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Ukraine's imports of Russian gas:

how a deal might be reached

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The current gas dispute between Russia and Ukraine is potentially the most serious yet. It takes place against the background of the two countries' deteriorating relations following the collapse of the Yanukovich government, the annexation of Crimea by Russia and the military conflict in eastern Ukraine. In June, negotiations between Russia and Ukraine on the pricing of gas imported to Ukraine broke down, gas deliveries were halted, and Gazprom (the exporter) and Naftogaz Ukrainy (the importer) began arbitration proceedings against each other.

The main obstacle to agreement on gas issues is political. Throughout the post-Soviet period, commercial agreements between Gazprom and importing companies in Ukraine were underpinned by inter-governmental agreements (IGAs). From 2006, contracts were signed without specific reference to IGAs, but the Russian and Ukrainian governments continued to participate in discussions of gas import and transit, and corporate negotiations were conducted alongside political negotiations. This year, political relationships have come close to breaking down, and the European Commission, concerned at the possible impact of a Russia-Ukraine dispute on the transit of Russian gas to Europe, has joined three-sided negotiations on the unresolved gas issues. By mid-June these had come to a standstill.

Agreement could be reached on the gas issues without all the outstanding political matters between Russia and Ukraine being resolved, but it is difficult to envisage a commercial agreement being made unless it is supported on both sides at political level. This comment addresses the key unresolved commercial points – the pricing of imports, and debts – on the assumption that the political process will move in such a way as to allow these to be discussed.

Background

Since 2009, Russian gas has been imported to Ukraine under an 11-year contract between Gazprom and Naftogaz Ukrainy, expiring at the end of 2019.[1] The contract provides (from 2010) for delivery of an annual contract quantity of 52 bcm of gas, with a take-or-pay requirement of 80%. Prices are linked to oil prices, through a formula similar to those traditionally used in Gazprom's long-term contracts with its principal European customers (in this case, with 50% of the price indexed to changes in gas oil and 50% to changes in fuel oil prices), with prices adjusted quarterly.

The 2009 contract marked a move away from the previous system of pricing gas imports to Ukraine, under which they were negotiated bilaterally each year. Since the mid 2000s, both the Russian and Ukrainian governments, and the companies, had accepted the principle that imports should be priced at a European netback level, i.e. at a price equal to the price of Russian gas in Europe, minus the additional transport cost. Although the 2009 contract did base itself on this principle, within months of it being signed the Ukrainian government demanded its renegotiation, mainly on the grounds (1) that the base price (i.e. the P_0, the price set in January 2009 as subsequently adjusted by the gasoil/fuel oil index) of $450/mcm, was above the European netback level;[2] (2) that penalties included for late payment, and e.g. for failure to take monthly volumes, were unusually harsh. The contract was renegotiated in 2010. As a result, a 30% discount, capped at $100/mcm, was offered by the

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[1] A detailed account of the negotiation of this contract and controversies surrounding it is given in two papers by Simon Pirani, Jonathan Stern and Katja Yafimava, *The Russo-Ukrainian gas dispute of January 2009: a comprehensive assessment* (OIES, 2009), http://www.oxfordenergy.org/2009/02/the-russo-ukrainian-gas-dispute-of-january-2009-a-comprehensive-assessment/; and *The April 2010 Russo-Ukrainian agreement and its implications for Europe* (OIES, 2010), http://www.oxfordenergy.org/2010/06/the-april-2010-russo-ukrainian-gas-agreement-and-its-implications-for-europe/.

[2] The author and his colleagues estimated at the time, about 10% above. See Pirani, Stern and Yafimava, *The April 2010 Russo-Ukrainian gas agreement*, p. 20.

Russian government, paid in the form of a suspension of export duty on the gas that was delivered by Gazprom to Naftogaz, in exchange for a political concession (the extension by 25 years on the lease by Russia of the Black Sea naval base in Crimea).

The period since the Ukraine contract was signed has been one of tumultuous change in the European gas market, and in the relationship between Gazprom and its major European customers. Gas-to-gas market pricing at trading hubs (exchanges) spread from the UK, where it had become prevalent in the 1990s, to other parts of Europe, so that by 2013 greater volumes of gas were sold at hub prices than at oil-linked prices for the first time.[3] In the competitive gas markets (i.e. where the market price of gas is set at hubs) during 2012-14, Gazprom reduced the base price in many contracts and agreed to refund a substantial proportion of the differential between oil-linked contract prices and hub prices. However, in order to achieve this, customers had been forced to institute arbitration proceedings against Gazprom. In the non-competitive gas markets of central/eastern Europe and the Baltic countries, the EC competition commission initiated an investigation to determine whether contracts were anti-competitive.[4]

In the case of Ukraine, Gazprom demonstrated the same reluctance to amend contracts, and a preference for short-term concessions, that it had shown in negotiations with European customers. It declined to reduce the base price in the Ukrainian contract, opting instead for temporary concessions e.g. delivering gas in lieu of payment for future transit services. An additional problem was that in September 2013 Naftogaz Ukrainy began to accumulate debts for gas delivered, but not paid for.

With the onset of the political crisis in Ukraine in November 2013, the negotiations on gas imports again became closely tangled with broader trade and political issues. After the Yanukovich government pulled back from signing an association agreement with the EU in November (which was the initial spark for the Maidan protest movement that brought about the government's downfall in February), the Russian government offered Kyiv a major finance and trade support package. In this context, it was agreed to reduce the gas import price from $402/mcm to $268.50/mcm for the first quarter of 2014, i.e. a 33% discount.

After the collapse of the Yanukovich government in February, the new government headed by Arseniy Yatseniuk, and newly appointed executives at Naftogaz Ukrainy, reopened negotiations with the Russian government and Gazprom on gas imports. Gazprom has throughout these negotiations insisted on payment of arrears as a precondition for discussions on price adjustments; the Ukrainian government stated that it would only pay the arrears once price adjustments were agreed. After the annexation of Crimea in early March and the eruption of armed conflict in Donetsk and Lugansk districts in April, relations between the two governments became much more strained. Negotiations were held together with EC representatives in May and June, during which president Putin and other Russian representatives stated that a $100/mcm discount could be offered to Ukraine, on the same basis as in 2010, i.e. via a suspension of export duty. They proposed to resume gas deliveries at a price of $385/mcm, including such a discount, provided that debts were paid, and with take-or-pay provisions in the Gazprom-Naftogaz contract waived for 2014. The Ukrainian government and Naftogaz rejected the proposed discount as "political" (because of the link to suspension of export duty) and proposed a renegotiation of the pricing clauses of the contract.[5] No agreement could be reached.

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[3] International Gas Union, *Wholesale Gas Price Survey 2013 Edition – a global review of price formation mechanisms 2005-2012*

[4] See Stern, "Russian Responses to Commercial Change in European Gas Markets", Chapter 3 in J. Henderson and S. Pirani (eds.), *The Russian Gas Matrix: How Markets are Driving Change* (OUP/OIES, 2014), pp. 50-81.

[5] "Putin: Gazprom predlozhil Ukraine te zhe usloviia, chto pri Ianukoviche", *Vedomosti*, 11 June 2014; "Dmitry Medvedev's meeting with energy minister Alexander Novak and Gazprom CEO Alexei Miller", Russian government press release, 16 June 2014; "Talks with Ukraine may be resumed", Gazprom press release, 16 June 2014.

On 16 June, Gazprom announced that it was imposing prepayment under the terms of the contract, and ceased deliveries of gas to Ukraine. Gazprom lodged proceedings against Naftogaz Ukrainy, the importing company, at the Stockholm arbitration court relating to $4.5 billion of debts for gas delivered; Naftogaz started proceedings against Gazprom relating to its failure to agree to reduce prices, claiming that it had been overcharged for gas delivered in 2010-13 to the amount of $6 billion.[6]

If and when negotiations resume, issues that will need to be resolved in relation to pricing and debts are as follows:

Pricing

In 2013, about 27 bcm of Russian gas was imported to Ukraine. About half of this volume was imported by Naftogaz Ukrainy and priced according to the 2009 contract, as amended in 2010 to reflect the $100/mcm discount resulting from the suspension of export duty on gas exported to Ukraine. The other half was imported by Ostchem Holding, a trading company controlled by the DF Group that owns Ukraine's agricultural fertiliser producers (i.e. the most gas-intensive industrial sector).

Prices were not reported systematically by the companies. According to statements by Naftogaz executives and Ukrainian press reports, Naftogaz's imports were priced in the first quarter at $406/mcm; in the second quarter at $426.10/mcm; in the third quarter at around $400/mcm; and in the fourth quarter at around $402/mcm.[7] Press reports, based on customs information, showed that in January-November 2013, the average price of Russian gas imported to Ukraine was $415.26, and that the average price of Russian gas imported by Naftogaz during January-September was $401.99.[8] This suggests that Ostchem Holding may have been paying slightly higher prices than those paid by Naftogaz.

European netback price levels

The 2009 contract appeared to reflect the European netback principle, but by 2013 was doing so very inaccurately, because (i) the base price was about 10% higher than the level of European netback to Ukraine in January 2009 (see above), and (ii) the changes on the European market resulted by 2013 in Gazprom granting price reductions to European customers that closed the differential between Gazprom's contract prices and hub prices (via price reductions, sale of volumes above take-or-pay at hub-related prices, and rebates). Ukraine's import prices had been reduced, but on the basis of a political, rather than commercial, arrangement (the 2010 agreement on the Black Sea naval base). This reduction was withdrawn following the Russian annexation of Crimea in March 2014.

Were the contract to be renegotiated this year, account might be taken of gas prices in the European market, in Table 1. The table shows prices at three European hubs, and an estimated price for Gazprom's gas at the German border, for the first six months of 2014.

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[6] "Gazprom ne dozhdalsia deneg", *Vedomosti*, 17 June 2014
[7] "Ukraine, Russia to reach deal by October 15 – minister", Platts EGD; "Tsena rossiskogo gaza dlia 'Naftogaz Ukrainy' v iiune", *Zerkalo Nedeli*, 21 June 2013; "Valiutnaia matritsa vtorogo polugodiia", *Zerkalo Nedeli*, 5 July 2013. See also Simon Pirani and Katja Yafimava, "CIS Gas Markets and Transit", Chapter 7 in Henderson and Pirani (eds.), *The Russian Gas Matrix*, pp. 181-215.
[8] "Import gaza v 2013 g. sokratilsia na 15%", UA Energy web site, 29 Jan 2014

Table 1. European gas prices, 2014						
	22-Jan		**19-Feb**		**19-Mar**	
Month ahead prices	**$/mmbtu**	**$/mcm**	**$/mmbtu**	**$/mcm**	**$/mmbtu**	**$/mcm**
Austrian VTP	10.58	388.29	9.83	360.76	9.66	354.52
Dutch TTF	10.52	386.08	9.65	354.16	9.36	343.51
German NCG	10.56	387.55	9.71	356.36	9.46	347.18
Gazprom border price	12.43	456.18	11.53	423.15	11.53	423.15
	15-Apr		**14-May**		**25-Jun**	
Month ahead prices	**$/mmbtu**	**$/mcm**	**$/mmbtu**	**$/mcm**	**$/mmbtu**	**$/mcm**
Austrian VTP	9.36	343.51	8.46	310.48	6.99	256.53
Dutch TTF	8.77	321.86	7.87	288.83	6.93	254.33
German NCG	8.95	328.46	8.03	294.70	6.99	256.53
Gazprom border price	11.55	423.89	11.53	423.15	10.42	382.41
Source: Platt's International Gas Report						

It should be noted that Gazprom's actual sales prices may be lower than the levels reported by Platts, which have been used in the table, since these do not include rebates that were applied in 2012 and 2013 to Gazprom's contracts with large European customers. In 2013, the rebates brought Gazprom's prices to within 5% of hub prices.[9]

Table 1 shows that prices at the Austrian hub, CEGH, which is nearest to the Ukrainian border, have been in the range of $255-$390/mcm ($6.95-$10.63/mmbtu). Estimates of European netback to Ukraine's eastern border could take into account transit across Slovakia (about $7/mcm) and Ukraine (about $28.50/mcm)¸ giving a range of $219.50-$354.50/mcm.

Gazprom, using its own export gas price estimates, in February 2013 published average European netback parity price estimates for the Russian market of $217/mcm for 2012, $201/mcm for 2013 and $206/mcm for 2014.[10] Presuming an additional $20/mcm in transport costs, plus 30% export duty, European netback parity at Ukraine's eastern border may be estimated at $338.57 for 2012, $315.71 for 2013 and $322.85 for 2014.[11]

Reverse flow gas

During 2012-13, the differential between the price of imports of Russian gas to Ukraine and European hub prices gave impetus to the reverse flow trade. Trading companies bought gas at hub-related prices, transported it to Ukraine in the opposite direction to the flow of Russian gas from east to west, and sold it – at prices lower than those of Russian gas imported into Ukraine – to industrial customers. The volumes and prices are shown in Table 2.

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[9] Thierry Bros, Societe Generale, quoted in 'Gazprom and European Markets, Paying the Piper', Economist, 4 January 2014. http://www.economist.com/news/business/21592639-european-efforts-reduce-russian-state-owned-companys-sway-over-gas-prices-have-been

[10] Gazprom investor presentation, February 2013, slide 29.

[11] These estimates are of an indicative character. Gazprom's netback parity price estimates only indicate an average price for Russia (where in practice there are a large number of prices depending on region, type of customer, etc). There are also a wide range of transport tariffs, so a single nominal estimate ($20/mcm) is used here. Export duty is charged at 30% of gross European sales prices.

Table 2. Prices and volumes of reverse flow gas, January-November 2013				
Note. Prices and volumes of imports from Russia given for comparison				
Source	bcm		Average price	
			$/mcm	$/mmbtu
Germany	0.859		388.73	10.59
Hungary	0.526		405.26	11.04
Austria	0.525		407.27	11.10
Poland	0.093		411.34	11.21
Total	2.003		399.17	10.88
Russia	23.66		415.26	11.31
Source: customs data, reported by UA Energy				

The reverse-flow trade stopped following the December 2013 agreement to price Russian imports in the first quarter of 2014 at $268/mcm. This price effectively undercut the reverse flow trade. It has been reported that reverse flow deliveries recommenced at a modest level in April 2014. According to the Ukrainian state statistics committee, 64.5 million cubic metres of gas were imported in April by RWE Supply and Trading (the trading company that accounted for most of last year's reverse-flow deliveries) at an average price of $375.80/mcm.[12] RWE Supply and Trading now has a 10 Bcm/year framework contract for reverse flow deliveries with Naftogaz, at a price which is reported to equate to the Net Connect Germany (NCG) hub price, plus transportation. This is the price with which Gazprom will have to compete, if it is to prevent reverse flow supply to Ukraine. (NCG prices for this year are shown in Table 1.)

The extent of reverse flow deliveries is constrained by several factors. Pipeline capacity for it is limited to 5.5 bcm/year via Hungary and 1.5 bcm/year via Poland. Under an agreement between Eustream, the Slovakian gas transport company and Naftogaz, as a result of negotiations in which the European Commission also took part, 8 bcm/year of capacity via Slovakia is due to become available by September this year (following the construction of an additional 400 metres of pipeline). In addition to pipeline capacity, sales need to be financed by companies prepared to take payment risk in the Ukrainian market.[13]

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[12] "Ukraina importirovala gaz iz Evropy po $375.8", uaenergy.com.ua, 24 June 2014

[13] This comment deals only with the price of reverse flow gas. The extent to which reverse flow deliveries can be used to mitigate supply interruptions (which in this case is limited, since almost all the gas available in central and eastern Europe is of Russian origin) is discussed elsewhere, e.g. in Pirani et al, *What the Ukraine Crisis Means for Gas Markets* (Oxford Energy Comment, OIES, March 2014).

Coal

In the period since 2009, high Ukrainian domestic gas prices, particularly for industrial customers, have resulted in some switching to coal. Against a background of economic recession and falling energy use overall, gas consumption fell by 25% from 60 million tonnes of oil equivalent (mtoe) in 2008 to 45 mtoe in 2013, while coal consumption rose 7.3% from 39.7 mtoe to 42.6 mtoe.[14] Coal remains a much cheaper fuel than gas, and where it is technically possible, switching will continue. Yuri Prodan, energy minister, stated in April that energy strategy was being kept under review "with a view to using as much domestic coal as possible, at the expense of natural gas".[15] Table 3 compares coal prices reported in the Ukrainian industry press to gas prices.

Table 3. Gas and coal prices in Ukraine			
		$/tonne	$/gigajoule (estimates)
Coking coal, market price	2013	145-159	5.07-5.56
	2014 proj	108-152	3.78-5.31
Subsidised coal to energy producers	2013	54	2.55
	2014 proj	72	3.4
		$/mcm	
Gas import prices	2014 Q1	268.5	6.88
	2014 Q2	486	12.46
Regulated gas prices, industry	2014	295.6	7.58
Regulated gas prices, residential (from May)	2014	101.02	2.59
Source: press reports, author's estimates			

"Net forward" prices

Gas exports from Russia to Belarus, the second major FSU importer after Ukraine, appear to be priced on a "net forward" basis.[16] Belarussian imports were priced at $168/mcm in 2012, $167/mcm in 2013 and $177/mcm (estimated) in 2014, according to Belarussian officials quoted in the press. The prices are related to those charged to consumers in the Yamal-Nenets autonomous district in western Siberia (where much Russian gas is produced), presumably with transport charges added.[17] The Belarussian prices are 60-80% higher than average

[14] BP Statistical Review of World Energy 2014
[15] "Prodan obeshchaet obespechit' ugol'noi otrasli", uaenergy.com.ua, 12 May 2+014
[16] S. Pirani and K. Yafimava, "CIS Gas Markets and Transit", chapter 7 in Henderson and Pirani (eds.), *The Russian Gas Matrix*, pp. 181-215, here p. 199
[17] "Rossiia ratifitsirovala tseny na gaz dlia Belarusi", RIA Novosti, 26 December 2012; "V 2013 godu tena impora gaza dlia Belorussii sostvait $185", Finarmet, 26 September 2012; "Belarus v 2013 godu importirovala gaz na $3.4 mlrd", AFN/Ukrenergy.dp.ua, 6 March 2014

Russian domestic prices (including excise tax, less VAT), which were $92.50/mcm in 2012 and $102.60/mcm in 2013.[18] These prices have been agreed in the context of Belarussian membership of the Customs Union with Russia, and agreements under which its gas transit pipelines have been transferred to Russian control. Officials in president Yanukovich's government argued for such a methodology to be adopted for Ukrainian import prices, but this is not a serious possibility in the present political climate.

Debts

In early April, Ukrainian energy minister Yuri Prodan acknowledged Naftogaz's debts to Gazprom at around $2.2 billion – $1.45 billion for gas delivered in November-December 2013, $269 million for gas delivered in February 2014, and $550 million for gas delivered in March 2014. On 30 May, Naftogaz paid Gazprom $786.3 million for gas delivered in February-March, at the price of $268.50/mcm.[19] This left $1.45 billion outstanding. Further debts then accumulated for 7.9 bcm of gas delivered in April-June. The cost of this gas under the contract, i.e. priced at $486/mcm, is $3.84 billion.

On 8 July Aleksei Miller, CEO of Gazprom, stated that the total debt outstanding for gas delivered is $5.296 billion (presumably, $1.45 billion for November-December 2013, plus about $3 billion for April-May 2014 and $0.84 billion for June 2014). The amounts for November-December and April-May, totalling $4.45 billion, are the subject of Gazprom's arbitration case against Naftogaz. Representatives of Naftogaz Ukrainy have stated several times that the company is prepared to pay no more than $268.50/mcm for gas delivered in April-June; it may be presumed, therefore, that the company acknowledges a debt of $2.12 billion for gas delivered in April-June. In addition, there is the amount outstanding for November-December 2013; while Gazprom has stated that this stands at $1.45 billion, it may be that Naftogaz disputes some of that amount, since its arbitration case against Gazprom in Stockholm claims that all gas imported by Naftogaz in 2010-13 has been overpriced.[20] Normal commercial practice would be for the agreed amount to be paid, while the disputed amount becomes the subject of negotiation or arbitration.

In April, Gazprom invoiced Naftogaz Ukrainy for $11.4 billion of take-or-pay penalties for gas not taken during 2013; Naftogaz announced that it did not acknowledge this debt.[21] The issue has not been raised prominently by either side during June (although Gazprom CEO Miller did mention it in a television interview[22]). Naftogaz has never come close to meeting the take or pay obligations since the contract commenced, and Gazprom has never enforced take or pay penalties.

Conclusions

The original terms of the 2009 contract between Gazprom and Naftogaz are surely unsustainable, given the changes in the relationship between Russia and Ukraine (resulting in the removal of political compromise mechanisms that have been used in the past) and the changes in the European gas market (which have affected prices and pricing formation in other Gazprom export contracts). Over the next year, the "market price" for up to

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[18] *Management report OAO Gazprom 2013*, p. 17
[19] "Gazprom otsenil dolg Naftogaza bolee chem v $2.2 mlrd", Vedomosti/Prime Tass, 3 April; "Skidok bol'she net", Vedomosti, 4 April; Naftogaz Ukrainy press release, 30 May.
[20] "Gazprom: Ukraina zadolzhala za gaz $5.3 mlrd", Vedomosti, 8 July 2014; Naftogaz Ukrainy press release, 15 April 2014.
[21] "Gazprom charges Ukraine $11.4b before EU gas talks", Bloomberg, 24 April 2014; Naftogaz Ukrainy press release, 1 May 2014
[22] "Gazprom pridumal eshche odin isk k Naftogazu", UNIAN, 17 June 2014

15 bcm/year of gas imports into Ukraine could be formed on the basis of a combination of reverse flow prices (NCG plus transportation) and coal switching prices. European netback methodology, as described above, might also be used.

A pragmatic short-term commercial solution to the current crisis could be for Naftogaz to pay the total of debts that it acknowledges, for gas delivered prior to 16 June 2014; to restart imports at $268.50/mcm; and to leave the price of gas deliveries from April 2014 onwards to be decided by the arbitral tribunal. (To ensure that funds are available following an arbitral tribunal decision, which could probably be expected in mid 2015, revenues representing the difference between the prices proposed by the two sides would be paid into an escrow account). When the tribunal reaches its decision, Naftogaz or Gazprom will receive the revenues accumulated, in proportions that depend on the price in the arbitration judgement.

In the longer term, further movement away from the previous Russia-Ukraine bilateral commercial relationship, and towards a more direct influence of market mechanisms, seems likely. In terms of the formation of import prices, the cost of new Ukrainian (conventional and unconventional) production will become an important element, alongside reverse flow prices and coal prices. Gazprom would be faced with decisions about whether it wished to compete for Ukrainian customers under such changed market conditions. As for contractual arrangements, the probable framework for imports by Naftogaz remains the 2009 contract, amended by negotiation – assuming that the political situation allows them to resume. But it is also possible (i) that gas will be sold on Ukraine’s eastern border to buyers not covered by the contract (there is a precedent for this, in that Ostchem Holding imported gas outside the Naftogaz contract in 2011, and by 2013 accounted for half of all imports from Russia); (ii) that the contract could effectively cease to be used before it expires in 2019; and (iii) that the nature of the contract may change further if the Ukrainian government makes progress with its plans, discussed with the IMF, to break up Naftogaz. Towards the end of the decade, and certainly after 2019, and depending on the progress of Ukraine’s discussions with the EU on integration into European energy markets, gas sold on Ukraine’s eastern border could be bought by a range of companies, including some who would resell it to customers in the EU.

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Note. Conversion

1 mcm of gas = 36.7 mmbtu of gas. So $1/mmbtu = $36.70/mcm.