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- Establishing the Southern Corridor could significantly increase the EU's security of supply of natural gas and accelerate Turkey's economic and political integration with the European Union. Furthermore, the inherent need to cooperate among the countries concerned in the Caspian region and the Middle East could enhance regional stability and security in the EU's neighbourhood. But the question remains whether these incentives, as well as the political and financial support that the EU has already provided for setting up the Southern Corridor, are enough to enable the EU to secure sufficient gas supplies and dispel doubts with regard to the Corridor's realisation.
- Further financial and political commitments on the part of the EU and its member states could boost the Southern Corridor, as could intensified energy cooperation with Turkey or Iranian or Russian participation. The EU and its members must decide whether to continue or, in one way or another, reconsider and strengthen their support for the Southern Corridor. In any case, establishing the Southern Corridor will be the litmus test of their willingness and ability to forge a meaningful foreign energy policy.





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Introduction

Kristin Linke and Marcel Viëtor

The European Union is seeking to diversify its natural gas supply and intends to establish a new supply route in addition to the three existing ones, from Norway (Northern Corridor), Northern Africa (Western Corridor) and Russia (Eastern Corridor). The fourth, Southern Corridor will make it possible to have natural gas shipped from the Caspian region and the Middle East to customers in Southeastern Europe and the EU. Turkey will be the key transit country for these deliveries via a multitude of pipelines, including Nabucco. Although several pipeline projects have reported development progress, it remains uncertain whether and when they will be able to secure sufficient gas supplies so that their realisation can com-

The Friedrich-Ebert-Stiftung (FES) and the German Council on Foreign Relations (DGAP) organised an international experts' meeting on this topic in Berlin in June 2010. The participants had political, business and academic backgrounds, and came from EU institutions and member states. Turkey, Azerbaijan and Russia were also represented. The meeting followed a preceding conference on energy relations between the EU, Russia and Turkey, with the aim, subsequently, of focusing on Turkey's role in EU foreign energy policy and also of looking beyond Turkey to potential resource bases for the Southern Corridor. We are delighted to be able to present this collection of five papers in order to share part of the discussion and further considerations with a broader public.

Brendan Devlin and Katrin Heer start by explaining the background for the European Commission's initiative to establish a Southern Corridor, pointing to the EU's increasing demand for natural gas imports and the lack of access to the world's largest gas reserves in the Caspian region and the Middle East. While the EU strategically needs all the different pipeline projects within the Southern Corridor, the Commission supports Nabucco in particular since it is the only project that provides for large volumes of gas, as well as significant diversification of sources along one continuous trunk line. Finally, they highlight the Commission's support in the coordination of gas purchases, as well as in legal and financial matters, since companies relying on market forces alone would not be able to open the Southern Corridor.

Ömer Fatih Sayan draws attention to Turkey's interest in deepening energy cooperation with the European Union, which so far remains below its potential due to the political blockage of accession negotiations, including on the energy chapter. Opening the energy chapter would accelerate Turkey's adoption of EU energy law and thus help in developing the Southern Corridor, which Turkey supports as a reliable partner and transit state. Since Turkey, unlike the EU, has already established energy relations with most of the potential supplier countries to the Southern Corridor in the Caspian region and the Middle East, Sayan elaborates on the Turkish experience with Azerbaijan, Iran and Iraq, among others. Turkey remains interested in meeting its increasing gas demand with purchases from Iran, although Iran, due to domestic needs, slashed its gas deliveries twice (which Turkey was able to replace with gas from Russia).

Ingilab Ahmadov expresses the wish that the EU would show more commitment on the legislative, financing and political levels, including offering more competitive prices, where needed, in order to win over the Caspian countries. This applies especially to Turkmenistan, where the EU's chances of tapping the gas reserves are decreasing, since China has already managed to build a pipeline to Turkmenistan. Providing detailed insight into Azerbaijani and Turkmen reasoning on whether to supply gas to new customers in the EU via Nabucco, the author states that, in contrast to the established customers in Russia, China and Iran, the EU is seen as a reliable and profitable market. Azerbaijan's and Turkmenistan's interest in the diversification of exports, on the one hand, increases the EU's chances of obtaining access to their gas deliveries, but on the other hand it also ensures that the EU will only be able to attract part of them.

Mert Bilgin analyses the resource potential of Iran, Qatar, Iraq and Egypt as the most promising Middle Eastern countries with regard to supplying the pipelines of the Southern Corridor. Among them, Iran is the most strategic country as its participation in the Southern Corridor would also enable access to Turkmen deliveries, circumventing the Caspian Sea with its unresolved legal status. Their participation is, however, jeopardised by a number of impediments. While Qatar and Egypt are more likely to expand their LNG export capacities than to develop new pipeline infrastructure, Iran and Iraq face political problems, such as the international community's misgivings about Iran's nuclear programme, and ethnic and regional clashes in Iraq. These impediments should not prevent the EU from establishing the Southern Corridor, Bilgin argues, as building the energy corridor will rather



strengthen regional stability and foster cooperation in the Middle East.

Maria Belova stresses that the Southern Corridor's pipelines could profit substantially from Russian participation. Instead of pursuing a politicised »avoid Russia« energy policy, the EU should join forces with Russia. Both sides would benefit if Turkmen gas reached the EU via existing and new pipelines between Turkmenistan and Russia. The same applies if the South Stream and Nabucco projects were partially merged. While Russia could reduce the transit risk of its existing export pipelines, as well as reduce the high cost of the South Stream project, the EU could finally get hold of sufficient gas deliveries from or via Russia. Therefore, she argues, a Russian Eastern Corridor and a non-Russian Southern Corridor should not be kept separate from one another simply for the sake of conceptual purity.

Establishing the Southern Corridor could significantly increase the EU's security of supply of natural gas and accelerate Turkey's economic and political integration with the European Union. Furthermore, the inherent need to cooperate among the countries concerned in the Caspian region and the Middle East could enhance regional stability and security in the EU's neighbourhood. But the question remains whether these incentives, as well as the political and financial support that the EU has already provided for setting up the Southern Corridor, will prove sufficient to enable the EU to overcome the hurdles that still cast doubt on the Corridor's realisation.

A stronger financial and political commitment on the part of the EU and its member states could boost the Southern Corridor, as could intensified energy cooperation with Turkey or managing Iranian or Russian participation. The EU and its members must decide whether to continue or, in one way or another, reconsider and strengthen their support for the Southern Corridor. In any case, establishing the Southern Corridor will be the litmus test of their willingness and ability to forge a meaningful foreign energy policy.

We would like to express our sincere gratitude to the authors and all other speakers and participants in the meeting for sharing their thoughts with us. We are also indebted to Elina Brutschin from the Institute for Advanced Studies in Vienna for her valuable support for this publication. We hope that this collection of papers will

interest the reader and further the debate on the European Union's security of energy supply.

Further Reading

Kristin Linke and Marcel Viëtor (eds.) (2010), Prospects of a Triangular Relationship? Energy Relations between the EU, Russia and Turkey, in: International Policy Analysis, 27 pp.



The Southern Corridor – Strategic Aspects for the EU

Brendan Devlin and Katrin Heer¹

1. Introduction

Domestic gas production within the European Union (EU) is decreasing, which will result in a growing need for gas supplies from external sources over the coming years. At the same time, the Middle East and the Caspian region have large and highly concentrated gas reserves, which to date have remained largely untapped. The Southern Gas Corridor Strategy of the European Union consists of making these large-scale reserves available to Europe. It schedules connecting the EU to new sources, via new routes and hence significantly diversifying its supplier portfolio, while ensuring that, overall, gas shipments are expanded in order to meet additional future imports.

The Southern Corridor Strategy has been given high priority on the EU's external energy policy agenda. The underlying rationale for doing so, as well as concrete actions developed at European level in order to open the Southern Corridor, are discussed in this chapter.

2. EU Natural Gas Consumption

The European Union is import-dependent with respect to energy. About half of its primary energy needs are currently imported from outside - a share that is likely to grow to up to 70 per cent by 2030.2 In particular, the importance of natural gas imports is expected to increase in the medium to long term, despite higher energy efficiency levels and the increased use of renewable energy sources. There are several reasons for this. First, natural gas is less carbon-intensive than other fossil energy carriers and a broad fuel switch towards gas would contribute considerably to the fulfilment of the EU's greenhouse gas (GHG) reduction targets. Second, natural gas is a very flexible fuel and therefore able to respond quickly to load changes which will become more and more important as the share of volatile renewable energy sources, such as wind and solar power, in the overall energy mix increases. Simultaneously, the EU's domestic gas production will decrease continuously over the coming years, while shale Given these facts and presuming a reference case scenario under which at least the common energy and climate targets that have been agreed up to now (2008 EU energy and climate package) will be achieved, the EU Commission estimates that EU natural gas net imports will rise by 24 per cent, from 285 to 353 billion cubic metres (bcm) – that is, from 257 to 318 million tonnes of oil equivalent – by 2030 compared to 2005 levels.³ Without doubt, this will require a significant extension of current gas supply patterns, an extension for which decisions must be taken today.

3. Import Routes

The European Union is surrounded by gas producing regions and is well placed to import gas from them at competitive prices. For the time being, gas is imported into the EU via three main corridors: from Norway (Northern Corridor; about 19 per cent in 2008), from Northern Africa (Western Corridor; about 13 per cent in 2008) and from Russia (Eastern Corridor; about 25 per cent in 2008).4 The world's largest gas deposits, however, are located in the Middle East and the Caspian region. Gas can be found from Kazakhstan in the North to Iran in the East to Saudi Arabia in the South and Egypt in the West. Proven reserves (91.3 trillion cubic metres at the end of 2009)⁵ are estimated to be up to twice as large as respective reserves on Russian territory and easily accessible from a technological point of view. Physically, they are located much closer to the European load centres than Russian gas reserves and concentrated in comparatively a much smaller area, which means shorter transport dis-

gas – which boosted domestic gas production in the US – is not expected to play a significant role within the densely populated member states.

^{1.} The opinions expressed in this paper are those of the authors and do not necessarily represent the views of the European Commission. The Commission is not responsible for any use that may be made of the information contained therein.

^{2.} Commission Green Paper, A European Strategy for Sustainable, Competitive and Secure Energy, COM (2006) 105, 8 March 2006, p. 3. Available at: http://europa.eu/legislation_summaries/energy/european_energy_policy/l27062_en.htm (accessed on 27 September 2010).

^{3.} Authors' calculations based on EU Energy Trends to 2030, Update 2009 p. 124. Available at: http://ec.europa.eu/energy/observatory/trends_2030/doc/trends_to_2030_update_2009.pdf (accessed on 27 September 2010).

^{4.} Authors' calculations based on Eurostat, Energy Yearly Statistics 2008, p. 17. Available at: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-PC-10-001/EN/KS-PC-10-001-EN.PDF (accessed on 27 September 2010).

^{5.} BP (2010), Statistical Review of World Energy, pp. 22, and authors' calculations. Available at: http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2008/STAGING/local_assets/2010_downloads/statistical_review_of_world_energy_full_report_2010.pdf (accessed on 27 September2010).



tances. Nonetheless, current gas supply routes to the EU disregard the Caspian basin and the Middle East.

4. Supply Partners

The EU has always pursued the diversification of partners and routes. As European coordinator and former Dutch foreign minister Jozias Van Aartsen put it, this is in a way just another translation of the underlying free-market and competition-based pillars on which the European Union is based.⁶

From a long-term strategic perspective, the EU clearly needs to invest in direct contacts and firm contracts with Central Asian and Middle Eastern gas-producing states. Opening a fourth or Southern corridor enables the EU to directly link its gas market to the extensive reserves available in the Caspian region and the Middle East. It enables the EU to get connected to new sources, via new routes and hence significantly diversify its supplier portfolio. Key gas markets to be supplied by the Southern Corridor are southern Germany, Austria and Italy, as well as Southeastern Europe, which are physically very close to the gas reserves in the Caspian and Middle East but traditionally have been supplied by Russia. The Southern Corridor provides an opportunity to change this situation, to reduce the dominant position of Russian gas supplies and to introduce price competition on regional markets, which eventually will benefit local consumers (see also Maria Belova's chapter in this volume). Recalling the considerable increase in future gas imports, this will not affect the existing trade relations between the EU and its »traditional« supply partners in Norway, Northern Africa and Russia. Cooperation with them will persist and even expand via newly built import routes, such as Nord-Stream, bringing gas from Russia through the Baltic Sea to northern Germany and further to the Netherlands, Denmark and the UK; or the MEDGAZ and GALSI pipelines bringing gas from Algeria to Spain and from Algeria via Sardinia to the Italian mainland – to name only a couple of examples.

Individual key supplier countries within the Southern Corridor are Azerbaijan, Turkmenistan, Iraq and Iran (see also Ingilab Ahmadov's and Mert Bilgin's chapters in this volume). In the medium term, however, only Azerbaijan, Turkmenistan and northern Iraq can provide gas to Europe. Qatar, southern Iraq and Egypt have medium- to long-term potential for increased shipments of liquefied natural gas (LNG) to the EU, while gas transport via pipelines is unlikely from these regions. Taking into account the existing political situation in the Islamic Republic of Iran, in particular with regard to the country's controversial nuclear programme, a supplier role for Iran within the Southern Corridor is for the time being not realistic. The recent decision of the EU foreign ministers (July 2010) to tighten the EU's sanctions on Tehran, including new restrictions in the oil and gas sectors, underlines this posi-

The key transit state for transporting gas from the Caspian region and the Middle East into the European Union is Turkey. Possible alternatives for transit routes would be through the Black Sea and via the Eastern Mediterranean.

5. Role of Turkey as a Main Transit State

Whichever infrastructure project materialises in the end, developing the Southern Corridor requires considerable

The Commission is aware that opening a new gas corridor is a complex task which requires a strong commitment, as well as extraordinary efforts and coordination. To this end, the development of the Southern Corridor has been defined as a strategic objective of the EU's external energy policy. It is crucial to note in this context that the European external energy policy, in general, and the Southern Corridor Strategy, in particular, are closely linked to the European neighbourhood policy and are intended to deepen cooperation with all partner countries. Clearly, it is not the aim of the Southern Corridor Strategy to play »pipeline politics«, but to help the upstream gasproducing as well as the gas-transit states to promote the rule of law and their own economic development. Accordingly, it is of primary interest to the European Union that the development of the Southern Corridor and the respective gas deals are built upon a clear and enforceable regulatory framework – a framework that has a clear basis in international law and respects de jure and de facto the EU energy acquis.

^{6.} Jozias Van Aartsen (2009), Activity Report September 2007 – February 2009, Project of European Interest No. NG3, Brussels, February 2009, p. 3. Available at: http://ec.europa.eu/energy/infrastructure/tent_e/doc/axis/2009_axis_linking_activity_report_2007_2009.pdf (accessed on 27 September 2010).



investment in Turkey – either for the upgrade of the existing Turkish transmission network or for the construction of a new trunk line crossing the country from East to West (see also Fatih Ömer Sayan's chapter in this volume).

An associate member of the EU since 1964, Turkey officially applied to accede to the Union in 1987. Accession negotiations started in October 2005. The energy chapter, however, has not yet been opened and is currently blocked by Cyprus. Indeed, it seems unlikely that Turkey will agree to the energy acquis as a whole before the official opening of the energy chapter. With regard to the Southern Corridor, this issue was dealt with by implementing pipeline-specific agreements, such as the Nabucco intergovernmental agreement (IGA) that defines the legal framework for the construction and operation of the pipeline. Gas purchases and gas transit disputes between Turkey and Azerbaijan were also settled recently on the basis of an IGA that was concluded at the beginning of June 2010. The agreement between Azerbaijan and Turkey is crucial for the development of the Southern Corridor and the transport of gas to the West. However, it also represents an important milestone with respect to relations between the countries in the region. As Turkish Energy Minister Taner Yıldız noted rightly, energy could be a catalyst to improve relations between Turkey, Armenia and Azerbaijan.8 The same is true of relations between Turkey and the EU. However, Turkey's EU membership is important in many senses for the future of the Community, not solely with regard to energy security. This includes (among other things) economic considerations, defence and transport policy, as well as European neighbourhood policy and the dialogue with the Islamic world in general. Accordingly, it should be stressed that the development of the Southern Corridor and the accession negotiations between the EU and Turkey must be seen as two independent courses of action. Both processes are decoupled from one another and are perused independently.

6. Corridor Projects

The Southern Corridor includes several routes scheduled to bring gas via pipelines, liquefied (LNG) or compressed natural gas (CNG) from the Middle East and the Caspian region to Europe. Pipeline projects under development are Nabucco, the Interconnector Turkey-Greece-Italy (ITGI), the Interconnector Greece-Bulgaria (IGB), the Trans-Adriatic Pipeline (TAP), WhiteStream between Georgia and Romania, and a potential trans-Caspian gas link via a sub-sea pipeline or CNG that would connect the shores of Turkmenistan and Azerbaijan. Increased LNG shipments are likely to originate from Qatar, southern Iraq and Egypt due to their access to the sea and relatively low production costs.

Strategically, the EU needs all the Southern Corridor projects. The issue is therefore one of scheduling and effective coordination. Ideally, the project developers would coordinate the development of the route to their mutual benefit (although there may be competition issues to be dealt with during the development process). Accordingly, the European Commission has a generally neutral attitude towards all projects, but it prefers a strategic option which provides most political benefits to the Community as well as the upstream and midstream countries involved. This refers, among other things, to whether a transport option can be scaled up and is, in the long term, able to bring large volumes of gas into the EU. At the moment, only Nabucco provides for such an option. The pipeline is designed for a plateau capacity of 31 bcm per year which would cover more than 5 per cent of the EU's gas needs in 2020.9 Nabucco is, furthermore, the only project that provides for strong diversification and a continuous trunk line from Eastern Turkey to Austria. If built, it would extend over a length of 3,300 km from two points on the Eastern Turkish border (Turkish-Georgian border and Turkish-Iraqi border) through Turkey, Bulgaria, Romania and Hungary to the central European gas hub in Baumgarten, close to Vienna in Austria. Additionally, Nabucco can build upon a strong legal basis with guaranteed third party access and transmission fees fixed for a period of at least 50 years. Recognising the importance of all of the Southern Corridor projects and without excluding the possibility of a cooperative system, if made to work, the EU has thus de-

^{7.} Gareth Winrow (2009), Problems and Prospects for the Fourth Corridor: The Positions and Role of Turkey in Gas Transit to Europe, in: Oxford Institute for Energy Studies NG 30, pp. 7–9. Available at: http://www.oxfordenergy.org/pdfs/NG30.pdf (accessed on 27 September 2010).

^{8.} Hurriyet Daily News, 6 May 2009, in: Gareth Winrow (2009), Problems and Prospects (see footnote 7), p. 12.

^{9.} Authors' calculations based on EU Energy Trends to 2030, Update 2009 (see footnote 3), pp. 66, 124.



cided to give political priority to Nabucco. This has been repeated on several occasions and at the highest level, such as during Commissioner Günther Oettinger's visit to Turkmenistan and Azerbaijan in April 2010, as well as in an amendment made by the European Parliament to the proposed Security of Gas Supply Regulation.¹⁰

As a matter of principle, however, the decision on whether a certain project will materialise or not should not be taken based on political decisions but must be motivated by strong and viable economic motives. To that effect, the Southern Corridor Strategy should clearly be driven by the needs of private companies. It is companies that will make the contracts to purchase gas and ship it to Europe and it is companies that are in charge of building the necessary infrastructure for that purpose. The European Commission, on the other hand, plays the role of a facilitator and enabler at political level. Strong political support at the highest level is crucial in order to minimise project risks. This is particularly important for the Southern Corridor, as the given projects are »midstream promoted« projects: that means that they are aimed at penetrating markets rather than consolidating a downstream or upstream-based position and are thus more vulnerable to risk.

7. Commission Initiatives

There is a common belief that the »invisible hand« of the market, as Adam Smith defined it, always results in an optimal allocation of resources and a perfect equilibrium between supply and demand. However, with respect to the Southern Corridor, several potential market failures exist. Most importantly, private investment in gas infrastructure requires strong financial security in the form of gas supply contracts. On the other hand, gas producers are unlikely to engage in sales contracts as long as the dedicated transport infrastructure is not in place or not even decided on yet. Without external security, the process thus cannot advance. Also, individual and comparatively small European companies may have difficulties competing in the market place with large players such as

CNOOC (China) and Gazprom (Russia). In addition, some gas-producing countries may be difficult to invest in as some have investment restrictions (preference for state control). Eventually, there are also a number of politically burdened relationships that must be considered within the region (Turkey-Azerbaijan, Armenia-Azerbaijan, Georgia-Russia, Turkmenistan-Russia, Turkey-Iran and so on). The Commission is well aware of the fact that under these circumstances special support is needed and that market forces, on their own, will not be able to open the Southern Corridor. Mitigating the existing market risks must therefore be the key task of the Commission during the development of the Southern Corridor.

In this context, several Commission initiatives are important. The first initiative relates to the coordination of European offers to buy gas from the Caspian region, in particular from Turkmenistan which has large uncontracted reserves. Turkmenistan has stressed that it wants to sell gas at the border without downstream commitments. It is interested neither in underpinning capacity contracts, nor in distributing the total gas volume amongst several buyers. Gazprom or CNOOC can potentially handle the large gas volumes offered by Turkmenistan; however, individual European companies clearly cannot. Responding to this problem, the Commission suggested in its Second Strategic Energy Review the setting-up of a Caspian Development Corporation (CDC) that would aggregate European buyers into a consortium to purchase gas conjointly and form an effective counterpart to eventual sellers, such as Turkmenistan.¹¹ As gas is bought at the border, this does not free the purchasing parties from the need to compete in the mid- and downstream markets. It should be stressed, however, that the CDC concept is an ad hoc solution to the specific market circumstances of the Caspian region. Generalised joint purchasing is not desirable.

Besides the CDC, the Commission is also strongly involved in the drafting and negotiating of dedicated legal agreements for the Southern Corridor. As already mentioned, it is of primary interest to the European Union that the development of the Southern Corridor and the respective gas deals are built upon a clear and enforcea-

^{10.} European Parliament (2010), Decision of the Committee on Industry, Research and Energy, First Reading/Single Reading of the Proposal for a Regulation of the European Parliament and of the Council Concerning Measures to Safeguard Security of Gas Supply and Repealing Directive 2004/67/EC, COD/2009/0108, 18 March 2010. Available at: http://www.europarl.europa.eu/oeil/file.jsp?id=5788232 (accessed on 27 September 2010).

^{11.} Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Second Strategic Energy Review, An EU Energy Security and Solidarity Action Plan, COM (2008) 781, 13 November 2008, pp. 4–5. Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0781:FIN:EN:PDF (accessed on 27 September 2010).



ble regulatory framework that is rooted in international law and respects the EU energy acquis. Since 2007, for instance, the European Commission has been actively involved in negotiations on the intergovernmental agreement (IGA) for the Nabucco pipeline. The Nabucco IGA deals with energy security protocols, transmission pricing and third party access, as well as certain investment issues related to the pipeline and is valid for a period of 50 years. The IGA was signed in July 2009 and is now, after a decision of the Turkish parliament of March 2010, ratified by all five countries along the Nabucco route. This represents a major achievement within the project cycle of Nabucco, as the pipeline now has all legal arrangements in place needed for operation. It also shows the importance of having a common legal framework underpinning such important projects. Similar efforts on the part of the Commission might also be helpful with respect to facilitating a corridor agreement for other main transit states, such as Azerbaijan and Georgia or a legal agreement that would govern a potential trans-Caspian gas link.

The Commission also provides financial assistance. Several pipeline projects within the Southern Corridor (ITGI, Nabucco, WhiteStream) have been supported via Commission financing schemes, most importantly the Trans-European Energy Networks (TEN-E) programme and the European Energy Programme for Recovery (EEPR). In total, more than 320 million euros were allocated to the various projects, 300 million of which under the EEPR. The Commission, moreover, acts as an intermediary between project operators and International Financing Institutions (IFIs) and/or as an organiser of investment conferences to attract additional capital.

8. Conclusions

The Southern Corridor will provide the European Union with substantial benefits. Above all, it will make a major contribution to the diversification of gas supplies to the Community and facilitate the introduction of increased price competition on regional markets, which in turn will

benefit local end-consumers. Moreover, the Southern Corridor implies important advantages with regard to the European neighbourhood policy by increasing dialogue and cooperation between the EU and the involved states in the Caspian Region and the Middle East. However, for several reasons, the opening of the corridor is very challenging and political support at the highest level is and will be necessary. The Commission has taken on the role of a facilitator at the political level and is involved on several issues (legal and financial assistance, coordination of negotiations and so on). It should be stressed, however, that the individual projects within the Southern Corridor must build upon a clear and enforceable regulatory framework and must be motivated by strong economic reasons. Indeed, the Southern Corridor has already advanced considerably. The signature of several international agreements establishing the framework for pipeline operations or gas deals in the region, the setting-up of new companies (for example, Nabucco International GmbH) but also the frequency of meetings (both at diplomatic and project level) dealing with the concrete implementation of the Corridor clearly support this statement. However, momentum should not be lost. Crucial decisions with regard to the upstream market – in particular, decisions on initial gas supplies to fill the Southern Corridor – should be taken in the course of 2010 in order to take advantage of the various benefits the Southern Corridor offers to Europe. This would include start-up volumes of 10 to 15 bcm per year to be supplied by 2015 at the latest and to be extended over subsequent years.

^{12.} Authors' calculations based on Commission Staff Working Document, Annex to the Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the Implementation of the Transeuropean Energy Networks in the Period 2007–2009, SEC(2010) 505, 4 May 2010, pp. 33–35. Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SEC:2010:0505:FIN:EN:PDF (accessed on 27 September 2010).



Turkey's Energy Policy between East and West

Ömer Fatih Sayan

1. Introduction

Turkey's total energy demand increased from 92 million tonnes of oil equivalent (mtoe) in 2006 to 126 mtoe in 2010, and it is expected to rise further to 222 mtoe in 2020.¹ In order to secure this demand, the Turkish government attaches great importance to, first, domestic source diversification. For instance, the Ministry of Energy and Natural Resources' Strategic Plan for the period 2010–2014, dated March 2010, includes the target of increasing the share of renewable energy resources to at least 30 per cent or 60 mtoe by the end of 2023, and that of nuclear energy to at least 10 per cent or 20 mtoe.² Second, Turkey's energy policy is aimed at external route diversification, especially with regard to the supply of natural gas.

Turkey is not only interested in attracting the necessary gas imports to meet its domestic demand, but also aspires to become the fourth, Southern Corridor for the EU's natural gas imports (see also Brendan Devlin's and Katrin Heer's chapter in this volume). It represents a natural energy bridge between the oil- and gas-rich Caspian and Middle Eastern countries, on the one side, and the European markets, on the other, which, like Turkey, face an increasing need to import natural gas. Turkey therefore aims to strengthen its role as a reliable transit country and to transform the port of Ceyhan into an energy hub for European customers. Turkey's energy strategy thus includes contributing to European energy security.

2. Turkey and EU Integration

Accession to the European Union is among Turkey's main objectives. Turkey's accession negotiations involve 35 chapters, for each of which, after an initial screening, criteria are established for Turkey's alignment with the relevant *acquis*.

However, France at present is preventing the opening of five chapters, while Turkey's fulfilment of commitments made under the Additional Protocol (2004) to the Ankara Agreement (1963) has become a benchmark for the opening of negotiations on another eight chapters. Fur-

The EU wants Turkey to be an active member of the Energy Community Treaty (ECT) which is aimed at regulating the energy trade across EU member states and the countries of Southeastern Europe in accordance with EU law. However, Turkey remains only an observer and does not apply the EU energy *acquis* fully:

[...] to the annoyance of EU bureaucrats and representatives of energy companies, officials in Ankara have questioned why they should accept the applicability of EU laws on Turkish territory when Turkey is not a member of the EU and the opening of the energy chapter remains blocked due to a political veto.³

Certainly, there is a real need for Turkey to be seen as adopting a united approach together with the EU. EU bureaucrats and representatives of European governments and energy companies should act in a coherent manner on issues related to natural gas transit, bearing in mind the problems arising from misperception and breakdowns in communication. Both the EU and Turkey will gain from a united approach within the EU and with regard to EU relations with Turkey.

One positive example of how Turkey and the EU can work together closely is the Southern Corridor and the Caspian Development Corporation (CDC), which the European Commission has set up as a consortium for energy companies from its member countries in order to purchase gas from the Caspian region and the Middle East, and transport it via Turkey to the EU. If all the pipeline projects within the Southern Corridor – Nabucco, the Interconnector Turkey-Greece-Italy (ITGI) and the Trans-Adriatic Pipeline (TAP) – were realised, up to 6 billion eu-

thermore, the Greek Cypriot Administration is preventing the opening of another six chapters – including the energy chapter – due to disagreements between the Greek Cypriots and Turkey about gas and oil explorations in the eastern Mediterranean. The energy chapter is one of those on which screening ended successfully and which Turkey is ready to open. In Turkey's view, however, efforts to prevent the opening of this chapter are purely political in nature, and neither Greek Cypriots and the EU nor Turkish Cypriots and Turkey have anything to gain from the current situation.

^{1.} Turkish Ministry of Foreign Affairs, Turkey's Energy Strategy, January 2009.

^{2.} Taner Yıldız (2010), Turkey's Energy Policy, Regional Role and Future Energy Vision, in: Insight Turkey, Vol. 12, No. 3, pp. 33–38.

^{3.} Gareth Winrow (2009), Problems and Prospects for the Fourth Corridor: The Positions and Role of Turkey in Gas Transit to Europe, Oxford Institute for Energy Studies NG 30, p. 8. Available at: http://www.oxfordenergy.org/pdfs/NG30.pdf (accessed on 27 September 2010).



ros would have to be invested in the existing Turkish pipeline network to handle the increased volumes.⁴

Opening the energy chapter would help in developing the pipeline projects within the Southern Corridor, because it would require that Turkey accelerated the adoption of EU energy law. Turkey has already signed the Nabucco Agreement as a positive signal to the EU.

3. Nabucco Pipeline

Agreement having been reached on the principles of mutual solidarity, mutual equality and interdependence, the Nabucco Intergovernmental Agreement (IGA) was signed in Ankara on 13 July 2009. With the IGA, the members of the Nabucco consortium took the initial and one of the most important steps towards the completion of the project's legal basis. The Nabucco partners believe that the signing sent a strong message to potential investors and producers regarding the will and resolve of the countries involved to realise this project. In this context, the section from Ankara to Baumgarten is expected to be completed by 2014, allowing the first gas to flow in 2014. Then, in a second step, from 2014 to 2016, the pipeline will be constructed from Ankara to Erzurum, where it will be connected to the Baku-Tbilisi-Erzurum pipeline.

In parallel to the work on the legal infrastructure, efforts to secure the necessary gas supply for the pipeline are continuing. The German Nabucco partner RWE has signed an agreement with the Turkmenistan government to conduct research and development for an offshore field in the Caspian Sea. Nabucco partners OMV of Austria and MOL of Hungary have both acquired shares in the Pearl Company, which operates in northern Iraq. This is a major development in comparison to where the project stood last year, since the major shareholders will have their own gas. Turkey, too, had numerous responsibilities, such as providing revenues for the project, by means of which it will also be able to sell gas to Europe via Nabucco (which is supplied from different sources, such as Shah Deniz II). A successful transfer project would involve linking countries such as Iraq and Turkmenistan to the Southern Corridor. In addition, Turkey has signed a memorandum of understanding (MoU) with Azerbaijan that covers gas deliveries from Azerbaijan and Turkmenistan to Turkey.

4. Data from the Ministry of Energy and Natural Resources.

In the initial phase, Azeri gas may be foreseen as the most plausible source for the pipeline. Iraqi gas is also fairly likely to be carried. In the subsequent stages, Turkmen gas may play a substantial role in the success of the Nabucco Project. After that, natural gas from Egypt and Qatar can be taken on board. When circumstances permit, Iranian gas may be transported to Europe via the Nabucco pipeline (on the resource potential of the abovementioned countries see Ingilab Ahmadov's and Mert Bilgin's chapters in this volume). On the other hand, following the coming into operation of the pipeline, Russian gas can also be shipped through the Nabucco pipeline in line with the third-party access principle. At this point, Russian and Iranian gas can be regarded as the last resort, because Russian gas will not help diversification and Iran is currently enmeshed in international controversy.

4. Turkey's Energy Cooperation with Potential Suppliers to the Southern Corridor

Azerbaijan

Azeri gas is a very important source for meeting the energy security needs of Turkey and European countries in the coming period. Its policies affect not only itself but also the broader region, including the Turkish gas market.

Turkish-Azeri energy relations are, unjustifiably, affected by relations between Azerbaijan and Armenia and the two countries' historical conflict over Nagorno-Karabakh. Turkey wants to see normalised diplomatic and economic relations between all the countries in the region. It has therefore initiated negotiations also with Armenia, while at the same time assuring Azerbaijan that this is for the purpose of creating stability in the region. Turkey and Azerbaijan signed a High Level Strategic Cooperation Council agreement on 15 September 2010 which enables cooperation at every level between the governments, including joint cabinet meetings. These are positive signs indicating that Turkish-Azeri political and economic relations are starting to normalise. Fortunately, there has also been progress in the OSCE's Minsk process to solve the Nagorno-Karabakh issue.

Turkish Energy and Natural Resources Minister Taner Yıldız and Azerbaijani Industry and Energy Minister Natiq Aliyev signed an MoU on 7 June 2010 at the third summit of the Conference on Interaction and Confidence Build-



ing Measures in Asia (CICA). This agreement enables Azerbaijani suppliers to obtain direct access to the Turkish market via PETKIM, a private company in which the stateowned oil and natural gas company of Azerbaijan, SOCAR, has a 51 per cent share. The deal also defines the pricing mechanism for gas sales to Turkey, which will retroactively pay for gas purchased since 15 April 2008 at new prices. The Turkish—Greece border will be the pricing point for Azerbaijani gas sales to the EU.

Both parties have agreed on the price and quantity of gas to be exported from the Shah Deniz II Project located in the Azeri part of the Caspian Sea. The project will go online in 2017, and the imports by the state-owned Turkish pipeline corporation BOTAŞ to Turkey will increase gradually from 2 billion cubic metres (bcm) in 2017, to 4 bcm in 2018 and to 6 bcm in 2019. BOTAŞ also has re-export rights in relation to 6 bcm. From another 10 bcm from Shah Deniz II, SOCAR has the right to sell 1.2 bcm inside Turkey via PETKIM, while sending the rest to third countries via Turkey. This is also one of the first steps towards liberalising the Turkish gas market.

Turkmenistan

Energy relations between Turkey and Turkmenistan necessarily involve Azerbaijan, but they are also strongly determined by Turkey's relations with Russia. Turkey and Russia agreed to cooperate in the areas of energy (and tourism) rather than compete. They also cooperate on finding solutions to the region's political problems. In this context, Turkey has played a mediating role between Azerbaijan and Turkmenistan. Two committees on energy and political issues were established in October 2008 between Turkey, Azerbaijan and Turkmenistan. Turkey aims to import gas from Turkmenistan via an underwater gas pipeline, and use it in its domestic market, as well as to re-export it. But there are still legal and costly technical problems involved in building such an underwater gas pipeline. The recently finished Turkmenistan-China gas pipeline, however, makes the energy equation more complex and it steers gas flows away from European customers.

Iran

Iran is already Turkey's second largest gas supplier after Russia. It supplied 6.16 bcm in 2007, 5.8 bcm in 2008 and 5.25 bcm in 2009,⁶ while the contracted amount of gas has been up to 9.6 bcm. The decreasing imports are partly due to decreasing demand by Turkey, and partly because energy relations between the two countries are not trouble-free. In the winter months of January 2007 and January 2008, when domestic demand in Iran was high, Iran slashed gas exports. However, this did not happen in the winters of 2009 and 2010.

Turkey intends to diversify its energy supplies by developing its energy cooperation with Iran. The UN Security Council is currently applying sanctions to Iran but, in contrast to additional sanctions by the US and the EU, they do not apply to the energy sector due to opposition from Russia and China, both of which seem still to be cooperating with Iran in energy issues. Thus, the energy sector has not been affected as much as it might have been. Turkey wants to be active in the field so that it can secure its growing energy needs. Prime Minister of Turkey Recep Tayyip Erdoğan has stressed repeatedly that Turkey's cooperation with Iran is intended only to diversify Turkish energy supplies. Turkey hopes that one day the international political situation with regard to Iran will change and wants its energy companies to be ready.

Iran and Turkey signed an MoU on 14 July 2007, agreeing to build two gas pipelines totalling 2,200 miles in length. One of the lines is from Iran's South Pars field and the other from Turkmenistan to Turkey. The latter pipeline is critical: as one of Turkey's long-term commitments and visions it enables a land connection to Turkmenistan's richest gas fields. There are still unsolved questions about the details and financing of the project. But when completed, up to 40 bcm of gas annually could be transported to Europe via Turkey.

Turkey and Iran signed another MoU on 14 July 2007 on the development rights of the gas fields in the Persian Gulf. The MoU gives Turkish energy company TPAO the development rights to the twenty-second, twenty-third and twenty-fourth phases of the South Pars field under a service contract. Details of the agreement are still to be worked out by the working group. Although three years

^{5.} Turkish Minister of Energy and Natural Resources Taner Yıldız during the Azerbaijan Agreement Ceremony in 7 June 2010.

^{6.} BP (2008, 2009, 2010), Statistical Reviews of World Energy, p. 30.



have passed since the MoU, the parties have not yet been able to sign a full agreement. The Turkish Energy Minister has announced officially that a full mutual agreement is not currently possible and some other initiative could be taken in the future. One of the main reasons for the disagreement is that Iranian Constitution does not allow the transfer of title to foreigners.

Qatar

Turkey and Qatar cooperate on several foreign policy issues of mutual concern, from the Middle East Peace Process to energy cooperation. While Qatar in 2009 exported only 0.32 bcm of liquefied natural gas (LNG) to Turkey, there have been discussions on how more Qatari natural gas can be piped to Turkey. Qatar has indicated its interest in connecting to a Turkish–Iranian pipeline, if Turkey secures a deal with Iran on the development of the South Pars phases 22–24. An alternative for transporting Qatari pipeline gas to Turkey could be a route via Iraq.

Iraq

Turkey is the main provider for Iraq's refined oil product needs. In 2005, 50 per cent of Iraq's and 90 per cent of northern Iraq's refined oil products were supplied through Turkey. Turkey currently provides electricity to Iraq and there are plans to increase this to a quarter of Iraq's entire electricity requirement. In the opposite direction, the Kirkuk-Yumurtalık oil pipeline became operational at the beginning of 2008 and an average of 350,000 barrels of oil started to be transported daily. Finally, Turkey and Iraq renewed the agreement for the operation of this pipeline, which transports about a quarter of Iraqi crude oil exports, for 15 years on 19 September 2010. Increasing the pipeline's capacity by around 1 million barrels per day was also agreed.

Turkish Prime Minister Recep Tayyip Erdoğan and his Iraqi counterpart Nouri al-Maliki signed a common political declaration to establish a High Level Strategic Council in 2008. A total of 48 agreements were signed in the joint

Council of Ministers on 15 October 2009. These include agreements on energy supply, security and transporting Iraqi natural resources to world markets. Turkish private companies have already made huge investments in Iraq. Turkey is working to convince the Iraqi government that oil and gas resources should be developed in parallel. A direct gas pipeline parallel to the existing Kirkuk-Yumurtalık oil pipeline is among the possible projects. Turkey aims to secure additional gas from Iraq in order to supply the transit projects through its territories. For instance, gas from Iraq's Akkas and Mansuriyah fields are slated to fill the Arab Natural Gas Pipeline Project. Turkey wants to extend this pipeline – which currently runs from Egypt to Syria, and which might operate from north to south, as well as from south to north – to Turkey.

Turkey has always supported Iraq's territorial integrity and national unity. Therefore, Turkey maintains communications with all legal political groups and community leaders. Massoud Barzani, head of the Iraq Kurdish Regional Administration visited Turkey in July 2010. However, irrespective of the good relations with the Kurdish Regional Administration, Turkey would like to eliminate the PKK terror organisation's presence from Iraq and, thus, also from Turkish–Iraqi relations. A terror-free region and preserving Iraq's territorial integrity is important for peace in the region and long-term energy security.

Russia⁸

Energy constitutes the most important dimension of Turkey's bilateral economic and trade relations with the Russian Federation. Around 24 bcm of Turkey's total demand for natural gas (32.1 bcm) in 2009 came from Russia. This amount has heavily increased in recent years, since Russia has proved to be a reliable gas supplier for Turkey and has always increased gas supplies whenever Turkey was in need of gas, especially during winter periods and when Iranian deliveries were cut off. Recent agreements and protocols will further deepen the energy cooperation between Turkey and Russia.

^{7.} BP (2010), Statistical Review of World Energy, p. 30. Available at: http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2008/STAGING/local_assets/2010_downloads/statistical_review_of_world_energy_full_report_2010.pdf (accessed on 27 September 2010).

^{8.} For a detailed account of Turkish–Russian energy relations, see Yurdakul Yiğitgüden (2010), Turkey – Turning the European Periphery into an Energy Hub? in: Kristin Linke and Marcel Viëtor (eds.), Prospects of a Triangular Relationship? Energy Relations between the EU, Russia and Turkey, pp. 14–16. Available at: http://www.dgap.org/fi/europa/aoz/publikationen/view/1df47ad48db2e0047ad11df8273a96476a5fe4afe4a. html (accessed on 27 September 2010).

^{9.} BP (2010), Statistical Review of World Energy (see footnote 7), pp. 27, 30.



Turkey has allowed Russia to carry out feasibility studies for the construction of the South Stream Project which will pass through Turkey's Exclusive Economic Zone in the Black Sea (see Maria Belova's chapter in this volume). Turkey does not regard South Stream as competing with Nabucco, but as complementary: both will contribute to Europe's energy security and diversification.

5. Conclusion

Turkey seeks to diversify its own sources of energy supply and to turn itself into an east—west energy corridor. It will therefore continue to be an important partner for energy and foreign policy initiatives with the EU, as well as with Caspian and Middle Eastern countries, Russia, and the US. Turkey has shown that, no matter what economic and political problems may arise and what its domestic needs might be, it has managed to secure its own supply, and energy transit was never disrupted. Turkey represents a reliable partner and the most effective means of transportation between Europe and the diverse energy resources in the Caspian Region, Russia and the Middle East, with which Turkey has already developed energy relations.

The EU's efforts towards energy diversification cannot bypass Turkey. The EU should also acknowledge that Turkey has never used its role in energy as a political tool, but rather seeks a win–win relationship with the EU. Turkey is working for full membership, and membership negotiations should not hinder but help the development of Turkish–EU energy relations. The EU should therefore let Turkey contribute to the EU's energy policy. Turkey and the EU are rowing in the same boat as regards Nabucco and other pipeline projects within the Southern Corridor, and the pipelines will, hopefully, come to express successful energy cooperation between Turkey and the EU and increase the economic integration of Turkey with the EU.



The Southern Corridor and Nabucco – A Promising Challenge for Caspian Countries

Ingilab Ahmadov

1. Introduction

The hydrocarbon-rich post-Soviet countries of the Caspian Sea basin, such as Azerbaijan, Kazakhstan and Turkmenistan, as well as Uzbekistan, are facing a difficult choice: where should they direct the major streams of their hydrocarbon exports?

All four directions are at stake: the North, the traditional Russian route, which has gone awry lately with regard to some countries; the South, namely Iran, which historically, as a »hydrocarbon country«, has all the necessary infrastructure and offers attractive rates for hydrocarbon transit to world markets; China, which is rapidly conquering key positions in Central Asia and already importing gas from Turkmenistan via a newly built pipeline; and finally, Europe, an immense and, what is more, reliable market, which by any estimation is profitable and alluring.

It is always the case that the wider the choice the more difficult it is to make the correct decision. That is why almost all of the abovementioned countries presently find themselves at a »crossroads« and have not yet decided on which principal route to opt for to sell their main natural resources. It is therefore fairly likely that we will see the Caspian countries develop all four options. Another reason for this is that they do not want to put all their eggs in one basket – as they had to do in the past with Russia – even a new basket, such as the European Union (EU). Indeed, each of these routes is problematic, and it seems that some of them currently present insurmountable challenges, which presumably will have to be solved by politicians of the next generation.

In this chapter, I shall explore the advantages and limitations of the European option for Azerbaijan and Turkmenistan. For these two countries, gas deliveries to EU customers are especially promising – due to their relative geographic proximity and huge reserves (see Table 1) – whereas they are less realistic for Kazakhstan and Uzbekistan. To enable Azeri and Turkmen deliveries is, however, also challenging since a number of hurdles have to be cleared from the path before gas can start flowing westwards.

2. Choosing the EU as a Customer?

Naturally, when a western orientation for Caspian gas deliveries to Europe is considered it is primarily the muchtalked-of Nabucco gas pipeline that is meant (see also Brendan Devlin's and Katrin Heer's chapter in this volume). What, therefore, are the advantages and limitations of the western direction for gas transportation from the Caspian countries?

First of all, it should be mentioned that, historically and traditionally, Europe is the largest market in terms of demand for hydrocarbons, especially for natural gas. It is not by chance that all gas pipelines running through the territory of the former Soviet Union and contemporary Russia are directed from east to west towards Europe. Forecasts for the EU also confirm fast-growing demand for additional natural gas in both the short and long terms. Moreover, it should be noted that the countries of the European Union and Europe as a whole are likely to be the most reliable business partners of all possible consumers of natural gas from the Caspian Sea basin coun-

Table 1: Proven Reserves and Production of Natural Gas in the Caspian Countries¹

Natural gas	Azerbaijan	Kazakhstan	Turkmenistan	Uzbekistan
Proven reserves (2009) in trillion cubic metres	1.31	1.82	8.10	1.68
Share of world total in per cent	0.7	1.0	4.3	0.9
Production (2009) in billion cubic metres	14.8	32.2	36.4	64.4
Share of world total in per cent	0.5	1.1	1.2	2.2

^{1.} BP (2010), Statistical Review of World Energy, p. 22, 24. Available at: http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2008/STAGING/local_assets/2010_downloads/statistical_review_of_world_energy_full_report_2010.pdf (accessed on 27 September 2010).



tries. This is especially noticeable when the new partners for purchasing of natural gas from Central Asia, such as Iran, China and Russia, periodically change contractual terms and even annul contracts, unilaterally suggesting alternative payment options, such as barter. European countries, most of which are members of the OECD, as a rule meet high standards of accountability and transparency and, in these term, are reliable and, most importantly, predictable partners.

Also important is the attraction of European values for most countries of the East. They have become the key driving force in efforts to join the European Union in the aftermath of the disintegration of the Soviet Union. Although there is no intention on the part of the Caspian countries to become members of the European Union, the EU is regarded as an attractive institution. Public opinion in all of the abovementioned countries unambiguously favours the EU and European values. In this sense, considering the EU as a business partner always triggers a positive reaction among the majority of members of the national elite and civic representatives.

At the same time, the European route of natural gas delivery entails a number of limitations for the Caspian countries. First of all, there is a considerable geographical distance between the EU and the Caspian countries, especially the countries of Central Asia. Obviously, this circumstance makes the European route fairly unpredictable and high-cost. The unresolved issue of the Caspian Sea's status should also be taken into account. Given the uncompromising position of Iran above all, the project of a Trans-Caspian – that is, sub-sea – gas pipeline making it possible to deliver natural gas from Central Asia via Azerbaijan to the EU seems rather vague. In addition, there are some inconveniences due to the Nabucco pipeline's own architecture. Sometimes it seems that the European Union has not clearly decided on the importance of this project. The large number of countries which are to be connected by the Nabucco gas pipeline is a hindrance to obtaining a firm political decision on it. It seems that various EU countries have different attitudes towards the project. For some of them, such as the East European countries, it seems more important than for others (particularly France, Italy and some other older member states), which consider it to be non-essential. A lot depended on Germany's position, which only recently declared itself a strong supporter of Nabucco. As a result, a political decision on the Nabucco pipeline and a mechanism for its financing look unconvincing and even nebulous

On the other hand, it is evident that some so-called authoritarian Caspian countries are not particularly eager to enter into negotiations on gas supplies to Europe, being aware of possible consequences with regard to human rights, freedom of speech and democracy, which will have to be met as counter-obligations. In this sense, it is much easier to cooperate with Russia, Iran and China, countries which are absolutely indifferent towards such values, considering them to be the internal affair of individual states. It is well known that human rights, freedom of speech and democracy are particularly burning issues in Turkmenistan and Uzbekistan, although Kazakhstan and Azerbaijan also face a number of problems in those areas.

The importance of the Nabucco gas pipeline varies in relation to different Caspian countries. Let us consider the motivating and obstructive factors for Azerbaijan and Turkmenistan.

3. Weaknesses of the Nabucco Project from Azerbaijan's Perspective

The Nabucco gas pipeline project was initiated not by the supply side, but rather by the demand side; more precisely, by a group of gas importing countries. This involvement on the demand side of financially stable importing countries can certainly be regarded as positive. However, although the importing countries can provide flawless gas delivery and guarantees for gas purchase at the terminal point, the gas necessary to fill the pipeline may be lacking. The quantity of gas needed to fill the Nabucco pipeline to full capacity is currently still lacking, despite numerous agreements and assurances on the part of the producers. The construction of the Baku-Tbilisi-Ceyhan crude oil pipeline in 2003 comes to mind, successful implementation of which is linked to the fact that it was initialised by an oil producing country - Azerbaijan which proved able to complete construction rapidly due to support from the West, above all, the United States.

Another weakness of the Nabucco gas pipeline project is the special role played by Turkey, which is gradually becoming the energy hub of the region. A friendly and strategic relationship between Azerbaijan and Turkey is cer-



tainly beneficial for mutual understanding between these countries and clearly account for the interest of each of these countries in this project. However, something else is at stake. Due to the Nabucco pipeline project and the other transit projects of the Southern Corridor Turkey has an obvious advantage in setting the terms of hydrocarbon transit through its territory. Needless to say, such terms may not always suit other partners, including Azerbaijan and the countries of Central Asia. The disagreement and protracted negotiations on the price for gas from the Azerbaijani natural gas field Shah Deniz and the rates for gas transit through the territory of Turkey illustrate this. Fortunately, all these issues were successfully resolved in early May 2010. Now it can be hoped that the commercial relationship between the two countries will become a success. However, Turkey's competitive advantages with regard to gas transit to Europe and additional opportunities to participate in the Russian South Stream pipeline project further underpin its ability to dictate the terms of gas transit to Europe.

The third weakness of the Nabucco pipeline project is the rivalry it represents with regard to Russia. As the biggest natural gas producer in the world, Russia has its own interests in the region. Having used its »energy weapon« in the region as a club to beat Ukraine with in 2004, Russia obviously has a vital interest in securing its monopoly of natural gas supplies to Europe. In this respect, other players and alternative pipelines going to Europe collide with Russia's plans. That is why Russia is actively cooperating with the leaders of Azerbaijan on the maximum accumulation of Azerbaijani gas in the northern direction, offering attractive conditions to purchase all available gas. The fact that Russia is presently buying Azerbaijani gas at the highest price in the world of 244 US dollars per 1,000 cubic metres serves as proof positive of this.² Although the amount of gas being bought remains small, at 500 million cubic metres per year, Russia keeps urging Azerbaijan to increase it in order to minimise the amount of gas that Azerbaijan is able to ship to the EU.

Europe remains the most reliable and commercially attractive destination for selling natural gas in the long run. Cooperation with the European Union has always been part of Azerbaijani policy. The natural gas business is no exception.

Azerbaijan is already in possession of an infrastructure for gas delivery to Turkey: the Baku-Tbilisi-Erzurum pipeline has been operating since 2007, and 9.1 billion cubic metres (bcm) of gas had already been pumped through by early 2010.³ The capacity of the pipeline (41 inches in diameter) is certainly not enough to meet the needs of the Nabucco project to its full extent, but, provided a successful solution can be found to all issues, beginning with pipeline construction within the framework of the Nabucco project using the existing infrastructure, the gas passage capacity of this corridor can be extended with much greater benefits and efficiency.

Azerbaijan's gas export policy can be expressed as follows: »diversify the diversification«. To put it another way, the Azerbaijani authorities have adopted and are successfully implementing the policy of securing maximum diversity of gas delivery routes. Consequently, nowadays Azerbaijan possesses four pipelines and exports gas in all directions: to the west, using the Baku-Tbilisi-Erzurum pipeline (5.2 bcm in 2009) and the Baku-Gardabani pipeline (less than 0.5 bcm per year); to the south, namely to Iran via the Hajigabul-Astara pipeline (0.5 bcm per year); and to the north, to Russia via the Hajigabul-Mozdok pipeline (0.5 bcm per year).4 Nevertheless, it is obvious that by creating a diversity of gas delivery routes the government initiates competition between potential buyers and gives preference to the most profitable direction. In this respect, the Nabucco pipeline project fits well into the abovementioned policy and participating in this project would benefit Azerbaijan. On the flip-side, however, this means that Azerbaijan will never wish to dedicate all of its gas to a single customer, including the EU.

Certainly, the recent package agreement with Turkey on gas gives Azerbaijan a mighty »carte blanche« for more active cooperation with the Nabucco project partners.

^{4.} Nabucco as a Stimulus to Azerbaijan

^{2.} RBK (2010), Dlya loyal'nykh RF stran Gazprom snizil tseny na gaz, 3 June 2010. Available at: http://top.rbc.ru/economics/03/06/2010/415719.shtml (accessed on 27 September 2010).

^{3.} $\,$ SOCAR presentation during the 17th Caspian International Oil & Gas Conference in Baku on 3 June 2010.

[»]Turan« and »Trend« information agencies.



5. Weaknesses of the Nabucco Project from Turkmenistan's Perspective

The fairly long distance between Turkmenistan and Europe is clearly a problem. Furthermore, the main Turkmen gas reserves are located in the east of the country, 1,000 km away from the Caspian Sea. A gas pipeline connecting the east to the rest of the country needs to be built on land in order to deliver Turkmen gas to western destinations. The recent decision by the Turkmen authorities to build such a pipeline without outside participation is controversial. Nobody knows the terminal point of delivery of the gas or its buyer, as the western border of Turkmenistan is not a point of sale, but rather an intermediate point of the gas transportation route. If this is a signal regarding the onshore route of gas transportation to Russia, why cannot the traditional Central Asia-Centre pipeline also be used successfully? At the same time, no positive signs can be discerned so far in the actions of Turkmenistan's political leadership with regard to the future Trans-Caspian route.

Another weakness of the Nabucco pipeline project is the continuing tension between Turkmenistan and neighbouring Azerbaijan which, ironically, is primarily the result of energy issues. The controversy over the Kyapaz field (in Turkmenistan this small oil and gas field right in the middle of the Caspian Sea is referred to as the Sardar field) is still not settled, and the undefined legal status of the Caspian Sea merely aggravates these antagonisms. Judging by the pace of the negotiation process and Iran's uncompromising stance, this stalemate is unlikely to be broken in the foreseeable future.

A third weakness of the Nabucco pipeline project, from Turkmenistan's perspective, is the low attractiveness of hydrocarbon-rich Azerbaijan as a transit country. It is common knowledge that the poorer a transit country is in hydrocarbon resources the more attractive it is for producers of raw materials to try to pump as much resources as possible over the territory of this transit country. The availability of natural resources in a transit country puts up »natural barriers« by creating competition for pumping hydrocarbons over its territory. Naturally, Azerbaijan, with large reserves of natural gas, is interested in pumping its own gas through the pipeline, and plans to export a total annual amount of 13 to 15 bcm of natural gas by

2025, during the second stage of the Shah Deniz project.⁵ Most of that volume could be provided to Nabucco. But does that mean that the most attractive time for Turkmenistan to join the Nabucco pipeline project will be after 2020, when Azeri gas supply is expected to start to fall?

6. Nabucco's Incentives to Turkmenistan

As for Azerbaijan, Europe is a very reliable and profitable long-term market for Turkmenistan. The Turkmen authorities understand this very well and are aware that being cut off from this large market is likely to mean remaining behind while the world progresses. Despite the long distance and some obstacles to the delivery of Turkmen gas to Europe this market seems very alluring.

Turkmenistan is also interested in diversifying its gas delivery routes to consumers. Turkmenistan's natural gas reserves are considered to be the fourth largest in the world. The entire gas transportation system of the country used to be linked to Russia via the Central Asia-Centre pipeline system. That is why even after independence Turkmenistan was dependent on Russia, which bought Turkmen gas at low prices and resold it on European markets at higher rates. In 1997, Turkmenistan built its first export gas pipeline, to Iran. However, despite the capacity of this pipeline – 8 billion cubic metres per year – Iran has never imported more than 6.5 bcm of the »blue fuel« from Turkmenistan.6

The highest level of gas production was achieved in Turkmenistan in 1989 (89.9 bcm). In subsequent years, natural gas production fell fairly rapidly. In the mid-1990s, annual gas production dropped to some 30 bcm. Natural gas production has gradually increased since then, however, reaching 70.5 bcm in 2008.⁷

^{5.} SOCAR presentation during the 16th Caspian International Oil & Gas Conference in Baku on 4 June 2009.

Tehran Times (2009), Iran-Turkmenistan gas pipeline inauguration slated for late Dec., 15 August 2009. Available at: http://www.tehrantimes.com/index_View.asp?code=200961 (accessed on 27 September 2010)

^{7.} Natal'ya Grib (2010), Turkmeniya predpochla evropejskuyu cenu ob"emam eksporta gaza v Rossiyu, 11 January 2010. Available at: http://www.kommersant.ru/doc.aspx?DocsID=1301816&ThemesID=188 (accessed on 27 September 2010); Nezavisimoe neftyanoe obozrenie Skvazhina, Neft' v mire – Turkmenistan. Available at: http://www.nefte.ru/oilworld/s2.htm (accessed on 27 September 2010).



This was linked to the fact that Gazprom was rapidly increasing its gas imports from Turkmenistan due to skyrocketing gas prices on European markets. However, the price fall of early 2009 resulted in the annual amounts of gas imported by Gazprom from Turkmenistan falling to around 10–11 bcm in 2010. It is widely believed that Gazprom, in order to avoid importing the promised annual 50 bcm at the agreed high prices or paying the penalty, induced the explosion in the Central Asia-Centre gas pipeline in April 2009. As a result, Turkmenistan's annual natural gas production fell by an unprecedented 44.8 per cent in comparison to 2008, totalling a mere 36.4 bcm.8

At the end of 2009, the Turkmen government managed to put into operation an export gas pipeline Turkmenistan-China. The second stage of this gas pipeline is currently under construction. However, the projected gas pipeline capacity of 40 bcm a year will not be realised before 2015. That is why Turkmenistan will scarcely achieve the production level of 2008 in the years to come. Turkmenistan is moving slowly but steadily towards multi-vector gas transportation, with a view to reducing its dependence on Russia. In this respect, the Nabucco pipeline project would fit perfectly into the geostrategic policy of the Turkmen authorities.

7. Conclusion

The examples of Azerbaijan and Turkmenistan show that, despite a number of problems, the Caspian countries are very interested in the Nabucco pipeline project in general. Given these circumstances, the EU has the task of creating competitive opportunities for these gas producing countries. Aiming at the maximum acceleration of these processes, ending the doubts of the gas producing countries and persuading them to develop the western hydrocarbon delivery routes, the European Union could take the following action.

First of all, the EU should demonstrate a united stand on the Nabucco pipeline project and its unanimous interest in this momentous project on the legislative, financial and political levels. This will inevitably give new impetus to potential gas suppliers and business partners in general. The EU should also clearly separate commercial interests from politics and offer a more competitive price where needed in order to win over the Caspian countries from other competitors for gas resources. The EU should enter into an active and committed engagement with Turkmenistan as the long-term prospects of the Nabucco pipeline project look extremely vague without Turkmen participation. The European Union has considered Turkmenistan one of the major suppliers of hydrocarbons for Nabucco since the project's inception in 2002. However, the EU has so far failed to come up with concrete proposals, such as initiating financial support for infrastructural development, support for economic and legal reforms and other relevant programmes for the Turkmen side.

At present, Turkmenistan is steadily moving towards determining its external economic and energy benchmarks. The events of recent years demonstrate that, overall, they do not favour the EU. China is positioning itself in the energy area with more and more confidence, and natural gas is being supplied to three destinations: China, Russia and Iran. Turkmenistan is drifting further away from the western course. The EU is constantly losing leverage. Despite these difficulties, the EU has a real opportunity to get a foothold in Turkmenistan and to guarantee its own energy security by diversifying large gas supplies to the European market.

^{8.} BP (2010), Statistical Review of World Energy (see footnote 1), p. 24.



The Middle East – A Real Gas Option for the Southern Corridor?

Mert Bilgin

1. Introduction

While Caspian gas (see Ingilab Ahmadov's chapter in this volume) is expected to play a key role in the initial phase of the Southern Corridor pipelines, resources in the Caspian region will not be sufficient to fill the pipelines later on. Consequently, the Southern Corridor will need additional supplies from the Middle East. This chapter therefore focuses on the supply-side characteristics – reserves, field development potential and transport options – of Iran, Qatar, Iraq and Egypt, which re the most promising Middle Eastern candidates to supply the Southern Corridor.

Iran has enormous gas reserves and its participation might also allow Turkmenistan to ship gas to Europe via a trunk pipeline that passes through northern Iran and circumvents the Caspian Sea, with its problematic legal status. Iran is, in this sense, the most strategic country in the region. Qatar and Iran, which share the giant North field/South Pars field, have exceptional cooperation opportunities. Iraq might start to export gas to European markets by cooperating with Turkey, if the Kurdish regional authorities and the Iraqi government can agree on the terms of gas exploitation. Finally, Egypt may become a supplier if the Arab Gas Pipeline is extended to Syria and Turkey.

These four countries have significant export potential (see Table 1) which should not be underestimated, despite some regional impediments – for example, the controversy about Iran's nuclear energy programme, Qatar's

interest in LNG, political instability in Iraq and Egypt's difficulty in meeting its gas commitments. Supplies to the EU from Iran, Qatar, Iraq and Egypt are feasible in terms of costs. Furthermore, additional pipelines from the Middle East to Turkey are likely to expand regional cooperation. A closer look at the economic opportunities, free from political restraints, is therefore necessary.

2. Iran

Iran's 29.61 trillion cubic metres of proven natural gas reserves rank second in the world, after Russia.² Natural gas production costs in Iran are very low, indeed they are among the cheapest in the world.³ Iran promises better terms to Europe, stemming from extensive reserves and low production costs, in comparison to other producers, for example, in the Caspian region, the Middle East and Northern Africa. The obstacles to this, however, extend beyond Iran's insistence on pursuing a nuclear energy programme, and include the lack of infrastructure for developing fields and transporting gas.

Iran, knowing that it did not have the means to produce and commercialise gas without developing South Pars and a domestic pipeline grid, put the emphasis on oil production to meet its OPEC quota. Since 1997, the Iranian Petroleum Ministry has taken measures – such as maintenance of production ability, modification of wells, drilling of development wells and development of new oil fields – to avoid a decline in oil production, given that most of its oil fields are in the second half of their life

Table 1: Proven Reserves and Production of Natural Gas in the Middle East¹

Natural gas	Iran	Qatar	Iraq	Egypt
Proven reserves (2009) in trillion cubic metres	29.61	25.37	3.17	2.19
Share of world total in per cent	15.8	13.5	1.7	1.2
Production (2009) in billion cubic metres	131.2	89.3	-	62.7
Share of world total in per cent	4.4	3.0	_	2.1

^{1.} BP (2010), Statistical Review of World Energy, p. 22, 24. Available at: http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2008/STAGING/local_assets/2010_downloads/statistical_review_of_world_energy_full_report_2010.pdf (accessed on 27 September 2010).

^{2.} BP (2010), Statistical Review of World Energy (see footnote 1), p. 22.

^{3.} Anthony Cordesman (2004), Energy Developments in the Middle East, Westport: Praeger, pp. 193–194.



span.⁴ The pressure fall in declining oil fields was a significant problem which limited production of the oil left in decaying fields. Iran re-injected gas in mature oil fields to keep production high by increasing the pressure. It is reported that the injection of 25 million cubic metres of gas made possible the production of 150,000 barrels of oil. In other words, Iran chose a very expensive way of sustaining oil production and until recently gas had to play second fiddle.

Iran is now aware that productivity in mature oil fields is in drastic decline and is therefore in search of ways of establishing its gas trade, not only with European countries but also with China and India. The lack of natural gas infrastructure in Iran increases primary investment costs and is a hindrance to the government's plan of becoming a significant exporter. Iran, despite its reserves, is a net importer of natural gas, mainly from Turkmenistan through a 200-km pipeline - in operation since 1997 between Turkmenistan's Korpedze and Iran's Kurdkui regions.⁵ Iran currently imports 5.77 billion cubic metres (bcm) per year from Turkmenistan for its domestic consumption, while exporting 5.25 bcm to Turkey via a pipeline between Tebriz and Ankara (in operation since 2001).6 Iran has also built another pipeline to carry natural gas to Armenia in exchange for electricity.7

Iran's natural gas field Sarakhs currently provides most of the gas and is located in north-eastern Iran, while the South Pars field – the most promising region and containing almost half of Iran's total reserves – lies in the Persian Gulf.8 Iran is committed to developing this field by cooperating with foreign companies in order to export natural gas to Europe via the Nabucco pipeline, as well as to India via a proposed pipeline between Iran, Pakistan and India (IPI). Iran has launched a 25-phase plan to develop South Pars with multinational companies over 20 years.9

The Iranian government has reached agreement with many foreign companies – for example, from China, France, Germany, Italy, Japan, the UK, Russia, and the US – to develop its natural gas industry and infrastructure. These agreements are reported to represent a total investment of more than 170 billion US dollars between 2000 and 2007 in the petrochemical, gas and oil sectors. Iran, therefore, appears to be a promising gas supplier in terms of reserves and field development potential.

However, the realisation of supplies from Iran still comes up against the problem of the country's insistence on a nuclear energy programme, which provokes fears about nuclear weapons proliferation among the international community. The Turkish government, along with Brazil, has become very active in trying to find a solution to this deadlock.¹¹ On 17 May 2010, Turkey, Brazil and Iran agreed to ship 1,200 kg of Iran's low enriched uranium enough for a single bomb if purified to a high enough level – to be stored in Turkey and then transported to another country (for example, Russia or France) to be turned into fuel, which would be returned to Iran in amounts which can be used in reactors. The agreement was not approved by France, the US and Russia, who claimed that Iran's low enriched uranium had already exceeded 1,200 kg, while Iran was still enriching uranium to a purity of 19.75 per cent. On 9 June 2010, the UN Security Council approved Resolution 1929 authorising sanctions such as financial curbs, an expanded arms embargo and warnings to UN member states to be vigilant about a range of Iranian activities. A total of 12 members, including the permanent five (the UK, China, France, Russia and the US) voted in favour; Lebanon abstained; Brazil and Turkey voted against.

The motive for Turkey's initiative to normalise Iran's international status can be explained in terms of three as-

^{4.} K. Soltani-Shana (2005), Injection of Gas, Production of Oil, in: Assaluyeh. Available at: http://www.assaluyeh.com/articles.php?124-en (accessed on 27 September 2010).

^{5.} Ibid

^{6.} BP (2010), Statistical Review of World Energy (see footnote 1), p. 30.

^{7.} BBC (2007), Iran, Armenia Open Gas Pipeline, in: BBC News, 19 March 2007. Available at: http://news.bbc.co.uk/2/hi/europe/6466869.stm (accessed on 27 September 2010).

^{8.} Jafar Aali, Hossain Rahimpour-Bonab and Mohammad Kamali (2006), Geochemistry and the Origin of the World's Largest Gas Field in the Persian Gulf, Iran, in: Journal of Petroleum Science and Engineering, Vol. 50, No. 3–4, pp. 161–175.

^{9.} J. Javanmardi, Kh. Nasrifar, S. Najibi and M. Moshfeghian (2006), Feasibility of Transporting LNG from South-Pars Gas Field to Potential

Markets, in: Applied Thermal Engineering, Vol. 26, No. 16, pp. 1812–1819.

^{10.} Reuters (2008), Foreign Investment in Iran from 2000–2007, 16 January 2008. Available at: http://www.reuters.com/article/BROKER/idUSL1684472920080116 (accessed on 27 September 2010).

^{11.} Parisa Hafezi (2010), Turkey, Brazil Seal Deal on Iran Nuclear Fuel Swap, in: Reuters, 16 May 2010. Available at: http://www.reuters.com/article/idUSTRE64F29P20100516 (accessed on 27 September 2010); lan Black (2010), UN Approves New Iran Sanctions, in: The Guardian, 9 June 2010. http://www.guardian.co.uk/world/2010/jun/09/iran-sanctions-united-nations-nuclear (accessed on 27 September 2010); Trita Parsi, The Turkey-Brazil-Iran deal: Can Washington Take >Yes</br/>for an Answer?, in: Foreign Policy, 17 May 2010. Available at: http://mideast.foreignpolicy.com/posts/2010/05/17/the_turkey_brazil_iran_deal_can_washington_take_yes_for_an_answer (accessed on 27 September 2010).



pects. First, Iranian-Turkish trade was worth around 11 billion US dollars in 2009 and Turkey wants to expand it. Second, Turkey's foreign policy is based on building peace and stability in its neighbourhood; this is why the Turkish government is carefully building trust in the region. Third, Iran is one of the most promising candidates for further gas supplies to Turkey, and it can bring not only Turkmenistan but also Qatar into the Western pipeline grid by channelling its domestic system.

3. Qatar

Qatar is the third best endowed natural gas country after Russia and Iran, and was the world's largest LNG producer in 2006. Its reserves are reported to be 25.37 trillion cubic metres. ¹² The North Field, the largest non-associated natural gas field in the world, contains most of the proven reserves. ¹³ The North Field is a geological extension of Iran's South Pars field, demarcated by the maritime border of the two countries.

The Dolphin Project in the North Field, which came on stream at the end of 2006, for the first time has established a network between Qatar, the United Arab Emirates (UAE) and Oman. ¹⁴ The 7 billion US dollar project includes the development of a 370 km subsea pipeline, which currently carries up to 20 bcm per year to the UAE.

Qatar plans to increase its production from 57 bcm in 2009 to 104 bcm. ¹⁵ Low LNG prices in 2010 – strongly related to the increase in LNG production from shale gas in the USA – happened to be a significant challenge for Qatar. Could Qatar, therefore, be interested in selling natural gas to European markets? Apparently, this is possible if there was a pipeline from Qatar to Turkey. Under current circumstances, it would be very difficult to convince European buyers to buy piped natural gas from Qatar so far as cheaper Qatari LNG remains an option. This may change in the medium term, depending on the differ-

ences between LNG and contractual pipeline gas prices, on the one hand, and the possibility of building a pipeline to Turkey via Iran, on the other.

4. Iraq

Irag's natural gas reserves total 3.17 trillion cubic metres. 16 Most of the proven reserves are associated gas. The Al Anfal natural gas deposits, located 32 km from Kirkuk and 380 km from the Turkish border, constitute the only Iraqi gas field which is non-associated to oil production. Other non-associated fields, although with no production, are Chemchamal, Jaria Pika, Khashm Al-Ahmar and Mansuriya. 17 Iraq exploited the associated gas of the Rumaila and Zubair oil fields (transported to the Zubair and Basra plants to be liquefied and processed there) until the 2003 war, which resulted in the total collapse of gas infrastructure. Currently, Iraq is reconstructing its associated gas production capacity in the Zubair and West Qurna oil fields and exploring gas in Akas. In addition, Iraq intends to develop non-associated gas fields by focusing on Al Anfal, where production started in 1990 but remained undeveloped until 2003, when the US invasion brought things to a halt. Iraq is negotiating with the Turkish government to import Al Anfal gas, which would be piped from Jambur gas processing station near Kirkuk to Europe via Turkey.

In the meantime, the Kurdish Regional Government (KRG) has signed agreements with several parties, including Turkish state company TPAO, to develop Iraq's northern fields and to sell gas via Turkey. The most significant agreement by the KRG, signed in 2009, concerns the EU very closely, as two of the consortium members (OMV of Austria and MOL of Hungary) are partners and equal shareholders in the Nabucco Consortium. ¹⁸ It is therefore very likely that Iraq will be included as a supplier to the Nabucco pipeline, and export up to 14–15 bcm of gas, if the KRG reaches agreement with the Iraqi government in due course. ¹⁹

^{12.} BP (2010), Statistical Review of World Energy (see footnote 1), p. 22.

^{13.} Rasgas, The North Field. Available at: http://www.rasgas.com/l_3.cfm?L3_id=1&L2_id=1 (accessed on 27 September 2010).

^{14.} Dolphin Gas Project, Ras Laffan, Qatar. Available at: http://www.hydrocarbons-technology.com/projects/dolphin-gas/ (accessed on 27 September 2010); http://www.dolphinenergy.com/Public/facilities/facilities-gas-pipeline.htm (accessed on 27 September 2010).

^{15.} Qatargas, 2009 Annual Report, p. 13. Available at: http://www.qatargas.com.qa/uploadedFiles/QatarGas/Media_Center/Publications/Annual%20Review%202010.pdf (accessed on 27 September 2010); and author's calculations.

^{16.} BP (2010), Statistical Review of World Energy (see footnote 1), p. 22.

^{17.} Toyin Falola and Ann Genova (2005), The Politics of the Global Oil Industry, Westport: Praeger, p. 187.

^{18.} Mert Bilgin (2009), Geopolitics of European Natural Gas Demand, Supplies from Russia, Caspian and the Middle East, in: Energy Policy, Vol. 37, No. 11, p. 4490.

^{19.} Business Monitor Online (2010), Nabucco Boosted by Offer of 15 bcm from Kurdistan, in: All Business, 8 June 2010. Available at: http://www.allbusiness.com/legal/international-trade-law-export-import-controls/14591956–1.html (accessed on 27 September 2010).



5. Egypt

Recent discoveries in the Nile Delta and the Western Desert have increased Egypt's proven reserves to 2.19 trillion cubic metres.²⁰ The Abu Madi, Badreddin and Abu Qir fields contain non-associated gas, accounting for almost half of Egypt's production. Egypt, having already become the sixth-largest LNG exporter in the world by 2006,²¹ promises to emerge as a natural gas exporter to Europe after developing new fields in the Nile Delta, such as Port Fuad and South Temsah.

The Arish-Ashkelon pipeline between Egypt and Israel was completed in 2008 with a capacity of 7 bcm per annum.²² Gas started flowing in May 2008, in accordance with the terms of an agreement signed in 2005 for the supply of 1.7 bcm for 20 years.²³ The Arab Gas Pipeline, connecting Egypt with Jordan and Syria, was completed in 2008. This pipeline might be extended to Iraq to be connected with the Nabucco pipeline. It was originally planned that Egypt would be able to export 1 bcm in 2008 and 2 bcm in 2009. In the meantime, Turkey agreed with Syria to extend the Arab Gas Pipeline to Nabucco.²⁴ Nevertheless, this plan was suspended as the »domestic upheavals in Egypt forced the government to prioritise supplies to its domestic market first, resulting in it proclaiming a moratorium on new export contracts until 2010«.25

This moratorium postponed plans to supply Egyptian gas to Europe via the Arab Gas and Nabucco pipelines until at least 2010. Another difficulty concerning natural gas supplies from Egypt to Europe arises from Egypt's plan to develop LNG trade. The Spanish Egyptian Gas Company

(SEGAS) has an export capacity of 7.56 bcm per year,

whereas Egyptian LNG has an export capacity of approximately 10 bcm per year.²⁶ Egypt is also planning to build new liquefaction units in addition to its three trains to benefit from the strategic locations of Port Said and Damietta which make possible about 17 bcm of LNG exports to Mediterranean and Gulf countries. The development of the LNG industry in Egypt indicates that this country would be neither interested in nor capable of supplying natural gas to Europe via pipeline in the medium term.

6. Conclusion

The gas supply potential of Iran, Qatar, Iraq and Egypt is significant. These countries appear to be likely suppliers for European gas markets, thereby giving rise to economic opportunities which may help to ease long-term political problems if regional cooperation develops. To take some examples from among many possibilities: pipelines from Iran to Turkey, and from Turkmenistan to Iran, could embed Turkmenistan within the European gas grid. Pipelines from Egypt to Turkey, in the meantime, can foster regional cooperation among Egypt, Jordan, Syria and Iraq. Turkey, indeed, emerges as the main artery for the Southern Corridor to Europe. Pipelines from the Middle East to Europe will definitely contribute to the EU's energy security.

This picture, which is theoretically possible at least for the reserves and field development projects of the selected countries, is, however, jeopardised by a number of technical, economic and political issues. Technically and economically:

- Qatar is predominantly interested in LNG, which nowadays confronts low prices and channels additional restraints and opportunities. Lower LNG prices, which also exert pressure for the reconsideration of long-term pipeline contracts, make Qatar less interested in investing in pipeline projects.
- The development of the LNG industry in Egypt reduces the potential for gas exports via pipelines; Egypt confronts the same problems as Qatar.

^{20.} BP (2010), Statistical Review of World Energy (see footnote 1), p. 22.

^{21.} Gordon Feller (2006), Egypt Seeks Ways to Use More of Its Own Natural Gas, in: Pipeline & Gas Journal, Vol. 233, No. 7, p. 35.

^{22.} Market Observatory for Energy (2010), Egypt Country File, July 2010, p. 10. Available at: http://ec.europa.eu/energy/observatory/doc/ country/2010_07_egypt.pdf (accessed on 27 September 2010).

^{23.} Al Jazeera (2010), Egypt gas exports to Israel legal, 27 February 2010. Available at: http://english.aljazeera.net/news/middleeast/ 2010/02/201022713820935395.html (accessed on 27 September 2010).

^{24.} Kostis Geropoulos (2008), Pan-Arab Gas to Supply Nabucco, Just a Pipe Dream?, in: New Europe, Vol. 771, No. 3, March 2008. Available at: http://www.neurope.eu/articles/83558.php (accessed on 27 September

^{25.} Global Insight (2008), Promising Offshore Acreage Offered in Upcoming Egyptian Licensing Round, 30 September 2008. Available at: http://www.globalinsight.com/SDA/SDADetail14385.htm (accessed on 27 September 2010).

^{26.} Anton Eberhard and Katharine Gratwick (2007), From State to Market and back again, Egypt's Experiment with Independent Power Projects, in: Energy, Vol. 32, No. 5, pp. 724-738, here p. 735.



■ Shale gas production in the US – and possibly in Poland – will definitely affect aspects of the gas trade in and around Europe.

These technical and economical restraints are significant but they can be overcome by the cost advantages obtained on the supply side. The real problem therefore emerges on the political side:

- Supplies from Iran are still subject to the country's problems with the international community concerning its nuclear programme.
- Regional clashes in Iraq, and possible disagreements between the Kurdish Regional Government and the Iraqi government, maintain doubts on gas supply security.
- Ethnic and regional problems between Kurds, Shias and Sunnis not only jeopardise Iraq's energy projects but also decrease the likelihood of cooperation between countries such as Iran and Oatar.

These problems may be seen as impediments decelerating the implementation of the Southern Corridor. However, the contrary is also true from the supply security and free trade perspectives. Europe's supply security perspective would definitely support diversification of suppliers. From a European free trade perspective, the more the EU develops its energy relations with the Middle Eastern countries, the more it is likely that these countries will contribute to stability and regional cooperation. Turkey, on this basis, has been launching initiatives to sustain stability and build mutual trust in the Middle East. Turkey's success at fostering regional gas trading and animating the Southern Corridor to Europe will be strongly linked to the resolution of political and ideological issues, some of which have been mentioned. From this point of view, gas production and transportation projects within the Southern Corridor have helped to strengthen regional stability and foster cooperation in the Middle East. This is why the Southern Corridor emerges not only as a real option for gas trading between the Middle Eastern countries and customers in the EU, but also as a political opportunity which is capable of generating new visions of the region's future.



The Southern Corridor – Not without Russia?

Maria Belova

1. Introduction

In addition to the – at least in theory, although not yet in practice – plethora of potential supplier-countries which could feed the Southern Corridor (see Ingilab Ahmadov's and Mert Bilgin's chapters in this volume), Russia, too, could partly supply the Southern Corridor's pipelines. However, this would contradict the logic, if not the idea behind the Southern Corridor: according to the EU Commission (see Brendan Devlin's and Katrin Heer's chapter in this volume), energy corridors do not refer to transport routes but to countries of origin. Russian deliveries, therefore, will always be part of the Eastern corridor, regardless of their transportation route, be it via Ukraine or Turkey, the Baltic or the Black Sea.

Nevertheless, Russian gas supplies, as well as Russia's energy policies, significantly influence the EU's intentions with regard to establishing a Southern Corridor in general, as well as pipeline projects such as Nabucco in particular. With this in mind, this chapter, first, addresses Russia's role in the attempts to transport Turkmen gas to Europe and second, examines the relationship between the Nabucco and South Stream pipeline projects. Finally, it calls upon the EU to cease its »avoid Russia« strategy in favour of an energy policy based primarily on economic grounds.

2. Bringing Turkmen Gas to Europe by By-passing Russian Territory?

The Turkmen gas trade is currently experiencing radical changes. Hitherto, there was usually one exclusive buyer (Ukraine, Russia or Iran) and a marginal partner with much smaller volumes in the Turkmen gas export balance. At present, Turkmenistan is widening its export options beyond the traditional export route to Russia by building new pipelines to Iran and China. Although gas exports to both countries are not expected to exceed 20 billion cubic metres (bcm) in 2010, the final annual export capacities of currently existing and projected export pipelines will be a remarkable 20 bcm to Iran (currently 14 bcm), and 40 bcm to China (currently 13 bcm). Since the existing export capacity to Russia is more than 65 bcm, the government in Ashgabat will be able to sell

up to 125 bcm a year to its present partners within a few years.¹

This means that Turkmenistan does not need to strive for additional exports to Europe, since it now has a diversified export portfolio and sufficient export capacities. Nevertheless, Europe undoubtedly is at the top of Turkmenistan's priority list, since European customers promise to pay higher prices. Turkmen President Kurbanguly Berdymukhamedov declared at a government meeting in July 2009 that »currently, Turkmenistan has excess gas for trade. We are ready to send it abroad to any customer. This includes Nabucco.«²

There are three options for bringing Turkmen gas to the Nabucco pipeline in Turkey:

- onshore via the existing Russian gas transport system, Azerbaijan and Georgia;
- onshore via the existing Iranian pipeline network which could serve as a bridge to link Turkmenistan with the Nabucco route's terminal in Turkey; and
- offshore via the proposed Trans-Caspian Gas Pipeline, Azerbaijan and Georgia.

According to the abovementioned concept of the Southern Corridor, the first so-called Russian option conflicts with it. The second is not supported by the United States or, consequently, by the European Union due to the unresolved problem of Iran's nuclear programme. But Richard Morningstar, the US Special Envoy for Eurasian Energy, at the Nabucco signing ceremony in Ankara on 13 July 2009, hinted that Iran's participation could be traded in exchange for concessions on the nuclear issue.³ Finally, the third option of a submarine pipe suggested by the US in 1996 does not look very promising, since Russia and Iran oppose it due to the unresolved legal dispute over Caspian Sea territorial boundaries.

Author's calculations based on data from Gazpromexport, and from Na vse chetyre storony. Turkmenistan nachal postavlyat' gas srazu neskol'kim importeram, in: Razvedka i dobycha, No. 34, 18 January 2010, p. 17. Available on subscription at: http://www.rusenergy.com/ru/ newsletters/newsletters.php?let=32&id=48561 (accessed on 27 September 2010).

^{2.} Marat Gurt (2009), UPDATE 2 – Turkmenistan ready to supply gas for Nabucco link, in: Reuters, 10 July 2009. Available at: http://www.reuters.com/article/idUSLA2358920090710 (accessed on 27 September 2010).

^{3.} Deirdre Tynan (2009), Turkmenistan: Berdymukhamedov Makes Nabucco Pledge, Moscow Takes Energy Hits, in: Eurasianet, 12 July 2009. Available at: http://www.eurasianet.org/departments/insightb/articles/eav071309b.shtml (accessed on 27 September 2010).



Russia has taken the legal position that a potential pipeline project, regardless of the route it takes on the seabed, would require the consent of all five Caspian littoral states in order to proceed, and Iran has pointed out that treaties signed by Iran and the Soviet Union in 1921 and 1940 are still in force, so that any action taken without the consent of all the littoral states would be illegal. Moreover, Tehran opposes the construction of any undersea pipelines in the Caspian because of environmental concerns.⁴ Even when legal status of the Caspian Sea is finally defined and, potentially, Russia and Iran cease to oppose the Trans-Caspian pipeline, it may be – although it is unlikely – that the pipeline will go through the Exclusive Economic Zones (EEZs) of Russia and/or Iran. This would be reminiscent of South Stream and its choice between the Turkish and Ukrainian Exclusive Economic Zones in the Black Sea. A situation in which Russian territory were involved would not allow Nabucco to be 100 per cent a Southern Corridor route. In order to ensure that Nabucco is a non-Russian Southern Corridor project, Turkmen gas must be supplied as liquefied or compressed gas shipped by tanker from Turkmenistan through the Caspian Sea. But in that case Turkmen gas would be too expensive for European customers. Is Europe ready to pay this price for energy security and diversification of supply?

3. South Stream – Russia's Response to the EU's Southern Corridor?

The South Stream project, which is being pushed by Russia's Gazprom and Italy's ENI, is often regarded as competing with Nabucco and thus opposed to the Southern Corridor concept. It is a pipeline project with a final capacity of 63 bcm, slated to run across the Black Sea to Bulgaria, before separating into two lines which would extend to Italy and Austria. South Stream's main task is to divert some gas currently exported through Ukraine in order to minimise transit risks, but it would also provide access to a new source of not only Russian, but also Turkmen gas for the EU, via Russia's Unified Gas System, to which Turkmenistan is connected.

The feasibility study was finalised in June 2010, in which two options are considered for crossing the Black Sea

through Turkish and Ukrainian territorial waters. Further progress will depend on securing transit through the Ukrainian or Turkish EEZs in the Black Sea. The Turkish option would be the more expensive one, but without the evident political transit risk which is associated with Ukraine. During President Dmitry Medvedev's visit to Turkey in May 2010, an agreement on the conditions of pipeline construction within Turkey's EEZ was expected but has not been signed. The permission for pipeline construction now is expected to be obtained in November 2010. At the same time, the progress which has been made in Russian–Ukrainian gas relations since the new president of Ukraine Viktor Janukovich came into power in February 2010 means that the South Stream partners may consider the Ukrainian EEZ in the Black Sea as the better option for pipeline construction.

It is important to understand that neither Turkey nor Ukraine has an interest in a successful South Stream. Indeed, the realisation of South Stream (even through the Turkish EEZ) will postpone or even cancel the realisation of the Blue Stream-2 project (a line parallel to Blue Stream-1 between Russia and Turkey under the Black Sea, and further on from Samsun to Ceyhan, which would bring natural gas further on from Ceyhan to Syria, Lebanon, Israel and Cyprus). The Blue Stream-2 pipeline would give Turkey the opportunity to become an important transit country for Russian gas. For Ukraine, it would result in a decrease in transit gas flows and through its existing pipes.

However, this is not the only uncertainty for the South Stream project. There are also doubts among the foreign backers with regard to the sharp discrepancy between Russian gas contract prices and spot market prices. Moreover, uncertainty remains concerning European gas demand, and the EU's developing energy legislation might also reveal some surprises. That is why the South Stream partners deem it necessary to include the project in the list of infrastructural systems representing special importance for EU gas supply (TEN-E) in order to obtain exemption from the third gas directive on third-party access. According to the official position of several representatives of the European Commission's Energy Directorate-General, however, that is rather unrealistic.

Under the current circumstances of economic crisis and forecasts of declining European gas market development it looks less likely that both South Stream and Nabucco

^{4.} Iran protiv prokladki truboprovodov po dnu Caspiya, in: Oilru.com, 4 September 2008. Available at: http://www.oilru.com/news/81667/ (accessed on 27 September 2010).



will be built simultaneously in the same region. Otherwise, there would be a high risk of creating excess capacity, which would be in the interests of the buyers rather than the gas producers. For that reason, one solution could be a partial merger of the projects, as already proposed several times by different stakeholders. For example, according to Paolo Scaroni, chief executive officer of ENI, South Stream and Nabucco should combine efforts in a joint cost-cutting drive. He said that if »all partners decide to merge the two pipelines for part of the route, we would reduce investments, operational costs and increase overall returns«.5 Richard Morningstar also emphasised that Washington has sought to involve Russia in new import arrangements for the European Union. »Russia can participate as a partner«, Morningstar said during the Nabucco signing ceremony in Ankara. »We're trying to engage with Russia in the energy area. We don't want to see a zero-sum game.«6

Moscow was nonplussed by idea of merging South Stream with Nabucco, given that both projects assume (as an intermediate task) gas supply practically to the same delivery point (to Bulgaria) and hence to the same markets in Southeastern Europe and beyond. However, it is possible to discuss the creation of a hub there, to which gas will come from Turkey (via the already constructed gas pipeline Baku-Erzurum and/or other current and potential onshore gas pipelines with the use of mainly existing Turkish and Bulgarian infrastructure), and through the Black Sea (the under-sea part of the South Stream project). Beyond the hub the joint pipeline project can be implemented, the specific route of which is subject to further discussion.

The timeframe for the decision-making process is tight. The investment decision on Nabucco's construction will be made by the end of 2010 at a special conference in Brussels, and the same will happen with South Stream.

In any case, realisation of the idea of merging projects would allow, first, Russia to reduce the huge costs of the South Stream project (officially estimated costs vary from

4. Conclusion: Let Economic Interests Prevail

As the assessments of Turkmenistan and South Stream show, pipelines in the Southern Corridor, such as Nabucco, would profit substantially if Russia participated. Russian participation would not be in accordance with the EU Commission's initial intention of creating a non-Russian energy transit corridor, but should a Russian Eastern Corridor and a non-Russian Southern Corridor be kept distinct from one another simply for the sake of conceptual purity? Furthermore, would a measure of Russian participation in Southern Corridor projects really endanger the EU's energy supply?

An important aspect of Russian energy policy is to deal with the politically motivated »avoiding Russia« strategies of the EU and the US, including the Southern Corridor concept. From a Russian perspective, Gazprom will remain the most reliable supplier for decades to come. The European business community is fairly confident about this, despite the Russian-Ukrainian gas disputes, which it regards as a transit problem, not as a problem with Russia as country of origin. Accordingly, the EU should not regard Russian territorial control over a major pipeline system – existing or projected – to the EU as an issue of dependence, but one of interdependence and as a generally convenient way of delivering gas supplies through additional import routes (South Stream is a good example here) and/or additional gas supplies. While the EU's and global economic development depends on Russian energy deliveries, Russia depends on physical demand and prices for its exports. Since Russia exports about one-third of its output of coal and gas, and twothirds of oil and refinery products, security of demand is

⁸ billion to 25 billion euros)⁷ and risks related to the project. This is essential at a time of global financial crisis and will also help Russia to avoid the potential problems with gas transit to European customers through a large number of transit states. Second, although it would most likely be (at least partially) Russian gas or gas running through Russian territory, Nabucco could finally contract for gas.

^{5.} Euractiv (2010), Italy's Eni wants rival gas pipelines to collaborate, 11 March 2010. Available at: http://www.euractiv.com/en/energy/italy-s-eni-wants-rival-gas-pipelines-collaborate-news-327050 (accessed on 27 September 2010).

^{6.} Deirdre Tynan (2009), Turkmenistan: Berdymukhamedov makes Nabucco pledge, Moscow takes energy hits (see footnote 3), 2009.

^{7.} Natal'ya Grib and Seda Egikyan (2010), Germaniya prosochitsya v Yuzhnyi Potoko. Wintershall stanet chetvertym uchastnikom v proekte, in: Kommersant 174 (4474), 21 September 2010. Available at: http://www.kommersant.ru/doc.aspx?DocsID=1507703 (accessed on 27 September 2010).



a major concern for Russia; but by the same token it is a major guarantee of Russia's economic interest in continuing smooth and reliable energy trade with its customers in the EU. No negotiations between the parties involved could change this basic equation.

While EU representatives accuse Russia of politicising its energy relations with third countries, it has been Western actors that have conducted a politicised »avoid Russia« energy policy, of which the construction of the Baku-Tbilisi-Ceyhan (BTC) oil pipeline and the Baku-Tbilisi-Erzurum (BTE) gas pipeline are two examples. Nabucco and the Southern Corridor in general are the next »avoid Russia« projects. But it is economic interests that should prevail for both sides. From a Russian perspective, it is obviously in its economic interest to maintain access to the EU market and transit revenues. On that basis, attempts to counterbalance the efforts to squeeze Russian economic interests out of the corridor between the Caspian region and Central Europe (including the Southern Corridor) seems quite natural. Russia would be delighted if the EU, too, acted according to economic principles, and ceased its politically motivated »avoid Russia« energy policy. Joining forces in projects of mutual interest, such as Nabucco and South Stream, would be a winwin approach for both Russia and the EU.



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