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Addressing Turkmenistan's recent challenges in production and exports

Policy Recommendations for the Ministry of Oil and Gas of Turkmenistan[1]

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EXECUTIVE SUMMARY

At the beginning of this decade, Turkmenistan was enjoying the privileges of its position as an exporter in three different directions, which led the Turkmen government to rest assured of the benefits the Turkmen energy policies provided for the economy of the country. In the last couple of years, however, the conditions have changed drastically, as Turkmenistan has been increasingly dependent on a sole customer; export revenues have dropped significantly; and the country has remained well behind of its plans about the production levels. By analyzing the country's current problems with production and exports, this report recommends the Ministry of Oil and Gas of Turkmenistan to firstly re-consider its specific energy policies pursued since 1990s, which prevent the government to act pragmatically towards tackling its major challenges. Two of these policy options are emphasized specifically: i) the government does not provide production sharing agreements on its onshore fields to the international oil companies, maintaining its total responsibility for developing those fields (IOC); ii) the government pursues the policy of selling gas at the borders of the country, requiring the interested actors to take on the financing risks and costs of the transportation. By addressing these issues, the government has to acknowledge that this kind of policies of adjusting external demands to its own domestic needs rather than adapting itself, are no more valid within the new circumstances, where the country has to strive with all its means for attracting necessary investment and new customers. These arguments are followed by an additional thematic set of recommendations, aimed at: preventing inefficient associated gas production on the offshore fields; attracting key actors for the realization of the alternative export routes, namely, Turkmenistan-Afghanistan-Pakistan-India pipeline (TAPI) and the proposed routes to Turkey and Europe (via pipeline or tankers); and achieving the diversification of its export products.

1. PROBLEMS WITH PRODUCTION

1.1. Lack of investment in the onshore fields: *the Ministry should grant onshore production sharing agreements to the IOCs.*

With proven reserves reported at above 18 trillion cubic meters[i], Turkmenistan represents one of the special cases, where the question of reserves is not a crucial matter; rather the question of increased

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[1] NOTE: While addressing the Ministry of Oil and Gas, this report acknowledges the frequent modifications and restructuring acts carried out by the president Berdymukhammedov over the past two years. Not much data can be found on this matter, however, according to the latest announced changes in July last year, the main responsibilities of the ministry have been distributed between Turkmengaz and Turkmenneft state concerns and the relevant department of the Cabinet of Ministers overseeing oil and gas sector. As no data on concrete divisions of competencies between these institutions is provided, this report addresses the ministry as a single institutional body of government control, which enables the single policy in the fields of exploration development, processing, transportation, rational and effective use of oil and gas resources and develops multiple choices of gas transportation system for Turkmen energy-carriers export to world market. Therefore, any recommendation provided for the ministry, is, in current conditions, aimed at the abovementioned state institutions, depending on their competencies.

production stands as the main concern. Turkmen government has underlined in several occasions throughout the last decade, its intentions to reach the production level of 120 bcm/year by 2010, 175 bcm/year by 2020 and 230 bcm/year by 2030, however, it is already obvious that the 2010 target has already gone unfulfilled since the figures for 2015 indicate an annual output of not more than 80 bcm.[ii]

Some of the main challenges in this area include the ageing Soviet-era pipeline and drilling infrastructure, along with the high hydrogen sulphide content of Turkmen gas leading to its sour quality – which overall require billions of foreign investment, as well as technical and managerial expertise to redevelop and expand the existing fields and the pipeline network.[iii] Given the official government energy policies, however, attracting investment seems to even be a greater challenge.

Limiting the PSAs with the IOCs to the offshore and western onshore fields (to operate under the control of Turkmenneft) has, in fact, been the distinguishing feature of Turkmenistan's energy strategy since 1990s.[iv] Meanwhile, Turkmengaz has been following the strategy of signing service contracts specifically with Asian and Arab operators on its major onshore fields in the East of the country (the only exception being the PSA signed with the Chinese CNPC on gas reserves in Bagtyyarlyk to the northeast of the country). Whereas, it is far from clear whether service contracts signed with non-Western companies will provide the necessary technical and managerial skills to deal with the development challenges of major oil fields, such as Galkynysh.[v]

Indeed, the government's abovementioned policy precludes major IOCs of risking multi-billion dollar investments in exploration, development and transportation of Turkmen gas fields of which the country is currently in dire need, especially considering the economic crisis Turkmenistan is finding itself in[vi]. Furthermore, in case if the government prioritizes exporting westwards, persistence of not signing PSAs with any European company would at least delay production and development in this direction, with a further risk of potential export routes to be cut off.[vii]

1.2. Inefficient associated gas production in the offshore fields: ***the Ministry should provide purchase and sales agreements for the foreign companies operating in the offshore fields.***

Coming back to existing PSAs, it should be mentioned that a number of offshore and Western onshore agreements have been signed with the foreign operators, since president's announcement of the 'Open Doors Policy' in 2009 to attract foreign investment into the Caspian area. However, certain policies aimed at PSAs have negatively impacted the production process since then. Particularly, the government's insistence that any gas extracted from the offshore fields must be delivered to Turkmengaz for processing and export, as well as the lack of access to export infrastructure for foreign companies, has become a major disincentive for them to continue their operation, or for new operators to get involved.

The German DEA AG, for instance, refused to renew its license after the expiration date in 2015. In other cases, such as with the Dubai-based Dragon Oil's operation at the offshore Cheleken project, the absence of export opportunity led to the fact that the company became disinterested in producing gas and the great amount of associated gas produced along with oil was flared, thus contributing to enormous waste. Meanwhile, Malaysia's Petronas is the only exception, which achieved signing the purchase and sales agreement with the government and selling the associated gas resources to the domestic market.[viii]

While it is highly unlikely that the Turkmen government would allow foreign operators to directly sell the produced gas from its fields to the foreign customers, the opening of the East-West Interconnector pipeline in December 2015, provides an opportunity to absorb all the shelf gas resources by the country, thus incentivizing the foreign operators to continue producing offshore gas that would otherwise become flared. In this regard, Turkmenistan's granting purchase and sale opportunities for the foreign companies, along with providing a concrete export route for them to directly sell their produced associated gas resources, should be considered as an effective measure towards more efficient gas production in the offshore areas.

2. PROBLEMS WITH EXPORTS

2.1. *Winning back the traditional trade partners (if possible) will not provide any significant benefits.*

The return to an essentially mono-directional energy export policy is a worrying development for the country, as around 90% of total exports and at least 80% of fiscal revenues depend on energy sector.[ix]Considering Ashgabat's previous negative experiences with depending only on one customer, it is obvious that the government has to do its best to provide alternative export routes.

China is expected to buy 100 percent of Turkmen gas exports by the end of 2017, while there is no certainty about the future prospects for increasing the volumes traded through the Central Asia-China pipeline. The negative effects of this mono-directionality are exacerbated even further by the internal structure of Sino-Turkmen gas trade: considering the fact that the country's gas exports are diverted towards the repayment of the capital CNPC invested in the construction of the pipeline and the development of the Galkynysh field, the revenue crisis will continue exerting on Turkmenistan's domestic economic landscape.[x] Furthermore, Uzbekistan and China's joint announcement of halting the construction of the Line D of the Central Asia-China pipeline indicates that the country is left with maximum of 35 bcm of space in three operating lines to export its resources to China for the years to come, which is well below Turkmenistan's plans of 65 bcm.[xi]

Meanwhile, the prospects for getting back Russia and Iran as important customers are rather unlikely. If previously energy trade with Turkmenistan was critical for Russia because exports were cheaper than developing Arctic and Siberian resources, today Russia is simply not interested in the Turkmen gas resources. Furthermore, since the cancellation of the contract and unilaterally stopping gas imports in 2016 due to the dispute over gas prices, Russia has reached a deal to pay Kazakhstan and Uzbekistan $140 per 1,000 cubic meters, which is way below the price demands of the Turkmen government.[xii]

Iran is also probably lost as a customer. Since the lifting of sanctions, the Irani side had declared for several times that they did not need Turkmen gas and they were maintaining gas trade relationship only for political reasons. And since Turkmenistan halted the gas exports early this year, because of the row over Iran's historical debt for gas, Iranian officials have spent enormous amount of effort to reroute domestic electricity supplies. Construction of internal gas pipelines from Southern Iran to areas in the north that were supplied by Turkmen gas have sped up, which means, that Iran most probably won't need Turkmen gas next winter.[xiii]

Consequently, both Russia and Iran should increasingly be considered as potential competitors to Turkmenistan, rather than its trade partners in the region. Even if Turkmenistan restored gas trade relations with Russia and Iran, the volumes of exported gas to both countries would be insignificant, as well as the revenues in hard cash, due to the disadvantageous trade arrangements with those countries (low prices with Russia and bartering agreement with Iran)[xiv]. Thus, the ministry should strongly prioritize the implementation of alternative export route projects, namely TAPI and exporting westwards.

2.2. TAPI as the most favorable export project for the government: *The ministry should provide India and other IOCs with stakes in its onshore fields.*

TAPI is one of the rare projects that positively reflects the geopolitical interests of almost all the major actors involved in the region, which can be backed with the fact that both Russia and western energy giants such as Chevron, ExxonMobil, BP and Total have on several occasions expressed their interest in the project.However, due to the volatile situation of Afghanistan's war-torn regions that TAPI is planned to pass through, it is already established that the realization of this project will not happen anytime soon.[xv] Nevertheless, this report maintains that Turkmenistan should take efforts to tackle all the other major challenges facing the project and consider its realization for the medium-to-long term period.

Two factors should be paid attention to: 1. The projected cost of the pipeline is rising by time and has already reached $10 billion (from $3.3 billion in 2006), while none of the partners or IOCs have yet committed themselves to financing the project.[xvi] And this is partly due to Turkmenistan's abovementioned policy of preventing exploration companies to be awarded with PSA on its onshore fields. Turkmenistan's talks with potential Asian and Arab financiers (including Saudi Arabia, Japan and the Islamic Development Bank), in turn, is unlikely to provide the sufficient amount of investment, given the sharp fall in oil/gas prices and Turkmen economic slowdown.[xvii] 2. In wake of TAPI's problems, two new competitive export projects aiming the same markets (Iran-Pakistan-India and Iran-Oman-India) are becoming increasingly attractive, and any further delay in the implementation of TAPI opens a window of opportunity for them to be considered by the other state partners, especially India.[xviii]

Therefore, Turkmenistan should pursue relevant policies to maintain relative attractiveness of the TAPI project for the state partners. One way should be providing India with stakes in Turkmenistan's upstream industry. Although a relevant agreement has already been signed between state parties ensuring security of supply for India, this kind of an arrangement could help further guarantee that any deliberate gas supply disruption from Pakistan could be avoided. Over time, however, it is obvious that Turkmenistan should allow international oil and gas companies to acquire stakes in its onshore fields. Doing so would provide a major step towards the actual construction of the pipeline project.

2.2. Exporting westwards: *the ministry should initiate the negotiations over exporting via tankers.*

This report asserts that the only possible diversification route for Turkmenistan to be realized in the short term is exporting westwards. By 'westwards', it does not necessarily imply Europe, as dependent on the conditions, exports can be limited to Turkey, where demand for gas is still significant. The first and foremost factorthe ministry should take into account at this point is that all the countries that can potentially provide transit route for Turkmen gas in that direction, are also Turkmenistan's potential competitors in the same markets. Given that the idea of exporting via Russia is currently off-the table, motivations of two other potential transit countries should be further examined:

i) Iran –is generally uninterested in providing Turkmenistan an opportunity to increase its independence through trade relations with the Western countries. Nonetheless, Tehran would prefer transit of Turkmen gas through its own territory rather than through other countries, – should that question be really on the table, – which explains their expression of readiness, on several occasions, to facilitate the transit of Turkmen hydrocarbons via its territory[xix]; ii) Azerbaijan – despite being interested in acquiring the status of a transit country, – through the realization of Trans-Caspian Pipeline (TCP) project, –also acknowledges that offering significant volumes of Turkmen gas to western markets could deter Azerbaijan from attracting investment and developing its own promising gas fields (Absheron and Umid). Thus, Azerbaijan would rather be interested in delaying the realization of TCP project, until reaching its own full capacity of production.[xx] Meanwhile, Azerbaijan is willing to pursue transporting offshore Turkmen gas reserves via Compressed Natural Gas (CNG) tankers, to meet its domestic demands.[xxi]

In addition to disputes over the legal status of the Caspian Sea and over the Serdar/Kyapaz deposit between Turkmenistan and Azerbaijan[xxii], it is obvious that the most significant challenge for the realization of the TCP project is the stance of Russia and Iran on this issue. Even if Turkmenistan and Azerbaijan share a common position on considering their sovereign rights to build the TCP through their territorial waters, Russia and Iran have clearly opposed that idea, requiring the consensus of all five littoral states before the implementation of the project.[xxiii] This indicates that the realization of the pipeline project through Caspian Sea will not be implemented soon enough.

Thus, the ministry should consider the implementation of the project for the medium-to-long-term perspective, and within that period, it should tackle another significant challenge, by providing onshore

PSAs for the Turkish and European companies. The government should realize that without those modifications, the TCP project would not be realized even absent the abovementioned political problems.

Meanwhile, the ministry should embrace the idea of transporting gas volumes through compressed-natural-gas tankers, as this way of transportation provides significant advantages for the country. First and foremost, by allowing to dismiss the abovementioned political and legal challenges facing the TCP project, it provides an alternative gas export direction within a short-term period. Secondly, transporting via tankers provides necessary flexibility in determining the maximum amount of gas to be delivered in that direction. Thirdly, it does not require granting PSAs to any of the involving actors. Fourthly, it establishes necessary energy trade relations between the customers, transit and producing countries, that would positively impact the realization of the TCP project in the years to come. Furthermore, considering Iran's abovementioned motivations, the realization of a transport route in Western direction would lead to a condition, where Iran, – realizing that Turkmenistan is actually implementing its export plans to western markets, – would become more willing to provide a transit route through its own territory, thus providing significant leverages for the Turkmen side in negotiations over the potential pipeline export routes.

Consequently, it is recommended that, the government should address this issue within the framework of trilateral meetings with Turkey and Azerbaijan, and initiate negotiations over exporting gas via tankers. It should be considered, though, that this project would not in any case provide such significant gas volumes as it is planned with the TCP project (33 bcm/year). Nevertheless, that amount would be sufficient to compensate for the halted export relations with Iran and Russia.

2.3. *The ministry should abandon the policy of 'selling gas from the border'.*

Another problem to be addressed, while considering Turkmenistan's export diversification policies, is the country's Niyazov era policy of selling gas at the borders, requiring the interested actors to take on the financing risks and the costs, and to build the necessary transport infrastructure outside the borders.[xxiv]While this policy line allows the government to avoid risks, by lowering their commitment, it deprives the government of the necessary flexibility in the negotiations and negatively affects the attractiveness of the transportation projects.

In case of Turkmenistan's policy priorities of exporting westwards, for instance, this policy leads to the complication of the conditions, both in the case of TCP and the transport via compressed-natural-gas tankers. Given that Azerbaijani companies are already engaged in financing TANAP's realization and Ashgabat is unlikely to bear the financial burden of TCP due to its strict pipeline policy[xxv], it will take significant amount of time and effort for determining the main actors for taking over the financial support to build the infrastructure.

Similarly, in case of Turkmenistan's engagement in CNG exports, it should be emphasized that Azerbaijan will be interested in financing the necessary transport infrastructure only according to their domestic gas demands and for any extra amount of gas volumes to be delivered in Western direction, Turkmenistan will have to deal with the problem of commissioning necessary amount of ships and building transport infrastructure. This rigid policy line, in turn, can potentially block Turkmenistan's prospects for transporting significant volumes in the Western direction.

Thus, the ministry should abandon their policy of 'selling gas from its borders' in order to be able to more flexibly address the problems they face in implementing their gas export diversification strategies. Needless to say, this change could also positively affect Turkmenistan's relations with the global financial institutions, providing important investment opportunities for the country.

2.4. Continue diversifying its export products.

Given that the export revenues of the country dropped by 40% during the first half of 2016[xxvi] and no short-term oil/gas export strategies are able to compensate this loss, the government should use this opportunity to decrease its dependence on raw materials by diversifying its offerings to the world markets. Low oil and gas prices, in turn, provide considerable opportunity for low-cost development of the petrochemical industry.

Considering the fact that these kinds of products are relatively easier to export than raw materials, this report supports the government's timely commitment to focus on attracting foreign technology and investment in creating chemical and petrochemical industrial facilities. A $1.7 billion agreement with the Turkish-Japanese consortium, for instance, considers converting natural gas into gasoline, which is a novel way to make up for the lack of oil resources in the country.[xxvii] Other agreements with mainly Japanese and South Korean firms include building gas-to-liquids plants, increasing the amount of liquefied petroleum gas plants, and producing chemicals such as carbamide, or urea from natural gas.[xxviii]

These policies will contribute to: maximizing the value of Turkmen oil and gas in the foreign markets, decreasing its dependence on the export of raw materials, and easing the country's struggles for recovering their export revenues. Therefore, Turkmenistan should continue focusing on the development of the petrochemical industry, as further processing of energy raw materials will contribute to the expansion of the value chain and the diversification of the economy. Country's vast energy reserves, in turn, will continue attracting the foreign investors to the development of this area.

Summary of the Proposed Policy Recommendations

Considering the abovementioned challenges for Turkmenistan's oil and gas industry, the Ministry of Oil and Gas of Turkmenistan should undertake the following actions:

1. **Encourage Turkmengaz to establish long-term relations with major IOCs and create incentives for foreign direct investments on its onshore fields.**
    - Granting onshore PSAs should also reflect the government's priorities on alternative gas export routes:
        i. For bolstering the prospects of the TAPI project – India should be provided with stakes in Turkmenistan's upstream industry, for further ensuring the security of supply;
        ii. For exporting westwards – granting PSAs to European companies should be considered as a 'must'.
    - Additional measures should include:
        i. Cooperation with the relevant state agencies for ensuring the avoidance of double taxation and providing guarantees against nationalization should be taken as important steps in creating a business-friendly environment;
        ii. Addressing the question of lack of information on the licensing process, country's hydrocarbon revenues, as well as operations and production in the fields.

2. **Grant purchase and sale deals to the foreign companies operating in the offshore fields and provide a concrete direction for them to directly sell the associated gas resources.**
    - This should be aimed at achieving more efficient production in the offshore areas;
    - East-West Interconnector Pipeline provides an opportunity to absorb all the shelf gas resources that would otherwise be flared.

3. **Take initiative for the negotiations over exporting gas westwards via tankers within the framework of the trilateral meetings with Turkey and Azerbaijan.**
    - In wake of TCP and TAPI's prospects for the medium-to-long-term period, this idea can fulfill Turkmenistan's short-term needs for diversifying its energy export routes;
    - This would not provide the same amount as TCP project, but the volumes would be sufficient to compensate for the halted exports to Iran and Russia;
    - Although the CNG option currently looks more promising, the ministry should further involve in estimating potential pros and cons of transporting LNG and CNG and make decisions accordingly.

4. **Abandon the policy of 'selling gas from its borders', which would be aimed at:**
    - more flexibly addressing the challenges of implementing Turkmenistan's gas export diversification strategies;
    - incentivizing foreign actors to get involved in the project by demonstrating a serious commitment;
    - establishing closer relations with global financial institutions, which would provide important investment opportunities for the transportation projects.

5. **Continue attracting investment for the development of its petrochemical industry to:**
    - diversify Turkmenistan's economy, expand the value chain and provide alternative sources of revenues;
    - maximize the value of Turkmen oil and gas resources in the foreign markets.

ENDNOTES

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