Russian Gas Insight
East European Gas Analysis

Brief Analysis
March 3, 2016

GAZPROM UNLIKELY TO WIN A PRICE WAR

Devaluation of the Russian ruble has affected the economic performance of Gazprom. However, the cost of West Siberian gas delivered to the European Union is still high and it leaves very limited room for price reductions.

Some analysts believe Gazprom is ready for a full-scale price war. James Henderson[1] estimates the cost of Russian gas at the German border at approximately $3.5/MMBtu (the report does not specify if it includes export duty or not). Bloomberg[2] quotes Alexander Kornilov, an energy analyst at Aton LLC in Moscow, saying that Gazprom spends about $2 per million British thermal units to lift the fuel in Siberia and deliver it to Western Europe.

In my view, Gazprom cannot afford any price reduction.

International Monetary Fund estimated the price of Russian gas at the German border in January 2016 at $5.09/MMBtu. The state takes 30 percent of the price in the form of export duty and Gazprom gets the remaining 70 percent or $3.56/MMBtu. If the above mentioned cost of $3.5/MMBtu is net of export duty, then Gazprom is unable to reduce the price below the current level.

A simple exercise can prove that the cost of $3.5/MMBtu, including export duty, is incorrect. First, $3.5 net of export duty leaves $2.45/MMBtu.

The most recent financial report of Gazprom for the period of January-September 2015[3] gives the cost of transit services purchased from Nord Stream AG - ₽54,099 Million or $917 Million.

ENTSOG Transparency Platform[4] or OPAL[5] and NEL[6] report the volume of gas shipped by the Nord Stream pipeline in January-September 2015 at about 300,000 GWh or slightly above 1000 TBtu. It results in the Nord Stream transportation cost of $0.92/MMBtu and the netback cost in St-Petersburg area at $1.53/MMBtu ($2.45 - $0.92 = $1.53).

Note that Russia's Federal Antimonopoly Service[7] reports the wholesale price of gas in Leningrad region and St-Petersburg at ₽4,215 or $71.42 per thousand cubic meters (FAS standard) or $2.28/MMBtu (net of VAT).

If the cost of $1.53 were correct, sales of gas in the Leningrad province and St-Petersburg would have generated Gazprom a profit of 49 percent. Exports to Germany at the price of $5.09 and the cost of $3.50/MMBtu would have resulted in a lower profit rate of 45 percent.

Looking at these numbers one can ask an obvious question: Why Gazprom reports losses instead of hefty profits?

How much does it really cost to export Russian gas to Europe?

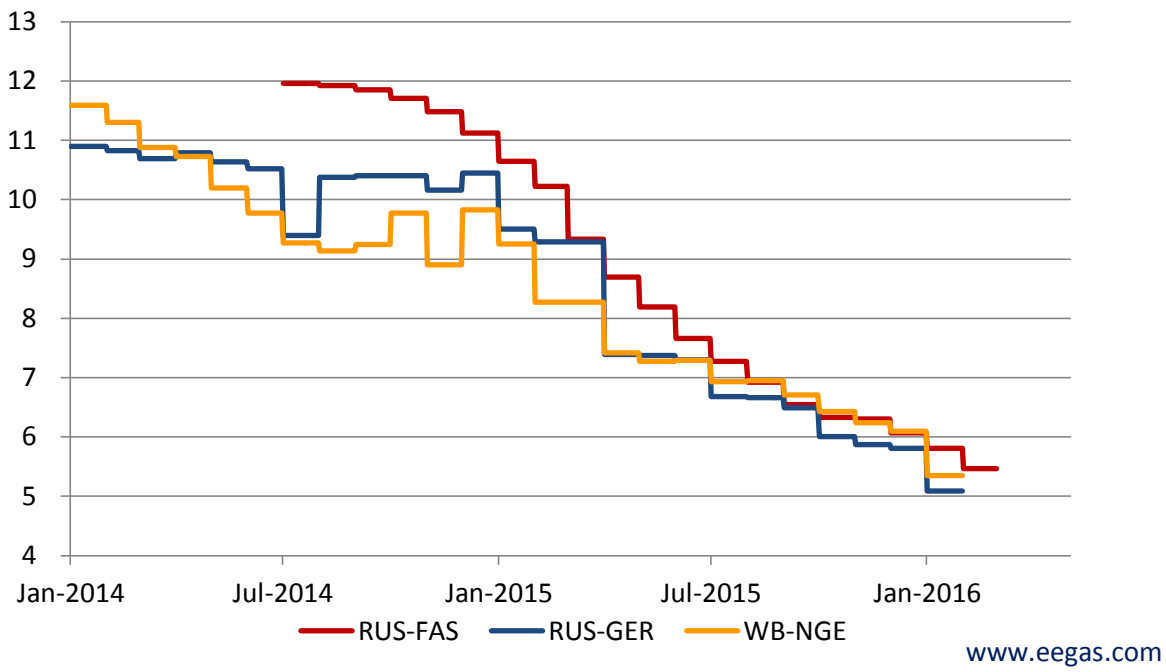
Using the reported total cost of gas production segment of Gazprom in January-September 2015 and the corresponding volume, one can calculate the average production cost at ₽1,656 or $28.07 per thousand cubic meters (IFRS standard of Gazprom) and convert it to $0.88/MMBtu[8]. Note that the average cost of the same period of 2014 was equal to $1.28/MMBtu.

Table 1. Estimated Cost of Russian Gas Export, $/MMBtu

Cost item	Average	Yuzhno-Russkoe
Production	0.88	1.08
Transmission to Vyborg	1.45	1.54
Nord Stream	0.92	0.92
Export duty for $5.09	1.53	1.53
TOTAL	4.78	5.07

Note: Calculated costs for the period of January-September 2015

Figure 1. Selected Gas Prices in Europe, $/MMBtu



RUS-FAS Gas export price index of FAS RF (Federal Antimonopoly Service of the Russian Federation)
RUS-GER Price of Russian gas at the German border (IMF/WGI estimation)
WB-NGE World Bank - Natural Gas (Europe), average import border price, including UK

One of the gas sources for the Nord Stream Pipeline is the Yuzhno-Russkoe field[9]. Special companies *Gazprom YRGM Trading* and *Gazprom YRGM Development* purchase and sell gas produced in the Yuzhno-Russkoye field in volumes proportional to the German partners' stake in the field development project.

Using the numbers of E.ON[10] and the financial report of Gazprom, I calculate the average price of Yuzhno-Russkoe gas in January-September 2015 at $1.08/MMBtu. The corresponding price of 2014 is $1.45/MMBtu. Note that the average price of Q3-2015 went up to $1.30/MMBtu.

Apparently, the Yuzhno-Russkoe volumes are delivered to the inlet of the Nord Stream pipeline. Using Gazprom's revenue from sales of gas transportation services to *YRGM Trading* and *YRGM Development*, I calculate the average transportation cost in January-September 2015 at $1.54/MMBtu (compared with $2.46 in the same period of 2014).

The official FAS tariff sets the cost of transporting gas from the Zapolyarnoe field (about 50 km from Yuzhno-Russkoe) to the Vyborg metering station (inlet of Nord Stream) at ₽2,630 per thousand cubic meters (including VAT). Depending on the calorific value of gas, it can be converted to $1.25-$1.40/MMBtu[11].

Gazprom has discontinued publishing quarterly pipeline gas balance making it more difficult to calculate the transportation costs. Nevertheless, I estimate the average cost of transporting gas to the Russian border at about $1.45/MMBtu.

The overall costs are summarized in Table 1. Note that the domestic costs started to grow in the second half of 2015 and I expect the growth to go on at a faster rate.

German partners of Gazprom pay one of the lowest prices in continental Europe. The RF Federal Antimonopoly Service calculated the average price of Russian gas in Europe at $5.45/MMBtu (in February 2015), so there still is a tiny space for the profit.

However, there is no room for a price war.

Conversion factors and exchange rates

Unfortunately, many analysts ignore the conversion factors and notes of the official documents of Gazprom and the Russian governmental agencies. One should keep in mind that power plants, residential consumers and many other buyers of natural gas pay for the energy content and not for the volume.

Ignoring the energy content of natural gas is like adding water to wine without changing the price per bottle.

Calorific value of one thousand cubic meters (mcm) of Gazprom can be easily calculated using the numbers of the company's Management reports[12].

Table 2. Calorific Value and Conversion Factors for Cubic Meters of Gazprom

Unit	Energy content or conversion factor
1 mcm of natural gas	1.154 ton of fuel equivalent (1)
1 kg of fuel equivalent	29.3076 MJ (1)
1 mcm of natural gas	33.821 GJ (2)
1 mcm of natural gas	32.056 MMBtu (2)

(1) Number from the Management Report of Gazprom 2014.
(2) Calculated number.

Note that Russia's Federal Antimonopoly Service has gas calorific value standard different from that of Gazprom (1 mcm of FAS = 31.35 MMBtu).

Russia's Central Bank[13] reports the average US dollar exchange rate for January-September 2015 at ₽59.02 and the corresponding rate for 2014 at ₽35.37.

Mikhail Korchemkin
East European Gas Analysis
Malvern, PA 19355
USA

[1] Henderson, J. (2016) "Gazprom – Is 2016 the Year for a Change of Pricing Strategy in Europe?", Oxford Institute for Energy Studies - https://www.oxfordenergy.org/publications/gazprom-is-2016-the-year-for-a-change-of-pricing-strategy-in-europe/
[2] http://www.bloomberg.com/news/articles/2016-02-19/russia-has-room-to-play-saudi-oil-game-with-gas-in-eu-veb-says
[3] http://www.gazprom.com/f/posts/12/001311/gazprom-ifrs-3q2015-en.pdf
[4] https://transparency.entsog.eu/
[5] https://opal-gastransport.biz/ivo/home?1
[6] https://nel-gastransport.biz/ivo/home?1
[7] http://fas.gov.ru/documents/documentdetails.html?id=13809 - the price for non-residential customers.
[8] http://www.eegas.com/rep2015q3-cost_e.htm
[9] https://www.nord-stream.com/the-project/pipeline/
[10] http://www.eon.com/content/dam/eon-com/Investoren/Captial_Market_Story/20160105_Capital_Market_Story.pdf
[11] Unlike the price, the transportation tariff is not adjusted to the calorific value of gas.
[12] http://www.gazprom.com/f/posts/91/415561/2014-mgt-report-en.pdf
[13] http://www.cbr.ru/statistics/print.aspx?file=credit_statistics/ex_rate_ind_15.htm