FUTURE PROSPECTS OF NABUCCO PROJECT FOR TURKEY

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ABSTRACT
Old Nabucco and New Nabucco West projects are the main geo-economic concern of Turkish Republic since their importance as energy corridor between Turkic Republics and European Union. That will be combined with TANAP and Israeli gas resources from Mediterranean Basin. This paper will provide knowledge about main cornerstones of Nabucco and its benefits to Turkey.

Keywords: Nabucco, EU Turkey relations

INTRODUCTION
Global soaring demand for energy resources forced EU countries to use alternative routes for their much interest. In 2002 EU promoted the Nabucco gas line project for the transport of Central Asian gas reserves to European borders. That will also prevent Russian dominance on these reserves. Turkey as a country on main route of the project will be highly involved in Nabucco. Although the project has slowed down in previous years there are expectations that it will start up in coming years. In my paper I will carefully investigate the potential future prospects of the project on Turkey. How EU Turkey relations will move towards a strategic partnership in this energy corridor will be the main focus of the paper.

ENERGY DEMAND OF TURKEY
Turkey has energy importer for many years since early 1970’s. Scarce foreign exchange reserves and OPEC’s petroleum price crisis have drastic effects on macro-economic variables in mid-1970. Following to liberalization policies after 1980’s made little impact on import formation of Turkey. Country was heavily bound to imported fossil energy resources. Disintegration of Soviet Block increased the import of gas from Turkic Republics. The industrial demand shifted towards those resources during the time span. It is expected that Turkey has an increasing energy demand mainly as electricity usage. According to a study expected population of country will be 115 million and per capita energy consumption will be 10,197 kWh accordingly in 2050. (Yumurtaci, 2004) That means 1,173 billion KWh. energy demands at this time. Sustaining high growth rates
raised energy resources demand of Turkey which increases current account deficit of country. The energy imports of Turkey is the main cause of that deficit since recent estimation reveals that the non-energy imports figure of current account deficit is around 1% of GDP. All of those indicators reveal that in near future Turkey would face energy supply problems with increasing costs.

The energy production resources of Turkey are mainly non-environmental friendly coal and lignite resources. Meantime there will be a high demand for energy resources in next decade due to the expected high economic growth in Turkey. In following table the potential sources of energy in Turkey are given. High share of coal would seriously create hazard for countries environment and creates negative external economies in industrial production. Under those circumstances that inefficient resources must be substituted by relatively affordable and clean gas resources imported from Caspian region.

**Figure 1** Primary energy production targets of Turkey

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<tr>
<td>Hard coal and lignite</td>
<td>21259</td>
<td>28522</td>
<td>31820</td>
<td>39385</td>
<td>42732</td>
<td>45954</td>
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<tr>
<td>Oil and natural gas</td>
<td>2127</td>
<td>1735</td>
<td>1516</td>
<td>1604</td>
<td>1505</td>
<td>1465</td>
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<tr>
<td>Central heating</td>
<td>495</td>
<td>884</td>
<td>1336</td>
<td>2018</td>
<td>2427</td>
<td>2758</td>
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<tr>
<td>Hydropower</td>
<td>5845</td>
<td>7520</td>
<td>8873</td>
<td>9454</td>
<td>10002</td>
<td>10465</td>
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<tr>
<td>Wood and waste</td>
<td>6760</td>
<td>6446</td>
<td>6029</td>
<td>5681</td>
<td>5498</td>
<td>5413</td>
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<tr>
<td>Geothermal</td>
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<td>3760</td>
<td>4860</td>
<td>4860</td>
<td>5400</td>
<td>5430</td>
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<tr>
<td>Nuclear</td>
<td>0</td>
<td>3657</td>
<td>9143</td>
<td>18286</td>
<td>26988</td>
<td>29600</td>
</tr>
<tr>
<td>Solar</td>
<td>459</td>
<td>907</td>
<td>1508</td>
<td>2294</td>
<td>2845</td>
<td>3268</td>
</tr>
<tr>
<td>Wind</td>
<td>250</td>
<td>620</td>
<td>980</td>
<td>1440</td>
<td>1786</td>
<td>2154</td>
</tr>
</tbody>
</table>

*Primary energy production targets of Turkey (Yarbay 2011)*

Turkish foreign relations with former Soviet Republics had a paradigm shift after the independence of CIS countries. The common historical, cultural and linguistic ties improved the economic relations of those Turkic Republics and Turkey. In first phase of economic relations vast amount of small and medium enterprises moved those countries in transition from Turkey. The foreign direct investment of Turkey in Turkic Republic was limited with consumption industry goods for a long time.

Turkey has started EU accession negotiations after 2004. That was the successful management of process after millennium. Besides customs union and economic cooperation benefits Turkey would also serve to help the growing energy demand of EU via energy corridors in country. The EU membership will have common benefits on security issues of both western countries and Turkey (İkiz, 2011). The fundamental gain of EU is achievement of stabilization in eastern borders of Union. Turkey with high talented, sophisticated and strong military forces will provide a safe heaven
and distant hammer for peace keeping operations of EU countries both in Balkans and Middle East (İkiz, 2011).

**NABUCCO & EU AND TURKEY**

Besides Giuseppe Verdi famous operate Nabucco had different interpretation after the agreement between Turkey, Hungary, Romania, Bulgaria and Austria in 2002. The main aim of project is transportation of energy rich gas resources of Caspian region to Europe via pipeline construction. In 2005 Nabucco Pipeline GmbH has founded as main company. The total lengths of pipeline will 3900 km. The 2581 km. of the pipeline will be in Turkish soil. That makes Turkey important partner in project. The annual capacity of pipeline is 31 bcm. The overall planned cost of construction is 7,9 billion Euro. The EU energy commission had a decision of financial support for project in order to limit the high gas dependency to Russia.

That also brought alternative route proposals from Russia and Italy as an alternative project. South stream project is undertaken by Russian GAZPROM (İleri, 2011) That alternative route is bypassing Turkey in transporting gas to Europe via Black sea. Compared to Nabucco is contains high costs and increases EU dependency on Russian energy resources. In the end of 2012 Russia started to construction of new line.

**Figure 2** Comparisons of Nabucco and South Stream

The Nabucco project was lately secured the resources in Central Asia. Shah Deniz stage 2 gas resources in Azerbaijan will be connected to line in 2017 at the proposed time of operation of pipeline. The main critics of project related to potential gas resources supply in Caspian region. In geopolitics maintaining secure and sustainable energy resources are the top priority for regional economic development. Thus in order to construct well-functioning pipe line the geopolitical and geo-economic stability of Caspian region must achieve. That will also improve and regenerate the relations between Turkey and Turkic Republics. That means this case must considered as priority in Turkish foreign policy.

The establishment of South stream and weak support of EU towards proposed pipe line changed the name and financers of Nabucco. The Turkish part with Azeri support decided to construct Trans Anatolia Gas Pipe line and Nabucco became Nabucco West starting from Bulgarian border. It passing through Bulgaria, Romania, Hungary and ending at the Central European Gas hub Baumgarten in Austria. The capacity of the 48 inch diameter 1329 km pipeline is scalable between 10-23 bcm. Which means Nabucco West is highly capable of meeting increasing market demand. Project will increase diversification within the European gas market.

**Figure 3** Nabucco West

Following to policy shift of European Union towards project there are several modifications in Nabucco. First it became Nabucco West in EU and TANAP in Turkey. Financing consortium changed ownership and there are modifications for alternative route. Besides Turkey decided to build TANAP as an alternate towards South Stream.

**Figure 4 TANAP**

There are different options as resource. Besides Shah Deniz II Stage option, Israeli gas from Mediterranean basin would also considered as energy source for project.

**MUTUAL BENEFITS OF NABUCCO WEST FOR EU&TURKEY**

Nabucco pipeline will bring Turkey and Europe eminent gains and provide important benefits. In this part of the paper the evaluation of those benefits is listed.

Secure supply of gas reserves: Both Turkey and EU have enormous growing demand for gas for households and industry. Bringing the new sources of gas from the Caspian region and the Middle East definitely match the soaring demand for energy resources in those countries.
Improving marketing capacity for Turkey: Turkey will have link with the European gas market with a capacity of 500 bcm/a consumption. That will improve the connection of Europe and Turkey. It will transfer imported gas reserves to EU and got financial liquidity and high revenues concerning the markets along the Nabucco pipeline.

Integrated storage capacity: Turkey will eliminate high risk of low gas storage capacity in country. It will be able to use the gas storage facilities in the Nabucco countries. That secures to have extra supply for drastic demand increase of Turkey.

Multiplier income generation of site construction: Nearly 2,000 km of the 3,300 km of the Nabucco pipeline will be built on Turkish soil under TANAP consortium. Not only construction investments but also maintenance expenses will increase the employment of resources. That increase in investments will create extra revenues in whole economy by multiplier effects.

Increase in foreign trade: The lucrative new gas export contracts between Europe and the countries supplying Nabucco – Azerbaijan, Turkmenistan and Iraq - will give huge opportunity to Turkish companies with high market penetration chances to export goods and services to partner countries and improve prosperity and wealth in Turkey.

Modernization of pipeline infrastructure in Turkey: Turkey will save enormous amount of money in by sharing the cost of building this major infrastructure with other consortium countries. BOTAS (the Turkish gas network company) will modernize and upgrade the gas distribution network without having excess costs of infrastructure.

Creation of energy Bridge for Turkey: Integration of Turkish gas market to European gas market will improve geopolitical importance of Turkey. Turkey will be a dominant hub between Caspian energy sources and European consumers.

CONCLUSION

Turkey has growing strategic geopolitical importance due to its location and neighborhood with Central Asia and European Union countries. The geopolitical structure of country makes it efficient energy hub between Asia and Europe. That is also meeting the demand of energy resources EU via gas pipeline from Turkic Republics. West Nabucco and TANAP pipelines will be very important for both EU and Turkey for matching clean energy demand. The EU Turkey relations will also get strength by this common project. EU will get stabilize his energy route and meantime Turkey will have economic benefits from gas transfer. The EU accession of Turkey will be also positively affected by this project.
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