

On Ukrainian Gas Transit and South Stream There may be more than meets the eye

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The European Union relies to a considerable degree on imports to meet its demand for natural gas. In 2012, the EU consumed approximately 444 bcm of gas, of which about two-thirds (or about 294 bcm) was imported from non-EU countries, mainly in the form of piped gas. Whereas Norwegian export pipelines are directly connected to the EU gas system, e.g. the Langeled pipeline transporting gas to the UK, a major share of Russian gas flows through the territories of non-EU member states, namely Belarus and Ukraine, before reaching consumers located in the EU.

From an exporter's standpoint, gas transit is problematic for two major reasons. First, the producer (e.g. Gazprom or Sonatrach) has to pay a transit fee to the government of the transit country. Second, gas transit carries risks. Transit countries (e.g. Belarus, Ukraine or Tunisia) often receive their own gas deliveries through the same pipelines that are used to transport gas to other consumers located down in the supply chain (e.g. Poland, Slovakia or Italy). Therefore, a suspension of gas supplies to one of the transit countries could negatively affect gas flows to other countries.

In 2009, a gas dispute between Moscow and Kyiv led to a suspension of Russian gas deliveries to Ukraine. This crisis resulted in supply disruptions in 12 EU member states. Not surprisingly, the mounting tension between Russia and Ukraine over the Crimean Peninsula has revived the ghosts from the past. Is there a real prospect that a crisis of the same magnitude might again erupt? Probably not.

According to a 2009 European Commission Staff Working Document (European Commission, 2009), about 80% of Russian gas exports to the EU that year transited through Ukraine. And even today, the Ukrainian gas transmission system (GTS) remains the main supply corridor for Russian gas flowing into the EU, as shown in the figure below.

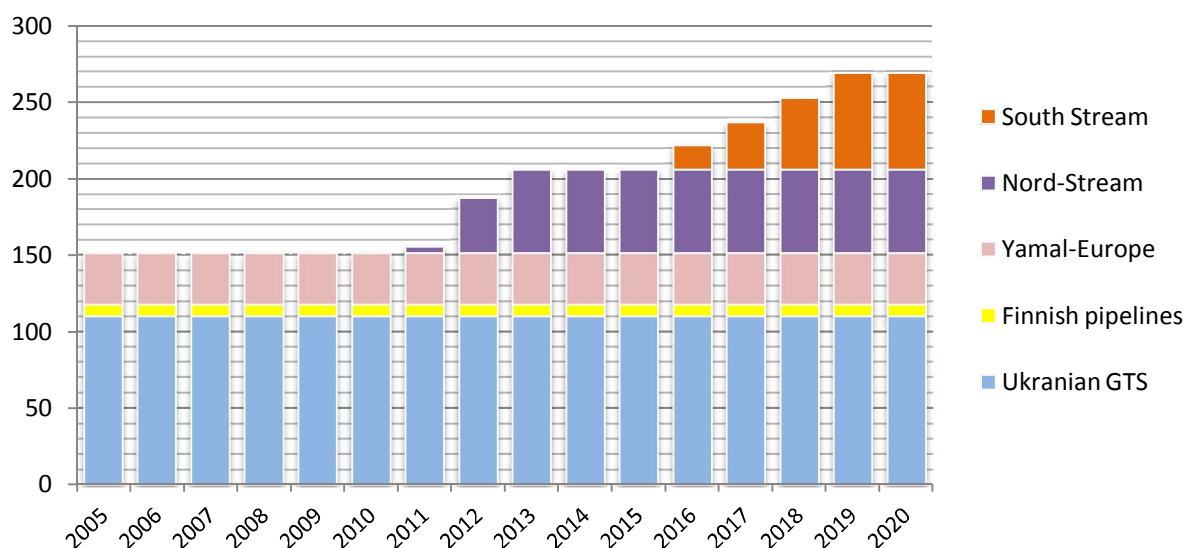
The picture is becoming more complicated today, however, as a result of several developments, and a (potential) suspension of Russian supplies to Ukraine would have a limited effect on EU member states. Four points are worth emphasising.

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Figure 1. Russia's export capacity to Europe (2005-20)



Data sources: IEA (2012a & 2012b) and the websites of Gazprom (www.gazprom.com) and Naftohaz (www.naftogaz.com).

First, the EU has learned its lesson in the aftermath of the 2009 crisis. The Regulation on Gas Supply Security is revealing in this respect. Adopted a few months after the 2009 gas dispute, it strengthened the EU's ability to respond to potential disruptions in gas supplies. Whilst the Regulation identified the internal gas market as the EU's best tool for enhancing its security of supply, it also provided standards for increasing the market's liquidity and interconnectivity. In this context, it requires all gas interconnectors between the member states to be equipped with reverse flow capabilities by the end of 2014, allowing gas flows to regions exposed to unwanted supply shocks. Moreover, the deployment of new infrastructure, in the form of reverse flows, storage sites and LNG facilities, has improved the supply-security of the internal gas market.

Second, Ukraine's role as a transit country for Russian gas supplies has been weakened because Russia diversified its gas export routes (see the figure above). Russia's export capacities to the EU increased by 55 bcm annually when the Nord Stream pipeline, connecting Russia and Germany, became fully operational in 2012. Moreover, the acquisition of Beltransgaz late in 2011 allowed Gazprom to take control of the Belarusian GTS. With that move, Gazprom killed two birds with one stone. Not only did it gain another direct supply route to the EU, but it also got rid of the transit element for gas flowing through the Yamal pipeline. The Yamal-Europe pipeline transports Russian gas through Belarus into Poland and Germany and has an annual capacity of 33 bcm. In the event of another crisis, if used at full capacity, the two supply corridors would allow Gazprom to inject up to 88 bcm per year, or 83% of total 2012 Russian exports¹ into the EU gas system.

In addition, the takeover of Beltransgaz and the construction of the Nord Stream pipeline allowed Gazprom to redirect gas flows destined for its customers located in Central and North-Western Europe to these more convenient export routes. Consequently, countries like Poland,

¹ The figure presenting the volume of Russian gas exports to the EU varies across sources. As reported by BP, in 2012, the EU member states purchased around 105 bcm of natural gas from Russia. According to statistics posted on the Gazprom website (www.gazprom.com), gas exports to Europe amounted to roughly 139 bcm in the same period of time. These differences stem from the fact that the figures presented by Gazprom also include exports to non-EU member states such as Turkey or Serbia.

Germany or France would be effectively shielded from potential disruptions in supplies of natural gas transiting Ukraine.

Finally, a successful completion of the South Stream project (with its planned capacity of 63 bcm per year) could further reduce the importance of Ukraine as a transit country. Currently under construction, the South Stream pipeline will ship Russian gas through the Black Sea into south-eastern Europe. Whereas this development might be welcomed by Moscow and Brussels, it would nevertheless increase Gazprom's market power in Europe. This is especially pertinent as the EU itself has embarked on a transition to hub-based pricing as the pricing mechanism for natural gas. As opposed to oil-indexation, the main price driver under this pricing mechanism is not the price of oil, but rather the market value of gas as a result of the *equilibrium* between supply and demand (for more, see Wieczorkiewicz, 2014). Indeed, if completed, the South Stream pipeline will augment Gazprom's export capacity to the EU to a maximum of 269 bcm per year, largely exceeding the current volume of gas supplies flowing from Russia to the EU member states, which totalled some 105 bcm in 2012. Under a hub-based pricing mechanism, this spare capacity could allow Gazprom to increase gas supplies with the possible aim of influencing price levels at selected European hubs (e.g. making alternatives to Russian gas unprofitable).

Further progress in the integration of the single gas market in the EU has reduced the vulnerability of the EU to disruptions of gas imports. However, new market rules are also influencing the behaviour of external gas suppliers. Most notably, we can observe the recent moves of Russia as it attempts to secure its long-term influence in the EU gas market. We should expect to see further strategic developments in EU gas supplies in the near future.

Sources and other recommended readings

- Behrens, A. and J. Wieczorkiewicz (2014), "Is Europe vulnerable to Russian gas cuts?" CEPS Commentary, Brussels (www.ceps.eu/book/europe-vulnerable-russian-gas-cuts).
- International Energy Agency (2012a), "Ukraine 2012 - Energy Policies beyond IEA countries", Paris.
- International Energy Agency (2012b), "Oil & Gas Security: Emergency Response of IEA Countries - Finland", Paris.
- Valiante, V. and C. Egenhofer (2013), *Price Formation in Commodities Markets*, Report of an ECMI/CEPS Task Force, Brussels (www.ceps.eu/book/price-formation-commodities-markets-financialisation-and-beyond).
- Wieczorkiewicz, J. (2014), "Abolishing Oil Indexation in Gas Contracts: Is it the cure-all?", CEPS Commentary, Brussels (www.ceps.eu/book/abolishing-oil-indexation-gas-contracts-it-cure-all).