

# Russia has trumped Nabucco for Central Asian gas

Last year Russia improved the gas-pricing scheme under which it buys Central Asian gas. It's a move that now seems to have rung the death knell for the Nabucco pipeline, says Andrey Konoplyanik

HAVING revamped the terms of its contracts with Central Asian natural-gas exporters, Gazprom's strategy in Central Asia is bearing fruit. The competitive advantage European companies had enjoyed in negotiations to bring new supplies to the West is gone, suggests new analysis, leaving Russia once again in the region's driving seat.

Russia's decision last year to offer netback-replacement-value pricing to countries in Central Asia, such as Turkmenistan, the region's most ambitious exporter, was a long time coming. Gazprom has for decades based its contracts with Western European buyers on the same terms.

Indeed, the Netherlands pioneered application of the contract in 1962 when, after discovering the giant Groningen gasfield, it abolished the cost-plus pricing system in favour of the netback one, which is considered far more lucrative for exporters (see box). Until January 2009, however, Central Asian gas producers had been exporting almost entirely to Russia at discounted cost-plus prices. Russia was reselling most of the gas to Ukraine, also at discounted prices.

The switch to netback replacement-value pricing will mean exporters get more money for their gas. It will also increase Russia's import bill. But for Gazprom, the strategic advantage should compensate, because by increasing the earnings of the producers, it has also transformed their export priorities. Exports through the proposed Nabucco pipeline, the developers of which say will be underpinned by Central Asian gas, are no longer more financially advantageous than exports through Russia.

Above all, geography still dominates the export options for Central Asian gas producers. Aside from Azerbaijan's gas, the bulk of what Cedigaz estimates to be 11.6 trillion cubic metres of gas reserves lie to the east of the Caspian Sea. The following offers a description and analysis of the mooted export routes. Turkmenistan is at the heart of all of them (see Figure 1):

- The Central Asia-Centre (CAC – 1, 2 and 4) pipeline system from Turkmenistan, through Uzbekistan and Kazakhstan to Russia and on to Europe (N2);
- The CAC 3 pipeline, known as Pre-Caspian (to be expanded according to a May 2007 bilateral Russia-Turkmenistan agreement), to connect with the existing CAC system (N2);
- Increased volumes to China, through a new 40bn cubic metre (cm<sup>3</sup>/y) Trans-Asian pipeline across Uzbekistan and Kazakhstan – inaugurated in December 2009 and scheduled to be operating at capacity in 2012 (N1);
- The planned Nabucco pipeline to Europe, bypassing Russia, but which requires a trans-Caspian link, or an onshore connection through Iran (N4);
- To Iran, through two existing pipelines from Turkmenistan, the Kopetdagh-Hangeran line in the west and the new – inaugurated in January 2010 – Dovletabat-Sarakhs-Gurtguyi pipeline in the east. One other possibility is a swap arrangement, with gas from Turkmenistan exported to international markets in the form of liquefied natural gas (LNG), from Iranian ports in the Mideast Gulf (N3); and
- A long-debated, and controversial, pipeline to India and Pakistan, through Afghanistan (N5).

## The gas-pricing system

UNDER the cost-plus system, the gas-export price is calculated based on the upstream capital and operational costs of producing gas at the wellhead; the cost of transportation to the contractual delivery point; plus a reasonable rate of return. Under the netback replacement-value principle, the price of gas at the contractual delivery point is calculated based on the replacement value of competing fuels for the end user (at the downstream end of the gas-value chain), netted-back (less transport costs) to a delivery point upstream of the consumer.

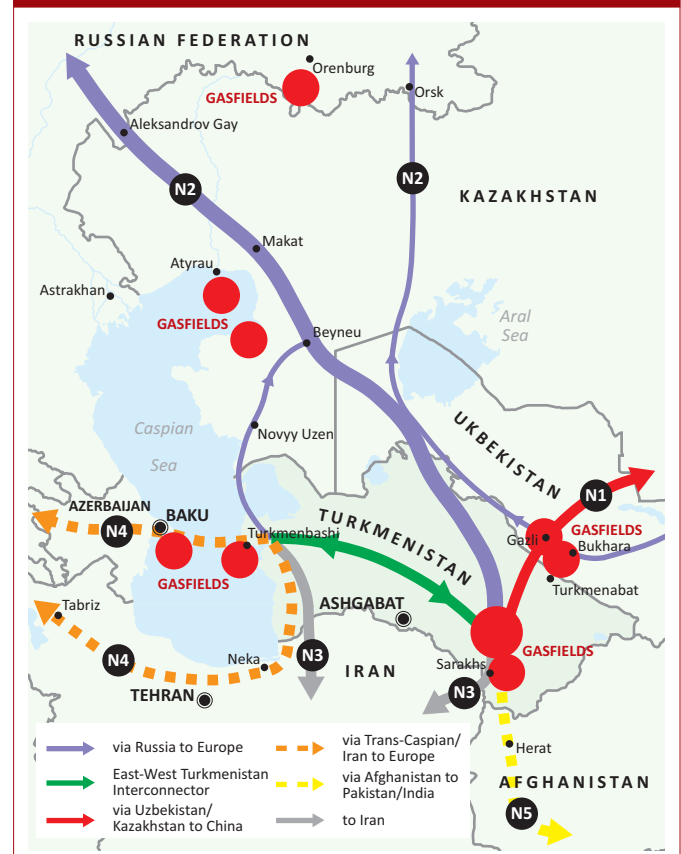
The netback value of the gas will usually be higher than the cost-plus-based export price. Under the cost-plus pricing system, the exporter receives only a portion of mineral (resource) rent – the so-called Ricardian rent. Under netback replacement-value pricing the exporter receives full value of the mineral rent – both Ricardian and the so-called Hotelling rent – by securing the highest possible price an importer will pay for gas compared with competing fuels.

Central to many of these plans is Turkmenistan's 30bn cm<sup>3</sup>/y east-west interconnector gas pipeline, an internal link that could and most probably will, have a revolutionary effect on the evolving Eurasian energy market, allowing the country to manoeuvre its gas resources – at around 8 trillion cm<sup>3</sup>, the largest in the region – between preferable export destinations. Construction began in June and is scheduled for completion in June 2015. The interconnector will provide a vital link in a chain physically connecting European and Asian gas markets. And with a few additional, smaller internal connections, it will enable Turkmenistan to access the world's most important gas markets.

But which of these proposed export destinations would be the export-market of choice for Central Asian gas exporters and for Turkmenistan in particular? Figure 1 rates them according to their value to Turkmenistan.

Route N5 to India and Pakistan, through Afghanistan, is the most risky and unpredictable, and the least likely to be pursued, at least

Figure 1: Gas-export options for Turkmenistan



until the security situation in Afghanistan stabilises. There is little sign that the war in that country will end soon.

Route N1 to China – the fastest-growing and potentially biggest Eurasian gas market – is the preferential option. When operating at capacity, in 2012, the Trans-Asian pipeline would deliver 40bn cm/y of Central Asian gas (30bn cm from Turkmenistan and 10bn cm from Uzbekistan) to a connection with China's West-East Pipeline system, for 30 years. In June, China agreed with Turkmenistan, Uzbekistan and Kazakhstan to increase the pipeline's capacity to 60bn cm/y.

Although gas-export prices to China would be lower than those to Europe under the replacement-value principle, China has provided financial resources for pipeline construction and its state-owned companies are ready to conduct onshore, upstream development on the basis of service contracts, rather than under production-sharing terms preferred by Western companies, which are less lucrative for the state.

A second priority for Turkmenistan may be increasing volumes to Iran through Route N3. Two existing pipelines have a capacity to deliver up to 20bn cm/y to the industrial, inhabited north of the country – although imports in 2009 were less than 6bn cm according to Cedigaz. Through swap deals, corresponding volumes from Iran's South Pars could be exported from planned Iranian LNG plants on the Middle East Gulf. This option would also benefit Russia, removing potential exports from Turkmenistan and Iran from the mature and competitive EU market – the traditional, vital, export market for Russia.

## Russia: the least risky option

Piping supplies to Russia (Route N2) has proved, historically, to be the least risky export option – with Gazprom responsible for costs and risks beyond the Turkmenistan border – and, since the transition to European pricing formulas last year, has delivered the highest export prices. However, an unfortunate spat between Russia and Turkmenistan, as a result of a pipeline explosion in April 2009, has resulted in a significant drop in export volumes. Russia imported 42bn cm of gas from Turkmenistan in 2007-08, but only 9.5bn cm in 2009, compared with a

contracted 41bn cm for that year. And the contract for 2010 is for only 10.5bn cm, compared with forecast supplies of 70bn cm/y under 25-year gas-co-operation agreement signed in 2003. Now Russia must compete with Iran for second place in Turkmenistan's export priorities.

Turkmenistan has sufficient gas resources to support supplies to more than one export destination, so its decisions will be based on the economic attractiveness of the competing markets, while guaranteeing security of demand for its gas. But it is almost impossible to imagine that Central Asian countries would halt supplies to Russia entirely, even in the light of last year's Russia-Turkmenistan trade spat.

Based on the above, Route N4, the EU-backed Nabucco pipeline to deliver gas to Europe bypassing Russia, has lost its competitive advantage compared with Russian Route N2. Apart from requiring a new, politically sensitive, pipeline across Iran (now impossible under EU and US sanctions against Iran), or a trans-Caspian link (impossible until the sea's five littoral states agree on how to divide the Caspian), European importers no longer hold price-bargaining chips with Central Asian suppliers. Their potential cost advantage was lost when Russia began paying the netback European price for Central Asian gas.

The shift from cost-plus to replacement-value pricing could be seen as a deliberate move by Russia to try to prevent Central Asian gas flowing through Nabucco, or shrewd bargaining by Turkmenistan. But the mutually beneficial solution kills two birds with one stone. In this win-win situation, Turkmenistan receives a full market price for its gas and Russia – despite an increase in its gas-import bill – has strongly diminished the economic stimuli and justification for the Nabucco pipeline.

Without gas from Turkmenistan or Iran, the Nabucco project is not economically justified, leaving it close to dead. ●

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