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Analysis of Turkmenistan's Gas Export Price Strategy

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Abstract: *Turkmenistan is one of the largest exporters of gas, known as "blue fuel". This is due to its large geological reserves, estimated at approximately 20 trillion cubic meters. Oil and gas are an important pillar of national economic development and one of the main sources of foreign exchange income and fiscal revenue. After the independence of Turkmenistan, the "Energy Rich Country Strategy" was determined, but due to historical factors and geopolitical influences, its oil and gas exports have been restricted by Russia for a long time. Russia has a kind of "energy power" over Turkmenistan. Turkmenistan has no say in the quantity and price of oil and gas exports, and it is difficult to maximize its benefits.*

First of all, we will trace back the actions of the past between Russia, Iran, and Turkmenistan and then focus on probable solutions. Russia has been controlling Turkmen energy sector heavy-handedly for a long time and Iran's sanctions and its own gas reserves created complications and competitiveness with Turkmenistan, making it hard to cooperate. In this prospective: in order to get rid of this power structure and develop its own economy, from the perspective of ensuring energy security, increasing domestic investment, and improving people's livelihood, Turkmenistan has been actively implementing strategies of diversifying its gas exports. After nearly 20 years of hard work, gas channels to China and Iran have been successfully built so far, and a diversified export pattern has initially taken shape. In order to further expand gas exports and avoid "dominance of one family", Turkmenistan hopes to obtain its presence in the European market, India, and Pakistan. Such projects as the construction of the TAPI pipeline (Turkmenistan-Afghanistan-Pakistan-India) facing South Asia and the Trans-Caspian oil and gas pipeline facing the European market.

So far, these two pipelines have made a little progress. Iran and Russia are the main opposing players for the Turkmen gas being delivered to Europe. Also, Azerbaijan shows its dissatisfaction with Turkmenistan's proposal to not affect its relations with Russia and Iran. In South Asia, the instability and turbulent situation in Afghanistan makes it almost impossible to advance TAPI pipeline. In retrospect, China and Russia will be realistic and feasible directions for Turkmenistan to expand its oil and gas exports.

In the face of worsening relations of China with major energy importing countries such as Australia, mainly iron ore and coal, Turkmenistan is in a unique position to expand its operational horizons and intensify its export capacity to China. It has gained trust of Chinese people and the governments are signing new deals to strengthen cooperation not only in energy sector, but in commodities and technological transfer from China to Turkmenistan.

Key Word*:* ***Turkmenistan; Natural Gas; Exports; Strategy****;*

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I. INTRODUCTION

Turkmenistan is rich in oil and gas resources and an important energy producer and exporter. Its economic and industrial sectors are not well developed yet and require diversification in order to provide and sustain high-quality life for its citizens. Oil and gas are being an important pillar of national economic development and one of the main sources of foreign exchange income and fiscal revenue. FDI's are the main prospect of revenue for Turkmenistan, hence it should attract foreign investors in order to develop its infrastructure. Turkmenistan, after its independence, adopted the "Energy Rich Country Strategy" policy, but due to historical factors and geopolitical influences, its oil and gas exports have been restricted and manipulated by Russia for a long time. Russia has a kind of embargo on "energy sector" with Turkmenistan. For a long time, Turkmenistan did not have a say in the quantity and price of gas exports, and had difficulties of maximizing its benefits. In order to get rid of this power structure and develop its own economy from the perspective of ensuring energy security and increasing domestic investment while improving people's livelihood, Turkmenistan has begun to actively implement many kinds of strategies of diversifying gas exports. After nearly 20 years of hard work, gas channels to China and Iran have been successfully built so far, and a diversified export pattern has initially taken its shape. In order to further expand gas exports and avoid the "dominance of Russia", Turkmenistan aims to establish new export channels, such as the construction of the TAPI pipeline

(Turkmenistan-Afghanistan-Pakistan-India) facing South Asia and the Trans-Caspian pipeline to the west. The former will establish gas pipeline facing the European market. [6] So far, these two pipelines seem promising but yet have made a little progress. This unique situation in which Turkmenistan have found itself is both a blessing and a curse. Due to political and environmental pressures, implementation of these two projects face intangible human-made obstacles. Big players such as Russia and Iran are on the opposing sides. This market of raw materials exported for energy production is competitive and the players will use any means to obstruct each-others' ways. [1]

The viable option for Turkmen gas to reach international lands will still be China. Yet, Turkmen side understands that having only one option in trading any kind of resources makes it hard to have mutually beneficial agreements, hence Turkmen government is pursuing diversification of its customers portfolio strategy. This paper will analyze and focus on Turkmenistan's natural gas export price strategy and factors influencing the policies and decisions.

II. Initiative for Turkmenistan's diversification of gas exports

2.1 Former and Future prospects and the cause for diversification.

There are three international pipelines operating in Turkmenistan so far. These are:

1. North to Russia, Central Asia-Central Oil and Gas Pipeline. The pipeline was built in the 1970s and has a total length of 3,178 kilometers. It starts at the Turkmenistan's Amu Darya Basin and supplies gas to Russia via Kazakhstan and Uzbekistan. The maximum annual gas transmission capacity is 50 billion cubic meters in the past. It has multiple parallel pipelines and sectors.

Pic.1

2. South to Iran, the Kobez-Kordkuy pipeline and the Dovletabad-Sherakhs pipeline. The Kobez-Kordkuy pipeline was put into operation in December 1997, with a total length of 135 kilometers. It is Turkmenistan's first transnational pipeline without passing through Russia. It mainly supplies gas to power plants in northeastern Iran with an annual gas transmission capacity of 8 billion cubic meters. In 2009, when the Turkmen-Russian gas trade was interrupted, Turkmenistan was eager to expand gas. Turkmen President Berdymukhamedov proposed to build a second gas pipeline to Iran. July of that year, Turkmenistan reached an agreement to build the Dovletabad-Serakhs pipeline. Second on its line of duty.

Pic.2

3. The BP Statistical Review of World Energy 2020 indicates that China-Central Asia Gas Pipeline (The A/B/C/D) to which three countries are connected such as Kazakhstan, Uzbekistan, and Turkmenistan. Turkmenistan being the biggest contributor of gas with 31.6bcm annually. And the total volume delivered over 47.9bcm of natural gas combined. [3]

Pic.3

The initiative for Turkmenistan's economic growth and political stability after getting its independence from Russia was the main concern for then President Niyazov. Policy makers and the government were occupied by implementing new ideas with beneficial strategies to gain its place on the world stage and become an important player and economic contributor for the world supply chain. These ideas have included many steps to emerge and show its willingness to become an independent and reliable partner in all political and economic spheres. Turkmenistan needed to play its role on a large scale and have had to adopt a solo path. It needed to be resourceful and manage its natural resources in the best possible way and plan ahead.

To begin with, Turkmenistan started all of its activities for ensuring national energy security. For energy exporting countries, the energy security includes ensuring the country's sovereignty over its energy producing resources. This will enable selling its energy resources at a reasonable price, and ensuring guaranteed export channels. Among the main export commodities of Turkmenistan (oil and gas, refined oil, crude oil, textiles), the export revenue of gas accounted for more than 60% of the total export value of commodities in 2019 and more than 30% of the Turkmen government's annual budget revenue. Turkmenistan still lacks production capacity due to its technological disadvantage. [7] It is explained by the fact that the gas and oil processing is still in its infancy and needs to be developed by foreign players' contribution. The country is still trying to adopt technological advances from developed nations. This situation might benefit from foreign direct investment (FDI) from outside players in its energy sector. For the last decade or so, Japanese, Chinese, and Korean firms have actively taken part in shaping Turkmenistan's energy sector.

To continue with, gas exports are an important source of Turkmen national fiscal revenue and are closely related to the wellbeing and lives of Turkmen people. If gas export operations are obstructed, it will not only hinder economic growth and cause the Turkmen government to cut fiscal expenditures, but may also trigger public dissatisfaction and social crisis. Turkmenistan is compromised by its geographical location. The country is located in the hinterland of Eurasia, and it's land-locked. It does not have a direct access to the sea which makes it difficult for Turkmen government export any value creating products. The country is not directly connected with large gas consuming countries and needs to transit through other countries. It creates an additional pressure and dependency on other players and makes it hard to achieve mutually beneficial agreements. [2] These transit countries such as: Russia, Uzbekistan, Kazakhstan, Iran, and Azerbaijan are themselves energy rich exporting countries. In fact, these countries are considered to be competitors rather than potential opportunity.

The future prospects for Turkmenistan are still complex. The dilemma in which Turkmenistan found itself requires a comprehensive approach. When implementing a diversified export strategy, Turkmenistan's gas sales follow two principles: first, gas exports are delivered to the borders of Turkmenistan and all of the expenses in the country born by itself through the loans from Islamic bank and the Asian development bank. All the investment, transit, and political risks of transnational gas pipelines out of Turkmenistan's border are borne by the importing country. Second, the export price is determined (net return value) based on the international market price after deducting the transportation fees and other expenses, and can be sold to "any buyer who has the ability to pay".

2.2. Russia-Turkmenistan gas cooperation: from absolute control over Turkmen gas exports to strategic adjustments

Russian dominance in Central Asian countries was eminent from 20th century. Russia (USSR) in the past has divided these 5 Central Asian countries into special resource producing sectors. Turkmenistan was delivering gas and oil at a cheap price for a long-time. Some experts call it exploitation of small players' natural resources. The system which was set up by the Russians in the 90s and is still present in these Central Asian countries. As of Turkmenistan, Russian dominance remained present until 2006-2007 when a new player emerged and circumstances favored Turkmen side. China, the new player, showed interest in Turkmen energy sector and has potential capital and technologies for investing in Turkmenistan. With the sudden rise of China and its economy with its energy hungry nation, Turkmenistan has obtained a new political and economic partner. The two sides made deals on gas exports which in turn extinguished Russian dominance on Turkmen energy sector.

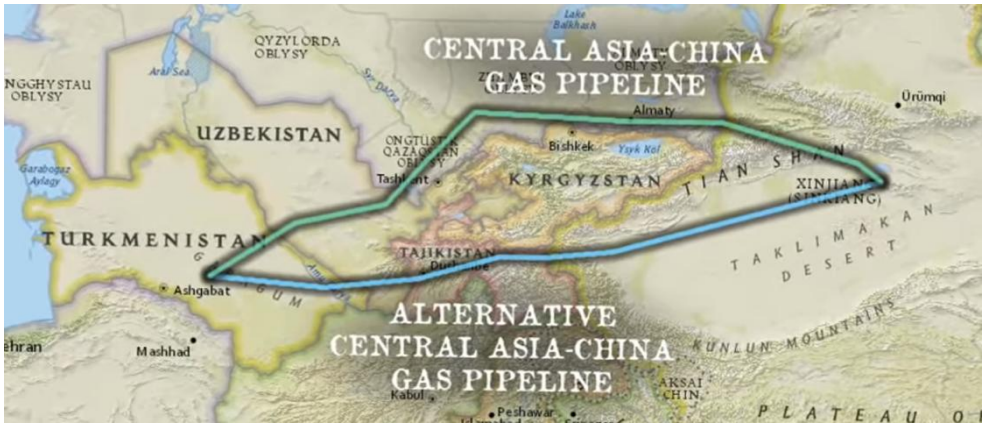
What caused frictions between Turkmenistan and Russia and what factors affected Russia's strategy towards Turkmenistan? Well, since 1996, due to the rapid development of the international gas market the export of gas to the European market showed promising perspectives to obtain substantial economic benefits. Russia hoped to export more self-produced gas. Therefore, it had increased transit pipeline transportation fees and reduced transit export quotas. Russia reduced the export volume gas of Turkmenistan, and the two sides continued to have frictions and conflicts. For some time, Turkmenistan used the method of transiting through Russia (paying pipeline transmission fees to Gazprom) to sell gas to Ukraine, about 36 billion cubic meters per year, and the contract period was until 2006 [10]. After the signing of "Contract of the Century", which stated that Russia will buy out Turkmen gas and resell it for double price to Ukraine and other European nations starting from 2007. [9] It put pressure on Europe after facing gas shortages which was set up by Russian side to show its influence and dictate its own terms with Europe. This decision did not last long. European Union being reliant on Russian gas pipelines were concerned of diversifying its suppliers. Hence, EU was actively pushing for new Trans-Caspian Gas Pipeline.

While observing the current Turkmen-Russian gas cooperation, it can be seen that Russia lost its monopoly on the export and transit of Turkmen gas. As far as Turkmenistan is concerned, if Russian side is willing to purchase its natural gas in accordance with the principle of "net return value" (international market prices deducting pipeline transportation fees), Turkmenistan is willing provide Russia with 70-80bcm of gas every year. This leniency of Turkmen side is explained by Russia's support in terms of security in border areas and to counter terrorism on the border with Afghanistan. For Russia, this itself may create incentives to have a leverage in cooperation with Turkmenistan.

Regarding the implementation of Turkmenistan's diversified gas export strategy, what kind of policy will Russia adopt? It can be said that Russia and Turkmenistan have gradually changed from a partner in gas cooperation to a competitor, and the competing markets include China and Europe. From December 2009 to May 2014, the China-Central Asia gas pipeline A/B/C lines were successfully completed and ventilated. Meanwhile the Sino-Russian east line gas pipeline project only signed a contract in May 2014. Starting in March 2006, The Sino-Russian West Oil and Gas Route Pipeline negotiations have so far not reached an agreement. It can be said that Russia has lost the opportunity in the competition for the Chinese market (introducing gas through western China). For Europe, being a traditional market for Russian gas exports, it involves Russia's major interests. Although Russia no longer has control over Turkmenistan's gas exports, Russia will do everything possible to prevent Turkmenistan from exporting gas to the European market. In order to prevent Turkmenistan from posing a competitive threat to it, Russia even proposed not to rule out the use of military force to solve the problem of energy contention in the Caspian Sea [18]. When Turkmenistan declared that it would export gas to Europe through the Trans-Caspian gas pipeline, Russia and Iran were the main opposing powers in this regard. Further analysis of the external and internal factors will be made below.

2.3 China-Turkmenistan gas cooperation: the initial realization of a diversified strategy

In the late 1990s, affected by Russia's suspension of gas exports, Turkmenistan was forced to increase its efforts to open up new export routes to break through Russian control. In 1998, it proposed a cooperative implementation to build gas pipelines to China. [11] As China's economic development increases energy demand, in April 2006, during the visit of Turkmen President Niyazov to China the governments of China and Turkmenistan signed the "The General Agreement on Gas".



Pic.4

The construction of the Central Asia–China Gas Pipeline started in July 2007. On December 14, 2009, the pipeline A line was completed and put into production. This was the first international route of Turkmen gas pipeline and made a historic moment. The dependency on Russian set quotas is no longer relevant for Turkmenistan. The four heads of states China, Turkmenistan, Kazakhstan, and Uzbekistan attended the pipeline ventilation ceremony. Gas from Turkmenistan began to be supplied to China, which became a landmark event in Turkmenistan's diversified export strategy and a major "turning point" for gas exports. In October 2010 and May 2014, lines B and C of the pipeline to China were successively completed and ventilated.

Turkmenistan sees China as a very attractive gas market and a stable partner. Since the beginning of the new century, China's gas consumption has increased. The energy hungry nation needs to supplement its expanding economy with a sustainable energy and decrease the amount of fossil fuels for energy production. China's financial system is strong and has all the necessary capital for implementation such grand projects which proves their financial strength. While central Asian countries lack technical and construction capabilities, in contrast, China and their work ethics might come in handy to support the idea of cooperation between Turkmenistan and China in building transnational gas pipelines.

New markets may help Turkmenistan not only diversify its client portfolio but, more importantly, bring much needed cash. [14] Since 2011, China has replaced Russia as the largest buyer of local gas. According to the above-mentioned data and the theoretical analysis of the interdependence of the international societies, it has been noted that Turkmenistan's dependence on China's gas market is equal of China's dependence on Turkmen gas supply. Both sides see it mutually beneficial. What affects China's strategic point related to Turkmenistan? Ever changing trends and inclination towards green energy made a big difference. China has vowed to reduce the amount of Carbon Emissions by 2030 and the usage of Natural Gas as its main energy source will create opportunities to achieve the above-mentioned goals. China's main goal is to become carbon-neutral state by 2030.

By exporting gas to China, Turkmenistan has opened up new export channels and obtained reliable and stable income for sustaining and developing its relevant sectors whether it is in economic or governmental. Due to the sharp decline in gas exports from Turkmenistan to Russia in 2009, and the rapidly growing Chinese economy, the situation puts additional hope for harmonious continuation. [16] Furthermore, both sides plan to build an additional route in the Central Asia–China Gas Pipeline. It will pass through Uzbekistan, Kyrgyzstan and Tajikistan. These two countries have less of Russian dependency, which makes it beneficial for China and Turkmenistan. It was later called D line. In September 2014, the construction of the Tajik section of the D-line pipeline started. Upon successful completion, Line D will bring the overall annual capacity of the Central Asia–China Gas Pipeline to 85bcm of gas, making it the largest gas transmission system in Central Asia combined. The total length of the pipeline is 966 kilometers, with 840 kilometers of it within Central Asia. The total cost of the project is estimated to be 6.7 billion USD. Financial resources, qualified personnel, and equipment are primarily supplied by the Chinese side. [16]

III. Turkmenistan's export potential and production capacity

The BP Statistical Review of World Energy 2020 indicates that Turkmenistan has 600 million barrels of proven oil reserves and 19.5 trillion cubic meters in proven reserves of natural gas. According to the same report, Turkmenistan produced 63.2bcm of natural gas in 2019; of that, Turkmenistan consumed 31.5bcm domestically and exported 31.6bcm to China. Oil production in 2019 reached 264,000 barrels per day, accounting for 9.4% of the world's total reserves, second only to Iran, Russia, and Qatar. Turkmenistan's gas resources are mainly concentrated in the eastern region. Currently three export pipelines are established so far:

Natural gas

Total proved reserves

	At end 1999 Trillion cubic metres	At end 2009 Trillion cubic metres	At end 2018 Trillion cubic metres	At end 2019 Trillion cubic metres	At end 2019 Trillion cubic feet	At end 2019 Share of total	At end 2019 R/P ratio
Azerbaijan	1.0	1.0	2.1	**2.8**	**100.5**	1.4%	117.0
Kazakhstan	2.0	2.0	2.7	**2.7**	**93.7**	1.3%	113.4
Russian Federation	32.9	34.0	38.0	**38.0**	**1340.5**	19.1%	55.9
Turkmenistan	2.6	8.2	19.5	**19.5**	**688.1**	9.8%	308.5
Uzbekistan	1.2	1.3	1.2	**1.2**	**42.7**	0.6%	21.5
Other CIS	†	†	†	**†**	**1.2**	◆	110.9
Total CIS	39.8	46.6	63.6	**64.2**	**2266.8**	32.3%	75.8

Table 1.

In order to evaluate the potential for growth in production capacity and expansion of its operational horizons, Turkmenistan's gas production must be advanced locally. More gas producing wells are needed to be drilled. The demand for natural gas is growing and Turkmen government is still unable to fill in the gap. Its current production and export rates are still stagnant. With its 63.2bcm of natural gas produced in 2019 potential diversification of its pipelines face an obstacle. This in turn opens up a question? Where should Turkmenistan obtain the necessary capital and technologies to implement its projects?

Natural gas: Production in billion cubic metres*

Billion cubic metres	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum 2019	Growth rate per annum 2008-18	Share 2019
Azerbaijan	15.9	16.3	16.0	16.8	17.4	18.4	18.8	18.3	17.8	19.0	**24.3**	27.7%	1.8%	0.6%
Kazakhstan	19.0	20.4	20.1	19.8	21.4	21.7	22.0	22.9	23.4	23.9	**23.4**	-2.2%	2.7%	0.6%
Russian Federation	536.2	598.4	616.8	601.9	614.5	591.2	584.4	589.3	635.6	669.1	**679.0**	1.5%	0.9%	17.0%
Turkmenistan	33.3	40.1	56.3	59.0	59.0	63.5	65.9	63.2	58.7	61.5	**63.2**	2.7%	◆	1.6%
Uzbekistan	58.4	57.1	56.6	56.5	55.9	56.3	53.6	53.1	53.4	57.2	**56.3**	-1.6%	-0.7%	1.4%
Other CIS	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	**0.3**	2.0%	0.2%	◆
Total CIS	663.2	732.7	766.2	754.3	768.5	751.4	745.0	747.2	789.1	831.1	**846.5**	1.9%	0.8%	21.2%

Table 2.

As of Turkmenistan's domestic consumption for 2019, as shown in table 10, it has been increasing in the last two years. [8] Growing population, energy production, and diversification of its other economic sectors, such as production of goods and services added additional usage of natural gas domestically.

Natural gas: Consumption in billion cubic metres*

Billion cubic metres	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Growth rate per annum 2019	Growth rate per annum 2008-18	Share 2019
Azerbaijan	8.6	8.1	8.9	9.4	9.4	9.9	11.1	10.9	10.6	10.8	**11.8**	9.0%	0.8%	0.3%
Belarus	16.9	20.7	19.2	19.4	19.3	19.1	17.9	17.8	18.2	19.3	**19.3**	-0.3%	-0.3%	0.5%
Kazakhstan	10.1	11.0	12.2	13.0	13.6	15.0	15.3	15.8	16.8	19.0	**17.9**	-5.8%	6.0%	0.5%
Russian Federation	397.8	423.9	435.6	428.6	424.9	422.2	408.7	420.6	431.1	454.5	**444.3**	-2.2%	0.7%	11.3%
Turkmenistan	17.1	18.3	20.7	22.9	19.3	20.0	25.4	25.1	24.8	28.4	**31.5**	11.1%	13.7%	0.8%
Uzbekistan	44.1	44.0	47.4	46.2	46.2	48.5	46.3	43.3	43.1	44.4	**43.4**	-2.2%	0.1%	1.1%
Other CIS	5.3	5.2	5.5	5.7	4.8	5.3	5.2	5.1	5.1	5.9	**5.5**	-6.0%	-0.1%	0.1%
Total CIS	499.9	531.3	549.5	545.2	537.3	539.9	530.0	538.8	549.6	582.3	**573.7**	-1.5%	1.1%	14.6%

Table 3.

At the end, the situation in production and output of gas in Turkmenistan still remains unclear. The current capacity is not viable for diversifying its export routes, hence Turkmen government needs to attract foreign companies for investment and technological transition.

According to the analysis of Turkmenistan's exports to Russia, China, and Iran in recent years, if no new purchase and sale contracts are signed or new pipelines are built, the more realistic situation in 2020 is that Turkmenistan can export about 82-86 billion cubic meters of gas, of which exports to Russia accounts 9-bcm, exports to Iran accounts 8-10bcm, and exports to China accounts 65bcm (accounting for 76.5%-79.3% of total exports).

For China, in the upcoming future, due to the successive completion of China-Russia Eastern Route gas pipelines, new LNG receiving stations and other facilities, gas market will gradually form a pattern of diversified imports, and its dependence on Turkmenistan will gradually decline. [13]

IV. Continuous and unremitting efforts: Prospects for implementation of diversified strategies of Turkmenistan.

From the actual situation, through the gas cooperation with China and partly with Iran, Turkmenistan has implemented a diversified strategy to weaken Russia's monopoly on Turkmenistan's gas exports and get rid of Russia's "energy power" control.

4.1 Construction of TAPI pipeline: Turkmenistan's initiative to actively develop the South Asian market.

In December 2010 Turkmen President Berdymukhamedov then Afghan President Karzai, then Pakistani President Zardari and Indian Oil and Gas Minister Diola signed the TAPI project implementation in Ashgabat so called "The intergovernmental agreement". The signing ceremony invited the President of the Asian Development Bank Haruhiko Kuroda. According to the agreement, the quartet plans to build a gas pipeline from the gas field in eastern Turkmenistan through Kandahar in Afghanistan and Multan in Pakistan to Fazilka on the Pakistan-India border. The total length of the pipeline is 1,800 kilometers and the investment is about 11 billion U.S. dollars, including 200 kilometers in Turkmenistan, 774 kilometers in Afghanistan, and 826 kilometers in Pakistan. Seen on the pic 5.

Pic.5

The construction of the TAPI pipeline has received strong support from the United States. At the "Turkmenistan and Europe-Future Cooperation Prospects" meeting held, and Mr. Stein, senior adviser to the Eurasian Energy Affairs Special Envoy of the U.S. State Department, pointed out that the U.S. supports the construction of Eurasian countries to reduce Russia's influence and its monopoly in energy exports. The purpose of the United States' efforts to promote the project is that: the pipeline crossing will promote the economic and social reconstruction of Afghanistan, bring pipeline income (estimated to be 1 billion US dollars per year), and provide new employment opportunities (about 12,000 jobs). It will also promote economic development and post-war reconstruction in Afghanistan. [4] Additionally, the pipeline will become an effective substitute for Iran's export gas (the construction of the Iran-Pakistan-India pipeline, shortly IPI). Seen in pic.6. This move will curb Iran's energy exports to the external market, and at the same time meet the energy needs of India and Pakistan; And finally, to differentiate Turkmenistan's gas export gas sources, and objectively improve Turkmenistan's negotiating position in energy sector cooperation with Russia and China.

Pic.6

The security situation in Afghanistan is turbulent. With the official withdrawal of the United States-led NATO coalition forces from Afghanistan, the security situation in Afghanistan has become more severe. Taliban attacks on government forces are increasing. This in turn exposes the vulnerability of Afghan security forces. If the Afghan security forces are unable to project its power on rural areas of Afghanistan which is predominantly influenced by the Taliban, how could Afghan government secure the project. The prospects for peace-talks between the Afghan government and the Taliban have become very bleak. This whole situation is left for the sake of luck and have a very little chance of becoming a success. Although, the Turkmen side and the Taliban had several meetings earlier this year in which Taliban had promised safe conditions for workers on sight and supported the idea of the whole project. Yet, this leaves the Turkmen government and the other participants such as investors of the project with little doubt. The proposed TAPI pipeline is 735 kilometers long in Afghanistan, passing through Kandahar and other areas controlled by the Taliban, and faces the real risk of being attacked. This is the biggest threat and challenge facing the construction of the TAPI pipeline. The construction of the TAPI pipeline faces strong competition from the Iran-Pakistan-India (IPI) pipeline. The IPI pipeline proposed by Iran and India is planned to start from the Perth gas field in southern Iran (the world's largest gas field) and arrive in India after passing through Pakistan, with a total length of 2,600 kilometers. For a long time, the project has been stalled due to US sanctions and firm opposition to Iran. The IPI pipeline has a shorter construction distance and do not need to pass through high-risk Afghanistan. Compared with the TAPI pipeline, it has a greater competitive advantage.

So, if it’s found that completing of TAPI pipeline is just impossible the impact on the border energy market to return to the status quo. What I mean by the status quo in this part of the world that the central Asian gas market is very insulated. It is land locked region. [5] Some of them are double land locked. It means that their options for export are very limited. They could subscribe to the BRI or perhaps they could resume traditional links with Russia.

4.2 The Trans-Caspian Gas Pipeline: A possible route for Turkmenistan to export gas to Europe?

Pic.7

Since the independence of Turkmenistan, in order to safeguard its own geopolitical and economic interests, the European Union has proposed to cooperate with Turkmenistan in energy sector especially in gas. EU began to accelerate the promotion of energy import channels and diversification of resources, and vigorously lobbied Turkmenistan to build a Trans-Caspian gas pipeline. Importing Turkmen gas will help the EU get rid of its excessive dependence on Russia (GAZPROM) and realize the diversification of energy import sources.

There are two routes to bypass Russia to transport Turkmen gas to Europe: one is to build a Trans-Caspian gas pipeline to transport Turkmen gas to Azerbaijan; the other is to transport gas to Turkey through Iran. The main opposing powers in this deal are obviously Iran and Russia.

Since the legal status of the Caspian Sea has not yet been finalized. Regarding the legal status of the Caspian Sea, the five coastal countries (Russia, Kazakhstan, Turkmenistan, Azerbaijan, and Iran) have not yet reached an agreement. On the issue of the construction of the Trans-Caspian gas pipeline, Russia and Iran expressed their opposition, proposing that because the laying of the pipeline involves environmental protection and other issues. For proposal to be effective the consent of all coastal countries must be obtained. This proposal by Iran and Russia has been made to prevent Turkmenistan from entering the European market. For Russia and Iran, the enormous reason is that they do not wish for Turkmenistan become a competitor in gas exports to Europe. From a strategic point of view, Russia may maintain the uncertainty of the legal status of the Caspian Sea for a longer period of time.

On the other hand, Azerbaijan has no real intention to build a Trans-Caspian gas pipeline. In June 2012, the governments of Turkey and Azerbaijan signed an agreement on the construction of the Trans-Anatolian (TANAP) pipeline. This pipeline will transport gas produced in the second phase of the Shahdeniz gas field in Azerbaijan to the border between Turkey and Greece, and then to southern Italy and Western European countries through the TAP pipeline. Most importantly, Azerbaijan does not want Turkmenistan to become a competitor in the European gas market. Since Russia and Iran strongly oppose the Trans-Caspian gas pipeline, Azerbaijan will not affect its relations with Russia and Iran in order to assist Turkmenistan in achieving its goal of exporting gas to Europe.

Additionally, The EU hopes that Turkmenistan will reconsider its policies regarding the delivery of gas to the EU border and will require from Turkmen organizations or sign other international companies to coordinate the construction of the Trans-Caspian gas pipeline and the subsequent transportation of gas through Azerbaijan, Georgia, and Turkey to the Turkish-Greek border. The two sides have not yet reached an agreement on this cooperation mode. So far, no multinational gas companies have expressed their willingness to build Trans-Caspian gas pipelines.

The author believes that it is not feasible for Turkmenistan to supply gas to Europe through transit routes of Iran or exchange with Iran. Iran is rich in gas reserves itself. According to statistics from BP World Energy in mid-2018, as of the end of 2019, Iran has 34 trillion cubic meters gas reserves, accounting for 18.2% of the world's total reserves, ranking first in the world.

If the US sanctions lifted, Iranian gas exports to Europe will succeed. Countries such as Italy, Greece, Switzerland have all expressed their intention to purchase Iranian gas, and Iran also has the intention joining the Nabucco pipeline. [3] The Nabucco pipeline that the EU is committed to implement also uses Iran as one of the potential gas sources. Iran and Turkmenistan have a competitive relationship in exporting gas to Europe. Therefore, Iran will not allow Turkmenistan to export gas to Europe through its own territory.[13] The Nabucco

pipeline has been put in stall and further restart date is not known. The German company EWR has decided to halt its operations due to political reasons and the emergence of two more economically viable pipeline plans.

V. Conclusion

Recently, Turkmen government and like many other governments in Central Asia are faced an economic stagnation due to the novel Covid-19 pandemic. It has been struggling to provide job positions and ensure the safety of its population due to lack of vaccines and the necessary equipment. This in turn created a series of advert reactions. On March 6 2021, Chinese government has sent a batch of Sino-vac vaccines to Turkmenistan. Two countries are maintaining their bilateral relations and strengthen cooperation in all possible fields**.**

Getting rid of Russia's "energy control" is one of the reasons for diversification of natural gas exports. From a micro level, the success of getting rid of Russia's "energy control" influence is directly due to the decrease in Russia's purchase of natural gas to increase the trade of blue energy of its own. Russian side and other sides likewise are mainly playing strategically for benefits of their own. In the case of Iran, Turkmen side should adopt a specific approach to reach agreement. The trade between Turkmenistan and Iran was mainly in barter terms, exchange of natural gas for goods and services. The possible solution for Turkmenistan is to set quotas which will benefit both Iran and Turkmenistan in the long term.

As of China, if the completion of Section D pipeline will be succeeded. China will have leverage for setting quotas themselves. This route is not passing through Kazakhstan which gives opportunities for China to set its own rules along the way.

As time has shown, Turkmenistan's rich natural gas resources attracted various parties and therefore they have competed for a piece of pie. They were using all the possible factors to obtain and maintain their presence and launched a fierce game. There are of course obvious conflicts of interests in the construction of the Trans-Caspian gas pipeline between the United States, Europe. Proceeding from its internal economic, social development and self-interests, Turkmenistan will continue to unswervingly promote the diversification strategy of natural gas exports. The primary consideration of Turkmenistan’s choice of partners is economic benefits, that is, a stable market and a competitive price (net return). However, in the foreseeable short-to-medium-term, Turkmenistan’s efforts to open up natural gas markets in South Asia and Europe still face many obstacles. The author puts his word that in addition to the step-by-step implementation of the gas supply agreement signed with China, the possible way to expand natural gas exports is to use existing pipeline facilities of China. In turn, it will sell natural gas northward to Russia or through transit routes of Russia to Europe. Of course, this depends on the restoration and development of the partnership between Turkmenistan and Russia.

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