

Russia to keep its dominance in European gas market

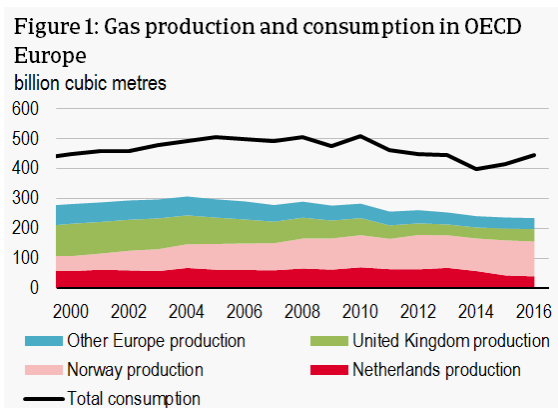
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Summary

- Russian gas exports to OECD Europe have increased in recent years.
- The dependence of some European countries on gas imports from Russia is triggering concerns about energy security.
- While these concerns may be understandable, we argue that gas trade is working for the benefit of both Europe and Russia.

The European gas market in recent years is characterized by rising demand amidst falling domestic production. After a decade of declining demand, gas consumption in OECD Europe¹ is, since 2014, increasing again. In 2016 the level of gas consumption was around 12% higher than in 2014. The increase is being driven by continued economic recovery and additional gas use in the power generation sector. The lower gas price combined with a steep increase in coal prices allowed gas to compete with coal for power generation in some parts of Europe. Gas production in OECD Europe has been declining in recent years. The Netherlands and the UK, the largest fields on the continental shelf, are to a large extent responsible for the decline (Figure 1).

¹ In this research note we follow the definition of OECD Europe used by International Energy Agency, which includes the EU countries, Iceland, Norway, Switzerland and, for statistical reasons, also Israel. See IEA Gas 2017: Analysis and Forecasts to 2022. p. 129.



Source: BP Statistical Review of World Energy

The pick-up in production in Norway in recent years was not sufficient to offset the decline in the Netherlands and the UK. Gas production in the Dutch Groningen field has been capped since 2014 due to seismic activity linked to gas extraction. The production cap has been increasingly tightened over recent years.

OECD Europe: Outlook to 2022

In the period up to 2022, OECD Europe's import requirements – the difference between consumption and production – is projected to expand from approximately 200 billion cubic meters (bcm) in 2016 to 290 bcm in 2022. Gas demand in Europe is expected to remain approximately flat. Gas is a relatively environmentally friendly fossil fuel, which is why - unlike coal and oil - demand for gas is not declining. On the production side, there is a relatively strong decline of 36 bcm projected between 2016 and 2022. In the Netherlands, the government will further tighten gas production over the coming years from its current level of 40 bcm to below 12 bcm per year in 2022. Gas production in the UK is also expected to decline in the coming years. In Norway, production is expected to plateau at its current level of 117 bcm.

Russia is a natural candidate to fulfil European countries gas needs. Russia already is the largest producer in Europe. In 2017 Gazprom – the state monopoly gas producer - supplied 192 bcm of gas to Europe (most of the EU plus Turkey). This is up from 159 bcm in 2015. Russia's gas export industry was built on an intricate network of pipelines to European countries. A recent development is that Russia is also developing Liquefied Natural Gas (LNG) facilities, the first shipment of which was received in Q4 of 2017. Russia provides relatively cheap gas and has approximately 150 bcm of spare production capacity.

The only new medium-term pipeline alternative to Russian gas is the Southern Gas Corridor, which connects Europe to gas fields in the Caspian Sea. The Southern Gas Corridor is expected to become available around 2020 and offer a cost-competitive alternative to Russian gas. However, the capacity of the Southern Corridor is not sufficient to plug the growing production shortfall.² Another alternative is LNG imports from major producers such as the United States, Australia and Qatar. The gas market is gravitating towards a more market-based pricing system, with a pivotal role for the US given its large resources and production flexibility. Europe is well-placed to import more LNG. It has sufficient regasification capacity: around 230 bcm annually, with a current utilization rate of 20%. The share of LNG in European gas imports is expected to rise over the coming decades given the tremendous growth in LNG export capacity in the US and Australia. However,

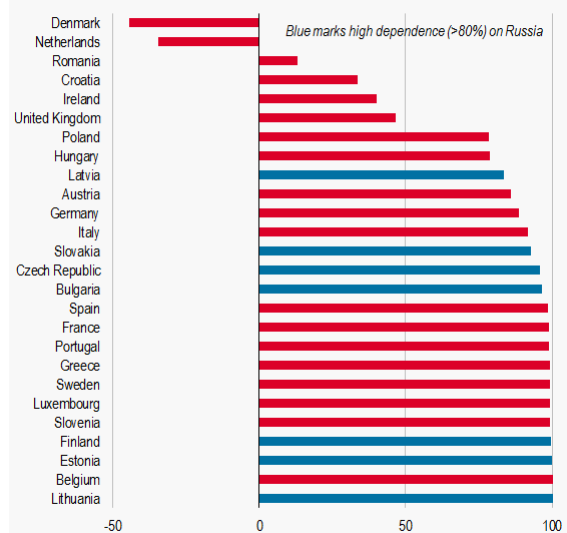
² The annual import requirement is expected to grow by some 90 bcm between 2016 and 2022, while the initial capacity of the Southern Gas Corridor is around 10 bcm annually.

LNG is normally more expensive³ than pipeline gas and therefore unlikely to replace Russian gas.

As the alternatives are limited (insufficient capacity of Southern Gas Corridor, relatively expensive LNG) we do not expect Russia to lose its dominant position on the European market. But there are concerns about energy security. On the EU-level there is already a growing dependency on Russian imports: in 2016, imports from Russia covered 36% of EU gas consumption, up from 24% in 2010. On the country level this dependency is even clearer: some European countries depend completely on Russia for their gas consumption (Figure 2). Countries that are very dependent on Russian gas supplies – more than 80% of consumption – are the Baltic States, Finland, Slovakia, Czech Republic and Bulgaria.

Figure 2: Gas dependence

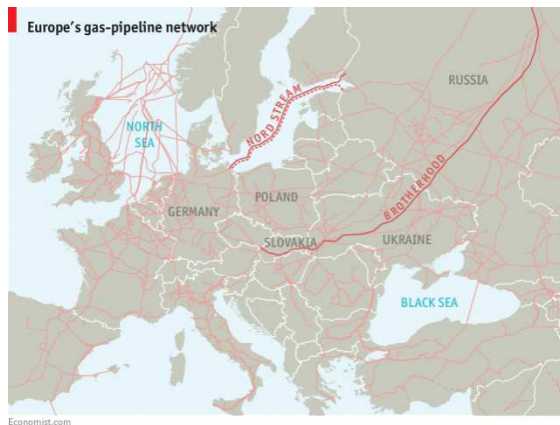
Net imports divided by domestic consumption + bunkers (2016)



Source: Eurostat

High dependence leaves countries vulnerable to supply disruptions, whether caused by political or commercial disputes, or infrastructure failure. Czech Republic and Slovakia are somewhat better positioned than the Baltic States and Bulgaria due to better infrastructure integration with other EU countries. However, all countries in Central and Eastern Europe (CEE), to a greater or lesser extent, are vulnerable. On two occasions gas supply to CEE was disrupted. This was in 2006 and 2009 when a gas dispute between Russia and Ukraine emerged and supply of Russian gas through the Ukrainian Brotherhood pipeline (Figure) was disrupted, leading to serious shortages in several CEE countries.

³ The European import price of pipeline gas was around USD 5/mmbtu (million British thermal units) in 2016. The full-delivered cost of US LNG is estimated to be above USD 6/mmbtu. Source: FT, "US and Russia step up fight to supply Europe's gas", 3 August 2017



To address concerns about energy supply, the EU started the Energy Security Strategy in 2014. The Strategy calls for increasing energy production in the EU, diversifying supplier countries and routes and improved coordination of national energy policies. The European Commission is investing in LNG terminals and gas connections between EU countries to increase gas security. On the other hand many plans from the Strategy still have to be executed, including the finalization of the Southern Gas Corridor. The planned construction of Nord Stream 2 (NS2) is controversial in the sense that CEE countries and the United States are strongly against it out of commercial interest (some CEE countries will miss transit revenues, whereas the US is a major LNG exporter) and fear that it will leave Europe vulnerable to manipulation of supply by Russia. The controversial South Stream project was cancelled and replaced by TurkStream.

We think that TurkStream and NS2 can actually enhance gas security. The growing import need and more expensive alternatives (LNG) means that Russia remains the most competitive supplier. In this context the addition of NS2 and TurkStream to the existing pipeline network is welcome. NS2 would

make an additional 55 bcm of gas available to Europe via a direct pipeline connection between Russia and Germany, bringing the total capacity of the existing and new Nord Stream pipelines to 110 bcm. It also provides a cost efficient alternative to the Brotherhood pipeline running through Ukraine, which runs over a longer distance and is less technologically advanced. TurkStream provides a gas connection between Russia – Turkey - South-East Europe. The part of the pipeline that is planned to reach South-East Europe will have a capacity of around 16 bcm. At the same time the availability of LNG is putting a ceiling on the price Russia can ask for its gas, so a rise in market share does not translate into higher pricing power for Russia.

Russian gas: here to stay

We do not think that the growing reliance of Europe on Russian gas imports constitutes a security threat. It is understandable that in the context of deteriorating political relations, some European countries are worried about the stability of Russian gas supplies. However, so far both Russia and the western powers have been fairly successful in keeping geopolitical conflicts out of gas trade. Russia also has a financial incentive to keep a steady flow of gas to the European market. It depends on Europe for 90% of its gas exports. Russia is looking to diversify export options, as is evidenced by its development of LNG facilities and the construction of the 'Power of Siberia' pipeline into northeast China. But Europe will remain its most important market for the foreseeable future. On the European side, the large underutilized regasification capacity for LNG serves as a backstop to possible supply disruptions or attempts by Russia to abuse market power. This LNG capacity can be deployed in a relatively short period to reduce any gas shortages.

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