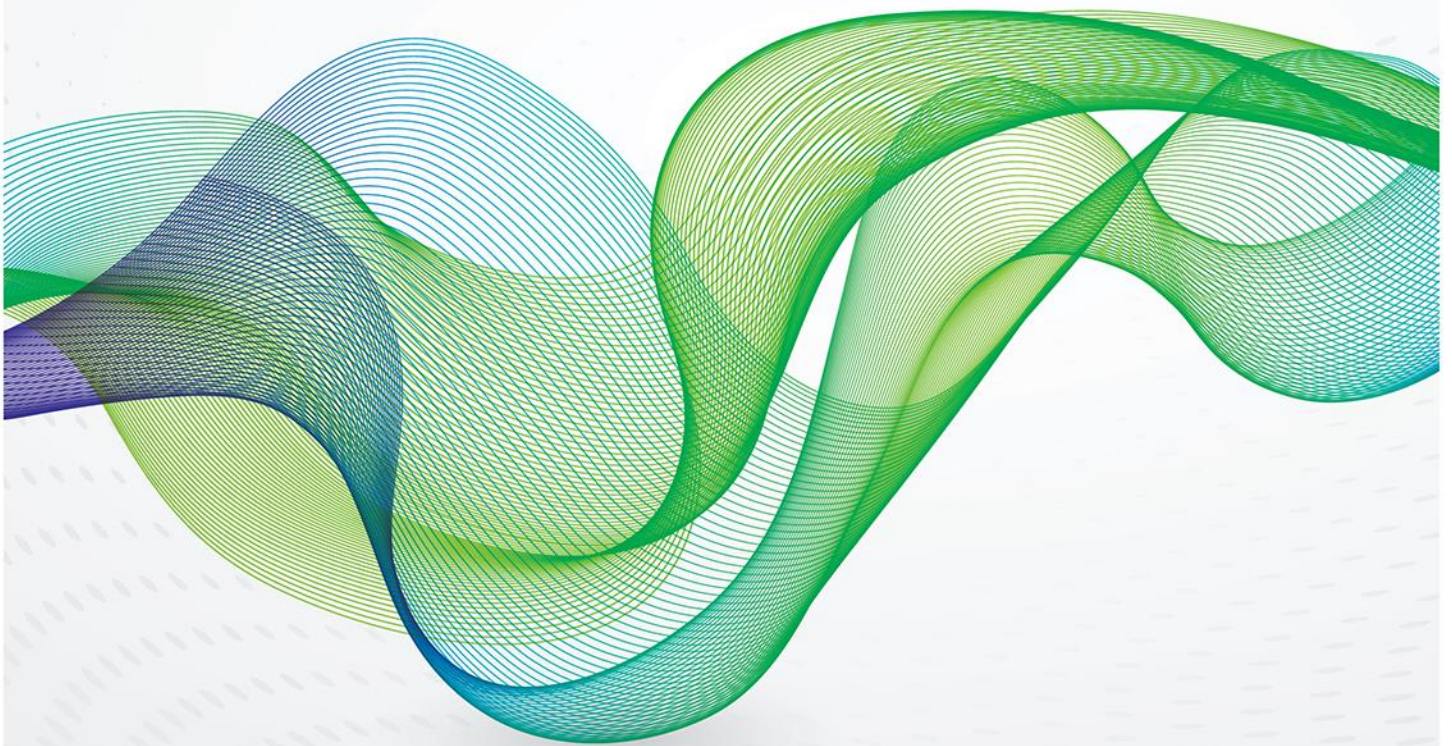


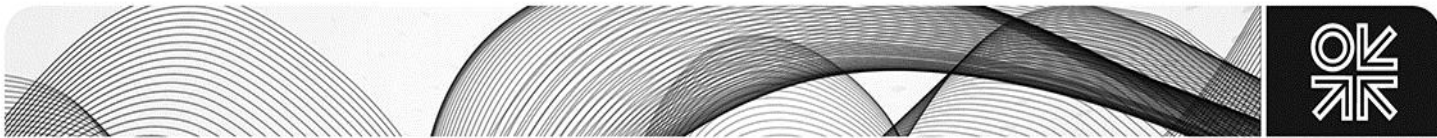


THE OXFORD
INSTITUTE
FOR ENERGY
STUDIES

January 2016

Gazprom – Is 2016 the Year for a Change of Pricing Strategy in 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.

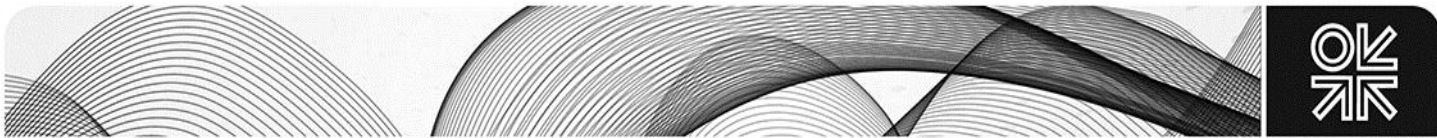
However, multiple threats now face the company’s business model in Europe. Many have been emerging over the past few years, but a combination of warm weather in the 2015 winter, the potential impact of the COP21 discussions in Paris in December 2015, the imminent export of LNG from the US, the continuing expansion of Australian LNG exports and the ongoing antipathy towards Russian gas in Europe mean that 2016 could mark a turning point for Gazprom.

While crude prices were above \$100/bbl, Gazprom was able to maximise revenues 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 ACQ 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, but it has yet to find a marketing model to fully exploit this fact. 2016 may be the year when it is forced to recognise this, and could mark a turning point for gas-on-gas competition in Europe.

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, has led to European gas demand falling by approximately 109bcm (18%) between 2010 and 2014.¹ A significant share of the recent decline has also been caused by warm weather, and although a rebound was experienced in 2015 thanks to the relatively cold early months of the year, nevertheless the overall demand trend has been consistently downwards. 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 2011-2014, caused by increasing demand in Asia (especially after the Fukushima disaster) as well as a dearth 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.

¹ IEA Medium Term Gas Report 2015, p.



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 Figure 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 falling oil price 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.² 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.

² Stern J., in Oxford Energy Forum No.102 (Aug 2015), "Gazprom: a long march to market-based pricing in Europe?"

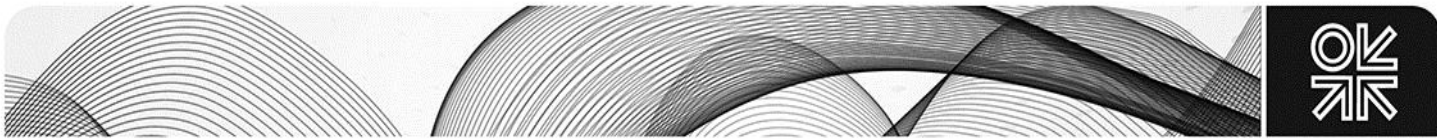
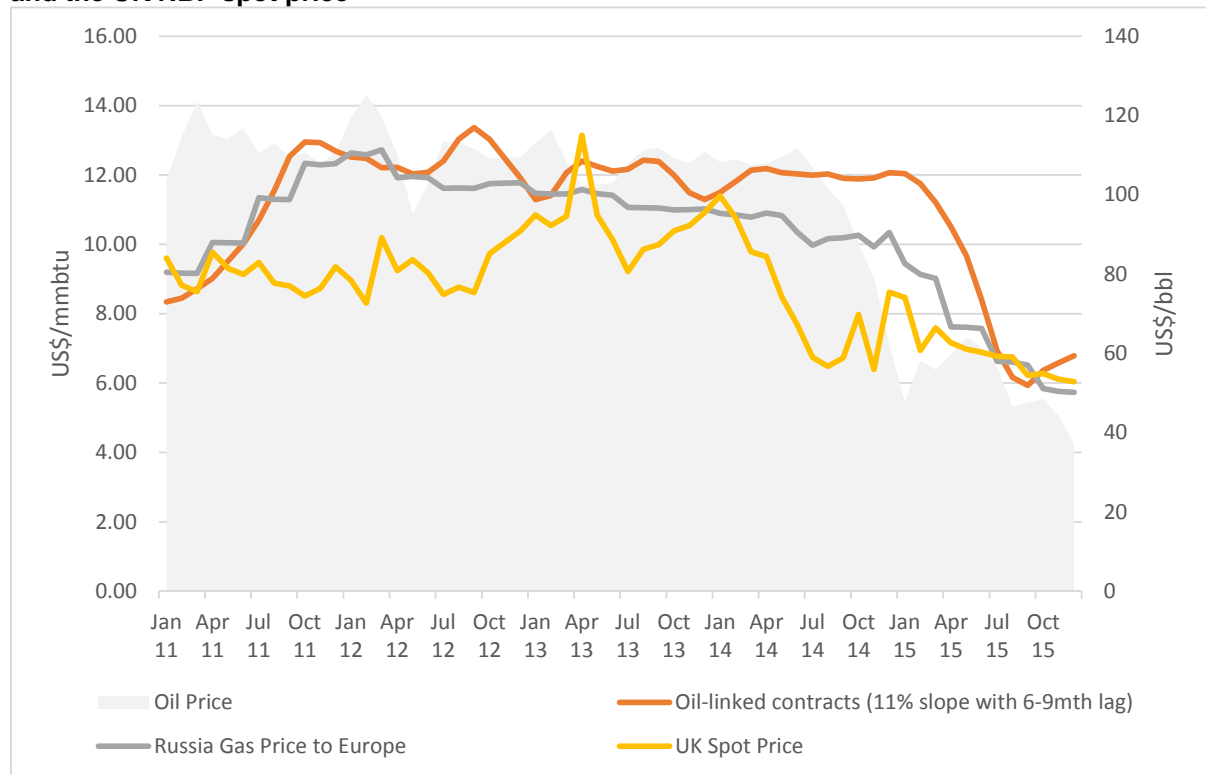


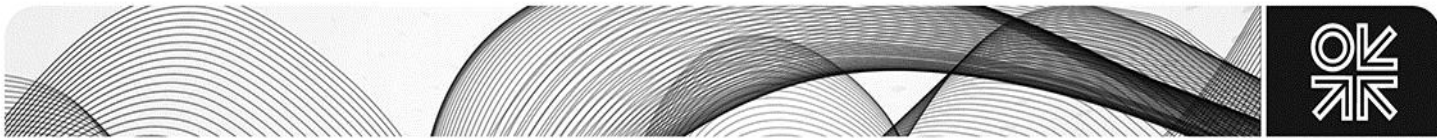
Figure 1: Comparison of an oil-linked contract price, the average Russian gas price to Europe and the UK NBP spot price



Sources: Energy Intelligence Group, Author's Analysis

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 challenges to its position in Europe. The arrival of LNG from the US has been much heralded, but will finally arrive in 2016 and 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 during which time Asian (and especially Chinese) demand for gas may continue to disappoint, creating a surplus of supply that is likely to spill over into the European market. Meanwhile, low coal and carbon prices and increasing renewables development will continue to challenge gas demand on the continent, exacerbating the 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 2017, and with little further capital expenditure needed to achieve this figure we estimate that the delivered cost of the gas to the German border is approximately \$3.5/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 concerned the impact on the coal industry, with many observers assessing that the death of King Coal 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.⁴ 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).

Figure 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. At the current coal price of just under \$44 per tonne (Jan 2016)⁵ the equivalent gas price would need to be around \$3.50/mmbtu to encourage fuel switching in the power sector, given the current carbon price of 7 euros per tonne.⁶ This compares with a spot gas price on the TTF hub in the Netherlands of \$4.5/mmbtu (Jan 2016),⁷ implying that the carbon price would need to more than triple and reach a level approaching 25 euros per tonne in order to make gas competitive with coal. As there is no sign of this happening in the short to medium term, the only other alternatives would be for policy makers to mandate the removal of coal from the power generation mix or for the gas price to fall further.

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 2025.⁸ 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 so competitive. Therefore, if coal prices continue to languish below \$50 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 sector across Europe before 2020. As highlighted by the IEA in its World Energy Outlook 2015,⁹ 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.

³ For example, FT Lex column, 3 Jan 2016, "Coal: The king is dead"

⁴ World Gas Intelligence, 16 Dec 2015, "Viewpoint: Natural Gas after the Paris Accord"

⁵ Argus Media, Argus Coal Daily International, 18 Jan 2016, p.1

⁶ Data from Argus Direct at <https://direct.argusmedia.com/>, 18 Jan 2016

⁷ Ibid.

⁸ Financial Times, 18 Nov 2015, "UK coal-fired plants to be phased out"

⁹ IEA WEO 2015, pp.312-313

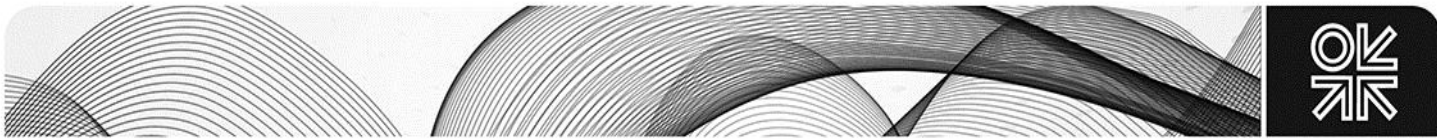
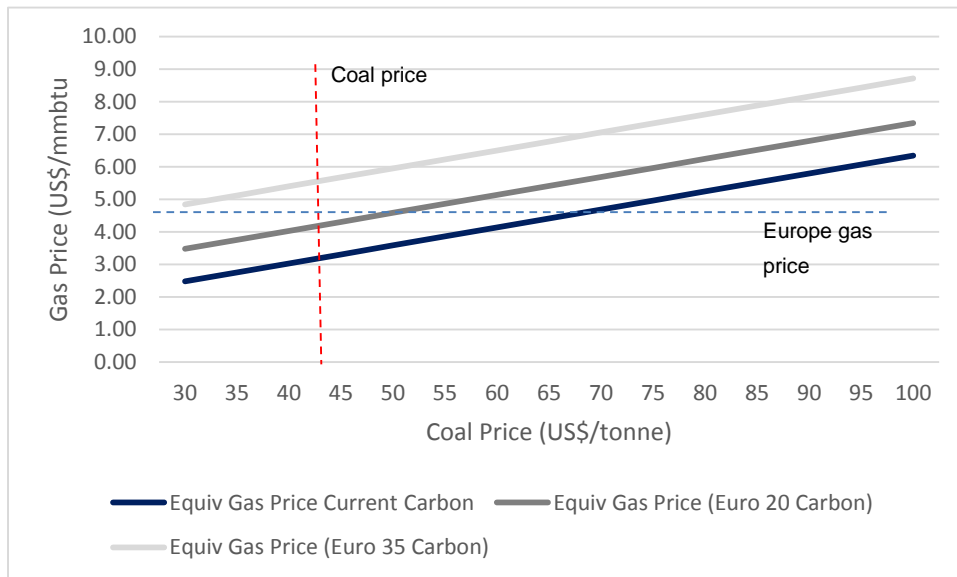


Figure 2: Coal versus gas switching price at various carbon prices



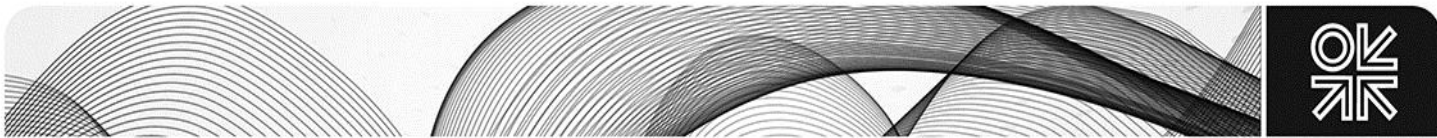
Source: Argus Media, Author's Calculations

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,¹⁰ 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. However, both of these factors have now altered significantly, with new US and Australian LNG arriving on the global gas market at a time when Asian gas demand growth appears to be faltering. The result is likely to be an increasing level of competition for Gazprom in Europe, with hub prices falling in response to higher supply and 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 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,
 - Expand demand for gas in Europe by displacing coal in the power sector?

¹⁰ Rogers H., Stokes, D. and Spinks O., Timera Energy, 23 Nov 2015, "Russia's strategic response to an oversupplied gas market" at <http://www.timera-energy.com/russias-strategic-response-to-an-oversupplied-gas-market/>

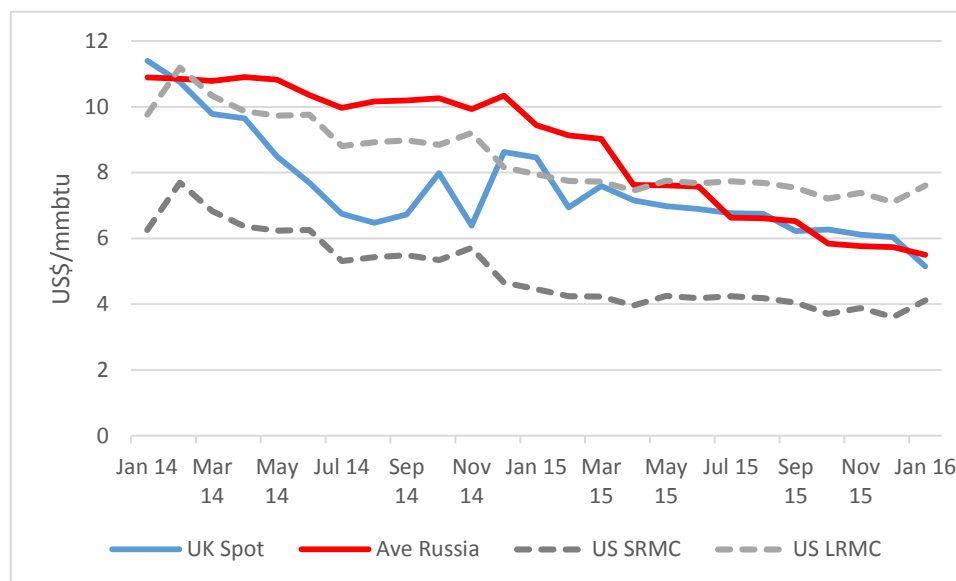


- In the longer term (post 2020), should Gazprom's management announce and demonstrate a commitment to keeping prices below the level required for new LNG projects to attain FID, and hence defend and grow market share through the 2020s?

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 Figure 3, the gas spot price in Europe and Gazprom's own export price have been trading in a range below the LRMC of US LNG (which fluctuates with the Henry Hub price) but above the SRMC, assuming in this instance that liquefaction costs of \$3.50/mmbtu are sunk.¹¹ 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.

Figure 3: European gas prices compared to the marginal cost of US LNG

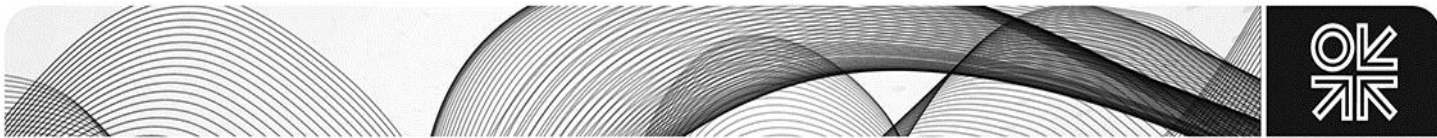


Source: Argus Media, Author's analysis

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/mmbtu (Based on a Henry Hub price of \$2.30/mmbtu in mid-January 2016). Sabine Pass will be the only US gas exporting facility in 2016 and much of 2017, and so US LNG will grow moderately to 2018. However, while this therefore might appear to be a question that Gazprom can defer, as is well documented¹² the rise in Australian LNG is already well 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

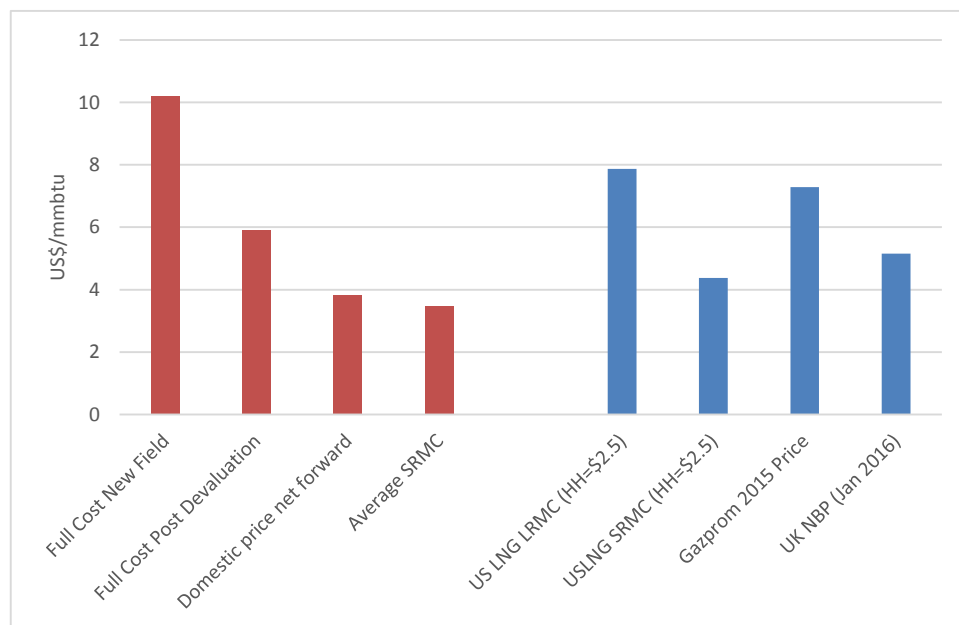
¹¹ We assume the long run marginal cost of US LNG in US\$/mmbtu is calculated as: (Henry Hub gas price x 1.15) + 3.50 (liquefaction cost) + 1 (transport to Europe) + 0.5 (regasification). The short run marginal cost then assumes that the liquefaction cost is sunk.

¹² IEA Medium Term Gas Report 2015, p.113



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, as as Figure 4 demonstrates it would appear to be reasonably well placed to do so.

Figure 4: Cost of Russian gas versus US LNG



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

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 less than \$1.50/mmbtu in Jan 2016. 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.

Figure 5 shows an analysis which compares various Russian export volume and price scenarios. On volumes, we assume three levels, the 2015 exports of around 160bcm, 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 figure (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 2020,¹³ a mid-case of the NBP futures prices to 2020 and a high case of the average Russian gas price for Q4 2015 (\$5.80/mmbtu, relating to an average oil price of US\$54/bbl 6-9 months earlier) – see table below for detailed assumptions. The graph then shows gross export revenues based on various combinations of volume and price.

¹³ 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

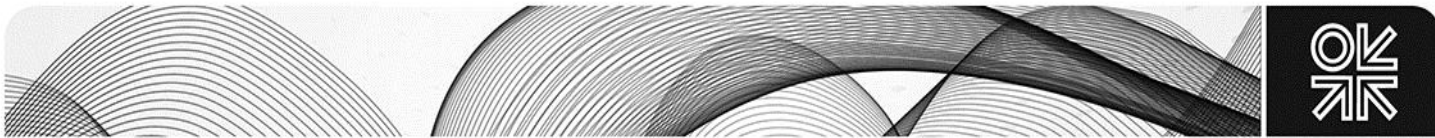
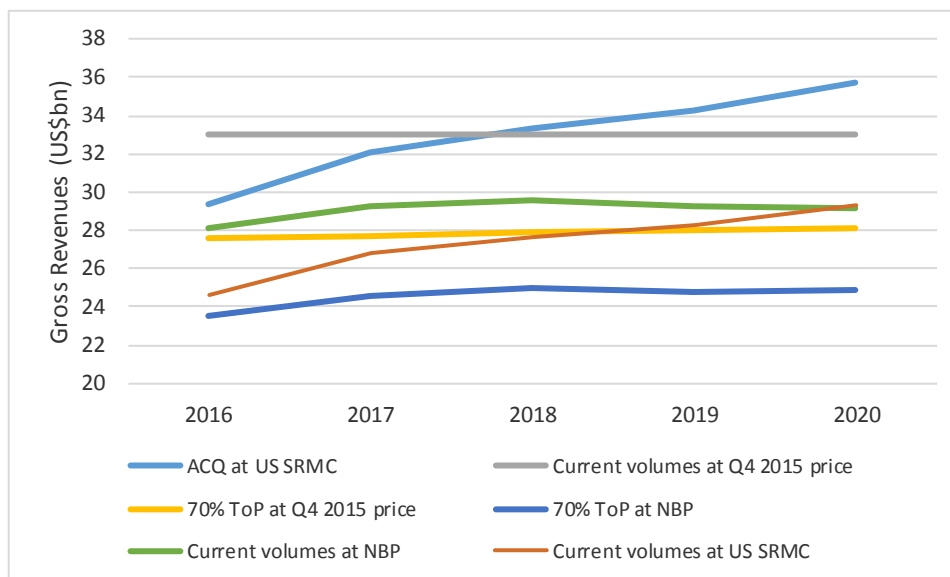


Figure 5: Ranges of Russian gas export revenues at various volumes and prices



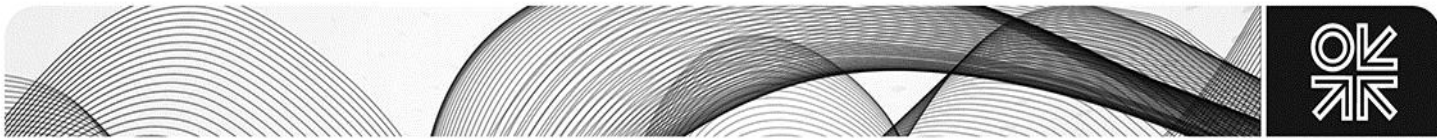
Assumptions

Volumes (bcm)	2016	2017	2018	2019	2020
ACQ	191	192	193	194	195
2015	160	160	160	160	160
70% Take or Pay	133	134	134	135	136
Prices (US\$/mmbtu)					
Russia Q4 2015	5.78	5.78	5.78	5.78	5.78
NBP Futures	4.93	5.13	5.18	5.12	5.10
US LNG SRMC based on HH Futures	4.32	4.69	4.84	4.95	5.13

Source: Author's analysis

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 and accepts volumes at the 70% take-or-pay level. Over the five-year period these outcomes could generate \$25-40 billion less revenue for the company than the best case. A second conclusion is that the best 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.

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 forward 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 retain current volumes at the 2015 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. Indeed, the most imminent arbitral decision, concerning Gazprom's contract with E.ON, may well set a precedent for a shift to more market-oriented pricing if the German utility can convince the court that oil-linked pricing is no longer a relevant methodology. A decision is expected during the first half of 2016. In consequence, price competition with US LNG based on full participation in European hubs and an acceptance of spot pricing now looks like a 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,¹⁴ 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.

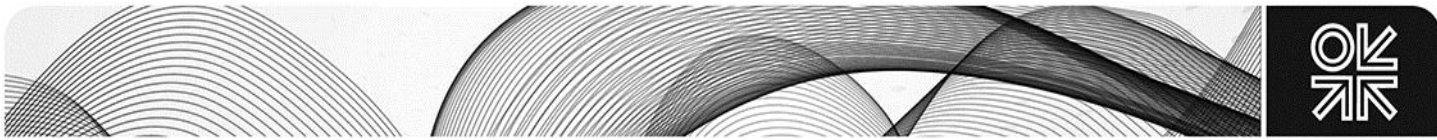
A competitive price strategy can make political sense too

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 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. If a change in Russian policy resulted in its gas becoming low priced and plentiful, this historical premise would be 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 very much more reactive than proactive. The commercial reality facing the buyers of its long-term contracts means that in effect Gazprom 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

¹⁴ Based on data from BP Statistical Review 2015 which shows reserves of 32.6tcm and production of 579bcm for 2014



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 needs to 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 and 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. An alternative methodology 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)¹⁵ 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 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.

¹⁵ Rogers, H. (2015), "The Impact of Lower Gas and Oil Prices on Global Gas and LNG Markets", Oxford Institute for Energy Studies, p.33

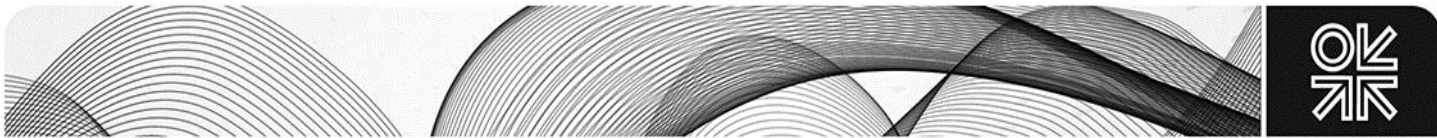
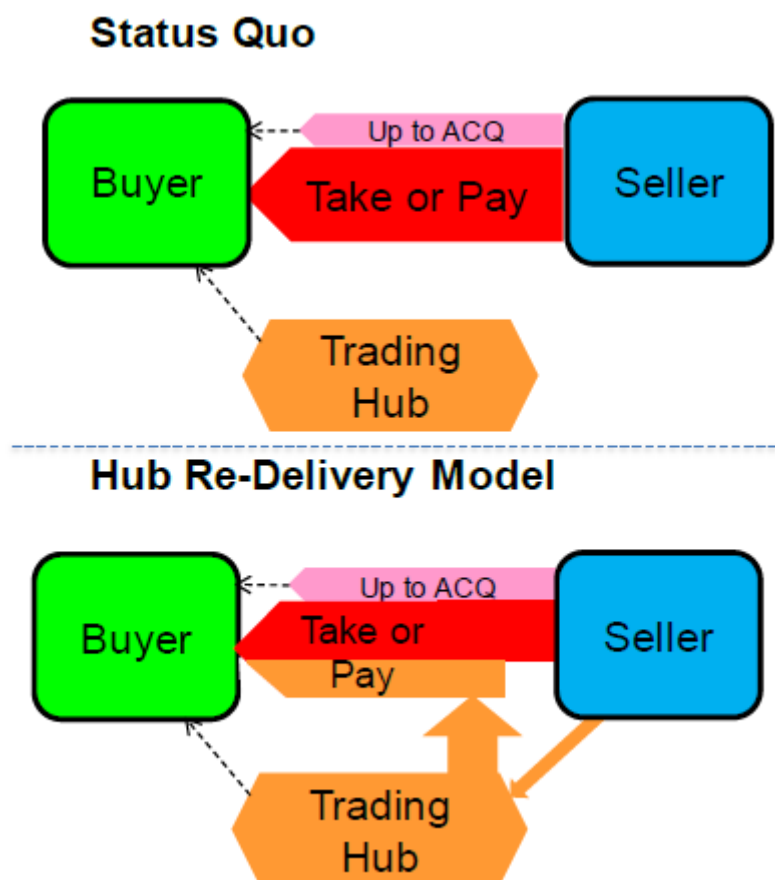


Figure 6: The Hub Re-Delivery Model



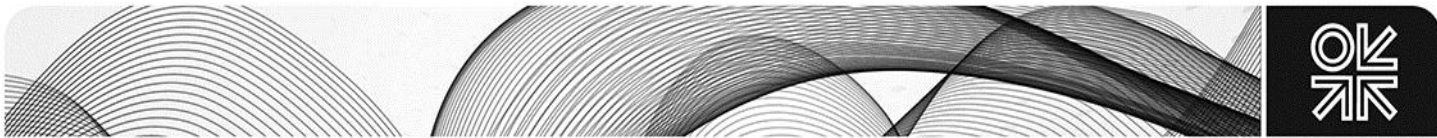
Source: Rogers (2015)

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,¹⁶ 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 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 COMP¹⁷ into Gazprom's business methods in eight Central and Eastern European countries. The most controversial allegation in this investigation

¹⁶ Bloomberg, 24 Nov 2015, "Looking for volatility? Try Germany's shift to renewable energy"

¹⁷ 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?"



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 unresolved, 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 2016. The discussions around the DG COMP investigation have been much less fraught than might have 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 proposed auction of the contracts for the Baltic States in 2016 can provide 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 recently 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."¹⁸ 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]"¹⁹ 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.

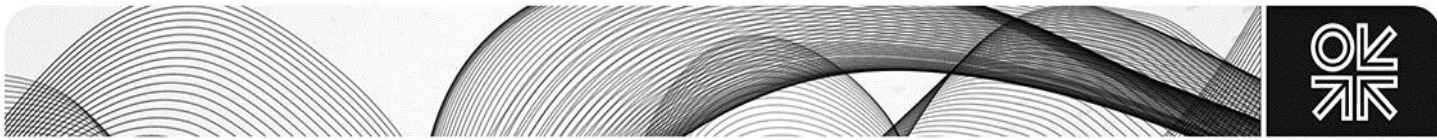
Conclusions

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 hit too hard, despite the declining trend in European gas demand. From 2016, though, that situation is set to change, albeit gradually, as new US and Australian LNG arrives in a global market where demand growth in Asia is also now disappointing, meaning that more gas is likely to arrive in Europe as the market of last resort.

When this fact is combined with stagnant European energy demand overall, the 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 Comment we have argued that there may be some logic for Gazprom, as one of the lowest cost suppliers to Europe with spare capacity, in adopting a Saudi-like 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 so low 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

¹⁸ Putin's speech to the GECF on 23 Nov 2015, sourced from <http://en.kremlin.ru/events/president/news/50755> on Jan 14 2016

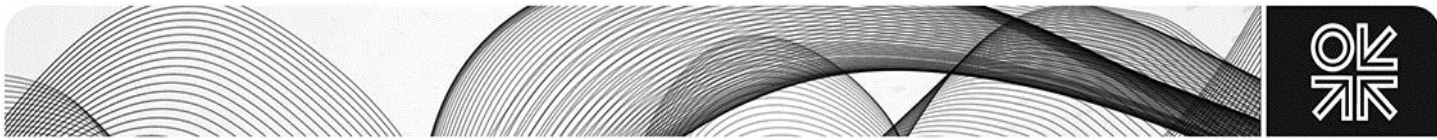
¹⁹ Bloomberg, 1 July 2013, "Gas exporters defend pricing as courts reject link with oil"



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 we highlighted in our 2014 book "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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