

## European gas security in historical perspective

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Nearly 30 years ago, Robert Mabro, on a rare excursion into European gas issues, wrote: *'Gas trade in Europe also raises political issues. In this area a distinction must be made between the risk of interruption arising from disagreements about the implementation of contracts, and the risk of interruption arising from international hostilities. The former is a bargaining problem which is referred to as political, although in reality the disagreements may be about economic clauses such as prices and volumes of exports. The latter is a problem which may arise when the parties to a contract are in conflict over issues unrelated to the gas trade.'*<sup>1</sup>

What we face today in the Russia–Ukraine relationship is precisely a combination of those elements. But we also face problems and conditions which could not have been remotely foreseen in the mid-1980s. Thirty years ago the major security issue was whether and where Europe would be able to secure sufficient gas to meet demand – which had been rising steadily for a decade and would continue to do so for another 20 years.

In 2015 it is uncertain whether the most important security issues relate to gas supply, demand, pricing, or flows. The answer probably depends on which region of Europe, and which part of the value chain, is under consideration.

### Security of supply – or demand?

While all the discussion of European gas security in the press is about Russia and the ongoing Ukraine crisis, gas market participants have many other issues occupying their minds. Preliminary data for 2014 show that European gas demand fell 13 per cent compared with the previous year; this continues a decline which started in 2009 and has reduced demand to the levels of the early 1990s. Many national markets have experienced double digit demand reductions with the power sector being a particular casualty: in several countries, nearly new and highly efficient gas-fired generating capacity has been mothballed, and some older stations scrapped. OIES projections suggest that overall European demand will not recover to 2010 levels until the mid to late 2020s. This raises difficult

questions about the viability and timing of new infrastructure and the need for new contracts.

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### What are the alternatives to Russian gas?

Thirty years ago Dutch production was already close to its maximum, but the UK and Norwegian continental shelves were producing around one-third and one-quarter (respectively) of their eventual peak levels. Today we expect conventional gas production from the UK, Norway, the Netherlands, and other continental European countries to decline by more than 100 Bcm/year (or 40 per cent from 2013 levels) by 2030. While the media is full of stories, both positive and negative, about European shale gas, there is very little prospect of significant production over the next decade – or probably over a much longer time scale either. Much more promising are the prospects for biogas production, despite the current need for significant subsidy.



As far as imports are concerned, Russia is the only major expansion source for pipeline gas. The situation in North Africa is not promising: Egypt has switched from exporting pipeline gas and LNG to becoming an LNG importer, Libyan exports are uncertain due to ongoing political instability, and the Algerian production and export outlook seems unlikely to improve in the wake of another relatively unsuccessful licensing round. In all these countries, domestic demand is increasing rapidly, fuelled by subsidized prices which are proving difficult to reform. The much-discussed Southern Corridor will deliver a maximum of 10 Bcm/year of gas starting at the end of this decade, with the possibility of significantly increasing that figure only from the mid-2020s.

#### LNG to the rescue?

The major prospects on the supply side rest with LNG. European import terminals have been running at less than 30 per cent capacity in recent years, but with Asian demand growth weakening and new supplies from Australia and the USA coming on stream over the next year, cargoes are already returning to Europe. This will be good news for the next few years, but the post-Fukushima (2011–14) period demonstrated how quickly Europe can lose LNG cargoes when Asian countries need them, and are willing to pay whatever price is necessary in order to secure them.

#### Price security

This brings us to the issue of pricing and price security. Thirty years ago – with the exception of the UK where the era of state ownership, with its combination of cost- and inflation-related pricing, was just drawing to a close – oil product-linked pricing dominated Europe and would do so for the following 25 years. Oil-

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linked pricing in long-term contracts cushioned customers against short-term volatility, through averaging and time lag mechanisms. But oil-linked pricing became untenable post 2008 due to a combination of recession-induced demand decline, supply surplus, oil price increases, (eventual) liberalization of gas transportation, and the emergence of market hubs. Gas became available at hubs at prices that were 30–50 per cent below oil-linked levels and by 2014, hub pricing had become dominant in north-west and central Europe. In these markets, conventional price risk-management techniques have become the security for larger customers, while smaller (residential/commercial) customers are protected from short-term volatility by regulation in some countries and retail competition in others (although in Britain the latter has become a controversial subject).

#### Russia–Ukraine gas relations and gas flows

To return to the Mabro distinction, the 2006 and 2009 Russia–Ukraine gas crises (which caused interruption of supplies to Europe) were mainly about contractual, and specifically price, disagreements. Events in 2014/15 are also concerned with these issues, but in the context of a complete breakdown in political relations, combined with military hostilities in eastern Ukraine. Russia has long taken the position that it is no longer possible to rely on Ukraine for the transit of its gas to Europe. Volumes transiting through Ukraine to Gazprom’s customers have been progressively reduced with the creation of alternative routes through Belarus (the Yamal pipeline), the Black Sea (Blue Stream), and the Baltic Sea (Nord Stream). However, in December 2014 the first

pipe for South Stream, an additional very substantial Black Sea route, was about to be laid when it was cancelled due to uncertainty that EU regulation would allow it to be built, and then to carry gas to Gazprom’s European customers. The cancellation was accompanied by an announcement that the project would be replaced by Turkish Stream – a pipeline following an identical route for three-quarters of its length but with a landfall in Turkey (rather than Bulgaria) which will deliver gas to the Greek border, from where Gazprom’s customers will be required to arrange transport.

#### The end of Russia/Ukraine sales and transit?

During the period up to 2020, the European Commission will play an important role in facilitating uninterrupted transit through Ukraine. Up to the end of February 2015, both Ukraine and Europe had got through the (relatively warm) winter without any interruption of Russian gas, which in no small measure reflected the success of the 2014/15 ‘winter gas package’ which the Commission had negotiated with Moscow and Kiev. But Russian direct sales to Ukraine in 2014 fell to one-third of 2010 levels as ‘reverse flow’ deliveries, mostly second-hand Russian gas (gas flowing from Russia to EU countries and then back to Ukraine) increased.

But just as elements of the Cold War relationship between the Soviet Union and Europe appear to be resurfacing, so a major element of Cold War gas flows – from Russia to Ukraine with onward transit to Europe – is likely to be phased out. Russia’s intention is that when the transit contract between the two countries expires at the end of 2019, none of its exports to Europe will be transported through Ukraine. How much of this plan is realistic from a logistical, commercial, and regulatory perspective is uncertain, certainly prior to 2020. But significant (albeit

decreasing from 2017 when Turkish Stream is scheduled to commence flowing) volumes of Russian gas will continue to flow through Ukraine, at least until the end of 2019, and the European Commission will probably need to manage this relationship on a continuous basis.

**Security infrastructure is being built and new regulation is being introduced**

Russia/Ukraine issues seem likely to dominate European gas (and perhaps general energy) security issues in the 2010s – just as concerns about Soviet gas deliveries to Europe did in the mid-1980s, although the context is different. In the 2010s, LNG is no longer

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the exotic preserve of the few: in 1985 three countries imported 13 Bcm of LNG; in 2013 nine countries imported 43 Bcm and new terminals are opening in the Baltic region hitherto dominated by Russian gas. Far greater interconnection and two-way gas flows between countries and national transmission systems have been dictated by regulation and facilitated by EU funds. A completely new commercial EU gas transportation regime, governed by national and EU-wide network codes, is in the process of being rolled out over the next few years.

**... but will there be demand to fill this new infrastructure?**

But at the same time as infrastructure is evolving to accommodate greater diversity, flexibility, and market responsiveness, the fall in gas demand casts doubt on the future of the fuel in Europe – in contrast to the rest of the world which is recording strong demand growth. And ongoing problems in the Russia–Ukraine relationship, which continue to create security concerns in Europe, are certainly not helping to promote a recovery of gas demand. These are developments that neither Mabro nor any other observer could possibly have foreseen 30 years ago.

*Note*

<sup>1</sup> ‘The Prospects for International Trade in Natural Gas’, in Mabro, R.(ed.), *Natural Gas: An International Perspective – Oxford Seminar Proceedings*, Oxford: OIES/OUP, 1986, page19.

