

### Base load supply of Nord Stream unable to meet peak demand in Eastern Europe

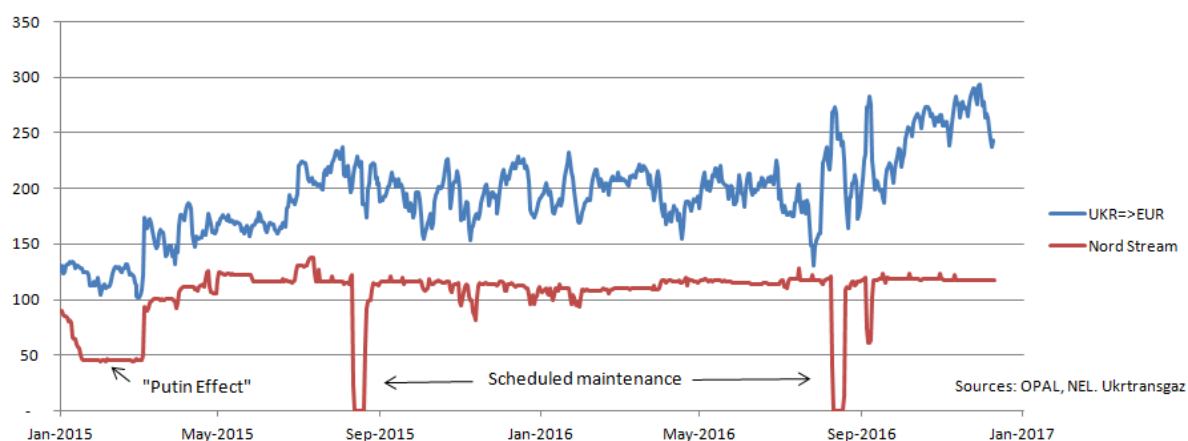
*Ukrainian transit creates higher value for the shareholders of Gazprom and provides higher security of supply of gas to Eastern and Central Europe.*

Daily volume of natural gas delivered to a specific border point is defined as a sum of nominations of many contracts. A simple comparison of daily export flows of Russian gas tells us that Gazprom contracts serviced by Nord Stream offer European importers less flexibility than the contracts serviced by Ukrainian transit.

In general, the Nord Stream flow line in Figure 1 is flat with three exceptions. Every August the pipeline is turned off for about ten days for scheduled maintenance. Materializing Vladimir Putin's threat<sup>1</sup>, in January-March 2015 Gazprom cut the flow to Greifswald by 50% trying to stop the reverse supplies of gas from Europe to Ukraine.

The flat line of the Nord Stream flow means the pipeline supplies base load gas. The corresponding contracts do not assume to reflect the seasonal or mid- and short-term change of demand. Base load gas is cheaper. On the other hand, base load gas is a bit less expensive to ship because Gazprom pays Nord Stream AG a flat sum regardless of the transported volume.

Figure 1. Daily gas flow to Europe through Ukraine and Nord Stream, mmcnd



"Putin Effect" = Gazprom reduced Nord Stream flow trying to stop reverse supplies to Ukraine.

Nord Stream (and the St.Petersburg region) is fed through the Ukhta-Gryazovets and Gryazovets-Vyborg pipelines<sup>2</sup>. This system is fully loaded in winter time and there is not enough storage capacity in the area.

<sup>1</sup> Vladimir Putin: - "If somebody thinks that they can resolve the problems of Ukrainian energy supply through reverse supplies, they are deeply mistaken. For two reasons: first, if we see that somebody is violating our contracts for gas supplies, we will reduce the volume, and the physical volume on the European market will simply be insufficient, there will simply not be enough". <http://en.kremlin.ru/events/president/news/45869>

<sup>2</sup> <http://www.eegas.com/fsu.htm>

Ukrainian transit to Europe also suffered from the "Putin Effect" - in the winter of 2014-2015, Gazprom reduced the daily flows to Velke Kapusany (Slovakia) and Drozdowicze (Poland) by 50%. However, in other periods the flow out of Ukraine was able to meet mid- and short-term growth of demand in Eastern and Central Europe. Notably, in October and November 2016 Gazprom was able to ship record volumes of gas to Europe without increasing the flow through Nord Stream and the Yamal-Europe pipeline. The exporter's willingness and ability to match the fluctuations of client's demand is rewarded by a higher price of gas.

According to Naftogaz of Ukraine<sup>3</sup>, in 2015 the cost of gas transit through Ukraine was \$27.53 per 1000 cubic meters (mcm). Gazprom reported<sup>4</sup> the Nord Stream tariff at \$31.19/mcm. Therefore, gas shipped at a lower cost through Ukraine was sold at a higher price than gas transported by Nord Stream. It is worth noting that with the increase of Nord Stream load in 2016, the transportation cost will be below \$27/mcm - by far, not enough to make base load gas more profitable than the peak load one.

Unlike the pipelines of Northwestern Russia, Russian pipelines running from West Siberia to Ukrainian border, as well as Ukrainian transit lines, have significant spare capacity. Huge gas storage facilities in Western Ukraine provide additional security of supply.

Gazprom report<sup>5</sup> foresees the growing role of gas as a backup fuel for renewable energy. Base load gas of Nord Stream does not fit this agenda. Without Ukrainian transit, Gazprom will not be able to meet peak demand of gas in Eastern and Central Europe.

*Base load gas supplied by Nord Stream cannot replace peak load deliveries through Ukraine.*

Mikhail Korchemkin  
East European Gas Analysis  
Malvern, PA 19355  
USA

*Reproduction or use of materials is allowed only with the reference to East European Gas Analysis or [www.eegas.com](http://www.eegas.com)*

---

<sup>3</sup> [http://www.naftogaz.com/files/Zvity/Naftogaz-15fs-ENG-Consolidated\\_final.pdf](http://www.naftogaz.com/files/Zvity/Naftogaz-15fs-ENG-Consolidated_final.pdf)

<sup>4</sup> <http://www.gazprom.ru/f/posts/26/228235/gazprom-ifrs-2015-12m-ru.pdf>

<sup>5</sup> <http://www.gazprom.ru/f/posts/36/607118/gazprom-emitent-report-1q-2016.pdf> - page 57