

The impact of the competition between Russian gas and LNG on commercial terms for gas in Europe

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Abstract

This paper discusses the potential change in strategy that Gazprom may have to address regarding its gas supply to Europe, in the face of the changes in LNG markets and the emergence of the US and Australia as new suppliers to Europe. We argue that there may be some logic for Gazprom, as one of the lowest cost suppliers to Europe with spare capacity, to adopt a market-share based strategy in order to reinforce its long-term competitive advantage. The methodology for achieving this goal would be a greater participation in hub trading. Politically, this can also be useful, as it can help to smooth Russia-EU relations while potentially also maintaining the influence of Russia's energy resources, albeit under a slightly different guise. It can also help to encourage the final removal of coal from the European energy system by completing the task that a carbon tax has so far failed to achieve.

Keywords: Gas markets, GNL, Russia, Europe.

Although Russia and Gazprom have embarked on a “pivot to Asia” strategy, it is clear that for the next five years at least Europe will remain the main export market for Russian gas. The Power of Siberia pipeline from East Siberia to NE China is unlikely to be completed before 2020, and no agreement has yet been reached on a second pipeline either from West Siberia or from Sakhalin Island. Meanwhile Russia's LNG plans have also been receding as global gas market conditions have worsened, with Novatek's Yamal LNG project now the only Russian project likely to produce gas before the end of the decade. As a result, Gazprom's defence of its core European market will be of fundamental importance both to its own performance and to the Kremlin's ability to use gas as a geopolitical tool over the next few years.

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However, multiple threats now face the company's business model in Europe. The emergence of new LNG from the US and Australia has been slow to materialise, but 2018 should start to see the ramp-up that everyone is expecting, while demand for gas in a number of markets outside Asia remains relatively stagnant. Meanwhile, the European Union continues to seek ways to diversify away from Russian gas and US president Donald Trump is acting as a principle advocate for his country's LNG exports as a substitute, even using the cover of political sanctions to promote US gas. Furthermore, the aftermath of the COP21 discussions in Paris in December 2015 is still being felt, with gas being viewed in a number of quarters as little better than any other fossil fuel in terms of its long-term environmental benefits.

From a pricing perspective, Gazprom was able to maximise revenues during the period of high oil prices in the early 2010s thanks to the oil product indexed price formation mechanism in its contracts and enforcement of take or pay volume levels. As buyer financial exposure became an existential threat post 2010 however, it has agreed concessions on take or pay volumes and price on an *ad hoc* basis, but still with the aim of securing the highest price possible consistent with buyer solvency. Notwithstanding relaxation of take-or pay levels (from 85% to 70% of ACQ² according to media commentary) its volume deliveries to Europe have been helped over the past two years by the continuing decline in European indigenous output, especially from the Groningen field in Holland. However, whatever targets Gazprom had for European gas export revenues have been thrown into turmoil by the collapse of the oil price from late 2014. This situation will be exacerbated by stagnant gas demand (on a weather-adjusted basis) in Europe and the imminent arrival of growing amounts of surplus LNG, potentially priced on a short-run marginal cost (SRMC) basis. In the face of this challenge Gazprom has the advantage of being one of the lowest cost suppliers of gas to the continent with surplus capacity, which could enable it to benefit from a competitive pricing strategy, and evidence is starting to suggest that it is already exploiting this fact.

² ACQ – Annual Contract Quantity, meaning the agreed total volume of gas to be sold under a contract in any one year.

WILL THE GLOBAL SURGE IN LNG OUTPUT (INCLUDING FROM THE US) CATALYSE A COMPETITIVE RESPONSE FROM GAZPROM?

Gazprom has been forced to respond to a number of different challenges to its position in the European gas market since the financial crisis which have mainly concerned gas demand and the relative price of Russian gas compared to competing fuels (including market-priced gas available on Europe's gas trading hubs). A combination of slow economic growth, increasing energy efficiency, the rise of renewable energy in the power sector and the low price of coal, which has eroded gas' market share in power generation in a number of countries, led to European gas demand falling by approximately 109bcm (18%) between 2010 and 2014 (IEA, 2015). A significant share of the decline was also been caused by warm weather, and although a rebound has been experienced in 2015 and 2016 thanks to relatively cold weather and a higher coal price, which has encouraged coal to gas switching in the power sector, nevertheless the overall demand trend remains relatively static over the longer term. Indeed gas consumption has yet to recover to the level seen in 2008 prior to the financial crisis. For exporters to Europe, some of this demand pressure has been offset by declining indigenous production, especially in Holland and the UK, with the former imposing new limits on output from the Groningen field due to seismic activity. Furthermore, a relative shortage of LNG in the period 2011-2016, caused by increasing demand in Asia (especially after the Fukushima disaster) and delays in the emergence of new LNG supply, has also helped the cause of major pipeline exporters to Europe by creating a premium market for LNG in the East.

Nevertheless, the dual effect of a shift in the overall balance of supply and demand that resulted from the economic crisis in 2008 and the subsequent stagnation of economic growth in Europe, and the more recent collapse in the oil price, has pushed European hub prices down, and in order to preserve the solvency of its customers, Gazprom has been forced to react, in particular by adjusting its oil-linked contract prices through a variety of mechanisms to bring them in line with the gas price on European hubs. As shown in Exhibit 1, Gazprom's average gas price to Europe was close to historical oil-linked levels for most of the period to 2012, but the spread between the two then widened through 2013 and early

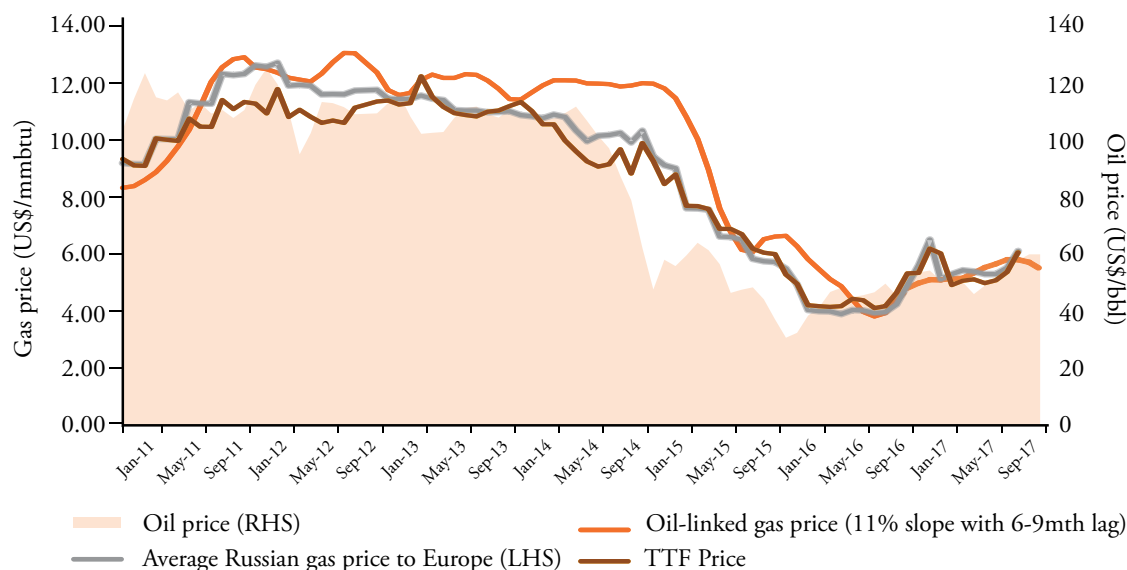
2014 as Gazprom made adjustments to its contract prices in order to satisfy customer demands for a lower price. The collapse in the oil price in 2014/15 led to a widening of the gap between spot and contract gas prices once more, but this gap has now been closed again thanks to the lag effect in oil-linked gas contracts (which generally refer to the price of oil over the previous 6 to 9 months) and to the continuing impact of Gazprom contract changes. Gazprom has shown a level of flexibility in managing its contract prices by reducing its previous firm commitment to oil-linked pricing, even if the company's and the Kremlin's rhetoric suggests otherwise. This has been reinforced by a continuing low level of oil prices that has contributed to a decline in contract prices down to, and in some months even marginally below, the level of spot prices.

However, the company has also shown that it is not yet completely willing to abandon its historical contract structures. Between the summer of 2014 and March 2015 Gazprom Export attempted to exert influence over the European gas market by refusing to meet nominations from a number of European customers, and was forced to pay specified contractual penalties as a result. The aim of this tactic appeared to be two-fold; to reduce the movement of reverse flow gas into Ukraine and also to attempt to support European hub prices by reducing supply into the market (Stern, 2015). However, Gazprom seemed to acknowledge failure on both fronts when the tactic was abandoned in the spring of 2015, with the company reportedly having lost significant revenues in the process. One clear lesson from this episode would therefore seem to be that, for all its competitive advantages, Gazprom will always struggle to optimise its position in Europe within its current contract structure, because it has limited direct influence on the European hubs. As a result, a more pro-active marketing strategy which involves full participation in European hubs may be required, even if the company continues to ostensibly argue for a hybrid model of contracts, which includes an element of oil linkage as well as a relationship with hub pricing. In reality, it is the latter which now appears to be driving the company's marketing strategy, even if the former still plays some role in establishing price levels.

Looking to the future, therefore, the key question is whether Gazprom will be willing, or will be forced, to show yet more commercial acumen and adjust its strategy further towards a fully market-oriented approach as it faces new

Exhibit 1

Comparison of an oil-linked contract price, the average Russian gas price to Europe and the UK NBP spot price



Source: Energy Intelligence Group, Author's analysis.

challenges to its position in Europe. The arrival of LNG from the US has been much heralded, and finally arrived in 2016, albeit at low levels due to delays in projects and higher prices in alternative markets. Nevertheless, it will ramp up over the next four years, in particular after 2018. At the same time, LNG from other new sources, in particular Australia, has already started to come online and will increase significantly over the next two-to-three years, and depending on the level of demand in Asia (and especially China) this may create a surplus of supply that could then spill over into the European market. Meanwhile, low carbon prices, volatile coal prices, increasing renewables development and continuing security of supply concerns may continue to challenge gas demand on the continent, exacerbating any oversupply situation.

Gazprom has a circa 100 bcma of surplus of fully developed gas in West Siberia that is available for sale into Europe at low marginal cost. This has mainly resulted from the company's decision, in the mid-2000s, to invest in the Bovenkovskoye field on the Yamal peninsula at a time when the gas demand outlook appeared much more positive. The field will have a total capacity of 115bcm by 2018,

and with little further capital expenditure needed to achieve this exhibit we estimate that the delivered cost of the gas to the German border is approximately \$4.50/mmbtu thanks to low ongoing upstream costs and the impact of devaluation on transportation expenses through Russia. Additionally, Gazprom has lost Russian domestic market share to upstream competitors, which has also contributed to its supply surplus. As a result, it is possible that Gazprom could compete with US LNG even on a short-run marginal cost of supply basis, if it should decide to participate in a price war. A low cost of supply is not the only condition for winning a price war, of course, as Gazprom would also need to fully switch to hub pricing in Europe to optimise its ability to compete, but it is certainly a necessary condition and one which gives Gazprom a competitive advantage under current market conditions.

DOES GAS NEED TO COMPETE WITH COAL ON COST, OR WILL ENVIRONMENTAL POLICIES BE ENOUGH?

Much of the discussion surrounding the conclusions of the COP21 meeting in Paris in December 2015 concerned the impact on the coal industry, with many observers assessing that the death of King Coal, in Europe in particular, is now a certainty.³ This outcome is particularly relevant in the power sector, where the further growth of renewable energy sources is assured, but it could also benefit gas, which can potentially reclaim the market share which it lost to cheaper coal over the past few years. However, it is perhaps rather premature to be overly optimistic about the demise of coal, especially in countries such as Poland, Germany, India and China, as the COP21 conclusions made no specific reference to this, and also failed to make any firm statements about the introduction of carbon taxes that could help to speed the process from a commercial perspective (Energy Intelligence, 2015). As a result, although the direction of travel has been laid out clearly, the risk remains that policy slippage could see much slower progress towards conversion away from coal towards gas than might be expected. Indeed, there must even be a risk that gas, as a carbon-emitting fuel itself, is by-passed on the way to a carbon-free future unless it asserts its credentials as a cheaper, as well as a greener, fuel than coal (which it has clearly failed to do in the period since 2010).

³ For example, *FT* Lex column, 3 Jan 2016, “Coal: The king is dead.”

Exhibit 2 highlights the problem in Europe, where the well-documented issues with the carbon trading system have meant that the carbon price has languished at below 10 euros per tonne for the past 4 years. Even at the relatively high current coal price of around \$85 per tonne (November 2017)⁴ the equivalent gas price would need to be around \$5.50/mmbtu to encourage fuel switching in the power sector, given the current carbon price of 7 euros per tonne.⁵ This compares with a spot gas price on the TTF hub in the Netherlands of \$6.75/mmbtu (November 2017),⁶ implying that the carbon price would need to more than triple and reach a level approaching 25 euros per tonne (equivalent to the £18/t carbon floor price in the UK) in order to make gas competitive with coal. Although the rising coal price has encouraged some coal-to-gas switching recently, especially in the UK, in the longer term the only realistic alternatives in Europe would be for policy makers to mandate the removal of coal from the power generation mix or for the gas price to fall further, especially if coal prices fall back to the bottom end of their 2017 range.

Gas producers are of course hoping that the former option is the route chosen, and it is clear that this could be one implication of the COP21 agreement. In the UK, for example, a carbon floor price has increased the gas price at which switching from coal occurs, and furthermore the government has now announced that all coal should be removed from the power mix by 2025 (*Financial Times*, 2015). At present, though, this is a rather isolated example of positive action, and has also been taken in a country where much of the coal plant is very old and is arguably already at the end of its useful life. In addition, if the plant is not removed until beyond 2020 then its closure will have little impact on the current gas glut. Furthermore, countries like Germany have much newer coal plant, and even some under construction, which will certainly continue to run while the coal price remains competitive. Therefore, if coal prices return to their recent historical average level of around \$60 per tonne, as seems likely, then a logical conclusion for producers such as Gazprom might be to consider a short-term low price strategy to encourage a more radical reduction of coal in the electricity

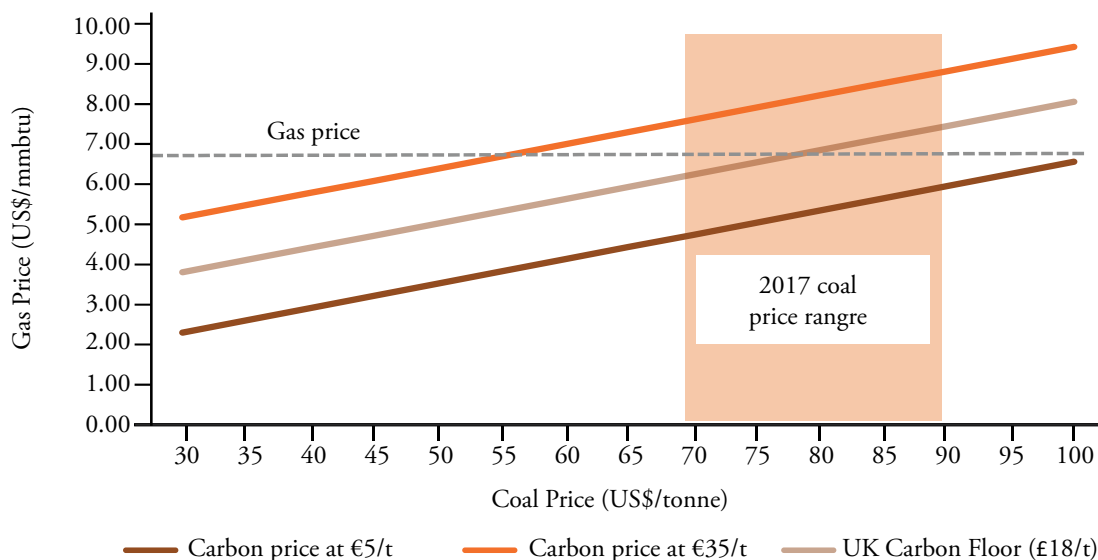
4 Argus Media, Argus Coal Daily International, 11 Nov 2017: 1.

5 Data from Argus Direct at <https://direct.argusmedia.com/>, 11 Nov 2017.

6 Ibid.

Exhibit 2

Coal versus gas switching price at various carbon prices



Source: Argus Media, Author's calculations.

sector across Europe before 2020. As highlighted by the IEA in its *World Energy Outlook, 2015*, significant net retirements of coal (and nuclear) plant are planned in the period to 2025, but a more competitive gas price would surely confirm these policy initiatives and potentially accelerate them, marking the end of coal in the power sector in many countries, providing a potential boost to gas demand over the next decade.

HOW WILL GAZPROM COMPETE WITH US, AND OTHER, LNG IN EUROPE?

If the question of competing with coal is a holistic gas industry issue, then the debate over Gazprom's potential reaction to the arrival of new LNG supplies to Europe is more company specific and more short-term. The volume flexibility in Gazprom's contracts has led some commentators to describe them as Europe's buffer (Rogers, Stokes and Spinks, 2015), with volumes reducing whenever Gazprom's price is above the hub-level and increasing when the opposite is true and extra volumes are required by the market. As a result, Gazprom has

experienced some volatility in sales to Europe over the past 5 years, but the lack of new LNG supply and robust gas demand growth in Asia have mitigated against any dramatic fall in this period, and indeed in 2015 and 2016 have seen exports rise significantly as European demand has also recovered. However, both of these factors carry significant risk, with new US and Australian LNG now set to arrive on the global gas market while Asian gas demand, although strong, remains subject to exogenous forces such as the weather (recent winters have been cold) and political decisions concerning nuclear power. The result could therefore be an increasing level of competition for Gazprom in Europe, with the potential for hub prices to fall in response to higher supply, with new LNG potentially being priced down to its short-run marginal cost as it is forced to sell into this market of last resort. In response to this Gazprom may need to reinstate rebates and price concessions to its customers as hub prices fall below its contract price levels, but more fundamentally it faces a number of other key issues, namely:

- In the short term (*i.e.*, the next 3 to 4 years), whether and at what point should Gazprom reduce to short run marginal cost (SRMC) its contract prices and by arbitrage, hub prices in Europe and Asian LNG spot prices, in order to:
 - Shut-in volumes of US LNG as these are unable to cover variable costs (gas purchase, shipping and regas); or,
 - Encourage sustained growth in demand for gas in Europe by displacing coal in the power sector?
- In the longer term (post 2020), should Gazprom's management announce and demonstrate a commitment to keeping prices below the level required for new LNG projects to attain FID (Final Investment Decision), and hence defend and grow market share through the 2020s?

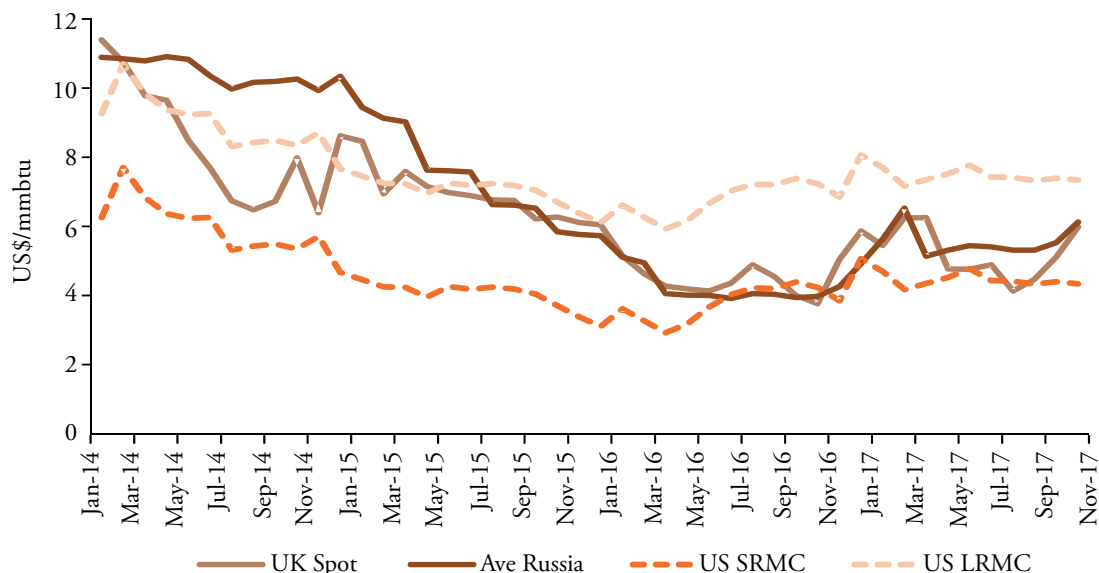
The distinction between the two time periods is important. In the short term the low price of oil (on which LNG contract prices were historically linked) and market-related gas prices means that few if any new LNG projects will be launched, but nevertheless the 'glut' of supply already under construction is a threat to Gazprom's market share, which it will need to respond to. In the longer term the

issue is whether Gazprom wishes to actively discourage the investment in new competing supply as fundamentals in oil (if it is still used as a pricing construct for LNG) and gas recover to support an increasing price trend.

As can be seen in Exhibit 3, the gas spot price in Europe and Gazprom's own export price have been trading in a range below the long-run marginal cost (LRMC) of US LNG (which fluctuates with the Henry Hub price) but above the SRMC, assuming in this instance that liquefaction costs of \$3.00/mmbtu are sunk.⁷ As a result, it is very unlikely that any new US projects will be sanctioned for the foreseeable future, or indeed any other new LNG schemes across the world. For Gazprom, this provides the hope that once the current LNG glut evaporates (most likely beyond 2020), then it can benefit from a rebound in prices as the supply/demand balance tightens.

Exhibit 3

European gas prices compared to the marginal cost of US LNG



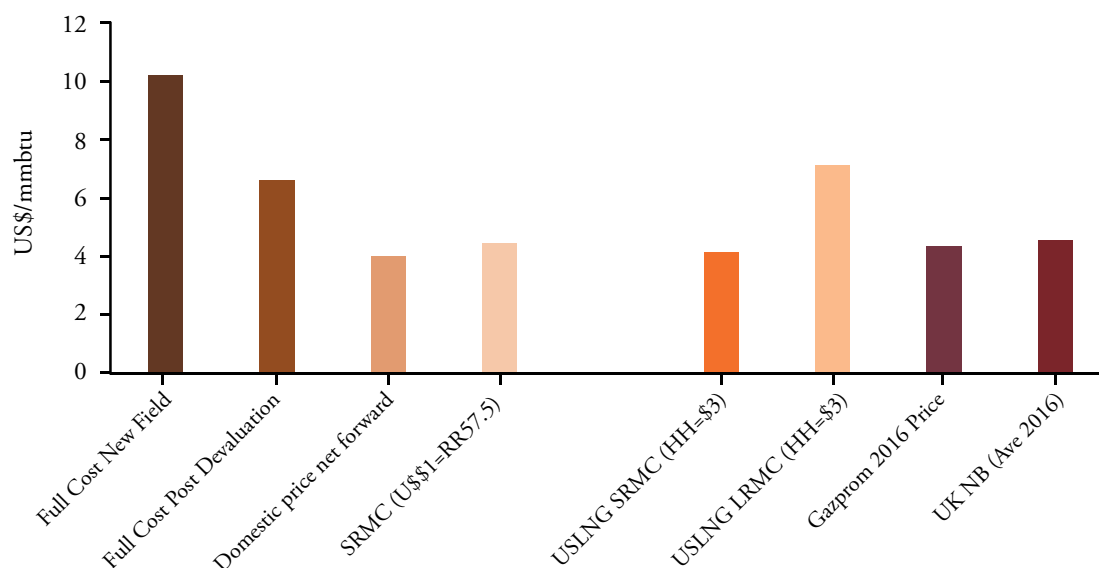
Source: Argus Media, Author's analysis.

⁷ We assume the long run marginal cost of US LNG in US\$/mmbtu is calculated as: (Henry Hub gas price x 1.15) + 3.50 (liquefaction cost) + 1 (transport to Europe) + 0.5 (regasification). The short run marginal cost then assumes that the liquefaction cost is sunk.

A key question is whether Gazprom will feel the need to compete on price down to the SRMC of US LNG, which to Europe is currently around \$4.25/mmbtu (Based on a Henry Hub price of \$2.90/mmbtu in October 2017). Sabine Pass was the only US gas exporting facility in 2016 and much of 2017, but US LNG volumes will grow moderately in 2018 and will accelerate thereafter to 2020. However, while this therefore might appear to be a question that Gazprom can defer, as is well documented (IEA, 2015: 113) the somewhat delayed rise in Australian LNG is now also underway, with the upswing from the US set to match it later in the decade. The decision to compete through price (or not) is therefore set to become increasingly relevant for Gazprom over the next two years. Gazprom Deputy CEO Alexander Medvedev has indicated that the company will be prepared to compete with US LNG when it arrives in Europe, implying that the decision has (at least in principle) been made. Furthermore, the company has consistently reiterated its desire to maintain a 30% market share (or more) in Europe, again implying that it will compete on price to do so, and as Exhibit 4 demonstrates it would appear to be reasonably well placed to do so.

Exhibit 4

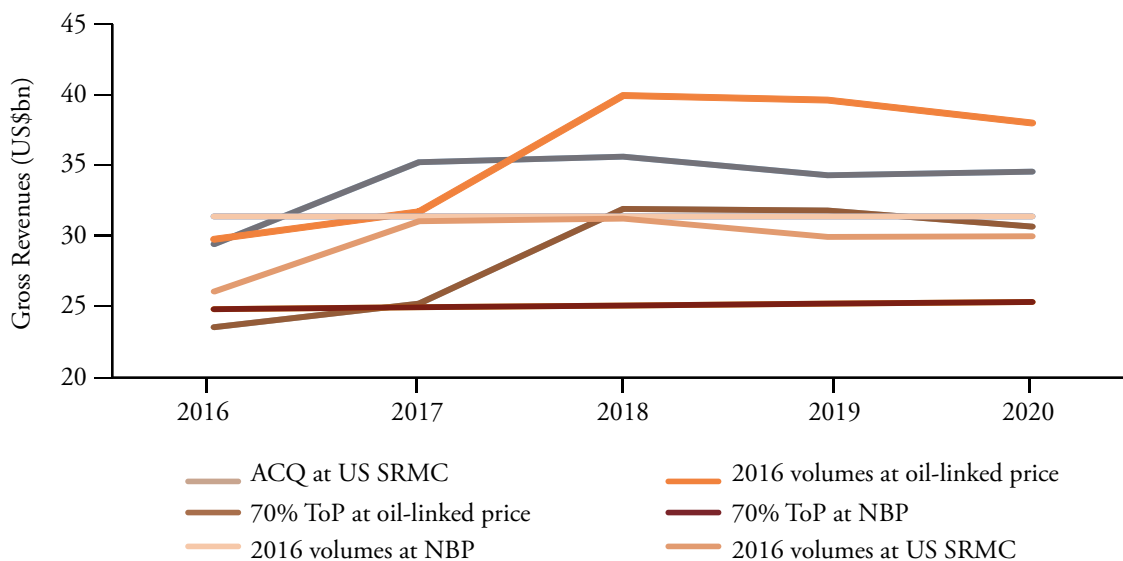
Cost of Russian gas versus US LNG



Source: Author's analysis (NB: assumes a Henry Hub price of US\$3/mmbtu).

Exhibit 5

Ranges of Russian gas export revenues at various volumes and prices



Assumptions

Volumes (bcm)	2016	2017	2018	2019	2020
ACQ	191	192	193	194	195
2016	169	169	169	169	169
70% Take or Pay	133	134	134	135	136
Prices (US\$/mmbtu)					
Oil linked price	4.93	5.25	6.62	6.57	6.30
NBP Average 2017	5.20	5.20	5.20	5.20	5.20
US LNG SRMC based on HH Futures	4.32	5.14	5.18	4.96	4.97

Source: Author's analysis.

Historically, the prospect of Gazprom competing with US LNG down to SRMC in order to protect, or even expand, its market share would have been nonsensical, as the incremental volumes could not possibly have compensated for the gas price differential at a time when Russia's oil-linked contract was based on an oil price of \$100 or more. However, the fall in the oil price, combined with the adjustments that Gazprom has made to its contracts, means that the price differential between the SRMC of US LNG and the current price of Russian gas has fallen sharply, from over \$6/mmbtu as recently as 2013 to around \$2/mmbtu in November 2017. At this differential, aggressive price competition could make sense for Russia, if the volumes to be gained, or saved, could make up for a cut in price.

Exhibit 5 shows an analysis which compares various Russian export volume and price scenarios. On volumes, we assume three levels, the 2016 exports of around 169bcm,⁸ the ACQ (maximum) level of existing contracts, which ranges between 190 and 195 bcm to 2020, and finally a 70% take-or-pay level based on this ACQ exhibit (approximately 135bcm per annum to 2020). For the price range we assume a low case of the SRMC for US LNG, based on the Henry Hub futures prices to 2020,⁹ a mid-case of the average NBP¹⁰ price in 2017 (for the first 10 months) and a high case of a Russian oil-linked oil price (based on the futures curve for Brent crude to 2020) – see table below for detailed assumptions. The graph then shows gross export revenues based on various combinations of volume and price.

NB: RUSSIA VOLUMES IN 2016 EXCLUDE 10BCM ASSUMED TO HAVE FLOWED TO UKRAINE VIA REVERSE-FLOW SALES FROM EUROPE

A number of important conclusions emerge. The first is that two of the three worst outcomes emerge from the low volume scenarios, if Gazprom refuses to compete, insists on a high oil-linked price and accepts volumes at the 70% take-or-pay level. Over the five-year period these outcomes could generate \$20-40billion less revenue for the company than the best case. A second conclusion is that the best realistic outcome results from cutting the price down to US SRMC and achieving volume growth to the ACQ level. The trade-off between reducing the price and increasing volumes would seem to pay off, and even though it might be politically unattractive in a number of European countries it is hard to see how it could be stopped given the contracts currently in place, or if customers decide to buy extra Russian gas on European hubs. From a commercial perspective, the attempt to increase volumes by lowering price would appear logical from a Gazprom standpoint, and an increased market share would certainly put the company in a stronger long-term position.

⁸ Excludes around 10bcm of exports that were re-exported to Ukraine by European buyers via reverse flow.

⁹ The Henry Hub price is multiplied by 1.15 to account for shrinkage, and then \$1/mmbtu is added for transport to Europe plus a further \$0.5/MMbtu for regasification.

¹⁰ NBP stands for National Balancing Point and is the hub at which UK gas is traded and prices are set.

A third important conclusion involves a more defensive comparison, namely that Gazprom would be better off defending its current volumes by reducing its price to the US SRMC than seeking to maintain an NBP price of just over \$5/mmbtu and accepting a reduction in volumes to the 70% take-or-pay level. In an ideal world, of course, Gazprom would prefer to achieve current volumes at the 2016 oil-linked price (the orange line), and indeed may attempt to enforce take-or-pay contract terms to achieve this while perhaps offering extra gas at spot prices. However, any attempt to enforce contracts that imply prices higher than the European spot price is likely to be met by referral to arbitration by customers, as we have seen over the past few years. Furthermore, the recent ruling by DG COMP on Gazprom's business activities in eight central and eastern European countries, which ruled that oil-linked prices were uncompetitive, suggests that Gazprom is unlikely to pursue this strategy in future, especially as it has essentially concurred and agreed to comply with the DG COMP assessment. In consequence, price competition with US LNG based on full participation in European hubs and an acceptance of spot pricing now looks like the most logical defensive tactic, with potential upside if volumes can be increased towards the ACQ level.

A final point to be made about the higher volume / lower price options is that they can also help to stimulate demand and establish increased sales of gas from Russia at a time when the COP21 agreement has raised the issue of un-burnable carbon reserves. Russia has well over 50 years of proved gas reserves at current production rates,¹¹ and significantly more if the country's probable and possible resources are added, meaning that the risk of not monetising all the country's gas assets is high. As such, a high-volume strategy which maximises production before 2050 can again make sense, on the assumption that by then the world will be well on the way to achieving its goal of an emission-free energy sector.

A COMPETITIVE PRICE STRATEGY CAN MAKE POLITICAL SENSE TOO

Although the Kremlin might be naturally disinclined to provide cheap energy to a region that has imposed sanctions on Russia and with whom relations are

¹¹ Based on data from BP Statistical Review 2015 which shows reserves of 32.6tcm and production of 579bcm for 2014.

somewhat frosty, nevertheless a competitive gas price strategy can provide political benefits. There is clear antipathy towards Russian gas in a number of European countries, with security of supply concerns being at the forefront of discussions over an Energy Union and the approval processes for possible new pipelines from Russia to Europe. These security issues are given greater weight if Russian gas is more expensive than alternative energy supplies, even if these alternative supplies include dirtier coal as well as other sources of gas. The European debate on security of gas supply has historically been based on an assumption of inherently expensive and at times unreliable Russian supply, primarily due to long-running issues with Ukraine. However, given the apparent change in Russian policy which has resulted in its gas becoming low priced and plentiful, this historical premise is being undermined. Evidence suggests that a number of European states have already shown that if Russian gas is priced cheaply enough then they will buy it, with Lithuania and Ukraine being two prime examples. From a commercial perspective, this can make sense for Gazprom if it plans to maintain its long-term position as the major supplier of gas to Europe, with some short-term price pain being compensated by long-term market share that can benefit from a future recovery in prices. Politically, this strategy can also make sense for the Kremlin, as it can maintain Russia's position as an energy partner for Europe, with whatever political leverage that provides, rather than see its position diminished as alternative gas, and alternative energy, erodes Gazprom's role. Indeed, one could perhaps describe this as a variation on the strategy which has been used in former Soviet states for decades – provide cheap gas to create or maintain dependency in order to create a political bargaining tool at a later date. Once again there is of course a short term cost to Gazprom and the Russian budget, which may be seen as unaffordable given the state of the country's economy, but given the fall in prices over the past 12 months the real cost of such a strategy is certainly much lower than it would have been previously and could return significant long term benefits.

TOWARDS A MORE PROACTIVE PRICING STRATEGY

Although, as discussed earlier, Gazprom has been adjusting its pricing strategy to reflect the realities of the European market and the demands of its customers for

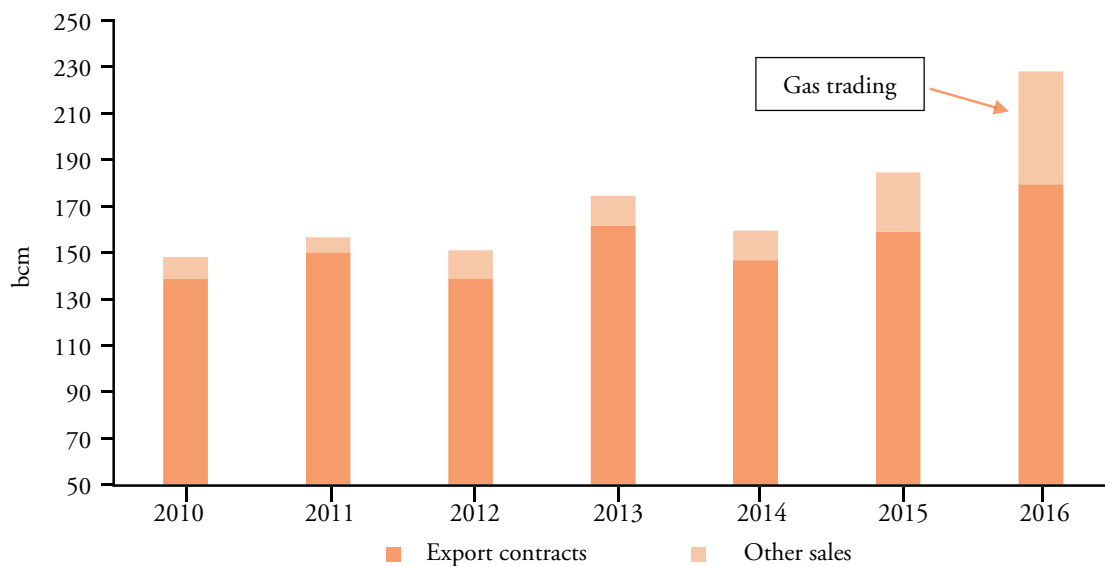
more competitive prices, to date its tactics have been rather more reactive than proactive. The commercial reality facing the buyers of its long-term contracts means that in effect Gazprom, with its hybrid pricing strategy, is always having to adjust its price from a pure oil-products linked base, providing discounts, rebates or adjustments to the formula (in particular via the inclusion of a link to spot prices). Indeed, in some instances this can lead to a situation where, if rebates are being offered, the price of Russian gas in Europe is unknown until the end of the year in question, when a calculation can be done to compare the oil-linked and market prices. This hardly leaves Gazprom in a strong position to compete with alternative gas supplies, let alone alternative energy sources.

A clear conclusion is that the oil linkage in Gazprom's contracts should logically be removed and be replaced with a much more market-oriented pricing mechanism involving full participation in European hub trading and an acceptance of hub prices, with the concept of long-term contracts also perhaps needing alteration too. Indeed, Gazprom and the Kremlin seem to be inching towards this conclusion, as evidenced by the auctions held for Nord Stream gas in 2015, President Putin's step-back from his previous apparent obsession with oil-linked prices, as seen in his recent speech at the Gas Exporting Countries Forum, and the increased amount of trading that Gazprom is undertaking on European hubs (see Exhibit 6).

However, a further extension of this strategy could involve much more active participation in hub-trading, acceptance of hub prices, the provision of short, medium and long-term contracts in place of the current take-or-pay flexibility and perhaps most importantly the ability to provide not just Russian gas, but traded gas, to Gazprom's customers. Rogers (2015) refers to this latter construct as the "Hub Re-Delivery Model", implying that Gazprom can purchase gas on the hubs and then use it to supply its customers in place of a portion of direct gas supply from Russia. Essentially, at present its customers can nominate for excess gas up to and beyond the ACQ level, sell the extra gas on the market and drive the price down before turning back to Gazprom and asking for a rebate or a renegotiation of terms. Under the hub re-delivery model Gazprom could control this situation by deciding where to source gas to supply its sales contracts, thus avoiding the potential for unwarranted over-supply. The Hub Re-Delivery Model would allow Russia to directly influence the price level of European hubs through

Exhibit 6

Gas sales into Europe, split by long-term contracts and hub trading



Source: Gazprom, 2017.

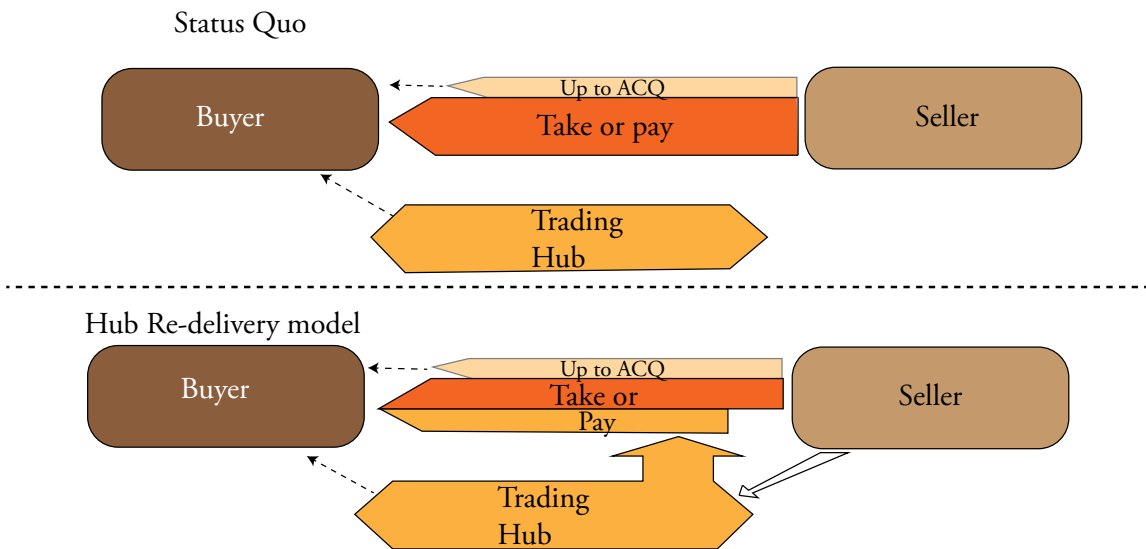
its control of physical volumes exported from West Siberia. This would give it the capability to deter short term US LNG supply and future LNG projects. Gazprom already has the in-house capability to undertake such a transition.

A further important consideration for Gazprom, and other gas suppliers, is the changing shape of the European energy market as a whole, catalysed by the rise in the share of renewable energy. Dependable supplies of low priced gas could, with suitable advocacy, modify European energy policy to focus on displacing coal with gas rather than to pursue the current renewables plus coal policy. If this gas was offered on a hub-traded basis then any increased volatility in demand, which might be created by the intermittency of wind and solar energy supplies (Bloomberg, 2015), could also benefit suppliers with active trading desks prepared to generate returns from providing flexibility rather than giving it away for free under current take-or-pay agreements.

An additional political consideration concerns Russia's relations with the EU, which have been undermined by the Ukraine crisis. The most obvious manifestations

Exhibit 7

The Hub Re-Delivery Model



Source: Rogers (2015).

of this deterioration in the gas sector have been EU attempts to undermine new Russian gas export pipelines such as South Stream and Nord Stream 2, as well as the investigation by DG COMP¹² into Gazprom’s business methods in eight Central and Eastern European countries. The most controversial allegation in this investigation concerns Gazprom’s alleged use of oil-linked pricing as a means to charge unfair prices, and although the legal arguments surrounding this accusation are complex and as yet not fully resolved, a logical outcome for Gazprom could be a face-saving, out-of-court settlement that saw it concede on this issue and gradually adopt the new, and more beneficial, hub-based strategy outlined above. This would remove another argument against Russian gas in Europe, while sending Gazprom down a more logical marketing path.

There are some signs that this outcome is possible in 2017/18. The discussions around the DG COMP investigation have been much less fraught than might have

¹² The EU Competition Authority – for detail on the DG COMP investigation into Gazprom please see Stern, J. (Aug 2015), Oxford Energy Forum No.102, “Gazprom: a long march to market-based pricing in Europe?”

been expected, given the political dynamics around Ukraine. Both sides have made conciliatory statements about reaching an amicable agreement, and Gazprom appears to be edging towards a more market-oriented strategy. Company CEO Alexey Miller has discussed Gazprom's desire to abide by the Third Energy Package and to start some form of hub-based trading, albeit on its own terms at present. The Nord Stream auctions point to an attempt to establish market prices for Russian gas, and the auction of the contracts for the Baltic States in 2016 has provided a further step down this route. Meanwhile the final acquisition of German gas marketing company Wingas again suggests that Gazprom may be preparing for a more trading-oriented outlook in the European market.

Furthermore, President Putin, who in 2013 gave his firm backing to oil-linked pricing at a meeting of the Gas Exporting Countries Forum in Moscow, has now altered his tone and provided additional evidence that the Russian view of gas pricing may be changing. At the most recent GECF meeting held in Tehran in November 2015, Putin continued to advocate long-term contracts but acknowledged that Gazprom "sold 17bcm of gas in spot trading – more than 8% of its total sales.¹³" While this is by no means a ringing endorsement for a new strategy, it is at least a significant step back from his 2013 statement that "the oil link is the fairest and most market-oriented [way of pricing gas] (Bloomberg, 2013)" Given that any change in Gazprom's pricing strategy would certainly need the President's approval, even a gradual shift in his position could have important consequences.

CONCLUSIONS

Historically Gazprom has provided flexibility to the European gas market via its take-or-pay contracts, with the result that it has tended towards a strategy of maximising price over volume, seeing its sales reduce when its prices are high (normally driven by the oil price) while other suppliers have offered gas at lower hub prices. However, over the past few years the lack of new LNG developments and a decline in European supply have meant that Gazprom has never been

13 Putin's speech to the GECF on 23 Nov 2015, sourced from <http://en.kremlin.ru/events/president/news/50755> on Jan 14 2016.

hit too hard, despite the declining trend in European gas demand. From 2018, though, that situation is set to change, as new US and Australian LNG finally arrives in a global market where even more robust demand growth in Asia may not be enough to absorb it, meaning that more gas is likely to arrive in Europe as the market of last resort.

When this fact is combined with the stagnant long-term trend in European energy demand overall, the relatively cheap price of coal and the continued rise of renewable energy in the power sector, incumbent gas suppliers are being left with some awkward decisions to make. In this paper we have argued that there may be some logic for Gazprom, as one of the lowest cost suppliers to Europe with spare capacity, to adopt a market-share based strategy in order to reinforce its long-term competitive advantage. Although current oil and gas prices are doing a good job of dis-incentivising new LNG developments, there are other long-term commercial and political arguments which suggest that Gazprom could benefit from adopting a competitive pricing strategy, even if this means reducing the price to or slightly below the SRMC of US LNG. Commercially the maintenance of market share is no longer illogical from a price perspective, because the price is already historically low enough that the reductions needed to undercut alternative supplies are not onerous. Furthermore, Gazprom could even benefit if it can encourage sales up to the ACQ levels in its contracts and can also take advantage of any future price rebound as markets re-balance. It can also help to encourage the final removal of coal from the European energy system by completing the task that a carbon tax has so far failed to achieve.

The methodology for achieving this goal would be a greater participation in hub trading, potentially using the Hub Re-Delivery Model described by Rogers (2015), which can not only give Gazprom the ability to avoid the value destruction which can be caused by its take-or-pay contracts but can also allow it to influence European hub prices. Furthermore, it can appease the EU competition authorities and also help to undermine security of supply arguments that are being put forward by a number of European countries. Politically, this can also be useful, as it can help to smooth Russia-EU relations while potentially also maintaining the influence of Russia's energy resources, albeit under a slightly different guise.

Having said all this, we are not advocating a “price war” strategy and nor would we expect Gazprom to willingly adopt this strategy as any further price fall would obviously be painful. As a result, a grand announcement from the Kremlin about a change in Russia’s gas export plans is very unlikely. Rather, we would expect a continuation of the trend which was highlighted in the 2014 book from the Oxford Institute for Energy Studies (OIES) entitled “The Russian Gas Matrix: How markets are driving change,” namely that Gazprom and Russia will respond to market influences in a commercially logical fashion. This interpretation suggests that price competition to maintain market share in the face of a significant shift in the dynamics of the European gas market can be one sensible conclusion for Gazprom, albeit one forced upon it rather than enthusiastically embraced. Clearly it is not ideal, as it will involve short-term price pain and a potential reduction in company and government revenues. However, the risks of remaining in a more reactive mode appear to be increasing, and if Gazprom can maintain and even enhance its position as a competitive and secure supplier of gas to Europe and undermine to a large extent the ‘security of supply’ arguments which have been levied against it, then it would seem to have more chance of reaping the benefits both of a future gas price recovery and of being able to maximise the long-term monetisation of a hydrocarbon resource that may ultimately become un-burnable if the world achieves its emissions targets.

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