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## **Energy strategy of export diversification in Central Asia: focus on Kazakhstan and Turkmenistan**

Among post soviet Central Asian republics, Kazakhstan and Turkmenistan currently play a significant role as energy suppliers, benefiting from huge oil and natural gas reserves which allow them to successfully play a multivector energy strategy aimed to achieve several strategic goals: through the diversification of their export routes, Kazakhstan and Turkmenistan can weaken Russian traditional control on Central Asian oil and gas exports, as well as attracting investments and know how in order to increase domestic hydrocarbons production and to develop new oil and natural gas fields.

As a matter of fact, Kazakhstan holds 30 billion barrels of proved crude oil reserves - the twelfth largest reserves in the world - while Turkmenistan ranks fourth in the world in terms of the volume of its natural gas reserves, after Iran, Russia and Qatar. According to the BP Statistical Review 2015, Turkmenistan holds 17.2 trillion cubic meters (tcm) of natural gas reserves, even if the estimates of the Turkmen authorities are higher: according to an independent audit, the reserves of the Galkynysh field – the world’s second largest in terms of reserves – together with the Yashlar deposits, are estimated at 26.2 tcm.<sup>1</sup>

The development of alternative export routes – which are not under Russian control – has been facilitated following China's growing engagement in Central Asia energy sector: Beijing aims to develop overland energy corridors from Central Asia in order to reduce its dependence on maritime energy routes, which satisfy over 70% of Chinese domestic energy needs.<sup>2</sup>

Kazakhstan and China signed a deal on energy cooperation in 2005, which represents one of the most significant pillars within a bilateral comprehensive partnership which includes strong political and diplomatic relations as well as deep trade and commercial relations. The realization of the Atyrau-Alashankou oil pipeline - linking Caspian oil-rich fields with Chinese markets through the energy gateway represented by the Xinjiang region - undoubtedly is the most successful result of the Sino-Kazakh energy cooperation. Since 2014 this pipeline has a capacity of 400.000 (bbl/d),

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- 1 U.S. Energy Information Administration, *Kazakhstan, Country Analysis Brief*, January 14, 2015, available online at: <https://www.eia.gov/beta/international/analysis.cfm?iso=KAZ>; British Petroleum, *BP Statistical Review of World Energy 2015*, BP, p. 20, available online at: <https://www.bp.com/content/dam/bp/pdf/energy-economics/statistical-review-2015/bp-statistical-review-of-world-energy-2015-full-report.pdf>; *Turkmenistan Heading Towards World Gas Markets*, Oil & Gas Eurasia, November 19, 2015, available online at: <https://www.oilandgaseurasia.com/en/news/turkmenistan-heading-towards-world-gas-markets>
- 2 Fabio Indeo, *Energy security in North East Asia: the vulnerability of maritime energy routes and strategies of diversification*, EGS Working Paper, No. 33, 2015, pp. 9, 17-19, available online at: [www.egskorea.org](http://www.egskorea.org)

representing nearly 20% of total Kazakh oil exports.<sup>3</sup>

For the Kazakh government, this pipeline is a strategic corridor which concretely allows the diversification of export routes: as a matter of fact, the Atyrau-Alashankou pipeline is the only overland oil pipeline which does not transit in Russian territory - unlike Atyrau-Samara and CPC (Caspian Pipeline Consortium, from the Tengiz oil field to the Russian Black Sea port of Novorossiysk) pipelines -, while Kazakhstan oil exports through the Baku-Tbilisi-Ceyhan pipeline are delivered by tankers across the Caspian Sea from the Kazakh port of Aqtau to the Azerbaijani port of Baku.<sup>4</sup>

After the state visit of the Chinese President Xi Jinping in Central Asia in September 2013, China obtained a significant success purchasing 8,33% shares in the North Caspian Operating Company, the international consortium aimed to develop the Kashagan giant oil field. Kashagan should hold the fifth largest oil reserves in the world, estimated at 13 billion barrels of oil, and its production should reach 1.5 million bbl/d.<sup>5</sup> Even if some doubts remain about the final export route – westward to the EU markets through the BTC pipeline, northward to Russia through the CPC pipeline, eastward to the Chinese markets – China and Kazakhstan aim to realize a new oil pipeline - parallel to the existent one - in order to deliver the growing oil production in the Caspian Sea oil fields (potentially including Kashagan) to the Chinese markets, strengthening the Kazakh strategy of export diversification.

The launch of the Sino-Turkmen gas pipeline (or China-Central Asia Gas Pipeline because also Kazakhstan and Uzbekistan are involved as suppliers, even if in lesser extent than Turkmenistan) in 2009 has represented an historic change in the regional energy chessboard, ending the Russian monopoly on Turkmen gas exports (even if small volumes of Turkmen gas - 6.5 bcm in 2014 - are exported to Iran): as a matter of fact, Turkmen gas exports to Russia fell down from 50 bcm in 2009 to 9 bcm in 2014, while Ashgabat successfully diversifies its energy strategy, re-orienting its export routes to China.<sup>6</sup>

China is currently the main energy partner for Turkmenistan in terms of exports (25.5 bcm in 2014, 60% of total gas exports) and the main investor in the development of the domestic fields of natural gas.<sup>7</sup> In addition to the development of the first and second phases of the giant Galkynish gas field (the world's second largest gas field after North Dome, located in Qatar, with gas reserves of

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3 U.S. Energy Information Administration, *Kazakhstan*, 2015

4 Ibidem

5 Eni, *Kashagan*, available online at: [http://www.eni.com/en\\_IT/innovation-technology/eni-projects/kashagan/kashagan-project.shtml](http://www.eni.com/en_IT/innovation-technology/eni-projects/kashagan/kashagan-project.shtml)

6 British Petroleum, *BP Statistical Review 2015*, June 2015, p. 28, available online at: <https://www.bp.com/content/dam/bp/pdf/energy-economics/statistical-review-2015/bp-statistical-review-of-world-energy-2015-full-report.pdf>

7 Ibidem

between 13.1 trillion and 21.2 trillion cubic metres)<sup>8</sup>, China National Petroleum Corporation (CNPC) is also developing Turkmenistan's Bagtyyarlyk gas field on the bank of the Amu Darya. After the completion of Line C at the end of 2015, the China-Central Asia Gas Pipeline has a capacity of 55 bcm, while the construction of a new gas pipeline from Turkmenistan to China (Line D) with the capacity to carry 30 bcm/a of gas will start in 2016. Under the agreement signed between the CNPC and Turkmenistan, Turkmenistan will supply China annually with 65 bcm of gas by 2020–2021.<sup>9</sup>

However, Gazprom's decision to stop buying Turkmen gas since 2016 has exposed Turkmenistan to an "unbalanced" situation: Ashgabat has lost an energy partner and without a coherent strategy of diversification of export routes, China will consolidate its monopole as the main buyer of Turkmen gas. This scenario is pushing President Berdimuhamedow to immediately find new and alternative energy partners, accelerating the implementation of the western and eastern vectors of export.

Concerning the eastern energy export corridor, in 2015 Turkmenistan started to build the national segment of the TAPI (Turkmenistan-Afghanistan-Pakistan-India) natural gas pipeline, which will have a planned capacity of 33 bcm of natural gas per year: through this pipeline - with a length of 1,800 kilometres – Turkmenistan will be able to develop the eastward vector of export, supplying Afghanistan, India and Pakistan and diversifying its energy strategy. Moreover, Turkmenistan has signed a framework agreement with a consortium of several Japanese companies for the development of the third phase of the Galkynysh gas field, which will be the main source fueling the TAPI project.<sup>10</sup>

In spite of Turkmen claims that it will complete the infrastructure by December 2018, the rising threats to regional security and stability appear likely to delay the implementation of this export corridor which is currently vital for the national strategy of diversification. As a matter of fact TAPI route will cross areas affected by a great instability such as South-Western Afghanistan (Herat, Helmand, Kandahar) and Pakistani Baluchistan.<sup>11</sup>

Following the realization of the national East-West pipeline in December 2015, Turkmenistan is currently able to implement the westward vector to start exporting natural gas to EU market. This pipeline - with a capacity of 30 bcm per year - will connect Galkynysh's largest gas field with the Turkmen shore of the Caspian Sea, allowing Turkmenistan to enhance the Southern Gas Corridor

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8 Tavus Rejepova, *Turkmenistan, China Reach New Energy Deals*. Central Asia-Caucasus Analyst Institute, October 16, 2013, available online at: <http://www.cacianalyst.org/publications/field-reports/item/12834-turkmenistan-china-reach-new-energy-deals.html>

9 *Turkmenistan supplied 125 bcm of gas to China*, Natural Gas Europe, September 28, 2015, available online at: <http://www.naturalgaseurope.com/turkmenistan-supplied-125-bcm-gas-to-china-25610>

10 *Turkmenistan to Work With Japan to Further Develop Galkynysh*, Natural Gas Asia, October 18, 2015, available online at: <http://www.naturalgasasia.com/turkmenistan-to-work-with-japan-to-further-develop-galkynysh-16787>

11 Fabio Indeo, *Turkmenistan 2014: Security Concerns And Unfulfilled Diversification Of Export Energy Routes*, in M. Torri, N. Mocchi (eds.), *Asia Maior 2014*, vol. 24, Emil di Odoya, Bologna, 2015, pp. 456–457.

backed by the EU Commission.

At present the Trans Anatolian Gas Pipeline (TANAP) project has been designed to fuel the SGC, together with the Trans Adriatic Pipeline: Azerbaijan currently is the only supplier while Turkey will play the role of transit hub. Turkmenistan's participation will enhance the capacity of this energy route - which is expected to reach 31 bcm in 2026 and 60 bcm in 2030 - allowing Turkmenistan to successfully exploit an alternative energy corridor.<sup>12</sup>

Following several diplomatic meetings – involving Turkmenistan, EU, Azerbaijan and Turkey, which signed in May 2015 the Ashgabat Declaration to enhance the energy cooperation<sup>13</sup> - Turkmenistan has clearly reaffirmed its commitment to developing the SGC, even if Russia maintains its opposition to the realization of a Trans-Caspian pipeline. Even if Russia officially motivates its opposition expressing ecological and environmental concerns, there are geopolitical reasons in Moscow's approach, aimed at preventing the implementation of an alternative export energy route to the EU markets, which could lessen the EU's dependence on Russian gas imports. Turkmenistan and Azerbaijan share a common position concerning the possibility of building an underwater Caspian pipeline with the consensus of the nations directly involved. However, Russia and Iran oppose this solution, privileging consensus among all five littoral states and also threatening to use their right to veto to prevent all Caspian pipeline energy projects. Furthermore, the unsolved legal status of the Caspian Sea contributes to delay a potential solution with respect to the TCP.<sup>14</sup>

Even if Kazakhstan and Turkmenistan have successfully implemented a strategy of diversification, these countries should avoid to become growingly reliant on China's imports and they necessarily find new energy markets delivering their hydrocarbon productions. As a matter of fact, the main rationale of the strategy of export diversification for Central Asian suppliers was to lessen the dependence on exports to Russia, finding new partners and opening new export routes: now, mainly Turkmenistan is in a similar situation with China taking over Russia's role.

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12 *Trans Anatolian Natural Gas Pipeline project*, available online at: [www.tanap.com](http://www.tanap.com)

13 European Commission, *Ashgabat Declaration*, May 1, 2015, available online at: [https://ec.europa.eu/commission/2014-2019/sefcovic/announcements/ashgabat-declaration\\_en](https://ec.europa.eu/commission/2014-2019/sefcovic/announcements/ashgabat-declaration_en)

14 Fabio Indeo, *Turkmenistan 2014: Security Concerns And Unfulfilled Diversification Of Export Energy Routes*, 2015, p.458