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The Role of Azerbaijan in European Gas Supply and the Greek Interest

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Abstract

Energy security is one of the most important priorities of the European Union. In this context Azerbaijan is capable of playing two key roles in helping to ensure stable gas supplies to Europe: as a producer in its own right and as a prospective entry point for the supplies from the southern shores of the Caspian Sea. But there are both political and commercial complications. This Policy Brief explores Azerbaijan's complex energy relations with other regional actors such as Russia, Iran, Turkmenistan and Greece. For Azerbaijan (and also Turkmenistan), establishing a direct connection between Turkey and Austria is likely to prove the key element for increasing their gas exports to the European market.

Keywords: Azerbaijan, Caspian Sea region, energy security, gas pipelines, European Union Greece, Shakh Deniz.

Introduction: Azerbaijan and European Energy Security

Azerbaijan has two main roles in terms of European gas-related energy security. It is potentially a major supplier of gas to Europe in its own right, and it is also a prospective entry point for gas from the eastern shores of the Caspian, notably Turkmenistan. The two issues come together when questions concerning the development of the "Southern Corridor" are considered in European commercial and political circles.

At present, Azerbaijan is already shipping around 8 billion cubic metres a year (bcm/y) westward, with most of this heading for Turkey, which then re-exports a proportion to Greece, but with some dropped off on the way in Georgia. The gas flows through the South Caucasus Pipeline (SCP) which runs from the gas terminal at Sangachal near Baku to the Georgia-Turkey border. The line is often dubbed the Baku-Tbilisi-Erzurum line because it connects to a new Turkish pipeline, opened in November 2007 from Turkey's border with Georgia down to Erzurum, where it joins Turkey's main east-west trunkline.

In the immediate future, the focus is on Azerbaijan's giant Shakh Deniz gas field and its role in developing new pipelines to connect European consumers with Caspian producers. Shakh Deniz is now generally accepted to contain well over one trillion cubic metres of

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recoverable reserves. But it is a complex field and for reasons concerning both technical development and transit issues with Turkey, progress in developing it has been slower than anticipated.

The Shakh Deniz Field and its Planned Second Stage

The first phase of the Shakh Deniz programme is the source both for current exports to Georgia, Turkey and Greece and for around one billion cubic metres (1 bcm) of gas that enters the Azerbaijan domestic market. The biggest immediate issue concerns the *planned second stage* of Shakh Deniz – commonly dubbed *SD-2* – and whether it will be used to fuel the projected Nabucco pipeline to Europe or used to supply other pipeline projects and customers.

At present, SD-2 is expected to come on stream in late 2014 or during 2015, three years later than originally envisaged. The project is officially aimed at delivering between 12-16 bcm. Officials from British Petroleum (BP), the field's actual operator, have said that upward revisions of the field's reserve estimates, as a result of the SDX-4¹ exploration well in 2007, made it clear that while the field was more complex than expected, it was also much bigger and was therefore capable of producing at the higher end of this scale. Officials with Statoil, one of BP's partners at Shakh Deniz, said in April 2009 that they consider SD-2 could yield around 15 bcm.² In the context of Azerbaijani supply to Europe, however, it should be noted that not much more than 12 bcm/y of SD-2 output can be expected to head west, since the design capacity of the SCP/BTE system is around 20 bcm/y, as and when additional compressor stations are installed. Exports beyond this level would require new pipes to be laid.

Other Azerbaijani Gas Prospects

In addition to Shakh Deniz, Azerbaijan possesses various other gas prospects that could enable it to produce as much as 50 bcm/y, though perhaps not as quickly as some Azeri politicians have indicated. In particular, there is known to be a substantial gas layer underneath the giant Azeri-Chirag-Guneshli (ACG) oilfield complex. Somewhat unusually, the existing production sharing agreement (PSA) for ACG has a depth limit concerning the reservoirs to be tapped by the partners to Azerbaijan's so-called "Contract of the Century" signed in September 1994.³ This means *a new PSA will have to be signed* for the development of ACG deep gas, and although BP and its ACG partners have discussed this matter – since they would be the logical partners as they already have many of the facilities required for deep gas development already in place – no such agreement has yet been concluded. In early 2009, however, the Azerbaijani authorities did sign a PSA with France's Total for development of the *offshore Absheron field*, with the focus apparently on testing to see whether commercial gas resources can be found and developed. The field was the location of a previous PSA, in which Chevron was the senior

¹ SDX-4 stands for the fourth exploration well at the Shakh Deniz field.

² Statoil official to Platts, Baku, April 2009. Shakh Deniz producers have often spoken of SD-2 producing around 14-16 bcm/y, once it is fully developed.

³ This was the contract under which BP, the US Amoco and a host of other countries joined forces to develop the Azeri-Chirag-Guneshli field complex as a consortium, instead of in separate packages. After the BP-Amoco merger in December 1998, BP became the field's operator. Rather unusually, the 1994 contract applied only to exploration and production down to a specified level. The so-called deep gas lies below this layer.



international partner and Total the junior, which was abandoned after the first well drilled by the concessionaries in 2001 failed to find what they wanted, which was commercial volumes of oil. They did find what the Azeris described as “small flows of gas” but with gas of significantly lesser interest than at present. As a result the partners decided not to pursue any further activities and the PSA lapsed in 2005. There are also prospects for increased production of associated gas from the current ACG concession and from fields operated directly by Azerbaijan’s State Oil Company, SOCAR.

For Azerbaijan, the question is how much does it want to use gas for export to Europe, how much might it wish to use it for export to its neighbours, notably Iran and Russia, and how much for its own domestic industrialisation. *The Azerbaijani government is committed to supplying some gas to both Russia and Iran.* But these are small volumes that come from SOCAR’s own production, not from Shakh Deniz. Azerbaijan swaps limited volumes of gas with Iran for Iranian gas supplies to the Azerbaijani exclave of Nakhichevan, which it cannot access directly because Armenia stands in the way, both physically and politically. In March 2009, the Azerbaijani government agreed to supply Russia with gas, but with Azeri officials saying this would come from SOCAR’s own production.

Gas Relations with Russia

The gas relationship with both Russia and Iran is delicate. Until 2006 when Shakh Deniz first began production, Azerbaijan routinely relied on Russia for around 4.5 bcm of gas imports a year. During the changeover year in 2007, when Azerbaijan anticipated it would become a net exporter for the first time, its initial arrangements were predicated on continued access to Russian gas, but Gazprom, which did not see why it should supply gas to Azerbaijan at one price when Azerbaijani exports to Turkey were projected at much higher prices, insisted on too high a price. With Azerbaijan rejecting this, Gazprom cut supplies abruptly at the end of 2006, forcing Azerbaijan, Turkey and Georgia (which had also found itself facing much higher than expected prices for renewed Gazprom supplies) to restructure their own agreements. Luckily, as works on Turkey’s extension to the South Caucasus Pipeline were running late, it was possible to redirect gas supplies from Shakh Deniz, both to the Azerbaijani domestic market and to Georgia. SOCAR also stepped up production from its gas fields.

The episode left a sour taste in Azerbaijani mouths. So when Russia offered in 2008, and again in 2009, to purchase the entire output of SD-2, the Azerbaijanis preferred to keep their options open. Gazprom’s CEO, Alexei Miller, visited Azerbaijan at least three times in early 2009 to try to secure significant access to Azerbaijani gas. But while Azerbaijan agreed that it was prepared to see work carried out to enable the gas pipeline between the two countries to be reversed so that Azerbaijani gas could flow north into Russia, SOCAR made it clear that any gas entering the system would come from its own resources, which, in effect, is likely to mean that not much more than 2 or 3 bcm will be supplied to Russia.

The episode can be interpreted as *a failure by Moscow to pre-empt European access to Shakh Deniz.* It also appears to reflect Russia’s own problems in securing enough gas, either from its indigenous production, or from that of its neighbours, to maintain its twin targets of satisfying increasing volumes of domestic consumption in Russia and maintaining the capacity to export gas to Europe at levels established in the pre-recession era before late 2008.



Azerbaijan's Gas Relations with Iran

Iran is also looking to secure increased gas supplies from Azerbaijan. This might appear a little surprising since Iran owns the world's second largest gas reserves, but it relates mainly to the fact that northern Iran is the mainstay of the country's energy-hungry industry and that it is potentially cheaper to pipe gas to the Tehran area from Azerbaijan than from the Gulf. In addition, Azerbaijan already supplies Iran with a small volume of gas in exchange for Iran supplying the Azerbaijani exclave of Nakhichevan with gas. During various energy crises, notably the Russian price crisis of early 2007, Iran and Azerbaijan cooperated in piping Iranian gas through Azerbaijan to help supply Georgia with emergency gas supplies.

Azerbaijan's Role in Turkmen Gas Transit

In April 2009, the question of Azerbaijan's role as a transit country for Turkmen gas to Europe became a particularly critical issue. Turkmenistan has long stressed its support in principle for what it calls a multi-vector policy of supplying gas to a variety of customers. Although the bulk of its gas currently goes to Russia, it is developing a major pipeline system to China and exports modest volumes of gas to Iran. However, the possibility of exports to Europe via a trans-Caspian pipeline to Azerbaijan, an issue on the agenda of every European energy delegation to visit Ashgabat since President Berdymukhammedov came to power in December 2006, is now a critical issue for Turkmenistan.

An explosion on the main pipeline to Russia on 7 April 2009 led to a furious war of words in which the Turkmen foreign ministry used unprecedentedly strong language to blame Russia for the explosion which briefly halted all Turkmen exports north. There was an assumption this was connected with Russia's own problems in selling gas to recession-hit markets in both the European Union and Ukraine, and that it was thus convenient for Russia to find a way to reduce its current imports from Turkmenistan.

The explosion occurred after a summit meeting in Moscow between Berdymukhammedov and Russia's President Dmitry Medvedev. The meeting had been expected to lead to a firm contract for construction of a major East-West pipeline project within Turkmenistan. Instead, probably as a result of disagreement on both the volume and price of Turkmen gas to Russia, Turkmenistan announced within days of the summit ending that it would host an open tender for the East-West pipeline and that it was specifically seeking participation by international companies.

The East-West pipeline would serve to connect the country's main producing areas in east-central Turkmenistan, and particularly the newly-discovered Yoloten/Osman complex, with the lesser producing region along the Caspian coast. From a Russian perspective, it could be used to carry Yoloten gas to the planned Caspian coastal pipeline intended to run from the Turkmenbashi area up the Caspian coast to Kazakhstan and Russia. But the line could equally be used either to carry gas westwards from Yoloten to an entry point on a trans-Caspian pipeline or to carry gas produced in the Caspian region already, notably by such producers as Petronas in the Caspian Sea or ENI/Burren onshore, eastwards to a connection point with the pipeline currently under construction to China.

In addition, efforts to meet Turkmenistan's criteria for gas exports to Europe are intensifying. Turkmenistan has always insisted that it will supply gas to anyone prepared



to construct a pipeline to its border. On 16 April, a leading member of the Nabucco memorandum” under which it will gain the right to develop Turkmenistan’s offshore Block 23. One particularly significant factor in the agreement, RWE said, is that “amongst other things, the parties have agreed upon investigating and discussing first direct deliveries of natural gas from Turkmenistan to Germany and Europe.”⁴

RWE is already involved in a partnership with Austria’s OMV, the prime mover of the Nabucco project, to develop a trans-Caspian pipeline from Turkmenistan to Azerbaijan. They are understood to be considering two possible options. The first would be a full-scale connection from the Turkmen coast to a terminal on the Azerbaijani mainland; the second would be an interconnector between existing offshore facilities in the Turkmen and Azeri offshore sectors currently under development.

In either case, the point is simply that Turkmenistan is both being wooed more assiduously than ever before as a source of gas for Europe, and is itself more determined than ever to find new markets. In a major statement on 4 April, the Turkmen stressed they wished to see new routes developed that constituted “the shortest and most convenient routes” to market.⁵ Although delivered in classic Soviet-era elliptical language this was the clearest indication to date that Turkmenistan is actively looking to develop a new export route across the Caspian and through Azerbaijan and the Southern Corridor to Europe.

For Azerbaijan to take advantage of this, it will have to settle its maritime boundary dispute with Turkmenistan. Since Berdymukhammedov became president, some progress has been made on this issue, and it is inconceivable that the two countries would be actively discussing prospective development of a trans-Caspian pipeline without being prepared to reach an amicable settlement with each other on where the boundary line for hydrocarbon exploration and development should lie.

The Greek Interest in Caspian Gas Pipelines to Europe

There are two issues of major concern for Greece. The narrower concern is the issue of any immediate increased gas flow to Greece itself and through Greece to Italy. The broader concern is the development of a major system to carry large volumes of Caspian gas to mainstream European markets. The two are intimately interconnected. In theory, output from the second stage of Shakh Deniz could be simply allocated to customers along the Turkey-Greece-Italy interconnection system. However, because this is, in essence, a blind alley – as the take-off customer in Italy is a single company, Edison, which is looking to secure feedstock for its own power stations – *it does not contribute significantly to overall European energy security*. Moreover, such a development would almost certainly preclude the development of the most required connection in the Southern Corridor: *a through line between north-western Turkey and Austria*.

⁴ “RWE enters into energy partnership with Turkmenistan”, RWE Press release, Essen, 16 April 2009, <http://www.rwe.com/web/cms/mediablob/en/234320/data/38794/Read-more...>

⁵ See “New system for energy security: on principles of equality and respect to interests”, *Turkmenistan.ru*, 4 April 2009, http://www.turkmenistan.gov.tm/_en/?idr=2&id=090404a. The website notes that “Material is provided by Ministry of Foreign Affairs of Turkmenistan.”



Despite this, there are good reasons for ensuring the delivery of some additional gas supplies, both to Greece and to Italy, from Azerbaijan. In essence, this relates to the need *to complete the Greece-Italy Interconnector*, the Poseidon project developed jointly by Edison and Greece's DEPA, since this constitutes a major element in a much broader energy security system for Europe. In essence, Poseidon ensures that, if there were to be a repeat of previous Russia-Ukraine crises, North African gas would be able to flow from Italy to Greece and the Balkans. In this context, no more than 1 or 2 bcm is really required for routine pumping from Greece to Italy, and perhaps a similar amount for Greece's own consumption (though Greece should really be looking, at this immediate stage, at increased imports of liquefied natural gas).

Resolving the Conundrum

For Azerbaijan, as for the European Union as a whole, the overriding requirement is for a single pipeline system from the Caspian to the heart of Europe, *operating on purely commercial lines*. In this context, the priority is the development of the connection between Turkey and Austria. Once such a connection is in place – or even once it is absolutely clear that such a connection will be built – both Azerbaijan and Turkmenistan would possess what they most require. Azerbaijan would have a cast-iron incentive to commission new gas projects and Turkmenistan a cast-iron incentive to develop a trans-Caspian pipeline to feed into the new export system to Europe. Such a system would ensure much greater flows out of Azerbaijan to the west than the 20 bcm/y provided by the existing Shakh Deniz Phase I and the impending Shakh Deniz Phase II projects.

In effect, developing a Turkey-Austria connection, which is exactly what the first phase of the Nabucco project is all about, is the vital component if Azerbaijan and Turkmenistan are to become convinced that Europe indeed constitutes a major market for their gas exports.

In recent months, and particularly in the spring and early summer of 2009, diplomatic efforts to get Nabucco off the ground have been truly intense. One point that needs to be borne in mind in all of this is that while Turkey is central to any solution of the Nabucco conundrum, it is not simply a matter of gas from one particular source, Azerbaijan, being entirely allocated to one particular project or destination – such as the Nabucco pipeline to Austria.

The needs of several customers need to be addressed, but so too should the possibility of *several suppliers be taken into consideration*. In essence, what is needed is a total initial input of around 15-18 bcm into the Turkish system. This would be enough to meet the initial requirements of Nabucco (say 7-8 bcm); the initial requirements of Turkey itself (say 5-6 bcm); and the initial requirements of Greece and the Poseidon project (say 3-4 bcm). If these can be met by drawing on the combined potential input of new gas supplies to Turkey – including perhaps some 1-2 bcm from northern Iraq and a similar volume from Egypt via the Arab Gas Pipeline now under construction in Syria – the equation can be made to balance.

This will not be easy. There are still complex agreements that need to be finalized concerning the terms under which Nabucco would be built, the guaranteed input available to both Nabucco and other prospective customers such as Turkey's Botas, Greece's DEPA and Edison, and above all, the terms under which Azerbaijani gas would transit Turkey. Greece is itself automatically involved in the key question of transit of Az-



erbaijani gas through Turkey since the arrangements covering export of Phase One gas from Shakh Deniz to Turkey allowed both for Turkey to purchase gas at what now seems to be a very low price – \$120 per thousand cubic metres – and also to re-sell such gas as it did not need to consume itself. *This means that while the gas that Greece imports via the Karacabey-Komotini pipeline may originate in Azerbaijan, it is actually purchased from Turkey.* Azerbaijan, which wants to ensure the maximum throughput all the way to the Austrian hub at Baumgarten, will insist that any future transit agreement ensures an end to such buy-and-resell arrangements, and that price variations paid by its customers should relate solely to the difference in costs incurred as a result of the distance the gas has to travel.

Right now, unprecedented efforts are under way to resolve all of these problems. For Greece the issue is clear. If it can restrict itself to initially low volumes of imports – essentially little more than those required to justify completion of the Poseidon connection to Italy – it can contribute significantly to the construction of a direct Caspian gas supply route to central Europe. Nothing should be done that would prejudice the development of a direct link between the Caspian producers and a major European hub serving the principal markets of central and western Europe. Once that connection is made, the Southern Corridor can be expected to grow organically – and that will result in gas flowing in ever greater volumes from the Caspian to all parts of Europe – not just to Austria and the hub at Baumgarten, but via Greece to Italy, and, as LNG, potentially from Mediterranean terminals to the rest of Europe and North America as well.



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