

March 2022

Thoughts on the impact of foreign companies exiting the Russian oil and gas industry

Introduction

Russia's invasion of Ukraine has catalysed a chorus of dismay and outrage from western companies with investments in Russia and has led some to announce their withdrawal from the country. Furthermore, it has also caused the US and the EU to impose sanctions on individuals and companies involved in the energy sector and to announce restrictions on investment in key industries, including oil and gas. These sanctions build on those which had already been imposed in the wake of Russia's annexation of Crimea in 2014. Together with the withdrawal of some major IOCs they are likely to undermine both the current operation, but more especially the future development, of the Russian oil and gas sector.

This Insight aims to review the involvement of international companies in the Russian oil and gas sector since the fall of the Soviet Union in 1991 and to assess the likely impact of the key withdrawals announced to date and the possible further withdrawals which may occur if the situation in Ukraine continues or deteriorates. It will also assess the possible impact of the sanctions announced so far and will consider the potential outcome for Russian oil and gas production and exports over the short to medium term.

A short history of international involvement in the Russian energy sector

Figure 1 below provides an overview of the largest foreign investments in the Russian oil and gas sector since 1990 and shows the pipeline deals that have also taken place, largely to move Russian gas to the export market but also involving the sale of Russian crude oil to China. The early 1990s saw a wave of small deals involving the formation of joint ventures between entrepreneurial western companies keen to exploit Russia's huge hydrocarbon resource base and a variety of Russia entities that had gained access to some of it as the Soviet Union collapsed. This initial source of investment tailed off as the much-maligned "loans for shares" privatisation programme (which banned foreign participation) was initiated in the middle of the decade, which saw a number of vertically integrated Russian oil majors formed and sold off to wealthy and well-connected individuals, many of whom later became part of the oligarch elite.¹ The major exception was Gazprom, which remained under state control throughout.

During this period, major international companies started to take tentative steps into the country, initially into specific assets on the geographic periphery. Specifically, ExxonMobil and Shell bought into two assets in the Far East of Russia, Sakhalin 1 and Sakhalin 2, via Production Sharing Agreements (PSA) partnerships with Rosneft and Gazprom respectively, which they still own today. These major offshore fields have been producing gas and liquids for well over a decade and remain key examples of foreign investment in the Russian energy sector. At around the same time Statoil (now Equinor)² and Total

¹ See Freeland, C. (2000) "Sale of the Century: The Inside Story of the Second Russian Revolution", Little, Brown and Company, London, Ch. 8

² A number of companies have changed their names over the past thirty years. In general I will use the current name, highlighting any change where appropriate



(now TotalEnergies) also entered the scene, investing in the Kharyaga JV (another PSA) and towards the end of the 1990s starting to negotiate for partnership in the giant Shtokman gas field in the Barents Sea (where Conoco and others also expressed interest).

The late 1990s saw the first significant corporate move when BP purchased 10 per cent of Sidanco in 1997 and chose Vladimir Potanin and Oneximbank as its first partner in Russia. The financial crisis of 1998 caused significant problems for this new venture, but BP eventually increased its stake to 25 per cent and then joined forces with TNK to form TNK-BP in 2003, taking a 50 per cent stake in the new entity. This became the foundation of its Russian business for the next decade.³ Meanwhile Shell started to produce its first oil from Sakhalin 2 in 1999 and Wintershall confirmed its status as a major player in the country by buying a 50 per cent stake in Achimgaz (with Gazprom as its partner in this gas condensate field) and then a 35 per cent stake in the Yuzhno Russkoye field (again with Gazprom) in the early 2000s. E.On also became a partner in Yuzhno Russkoye with a 24.9 per cent interest. By the end of the decade Shell had also produced its first LNG from the Sakhalin 2 project (starting in 2009), although by then it had been forced (with its Japanese partners) to cede a 50.1 per cent stake in the operating company Sakhalin Energy to Gazprom.⁴

The 2000s also saw the first Asian investment in the Russian oil and gas sector, with ONGC purchasing a stake in Sakhalin 1 in 2001 (by which time the project had already been producing oil for almost six years), Sinopec buying a 49 per cent in Udmurtneft in 2006, where it continues to partner and produce oil with Rosneft, and ONGC then buying 100 per cent of the small exploration company Imperial Energy in 2008.⁵ These two companies set a trend for what has become the increasingly important presence of Asian energy companies in Russia.

The past decade has seen significant corporate activity involving international companies in Russia. In 2011 BP attempted to form an Arctic alliance with Rosneft, but when it failed due largely to the intervention of their Russian partners at TNK-BP, Exxon took over and acquired interests in a number of licences with Rosneft.⁶ Meanwhile the TNK-BP partnership never really recovered, and BP finally sold out in 2013, with the whole of TNK-BP being sold to Rosneft and BP taking cash plus a 19.75 per cent stake in the state company as its part of the transaction. At around the same time Equinor also signed a strategic agreement with Rosneft, mainly focussed on Arctic and tight oil investments.⁷

Meanwhile in the gas sector TotalEnergies was beginning what would become a major partnership with Novatek. It acquired its initial stake of 11 per cent in 2011, although this has now been increased to 19.4 per cent, and also became the owner of a 20 per cent stake in the Yamal LNG project, where it was joined in 2013 by the Chinese state energy company CNPC and the state investment vehicle the Silk Road Fund, which hold a 20 per cent and 9.9 per cent share respectively.⁸

Russia's annexation of Crimea in 2014 caused a hiatus in international company activity, and indeed caused some projects to be shelved. ExxonMobil and Equinor were forced to halt their Arctic activities with Rosneft, and ventures in Russian shale and tight oil were put on hold. However, the gas sector was much less affected, with the Yamal LNG project coming online in 2017 and providing a major boost to foreign-owned gas production from Russia. Indeed, by the end of the decade TotalEnergies and CNPC had signed up for 10 per cent interest each in a new project, Arctic LNG-2, which is due to come online in the next two years (and they were also joined by another Asian company, CNOOC).⁹ Also in the gas sector, OMV replaced E.On as the 24.9 per cent shareholder in the Yuzhno Russkoye gas field.

Despite the sanctions, though, Rosneft continued to form international alliances, selling 49.9 per cent of the giant Vankor oil field on the border of East and West Siberia to ONGC and a consortium of Indian companies, while Equinor strengthened its ties with Russia's state oil company by forming two joint ventures, both of which are now in production.

³ Financial Times, 23 March 2022, "Oligarchs, power and profit: the history of BP in Russia"

⁴ The Japan Times, 20 April 2007, "Gazprom takes over Sakhalin 2"

⁵ <https://www.ongcindia.com/wps/wcm/connect/en/about-ongc/subsidiaries/ongc-videsh-limited/>

⁶ The Guardian, Aug 2011, "ExxonMobil clinches Arctic deal with Rosneft"

⁷ Equinor Press Release, 21 June 2013, "Statoil and Rosneft move forward with exploration cooperation"

⁸ <https://www.novatek.ru/en/business/yamal-lng/>

⁹ <https://www.novatek.ru/en/business/arctic-lng/>

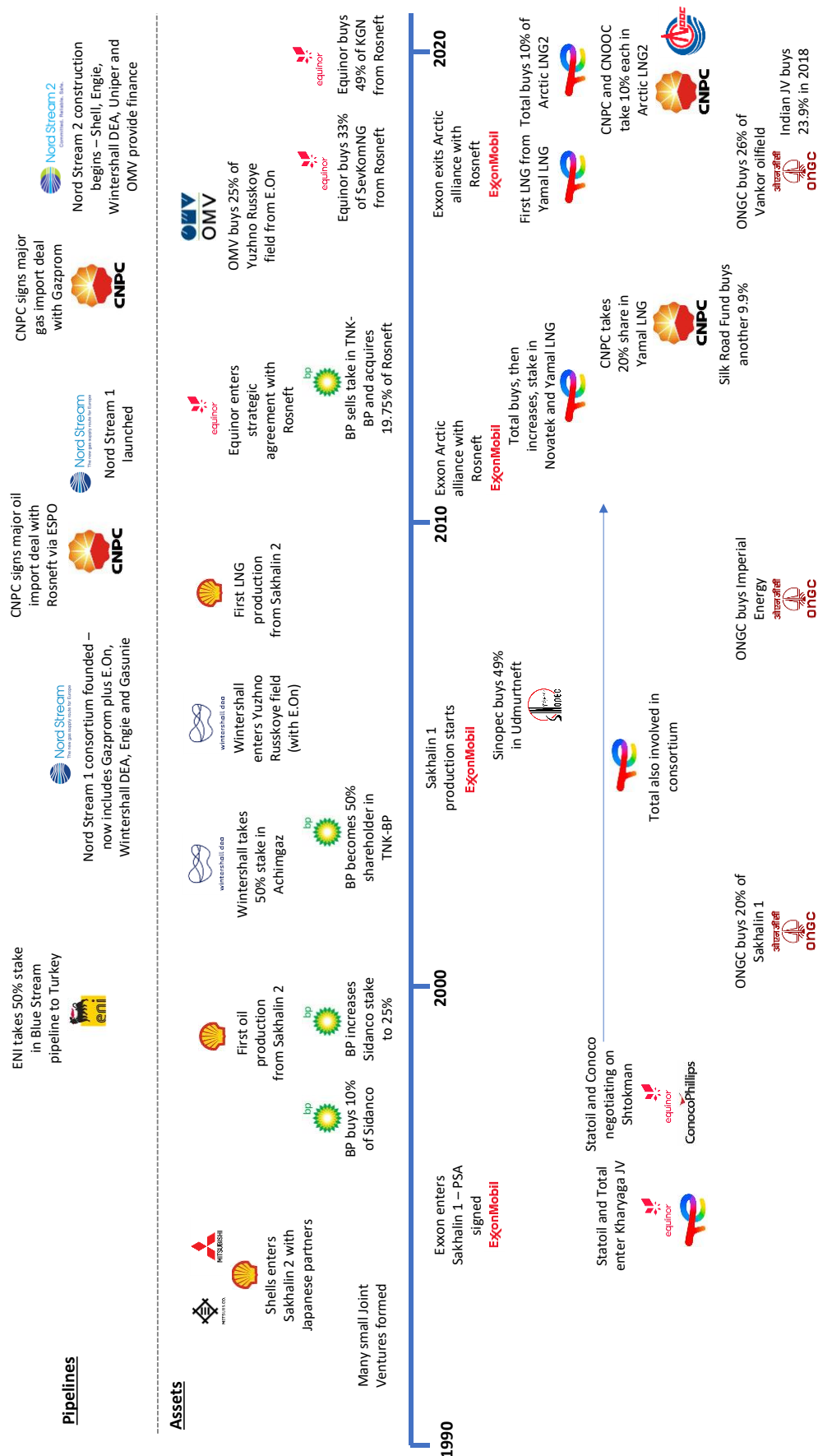


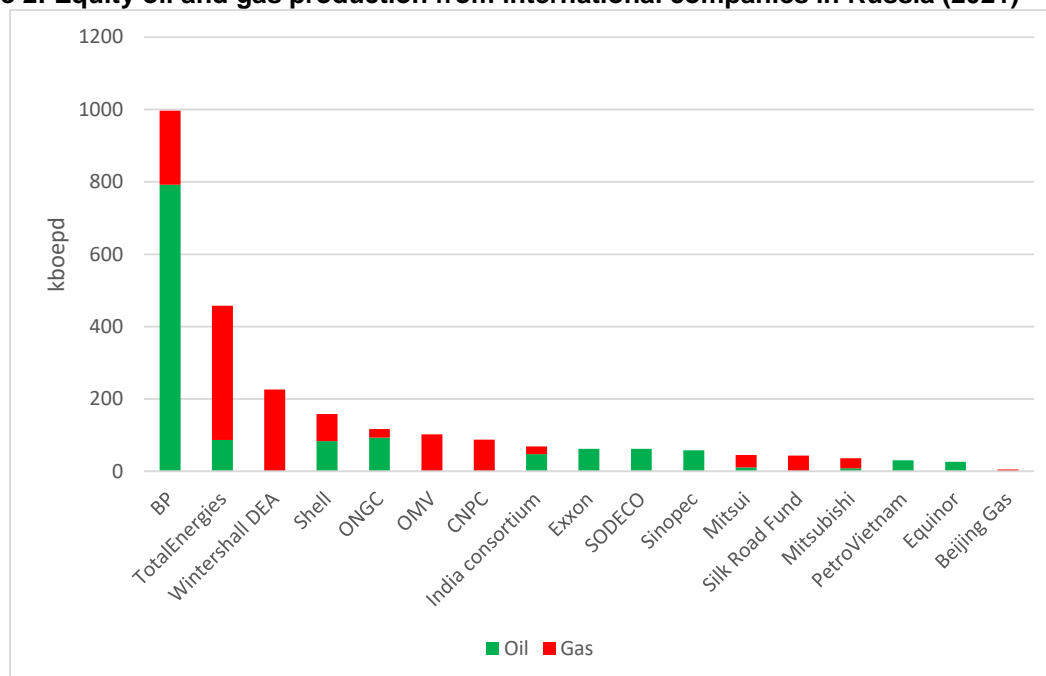
Figure 1: Timeline of foreign investment in key Russian oil and gas assets
Source: OIES form company data, Interfax, Argus, Bloomberg, Financial Times, Platts

This history of investment in oil and gas exploration and production assets was complimented by other deals done to support pipeline projects. In 1999 ENI established a 50 per cent per cent stake in the Blue Stream pipeline to export gas from southern Russia to Turkey, with a capacity of 16bcm/a. Then in 2005 a consortium to operate the Nord Stream 1 pipeline (55bcm/a capacity) was founded by Gazprom (51 per cent) and four European companies (E.ON – 15.5 per cent, Wintershall DEA – 15.5 per cent, Engie – 9 per cent and Gasunie – 9 per cent).¹⁰ In 2009 CNPC signed a major oil import deal with Rosneft and provided \$15bn of finance to Rosneft and state pipeline company Transneft to ensure the construction of the ESPO pipeline to North East China and the Pacific coast of Russia (1.6 million b/d capacity).¹¹ CNPC complimented this with a similarly strategic gas export deal with Gazprom in 2014 involving the Power of Siberia 1 line from East Siberia (38bcm/a capacity).¹² Finally, the Nord Stream 2 consortium was founded in 2011, with construction starting in 2018, and although sanctions forced the foreign companies to give up their equity stakes, five have provided 50 per cent of the financing (10 per cent each from Shell, Engie, Wintershall DEA, Uniper, and OMV).¹³

The current position of foreign companies in the Russian oil and gas sector

Prior to the announcement of the withdrawal of several international companies from the Russian oil and gas sector, foreign equity ownership of Russian oil and gas production totalled just over 2.5 million barrels of oil equivalent per day (million boe/d). This is equivalent to approximately 11 per cent of Russia's total oil and gas output of 23.5 million boe/d in 2021 and is split fairly evenly between the two hydrocarbons, as can be seen in Figure 2 below. It is worth noting the difference between the production generated from shareholdings in Russian companies, which accounts for all of BP's production and approximately half of TotalEnergies' output, and the more operational asset-based production which makes up the other foreign company activity.

Figure 2: Equity oil and gas production from international companies in Russia (2021)



Source: Company data, OIES calculations

Note: All of BP's production comes from its 19.75% stake in Rosneft, while more than 50% of Total's output comes from its 19.4% stake in Novatek

¹⁰ <https://www.nord-stream.com/>

¹¹ Reuters, 27 Sept 2010, "Russia's ESPO pipeline link to China"

¹² SPG Global, 15 Dec 2021, "Gazprom's gas supply via Power of Siberia pipeline continues above contract levels"

¹³ <https://www.nord-stream.com/about-us/our-shareholders/>



With this in mind, BP is by far the largest owner of equity production, entirely derived from its 19.75 per cent interest in Rosneft, but the company has little direct control of the operation of these assets. In terms of practical involvement, the second largest producer TotalEnergies has a direct stake in the Yamal LNG project, as well as a 19.4 per cent interest in the operating company Novatek. Meanwhile Wintershall DEA is more closely involved in actual production, with direct interests in the Yuzhno Russkoye field and the Achimgaz JV. In fourth place is Shell, with its direct interests in the Sakhalin 2 project and the Salym Petroleum JV. ExxonMobil's 30 per cent stake in the Sakhalin 1 project then puts it in 9th place thanks to its share of oil production from the joint venture.

It is also interesting to note that 10 of the 17 investors noted in Figure 2 are from Asia, and although their equity share of production only accounts for 18 per cent of the total it has nevertheless grown dramatically over the past decade. Indeed, if one excludes equity interests in company production (BP's interest in Rosneft and TotalEnergies' interest in Novatek), Asian companies account for almost 40 per cent of foreign company direct interests in Russian oil and gas assets, amounting to approximately 470,000 boe/d.

Of course, not all of the foreign investments in Russia are producing oil and gas, as some involve exploration or the pipelines discussed above. A full list of the assets owned by the companies mentioned in Figure 2, as well as some other companies with non-producing energy assets in Russia, can be found in Appendix 1 at the end of this short paper.

International oil company reactions and their impact after the invasion of Ukraine

BP: Perhaps the highest profile announcement on oil company exits from Russia concerned BP's decision to exit from its 19.75 per cent stake in Rosneft. This had been held by the company since 2013, when it was acquired during the sale of TNK-BP, and has been a significant contributor to BP's asset base over the past nine years, accounting for 50 per cent of the company's oil and gas reserves and one third of production. In addition it provided \$2.7bn of BP's \$12.8bn profit in 2021, or 21 per cent of the total. Furthermore, as there is no obvious buyer for BP's stake, there is the possibility of a significant write-down, put at a total of up to \$25 billion by BP itself.¹⁴

BP's two directors on the Rosneft board, former CEO Bob Dudley and current CEO Bernard Looney, have also resigned, leading BP to conclude that it will no longer have any significant influence at the Russian state company and leading to a change of accounting treatment that could trigger the write-downs. However, it is arguable how much influence BP ever truly had over strategic decisions made by Rosneft, not only because any stake below 25 per cent has no veto rights under Russian corporate law but also because as a state company Rosneft was clearly more beholden to its majority shareholder, the Russian state, and is dominated by its CEO, Igor Sechin, who is a close associate of the Russian president.

BP employees had some role advising on the development of important assets and introducing new technical ideas, but in reality Rosneft is certainly capable of maintaining its oil production at core fields without their advice. Development of new fields in the Arctic and other remote regions or in difficult geology could have benefited from BP's input, but in practice service companies are now providing much of the key equipment and technology (see later section). The only real direct operational involvement for BP concerned three small joint ventures from which the company has also withdrawn.

As a result, although BP's withdrawal from Russia has generated significant headlines and will create a big hole in the company's balance sheet, it is unlikely to have a major short-to-medium term impact on Rosneft's or Russia's production outlook.

TotalEnergies: Although TotalEnergies has not announced a complete exit from Russia, it has made a firm statement on its position in the country and has confirmed that it will "gradually suspend its

¹⁴ BP Press Release, 27 Feb 2022, "bp to exit Rosneft shareholding"



activities in Russia, while assuring its workforce's safety."¹⁵ The company has, in common with all the foreign actors who have made announcements, condemned Russia's military action, expressed its solidarity with the people of Ukraine and has committed itself to implementing all EU sanctions as they affect the company's assets.¹⁶ With reference to its investment in the Yamal LNG project (20 per cent interest) it has confirmed that it will continue to deliver LNG under its current contracts "for as long as Europe's governments think that Russian gas is necessary,"¹⁷ and currently it does not plan to divest its interest in the project's operator Novatek (19.4 per cent equity stake). Combined, the two interests account for 24 per cent of TotalEnergies' proven reserves and 17 per cent of its oil and gas production.¹⁸

One reason for this may be that Novatek is a non-state actor and has not been sanctioned by the EU in 2022 or in 2014, after the annexation of Crimea. The company was sanctioned by the US, but this was limited to preventing it raising finance in western capital markets and did not include any sanction on the provision of technology or technical advice. Providing this advice and expertise has been a large part of TotalEnergies' role, in particular with regard to the development of Yamal LNG, which was Novatek's first major project, but nevertheless it has come under pressure from investors and NGOs who are keen to see it leave the country.¹⁹ However, TotalEnergies has argued that "abandoning these interests without consideration would enrich Russian investors...[and] would have no impact on the [Russian] companies' operations and revenues."²⁰

TotalEnergies has promised not to invest further capital in new projects, and it has now confirmed that this will apply to its 10 per cent interest in the Arctic LNG-2 scheme that is currently under development.²¹ Arctic-2 is due to come onstream in three stages between 2023 and 2025, and Novatek announced in February 2022 that the project was 59 per cent complete at the end of 2021 and that Train 1 is 78 per cent complete.²² However, it is interesting to note that an Italian state bank, CDP, has frozen a €500 million loan to the project,²³ which has increased the global focus on LNG as a strategic asset for Russia and has raised questions over whether financing might become a problem for Arctic LNG-2, at least in the short-term. Alternative financing could probably be sourced from Asia (as happened with Yamal LNG after 2014) and the existing partners (including Novatek) are likely to have enough expertise to complete at least the first train of this second project. However, the withdrawal of the French major could undermine the remainder of the project (indeed TotalEnergies has confirmed that it will no longer record proved reserves from the project given the uncertainties)²⁴ and Novatek has confirmed that it will only be focussing on train 1 for the time being.²⁵ In addition it could also impact the longer-term ambitions of Novatek to further expand its Arctic LNG portfolio, which includes plans for further developments on the Yamal and Gydan peninsulas.

TotalEnergies has one other small joint venture with Novatek (a 49 per cent interest in Termokarstovoye) which is a more traditional gas field development that is already in production and would not really suffer from the company's departure. In addition, it also has a 20 per cent interest in the Kharyaga joint venture, from which Equinor has already announced its departure in reaction to the war. Finally, TotalEnergies has also confirmed that it will no longer be purchasing Russian oil and petroleum products by the end of 2022 at the latest.

Wintershall DEA: Wintershall DEA, which is a subsidiary of BASF and Letter One, is perhaps the most exposed of all the foreign companies in Russia, as almost 50 per cent of its oil and gas production plus

¹⁵ TotalEnergies Press Release, 22 March 2022, "TotalEnergies to stop purchasing oil and petroleum products from Russia"

¹⁶ TotalEnergies Press Release, 1 March 2022, "TotalEnergies: statement concerning the war in Ukraine"

¹⁷ Platts European Gas Daily, 23 March 2022, "TotalEnergies opts not to provide more capital to Russia's Arctic LNG-2"

¹⁸ Reuters, 15 March 2022, "Church of England funds press TotalEnergies to exit Russia"

¹⁹ For example: <https://www.business-humanrights.org/en/latest-news/activist-clearway-urges-totalenergies-to-exit-russia-as-a-response-to-military-invasion-to-ukraine/>

²⁰ TotalEnergies Press Release, 22 March 2022, "TotalEnergies to stop purchasing oil and petroleum products from Russia"

²¹ Platts European Gas Daily, 23 March 2022, "TotalEnergies opts not to provide more capital to Russia's Arctic LNG-2"

²² <https://www.novatek.ru/en/business/arctic-lng/>

²³ Reuters, 1 March 2022, "Italy freezes loan for Arctic LNG-2 plant"

²⁴ TotalEnergies Press Release, 22 March 2022, "TotalEnergies to stop purchasing oil and petroleum products from Russia"

²⁵ Interfax, 25 March 2022, "Moscow Press Review for March 25, 2022"



24 per cent of its free cashflow comes from its investments in the Yuzhno Russkoye gas field and the Achimgaz JV. To date the company has issued a statement saying that the “war of aggression against Ukraine has shaken the foundations of the company’s work in Russia to the core” and also that “no additional projects will be advanced or implemented.”²⁶ However, it has not announced a withdrawal from its main assets, although it has been reported that the company has halted all financial transactions with Russia both into and out of the country.²⁷

In its latest investors’ presentation the company has reported that operations at the two fields have not been impacted to date,²⁸ and this is hardly surprising as both have been in operation for a number of years. Indeed, as both are operated by Gazprom and have been fully developed as relatively standard gas (Yuzhno Russkoye) and gas condensate (Achimgaz) fields, it is unlikely that production would be impacted even if Wintershall DEA did pull out. Gazprom would likely just take over full operatorship with a 100 per cent stake or would find other investors from non-sanctioning countries to buy into highly profitable gas fields.

Shell: The same might not be the case for at least one of Shell’s investments, Sakhalin 2, as although the LNG project has been under the majority control of Gazprom since 2006, when it took a 50.1 per cent stake, Shell has played a major role in the operating company (Sakhalin Energy) and its departure could have a significant impact. Sakhalin 2 currently produces around 11mtpa of LNG which is exported to Asia, and Shell’s share accounts for around 5 per cent of the company’s total gas production.²⁹

In its withdrawal announcement Shell stated that it would end its involvement in “all Russian hydrocarbons, including crude oil, petroleum products, gas and LNG” and apologised for having purchased a cargo of Russian crude the week before.³⁰ This presumably means that the company will also not be buying or trading Russian LNG from Sakhalin 2, once its exit has been completed. However, the company also pointed out that withdrawing from an LNG project is “a complex challenge” which would involve both a handover of operational control and an effort to ensure that safety and environmental risks are managed appropriately. No timescale was provided, and so the completion of this task will need to be monitored.

Once Shell has left, Gazprom will become the only operator, as the Japanese partners (Mitsui and Mitsubishi) have always tended to be in the background without any significant day-to-day input. Given that Gazprom has limited LNG expertise and may not have access to some of the most technical equipment which Shell uses on its projects if it is removed in line with US and EU sanctions, it is certainly possible that the medium-term performance of the project could be undermined. Production can be expected to remain stable for the remainder of 2022, but as equipment needs to be replaced or more complex maintenance needs to be carried out, there is certainly the potential for problems to emerge.

Shell’s other major joint venture, at Salym Petroleum, produced 21,000bpd of equity production for the company in 2020, equating to around 3.5 per cent of the company total, while liquids production from Sakhalin 2 added a further 9,000bpd (1.5 per cent). Shell’s partner at Salym is Gazprom Neft, widely regarded as one of the most competent oil producers in Russia, and therefore although Shell will lose equity output, Russian production is unlikely to be impacted. Finally, the company has an exploration joint venture, Gydan, with Gazprom Neft which it will also exit, and the company is closing all its petrol retail sites in the country alongside its aviation fuels and lubricants operations.

OMV: The Austrian oil and gas company is another which has expressed its dismay at events in Ukraine but has yet to commit to pulling out of Russia. The OMV board is currently undertaking a strategic review of its main producing asset, a 24.9 per cent interest in the Yuzhno Russkoye field which accounts

²⁶ Wintershall DEA Press Release, 2 March 2022, “Wintershall writes of financing of Nord Stream 2”

²⁷ Financial Times, 2 March 2022, Wintershall DEA to receive no Russian revenues until sanctions lifted”

²⁸ See report at: <https://wintershalldea.com/sites/default/files/media/files/Wintershallper cent20Deaper cent20Q4per cent20FYper cent202021per cent20Resultsper cent20Presentation.pdf>

²⁹ Based on 2020 data from <https://reports.shell.com/annual-report/2020/strategic-report/segments/oil-and-gas-information/data-tables.php>

³⁰ Shell Press Release, 8 March 2022, “Shell announces intent to withdraw from Russian oil and gas”



for approximately 22 per cent of the company's global production (c.100kboe/d out of a total of 470kboe/d in Q3 2021). All options are being considered, including divestment or exit, but no final decision has yet been made.³¹ The company is making a €1.5-1.8bn value adjustment, however, to take into account the potential impairment of its Yuzhno Russkoye investment and also the fact that receivables from its loan to Nord Stream 2 may not be recoverable. Furthermore, the company has also cancelled negotiations with Gazprom on the purchase of a 24.98 per cent stake in blocks 4A and 5A of the Urengoy Achimov formation, which had been ongoing since 2018 and which could have added materially to OMV's reserves and future production.

In terms of the impact on Russian production, should the company withdraw from Yuzhno Russkoye it would be unlikely to have a material impact as Gazprom would continue to operate a field which has been in production for some time and needs little in the way of technical expertise. The withdrawal from the Urengoy Achimov licenses could have a medium-term impact, as it could slow development as Gazprom seeks new partners for a field that is more complex and would require financing.

OMV has also made the statement that "Russia will no longer be a core region", underlining what is likely to be a theme for many international companies given that, despite the country's huge hydrocarbon reserves, the political situation makes investment there untenable. In addition, with the energy transition also threatening the future of hydrocarbons more generally, the Ukraine war could well be the catalyst for a complete re-think on the future of foreign involvement in Russian oil and gas development.

ExxonMobil: The Sakhalin 1 project has been one of the most iconic examples of foreign investment in Russia since the PSA was signed in 1995 and first significant production began in 2005. The field currently produces just over 200,000 b/d, of which ExxonMobil's share is 30 per cent, and although this is less than 3 per cent of the company's total liquids production Sakhalin 1 is nevertheless one of the company's major global oilfield developments. In addition, ExxonMobil is the field operator and so its decision to discontinue its operations will have a significant impact on the other partners at the field, who include Rosneft with a 20 per cent stake. The US major has highlighted its responsibility to ensure a safe handover of operations to its co-venturers, who also include ONGC and the Japanese consortium SODECO, but it will be a challenge to find a replacement operator from this group as none of the companies has any real offshore operating experience. Rosneft is the obvious candidate, but its offshore work has been limited to a few exploration wells. As a result, the future trajectory of oil output at Sakhalin 1 could, at the very least, fail to reach optimal levels and could fall significantly if ExxonMobil removes all its technical equipment and expertise. In the short-term, though, the impact is likely to be negligible as Exxon will manage its departure with caution in an attempt to minimise the safety and environmental impact.³²

Sakhalin 1 is ExxonMobil's last major asset in Russia as the company had previously been affected by the sanctions introduced in 2014 after the annexation of Crimea. At that time the company had just made a major oil discovery in the Arctic region offshore Russia's northern coast, but it was forced to cease operations immediately at the new field (called Pobeda, the Russian for 'victory') and ultimately to withdraw from all the other Russian licences where it had partnered with Rosneft. It is interesting to note that Rosneft did not return to the licences where the discovery was made until 2020, when it was reported to have drilled two more wells,³³ and no ostensible progress has been made to develop the discovered reserves. Indeed, Rosneft's attention in the Arctic is now more focussed on its onshore Vostok Oil project in the Taimyr region of East Siberia.³⁴

Equinor: The Norwegian state oil and gas company has announced that it regards its position in Russia as "untenable [and that it] will now stop new investments into its Russian business."³⁵ In fact, Equinor's

³¹ OMV Press Release, 5 March 2022, "OMV no longer pursues investments in Russia"

³² Reuters, 2 March 2022, "Given the current situation ExxonMobil will not invest in new developments in Russia"

³³ Reuters, 18 Aug 2021, "Russia's Rosneft drilling again in Arctic Kara Sea after sanctions hiatus"

³⁴ Reuters, 23 Dec 2021, "Russia's Rosneft bets on giant Vostok to reshape Europe's oil market"

³⁵ Equinor Press Release, 28 Feb 2022, "Equinor to start exiting from joint ventures in Russia"



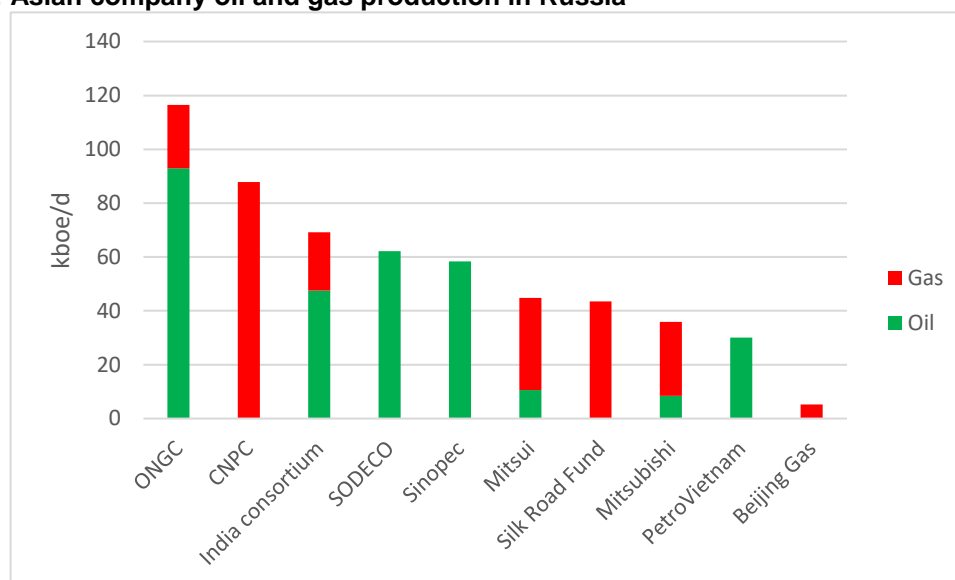
, attempts to create a significant business in Russia have always fallen short, principally because the company's focus on the potential development of the giant Shtokmanovskoye field in the Barents Sea never reached fruition, with the company finally ending its involvement in 2019 after more than two decades of negotiations.³⁶

As a result, Equinor's announcement will see it exit four joint ventures with a balance sheet value of around \$1.2 billion, three of which are in production and contributing 26kboep/d to the company's overall production of around 2mmboe/d (just over 1 per cent). Its main partner is Rosneft, with whom it signed a strategic partnership agreement in 2012,³⁷ subsequently entering three joint ventures with the company. The Sevmorneftegaz JV (Equinor 33.33 per cent) contains the North Komsomolskoye project which is currently producing around 11kbpd of oil, while Angara Oil (Equinor 49 per cent) owns 12 licenses in East Siberia, one of which is producing around 27kbpd. Finally, a joint venture to explore the Domanik formation in Samara (Equinor 49 per cent) was suspended due to the sanctions imposed in 2014. Equinor's last joint venture is its longstanding 30 per cent interest in the Kharyaga field, currently producing a total of 32kbpd.³⁸ In reality, none of these investments will be materially affected by Equinor's withdrawal, and the company's only other exploration interests, a number of offshore licences held in partnership with Rosneft,³⁹ have also been suspended since 2014 due to EU and US sanctions.

The rise of Asian companies in Russian oil and gas

Having noted the withdrawal of western companies from the Russian oil and gas sector it is also worth considering the increased activity that has been seen from Asian companies over the past decade.

Figure 3: Asian company oil and gas production in Russia



Source: Company data, Interfax

Figure 3 above shows the breakdown of Asian companies' production in Russia, highlighting the fact that although individual equity production numbers are relatively small compared to the top western players, the number of companies involved is significant. Also, the split between oil and gas production is fairly even, but it is also interesting to note that the major Russian partners are Rosneft (for oil) and Novatek (for gas), with Gazprom playing only a minor role as the partner of Mitsui and Mitsubishi at Sakhalin 2.

³⁶ Barents Observer, 28 Feb 2022, "Equinor exits Russia"

³⁷ Equinor Press Release, 5 May 2012, "Statoil signs cooperation agreement with Rosneft"

³⁸ For details see <https://www.equinor.com/en/where-we-are/russia.html>

³⁹ <https://www.equinor.com/en/news/archive/2012/05/05/StatoilRosneftMay2012.html>

The largest player is the Indian company ONGC, which owns a 20 per cent stake at Sakhalin 1 (bought in 2001) and most importantly a 26 per cent stake in the Vankor oilfield, which it purchased in 2015 and 2016 when a deal between Rosneft and CNPC fell through.⁴⁰ The Indian consortium which owns a further 23.9 per cent of the Vankor field is the third largest Asian producer in Russia, underlining that the equity purchased in this asset is the most critical Asian investment in Russian oil to date. By contrast, Chinese companies have focussed more on gas, with CNPC and the Silk Road Fund owning a combined 29.9 per cent of the Yamal LNG project while CNPC and CNOOC each own 10 per cent of the Arctic LNG-2 project that is currently under development (both projects being controlled by Novatek). Meanwhile Beijing Gas owns a 20 per cent stake in a small East Siberian gas producer in partnership with Rosneft. The one exception to this is Sinopec, which owns 49 per cent of the small oil production company Udmurtneft, in partnership with Rosneft.

The other Asian equity in Russian oil and gas is largely owned by Japanese companies who have interests in the Sakhalin 1 and 2 projects as well Arctic LNG-2. Finally, Petrovietnam owns a 50 per cent share in the Central Khoreyver oilfield with Zarubezhneft.

To date no Asian company has stated its firm intention to withdraw from its Russian assets, with even the Japanese companies citing security of supply issues to justify their continued involvement despite the Japanese government having imposed sanctions on Russia⁴¹ and in some instances banned new investment in specific projects.⁴² Meanwhile China and India have remained staunchly non-committal on the Ukraine invasion and their oil and gas companies appear to remain committed to Russia.

Service company reactions and impact

The analysis above would suggest that, with a few exceptions, the withdrawal of foreign companies from Russia will have little immediate impact on oil and gas production in the country, although the optics could become rather dramatic as BP attempts to sell its stake in Rosneft while Shell and ExxonMobil leave their major field developments. Perhaps more operationally significant, although less obvious to date, would be the potential withdrawal of western oil service companies who have played a critical role in the re-development and consistent growth of the Russian oil and gas sector since 2000. In particular, Schlumberger, Baker Hughes, and Halliburton have provided technically advanced equipment and IT facilities that have allowed the exploitation of more challenging fields and have increased the efficiency of production of existing assets in Russia, leading to the country seeing consistent growth in output over the past two decades. The impact has particularly been seen in the oil sector, and were these three companies, and other western players, to exit immediately it could have a significant short-to-medium term impact.

Figure 4 below shows the revenues generated by these three companies in Russia relative to their global sales. Schlumberger is estimated to make around 8 per cent of its revenues in Russia,⁴³ followed by Baker Hughes with 5 per cent⁴⁴ and Halliburton with 2 per cent.⁴⁵ However, these figures do not really reflect the importance of these three companies in the Russian oil sector, as they have all built up significant businesses in the country.

⁴⁰ <https://www.livemint.com/Industry/U9I5hhLVbaq7QiFM8Dxzy/ONGC-signs-deal-to-acquire-additional-11-in-Russias-Vankor.html>

⁴¹ <https://www.energyvoice.com/oilandgas/asia/394187/japanese-firms-unlikely-to-exit-russian-energy-after-shell-and-exxonmobils-departure/>

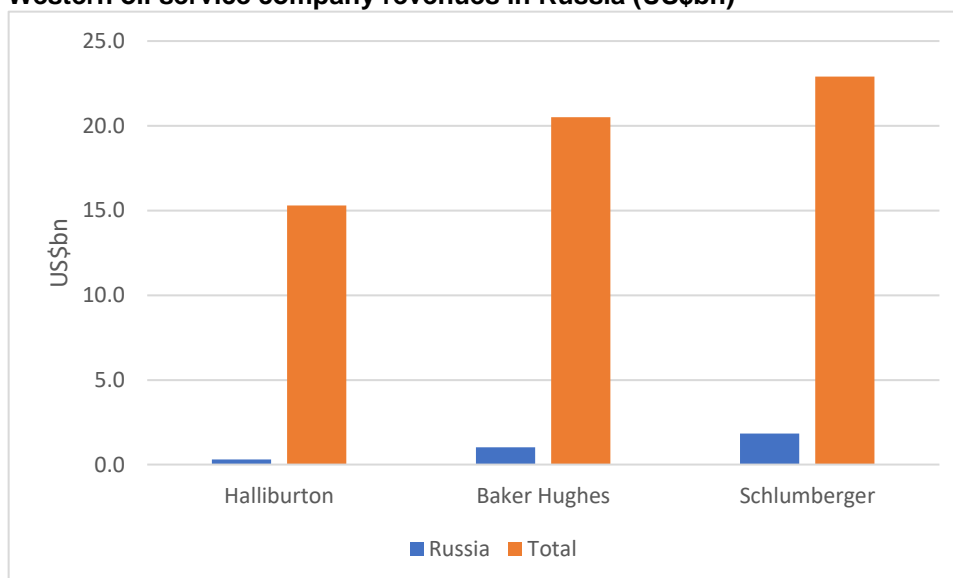
⁴² Finmarket, 25 March 2022, "Япония и Франция заморозили инвестиции в "Арктик СПГ 2"

⁴³ Estimate by JP Morgan cited at <https://www.bloomberg.com/news/articles/2022-03-01/oil-servicers-may-see-russia-earnings-impact-analysts-warn>

⁴⁴ Financial Times, 16 March 2022, "Western oilfield services companies stay the course in Russia"

⁴⁵ See note 21

Figure 4: Western oil service company revenues in Russia (US\$bn)



Sources: Bloomberg, Financial Times, JP Morgan, Company Data

Schlumberger has signed a number of agreements with Russian companies over the past few years to provide key high-tech equipment to enhance oil production. For example in November 2021 it signed a deal with Gazprom Neft to develop a domestic business using its digital oilfield technologies,⁴⁶ while in June 2021 Schlumberger and Rosneft signed a technology cooperation agreement for joint innovation projects relating to the science, design, and operation of oil and gas fields in Russia.⁴⁷ More specifically, in 2019 Schlumberger also announced that the application of its cluster hydraulic fracking technologies would allow Rosneft to cut costs for development of tight reserves by 7-12 per cent, underlining how important the impact of western technology can be in enhancing the economic efficiency of Russian oil production.⁴⁸ Indeed, the 2014 sanctions already imposed on the Russian oil sector specifically targeted areas where technology would be most important, namely the Arctic, offshore and shale oil, in order to undermine the future prospects for production. This confirmed the importance of the technical solutions that could be provided by western contractors, and while they have all avoided breaking the sanctions rules their continued involvement in Russia underlines their importance in certain areas of the country's hydrocarbons industry.

Other examples of the involvement of the key western service companies include Halliburton's acquisition of oil equipment manufacturer Novomet in 2017 and its agreement with Gazprom Neft on a partnership to conduct high-tech drilling to optimise production at a number of the Russian company's fields.⁴⁹ Meanwhile another western company, Weatherford, concluded a strategic agreement with Gazprom Neft in 2019 to provide the complex logging while drilling and measurement while drilling services that can significantly enhance field productivity.⁵⁰ Previously Weatherford had also confirmed a strategic agreement with Gazprom Neft to "enable technology collaboration through frequent knowledge and information sharing," further emphasizing the role that western service companies have provided in the development of technical expertise in Russia.⁵¹

⁴⁶ See note 24

⁴⁷ Interfax, 4 June 2022, "Rosneft, Schlumberger announce technology cooperation agreement"

⁴⁸ Interfax, 18 Oct 2019, "Schlumberger cluster hydraulic fracking technology to allow Rosneft to cut Fracking costs for tight deposits by 7%-12%"

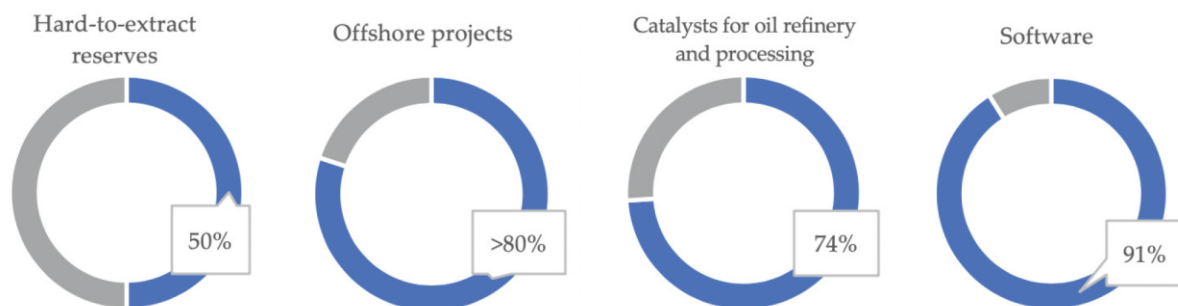
⁴⁹ Interfax, 1 June 2017, "Gazprom Neft concludes agreement with Halliburton on high tech drilling"

⁵⁰ Interfax, 1 Nov 2019, "Weatherford signs two contracts on drilling in Russia, including for Gazprom Neft"

⁵¹ Interfax, 10 Sept 2014, "Gazprom Neft, Weatherford sign strategic cooperation agreement"

These examples underline the point that in areas of advanced technology the western service companies remain critical to the Russian oil sector. Figure 5 shows the situation as assessed by the Ministry of Energy in Russia prior to the imposition of sanctions, and although progress among domestic contractors has been made, it remains the case that in areas of advanced software and offshore development the experience and technological know-how of western companies remains critical. Even before the current crisis many commentators asserted that the impact of sanctions would “have a compounding effect with negative consequences” for long-term production prospects in Russia, suggesting that any threat to western contractor involvement in Russia could have serious consequences.⁵²

Figure 5: Russian reliance on foreign technology in the oil and gas sector prior to sanctions



Source: The Ministry of Energy of the Russian Federation, Ministry of Industry and Trade of the Russian Federation

Source: CEES Working Paper No.3, April 2020, Drifting East: Russia's import substitution and its pivot to Asia, p.4

The initial reaction of the main western oilfield service companies to the invasion of Ukraine was to remain non-committal on their continued involvement in Russia, but the ratcheting up of sanctions on technology transfer from the US and the EU has catalysed a response. On March 18 Schlumberger announced that it would “immediately suspend new investment and technology deployment to our Russia operations” while promising to fulfil existing contracts as permitted by sanctions.⁵³ On the same day Halliburton made a similar statement, announcing that it had “immediately suspended future business in Russia” and that it had already halted shipments of sanctioned equipment.⁵⁴ Then on March 19 Baker Hughes announced that it had also halted new investments in its Russian operations.⁵⁵ Finally on March 20 Weatherford stated that “following the implementation of sanction on February 24, 2022, we placed a hold on shipments and immediately suspended making any new investments or deploying new technology in Russia. We have no active joint ventures or partnerships in Russia.”⁵⁶

It is also important to note that, beyond the upstream sphere of oil and gas production, other services critical for Russia are also now at risk. One particular example is shipping in the Arctic, where the construction of next generation ice-breakers and ice-class LNG tankers is in doubt due to sanctions on technology transfer.⁵⁷ A number of vessels are being constructed in South Korea, which has stated that it will follow US sanctions on Russia,⁵⁸ while South Korean companies also have joint ventures with Rosneft's Zvezda shipyard in the Far East of Russia, where Arctic vessels are being built. Fifteen ARC-7 icebreaking LNG tankers have been ordered from the yard, with the seventh starting construction in February 2022 and with Novatek being the major customer,⁵⁹ and although the Korean partners have

⁵² CEES Working Paper No.3, April 2020, “Drifting East: Russia's import substitution and its pivot to Asia”

⁵³ Schlumberger Press Release, 18 March 2022, “Schlumberger announces update on Russia operations”

⁵⁴ Halliburton Press Release, 18 March 2022, “Halliburton suspends future business in Russia”

⁵⁵ Baker Hughes Press Release, 19 March 2022, “Baker Hughes announces update on Russia operations”

⁵⁶ Weatherford International Press Release, 20 March 2022, Weatherford International plc today announced the following update on its Russian operations”

⁵⁷ Financial Times, 28 March 2022, “Russia's Arctic gas ambitions at risk as sanctions imperil LNG icebreakers”

⁵⁸ <https://www.aljazeera.com/economy/2022/3/7/new-zealand-south-korea-announce-new-sanctions-on-russia>

⁵⁹ <https://www.offshore-energy.biz/zvezda-starts-7th-arctic-lng-2-carrier-construction/#:~:text=RF%20group%20signed%20the%20contracts,the%20construction%20of%20such%20vessels.>



denied that the JVs are currently under threat it is possible that the withdrawal of some key technical equipment under sanctions rules could undermine the completion of ongoing projects. In particular, there is only one supplier of maritime container tanks for LNG,⁶⁰ and if it is sanctioned then construction of the vessels could come to a halt.

Given concerns over safety issues and the wellbeing of Russian staff it is unclear how rapidly any service companies would wind down their operations in Russia, if they ultimately decide to leave. In addition, as evidenced by the domestic Russian reaction to the 2014 sanctions, it is clear that Russian oilfield service companies, supported by the rapidly increasing involvement of Chinese companies, can substitute in many areas. For example, Chinese companies have been heavily involved in the development of the Yamal LNG project and Novatek has developed a Russian liquefaction technology (Arctic Cascade) that can now be used to partially replace western products. However, if western equipment becomes less available then the risk of shortages will increase, and more importantly the removal of western software and advanced computer-based technology could inhibit oilfield optimisation and development. This is not to say that Russian and Chinese companies could not develop analogous products over time, but it is likely that there would be a hiatus and some impairment of performance in the short-to-medium term.

Pipelines in the aftermath of the invasion

International companies have also been involved in the construction and financing of hydrocarbon export pipelines from Russia. In the west, E.On, Engie, Gasunie, and Wintershall DEA are shareholders with Gazprom in the 55bcm Nord Stream 1 pipeline that has been operational since 2012.⁶¹ It runs 1224km from North-West Russia to Germany and has become a vital artery for Russian gas exports to NW Europe, accounting for approximately 35 per cent of the total in 2021. To date little mention has been made of any of the partners withdrawing from the project, and indeed it would make little difference as Gazprom could continue to operate the pipeline on its own.

The new Nord Stream 2 pipeline has been much more controversial, though, and has been the subject of US sanctions for some time. As a result, the original western shareholders (Shell, Wintershall DEA, Engie, OMV and Uniper (10 per cent each)) all withdrew from ownership of the project company but are still exposed to just under €1 billion of financing each. All have announced that they are making provision for the potential insolvency of Nord Stream 2, as the operation of the pipeline has now been permanently delayed by the German authorities, and indeed some of the companies have already written off the debt. However, the pipeline construction has already been completed, and so the future of Nord Stream 2 is more dependent on the decisions of the German government and regulators than on the involvement of western companies.⁶²

Asian companies have also had an important role in pipeline development, although mainly in the oil sector. In 2009 the Chinese Administration provided a \$25 billion loan to Russian companies Rosneft (\$15 billion) and Transneft (\$10 billion) to secure the future of East Siberian oil reserves and their delivery to China via the East Siberia Pacific Ocean (ESPO) pipeline.⁶³ In return for the loan CNPC was guaranteed delivery of 15 million tonnes per annum of crude oil over 20 years. A subsequent deal to provide financing for Rosneft's acquisition of TNK-BP in 2013 added a further 15 million tonnes per annum added to the guaranteed exports, with Sinopec also negotiating for a further 10 million tonnes per annum in 2014 (although it is unclear whether this deal was finalised).⁶⁴ As a result, Russian oil exports are committed to China for the foreseeable future and both Rosneft and Transneft have

⁶⁰⁶⁰ Gaztransport & Technigaz, a Paris-listed company that is 30% owned by Engie

⁶¹ <https://www.nord-stream.com/>

⁶² DW, 23 Feb 2022, "The end of Nord Stream 2 – for now?"

⁶³ Henderson, J. (2011) "The Strategic Importance of Russia's Eastern Oil Resources", Working Paper WPM41, Oxford Institute for Energy Studies

⁶⁴ Henderson, J. & Mitrova, T. (2016) "Energy Relations between Russia and China: Playing Chess with the Dragon", Oxford Working Paper WPM67, Oxford Institute for Energy Studies



significant outstanding loans to their eastern neighbour in return for the construction of a major export pipeline.

As far as gas is concerned, Gazprom has been much more circumspect, financing its own construction of the Power of Siberia pipeline to China. The line started operation in 2019 and is building up to its full capacity of 38 bcma, underpinned by a long-term supply contract with CNPC. It remains to be seen whether two proposed new pipelines, Power of Siberia 2 from West Siberia through Mongolia to China and the Far East pipeline from Sakhalin Island to NE China,⁶⁵ will be built using solely Russian money or whether Chinese finance, and perhaps even equity involvement, might be welcomed in more straitened times.

The impact of the new sanctions

Foreign company activity in Russia, and the ending of it, are clearly related to the imposition of sanctions by major governing bodies such as the US and the EU. As restrictions tighten over time as the situation in Ukraine develops, it is clear that more companies could be forced to withdraw from their Russian assets. As of March 21 a summary of the EU sanctions in place for the energy sector is as follows:

Various named individuals, such as Alexei Miller and Igor Sechin, the CEOs of Gazprom and Rosneft respectively, have been sanctioned. In addition, sanctions on supplies of energy-related goods have been made much stricter, having previously only applied to the Russian deep-water, Arctic offshore and shale oil exploration under the 2014 sanctions relating to the annexation of Crimea.⁶⁶ Finally there is a broad ban in place on new investment in the energy sector as well as conducting any transactions with state-owned enterprises including Gazprom Neft, Rosneft and Transneft. Interestingly, Gazprom and Novatek are not yet on this list.⁶⁷

The US has imposed similar sanctions with a few additional measures. Most prominently the government has banned imports of Russian crude oil, petroleum products, coal, and LNG into the United States.⁶⁸ In addition, it has banned new investment and financing in the Russian energy sector, in particular preventing the export of key technologies to the Russian energy industry. As with the EU, the US has also sanctioned key individuals within the sector, including Igor Sechin and Nikolai Tokarev the CEO of state oil pipeline company Transneft.⁶⁹ Interestingly, the US has also imposed sanctions on Gazprom, banning it from raising finance in the US, although it should be noted that the impact on the US gas market as a result of this would be negligible.

Clearly these sanctions could have an equal, or even greater, impact than the withdrawal of foreign oil companies from Russia, and the two factors need to be considered together. This paper has focussed on foreign company activity, but that in itself will be significantly influenced in future by the actions of their domestic governments towards Russia.

Initial thoughts for Russian oil and gas production

At this early stage it is difficult to draw definitive conclusions about the impact of the decisions made by governments and companies concerning their activities in the Russian energy sector. The situation is changing rapidly and new rulings could worsen the situation, but as of the end of March 2022 some preliminary thoughts can be offered.

As far as **pipeline gas supply** is concerned, little change should be expected. Sanctions on Russian gas exports have not been imposed by the EU or any of the major importers (the UK being one European exception) and the exit of western companies from joint ventures with Gazprom will have little impact where they involve standard gas producing fields in West Siberia. Gazprom is capable of

⁶⁵ Reuters, 4 Feb 2022, "Russia, China agree 30-year gas deal via new pipeline, to settle in euros"

⁶⁶ For details of these sanctions see Henderson, J. (2015) "The Key Determinants for the Future of Russian Oil Production and Exports" Working Paper WPM58, Oxford Institute for Energy Studies, p.30

⁶⁷ For details see <https://www.whitecase.com/publications/alert/new-eu-sanctions-target-russian-energy-investments-and-supplies-imports-russian>

⁶⁸ Financial Times, 8 March 2022, "US and UK ban Russian oil and gas imports in drive to punish Putin"

⁶⁹ Bloomberg, 3 March 2022, "US sanctions Usmanov, Prigozhin among Russian elites"



maintaining production at these relatively simple fields, and domestic or Chinese service companies will be able to provide adequate maintenance and equipment. The key to Russian gas production will be whether the EU can really fulfil its strategy to reduce imports by two thirds (101.5bcm) in 2022. If it can then Russian gas production could be shut in, as there is no alternative export market for West Siberian gas at present. Further complications could also be added by a Russian insistence on payment for gas sales in roubles, which might lead to contract renegotiations or disputes.⁷⁰

The story for **Russian LNG** is slightly more nuanced. Shell is withdrawing from the Sakhalin 2 project and the major shareholder, Gazprom, has limited experience of the LNG sector. However, it has been a major partner for the past fifteen years and so will undoubtedly have acquired adequate skills to keep production going in the absence of any major problems. Nevertheless, the risk of outages that could cause interruptions has probably increased given the departure of one of the most experienced IOCs in the LNG sector, and Shell may also be removing key technical equipment and software which could undermine medium-term efficiency and optimisation. Furthermore, the development of a third train at the plant seems unlikely (it has been delayed for a number of years in any case), and the chance of Gazprom developing any new LNG projects (for example Baltic LNG) has also reduced.

Russia's other major project, Yamal LNG, is run by Novatek, a company that has demonstrated its huge competence in operating major projects over the past five years. Furthermore, its major foreign partner, TotalEnergies, has not decided to withdraw yet, although it will not be investing in new projects. Even if it were to pull out, it would be unlikely to affect Yamal LNG output, although the future of the Arctic LNG-2 looks a little less secure as it will receive no further finance from an important partner. The first train is almost 80 per cent complete and is likely to come online in 2023, adding 6.6 million tonnes of capacity to the LNG market, but the prospects for trains 2 and 3 look a little murkier. Finance could be found in Asia and perhaps the Middle East, but at the very least some delay in the development timetable might be expected. Beyond that, Novatek's goal to produce 55-70 million tonnes of LNG from the Yamal region by 2030 is also looking rather more doubtful. The resources are certainly in place, but the market for any LNG is now more limited and the availability of western liquefaction technology could certainly undermine development prospects, as the domestic Arctic Cascade technology is limited to small trains (c.1 million tonnes) at present.

Finally, the prospects for Rosneft's Far East LNG project now look bleak. It was unclear how committed ExxonMobil was to the project in any case, but after their withdrawal Rosneft and its partners are left without any company with adequate LNG experience to develop a major new project.

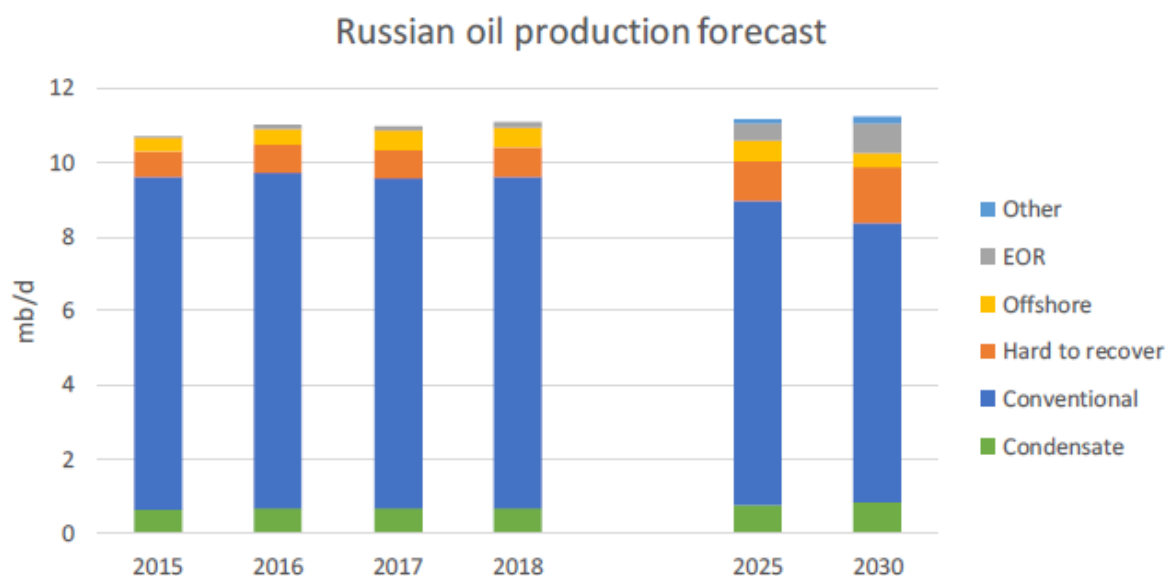
As far as **oil production** is concerned, the outlook varies by location and timescale. As with Gazprom, Rosneft and the other Russian oil majors are more than capable of maintaining output at traditional Russian oilfields in the heartlands of European Russia and West Siberia. Equally, the domestic oil service sector has developed an ability to carry out the drilling, logging and other infield activities that are needed to maintain production at current levels from conventional fields. As a result, the major risk to short-term Russian oil production is a lack of market for Russia crude and oil products. If import bans become more widespread and effective then oil production could be shut in, although it should be born in mind that in a liquid global market it is likely that alternative buyers would be found if suitable discounts are offered, as is already being seen.

However, as the graph below (Figure 6) shows, an increasing proportion of Russian oil production is coming from hard-to-recover reservoirs, offshore, enhanced oil recovery, and other more difficult sources such as tight oil and shale. It is here where production might be at risk in the medium term, as new developments become more remote and the technology required to develop more complex fields is in shorter supply as western oil companies and, perhaps more importantly, service companies end new investment and start to exit the country.

⁷⁰ Financial Times, 28 March 2022, "G7 rejects Russia demand for energy payments in roubles"



Figure 6: The potential for Russian oil production to 2030



Source: Henderson J. & Grushevenko E. (2019) The Future of Russian Oil Production in the Short, Medium and Long-Term, Energy Insight No.57, Oxford Institute for Energy Studies, Figure 18 on p.22

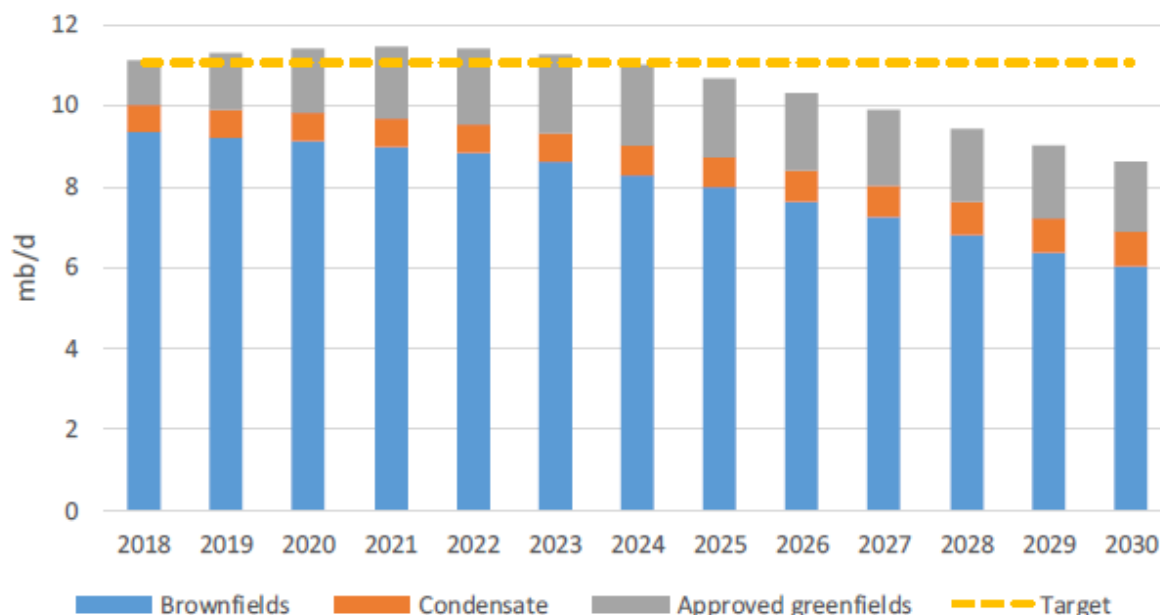
This leads to the conclusion that short-term Russian oil production is not at risk from a technical perspective, but the medium-term prospects may be. Figure 7 is reproduced from an analysis in 2019 that compared a forecast of future Russian oil production at the time from the Ministry of Energy with a possible outcome if Russia did not meet key technical challenges in its new fields.⁷¹ The Ministry of Energy forecast was for production to stay flat at 550 million tonnes per annum, equivalent to just over 11 million b/d, while the analysis showed that production from existing fields in production, condensate, and approved new fields could see output fall to around 8.5 million b/d in 2030 if hard-to-recover, offshore, enhanced oil recovery, and other more complex reserves were not developed.

Stability of production over the medium term remains a key Russian government objective, but the risks on the downside would now appear to have increased as the availability of complex software and hardware is limited by the withdrawal of western oil companies and service contractors. Production is probably secure to 2024/25, and domestic and Asian companies and contractors can fill some of the void left by western companies, but as Russian companies need to develop a greater share of remote and complex fields the chance of overall oil production going into decline will increase and picture shown in Figure 7 will become more likely. A collapse in output is not forecast and a short-term decline will be driven more by market forces than technical issues, but the risk of Russian oil production being markedly lower by 2030 has increased as a result of the reaction to the current war in Ukraine.

⁷¹ Henderson J. & Grushevenko E. (2019) The Future of Russian Oil Production in the Short, Medium and Long-Term, Energy Insight No.57, Oxford Institute for Energy Studies



Figure 7: Possible downside of Russian oil production versus Ministry of Energy target to 2030



Source: Henderson J. & Grushevenko E. (2019) The Future of Russian Oil Production in the Short, Medium and Long-Term, Energy Insight No.57, Oxford Institute for Energy Studies, Figure 17 on p.21

Overall, then, the impact of the withdrawal of foreign oil and gas companies from Russia is likely to be similar to the impact of sanctions, in as much as it will have a more significant medium term rather than short-term effect. In the gas sector the most important impact is likely to be on the future of Russian LNG, because western technology and expertise has played a key role to date. The project most at risk would seem to be Arctic LNG-2, but the futures of the third train at Sakhalin 2 and the development of Far East LNG and Baltic LNG must be in doubt. On the oil side, the development of more remote fields and assets with complex geology will be more difficult, which could potentially bring forward the time at which Russian production will go into decline.

Two final questions remain. Firstly, to what extent and how rapidly might Russian domestic companies and other companies from “friendly” countries be able to replace their western counterparts. In some areas it would seem that the transition will be relatively easy, but in others (such as liquefaction technology) progress to date has been slow. Russian companies have shown they can adapt to shifts in the availability of western technology in the aftermath of the sanctions imposed in 2014, but activity in the Arctic and shale oil was clearly slowed, and in some instances halted, and the same outcome can most likely be expected now.

Lastly, it is interesting to consider whether the current crisis marks a final turning point for western oil companies in Russia. They have clearly made significant returns from their investments to date, and their exits are driven by the political situation rather than commercial reasons, but the potential for a return must be questionable for two main reasons. Firstly, President Putin has made it very clear that those who leave Russia now will see their assets redistributed.⁷² Secondly, the acceleration of the energy transition in Europe that is likely to result from the current crisis means that western companies may feel that ultimately, although the timing of their exit was forced upon them, the strategic importance of Russian hydrocarbons in their portfolios was set to decline in any case.

⁷² Financial Times, 10 March 2022, “Putin seeks legal solutions to seize assets of companies exiting Russia”

Appendix 1: Energy assets owned by foreign companies in Russia at the end of 2021

Company	Assets	Share	Russian Partner
BP	Rosneft	19.8%	Rosneft
	Kharampur JV	49%	Rosneft
	TAAS JV	20%	Rosneft
	Yermak JV		Rosneft
Shell	Sakhalin 2	27.5%	Gazprom
	Salym Petroleum	50%	Gazprom Neft
	Gydan JV	50%	Gazprom Neft
	Nord Stream 2 Finance	10%	Gazprom
Exxon	Sakhalin 1	30%	Rosneft
TotalEnergies	Novatek	19.4%	Novatek
	Yamal LNG	20%	Novatek
	Arctic LNG 2	10%	Novatek
	Termokastovoye	49%	Novatek
	Kharyaga JV	20%	Zarubezhneft
Equinor	Sevkomneftegaz JV	33%	Rosneft
	Angara Oil	49%	Rosneft
	Kharyaga JV	30%	Zarubezhneft
	Domanik JV Samara	49%	Rosneft
OMV	Yuzhno Russkoye	24.9%	Gazprom
	Nord Stream 2 Finance	10%	Gazprom
Wintershall DEA	Achimgaz	50%	Gazprom
	Urengoy Achimov 4A/5A	25%	Gazprom
	Yuzhno Russkoye	35%	Gazprom
	Nord Stream 1	15.5%	Gazprom
	Nord Stream 2 Finance	10%	Gazprom
ENI	Blue Stream pipeline	50%	Gazprom
Uniper (Fortum)	Nord Stream 2 Finance	10%	Gazprom
	Unipro (10.8GW power)	83.7%	
Enel	Enel Russia (5.7GW power)	56.4%	
Chevron	CPC pipeline	15%	
Engie	Nord Stream 1	9%	Gazprom
	Nord Stream 2 Finance	10%	Gazprom
E.on	Nord Stream 1	15.5%	Gazprom
Gasunie	Nord Stream 1	9%	Gazprom

Company	Assets	Stake	Russian Partner
CNPC	Yamal LNG	20%	Novatek
	Arctic LNG2	10%	Novatek
Silk Road Fund	Yamal LNG	9.9%	Novatek
Sinopec	Udmurtneft	49%	Rosneft
Beijing Gas	VerkhnechonskNG	20%	Rosneft
PetroVietnam	Central Khoreyver	50%	Zarubezhneft
Mitsui	Sakhalin 2	12.50%	Gazprom
Mitsubishi	Sakhalin 2	10%	Gazprom
SODECO	Sakhalin 1	30%	Rosneft
ONGC	Vankor	26%	Rosneft
	Sakhalin 1	20%	Rosneft
	Imperial Energy	100%	
India Consortium	Vankor	23.9%	Rosneft

Source: Compiled by OIES from Company Data, Interfax, Argus, Reuters and various press sources