vladivostok is 38 billion and is scheduled for the end of 2017. However, Gazprom has had to delay construction since CNPC has held out on finalizing a gas supply and purchase agreement.

⁶⁹ The first factor is heightened attention to the need of economic development of Eastern Russia and the second is the strategic development of transport infrastructure in Eastern Siberia and in the Far East, to ensure diversification with respect to delivery routes and avoid excessive dependence on the Chinese market, to prevent China from dictating the price and terms of delivery, as occurred in Russia's 'Blue Stream' gas pipeline to Turkey. On a positive note, will run parallel to the crude ESPO pipeline streamlining infrastructure and power supply costs.

⁷⁰ According to an industry insider, Interview with the Author, January 2013.

⁷¹ The law came into force in January 2014 and should facilitate the finalization of new LNG contracts. The law stipulates that exports by other approved producers do not come into direct competition with Gazprom's pipeline exports.

⁷² See Henderson & Stern, *The Potential Impact on Asia Gas Markets of Russia's Eastern Gas Strategy*, Oxford Energy Comment, February 2014, p. 3

afford such a substantial sum along with governmental endorsement is CNPC. Gazprom is aware that accepting a loan of this magnitude will almost certainly only be forthcoming in exchange for equity in (particularly) the upstream part of the project. Despite past stagnation, on Russia's side, there are two significant reasons making this indeed possible: 1. Mounting frustration in Kremlin's circles with Gazprom's unsuccessful negotiation techniques with the Chinese and the political rise of Igor Sechin, a man who has been historically more sensitive to the importance of the Chinese energy market than the Western-oriented Gazprom. 2. Russia's slowdown in economic growth and possible fiscal imbalances.

In fact, Novatek's Yamal LNG and the Rosneft-CNPC development mirror both Russia's pressing need to diversify its gas export destinations away from Europe and also the specter of a shrinking economy. No such equity investments were ever mentioned since Putin's rise to power in the early 2000s and the subsequent state's capture of hydrocarbon resources. Significantly, both deals occurred in 2013, a year in which Russia has found itself on the verge of extinction of energy driven growth. The recent trend indeed has been in the direction of Russia's upstream opening to Chinese companies. For example, in September 2013 PetroChina declared that it is seeking to invest 10 billion \$ in Russian gas fields as part of efforts by the two countries to conclude gas-supply negotiations that have dragged on for almost a decade.⁷³ In March 2014, subsequent to the Crimea crisis, a potential acquisition by CNPC of 25% of the Chayandinskoye gas field in the Sakha Republic was mentioned for the first time. If CNPC indeed proves successful in this endeavor, the likelihood of a breakthrough in the Sino-Russian gas linkage in May 2014 will be hugely increased.

3. Domestic budgetary troubles – once again, falling into the Dragon's embrace...

This section examines why domestic economic drivers could affect the progress of gas cooperation as it has already happened in the field of oil. Russia's economic growth in 2013 was just barely above 1%, while it used to be at a level of 7-8 %.⁷⁴ What is more, the official forecast to 2030 of the Russian Ministry of the Economy, does not foresee any improvement. In the last two decades, thanks to the oil assets inherited from the Soviet Union, the oil industry has managed to rebuild production back to the Soviet level⁷⁵ generating enough rent to sustain: the Russian consumers, the owners and the managers, and the state. But as Thane Gustafson writes,⁷⁶ the Soviet legacy is now at the point of diminishing returns. As costs rise, the flow of oil rents will depend above all on one remaining variable: oil prices. This is another crucial factor that could work in favor of a Sino-Russian gas deal.

In 2013 a historical shift has occurred: ever since Putin came to power in the early 2000s economic growth has followed the fluctuations of hydrocarbons' prices, with the 2008 dramatic recession

⁷³ Bloomberg, "PetroChina Said to Study \$10 Billion Russia Gas Investment", September 10, 2013

⁷⁴ See: <http://www.finmarket.ru/main/txt.asp?id=3566843>, Accessed in January 2014

⁷⁵ In 2014 Russia expects its oil output to reach 525 million tonnes (10.54 million barrels per day) - a figure that would set a post-Soviet record high. See *Russia expects 2014 oil output to renew post-Soviet record*, Reuters, February 12, 2014

⁷⁶ Gustafson T., *Wheel of Fortune – the battle for oil and power in Russia*, Harvard University Press, 2013, pp. 480-500

occurring when the price of crude reached a historic low. Yet, the ongoing economic slowdown appears unrelated to the price of oil: in 2012, the Russian Urals averaged \$ 110.8 per barrel, a new record high, but the flow of Russian oil rents has proven insufficient to spur economic growth, even as Russia's reliance on these rents has continued to grow. Hence, to make up for the diminishing returns in Europe, which is no longer as lucrative as it used to be, Russia is frantically pivoting to the East, with the Chinese gas market as the main target. This ultimate objective is intimately linked to stability at home. Putin's regime ability to function to a significant degree depends on its ability to retain the loyalty of the business and political elites, and to ensure wider popularity by keeping up social spending. The system's ability to do that is connected very directly to the oil price, which accounts for more than half of the state's budget revenue.⁷⁷ With flat oil prices, Russia is already reverting back to what Gaddy and Ickes call Russia's long-term steady-state growth rate, which may well be barely above zero.⁷⁸ Russia in addition must pay what Gaddy&Ickes call the "Bear Traps" penalty of the structural legacy, which may cost it at least 1.5 percentage points a year.⁷⁹ This, then, raises the question: how much longer can the flow of commodity rents support the elites' and the population's steadily growing expectations?

Russia is beginning to back into international capital markets, something that it has not done since early on in Putin's presidency – in part to pay for commitments that include everything from social, infrastructure and military spending, all of which have been increasing quite significantly. In 2013, the break-even price for oil that Russia needed to balance its budget was around 107 \$, the fifth straight year the country needed crude above \$100 to its finances.⁸⁰ This is just counting domestic spending on social welfare, when one takes into account all of the promised spending on military build-ups and new infrastructure, it is unclear where the money for all that is going to come from.

On the other hand, Putin has been preparing for this scenario of a decline in rents. In principle, at least, he knows it can come, and he knows its dangers. His whole system of rent management is designed to mitigate its impact. But whether he can actually carry out the "backup" plan is another matter. It is here where the domestic budget story and the China story intersect. To compensate for the declining returns in Europe, much rather than enacting unpopular reforms that would impinge on the fortunes of Russia's super-wealthy and on his own fate, Putin is willing to do whatever he thinks is necessary to keep the state and economy strong. Finding another energy market that pays seems the less disruptive and painless option. The answer is Asia and most crucially, once again, China.⁸¹ Finally, if we take the Sino-Russian oil deal as a yardstick for comparison, a strong case can be made that when Russia faces serious financial troubles, a breakthrough in Sino-Russian energy cooperation appears more feasible.

⁷⁷ The energy sector currently accounts for approximately two-thirds of Russia's exports, around 30 percent of Russia's GDP, and almost half of the Federal Budget revenues.

⁷⁸ Countries at Russia's income level historically (1950-present) have grown at about 1.85 percent a year.

⁷⁹ Gaddy G.C and Ickes B.W. *Bear Traps on Russia's Road to Modernization*, Routledge, 2013.

⁸⁰ For example, Russian budget banks on firm oil prices, Reuters, July 9, 2012, and Russia Faces Widening 2014 Budget Deficit, Siluanov Says, Bloomberg, May 22, 2013.

⁸¹ China will never replace the profitability of the European markets, but it is a necessary step the Russians have to take to find a new substantial market that pays.

4. Russia's last minute concessions: the route and progress on the pricing formula

Gazprom has been slow in reacting to the current expansion of Liquefied Natural Gas (LNG) transportation and spot contract pricing. As previously noted, Gazprom's share of the European market is under pressure from LNG (originally destined to the saturated US market) sold at spot prices lower than Gazprom's traditional long-term contracts. However, Gazprom's most lucrative market still is and will remain, Europe. Even when both China and Russia approve the Sino-Russian gas pipeline, Russia will still achieve a higher netback⁸² from sending gas to Europe and Russia will remain a major source for Europe's imports under most every scenario. That partly explains why Gazprom has been so slow in adapting to the Chinese conditions and has stubbornly insisted that China's purchase price should correspond with the former sales price to Europe. For example, in the words of Sergei Komlev of Gazprom's export division: *Russia is not willing to subsidize the Chinese economy; our gas will come from remote places like Chayanda, we need massive investments to develop these, so the price should be even higher than prices in Europe.*"⁸³ Despite such comments, more moderate observers admit that Gazprom should have pushed the deal earlier, say five years ago, when the unconventional revolution in the US and a possible replica of the same in China were still a distant reality, and when China was still looking for gas suppliers to cover its needs up to 2020. Today, with a massive pipeline from Turkmenistan,⁸⁴ a newly built smaller pipeline from Myanmar,⁸⁵ but also LNG imports from the Middle East, Southeast Asia, and Australia,⁸⁶ China has successfully secured its gas requirements until year 2020, without counting on imports from Russia. In these circumstances, the key question is: how much of a window does Gazprom still have to supply China *after* 2020? As the situation in Europe deteriorates, the Russian government is rushing to make the necessary strategic concessions and avoid further alienation of its eastern neighbor. In March 2013, when Xi Jinping chose Moscow as his first inaugural visit, Putin surprised everyone by expressing support for China's favored Eastern route.⁸⁷ By acquiescing that promoting the so-called Altai pipeline⁸⁸ first, would no longer be possible, Moscow made a significant step in China's direction. Giving up the Altai route meant abandoning the ambition to be a 'swing supplier.' Indeed, the essential reason why Gazprom lobbied heavily for the Altai route is because it would enable Gazprom to divert its surplus European volume to China, increasing its ability to use gas as a political bargaining tool. According to Keun Paik the route concession is an essential step on the long gas price deal journey. He says: "*That was the importance of last year (2013), even though the price deal was not reached, this was the most significant compromise Russia has made in recent years.*"

⁸² The income after taking transportation cost differences into account

⁸³ Interview with the Author; August 2013, Moscow.

⁸⁴ Whose current capacity is 40 bcm but is being expanded to reach 65 bcm a year.

⁸⁵ Expected to send 12 bcm of gas annually to Myanmar and southwest China, it became fully operational in October 2013.

⁸⁶ Not to count the additional supplies that will come on stream from discoveries in East Africa (Mozambique and Tanzania) and the East Mediterranean.

⁸⁷ Which is intended to deliver gas to north-eastern China which has a population of over 100 million, and which is experiencing serious gas shortages

⁸⁸ Which would stretch 2,700 kilometers from the Altai Republic in western Siberia to the Xinjiang Uygur Autonomous Region

True, there was another factor, the lingering price deadlock. Everyone in Russia, including Gazprom, has been by now aware that time is on China's side. Until June 2013, the price gap was reportedly \$100 per 1000 cubic meters. The European border price was roughly US\$ 380 / 1,000 cm, and CNPC was not ready to pay over US\$ 280 / 1,000 cm.⁸⁹ The key question of the relationship between the prices of the oil basket and the contract price of gas remained a sticking point. And time was running out. Indeed reports in early January 2014, suggested that Gazprom and CNPC were getting closer to agreeing a base price, with a range of \$10-11/mmbtu at the Russian border being mentioned. Industry sources have indicated that Gazprom may ease its price demands in return for billions of dollars in upfront payments. One industry insider close to the talks said that CNPC is considering an upfront payment of 50 bl \$ without any interest to finance the pipeline (valued at \$22 billion) and invest upstream, which is a large sum of money for any country, even China. As the example of Rosneft's effective oil cooperation with China shows, on price issues China has proven a very firm negotiator, and seemingly much more eager to explore the idea of pre-payment than concede on the final price. The scheme has been already tested many times with Rosneft and it worked quite effectively. This brings us back to the core point of this section. Not long ago, Gazprom was scoffing at the idea that gas to China could be shipped with a price which is only 2/3 of the price of natural gas sold by Gazprom in Europe. However, during the period in which Moscow had no intention of quickly concluding the negotiations with Beijing, China has energetically diversified its imports gaining a substantial negotiating advantage. Whether Gazprom likes it or not, these days it has not much choice but to "subsidize" (as it likes to say), the Chinese consumers. Due to the creeping effects of the American shale revolution and the challenging conditions in the European market, Chinese contracts will be needed more than ever to ensure the funding of the Russian budget. Gazprom hopes to sign the long-awaited deal when President Vladimir Putin visits China in May 2014.⁹⁰ Although from a strictly bargaining position, China can comfortably afford to wait and leverage its position, several other factors suggest that the political will in China to come to an agreement is very strong.

⁸⁹ In September 2013, Gazprom and CNPC agreed on the basic terms of an agreement, including volumes, when deliveries should start, payment, a 'take-or-pay' amendment, but they failed to secure a price deal. In reality, although the final price was not fixed, in October 2013, in a highly symbolic visit to Beijing, the Russian Prime Minister Dmitry Medvedev strongly recommended the parties to accelerate and finally agree on the conditions of supply. In October, Gazprom and CNPC announced that they were able to agree on a binding contract to a basket of oil products in Singapore instead of linking it to the Henry Hub, as CNPC proposed in June 2013.

⁹⁰ When President Putin is set to visit the Conference on Interaction and Confidence Building Measures in Asia (CICA), in Shanghai and to visit Beijing. Putin's spokesman Dmitry Peskov, announced that the Kremlin is expecting the finalization of this agreement in May and then the implementation of this agreement from the end of 2014.

Impulses from China

1. A projected gas shortage

Today natural gas is severely underrepresented at 4 percent of China's primary energy, while oil covers approximately 18% of its energy needs.⁹¹ This mismatch explains why in the past, China did not have the same immediate need for Russian gas that it had for Russian oil, and along with the other inherent characteristics of the two commodities, explains why oil negotiations in oil proceeded more swiftly. However, due to the current Chinese leadership more serious commitment to reduce use of coal,⁹² Chinese gas demand is expected to boom in the next decade.⁹³ In fact, reflecting China's growing environmental concerns, the 12th five-year plan (2011-2015), sets the target of increasing the share of natural gas to 8-12 percent by 2015, and total gas consumption in the country is expected to reach 260 billion cubic meters by that date. By 2020, the even more ambitious target is 10 percent of natural gas in the energy mix. In 2015, China's total domestic production is expected to reach 172.5 bcm (including shale gas). But total demand will exceed 230 bcm. Even with China's alternative import options (the Central Asian Republics, Myanmar, and LNG imports) as well as the potential to expand domestic production, there will be a substantial gap. Boosting the use of natural gas at expensive incremental LNG world prices⁹⁴ is a move that could be inflationary to China's economy. At the same time, Japan's shifting away from nuclear and India's growing hydrocarbon needs will place further upward pressure on Asian natural gas prices. In turn, if CNPC fails to strike a price deal with Gazprom soon, the excessive premium on LNG supply to Japan, Korea and China will continue. Due to China's necessity to import more LNG, competition between Japan, Korea and China to secure LNG supplies will intensify. This is good news for LNG producers, but not for China's government and the end consumers. It means that ultimately, for China, Russian gas could be cheaper⁹⁵ than LNG from Qatar and Australia.

2. Chinese domestic imperatives: raising domestic prices and reducing the Asian LNG price premium

Being acutely aware that in no time additional expensive foreign gas will be part of China's demand equation, the government has taken several steps toward linking the price of gas to fuel oil and LPG (liquid petroleum gas), as a way to "prepare" for additional foreign supplies. First, there have been some experimental pricing projects: the so-called "New Gas price mechanism" in Guangdong and Guangxi. Second, starting from July 10, 2013 the NDRC decided to increase the

⁹¹ See: <http://www.eia.gov/countries/cab.cfm?fips=ch>, accessed in February 2014.

⁹² The specific reference is to *Policies and Actions in China to tackle Climate Change (2011)*, issued by the state information office of the PRC, Nov 22nd, 2011.

⁹³ For example, in the words of Hu Zheng, former Vice President of CNPC, "Gas is a very good option for the future development of China. It has become the first choice to improve the air pollution in the country. The 3 "A" advantages of natural gas are: abundant, affordable and acceptable." International Conference, The EU and Emerging Powers, 29-30 April 2013 European Parliament, Brussels

⁹⁴ Indeed, China has been willing to pay market price for LNG imports, but demanded much lower prices for piped gas.

⁹⁵ Some observers worry, that although Russian gas seems the cheapest option in town, it may turn out as an unreliable solution. Yet if history is any guide, the booming Sino-Russian oil trade has thus far proceeded without any interruptions.

price of non-residential gas.⁹⁶ Third, already in Beijing the pricing has changed toward oil-indexation.⁹⁷ Several Chinese experts are emphasizing that the price of natural gas is going up and that natural gas price reform is deepening.⁹⁸ As one prominent Chinese economist comments: “with economic development, the trend for all commodities in China is to increase in price—so I think that hydrocarbon resources should follow suit, without price distortions.” The price of domestic natural gas resources will go up, and I think under these circumstances negotiations between China and Russia will gain a strong momentum.”⁹⁹ However, in terms of social security, these are very sensitive topics in China. Chinese people are protesting against the reform because China is a manufacturing country; in order to have competitive goods the sector needs cheap stocks and manufactured goods are competitive precisely because of cheap energy. Due to these limitations, fully balancing gas prices will still need some time. However, pushing oil linkage will put an upward pressure on China’s domestic market price. Given that gas prices now are very low even compared to Chinese salaries, the profit margin for Chinese energy companies is very thin and they have been losing a lot of money on imported gas.¹⁰⁰ This factor, combined with the awareness that China’s demand for gas is seriously taking off and the already huge gap between demand and supply will continue to widen, makes Chinese NOCs push even harder on the government to raise prices, in a way that would either motivate the them to import more higher priced foreign gas or produce unconventional domestically. Many scholars in China believe that price reform could also foster energy efficiency, helping to ease China’s pollution and environmental concerns.¹⁰¹ Finally, considering the Chinese government’s recognition of the strategic value in the Sino-Russian deal to diversify supply, evidence suggests that we may be reaching a tipping point where every effort will be made to accommodate foreign supplies as quickly as possible, including with a deeper gas pricing reform.

3. Enhancing energy security – it clearly still matters

Energy is not just an economic issue; it is a political and strategic issue. According to a Russian analyst, Tatiana Mitrova, pipeline gas is the most interesting for China given its importance for the country’s energy security. She says “The country is already receiving increasing supplies from Central Asia but this route is not the safest,” referring to shipments through the Central Asian region, where the political environment is clouded by uncertainty over leadership succession.¹⁰² Also, through inland pipelines China hopes to reduce the dependence on sea-lanes dominated by

⁹⁶ China has two prices for gas; a price for residential consumers and one for industrial consumers. After that, the incremental valve station price ranged from 2.29 Yuan/m³ to 3.32 Yuan/m³, the national average was up 1.25 Yuan/m³ reached 2.94 Yuan/m³.

⁹⁷ Just in Beijing the price of gas it is 3.50 Yuan/m³, because Beijing did not face protests against it

⁹⁸ For example, Author’s Interview with Liu Xiaoli - Deputy director, Centre for Energy Economics & Development Strategy, Energy Research Institute (ERI)

⁹⁹ Authors Interview, Deng Haifeng, Director of the Environmental law research society of China, Tsinghua University, September 2013.

¹⁰⁰ CNPC has been losing billions of \$ a year on the pipeline imports from Central Asia, and from some of its LNG contracts especially the ones that were oil indexed until 2008 before the price of oil collapsed.

¹⁰¹ Author’s Interview with Zheng Li, Director of the Tsinghua BP Clean Energy Tsinghua University, Chen Shaofeng, professor at PKU, and Qi Huiqing, currently the world’s new energy strategy Research Center Deputy Director

¹⁰² Referring to the ageing Central Asian presidents for life, such as Nazarbayev and Karimov, and their uncertain political trajectory once succession has taken place. See: Reuters, “Gazprom won’t lose out in Russian LNG law, will still dominate” October 31, 2013

the U.S. Navy. In fact, many Chinese analysts view this pipeline as an important source of energy security because China still lacks a navy that can protect its seaborne imports. Especially, with regard to possible rising tensions with the United States in the South China Sea, securing energy supply routes out of American reach, through the expansion of inland routes is best served by the Sino-Russian shared border.¹⁰³

4. Slow Chinese shale production

The shale gas revolution in the US has been an epic event, a fateful change that transformed the country from an increasingly dependent gas (and oil) importer to a country with the largest world's gas reserves. According to the EIA, China has even more formidable shale gas endowments – ranking first in technically recoverable shale gas reserves and third in shale oil resources.¹⁰⁴ To use Chinese estimates, China's Ministry of Land and Resources have appraised potentially recoverable resources of 25.1 trillion cubic meters. The question then becomes: will China use its bountiful reserves? One can visualize two possible responses, one positive and one negative. Russia will be at the center of both. On the one side, the specter of a Chinese shale gas revolution is already acting as a catalyst for the Sino-Russian gas cooperation. The more sober assessment holding that China's shale gas revolution is not promising in the short-medium term again points to Russia as a partner that, meanwhile, can fill China's gaps. The challenges include water availability and population density demographics as well as the need to stimulate an innovative competitive dynamic in the Chinese upstream service sector with foreign participants for the transfer and application of technology. China is obviously vastly different from the United States. Suffice here to say that the Chinese government has only just started to sort out conflicts over exploration rights between local miners and natural gas producers. Furthermore, within the government itself there is an inter-departmental conflict of interest between the Ministry of Land and Resources and the NDRC over responsibility for the regulation of these resources.¹⁰⁵ Below ground challenges include a different geology from that of the US, with deeper shale formations, which are thus more expensive and impractical to extract. The absence of equipment and pipeline infrastructure added to the water scarcity problem – are all elements that increase the total cost of shale gas production in China. The target for 2015 is 6.5 bcm (criticized by many as too low) and by 2020 shale gas production should range between 60 billion to 100 bcm.¹⁰⁶ If technological discrepancy is resolved, then production of gas could, in principle, increase more rapidly. However, the most enduring constraints China is facing are institutional in nature. In China the state owns the resources and the ground, and CNPC and Sinopec own 80% of the explored acreage, so any breakthrough of shale gas development can only happen with these two behemoths' active participation. Yet, these two companies do not seem to be all that interested in developing shale in the short term. They are developing cheap conventional gas and in order for them to move more quickly on shale, they would like to see a more robust reform on gas prices. Given that the Chinese government and the NOCs play an essential role

¹⁰³ Which is the largest border in the world (4,200 km or 2,600 mi). In 1991 the two states signed a treaty that set up demarcation work to resolve most of their border disputes. After the agreement both sides drastically reduced their military presence at the border.

¹⁰⁴ See <http://www.eia.gov/analysis/studies/worldshalegas/>, Accessed in February 2014.

¹⁰⁵ For a detailed analysis, see: Fan Gao *Will There be a Shale Gas Revolution in China by 2020?* Oxford Institute for Energy Studies (working paper, April 2012).

¹⁰⁶ China's "Shale gas 12th five-year plan"

in the energy sector, the development of China's unconventional gas will largely depend on how the government manages mining rights, introduces incentive policies, opens market access and de-regulates gas prices, and how it directs NOCs to unlock unconventional gas resource potential. To sum up, this section looked at what implications a possible shale gas breakthrough in China may have for the Sino-Russian partnership. Gazprom's denial notwithstanding, with the prospects of shale in China unfolding, Russia has grown more proactive in these negotiations. However, given the above-mentioned challenges, China's shale gas development may not be so buoyant and fast as it initially seemed. Thus, as China's gas demand steadily rises, Russia will inevitably loom large as a gas supplier. Let us review the major elements that will push China closer as a future consumer of Russian gas:

If China wants to meet its natural gas target, it must consume roughly 500 bcm of natural gas by 2020,¹⁰⁷ a 213 percent increase from 2012 levels. Most analysts agree that the country will need at least 10 years or more to unlock its potential shale riches. Thus, even if China increases the share of domestic shale gas, it will also need imported gas at an acceptable price to address a projected gas shortage, as rapid demand growth will continue to largely outstrip supply. For example, to meet its voracious demand, in the first ten months of 2013, China imported 25 bcm of gas from abroad, with a year-on-year growth of 86.5%, including 12.3 bcm from Central Asia and 12.7 bcm of expansive LNG from Yemen, Malaysia, Qatar, Indonesia and Australia.¹⁰⁸ Therefore, two reasons loom large on why China is eager to decrease its dependence on LNG: an economic one (prices are too high) and a geopolitical aversion to excessive dependence on one side, on the unstable regions of the Middle East and East Africa,¹⁰⁹ and on the other, on sea lanes dominated by the U.S. Navy.¹¹⁰ China hopes to reduce its dependence on LNG with a highly diversified supply combining gas from Central Asia, Russia, domestic shale and LNG – while avoiding relying excessively on one single region. China's motivation to seek international pipeline access to its overland borders in line with its "March West"¹¹¹ doctrine will intensify pressures for a breakthrough in the Sino-Russian gas deal even further. Also, energy cooperation is considered as useful means to give practical significance to otherwise quite declaratory strategic ties.¹¹² As evinced by a distinguished

¹⁰⁷ Under the ambitious scenario, natural gas consumption in 2020 should be 572 bcm and under the lower scenario, 492 bcm. Natural gas supply is aimed to replace coal and to improve the overall energy efficiency. See the 12th five-year plan for energy conservation and emissions reduction, August 2012

¹⁰⁸ According to the latest statistics from the Chinese NDRC (national development and reform commission).

¹⁰⁹ Africa does have some appeal for China on geopolitical grounds, as it affords diversification away from a volatile Middle East, towards areas where Chinese influence is greater. Yet, Africa is considerably more distant, which increases the costs of transportation.

¹¹⁰ The traditional pattern of recent years has been the energy sea-lanes from the Persian Gulf, through the Straits of Hormuz and Malacca, across the South China Sea, to Northeast Asia.

¹¹¹ Wang Jisi, China's most prominent and influential international relations scholar articulated the strategy in 2102. As Washington rebalances to Asia, the relationship between the U.S. and China has become increasingly contentious and "zero-sum." Beijing sees Washington's policy in the Pacific as containment and, if China continues to push forward a head-on military confrontation with the U.S. would be inevitable. In comparison, the region to the west of China, including Central Asia, South Asia and the Middle East, bears no such risks. In Wang's view, the area is free from a U.S.-dominated regional order or pre-existing economic integration. Strategically, Washington is retreating from the area leaving more space and a perfect opportunity for China to advance in. For a succinct description see: Yan Sun *March West: China's Response to the U.S. Rebalancing*, Brookings, January 31, 2013

¹¹² Referring to the so-called 'Axis of Convenience,' which is limited in scope and depth by divergent priorities and mutual distrust. See B. Lo, *Axis of Convenience*. Moscow, Beijing and the New Geopolitics, Chatham House, London 2008.

scholar in China, “*Energy is such a crucial catalyst for the revived cooperation between China and Russia, but also of China and several other countries. We have a different perspective than the US, which is more worried about energy self-sufficiency. It is not in China’s interest to be self sufficient; for example with several countries such as Russia our current economic relations are over-reliant on energy, thus, it is in our national interest to gain influence through geopolitical financial and commercial energy expansion.*”

Putin meets Xi in May: What Happens Then?

The final section aims to present some ideas on what to expect from Putin and Xi’s meeting in May. This is not an exercise in predicting the future but in discussing possible alternative scenarios. With that in mind, we now turn our attention to two possible responses, one constructive, or in other words, a breakthrough in gas cooperation in 2014. In sharp contrast, the status quo scenario envisages a protracted impasse, for quite a long time.

A breakthrough in May 2014

Over the preceding pages I have presented the story of how and why remarkable complementarity and synergies, may soon catalyze the much-anticipated gas deal. The collected evidence suggests a powerful rationale that Sino-Russian gas relations may reach a turning point in 2014. Of course, given the two countries’ natural complementarity and their nevertheless long-static ties in gas, the natural question is: why should they abruptly change now? I have tried to look closer at changes in the two individual states to identify the challenges, incentives and policies driving the Sino-Russian gas cooperation. On each side I have made 4 distinct observations about why the deep ambivalence, hesitance and inaction that characterized past cooperation, could be soon transformed. To capture these important nuances and correctly portray the drivers for a breakthrough in the China-Russia gas deal, I turned to a country specific analysis along three dimensions: the domestic conditions, the interregional trends in gas and the more general strategic shifts in both countries. I showed that in Russia, the geoeconomic incentives driving cooperation with China have changed sharply of late. The first and most important reality shaping Russia’s behavior is of course the crisis of its business model in Europe. This crisis brings stimulus for change on two levels: 1. Gazprom’s organizational model is threatened by other competitors, such as Rosneft, demanding for changes in Russia’s legislation over pipeline exports and utilizing Gazprom’s crisis as a catalyst for change and reform of Russia’s energy industry¹¹³ 2. Geographically, it produced a more substantial reorientation away from the West towards new emerging powers, and more specifically China’s booming gas market. I pointed out that a possible take-off of shale gas production in China

¹¹³ For example, in January 2014 it was reported that Rosneft has prepared a plan to abolish Gazprom’s monopoly for gas exports. According to the sources, Rosneft suggests reform of the gas sector in two stages. At the preparatory stage the oil giant proposes an equal-profits price (equal domestic and export prices), provide market players with equal access to gas transportation system and implement a pilot project for access to export outlets. Furthermore, the plan provides for turning the gas transportation system into a state-regulated independent company, setting up a gas exchange and giving all market participants opportunity to export gas. Most probably, Sechin’s confidence was boosted by the fact that Rosneft contributed 2.7 trillion rubles (\$76.7 billion) to Russia’s budget in 2013, counting all taxes, duties and royalty fees. By comparison, Gazprom was expected to generate no more than 1.2 trillion rubles for the budget the same year.

may help to reduce the country's import dependence, but it does not fundamentally change China's gas import equation, since natural gas consumption is set to expand so dramatically in China. Another driver is the rise to power in China of a distinctive type of leadership; one that believes that environmental quality should be tackled with more urgency and therefore, the role of natural gas will be greatly expanded.¹¹⁴ Few scholars have considered the implications of the two countries' domestic structures for their foreign energy policy, or the implications of a possible Chinese shale gas revolution for the development of the Sino-Russian gas relationship as a whole.

The broad and rapidly expanding Chinese presence in Central Asia is certainly acting as an irritant in Sino-Russian relations, however, there is no evidence that competition in Central Asia does much to disrupt the geopolitical logic of deepening Sino-Russian energy ties. The partnership between these two is continuing to deepen rapidly, little influenced by competition in Central Asia. If anything, China's increasing economic dominance in Central Asia encourages Russia to move more rapidly to secure itself a place in the Middle Kingdom's gas portfolio. Also, they share the common implicit concern of containing the American military presence in Central Asia and the Caspian.¹¹⁵ With respect to Japan, a roughly similar pattern prevails: of late Japan has had surprisingly little impact on the gas trade decisions of China and Russia, partly because Russo-Japanese cordial relations won't destabilize Russia's pivot to China. Tokyo provides a significant market for Russian LNG at high prices, or in other words great revenues, as well as moderating technical and economic support. However, it stands somewhat on the sides of Sino-Russian pipeline politics because it does not have the geoeconomic means to interfere, and the evidence presented here suggests that now Russia has strong incentives to finalize the deal instead of playing 'the Japanese card' in the China gas-deal calculus. The Ukraine crisis is something of a wild card in Sino-Russian energy ties. It is too early to speculate about the medium-term consequences of the crisis. The West's campaign to isolate Russia economically and diplomatically will most likely push the latter even closer to China and make it more willing to compromise on the gas price, with China boosting its leverage. As the Ukraine crisis lurches on, geopolitical conditions appear to have pushed the two sides even closer to finally concluding the deal. In any case, the previous pages already suggest a powerful logic on both sides, acting in favor of a gas deal in 2014, with fateful future implications for the region, world's climate, and energy geopolitics.

¹¹⁴ In the words of Jia Qingguo, "In the old days pollution has always been secondary to economic growth, now the environmental factor is becoming a larger social concern, especially in the last few years."

¹¹⁵ In this regard, cooperation within regional organizations, such as the SCO is crucial to preempt deeper American political-military involvement in the region and to encourage the United States to downsize its existing presence in military basing.

Ukraine: collaboration toward a New World Order?

The Ukraine crisis too works in favor of a deepening Sino-Russian gas relationship. As a result of Russia's standoff with the West, Russia may be more willing to compromise on the gas price, with China boosting its leverage. Although China has not explicitly taken Russia's side, Russia's annexation of Crimea has already been playing into China's hands. While Putin remains distracted in Ukraine, China can use this moment to cement influence in Central Asia. Moreover, Obama's pivot to Asia will suffer as a result of Ukraine, another clear win for Beijing. Like Russia, China is concerned by the American presence in Central Asia and the Pacific, which it views as an extension of Washington's hegemonic power as well as a source of regime instability through the propagation of 'alien' values. However, in contrast to Russia's revisionist aspirations, China seeks a more equal strategic arrangement. Both countries resent the American hegemonism and although China has no appetite for antagonizing the West, Putin's aspirations to redraw the post Cold War order have for now promoted China's best interests at limited costs. On the gas deal, Western sanctions imposed on Russia have boosted both China's negotiating position and the likelihood of a deal, as Russia is increasingly desperate to look for gas markets outside Europe.

However, looking at the future, it is useful to consider the opposite, status quo scenario as well.

A geostrategic status quo

If one looks at the bargaining positions, China has the upper hand. Gazprom made some costly strategic mistakes in the last few years in underestimating new supply sources like US shale gas, Canadian gas and in dismissing new offshore discoveries in Eastern Africa and the East Mediterranean, that can all be supplied to China via LNG, whereby in turn fostering competition. In addition, while Gazprom was delaying the deal, CNPC contracted 65 bcm from Central Asia and built a new pipe from Myanmar in less than three years.¹¹⁶ In the preceding pages, I have argued that Sino-Russian interest cohere regarding the imperative of supply, but not with regard to price. If Gazprom fails to accept the Chinese loan offer in exchange for a discount on the border price,¹¹⁷ and keeps on insisting that China's purchase price should correspond with the former sales price to Europe, then CNPC may not renew its offer for quite a while, and instead CNPC may decide to close its supply gaps partly with other countries' LNG and by burning additional coal, at the expense of Russian possible supplies.

What might be some of the politico-economic implications of the Sino-Russian deal? That is the subject of this concluding section.

¹¹⁶ Construction of the gas pipeline began in 2010 and it became operational in July 2013.

¹¹⁷ An outcome of such cooperative prospects may involve Russia opening its upstream sector and China following suit with opening its downstream to Russia.

Looking ahead: Implications for Policy

The most conspicuous long-term impact would be the on global climate change. Without a change in China's energy mix, one cannot expect a real improvement in global climate change. From an environmental perspective, the more China can shift its energy consumption from coal to cleaner natural gas, the better. Yet, any delay to finalize this deal may deliver massive financial damage to both CNOOC and Sinopec as their share of LNG supply will be much larger than that of CNPC. It ultimately means that competition for LNG supplies between Japan, Korea and China will intensify. In China, that would in turn make gas too expensive to import on a large scale, protracting dependence on dirty coal. In short, the ultimate premium China would have to pay without the Sino-Russian gas price deal would be much bigger than the generous financial lending CNPC has to offer to make a price compromise. Hence, in terms of geoeconomics, a Sino-Russian deal holds major implications as a driver to contain the rise of Asian LNG prices¹¹⁸ and as a factor helping to tackle the environment. In a broader perspective, in contrast with the often outlined argument about the unsettling implications of a potential Sino-Russian deal that could raise the impulse on both sides to form a robust Eurasian continental energy-centered entente,¹¹⁹ this work doubts the potential emergence of such an alliance for two crucial reasons: the prospects of a Russia-China consortium outside of energy are not particularly strong, unless they are set on specific issues, like Syria. True, as cooperation in gas moves forward, the Sino-Russian axis is gaining greater geostrategic weight in world affairs. However, it is unrealistic to expect the Sino-Russian energy entente to somehow pose a great geostrategic challenge to the United States. China could probably upset the US geopolitical influence in the Pacific, but if anything, China and Russia may find themselves at odds more than aligned over issues involving the Asia-Pacific region.¹²⁰ Even as potential for Sino-Russian gas cooperation grows, rivalry remains conspicuous and Russia is, not surprisingly, often disinclined to deference to China on matters involving East Asia. Russia worries about Chinese naval intentions in the northern Pacific and Arctic region and even as Moscow and Beijing have been growing closer, Russia has also been improving ties with Japan. China is wary that new clients, such as Vietnam and the Philippines have become loyal buyers of Russian weaponry. In addition, Russia does not support China's extensive maritime claims in the South China Sea, and has recently backed Vietnam, a major Russian arms client, in its bilateral dispute with Beijing, with the announcement it would help state-owned PetroVietnam develop a lucrative offshore energy field. With Moscow increasingly balancing China's presence in East Asia, there is neither the commitment nor the ability to act in concert against western interests. If one looks at the future in regional terms, energy could be driving new patterns in Sino-Russian affairs. Nevertheless, the very driver of such cooperation is economic benefit, more than a parallel, albeit much less pronounced, interest to counterbalance American global influence.

¹¹⁸ Currently, the biggest supplier of LNG is Qatar, followed by Australia. However, US LNG is set to penetrate the Asian LNG market. The volume by 2020 will be at least 30 mt/y. LNG suppliers from East Africa are also targeting the Asian market, as massive discoveries are being made in the region (the combined reserves from Mozambique and Tanzania could be over 200 tcf, well over 6000 bcm). In ten years, the supply volume could reach 40-50 mt/y with no difficulty if a timely LNG production scheme is arranged. On top of this, LNG supplies from Canada and Russia are also targeting the Asian market. So it will be a battleground for gas exporters. But, if the Sino-Russian deal fails, China's demand will largely outstrip supply, pushing Asian spot prices even higher.

¹¹⁹ See Calder, K.E. *The New Continentalism: energy and the 21st Century Eurasian Geopolitics*, Yale University Press, 2012

¹²⁰ Russia worries about Chinese naval intentions in the northern Pacific and Arctic region and even as Moscow and Beijing have been growing closer over the last two years, Russia has also been improving ties with Japan.