

Iranian Natural Gas and the EU Diversification Policy

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Abstract: One of the most important Challenges of the European Union (EU) energy security is the excessive dependence of the EU on the gas supplying countries, Russia in particular. The gas crises in 2006 and 2009 showed that the Russian government would not hesitate to make instrumental use of energy in order to realize its foreign policy objectives. To avoid further disruption energy, there are various ways to decrease dependency as a major threat to energy security, in particular via diversifying the energy suppliers. Iran is the second richest country in terms of holder of natural gas reserves and the third gas producer in the world and this makes it necessary to consider Iran as an additional supplier of natural gas to the EU, although being aware of the obstacles which cooperation with Iran in energy issues may pose. This article aims to investigate the benefits and challenges of transmission of Iranian natural gas to the EU's countries.

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1. Introduction

The world demand for kinds of energy increases every year while the natural gas has the vital role in supplying this demand. It is predicted that in the next two decades, the gas consumption will face the significant and unprecedented growth in all over the world and within the 2020 to 2030, can substitute the oil, as a main fuel used by people in the world. The increasing demand for more natural gas comes from environmental benefits that have the lowest pollution among the fossil fuels.

The European Union natural gas is one of the expanding markets and long-term natural gas sale contracts are very customary there. Iran, however, as the second owner of natural gas resources in the world, has not allocated any main share to itself in supplying the European natural gas demand. Therefore, the EU market due to its significant consumption of natural gas, during the next three decades and due to severe dependency of this Union to imported natural gas, should be consider as one of the targeted market by Iran.

Russia, Norway, Algeria, and Nigeria are the greatest suppliers of gas to the European Union, with shares of 40, 30, 15, and 4 percent respectively. Dependence of the EU on imported gas in the past years has consistently been on the rise. In 2010, this dependence reached the remarkable figure of 64.5 percent, which is very significant. Overall, between 1998 and 2010, the European Union dependence on imported gas has gone up by 19 percent. (BP, 2010) In 2008, dependence of 23 EU member countries on

imported gas was more than 80 percent, and the Netherlands and Denmark were the only exporters of natural gas in the European Union. In addition, Britain was as a natural gas exporter until 2003, but after 2004, it became a natural gas importer.

One of the main concerns of the EU officials is the excessive dependence of the EU on the gas supplying countries, Russia in particular. The gas crises in 2006 and 2009 showed that the Russian government would not hesitate to make instrumental use of energy in order to realize its foreign policy objectives. Such concerns have caused the EU officials to seek ways of diversifying their resources to reduce their dependence on Russian gas imports. As a major player in the gas market, Iran is in a position to offer certain advantages that would be attractive to the European Union.

2. Advantages of Importing Iranian Gas for the European Union:

Iran is one of the richest countries in the world in terms of natural gas reserves. In 2010, Iran's total proved natural gas resources were 29.6 trillion cubic meters, i.e., 15.8 percent of the total gas reserves in the world. In the year 2000, Iran's natural gas reserves were estimated at 26 trillion cubic meters, which indicates a high growth rate in recent years. (BP, 2010) These plentiful resources have placed Iran in the second place after Russia in the world ranking of countries with large gas resources. The reserve-to-production ratio for Iran is estimated as 100 years.

Iran is also among the biggest global producers of natural gas, producing 138.5 billion cubic meters annually, i.e., 4.3 percent of the total gas production in the world. In recent years, natural gas production in Iran has seen a fast growth rate, increasing from 60.2 billion cubic meters in 2000 to 138.5 billion cubic meters in 2010. (BP, 2010) However, the production potential in Iran far exceeds this amount. Now, there is a considerable potential for increasing gas production through the explored, but there are some undeveloped gas fields in Iran. Moreover, Iran is in possession of huge gas resources that have not been completely explored to the final stages. It is hoped that through the required exploratory activities, these resources could be utilized for production. During the Fourth Development Program in Iran, the coefficient of gas exploration replacement was approximately equal to 2, i.e., more than two times the produced gas has been added to the country's gas resources, a trend that is expected to continue. (Torkan, 2011).

In addition, Iran has a very special geographical situation. Access to the long vast coastal lines of the Persian Gulf and the Sea of Oman (the Arabian Sea), as well as proximity to the oil and gas resources of the land-locked countries of Central Asia, which are dependent on Russia for exporting their natural gas, is a key advantage that Iran enjoys. In addition, due to its vast oil and gas transportation networks throughout the country, Iran has the possibility of exchanging these resources at a low price in Europe. It should be added that the extensive oil and gas pipelines in Iran are considerably secure, which is considered a great advantage as compared with other countries in the region. As could be seen, the expenses of transporting natural gas from Iran to the European Union are lower than that from other Central Asian and Middle Eastern countries as well as Russia. Moreover, the expenses for transferring gas through pipelines would be much less as compared with the LNG (liquidification of natural gas) transportation method.

According to the Energy Information Bureau report on global energy prospects running up to 2025, Iran is considered as a potential exporter of natural gas to Europe. Based on this report, the first step taken by Iran for exporting gas to Europe would be to complete the Iran-Turkey gas pipeline. Iran's vast gas resources could turn the country into an important exporter of gas to Europe in the future. (Torkan, 2011).

The Institute for Energy Studies is an institute that has conducted extensive research into the future of Europe in terms of gas consumption. Through developing a model for supplying gas to Europe, the Institute has tried to analyze the suppliers' side in the natural gas market. In this model, Iran is named along with Russia, Algeria, Libya, the Netherlands, Egypt, Nigeria, and Turkmenistan, as one of the most

important sources for supplying gas for European demand. Based on this model, Iran's net export of natural gas in 2020 and 2050 would exceed 58 billion cubic meters and 85 billion cubic meters respectively, confirming Iran as the fourth biggest exporter of natural gas in the world after Russia, Algeria, and Norway. (Heydari, 2005)

Results obtained from this model indicate that although Iran currently does not have an active presence in the global gas markets, by 2025 it will have turned into one of the main exporters of gas to Europe. This report emphasizes that since exports from Norway and Algeria will decrease in the coming years due to their diminishing gas reserves, Iran could become the second biggest exporter of gas to Europe. Moreover, due to Iran's huge gas reserves as well as the possibility of using the existing pipelines, the supply costs of Iranian gas, as compared to that of Russian and Norwegian gas, would be lower not only for Eastern Europe, but also for Western Europe. In addition, the completed Iranian gas pipelines could be made available to other countries including Turkmenistan, Azerbaijan, and Iraq.

3. Routs

At present, there are three routes for exporting gas from Iran to Europe: through Armenia, through Turkey, and through Iraq. Each route has its own specific characteristics. Security, customer's preferences, governing conditions in the countries the pipeline passes through, costs and some other criteria are to be considered in selecting a route. Transfer of Iranian gas through the Armenia-Georgia-Ukraine route, although approved by Europe, is seriously opposed by the United States and Russia. Russian interests in Southern Caucasus and its desire to maintain Southern Caucasus republics dependency on Russian energy is among the most important reasons for the Russian opposition to the project. The implementation of this project would be against Russian policies regarding the monopolizing by Russia of the energy transfer and transition routes in the region. Moreover, Russia would not like to have Iran as a rival in the European market. The first phase of this project, a 140 km pipeline with an annual capacity of 1.1 billion cubic meters, was made operational in 2008 for carrying gas from Iran to Armenia. (Javan, 2009) The reason why the United States is against this project is that its implementation would violate the US sanctions against Iran.

The other possible route for transfer of Iranian gas to Europe is the Turkish route. Currently, Turkey imports 6.2 billion cubic meters from Iran through one pipeline. There are ongoing discussions for extending this pipeline to Europe, so that Iran could export its gas to Europe through it. Moreover, Iran can export

gas to Greece and Italy through related interconnectors in Turkey. Iran has been discussed as one of the main suppliers of gas through the Nabucco Pipeline. Some experts believe that without Iranian participation in this project, spending more than 8 billion dollars to build this pipeline would be economically unfeasible since the gas producing Caspian Sea Region countries would not be able to send long-term supplies through this pipeline. On the other hand, Iranian gas fields, Southern Pars Gas Field in particular, would be capable of providing the required long-term natural gas supply for this pipeline. (Torkan, 2011: 54).

One other route recently taken into consideration by Iran is the Iraq-Syria-Europe route. The contract for building a gas transfer pipeline from Iran to Syria was concluded between the energy ministers of Iran, Iraq, and Syria in 2011. According to the terms of this contract, the gas produced in the Southern Pars Gas Field in Iran would be transferred through Iraq to Syria and from there via the Mediterranean Sea to Europe. Based on the announcement made by the Iranian Deputy Oil Minister, the cost of building this 5600 km pipeline is approximated at 5 to 6 billion dollars and its ultimate capacity would be 110 million cubic meters. The prospects for the implementation of this project are dim now though, due to the recent dramatic developments in the Middle East and particularly in Syria. (Bagherzadeh, 2011).

4. Existing Challenges in the Way of Transferring Iranian Gas to Europe

In spite of the advantages mentioned for exporting of the Iranian gas, there are also challenges that need to be considered. Although Iran ranks second in the world in terms of gas reserves, and although it has a high gas production rate, its domestic gas consumption is also very high. This high consumption is the reason why only a small fraction of the Iranian gas is currently exported. In 2010, the Iranian domestic gas consumption amounted to 136.9 billion cubic meters, the third highest consumption globally after the United States and Russia. (Khajavi, 2011) It is true that Iran exports gas through pipeline to Armenia and Turkey, but in order to cover consumption in its northeastern regions imports some natural gas from Turkmenistan. Domestic gas consumption in Iran has doubled since the year 2000, increasing from 62.6 billion cubic meters to the current level of 136.5 billion cubic meters. If this consumption rate continues, there will not remain much gas for export. The rising of domestic gas consumption in 2006 caused a halt in the export of gas to Turkey and was met with serious protest from Ankara.

Furthermore, a great many of the Iranian oil fields are currently in the second half of their useful

life, so that in order to increase the secondary exploitation of these fields to 22 to 24 billion barrels, it would be necessary to inject 300 to 310 million cubic meters of gas on a daily basis to these reserves, which would consequently reduce even further Iran's exporting potential. Kamal Daneshiari, former head of the Energy Commission in the Iranian parliament believes that priority should be given to the injection of gas into the oil wells, and that upon implementation of this policy, no more gas would be available for export. (<http://www.isna.ir>).

Another challenge in exporting gas to Europe is the imposition of extensive international sanctions and limitations against Iran. It is years that the Iranian oil and gas industries have been subjected to sanctions by the western countries, particularly the United States. However, recently these sanctions have been escalated due to the western opposition to the Iranian nuclear program. Iran's joining the Nabucco pipeline project is also included in these sanctions. Mathew Bryza, the former United States Deputy Secretary of State, said that the United States would be willing to support the Nabucco pipeline project as a way of diversifying the policy of the European Union, if Iran would not participate in this project. (Khajavi, 2011) Moreover, the West intends to reduce its investments in Iran's gas industry because of the mentioned sanctions. Overall, the consequences of sanctions on the Iranian gas industry include:

1) Increased risk for investments in Iran: Many energy companies that would like to be present in Iran change their mind because they are afraid of being included in the list of companies sanctioned by the United States;

2) Sanctions have caused foreign banks to reject granting of facilities to Iran since they are doubtful about the Iranian exporting capability, and also because they, too, are afraid of US-imposed sanctions against them;

3) Reduced investment on the part of Iran, particularly in the common fields, has led to an increase in the other countries' shares of these fields. For example, in the Southern Pars Gas Field, the biggest gas field in the world, Qatar's extraction share far exceeds Iran's share.

5. Conclusion

The gas consumption rate in the European Union is on the rise due to environmental concerns as well as an attempt to reduce nuclear energy consumption. The EU lacks extensive gas reserves, and therefore, largely depends on gas imports from other countries. Russia is the main exporter of gas to Europe and supplies more than 40 percent of EU's gas imports. The high dependence of EU on Russian gas is considered as a major threat for Europe.

Having vast gas reserves as well as high rates of production, Iran could be a suitable candidate for exporting gas to the EU at a time when the EU seeks to diversify its gas importing policy. However, there are multiple obstacles in the way, including western sanctions and high domestic consumption of gas in Iran, which prevent Iran from exporting gas to the EU and turning into a main gas supplier to Europe. Removing these obstacles would require the bilateral effort. On the one hand, Iran should through implementation of various policies, reduce its domestic consumption in order to provide more gas for export, and on the other hand, the EU should move towards more interaction in an effort to alleviate its sanctions against Iran.

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