

July 2019

Gazprom's Gas Sales via its Electronic Sales Platform (ESP)

Introduction

Gazprom has traditionally sold gas to its European customers under long-term, oil-indexed contracts. However, as we have documented in numerous OIES papers, it has been forced to adapt to changing market rules in Europe and an increasingly competitive global gas market. The company has responded to challenges from both the European Commission and its customers in Europe by introducing elements of hub-linked pricing to its contracts. Indeed, according to the Director of Gazprom Export, Elena Burmistrova, 28 per cent of Gazprom Export's long-term contracts are now spot-indexed, while a further 14 per cent of volumes are sold with oil-indexation and a spot reference for the corridor of price fluctuation.¹ Gazprom also trades gas in Europe through its subsidiary companies, of which Gazprom Germania acts as the 'umbrella',^{2,3} and between September 2015 and September 2016, Gazprom Export conducted three auctions for short-term sales of gas over and above existing contracted volumes.⁴ All these moves demonstrate the company's growing desire to maintain its core position within a liberalising European market and its willingness to adapt its strategy not just by trading on European hubs, but also by finding alternative methods to trade with European consumers.

Another example of this gradual development emerged on the 20th September 2018, when Gazprom Export conducted its first sales via its new Electronic Sales Platform (ESP). While the auctions were one-off events for the sale of gas to specific destinations via specific routes, and the trading activities of Gazprom's subsidiaries include the buying and selling of non-Russian gas, the ESP is intended as a framework for the ongoing monthly sale and physical delivery of Gazprom-produced gas to a variety of destinations.

This Insight analyses the growth in volumes sold via the ESP, the share of sales via the ESP in Gazprom Export's total sales to the European market, the delivery schedules (i.e. the time-lag between the sales transaction and physical delivery), the significance of the delivery destinations and related delivery routes, the price at which gas is sold via the ESP relative to both European hub prices and the price of Gazprom's long-term contract sales in Europe, and the motivations of the counterparties for buying gas via the ESP.

¹ Gazprom Export, 2019. Speech by Gazprom Export General Director, Elena Burmistrova, 'Changes in the European gas landscape, 2019-2020: Review and expectations. Conference 'Prospects for Russia-EU Energy Co-operation, Gas Aspect'. 16 May. http://www.gazpromexport.ru/files/EV_Burmistrova_Berlin_16052019499.pdf. Accessed 3 July 2019.

² Gazprom Germania is a wholly-owned subsidiary of Gazprom Export. See: Gazprom Germania, 2019. *Corporate structure*. <https://www.gazprom-germania.de/en/company/structure.html>. Accessed 3 July 2019.

³ Those subsidiaries include Gazprom Marketing & Trading, Gazprom Schweiz, Wingas, Vemex, and Bosphorus Gas. See: Gazprom Germania, 2019. *Business areas: Natural gas trading*. <https://www.gazprom-germania.de/en/business-areas/natural-gas-trading.html>. Accessed 3 July 2019.

⁴ Gazprom Export, 2019. *Gas auctions*. http://www.gazpromexport.ru/en/strategy/gas_auction/. Accessed 3 July 2019.

ESP sales volumes and share of total sales

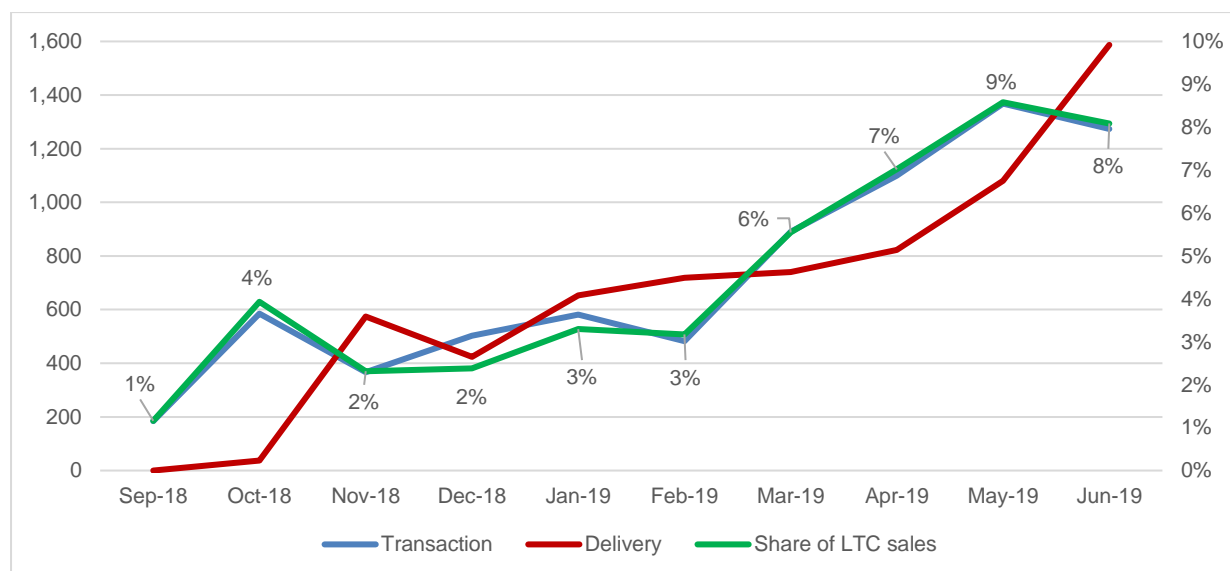
In a little over nine months of trading between the 20th September 2018 and 30th June 2019, Gazprom Export sold 7,333 million cubic metres (mmcm) of natural gas via its ESP. When only complete calendar months are considered (i.e. with the partial month of September 2018 excluded), that figure falls to 7,149 mmcm.⁵ Of those total volumes, 6,638 mmcm was physically delivered between October and June, with the remaining 695 mmcm scheduled for delivery in July, August, Q3-2019 or Q4-2019.

For comparison, between the 1st October 2018 and 30th June 2019, Gazprom Export reported sales of around 148.0 billion cubic metres (bcm) to the European market under long-term contracts.⁶ Therefore, sales via the ESP equated to approximately 4.8 per cent of Gazprom Export's total LTC sales to Europe during this period.⁷ However, the overall trend has been increasing: if one uses just the latest month for which concrete data is available (June 2019), ESP sales of 1,274 mmcm equated to 8.1 per cent of Gazprom Export's contract sales.

It is possible to differentiate between the dates on which each transaction was concluded and the date on which that gas is delivered. Therefore, Fig.1 illustrates that, even though the amount of gas sold each month (i.e. the volume of gas for which transactions have been concluded) grew and then levelled off in May-June 2019, the amount of gas purchased on the ESP being delivered each month has continued to rise. The reason for this is the continued growth in sales for day-ahead, weekend, and Balance of Month delivery, while sales for month+1 delivery peaked in May 2019, as discussed below.

The key conclusions here are that the monthly volumes of gas sold on the ESP have now reached significant levels, with sales volumes in excess of 1 bcm per month throughout Q2-2019, and that those volumes equate to a non-negligible portion of Gazprom's long-term contract sales.

Figure 1: Gazprom Export ESP sales by transaction month and delivery month (mmcm), and equivalent share of ESP sales in LTC sales



Data source: Argus.⁸ Graph by the author.

⁵ Gazprom Export, 2019. *ESP sales*. <http://www.gazpromexport.ru/en/esp/sales/>. Accessed 3 July 2019.

⁶ Data from Argus, 'Gazprom monthly sales and prices'.

⁷ Here it should be noted that the data for Gazprom Export sales to Europe is slightly higher than the data for Gazprom Export deliveries to Europe. The difference is accounted for by Gazprom Export withdrawing gas from storage in Europe, either to meet its contractual delivery requirements, or to sell additional volumes on European hubs.

⁸ From Sept-18 to Nov-18 and from Feb-19 to May-19, the transaction volumes (left axis) and equivalent share of LTC sales (right axis) follow the same line on the graph

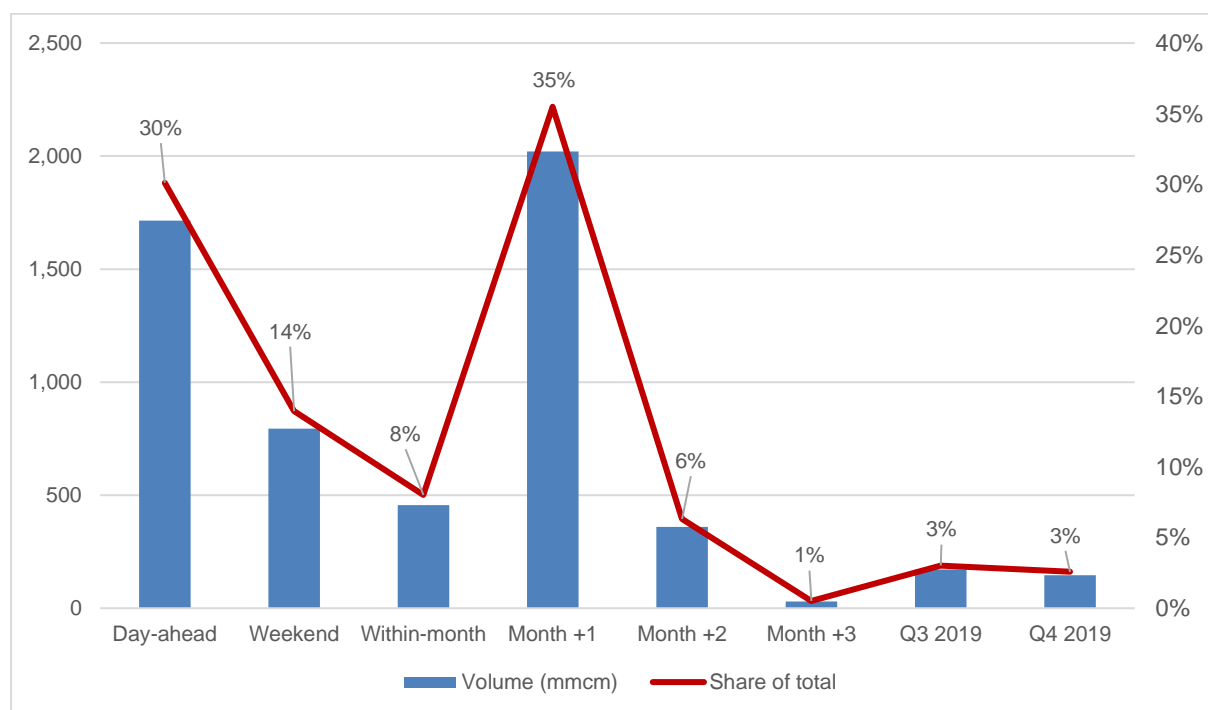
Delivery schedules

In the first three months of trading via the ESP, Gazprom Export sold gas for delivery between one and three months after the transaction date. For example, sales transactions concluded in October 2018 were for deliveries between November 2018 and January 2019. This explains the lag between the transaction and delivery volumes in September and October in the graph above. The first day-ahead sale was concluded on the 18th of December 2018.⁹ This was followed by the first Balance of Month sale on the 10th of January.¹⁰ The first sale for delivery in a specific quarter was concluded on the 4th of April 2019.

Since January 2019 (i.e. when the day-ahead, weekend, and Balance of Month sales were available), Gazprom Export has sold 5,695 mmcm of gas via the ESP. Taking only the sales transactions concluded during this period, sales for such ‘prompt’ delivery account for 52 per cent of total sales, with sales for delivery one month after the transaction accounting for a further 35 per cent. Sales for delivery further into the future accounted for just 13 per cent of total sales. (See Fig.2 below). As illustrated by Fig.3, the peak in physical deliveries in June 2019 was caused by the combination of the May 2019 peak in sales for Month+1 delivery, and the June 2019 peak in sales for prompt delivery (Day-Ahead, Weekend, and Balance of Month).

These trends suggest that customers are presently most interested in using the ESP to source gas on a short-term basis. This is not surprising, given the current relatively low price at European hubs and confidence among gas purchasers that they can acquire extra gas as and when they need it.

Figure 2: Sales by delivery date as volume (mmcm) and share of total sales (January 2019 to June 2019 inclusive)

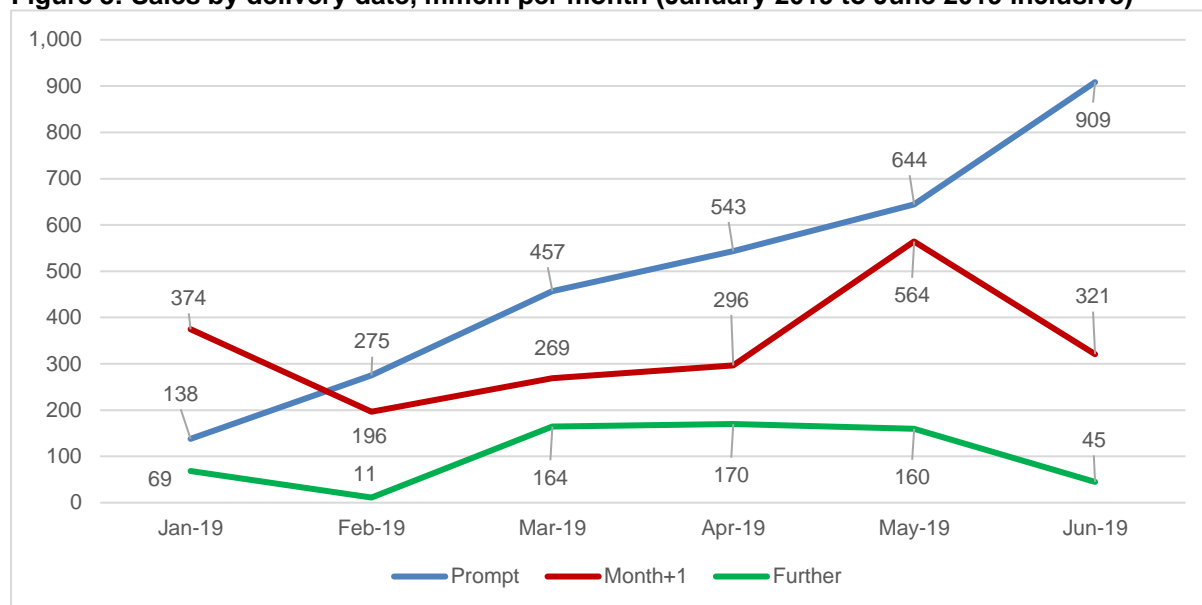


Data source: Gazprom Export. Graph by the author.

⁹ Gazprom Export, 2018. Gazprom Export successfully concludes a day-ahead gas sales deal on the Electronic Sales Platform. *Press release*, 19 December. <http://www.gazpromexport.ru/en/presscenter/press/2275/?year=2018>. Accessed 3 July 2019.

¹⁰ Gazprom Export, 2019. Gazprom Export Successfully Concludes a Balance-of-Month Gas Sales Deal on the Electronic Sales Platform. *Press release*, 14 January. <http://www.gazpromexport.ru/en/presscenter/press/2286/?year=2019>. Accessed 3 July 2019.

Figure 3: Sales by delivery date, mmcm per month (January 2019 to June 2019 inclusive)



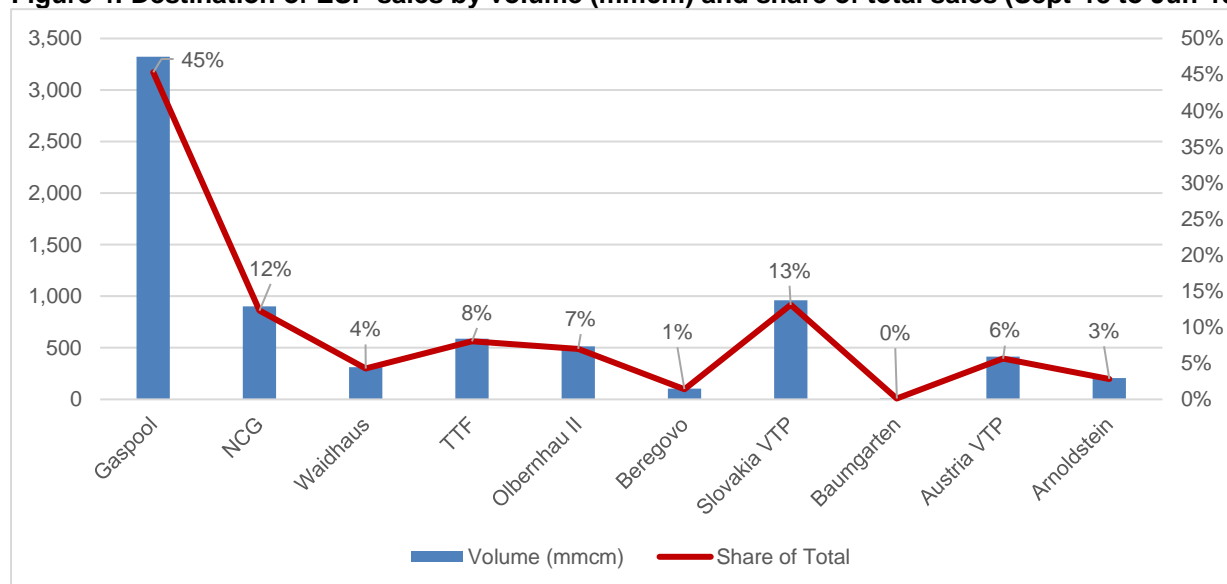
Data source: Gazprom Export. Graph by the author.

Note: 'Prompt' refers to combined Day-Ahead, Weekend, and Balance of Month' sales, 'Month+1 refers to delivery in the calendar month following the transaction, and 'Further' refers to sales for delivery further into the future (i.e. Month+2, Month+3, Q3-19, and Q4-19)

Delivery destinations and related delivery routes

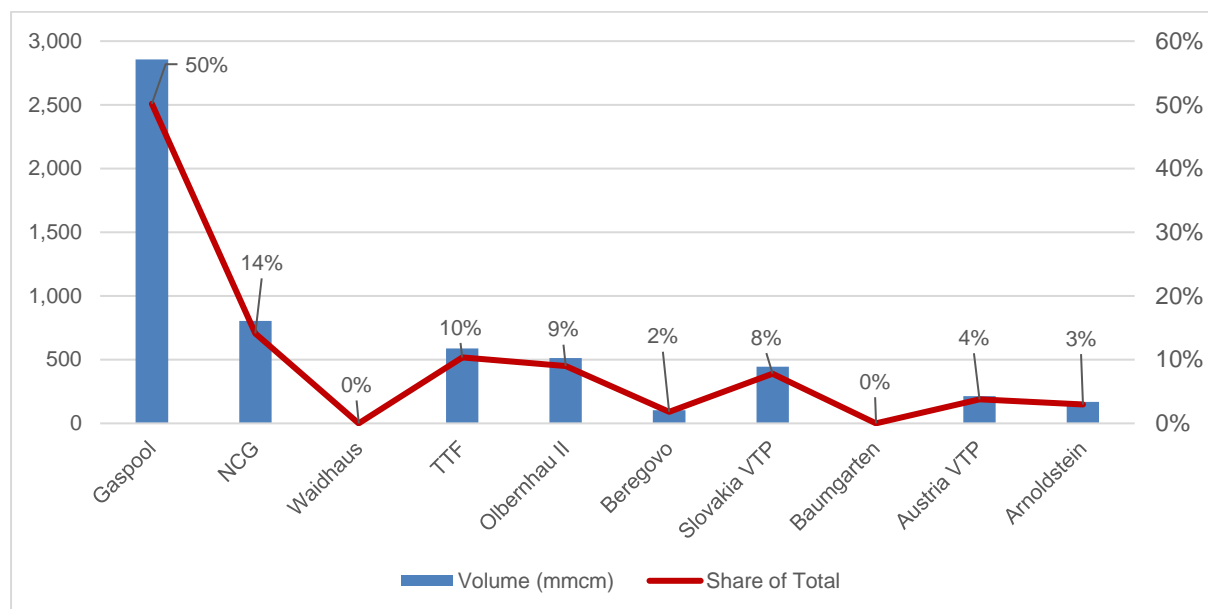
A related issue is that of the delivery destinations of gas sold on the ESP and, by extension, the likely routes used to deliver gas to those destinations. Since its launch, the ESP has facilitated the sale of gas for delivery to ten destinations, as illustrated in Fig.4. Taking only sales conducted since January 2019 (when day-ahead, weekend, and Balance of Month deliveries were available), the dominant share of sales to the most liquid market areas (Gaspool, NCG, and TTF) becomes more apparent, as illustrated in Fig.5.

Figure 4: Destination of ESP sales by volume (mmcm) and share of total sales (Sept-18 to Jun-19)



Data source: Argus. Graph by the author.

Figure 5: Destination of ESP sales by volume (mmcm) and share of total sales (Jan-19 to Jun-19)



Data source: Argus. Graph by the author.

In terms of how gas is delivered to these destinations, analysis of the flows across the relevant borders indicate that the following conclusions can be drawn:

- Gas for the Gaspool market area is delivered via the Nord Stream and Yamal-Europe pipelines (the latter from Russia to Germany via Belarus and Poland)
- Gas for TTF is also delivered via Nord Stream and the Yamal-Europe pipeline
- Gas for Olbernhau II is delivered via the same routes, for sale into the Czech VTP market area
- Gas for Waidhaus and NCG is also delivered via the same route, with the Gazelle pipeline connecting Olbernhau II and Waidhaus in western Czechia
- Gas for Beregovo is delivered via Ukraine to the Ukraine-Hungary border
- Gas for Slovakia VTP, Austria VTP, Baumgarten, and Arnoldstein is highly likely to be delivered to those destinations via Ukraine¹¹

The routes by which gas is delivered to these destinations is illustrated in Fig.6 (below). In accordance with the analysis above, the destinations served via 'non-Ukrainian' routes are TTF, Gaspool, Olbernhau, Waidhaus, and NCG. The destinations served via Ukraine are Slovakia VTP, Baumgarten, Austria VTP, Arnoldstein, and Beregovo.

Of the 7,333 mmcm that has been sold via the ESP between September 2018 and the end of June 2019, 5,640 mmcm (77 per cent) was sold for delivery via the 'non-Ukrainian' routes to TTF, Gaspool, NCG, Olbernhau, and Waidhaus. A further 104 mmcm (1.4 per cent) has been sold for delivery to Beregovo (which can only be reached via Ukraine). The remaining 1,589 mmcm (21.6 per cent) was sold for delivery to Slovakia, Baumgarten, Austria, and Arnoldstein.

¹¹ This point is supported by analysis of the limited gas flows at the Lanzhot cross-border point between Slovakia and Czechia, which shows that limited volumes (0.5-1.8 bcm) crossed the border in either direction in H1-19. This means that the vast majority of the 21.3 bcm of gas that arrived in Austria from Slovakia in H1-19 arrived via Ukraine, rather than via Germany and Czechia.

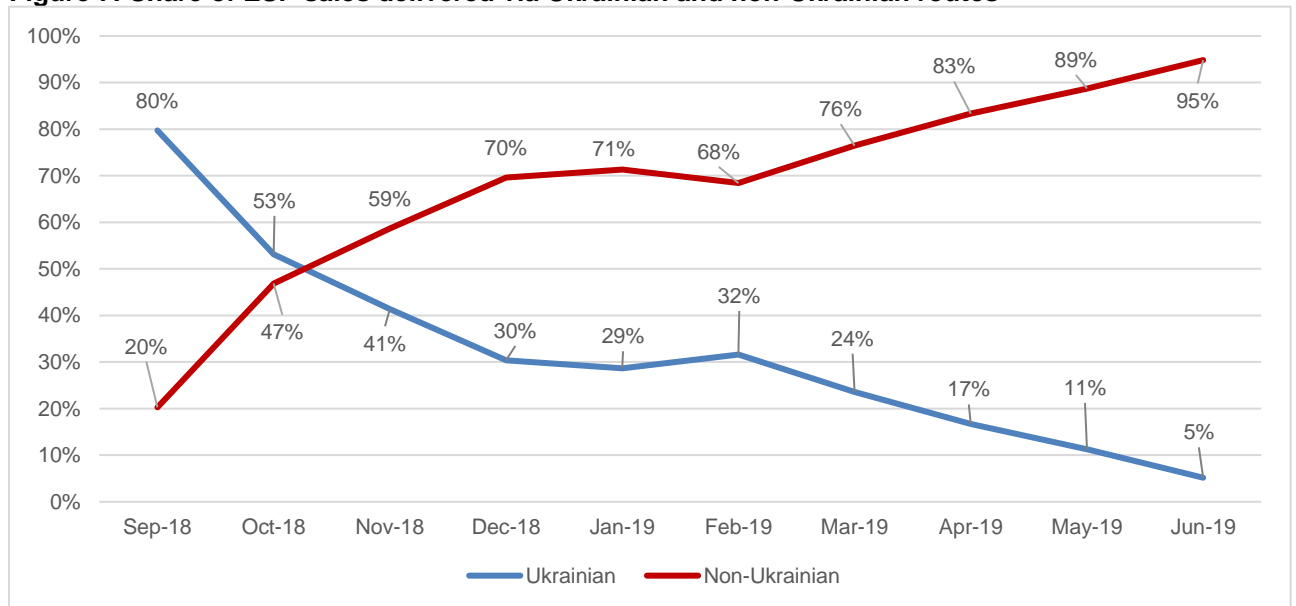
Figure 6: Locations of delivery points for gas sold on the ESP



Source: Map from IEA 'Gas Trade Flow in Europe', with additional labelling by the author

Note: The ten locations are given in the white boxes: Gaspool, TTF, Olbernhau II, Waidhaus, NCG, Beregovo, Slovakia VTP, Baumgarten, Austria VTP, and Arnoldstein. The probable delivery routes are highlighted in green.

Figure 7: Share of ESP sales delivered via Ukrainian and non-Ukrainian routes



Data from Argus interpreted by the author

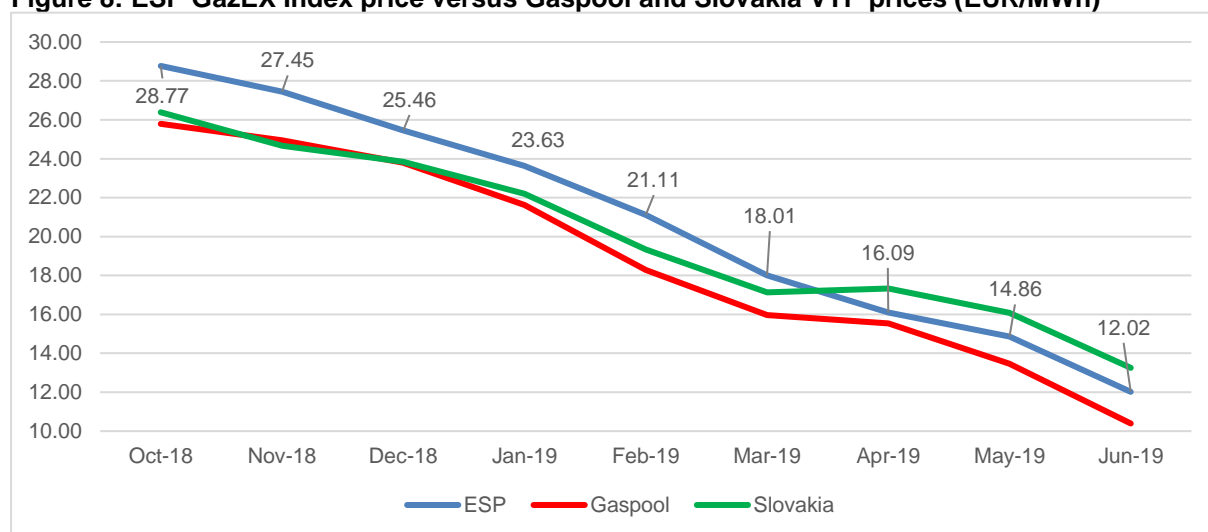
However, as Fig.7 illustrates, the share of ESP sales delivered via 'non-Ukrainian' routes has increased month-on-month, reaching 95 per cent of the total in June 2019. On this basis, it is clear that as sales via the ESP have progressed, they have become increasingly concentrated on delivery destinations

that are predominantly served by pipeline routes that avoid Ukraine. Or, to put it another way, ESP sales are concentrated on destinations served by pipelines that Gazprom owns, namely Nord Stream and the Yamal-Europe pipeline. Regarding the former, Gazprom is a 51 per cent shareholder, while for the latter, Gazprom owns the Belarusian section and holds a 48 per cent stake in the Polish section.¹²

Prices

Since the 1st April 2019, Gazprom Export has published a monthly weighted average price of sales via the ESP, which is referred to as the GazEX Index. Prices in EUR/MWh are provided back to October 2018.¹³ As Fig.8 illustrates, the ESP price has fallen steadily in line with European hub prices over the past nine months, and the weighted average price of sales via the ESP now sits between the monthly averages of day-ahead prices on the Gaspool and Slovakia VTP hubs.

Figure 8: ESP GazEX Index price versus Gaspool and Slovakia VTP prices (EUR/MWh)



Data source: Argus (Note: Only ESP prices have data labels)

In reality, Gazprom Export is likely to have sold volumes destined for NW Europe at prices closer to Gaspool, NCG, and TTF prices, volumes destined for central Europe at prices closer to those of the Slovakia, Czechia, and Austria VTPs, and volumes destined for Arnoldstein and Beregovo at prices closer to the Italian PSV and Hungarian MGP hubs, respectively.

As an exercise to examine this spread of prices, it has been possible to take data from Gazprom Export for every ESP transaction concluded in June, the volume sold, and the delivery destination. It has then been possible to use Argus data for European hub prices and match each transaction with the hub price on that day, for the hub nearest to the delivery destination. For day-ahead and weekend ESP sales, the day-ahead price of the nearest hub was used. For Balance of Month, month+1, month+2, and Q3 sales, the relevant prices were also used.

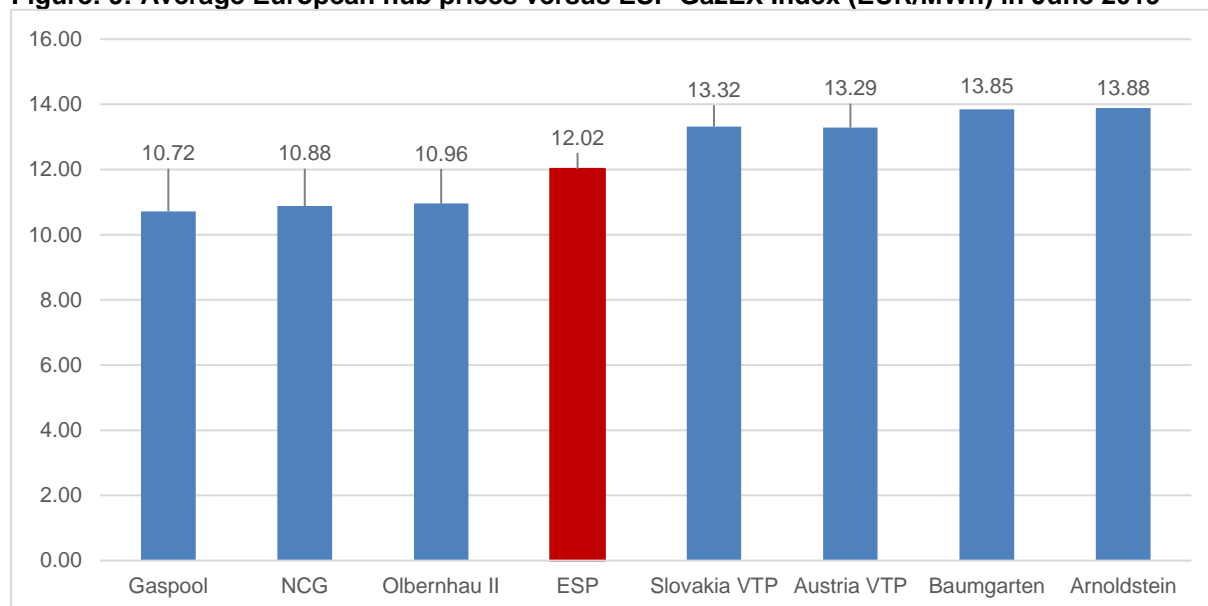
As a result, it has been possible to calculate that, having sold 13,576,051 MWh of gas at a weighted average price of 12.02 EUR/MWh in June 2019, Gazprom Export generated revenues of EUR163.4m. However, if those same volumes had been sold on the same days at the hub prices of the nearest hubs, those revenues would be EUR148.2m. This would equate to an average sales price of 10.91 EUR/MWh. Therefore, Gazprom Export's sales via the ESP generated revenues 10.4 per cent higher than sales of the same volumes would have generated on European hubs.

¹² EuRoPol Gaz, 2019. *General information*. <https://www.europolgaz.com.pl/en/company/general-information>. Accessed 3 July 2019.

¹³ Gazprom Export, 2019. *ESP GazEX Index*. <http://www.gazpromexport.ru/en/esp/espgazex/>. Accessed 3 July 2019.

To illustrate the spread of prices, Fig.9 (below) shows the average price that Gazprom Export would have received for each destination, if it had sold at the nearest hub price. This is then compared to the ESP GazEX index price. It is important to note that (for example) the price of 10.72 EUR/MWh for Gaspool is the average Gaspool hub price on the days when Gazprom Export sold gas for delivery to the Gaspool market area - it is not simply the average Gaspool hub price for the month of June. The same logic applies for the other hubs as well. As a result, this chart demonstrates the extent to which the ESP GazEX Index sits between hub prices at the most liquid hubs of NW Europe and the less-liquid hubs of central Europe.

Figure: 9: Average European hub prices versus ESP GazEX Index (EUR/MWh) in June 2019



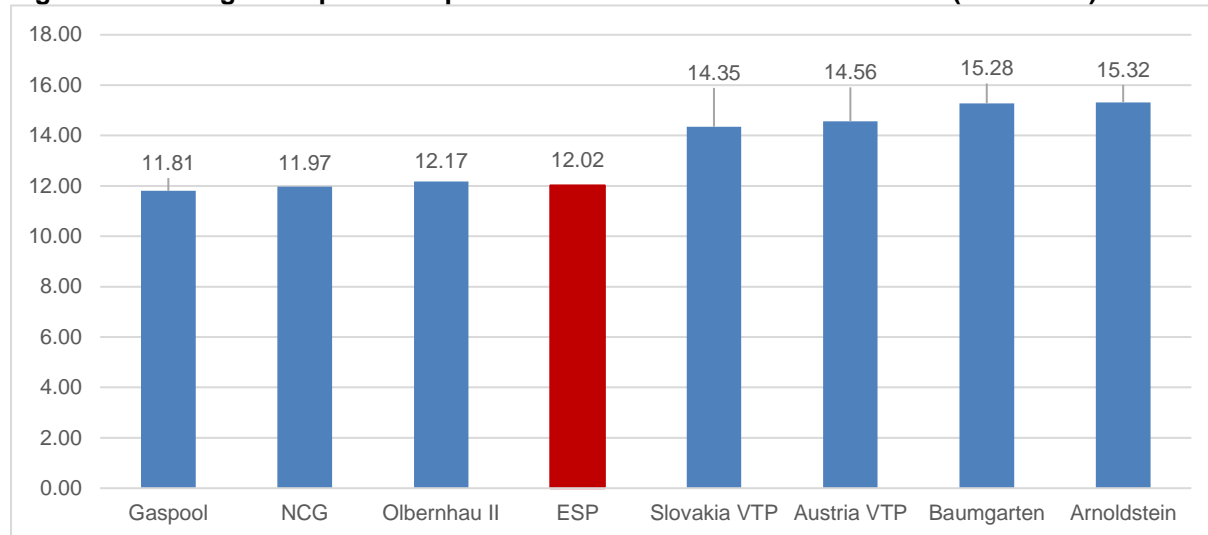
Data from Argus. Graph by the author.

Recalling that Gazprom generated revenues of EUR 163.4m from the sale of 13,576,051 MWh of gas at a weighted average price of 12.02 EUR/MWh in June 2019, the chart below shows how Gazprom could have achieved the same revenues by selling the same volumes to the same destinations at 'hub plus 10.4 per cent' prices. The chart is interesting, because it clearly demonstrates the impact of Gaspool, NCG, and Olbernhau on the ESP average sales price in June, given that they accounted for 63 per cent, 22 per cent, and 10 per cent respectively of total ESP sales in that month.

It would clearly be wrong to suggest that all ESP sales were conducted at a uniform 'nearest hub plus 10.4 per cent', and it seems much more likely that, in reality, the prices of sales to some markets were more closely aligned to local hub prices than others, although it would be pure speculation to suggest which those might be.

However, it should be noted that, to maintain the weighted average of 12.02 EUR/MWh in June 2019 while bringing the price of sales to Gaspool, NCG, and Olbernhau even closer to the relevant hub prices, sales to the other destinations (which accounted for just 5 per cent of the total) would have needed substantially higher prices. Therefore, it is highly likely that Gazprom sold gas to Gaspool, NCG, and Olbernhau at a premium to the nearest hub prices in June 2019, with that premium being roughly 10 per cent over hub prices.

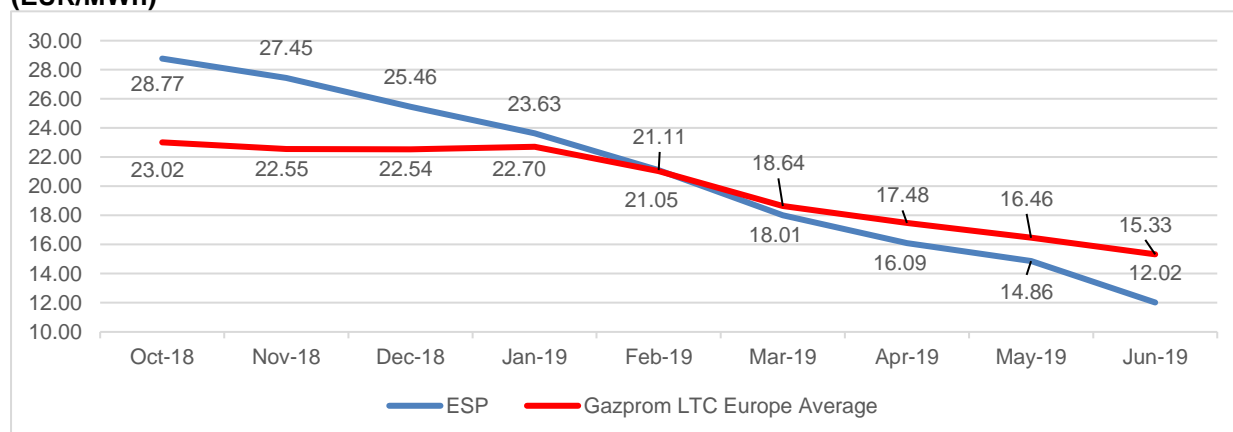
Figure 10: Average European hub prices +10.4% versus ESP GazEX Index (EUR/MWh) in June 2019



Data from Argus. Graph by the author.

It is also interesting to note the relationship between the ESP GazEX Index and the average price of Gazprom Export's LTC sales to Europe, as illustrated in Fig.11 (below). The fact that the ESP GazEX Index has been below the average price of Gazprom's monthly gas sales to Europe since February 2019 may be explained partly by the continued downward trend of European hub prices pulling the ESP similarly downwards, while the Gazprom average LTC price is lifted by the continued presence of oil-indexation in its sales contracts. It should also be remembered that, while the bulk of ESP sales are to the most competitive markets in NW Europe, Gazprom's average LTC sales include sales to less-competitive markets in central and south-eastern Europe, and to Turkey. Indeed, the LTC sales price for NW Europe is likely to be below the Gazprom European average LTC price, and closer to the ESP. Nevertheless, the fact that the ESP price is below the LTC price does suggest that Gazprom is prepared to offer gas on the ESP at very competitive prices in a market that is currently oversupplied and where the competition for market share is currently intensifying.

Figure 11: ESP GazEX Index price versus price of Gazprom monthly LTC sales to Europe (EUR/MWh)



Date source: Gazprom Export (ESP) and Argus (Gazprom LTC Europe Average, in USD per 1,000 m3). Converted to EUR/MWh using IEA conversion factor for Russian gas (1,000 Sm³ = 36.235 MMBtu = 10.62 MWh)¹⁴

¹⁴ IEA, 2019. *Natural Gas Information 2019 first edition: Database documentation*. http://wds.iea.org/wds/pdf/Gas_documentation.pdf. Accessed 3 July 2019. See pages 45-46.

ESP counterparties

According to Gazprom Export, ESP sales transactions have been concluded with ‘over 20 clients’, whose identities have not been disclosed. Speaking in Berlin in May, the General Director of Gazprom Export, Elena Burmistrova stated that “among the buyers of gas on the ESP are companies that are our long-standing partners on existing long-term contracts”.¹⁵ She also claimed that “they do not reduce their withdrawals under these contracts when they buy gas on an electronic platform”.

Taking these statements together, and considering the analysis above, we may draw the following conclusions. Firstly, Gazprom Export is prepared to offer extra gas to its existing LTC counterparties at close to hub prices. Secondly, the counterparties appear to be keen to take advantage of this at a time of relatively low hub prices in Europe, even to the extent of purchasing additional volumes beyond their LTC nominations. This correlates with the record high levels of gas in storage on the European market for this time of year.¹⁶ Thirdly, there may also be counterparties that do not currently hold LTCs with Gazprom, who wish to develop trading relations with Gazprom, and who are prepared to pay a slight premium over hub prices for purchases from the ESP.

As a final point of note, Gazprom Export introduced payment in Russian Rubles for transactions on the ESP on the 7th of March.¹⁷ However, it is not known how popular this option has been with ESP customers.

Conclusions

In the nine months since its launch, the Gazprom Export Electronic Sales Platform has developed into a viable source of spot gas purchases for European customers. Monthly sales volumes have grown and have been sustained at over 1 bcm per month during Q2 2019. They are now non-negligible, both in terms of absolute size, and in terms of their equivalent share of Gazprom Export’s LTC sales in Europe. The delivery schedules show a concentration on prompt sales (day-ahead, weekend, and Balance of Month), alongside substantial interest in Month+1 deliveries. By contrast, ESP customers have shown limited interest in purchases for delivery further into the future.

The delivery destinations have been concentrated on NW Europe, as both the most liquid market area in Europe and an area predominantly served by pipelines in which Gazprom holds an ownership stake, thus largely avoiding deliveries via Ukraine. This has allowed Gazprom to continue utilising the Nord Stream and Yamal-Europe pipelines at effectively full capacity throughout much of H1 2019.¹⁸

Finally, the weighted average price of sales via the ESP has fallen in line with European hubs since October 2018, and now sits between the hubs of NW Europe (floor) and the hubs of central Europe (ceiling), and below the average price of Gazprom’s LTC sales in Europe. A nuanced appraisal would suggest that the prices of ESP sales to NW Europe are only slightly above hub prices in that region, and only slightly below the average price of Gazprom’s LTC sales to that region.

Looking forward, it seems that the ESP is now established as both a source of spot gas purchases for European customers, and a source of flexibility for Gazprom as it seeks to maximise both its European sales volumes and the utilisation rates of its export pipelines. At a more strategic level, it also provides Gazprom with the opportunity to demonstrate that it continues to adapt to European market conditions without fully conceding that it will simply trade on European hubs. It has created a new trading platform through which it can start to manage extra flows of Russian gas into Europe, creating a very useful tool

¹⁵ Gazprom Export, 2019. *Speech by Gazprom Export General Director, Elena Burmistrova* (see footnote 1)

¹⁶ On the 2nd July 2019, 801 TWh of gas was being held in European storage. The previous record was 668 TWh on 2nd July 2016, while the figures for 2nd July 2017 and 2018 were 563 TWh and 539 TWh respectively. See: Gas Infrastructure Europe, 2019. *Historical data: Europe*. <https://agsi.gie.eu/#/graphs/eu>. Accessed 3 July 2019.

¹⁷ Gazprom Export, 2019. *Gazprom Export Successfully Completed First Gas Sales Deal on the Electronic Sales Platform With Payment in Rubles*. *Press release*, 7 March. <http://www.gazpromexport.ru/en/esp/espqazex/>. Accessed 3 July 2019.

¹⁸ Analysis of gas pipeline daily capacities and physical flows. Data from: ENTSOG, 2019. *Transparency platform*. <https://transparency.entsog.eu/#/?loadBalancingZones=false>. Accessed 3 July 2019.

at a time of surplus supply to the market. The option to increase or decrease the amount of gas on offer at the ESP and the price at which it is sold provides Gazprom with the opportunity to compete for market share in Europe should it choose to do so, and as such it will be important to monitor both the volumes and the prices on the platform as an indicator of the company's strategy. The fact that over the past four months the ESP GazEx Index price has been trading below the average price of Gazprom's LTC supplies to Europe and that volumes have been increasing rapidly provides a clear indication, albeit not definitive evidence, that Gazprom is currently intent on maintaining its export volumes to Europe in 2019 and does not appear to be ready to sacrifice volumes for price at the present time.