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ENERGY SECURITY OF THE EUROPEAN UNION AND TURKEY'S ROLE

Hakan KAYSI*

Abstract

Energy security debates within the EU increasingly focus on security of gas supply. Rising demand and declining domestic production compel the EU to forge a comprehensive policy toolset unifying energy and external policy. Security of gas supply in the EU has been tried to be tackled by market-oriented measures such as liberalization, solidarity measures or Community mechanism. However, supply risks are transcending the boundaries of EU internal market forcing the EU to adopt policies based on geopolitics. In this context, Turkey seems to play a key role as part of the strategic Southern Corridor planned to be a new gas artery from the Caspian region through Turkey to Europe. In addition, the further integration of nascent Turkish gas market to the EU appears to be in harmony with efforts relying on deepening of EU internal market.

Key Words: *Energy Security, security of gas supply, Southern Corridor, internal gas market, Turkish gas market.*

Özet

AB içinde enerji güvenliği tartışmaları daha çok doğal gaz arz güvenliği üzerinde yoğunlaşmaktadır. Artan talep ve azalan yerli üretim AB'yi, enerji ve dış politikayı birleştiren bütüncül bir politika oluşturmaya zorluyor. AB'de doğal gaz arz güvenliği topluluk mekanizması, dayanışma ya da serbestleştirme gibi önlemlerle ele alınmaya çalışılmaktadır. Bununla birlikte, arz kaynaklı riskler iç pazarın boyutlarını aşarak, AB'nin jeopolitiğe dayalı politikalar benimsemesini zorunlu kılıyor. Bu bağlamda, Türkiye, Hazar kaynaklarını Avrupa'ya taşıyarak yeni bir doğal gaz arteri haline

* Energy Expert, Energy Market Regulatory Authority of Turkey.
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gelecek stratejik Güney Koridorunun bir parçası olarak önemli bir rol oynamaya hazırlanmaktadır. Buna ek olarak, yeni gelişen Türkiye doğal gaz piyasasının AB ile bütünleşmesi, AB'nin iç pazarı geliştirme yönündeki çabaları ile de uyumlu gözükmektedir.

Anahtar Kelimeler: *Enerji güvenliği, doğal gaz arz güvenliği, güney koridoru, doğal gaz iç pazarı, Türkiye doğal gaz piyasası.*

Introduction

Energy security of the EU has been increasingly becoming an integral part of the debates over the future of the EU. Ongoing concerns about security of energy supplies to the EU are not only confined to a limited circle of elites but also ordinary citizens. Risks are becoming more and more visible for all. Europe's domestic gas and oil production are in decline. Similar to oil, natural gas has become a political leverage for producing countries and further gas supplies necessitate vast investment in the each value chain of the gas sector. Unless proper steps are taken, many scholars believe that, security of energy supplies would continue to be the Achilles heel for the EU.

As a distinctive feature of this new wave of public concern from the past, debates are focusing on security of gas supplies rather than oil. Two factors have come to play a viable role. Firstly the share of natural gas within overall energy consumption has rapidly increased. The share of gas in world primary energy demand increased 86% between 1980 and 2004, while oil raised 27% within the same period[1]. Secondly, world gas consumption via pipeline trade still dominates natural gas sector, leaving gas sector mostly as regional rather than global. Pipelines make a connection between consumers and producers and exclude everyone else.[2] Therefore natural gas often carries greater strategic significance than oil because of its dependency relationship and political leverage which pipeline creates.

The EU ensures its gas supplies mostly via three conventional arteries: North Sea, North Africa and Russia. Out of these three main routes, Russia is the source of real concern especially after the EU's 2004 enlargement to the Eastern Europe. Out of ten new member states, six are depending on Russia over 60% in terms of natural gas consumption. Relationship in perennial conflict between Ukraine and Russia over natural gas prices and transit have threatened both short and long term security of gas supply of the EU. It is apparent that this conflicting relationship on natural gas issues will have implications on gas diplomacy surrounding the future gas transit corridors planned to meet increasing gas demand of Europe.

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[1] **World Energy Outlook 2007**, Paris, International Energy Agency, 2007, p.74

[2] Nicklas Norling, "Gazprom's Monopoly and Nabucco's Potentials: Strategic Decisions for Europe", **Silk Road Paper, Central Asia-Caucasus Institute & Silk Road Studies Program**, Washington & Stockholm, November 2007, p.9

In this regard, the EU is in search of new supply routes to balance its gas import, diversifying sources. This brings with it the challenge of creation of an integrated external energy policy. At present, the EU policy does hover ineffectively between the market and geopolitics.[3] The EU is in need of a comprehensive approach articulating both markets and politics into energy policy. Energy policy's incorporation to the foreign and security policy of the EU will mostly determine the future landscape of Eurasian energy geopolitics.

While all these developments have taken place, Turkey has the aim of being a fourth transit energy artery between Europe and producing countries in Central Asia and Middle East. Nabucco pipeline project, planned to carry natural gas from producing countries like Azerbaijan, Turkmenistan, Iraq and possibly other countries to Austria has a vital priority for Turkey's aim of being a transit country. The project is at the cornerstone of Southern Corridor concept and the realization of this project is posing a challenge for the EU. Southern Corridor would also be an important play field on which EU external energy policy could be tested.

Turkey's membership negotiations with the EU have made the process more significant. "Europeanization" of Turkish gas market could possibly have long-lasting effects for both sides. Moreover, further deepening of cooperation on energy between the EU and Turkey will probably constitute an important ground from which many spill-over elements can emerge. Nevertheless, as a considerable transit and consuming country, Turkey's own internal scheme for security of supply and its implementation would have implications on the development of Turkey's role as an "energy hub" both in the short and the long term.

All of these considerations set the stage for an in depth examination of security of gas supply in the EU and Turkey's position to it. The EU has several tools at its disposal to tackle energy security. In addition to energy policy specifically, external relations, neighbourhood policy and security policy are also part of the energy security toolset, as is environmental policy.[4] Therefore, the EU should use a policy toolset incorporating all of these policies to achieve the best. Undoubtedly, diversification will continue to be at the cornerstone of any policy toolset aiming supply security.

The EU and Security of Gas Supply

European gas market has been undergoing a thorough liberalization process that started in 1998.[5] Competition across the market has been prioritized by the EU with market opening, unbundling, third party access to gas grid and regulatory oversight. Overall, at the end of 2004, at least 86% of gas consumed in Europe was supplied to

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[3] Richard Youngs, "Europe's External Energy Policy: Between Geopolitics and the Market", **CEPS Working Document,** No. 278, CEPS, Brussels, November 2007, p.1

[4] Aad Correlje and Coby Van der Linde, "Energy Supply Security and Geopolitics: A European perspective" **Energy Policy** 34, 2006, p.539

[5] However, the original idea for an internal market for gas and electricity dates back to a 1988 Commission Communication on "the internal market"

end-users who were legally able to choose their supplier.[6] However, real competition has reached different levels across the member states. The creation of a single market is still one of the three pillars of EU energy policy alongside security of supply and energy efficiency.

Despite the fact that European gas sector evolved in the 1950's and 1960's with the development of the oil and gas fields in Italy, the North Sea and the Netherlands, the first internal market gas directive based on the principles of non-discrimination, transparency, and the introduction of competition entered into force in August 1998.[7] The liberalization process introduced changes such as market opening, unbundling, network access, and regulation. The original internal gas market directive has been replaced by a new one in 2003[8]. But the European gas market has inharmonious characteristics due to the inclusion of the 27 different natural gas markets with different development levels which makes it difficult to create a level playing field. European gas market has based on the pipeline system within and across the member states. But Europe needs much more interconnections facilitating gas trade among member states. This deficiency makes member states isolated in gas infrastructure limiting action in solidarity. Therefore establishment of a fully integrated internal gas market for the EU will be of utmost importance for ensuring gas supply security within the EU.

Liberalization of the market involves the creation of a new security of supply scheme in which market players would play a bigger role. However, as low-probability/high-impact events occur very rarely, the incentive of market players to invest in insurance is projected to be low in the future. This is due to scarce incentives within a liberalised environment.[9] European governments need to make cost/risk judgments and create a transparent security framework of standards and obligations including obligations which should be placed on different market players.[10]

In fact, the EU has tried to respond to this requirement with the Directive concerning measures to safeguard security of natural gas supply adopted in 2004[11]. The Directive (2004/67) entered into force in 2006. It brings up a three step approach in case of a supply disruption: first, the industry takes the necessary measures; if these are not sufficient to mitigate the crisis, measures at national level are taken. If these are still not adequate and if the disruption reaches the level of a major supply disruption (defined in

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[6] Nigel Harris and Mary Jackson, "**A picture of the European gas trading market in 2005**", 19 February 2009, <http://www.kingstonenergy.com/eugas0805.pdf>, p.1

[7] Uwe Remme et al, "Future European gas supply in the resource triangle of the Former Soviet Union, the Middle East and Northern Africa", **Energy Policy,** 36, 2008, p.1624

[8] Council Directives 2003/54/EC and 2003/55/EC on the internal market in Electricity and Natural Gas.

[9] Arianna Checchi et al, "Long-Term Energy Security Risks For Europe: A Sector-Specific Approach", **CEPS Working Document**, No:309, Brussels, January 2009, p.23

[10] Jonathan Stern, "Security of European Natural Gas Supplies. The Impact of Import Dependence and Liberalization", **The Royal institute of International Affairs**, London, 2002, p.5

[11] Council Directive 2004/67 of 26 April 2004 concerning measures to safeguard security of natural gas supply

the Directive as the loss of at least 20% gas supplies) then the Community mechanism is activated. In that situation, the Gas Coordination Group[12] is convened to discuss what further steps to be taken and to assist the Member States. The Group, if necessary, can propose further measures to the Council.

Another significant development (in terms of strengthening of EU legal capacity to cope with supply security) was the addition of a new energy chapter in the Lisbon Treaty. A specific chapter on energy (Title XX) accentuates the importance of a union policy, which stresses "a spirit of solidarity between member states", aiming at security of supply, proper functioning of energy market, energy efficiency and interconnection of energy networks. Nevertheless, there is still an uncertainty about how solidarity could benefit EU's energy policy in practice. It is argued that we should expect that the 'solidarity clause' will be taken up by the European Commission which will develop a 'system of solidarity'. This system would include the establishment of an appropriate action plan in case of serious supply disruptions and a review process for member states' energy security.[13] However it seems that there is a lack of political will among member states to solidify the energy market within Europe. The recent crisis between Russia and Ukraine at the beginning of 2009 has caused an interruption of Russian gas flow to Europe tested the functioning of solidarity and reliability of mechanisms designated in the Directive 2004/67. The Gas Coordination Group has tried to balance and coordinate measures taken by member states. However, the reactions of member states have been centered at securing their own supplies rather than considering the solidarity with other member states.[14]

In its security of natural gas supply communication of 13 November 2008[15], the European Commission clarified that the Community mechanism, foreseen in specific conditions, is not sufficient to provide a timely response to a gas supply crisis which goes beyond the level that national measures can mitigate. The document argues that the Directive (2004/67) should focus on: a) developing a regional response to supply crisis, b) creating an EU emergency plan, c) improving transparency through adequate reporting on member states' situation on security of supply. Distinctively, it is accentuated in the document that solidarity is not a charity. For that reason, adequate compensation mechanisms would have to be developed. However the document leaves

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[12] A Gas Coordination Group has been established to facilitate coordination of security of supply measures by the Community in the event of a major supply disruption. This group could also assist Member States in coordinating measures taken at national level.

[13] Christian Egenhofer and Arno Behrens, "Two sides of the same coin? Securing European energy supplies with internal and external policies", paper presented at the **Vijverberg Session on Energy**, The Hague, 20 May 2008, p.5

[14] "Mandil: Energy solidarity 'still just words", 10 February 2009, <http://www.euractiv.com/en/energy/mandil-energy-solidarity-just-words/article-179254>, 18 February 2009, p.1

[15] European Commission, **Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions on the Directive 2004/67/EC of 26 April 2004 concerning measures to safeguard security of natural gas supply**, COM(2008) 769 final, 13 November 2008.

the issue of how solidarity measures should be compensated to later debates. It seems quite possible to expect that after the Lisbon Treaty, solidarity clause would especially lay the groundwork for more assertive changes in the Directive (2004/67).

The internal gas market has been expected to spawn a liquid, deeper market with spot transactions, and hubs along with corresponding services all of which will create a flexible and robust structure quickly adapting to tight market conditions. However, in terms of security of supply, potential benefits of internal gas market would be accessed through a more interconnected gas infrastructure. This integration can also be extended to neighbouring countries and regions such as Russia, Central Asia, and the Middle East. In this regard, the EU designed a policy called Trans-European Networks introduced in Maastricht Treaty. In November 2003, guidelines for trans-European energy networks were adopted identifying so-called axes for priority projects—which are projects considered very important for the operation of the internal energy market and/or security of energy supply. These projects, in return, will have priority for receiving EU financial aid.[16]

The Commission intends to keep internal energy market as the main driver of investment in energy networks. However, it also tries to make TEN-E a mechanism through which it can play an active role on projects of clear relevance to European energy security. However, trans-European networks needs to be depended on market conditions, too. Thus, pipeline economics will continue to play an important part for the future infrastructure of internal gas market. In that regard, the relative security in international affairs and the fate of the energy security in Europe will strongly depend on the alliances and power relationships established between the great "European trans-nationals" of the sector and their counterparts in other parts of the world in North-America and Russia.[17] In fact, the existence of a powerful European trans-national within a trans-border pipeline project is perceived as indispensable to the success of the project. However, it is also argued that changes that have taken place in recent years in the worldwide energy system could make it advisable to adopt a more regional, government-led approach in energy issues, rather than just leaving it to market conditions.

Gas market entails different segments each of them linked to the other like a chain. The future projections based on demand and supply balance must be accurate and timely to attract the necessary long-term investment consistently and to minimize market disruptions and distortions.[18] The lack of investment can create congestion and even disruption in the basic infrastructure of natural gas system. But some uncertainties about government policies on overall energy policy affect future gas demand

[16] Loyola de Palacio, "Reforming the Gas Market", Jan H. Kalicki and David L.Goldwyn (Eds.) **Energy and Security: Toward a New Foreign Policy Strategy**, Baltimore, Johns Hopkins University Press, 2005, p. 180

[17] Aurelia Mane-Estrada, "European energy security: Towards the creation of the geo-energy space**" Energy Policy** 34, 2006, p.3776

[18] Michelle Michot Foss, "Natural Gas Industry, Energy Policy in", **Encyclopedia of Energy**, Volume 4, Elsevier Press, 2004, p.222

projections considerably creating major investment risk for Europe. The Commission suggests a number of major strategic projects which the EU could promote to strengthen solidarity and security of supply in a truly European energy network using all instruments at its disposal, alongside TEN-E.[19]

Security Risks and EU Policies

The risks faced by the EU transcend the limits of internal market. This fact creates a challenge for the EU as risks spread to other areas aside from those associated with the internal market. We can subdivide the types of risks relating to debate on energy security of supply in Europe as geological, technical, economical, geopolitical and environmental risks. [20]

However, geopolitical risk faced by the EU, is shown as a prominent one in terms of threat it poses to interests of Europe. In 2009, the EU consumed 484 bcm of natural gas. Nearly 36% of gas demand has been met by domestic production.[21] The remainder has been met by import. When considered the origin of the gas imports; Russia, Norway and Algeria hold shares of 22%, 19% and 10% within the total EU gas consumption respectively. However, import dependency has different patterns across the member states, exposing some of them to various security risks. For example, Bulgaria and Slovakia are fully dependent on the Russian gas supply and these are the countries that are severely affected by any disruption in the Russian gas supply.[22]

According to future projections, a notable change in the share of natural gas within EU energy mix is not anticipated, yet natural gas demand is expected to expand by 79 bcm up until 2030, meaning a 16% increase between 2005 and 2030.[23] The leading factors behind the foreseen increase in gas demand are the following: restrictions on CO2 emissions, the nuclear phase out announced by some member states, high emissions from coal based generation, and barriers to rapid development of renewable generation seemingly forcing the EU into a high dependency on natural gas.[24] On the supply side, gas production is declining after its peak in 2001 with 232 bcm and expected a total 59% decline in gas production between 2001 and 2030.[25] All of these forecasts indicate an import dependency of the EU at present and in the future. Besides, greenhouse gas emission commitments of the EU will determine the EU's future energy portfolio as well.

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[19] European Commission, "Towards a Secure, Sustainable and Competitive European Energy Network", **Green Paper**, COM(2008) 782 final, Brussels.
[20] Checchi et al, **op cit**., p.3
[21] **Natural Gas Consumption in EU27, Turkey and Switzerland in 2009,** Brussels, EUROGAS, 11 March 2010.
[22] "The row between Russia and Ukraine: Pipe Down", **The Economist**, 10 January 2009
[23] European Commission, **European Energy and Transport Trends to 2030 – Update 2007**, Directorate General for Energy and Transport, April 2008, p.74
[24] Jan Kjärslad and F. Johnsson, "Prospects of the European gas market", **Energy Policy** 35, 2007, p.869
[25] European Commission, "European Energy and Transport Trends …", **op cit.,** p.74

The challenge is increasing since import need of Europe has to be met from politically unstable countries. This trend will apparently gain momentum after foreseen oversupplied period until 2012 is over. After 2020, it is expected that Qatar and Iran will emerge as major suppliers alongside Russia.[26] However, Europe's import dependency especially to Russia, raises concern within the EU and in some member states. Certainly there are other reasons for Russia to become a source of concern all but its high share in EU gas import.

Russia's foreign policy has increasingly been interpreted in its external energy policies. That leads to distrust and concern for future partnership with Russia. Russia's gas strategy has been transforming from a regional to a world market one, in which the national rather than the regional interests are central.[27] This new strategy includes a target of diversification of market outlets via countries with high demand potential like China. Moreover, Russia is involved in close cooperation with other producing countries within Central Asia and the Middle East. For example, Russia tries to lock up vast amounts of natural gas through long-term contracts with Central Asian states by offering to pay 'European' prices to them.[28] Given that many of the projects (e.g., "southern corridor" such as Nabucco, Turkey-Greece–Italy Interconnector, Trans-Adriatic pipeline) depend on gas supplies from the Central Asian producers, there might be some repercussions on the future of these pipeline projects. Furthermore, Russia plays a prominent role in creation of a gas cartel, namely GCEF, with the major gas producers of Middle East (i.e. Qatar, Iran, Algeria) and North Africa.

Alternative Policy Options

The EU and its member states have various alternatives at their disposal to tackle with security of gas supply. Limited domestic gas and oil resources within the EU make more energy import inevitable. However there are policy tools which could be used on the supply and demand side. The net effect of these alternative policy tools will be determined by the long-term trend on energy efficiency, oil prices, environmental regulations, future of nuclear energy, technological developments, and world economic outlook. More efficient use of energy has a potential to put pressure on import requirement. On the other hand increasing use of alternative energy resources like renewables would affect the EU energy mix. However future projections to 20 or 40 years ahead show that oil and gas will keep their importance.

Therefore, the EU should focus on measures and policies to mitigate risks arising from gas supply in an efficient way. In that sense, future projections demonstrate that Russia will supply the bulk of EU gas demand in foreseeable future. This makes it indispensable to establish a cooperation scheme based on mutual understanding. However, until Russia has a liberalized gas market, and until the government removes

[26] Kjärslad and Johnsson, **op cit**., p.887
[27] **The Gas Supply Outlook for Europe: The Roles of Pipeline and LNG,** The Hague, Clingendael International Energy Programme, CIEP, August 2008, p.26
[28] **Perspectives on Caspian Oil and Gas Development**, IEA Working Paper Series, Directorate of Global Energy Dialogue, Paris, International Energy Agency, 2008, p.16

its direct control over the sector, the process will be open to conflict. That said, the EU should find ways of forcing Gazprom into more competition. Interestingly, this can be achieved best through diversification of gas supplies of the EU. According to some calculations, even small amounts of gas coming from different sources can make a big difference because of low elasticity of gas demand and net present value of a 10 percent reduction in Gazprom prices due to competition is forecasted as €30 billion.[29]

LNG, as an alternative to gas trade via pipelines, could submit various opportunities for diversification and flexibility of the gas system. According to Eurogas[30], LNG imports represented a share of 11 % of total EU supplies. It is forecasted that LNG could forge 25% of total EU supplies in the long term. However, it is not expected that LNG will replace gas trade through pipeline. In foreseeable future, LNG will be used for meeting short-term deficits in supply or peak-shaving. Moreover, LNG will bring more flexibility and security to land-locked Central and Eastern European member states provided that there are sufficient interconnections among LNG regasification terminals and them. It should also be kept in mind that flexible LNG, which means one not committed to any market by means of a long-term contract, by its nature is not committed to the European markets and is out of the control of the administrative action.[31]

Keeping all ideas in mind, the EU has sought to lay the groundwork for future partnerships with major producing regions and transit countries (e.g., the Caspian Region and the Middle East along with Russia). The Southern Corridor of energy supply will provide important contribution to EU energy security through further flexibility and competition. Turkey, as a candidate state for EU membership, will seemingly be a key player of that Southern Corridor.

Turkey's Role

Access to multiple sources of supply through its favorable supply geography is key to energy policy. In this regard, Turkey has the potential to profit from its geographic advantages. Transit oil and gas pipelines via Turkey strengthen the geopolitical role of Turkey. Generally these pipelines follow east-west route but there are some other planned pipelines in north-south direction as well. However, Turkey should carefully balance between these two axes. Particularly, it is evident that overextension of north-south corridor could exclude fully development of east-west energy corridor which is having key strategic importance to Turkey.

From the beginning of the idea of oil and gas pipelines between Central Asia and Europe, Turkey has been an active player with the aim of becoming an energy hub serving both sides. In this context, there are important pipeline projects already

[29] The box "The money benefits of diversification" by Daniel Gros in Katinka Barysch (ed.), **Pipeline, Politics and Power: The future of EU-Russia Energy Relations**, , Center for European Reform, London, October 2008

[30] **Natural Gas Demand and Supply: Long Term Outlook to 2030**, Brussels, EUROGAS, November 2007, p.7

[31] "The Gas Supply Outlook for Europe: The Roles of Pipeline and LNG", **op cit.**, p.63

completed including the Baku-Tbilisi-Ceyhan crude oil pipeline, the South Caucasus (Baku-Tbilisi-Erzurum) natural gas pipeline and the Turkey-Greece Interconnector. Natural gas from Azerbaijan has been flowing to Greece since July 2007 over the South Caucasus pipeline, the Turkish main transmission system and Interconnector between Turkey and Greece.

Moreover, Turkey continues its membership negotiations with the EU making the issue thornier. Ongoing postponements in materialization of the Nabucco project cause Turkey to be criticized for different reasons. One of the reasons is related to Turkey's own security of supply problem. At the moment Turkey is more dependent on gas import to Russia than the EU with a share of 63%. Turkey intends to diversify its natural gas import from sources in Central Asia and the Middle East. On this account, Turkey intends to secure as much as possible gas from Nabucco for domestic consumption and to re-export rest of it to Europe. On the other hand, Turkey expects some positive externalities from the project in its membership negotiations with the EU. If worse comes to worst, the EU would need more gas through Nabucco trying to leave less gas to Turkey. Therefore, it will be a difficult task to find a way that respects Turkey's legitimate concern for its own energy security as stated in the Green Paper on Energy Networks.

Turkish Gas Market

Natural gas accounts for nearly one-third of total energy consumption of Turkey. [32] Turkey's domestic gas production was around 0.7 bcm in 2009[33] covering 2% of total demand. This makes Turkey a country close to becoming completely import dependent in terms of gas. Interdependence between natural gas and electricity sector is rather high given that electricity generation encompassed 56% of gas demand in 2009.

In this regard, natural gas supply has been based on long-term gas contracts with different suppliers. In spite of long-term contracts with six different suppliers and spot LNG for short-term balancing, distribution of actual gas import is not balanced. In 2009, 54,5 % of total gas import was met by Russia.[34] This is a fairly high import dependency on Russia when compared to the European average.

According to the official natural gas consumption figures, Turkey consumed 35 bcm of natural gas in 2009. However, state-owned company Botas had predicted 57 bcm of natural gas demand for 2010. This was the projection taken into consideration for finalizing the long-term gas contracts. Nevertheless, the official forecast signals that Turkey has been undergoing a slowdown in growth of gas demand at least in the short-term. That would probably create a high risk since most long-term contracts includes

[32] **2008 Yılı Genel Enerji Dengesi Tabloları,** Ministry of Energy and Natural Resources, <http://www.enerji.gov.tr>, (10.02.2010), p.2
[33] **Monthly Natural Gas Survey,** , Paris, International Energy Agency, February 2010, p.6
[34] **Türkiye Doğal Gaz Piyasası**, PETFORM, <http://www.petform.org.tr/?lang=tr&a=3&s=1> , (05.06.2010).

take-or pay obligations. Moreover the risk seems to continue until the end of 2011 when one of long-term contracts (supply of 6 bcm annually) with Russia will expire.

Security of Gas Supply in Turkey

The Turkish gas market has undergone a major reform that started with the Natural Gas Market Law (NGML) 4646 which entered into force on May, 2001. The law meets the requirements of the 2003 EU Gas Directive.[35] The regulatory framework on energy security in Turkey is based on responsibilities shared between Ministry of Energy and Natural Resources (MENR) and Energy Market Regulatory Authority (EMRA). MENR's responsibilities involve determining and executing general energy policy goals in the framework of planning, programming and analyzing Turkey's needs for energy resources. However, NGML defines specific tasks for EMRA. The regulatory body has been granted prerogatives to monitor and drive the role of market players on energy security.

NGML sets out storage as the main tool of gas supply security in Turkey. It requires import licensees to obtain commitments from storage operators regarding their ability to store the equivalent of 10 percent of their annual gas imports within five years. It also requires wholesalers to take specific measures in regard to supply scheduling and gas storage. However, nine years after NGML has entered into force, Turkey's existing underground storage capacity is still below 5 percent of total annual consumption, a far cry from 10 percent obligation. Even with planned underground storage project[36], it seems difficult to catch the minimum storage obligation when taking increasing gas demand into account.[37]

Despite the fact that natural gas has a relatively high share, 52%, in electricity generation and even in overall energy mix, Turkey is still quite restricted in terms of some essential flexibility tools to avert supply disruptions. The domestic production will probably continue to forge a small part of overall consumption and storage seems to stay below 10 percent in the foreseeable future. This leaves diversification of energy supplies as the most important security policy for Turkey. The government has supported the diversification of both energy resources and gas resources by relying on alternative energy resources like renewables, usage of nuclear and domestic coal.

Turkey sees development of further oil and gas transit pipelines passing through its territory as one of the pillars of energy policy. Basically, two benefits are expected: The potential to enhance the security of gas supply by virtue of having larger-than-otherwise volumes of gas moving across the national territory, and the possibility of creating a

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[35] **Turkey: 2005 Review**, Energy Policies of IEA Countries, Paris, International Energy Agency, 2005, p.107

[36] In the scope of the project called "Tuz Golu Underground Gas Storage (UGS) Project", Botas plans to build UGS facility at approximately 40 km south of Tuz Golu (Salt Lake) in the central part of Turkey. This storage site will have a geometrical volume of approximately 630.000 m^3 and the total working gas volume will be about only 1 bcm in twelve caverns.

[37] As an example, Germany has the ability to store more than 25% of its annual gas consumption.

Turkish gas market hub and contributing to a more liquid market for gas.[38] However, not necessarily all pipelines reaching Turkey's mainland contribute to security of supply in the same manner. The Blue Stream Pipeline linking Russia to Turkey (which directly crosses under the Black Sea) has helped mitigating transit dependence which is the case for pipeline between Turkey and Russia currently in operation in the Balkans. On the other hand, the Blue Stream Pipeline was also heavily criticized strategically. Turkey's dependence on Russian gas has greatly increased since the pipeline's construction. Some believes that the Blue Stream prevents Turkey from pursuing independent energy policies, and that could potentially allow Russia to thwart EU diversification strategies involving Turkey.[39]

The Nabucco Project and the Turkey-Greece-Italy Natural Gas Pipeline Project (ITGI) are important pillars of Turkey's energy hub strategy. ITGI aims to link Turkey to Greece and then Italy. In 2003, Turkey and Greece signed an Intergovernmental Agreement for the first stage of the project, followed in 2005 by an agreement between Greece and Italy. A trilateral IGA was signed by Turkey, Greece and Italy in July 2007 that defined the overall commercial and legal framework for gas trade and transit for the ITGI. Volumes of gas supplied along the ITGI are expected to rise to approximately 12 bcm per year in 2013, with 8 bcm supplied to Italy and the remainder to Greece. The first stage of the pipeline, the Turkey-Greece Interconnector, linking Turkey (Karacabey) to the Greek grid (Komotini) was commissioned in November 2007. The initial transportation capacity is 3 bcm per year.[40] The Nabucco Project will be further analyzed. But at this stage it can be expressed that ITGI and Nabucco are closely related to each other and materialization of one of them will have repercussions on the other due to limited availability of gas for transport at least in the medium term.

Aside of these two pipeline projects headed for Europe, there are other pipeline projects which might be considered as feeding pipelines. The expansion of the South Caucasus Pipeline (which brings gas from the Shah Deniz offshore gas field in the Azerbaijan Caspian Sea to Turkey) would increase existing capacity (7.8 bcm/y) to 25 bcm by 2016. This would be linked to a second phase development of Shah Deniz, seen coming on line between 2014 and 2017. The South Caucasus Pipeline will most probably be the main conduit for Caspian gas for delivery to Georgia and Turkey, and through Turkey to markets in Europe.[41] Moreover, if Trans-Caspian link can be constructed between Turkmenistan and Azerbaijan, the gas corridor between

[38] **Turkey: Gas Sector Strategy**, ESMAP Technical Paper 114/07, Washington, Energy Sector Management Assistance Program (ESMAP), 2007, p.44
[39] Volkan Ozdemir, "Turkey's Role in European Energy Security" in Svante Cornell and Niklas Nilsson (eds.), **Europe's Energy Security: Gazprom's Dominance and Caspian Supply Alternatives**, Stockholm & Washington: CACI & SRSP Joint Center, 2008, p.99
[40] Perspectives on Caspian Oil and Gas Development, **op cit.,** p.68
[41] **Ibid.,** p.65

Azerbaijan-Georgia-Turkey will be further strengthened. This energy hub could be supplied by other potential gas producers like Iran, Iraq, and Egypt until 2015.[42]

This transit role between Caspian and the Middle Eastern suppliers and Europe also submits opportunities for Turkey through further diversification of supplies. Except LNG, Turkey uses a 10 bcm gas pipeline between Tabriz in Iran and Erzurum in Turkey as of 2001 and the South Caucasus pipeline as of 2007 for gas import. These two pipelines supplied nearly 30% percent of total imports in 2009. Iran is a leading potential supplier with huge reserves but it was a net importer until recently. In addition, there are doubts over its capability to raise its production capacity for import in short to medium term.[43] Turkey has experienced periodic disruptions in gas flow from Iran showing Iran's tight demand-supply balance particularly aggravating in winter cold. Turkey is also active in Iraq signing a framework agreement in 1996 in Ankara for the delivery of 10 bcm/y of gas to Turkey. It is pointed that Iraqi gas will be more competitive, in cost terms, compared to gas from the traditional players such as Azerbaijan, Turkmenistan, Iran, and Russia.[44] However political instability in this region, stemming from the war in Iraq and political confrontation between the US and Iran make those countries too fragile to depend on. That place Central Asia, and Azerbaijan in particular with its existing infrastructure, a highly favourable position for Turkey to diversify its gas supply spectrum.

Turkey has close relations and cooperation framework with Azerbaijan and energy is not outside of that. The long-term gas contract with Azerbaijan dated 2001 makes it possible to re-export the gas to third countries. Turkey's gas export to Greece has been based on that contract. But, given the fact that Azerbaijani Shah Deniz Phase II gas has also been considered to feed Nabucco and even ITGI, finding equilibrium between the interests of all sides poses a real challenge to Turkey's energy policy. Assumptions about expected volumes for export from Shah Deniz II vary, but this could eventually amount to an additional 9-12 bcm/y.[45] Turkey would demand to secure at least 6 bcm Azerbaijani gas per year. However, recent slowdown in gas demand could require reviewing future gas demand projections unleashing more Azerbaijani gas for Europe.

Either with Azerbaijani gas or without it, Turkey's import of natural gas from Russia will not decrease below 40% until 2015. After that it will depend on new gas contracts, diversification targets and domestic demand. In that sense, a policy focused on curtailment of share of gas within primary energy consumption will need to be adopted alongside diversification policies.

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[42] John Roberts, "The Turkish Gate: Energy Transit and Security Issues", **CEPS EU-Turkey Working Papers,** No. 11, 1 October 2004, p.6

[43] Nicklas Norling, **op cit.**, p.39

[44] Dimitrios Mavrakis et al., "An assessment of the natural gas supply potential of the south energy corridor from the Caspian Region to the EU", **Energy Policy** 34, 2006, p.1676

[45] Perspectives on Caspian Oil and Gas Development, **op cit.,** p.41

Southern Corridor

The Southern Corridor (or Southern Gas Corridor) which is a planned energy supply route from the Caspian region through Turkey and into Europe is a term used in various EU official documents. However, it appears that EU countries have yet to agree on which projects should actually constitute the Southern Corridor. It could comprise a Trans-Caspian pipeline from Turkmenistan to Azerbaijan, Turkey-Greece-Italy Natural Gas Pipeline Project and also the planned Nabucco gas pipeline to run from Turkey, through Bulgaria, Romania, and Hungary and terminating in Austria. In some cases, its meaning has been extended in a way comprising South Stream gas pipeline too.

The EU has tried to delineate the Southern Corridor concept in Prague Summit held in 8 May 2009.[46] In the declaration signed in Prague by leaders from Europe, Azerbaijan, Turkey and Georgia after the Summit, it has been clarified that Southern Corridor is considered as a "modern silk road" interconnecting countries and people from different regions and establishing the adequate framework, necessary for encouraging trade, multidirectional exchange of know-how, technologies and experience. More importantly, rather than determining some specific pipeline projects, the Declaration defined the corridor as a synergy of some specific documents. The documents included in this definition have comprised of some particular Partnership and Co-operation Agreements, Association agreements and declarations between the EU, Turkey, Egypt and Central Asian countries.

The Southern Corridor had been already endorsed at the 2007 European Spring Council as a means of diversifying its energy sources and routes to Caspian, Central Asian and Middle Eastern suppliers. It has been expected that gaining access to such resources will help increase the EU's resilience to any disruptions in energy supply. Another element underpinning this security perception is to avoid the already high risks associated with maritime transport of oil and LNG.

Nevertheless, the Nabucco Gas Pipeline project seems to be the vital link of the southern corridor concept. It has been planned to carry natural gas from producing countries like Azerbaijan, Turkmenistan, Iran and possible other countries to Europe, is expected to contribute to the EU's energy security. It has gained extra legitimacy from the latest crisis between Russia and Ukraine at the beginning of 2009. The showdown between Russia and Ukraine ended up with the loss of confidence as a reliable source of natural gas by the EU.

The Co-operation Agreement for Nabucco was signed among the associated companies of the respective countries on 11 October 2002. Nabucco Gas Pipeline International GmbH (NIC), responsible for the marketing of the pipeline capacity, was established in 2004. Current shareholders of NIC are OMV (Austria), Botas (Turkey), Bulgargaz (Bulgaria), Transgaz (Romania), Mol (Hungary) and RWE (Germany) with

[46] The Declaration - Prague Summit, Southern Corridor, 8 May 2009, <http://www.eu2009.cz/en/news-and-documents/press-releases/declaration---prague-summit--southern-corridor--may-8--2009-21533/> , (11 June 2009)

equal shares of 16,67%. Originally, the commissioning of the first phase of Nabucco was expected by the end of 2009.[47] According to latest statements, the pipeline will be operational in 2014 with initial capacity. The cost of the project has also got through up and downs. The predictions began with €4.6 billion, rose to €7.9 billion and it seems that it will be revised downward because of dramatic decline in world steel prices.[48]

The long delay in the project is mostly attributed to the uncertainty about supply sources. Despite the fact there are potential suppliers in the region to feed the pipeline, Nabucco is still in need of overcoming this uncertainty. In the initial phase, Central Asian route via Azerbaijan and Turkmenistan is standing out with their reserves and production capacity but in the longer term Middle Eastern suppliers such as Iran, Egypt and Iraq can sell their gas over Nabucco. Even Russia could become a supplier to Nabucco in a contrasting manner to the original idea behind the project. Uncertainty over gas supplies could be considered as a major setback for the realization of the project but on the other hand that multiple set of supply sources with incremental amounts of gas will most probably the strong side of the project. This would forge a balanced interest structure between consuming, transit and producing countries preventing a single supplier to exert political or economic influence over consuming countries. This flexibility generally lacked by pipeline gas would also be in harmony with the ongoing efforts to create a liberalized and competitive internal gas market in the EU.

Member of the EU?

The opposition to Turkey's membership depends on religio-cultural rifts, the doubts on democracy and rule of law, the EU's digestion capacity of new members, and difficulties to integrate a big country like Turkey to existing supra-national structure of the EU. However, there are also strong arguments in favor of Turkey's membership perspective.

Among other things, economic dimension is an important part of Turkey's accession to the EU. Business circles are strongly convinced that Turkey's accession will create a win-win situation for both sides.[49] Political gains are also relevant. Turkey expects EU membership will be a catalyst for democratic reforms in the country and the EU will utilize Turkey's influence in a wider region from Balkans to Central Asia and Middle East. In this regard, security appears to be one of the key dimensions of Turkish membership of the EU. In post-cold war era, the security issues in Europe have widened both in space and scope. European security environment has a multi-dimensional structure including European, Middle Eastern, Mediterranean security issues. This

[47] Turkey: 2005 Review, **op cit.**, p.105

[48] "Türkiye Olmadan Nabucco Olmaz", 04 February 2009, <http://www.cnnturk.com/2009/ekonomi/genel/02/04/turkiye.olmadan.nabucco.olmaz/512080.0/index.html>, (22 February 2009), p.1

[49] Julian Horn-Smith, "Turkey: Trade and EU Accession", Adam Hug (ed.), **Turkey in Europe: The Economic Case for Turkish Membership of the European Union**, London, The Foreign Policy Center, 2008, p.51

structure also developed in scope comprising economic, social and political insecurity alongside military threats. Security of Europe has been threatened by weapons of mass destruction, terrorism, fundamentalism, demographic violence and migration and organized crime all stemmed from southern and eastern periphery of Europe. Moreover security of energy supplies would forge another part of this security perception. Turkey can play a vital role as a stabilizer in its region by controlling reliable stream of energy resources to Europe.

Integration of Turkish gas market to the EU would be another agenda item in accession negotiations. Turkey expects a contribution from energy cooperation with the EU to the negotiations. Nabucco project appears to be the main part of this strategy. Turkey didn't cover this strategy in government statements or even in negotiations on Nabucco project itself. Indeed, participation of GDF to Nabucco project was blocked by Turkey on grounds of France's approval of a bill recognizing Armenian genocide claims.

On the other hand, during a visit to Brussels, Turkey Prime Minister Mr. Erdoğan, has made it clear that Turkey might be forced to rethink its support for the strategic Nabucco gas pipeline if the EU refuses to unfreeze accession talks on important negotiating chapters such as energy.[50] This statement came in a time when the EU is extremely cautious about the security and stability of transit lines. Therefore, it has ignited further questions about the possible contributions of Nabucco to energy security of the EU.

However, the EU itself links the pipeline to the interests other than economic benefits. This is particularly clear in the example of EU's objection or at least reservation to Iranian gas supplies to be hooked up to Nabucco pipeline. Besides the EU appears to embrace the link of energy cooperation and membership when Commission President Barroso said "Turkey can in fact be something that is in the interest of all European citizens: Good cooperation on energy matters."[51]

That kind of strategy taking the shape of horse trading has been increasingly politicizing energy cooperation casting shadow over mutual economic benefits to be gained by both sides. Instead, a market-oriented approach focusing on competition and further interconnection between the EU and Turkey will mostly forge a ground upon which a robust cooperation on energy can emerge. In this regard, opening of energy chapter to negotiations could provide an important momentum in terms of further alignment of EU internal gas market with Turkey. Moreover, Turkey should not be perceived as a mere transit route to be passed over. With potentials like high demand growth potential structure, favorable supply geography and infrastructure, extensive

[50] "Turkey plays energy card in stalled EU accession talks", 20 January 2009, <http://www.euractiv.com/en/enlargement/turkey-plays-energy-card-stalled-eu-accession-talks/article-178623>, (18 February 2009), p.1

[51] "Energy pushes Turkey and EU closer", 9 January 2009, <http://www.nytimes.com/2009/01/19/world/europe/19iht-turkey.4.19499151.html>, (20 February 2009), p.1

transmission backbone, Turkish gas market could be an important gas terminal and important part of EU internal gas market.

Conclusion

Concerns about security of energy supplies to the EU are rising all over the Europe. The discussions over how to handle energy security continue. Nevertheless, two different approaches prevail. Some analysts argue that the EU should stick to market principles while handling security of supply problems. It is expressed that this kind of strategy is in harmony with the EU's capabilities and structural organization. Others believe that the EU should take a more assertive stance towards securing energy supplies by making energy policy one of the pillars of the EU external policy.

EU Commission indeed takes steps including both of the two strategies. On one hand, it tries to increase the reliability of EU's internal energy market to overcome short-term supply crises. The directive 2004/67 involves rules in case of gas supply crisis introducing responsibilities for both the Commission and member states. On the other hand, the EU appears ready to undertake some strategic initiatives on energy geopolitics. This approach would involve widespread usage of TEN-E to strengthen its position in certain vital pipeline projects.

It is clear that the risks faced by the EU surpass the boundaries of internal energy market. Forecasts show that EU's gas demand rises and domestic production goes down. This necessitates further gas import both as LNG and pipeline increasing the geopolitical risks since most of new gas production sites are located in politically more unstable countries. The fact that the distribution of risk of gas supply throughout the EU is not homogenous among member states restricts joint action in decision-making bodies of the EU. Therefore, it is not rare that member states conduct policies contradicting policies of other member states or even that of the EU.

Especially, Europe's import dependency to Russia, raises concerns in the EU. Russia controls a high share within EU gas import and it is expected to increase. It is apparent that the EU needs to counterbalance Russian influence by diversifying gas supply sources. Alternative gas routes should be realized by making a compromise between business conditions and political will.

The weakness of EU external energy policy together with the Europe's import dependency to Russia constitutes the premier challenge for EU policy makers. Russia tries to deepen this weakness through bilateral gas agreements with major European consuming countries such as Germany, France, Italy, Netherlands and Belgium. If this tendency prevails, Russia could strengthen its position imposing its conditions in the future gas negotiations, keeping an EU common energy policy at bay.

Turkey seems to strengthen its position as a new gas artery between resource-rich regions and Europe. Some oil and gas pipelines have been already completed and operated successfully but some of them are expected to be realized. Moreover, Turkey has been going on negotiations with the EU for full membership and this can be a catalyst for further and deeper cooperation between Turkey and the EU on energy

matters. Recent reform process on gas and electricity sectors in Turkey signals that Turkish energy market is on its way for integration with EU internal market. This development can create a great basis for Turkey's aim to become an energy hub integrated with EU market. That kind of approach must be the starting point for any long-term cooperation framework. A well- functioning energy market in Turkey would provide the EU with necessary reliable and liquid market conditions serving as a guarantee for energy security.

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