NABUCCO PIPELINE AND THE TURKMENISTAN CONUNDRUM

Marco Giuli*

Abstract

This paper aims at exploring the prospects for Turkmen natural gas participation in the Nabucco pipeline project. Since the Azerbaijani and Iranian resources suffer technical and political setbacks, Turkmenistan's inclusion among the supplying countries is turning out to be essential even if its prospects are probably unsustainable in the long term, when huge amounts of Iranian gas will be needed. However, Turkmenistan could be considered as a "bridging provider" justifying the realization of Nabucco in preparation for a reduction of the international tensions stemming from the Iranian nuclear program. Despite the improved political landscape in Turkmenistan, several obstacles still persist: among them, the commitment of the new leadership to supply Russia and China as well as the weak prospects for the Trans-Caspian pipeline.

Keywords: *Turkmenistan, natural gas, Nabucco, Caspian Sea, EU, Russia, Iran*

Introduction

The idea to supply gas to Europe from the Caspian basin and the Middle East has been around for a long time. The 31 bcm [billion cubic meters]/year Nabucco project dates back to 2002, and a consortium led by Austrian OMV was established in 2004. The project is strongly supported by the EU and the US as a means to boost competition in the European gas market, by reducing the dependence on Russian gas as well as to emancipate the transition paths of former Soviet countries from their dependence on Russian-controlled gas export routes. The feasibility of the project is often questioned because of uncertainty related to supply.

This paper aims at assessing the role of Turkmenistan's natural gas in enhancing the prospects for Nabucco, by analyzing the drawbacks related to the other actors involved. To reach this aim, the first section will explore the main characteristics of the Turkmen natural gas sector such as the reserves, the production, the export routes, the transport system and the organization of the sector. The second section will be dedicated to the limits of Azerbaijan and Iran in filling the pipeline. The importance of these countries stems from the fact that Azerbaijan is the only safe source so far and Iran was considered as the main potential supplier during the first years of the project. Finally, the third section will focus on the problems and prospects of Turkmenistan's

* ***Marco Giuli*** *resides currently at the Centre for European Policy Studies in Brussels. He is currently developing research related to EU-Russia energy issues.*

participation, by analyzing the doubts arising from the size of the Turkmen reserves and the uncertainties related to the transport facilities.

Turkmenistan: natural gas profile

In order to evaluate the relevance of Turkmenistan gas for the Nabucco project, it is necessary to reach a clear understanding of the real amount of this gas. Turkmenistan had proven natural gas reserves of 2.67 tcm at the end of 2007, ranking the country among the top 11 countries in terms of natural gas reserves with a 1.6% share of global reserves and the second highest after Russia as far as former Soviet Union republics are concerned.[1] In terms of production, Turkmenistan's natural gas output was 62.2 bcm in 2006. In the aftermath of the USSR's collapse in 1991, the production fell from 57 bcm/y in 1992 to 12.4 bcm/y in 1998 due to a pricing dispute with Russia, the only outlet for Turkmen gas given the centralized post-Soviet infrastructural profile. Having dropped throughout the 1990s, natural gas production sharply recovered from 1998 thanks to a Turkmen-Russian long-term agreement, skyrocketing from 12.4 bcm/y to 43.8 bcm/y within two years. Since 2000, output grew steadily at a 6% rate annually. According to the chairman of TurkmenGaz, Yashigeldy Kakayev, the country is planning to double gas production to 120 bcm/y by 2010 and to triple to 240 bcm/y by 2030.[2] In terms of reserves/production ratio, Turkmenistan performs very poorly in comparison to the other Central Asian republics: with 214 and 70 years of production remaining respectively, underexploited Azerbaijan and Kazakhstan lie far ahead. At the current level of exploitation, Turkmen fields can last about 44 years.

All the major gas fields are located in the Amu'Darya basin, the Murgan basin and the South Caspian basin. Among the operating ones, most of them have begun to show early signs of natural depletion. Furthermore, the fields expected to provide the most of the foreseeable additional output in the near future are likely to produce sour gas with high contents of sulfur and mercaptan which increase the costs of refining as well as the challenges for the companies involved in the resources' development.[3]

The Turkmen government seems to be willing to develop the offshore fields located in the Caspian shelf. Malaysia's Petronas, as one of the most involved international oil companies (IOCs) in Turkmenistan since the signing of the first 25-year Turkmen Production Sharing Agreement (PSA) in 1996, completed in 2002 the drilling of East Livanov 2A, which is the fourth well in the offshore Block 1 field. According to the company, the well is likely to produce 10 bcm/y for 20 years.[4] Dragon Oil is involved in the offshore Cheleken field that is supposed to hold 100 bcm gas reserves.[5] A PSA between the Turkmen government and the Zarit joint

[1] BP, "Statistical Review of World Energy", 2007, pp. 22-24.
[2] EIA, "Central Asia Brief", (2007), http://www.eia.doe.gov/emeu/cabs/Centasia/NaturalGas.html.
[3] Ibid.
[4] Petronas Media Relations & Information Department, "Petronas Discovers Oil, Gas Offshore Turkmenistan", September 19, 2002, http://www.petronas.com.my/internet/corp/news.nsf/2b372bb45ff1ab3a48256b42002b19a7/7d585f1 2898ffda648256c39002e1df8?OpenDocument.
[5] Dragon Oil, "Annual Report and Financial Statement 2007", 2007, p. 3.

venture, established in 2002 by the US-registered Russian gas trader Itera, Russian State-owned Rosneft' and ZarubezhNeft' along with TurkmenGaz , is likely to be signed to develop the offshore 29, 30 and 31 Blocks.[6]

The biggest Turkmen gas field is Dauletabad, located in the Amu'Darya basin. Brought into operation in the early 1980s, it currently accounts for 24.47% of the country's proven reserves. Dauletabad is one of the most important fields for the Central Asia-Centre pipeline (CAC), the regional gas grid dating back to Soviet times. This field, hosting 0.7 tcm, is a key factor for the integrity of the current Russian-oriented Central Asian infrastructural profile.

The most recently discovered fields are South Yolotan and Osman, in the Murgan basin. Up to now there has been difficulty in reaching some acceptable estimate concerning the new fields' reserves, officially claimed by Turkmengaz as 39.6 bcm. South Yolotan[7] and Osman attracted Chinese CNPC, which signed a PSA with Turkmenistan to develop these deposits along with the Bagtiyarlyk field in the Amu'Darya basin in order to transport up 30 bcm/y of gas for 30 years to a planned Central Asia-China pipeline beginning in 2009.[8]

As far as exports are concerned, Turkmenistan's performance is impressive in comparison to the other former Soviet republics of the Caspian area. The difference between production and consumption in 2007 freed 43.3 bcm for export, considerably higher than Kazakhstan (3.7 bcm), which suffers from the underdevelopment of its fields; Uzbekistan (12.2 bcm), which despite outstanding level of gas production needs to exploit the most of it to meet domestic requirements because of its growing population; and Azerbaijan (2 bcm), which was a net importer until 2006.[9] To this extent, Turkmenistan benefits from the high rate of exploitation of its gas and the low domestic demand due to a small population and a poor industrial base. As a result, Russia accounted for 86.6% of Turkmen gas exports in 2006, by importing 37.5 bcm through the CAC. Most of these imports are subsequently sold to Ukraine. The rest (5.8 bcm) reaches Iran through the Korpedzhe-Kurt Kui pipeline. This amount is likely to increase from 2008 but the prospects seem to be poor, given the frequent supply cuts due to pricing disputes. Export revenues stemming from the hydrocarbons sector account for some 80% of the country's total merchandise exports, allowing Turkmenistan to develop a sound public finance stance and a positive current account since 2000.[10] As one can see, Turkmenistan is considerably dependent on energy rent that granted robust economic growth, masking, however, limited improvements in economic reform.

---

[6] Oil & Gas Eurasia, "Itera to Sign Offshore PSA in Turkmenistan", 28 April 2008, http://www.oilandgaseurasia.com/news/p/0/news/2250.

[7] At the end of 2006 a CNPC affiliate signed a 3-years drilling contract for 12 wells in South Yolotan. See EIA, "Central Asia Brief"

[8] CNPC, "CNPC in Turkmenistan", 2007, http://www.cnpc.com.cn/eng/cnpcworldwide/euro-asia/Turkmenistan/.

[9] BP, "Statistical Review of World Energy", pp. 24-27.

[10] World Bank, "Turkmenistan Brief", 2007, http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/ECAEXT/TURKMENISTANEXTN/0,,contentMDK:20631627~menuPK:300743~pagePK:141137~piPK:141127~theSitePK:300736,00.html.

Turkmenistan is connected to the CAC through two routes. The western branch, running from the Turkmenbashi terminal alongside the Caspian coast, links the South Caspian basin to the Russian Orenburg pipeline meeting the CAC in the Kazakh Baynau terminal. The eastern branch delivers gas from the Amu'Darya and Murgan basins to the Uzbek Urgan hub where Turkmenistan's eastern gas joins the CAC.[11] The combined projected capacity of CAC is about 100 bcm/y, currently reduced to 65 bcm/y because of poor maintenance. Capacity is actually underexploited to a rate lower than 65%, with the eastern branch accounting for over 90% of the country's exports on the CAC system. Gazprom is actually planning to upgrade the western branch's 4 bcm/y capacity by building an additional 20 bcm/y-pipeline aimed at restoring the 10 bcm/y Soviet-era capacity by 2010 and raising the flow to 30 bcm/y by 2016-2018.[12] The whole investment is expected to require 1 billion USD.[13]

The only route independent from CAC is the Korpedzhe-Kurt Kui pipeline. Dating back to 1997, this corridor connects South Caspian gas from Turkmenistan to Iran's north-eastern provinces. The total capacity is 13.5 bcm/y, currently underexploited at a rate lower than 50%.

The organization of the hydrocarbon sector in Turkmenistan is highly centralized. The President oversees the sector, and signs PSAs and sales contracts. The State Agency for Management and Use of Hydrocarbon Resources and the Oil and Gas Ministry depend on the President, with the former interacting with foreign investors and the latter controlling the State-owned companies. The companies are Turkmenneft, responsible for the offshore oil production, and TurkmenNefteGaz, responsible for refining, marketing and distribution of oil and gas. These functions were transferred into the Oil and Gas Ministry in 2005. TurkmenGaz is responsible for onshore gas production; TurkmenGeologiya is involved in hydrocarbons exploration; TurkmenNefteGazStroy manages the upstream construction services for the whole sector.[14]

Problems and prospects of Azerbaijani and Iranian natural gas contribution to Nabucco

Azerbaijan is considered as the supplier most likely to contribute to the Nabucco pipeline given its geographic position and its infrastructural network, which both make the country independent from the Russian-controlled gas grid. Azerbaijan's reserves are calculated between 1.35 and 2.30 tcm, but the country became a net exporter only in 2007. The most hopes are related to the giant

[11] Stern, Johnatan, "The Future of Russian Gas and Gazprom", Oxford and New York, Oxford University Press, 2005, p. 76.
[12] The agreement has been reached at the presidential level on May 12, 2007. It is part of a broad package including a 25-year gas purchasing contract. See Socor, Vladimir, "Russia Surging Farther Ahead in Race for Central Asian Gas", in: Eurasia Daily Monitor, May 16, 2007, http://www.jamestown.org/edm/article.php?article_id=2372168.
[13] EIA, "Central Asia Brief".
[14] Denison, Michael, "Turkmenistan and the EU: Contexts and Possibilities for Greater Engagement", in Neil J. Melvin (ed), "Engaging Central Asia: The European Union's New Strategy in the Heart of Eurasia",. Brussels, Centre for European Policy Studies, 2008, pp. 81-105.

offshore Shah Deniz[15] field. The first phase, launched in 2006, is about to produce up to 15 bcm/y, but the phase expected to fill Nabucco is the second one. Phase II of Shah Deniz is supposed to produce 8-12 bcm/y by 2013 according to optimistic forecasts,[16] allowing to fill the projected pipeline during the early phase from 2013 to 2018 and then to provide 20 bcm/y.[17] Other assessments expect Shah Deniz to provide only 4-5 bcm to Nabucco during the early period given the growing demand of Georgia and Turkey.[18] In both cases, even by forecasting 20 bcm/y of future supply, Azerbaijan gas alone will be unable to fill the double outlet – the northern branch to Baumgarten and the southern branch to Brindisi thanks to the Turkey-Greece and Greece-Italy interconnectors - of Nabucco. Furthermore, the impressive growth rates of Azerbaijan's domestic gas consumption are turning out to be powerful leverage at Russia's disposal to prevent massive gas outflows from Azerbaijan: by means of technical reasons or pricing quarrels Gazprom is threatening from time to time to cut off gas deliveries to Azerbaijan. In this case, Azerbaijan will be forced to exploit Shah Deniz to cover its own growing requirements to the detriment of its export commitments.[19] Russian willingness to prevent Azerbaijan from exporting its gas westwards is confirmed by the recent Gazprom proposal to buy at European prices all Shah Deniz's future output.[20]

Iranian outstanding gas reserves were essential to the early prospects for Nabucco. Iran has 28.13 tcm of natural gas reserves, accounting for 15.5% of global and ranking the country the second place in the world after Russia. These resources are both mismanaged and underexploited, so that the huge 105 bcm/y output is not enough to meet the domestic demand. As a result, Iranian gas is totally removed from the international markets with the exception of a small amount (5.60 bcm/y) exported to Turkey.[21] Several scholars consider Iranian gas as the only source able to meet Nabucco's needs[22] to a twofold extent: on the one hand, obviously, the size of the reserves and the high reserves/production ratio. By exporting an additional 30 bcm/y to fill Nabucco, Iranian reserves are expected to last about 205 years. On the other hand, the strategic position

[15] The consortium operating in Shah Deniz is composed by BP (25%), Statoil (25%), Total (10%), LukAgip (10%), NIOC (10%), Socar (10%) and TPAO (9%). See Socar, Vladimir, "Shah Deniz Perspective Structure", 2008, http://www.nabucco-pipeline.com/project/project-timeline/index.html.

[16] Norling, Niklas, "The Nabucco Pipeline: Reemerging Momentum in Europe Front Yards", in Cornell, Svante and Nilsson, Niklas (eds), "Europe Energy Security: Gazprom Dominance and Caspian Supply Alternatives", pp. 127-140, Stockholm and Washington, Central Asia-Caucasus Institute – Silk Road Studies Program, 2007.

[17] Nabucco Company Pipeline Study Gmbh, (2007), "Project Timeline", http://www.nabucco-pipeline.com/project/project-timeline/index.html.

[18] Roginsky, Stanislav and Minina, Olga, (2008), "South Stream and Nabucco: Are They Competitors?", in: Pipeline & Gas Journal, vol. 4:4, 2008, pp. 15-18.

[19] Stern, Johnatan, "The Cut-Throat Energy Politics of Russia and Turkey", in: Europe's World, vol. 5:2, 2007, pp. 125-129.

[20] Ekspress, (June 5, 2008), "Iran Discusses Nabucco, BTC Shipments with Azerbaijan", http://www.downstreamtoday.com/News/Articles/200806/Iran_Discussing_Nabucco_BTC_Shipments__11217.aspx?AspxAutoDetectCookieSupport=1.

[21] BP, "Statistical Review of World Energy", pp. 22-27.

[22] Mangott, Gerhard and Westphal, Kirsten, "The Relevance of the Wider Black Sea Region to EU and Russian Energy Issues", in Hamilton, Daniel and Mangott, Gerhard (eds), "The Wider Black Sea Region in the 21st Century: Strategic, Economic and Energy Perspectives", pp. 147-176, Washington, Centre for Transatlantic Relations, 2008; Fee, Florence F., "The Russia-Iran Energy Relations", in: Middle East Economic Survey, vol. 59:11, 2007, pp. 12-17.

which makes Iran the most economically viable way to ship Turkmen gas away from Gazprom's control.[23] Unfortunately, Iranian gas exports suffer considerable setbacks as far as the systemic level is concerned. By limiting foreign investments in Iranian hydrocarbons sector to 20 million USD, the US Iran-Libya Sanctions Act (ILSA) seriously undermines the attractiveness of Iran for western IOCs. Despite the fact that most of the penalties harmed US companies such as ConocoPhillips and no European company has been targeted so far,[24] the threat of the sanctions, focused on credit access, prevented companies such as OMV and Shell from undertaking massive investments in development of both Iranian upstream and domestic transport. As a result, given the political climate stemming from the Iranian nuclear issue, it seems to be considerably difficult for the EU to engage Iran in participating in the Nabucco project, whilst avoiding at the same time the emergence of disruptive effects on transatlantic relations. In other words, Nabucco turns out to be undermined by US sanctions more than by Russian attempts to build up alternative routes like Southern Stream. Other commentators are more dismissive about the necessity of Iranian gas. Their main argument is rooted in the poor Iranian infrastructural network, which is under massive strain because of growing domestic demand as well as the lack of investments aimed at upgrading the grid, notably the south-north trunk line which should ship the gas from the giant South Pars offshore field.[25] In other words, leaving aside the political consequences caused by Iranian involvement, the question of how Iran ultimately will be able to free up gas for export remains unresolved.

The Turkmenistan factor

Given the inability of Azerbaijan to serve the Nabucco's double outlet and the unlikelihood of Iranian involvement, Turkmenistan turns out to be crucial for the gas pipeline prospect, but both the available resources and the export routes seems to pose very serious challenges.

With Azerbaijan supposed to provide 20 bcm/y, Turkmenistan is expected to deliver the remaining 10 bcm/y. President Berdymuhammedov recently confirmed the country's willingness to commit itself to the west-sponsored routes, on the occasion of talks with EU Commissioner for External Relations Benita Ferrero-Waldner[26] and the Memorandum of Understanding signed with EU Commissioner for Energy Andris Piebalgs.[27] Notwithstanding this, the prospects for extraction remain unclear. While the eastern basins have definitely fallen under Russian and Chinese companies' control, western companies have some room to maneuver in the Caspian shelf, particularly Block 1.[28] Unfortunately, even in the case of a massive IOCs' involvement in

[23] Ghorban, Narsi, "By Way of Iran: Caspian's Oil and Gas Outlet", in Amirahmadi, Hooshang (ed), "Caspian Region at a Crossroad", pp. 147-161, Houndmills, MacMillan, 2000.
[24] Rivlin, Paul, "Iran's Energy Vulnerability", in: Middle Eastern Review of International Affairs, vol. 10:4, 2006, pp. 103-116.
[25] Norling, Niklas, "The Nabucco Pipeline: Reemerging Momentum in Europe Front Yards", pp. 136-138.
[26] Financial Times, "Turkmenistan to Cut EU Dependence on Russian Gas", (April 13, 2008), p. 3.
[27] Memorandum of Understanding and Co-operation in the Field of Energy between the European Union and Turkmenistan, (May 26, 2008), http://ec.europa.eu/dgs/energy_transport/international/regional/caucasus_central_asia/memorandum/doc/mou_turkmenistan_en.pdf.
[28] Denison, Michael, "Turkmenistan and the EU: Contexts and Possibilities for Greater Engagement", p. 94.

the South Caspian basin, Turkmenistan has already committed itself to supply Russia with 80-90 bcm/y for 25 years[29] and China with 30 bcm/y for 30 years. Adding a further 20 bcm/y absorbed by domestic consumption, these commitments turn the reserves/production ratio down to 21 years, less than the period established by the aforementioned agreements. As a result, some doubts do not stem from upstream investments, but from the overall reserves' amount.[30] IOCs themselves, by experiencing the usual tendency of the Turkmen leadership to overestimate the country's gas reserves in taking commitments during the '90s, are now much more cautious about the potential of the Caspian basin as a source of competition for European market, ranking it at the 3rd or 4th place after Norway, North Africa or Gulf countries such as Qatar. Anyway, in dismissing the Turkmen reserves' capability to fill multiple outlets, it should be taken into account that Ashgabat is becoming very pragmatic. To this extent, western IOCs and governments as well as the EU should pay more attention to frequent pricing disputes among Turkmenistan and Gazprom.[31] Furthermore, despite the low reserves/production ratio suggesting that Turkmen participation in Nabucco is not sustainable in the long term,[32] it could be considered as an option to bolster the prospects for the pipeline whilst waiting for a reduction of the international tensions arising from the Iranian nuclear issue. In other words, Turkmenistan could be expected to be a "transitional provider". However, remarks concerning volumes should not be separated from the important issue of pricing. It should be taken into consideration that as the Russian gas giant promised to raise the prices paid to Turkmenistan to the European level by 2009, Europe is losing its last source of leverage on Ashgabat.[33]

As far as transport infrastructure is concerned, the main obstacle to Turkmenistan's participation in Nabucco has to do with the political unreliability of the Iranian corridor, unanimously considered as the most rational way to deliver Turkmen gas westwards. Turkmenistan already exports about 5.5-6 bcm/y to Iran through the aforementioned Korpedzhe-Kurt Kui pipeline. Iran consumes domestically this gas, which allows the Islamic Republic to swap a similar amount to Turkey. Despite the overall capacity of these pipelines, which is about 15-20 bcm/y, the Iranian domestic section needs improvements that are unlikely to be undertaken under the US sanctions.

---

[29] West branch additional pipeline (*Prikaspiyskiy*) is expected to add 20 bcm/y to total Russian imports of Turkmen gas, but the whole intervention, including the East branch will allow Turkmenistan to export to Russia 80 bcm/y according to Gazprom CEO Aleksey Miller and 90 bcm/y according to Energy Ministry Viktor Khristenko. (The Washington Post, "Russia, Central Asia in Crucial Gas Deal" (May 12, 2007), p. 4).

[30] Cornell, Svante, "The Trans-Caspian Pipeline and Europe's Energy Security", in Cornell, Svante and Nilsson, Niklas (eds), "Europe Energy Security: Gazprom Dominance and Caspian Supply Alternatives", pp. 141-153, Stockholm and Washington, Central Asia-Caucasus Institute – Silk Road Studies Program, (2007).

[31] Despite Turkmenistan's gas exports to Russia account for less than 1% of total Russian gas production, they account for 24.4% of Russian gas export, so that the Russian price arbitrage turns out to be an essential tool to allow Gazprom increasing the profitability of its exports in order to keep the internal subsidized consumption sustainable. The domestic factor seems to be dominant in the Russian need to keep the CAC system alive not only as far as price differentials are concerned, but also in preventing the east-west corridor collapsing within Russia. An extensive analysis of these issues is provided by Stern (Stern, Johnatan, "The Future of Russian Gas and Gazprom", pp. 72-79) and Blank (Blank, Stephen, "Infrastructural Policy and National Strategies in Central Asia: the Russian Example", in: Central Asian Survey, vol. 22:3-4, (2004), pp. 225-248).

[32] Mandil, Claude, "Sécurité Énergétique et Union Européenne: Proposition pour la Présidence Française", Rapport au Premier Ministre, (21 avril 2008).

[33] Sadegh-Zadeh, Kaweh, "Turkmen Promises", in: Russia Profile, (June 3, 2008), http://www.russiaprofile.org/page.php?pageid=International&articleid=a1212503907.

As a result, the only way to connect Turkmenistan's offshore fields to Nabucco is by way of the Caspian Sea. Feasibility studies concerning the Trans-Caspian pipeline (TCP) date back to several years ago. The early version of the project, endorsed by a consortium composed by Enron, Bechtel and General Electric, was strongly supported by the Clinton Administration. Unfortunately, thanks to the discovery of the Shah Deniz field, Azerbaijan began to consider itself as the main source for Nabucco and not only a transit country. This allowed Baku to become more assertive in its relations with Turkmenistan, poisoned by the disagreement about the Caspian Sea's legal status as well as the right to exploit the offshore Kyapaz/Serdar field lying in the middle of the sea. The worsening of relations between the two countries, along with the former Turkmen President Niyazov's concerns about the US' tough stance against Saddam-style dictatorships in the aftermath of Operation Iraqi Freedom, made the 2 billion USD-estimated TCP fall apart.[34] From a broader perspective, within the Central Asian context TCP has been the second collapsing West-backed corridor after the Trans-Afghan Pipeline (TAP). Some argue that the main reason for these failures lied in the unpredictable and bizarre behavior of the former Turkmen President[35], so that something could be achieved with the new leadership.

However, leaving aside Niyazov's choices, it should be taken into account that both corridors relied upon a very uncertain political background hindered by often inconsistent US efforts to isolate Iran, fight Islamic terrorism, reduce world dependence on Middle East hydrocarbons, promote democracy in Central Asia and drive post-Soviet regimes away from Russian influence at the same time. All these factors determined the emergence of an international environment that turned out to be detrimental to a diversification of routes, to the extent that Russian involvement in keeping the current infrastructure alive has been considered less dangerous by Central Asian leaderships for regional stability. In the light of this context, it seems to be difficult to take the *Turkmenbashi* as the only one responsible for the TCP and TAP failures, so that the emergence of a new climate in the Ashgabat leadership is not a guarantee for these projects' revival. There is of course some room for optimism stemming from the improvement of the relations between Turkmenistan and Azerbaijan and the completion in 2007 of the South Caucasus Pipeline (SCP). These events increase the prospects for TCP.[36] But it should be taken into consideration that Berdymuhammedov is probably making more promises than his country's amount of natural gas can keep. The first to become aware of it seem to be the western IOCs.

Conclusion

Turkmenistan has huge natural gas resources and high levels of production, but these resources need massive western investments to be developed. At the same time, Russia is apparently succeeding in boosting its grip on the Central Asian infrastructural landscape.

[34] Soligo, Ronald and Jaffe, Amy Myers, "The Economics of the Pipeline Routes: The Conundrum of Oil Exports from the Caspian Basin", in Kalyuzhnova, Yelena (ed.), "Energy in the Caspian Region: Present and Future", pp. 111-132, Basingstoke, Palgrave (2002).
[35] Norling, Niklas, "The Nabucco Pipeline: Reemerging Momentum in Europe Front Yards", p. 128.
[36] Ibid.

The Nabucco pipeline needs to rely on Turkmen gas given the position of two other potential suppliers. Azerbaijan is the safest source, but it is still importing gas to satisfy its increasing domestic demand and the gas predictably coming from the giant Shah Deniz field is unlikely to fill the Nabucco's double outlet. As a result, the participation of Azerbaijan alone seems to be unable to justify the huge investments required by the construction of Nabucco. Furthermore, there are strong elements of uncertainty related to the Russian leverage, given that Russia is the only source for Azerbaijani gas imports.

Iran has at its disposal a huge amount of gas reserves, able to challenge the Russian dominance on European markets. Unfortunately, the political climate is preventing western IOCs from undertaking investments aimed at developing the Iranian gas upstream as well as the Iranian domestic grid, given the limited capacity of the south-north corridor.

Turkmenistan's engagement is needed to fill Nabucco in the short and medium terms, but several doubts arise concerning the available resources and the transit corridors. As far as resources are concerned, the EU should consider Turkmenistan gas as a "transitional source" whilst waiting for significant improvement of the political climate around Iran. However, Turkmenistan has committed itself to long-term agreements with Russia and China, with Europe losing its sole attractiveness as Gazprom promised to raise the prices paid to Turkmenistan to the international levels. From a broad political perspective, Russia profited from the need of Berdymuhammedov to consolidate his power in the light of a regional context potentially sensitive to "destabilizing pressures" coming from the systemic level, within the framework of the US involvement in the "broader Middle East". Furthermore, given the unlikelihood of exporting Turkmen gas to Europe through Iran, Nabucco's prospects seem to be highly dependent on TCP prospects, which are turning out to be poor so far in the aftermath of the previous mid-2000s failure. However, the improvement of Azerbaijani-Turkmen relations, as well as a partnership between Turkmenistan and Russia which is not so stable as it seems, leave some room to maneuver for the EU and western IOCs. As a result, one can consider Turkmenistan's involvement in the Nabucco project weak, but still not dead.