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The Perspectives of Iran-EU Partnership in Energy Sector

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ABSTRACT

Natural gas represents one of the significant resources. It is often considered as a political power by which some of the countries can gain the goals. Nowadays Russia is one of the richest countries with natural gas reserves and production. Russia is a key natural gas supplier for EU member countries. Because of some political reasons Russia reduced gas transporting to Europe to impact on it. Europe tries to find ways out of these crucial situation and problem. The present work aim is to analyze the last year's gas reduction and their influence on European energy market. Its purpose is also to define Iran as an alternative source of natural gas of Russia for EU. According to the statistical data, in 2016 Iran took the first place in natural gas reserves and Russia took the second one. But in 2017 visa versa. This will help Europe to diversify energy suppliers, reduce Russian influence on it and cooperate with Iran in energy sector.

Introduction

Natural gas supply is a crucial question for European Union [1]. Its basic provider is Russian Federation [2, 3]. According to the last 2006-2007 and 2009 years Russia reduced Gas supply to Europe with some political reasons that resulted energy problems in Europe and economic crises almost across the world [4, 5]. Russia tries to use natural gas for political purposes and impact on European countries with it. And this makes unstable and unsecure gas supplying for Europe.

Beside the fact that Europe has consumed natural gas from different countries, Russia has provided EU with 45% of total EU gas demand in 2016 (see Fig.: 5 [3, 6]). Russian gas basic transit countries are Ukraine and Belorussia [7]. Europe still tries to diversify its energy sector or replace it with the other energy source: EU defined the possible ways to solve the energy sector problems in "Europa 2020" and "Europa 2030" [8, 9]. EU attempts to expand and strengthen renewable energy fields to begin or increase using alternative energy resources. The alternative ways of Russian gas are also the shelf and Azerbaijan gas [1]. But the shelf gas is still developing and Azerbaijan is not enough because of lacking its natural gas reserves. It is not included in top ten gas reserves countries. But in this case Russia takes the second place in it [3]. As a matter of fact, Azerbaijan is not able to increase gas supply enough so that could replace Russian position in European energy market. But there may be discussed Iran as a competitor gas supplier of Russia. According to the statistical data of BP, Iran takes the first place in top ten gas reserves countries with 18% in 2016. Taking into account the last one, Iran can enhance natural gas production-export to Europe, decrease Russian influence on Europe and provide energy security for European countries.

The aim of the issue is to show EU demand on natural gas, the quantity of natural gas supplied to Europe by different countries, especially Russia, also the possibilities of replacing Russian gas with Iranian resources and Iran-EU partnership in energy sector.

Methodology

According to the purposes of the present work, there is brought statistical data of EU gas consumptions and productions of 2016 (see Fig.: 1 [3]):

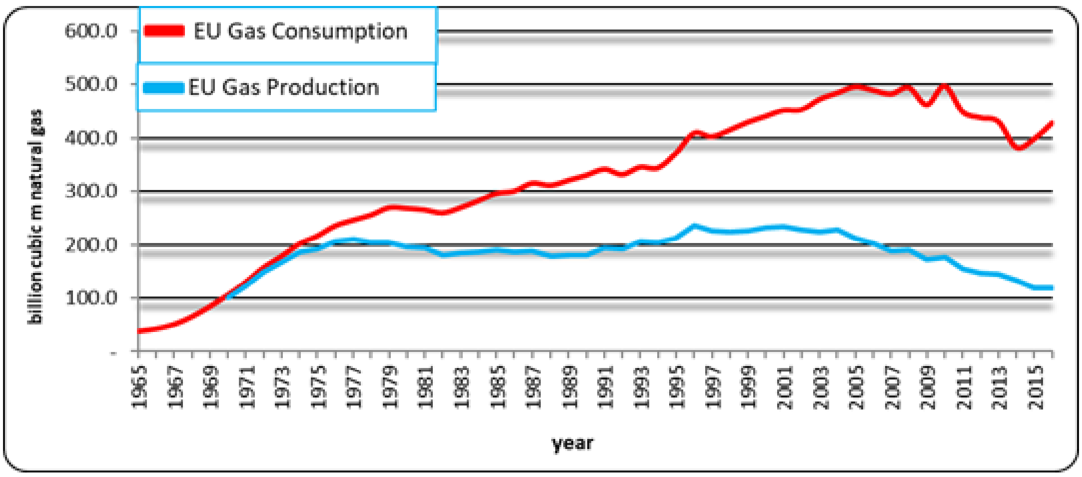

Figure 1. EU natural gas consumption and production in 1965-2016.

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There is also represented statistical data of EU natural gas main suppliers in 2006 (see Fig.: 2 [10]), 2009 (see Fig.: 3 [11]), 2013 (see Fig.: 4 [11]) and 2016 (see Fig.: 5).

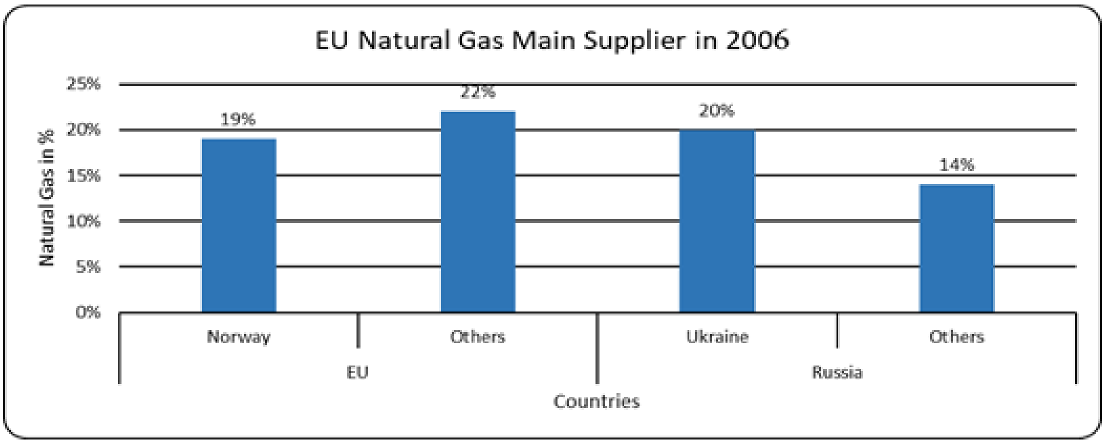

Figure 2. EU natural gas main suppliers in 2006.

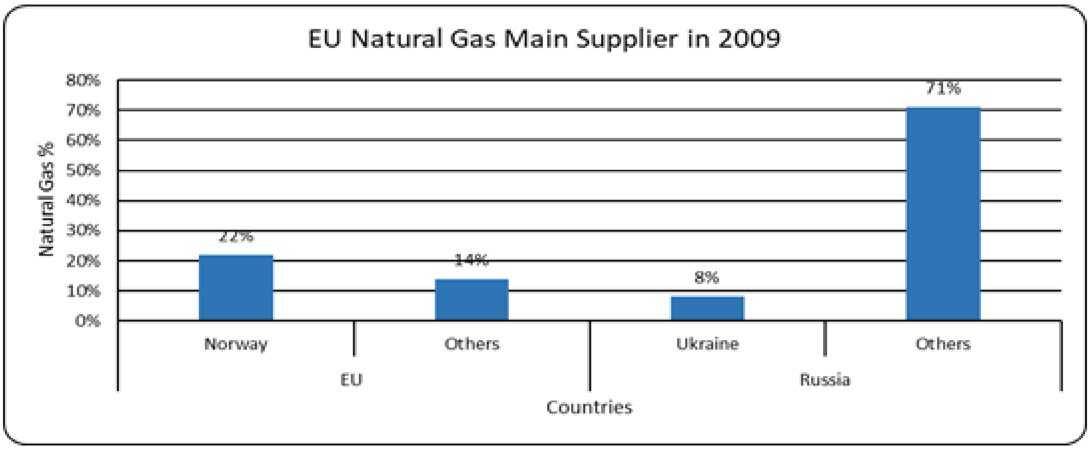

Figure 3. EU natural gas suppliers in 2009.

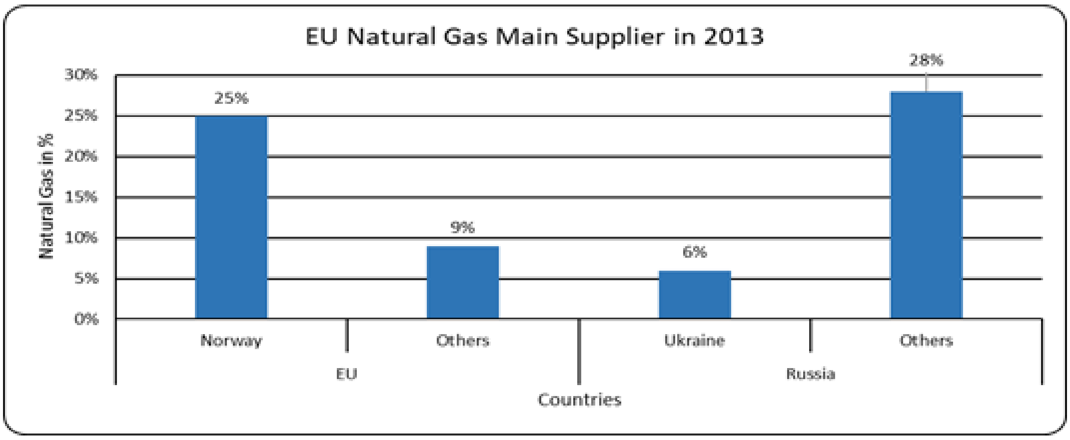

Figure 4. EU natural gas suppliers in 2013.

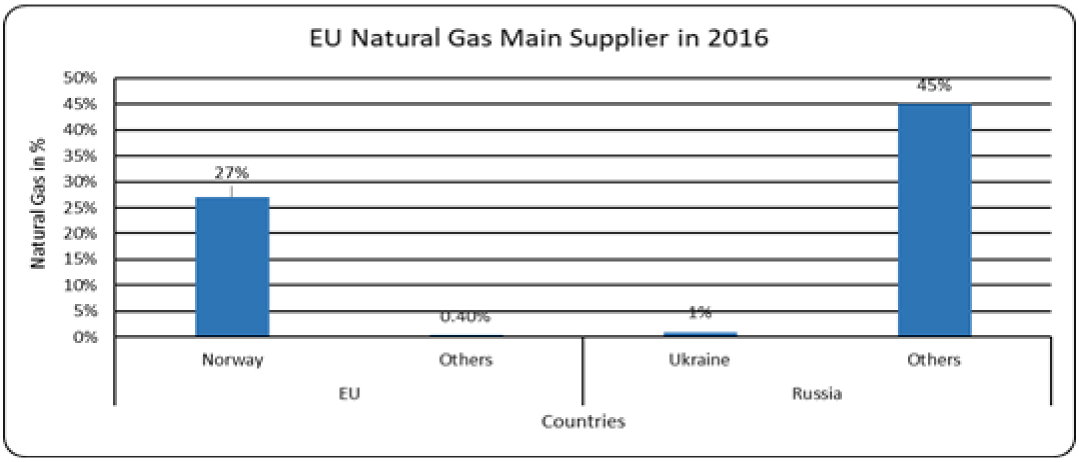

Figure 5. EU natural gas supplier sources in 2016.

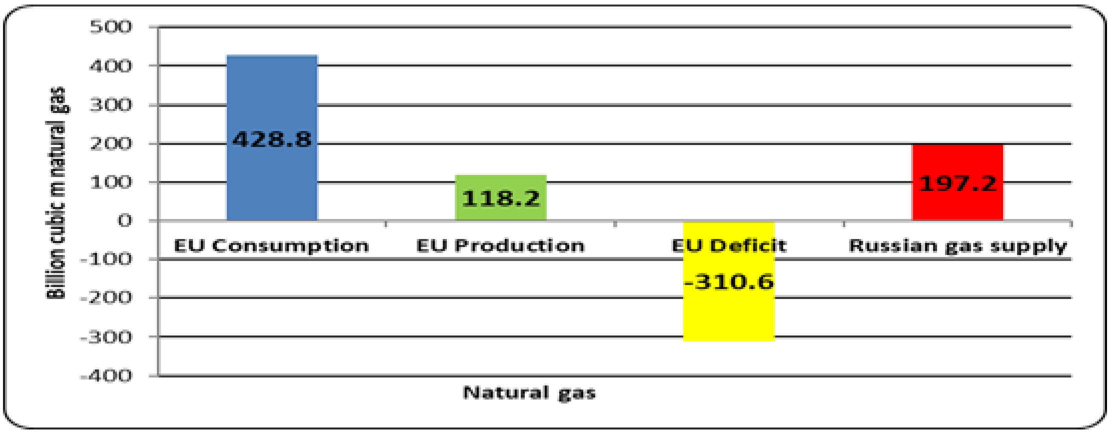

Figure 6. EU natural gas consumption and production, EU gas deficit in 2016 [3, 8].

There is also discussed general information about Iranian, Russian and Azerbaijan natural gas in 2016 (see Tab.: 1) and main data of Iran economy (see Tab.: 2).

Table 1. General information of Iranian, Russian and Azerbaijan natural gas in 2016 [3].

Natural Gas	Iran	Russia	Azerbaijan
Reserves (trillion m^3)	1183	1140.0	40.6
Production (billion m^3)	202.4	579.4	17.5
Consumption (billion m^3)	200.8	390.9	10.4
Export (billion m^3)	1.6	188.5	7.1

Table 2. General information about Iran in 2016 [12].

Area	2 628.8 thousand km^2
Population	80 billion people
Population/1 km^2	49 people
Population annual growth	1 %
GDP in current price	$409.386 billion
GDP per capita	$0.5123 thousand
GDP annual growth	13.4
Total labour force	27.4 million people
Unemployment in total labour force	12.4 %
Women employ in total labour force	19.2%
Export (current price)	$93.868 billion
Import (current price)	$87.191 billion
Annual inflation	8.6%

Discussion of statistical data

According to the statistical data (see Fig.: 1), EU natural gas consumption has increasing tendency despite its attempting to its gas supply or move on the other alternative energy resources. Its gas production has vice versa tendency: it is reducing gradually.

The basic gas supplier of Europe is Russia. Russian gas mainly was distributed through Ukraine (70%) and Belorussia (30) [7]. In 2006-2007 there was Russia-Ukraine gas war, in 2009 there also were political tensions and natural gas crises in Europe. Russia reduced gas supply to Europe to impact on European countries. That resulted difficult economic and financial problems globally.

After 2006-2007 gas crisis, Russia started Nord Stream pipeline building to supply much more resource to Europe to keep EU dependent on Russia. This pipeline connects Russia to Europe directly. There are two strings and both annual capacities are 55 billion cubic meters of gas. They launched in 2011-2012. But this is not fully used [14].

EU produced 118.2 billion m^3 and consumed 428.8 billion m^3 natural gas in 2016. So, there was originated a deficit about 310 billion m^3 gas (see Fig.: 2). Russia supplied natural gas more than 50% of EU demand in 2016. Germany, Italy, United Kingdom and France mostly use Russian gas. According to their economies providing them with gas is significantly important.

The second gas supplier of Europe is Norway. It tried to enhance its gas production gradually from 16% to 27% in 2006-2016 [3] to avoid Russian influence on EU. Europe looks for alternative energy resources to replace or reduce Russian influence on European energy market. Russian gas share in EU energy market decreased from 34% to 12% in 2006-2009. But, for instance, in 2013 Russian energy distribution to Europe was enhanced to 34% and in 2016 46% where the share of Ukraine was significantly reduced.

The statistical data shows that Iran takes the first place among the top ten gas reserves countries with 18% (see Table: 1). But Azerbaijan has 29 times less gas reserves than Iran. Although Iran produces gas for its countries demands which is the sixth of its gas reserves. At the very time Russia is on the second place among gas reserves countries with 17% but it is producing and consuming approximately the same amount [3]. So, this means that Russian gas has problems about lacking the reserves fast and Azerbaijan is not able to be competitor to Russia in energy sector. According to the abovementioned, Iran is a proper alternative way to increase gas stable and secure exports to reduce Russian impacts on EU.

If EU is ready to cooperate with Iran, the pipeline will pass The Caucasus. This will make close Iran and Europe in energy and economic sectors.

There is also represented general information about Iran in 2016 (see Tab.: 2[13]). According to the statistical data (see Tab.: 2) Iran has a large territory with big population. It has a big trade balance and the rate of inflation is 8.6% may be caused with positive trade balance. From the point of the partnership of Iran-EU in energy sector, this will provide economic development between them. If Europe agrees to this statement, Iran will be a stable and secure gas supplier to European countries.

Conclusion

Stable and secure natural gas supply is wildly important for Europe. Its basic supplier is Russia. Problems derived from energy sector in 2006-2007 and 2009, Russia decreased gas supply to Europe which resulted economic and energy crisis. Europe tries to find out or look for to change Russian resources into alternative ways to reduce Russian influence on European countries. Europe is able to increase inner gas production, consume shelf gas or renewable energy. There is also an attempt to enhance Azerbaijan gas production and export. But all these ways are not enough for each one to be fully competitor of Russia.

Iran takes the first place with 18% among the top ten natural gas reserve countries. Nowadays he produces and consumes the same amount gas. In this case Iran has possibilities to increase its gas production and exports toward

Europe. This will be stable and secure supplement which help deepen relationship in economic and energy sectors between them.

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