



Gas pipelines and Regional challenges:

*Assessment of the Macedonian role in the SEE natural
gas market*

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Introduction

Today, we live in an “era of energy” when most of the political debates are directed towards ensuring the availability and security of supply of energy. Across the world, the countries are caught in the grip with the raising energy demand and prices. On the European continent the energy crisis and debate over energy security and sustainability are concentrated on two issues: the high dependence on energy import and the increasing need for diversification of the energy sources. The current debate is all about the geopolitics of supply of the natural gas, as leading energy source and the pillar of the energy stability in the continent. A decade ago, the European Commission has adopted several important documents concerning measures that safeguard the security of natural gas supply and regulate the internal natural gas market. The most recent one, the Energy Policy of EU from 2007 has projected that even with the current targets on energy efficiency and renewables, oil and natural gas will still continue to meet half of the EU’s energy needs, with the import of natural gas exceeding 80% by 2030. Moreover, taking into consideration that the electricity generation in EU remains heavily dependent on natural gas, the 2007 Energy Policy reaffirms the security of supply of natural gas as a paramount for Europe’s security and economy.¹ The other important part of the EU energy strategy concerning natural gas is the diversification of its energy sources. In order to diminish the role and the political influence of Russia as the biggest supplier of Europe with natural gas, EU has turned to find new sources and best transit routes to transport the natural gas to Europe, at the same time avoiding Russian territory.

Within this new geopolitics of supply the Southeast European region (SEE) is receiving a new role - as crucial transit region for natural gas in Europe, guaranteeing the energy security and stability of the Union. Thus the new energy outlook of the SEE is nowadays defined by the interconnected web of pipelines transporting natural gas from the Russian, Caspian and Middle East regions to the consuming economies of Europe. As Europe is striving to create a single energy market and ensure security of energy supply, energy issues and energy dependence are pushing towards widening of the European energy market to Southeast Europe. The only way to achieve this is by regional integration and cooperation, and it is on this point where the region of Southeast Europe is receiving a key role, as the major transit corridor securing stability of the energy supply in Europe.²

Like the other SEE countries, a small country with limited energy sources and striving to become energy sustainable Macedonia is highly dependent on the energy situation in the region and regional cooperation. The president Crvenkovski emphasized on the Ohrid Summit 2008 “[Macedonia’s] highest interests and priorities is to participate in the design of a wider regional and European approach in search for a response to the complex energy challenges”.³ Therefore he re-confirmed the high support for the participation of Macedonia

¹ *An Energy Policy for Europe*, Communication from the Commission to the European Council and the European Parliament, Brussels, January 2007, available at:
http://ec.europa.eu/energy/policy/doc/01_energy_policy_for_europe_en.pdf

² On this topic also see Milina, Velichka. “Energy Security and Geopolitics” in *Connections, the Quarterly journal*, PFP Consortium, Volume VI, No.4, Winter 2007.

³ Speech of the president of Macedonia Branko Crvenkovski at the Ohrid Summit of the Head of states of Central and Eastern Europe in Ohrid 2008, taken from the president’s official web site
www.president.gov.mk

in the major gas and oil transport corridors and the involvement of the country in the new regional and European energy projects in order to protect and promote country's national energy interests.

In this respect, the following part of the report will give an outlook of the regional market of natural gas and the network of major transit gas pipelines in Southeast Europe, with the aim of assessing the place of Macedonia in the energy map of SEE and the opportunities for connection to the strategic energy projects.

Following the conclusions of the Analytica's report "Natural gas – an energy necessity for Macedonia: Overview of the Macedonian energy potential" the aim of this report is to offer suggestions of best energy policies for development of the natural gas sector in Macedonia and best strategies towards connecting to the network of natural gas pipelines in the Southeast Europe.

"Clementine's Net" - the SEE regional network of natural gas pipelines

The Southeast European countries have been characterized as the new battlefield over the transit lines of natural gas between the energy giants like Russia, USA and EU. The European Union on one side is using the SEE region for their policies of security of energy supply and diversification of the energy sources from the Caspian and Middle East region in order to decrease their dependence on Russian natural gas.⁴ The Russian administration and the energy giant "Gazprom" on the other side are gradually warming the individual relations with the countries of SEE in a rush to strengthen their position in this region already highly dependent on the Russian energy sources. The result is a web of planned pipelines of natural gas that will traverse SEE crosswise and longitudinal and will transport natural gas to Western Europe in the same time providing the countries on the transit lines with millions of cubic meters of cheap and environmental friendly energy source.

The EU supported pipeline projects that combine the principles of energy security, regional growth, stability and sound solutions, (principles that are becoming louder in the new EU energy agenda) include: TAP – the Trans - Adriatic pipeline, TGI – the Turkey-Greece - Italy pipeline and Nabucco pipeline that is also strongly supported by the American administration.

⁴ Currently, Europe receives 26 percent of gas supplies from Gazprom and by 2020, experts expect this percentage to grow to 33 percent, in *Moscow News*, No. 3, April 2008.

Map of planned and existing pipelines in Southeast Europe:



Source: http://www.bankwatch.org/balkan_energy/

- **TGI – Turkey – Greece – Italy pipeline** presents a link between Azerbaijan and Italy for transport of natural gas via Turkey. It presents the first independent pipeline of natural gas from the Caspian region to Europe, officially opened on 18 November 2007. The pipeline is also an integral part of the EU energy policy to cut off the dependence on Russia for natural gas and has been politically and financially backed by EU. The source of natural gas for the TGI is Turkmenistan, it bypasses Russia and via Turkey and Greece brings natural gas to Italy. The total capacity of the pipeline is 11, 5 bcm per year and the deadline for completion of the project is 2012.⁵

- The **Trans – Adriatic Pipeline (TAP)** will transport natural gas from the Caspian and Middle East region to Western Europe. It is planned to be the new outlet for natural gas in the wider EU plan for diversification of the natural gas supply. The natural gas will come from the Shah Deniz field in the Azeri part of the Caspian Sea. With TAP the Southeast European region will receive and an important role as a transit region that links Western Europe with the Caspian and Middle East natural gas sources. It will fill the gap with the shortage of natural gas sources in SEE and will become the missing energy link between Turkey and Italy. The length of the pipeline will be 520 km, with transport capacity of 10 bcm per year. The implementation of the project worth 1.5 billion dollars should start in the second half of 2009 and is planned to become operational earliest in 2011 and latest by 2012.⁶

- **Nabucco** is the biggest European natural gas pipeline in which EU has invested high interests and is also strongly supported by the American administration. The aim of this

⁵ Data from: <http://cambridgeforecast.wordpress.com/2008/02/10/turkey-greece-italy-gas-pipeline>

⁶ Official web site of the TAP pipeline <http://www.trans-adriatic-pipeline.com/index.php?lang=&Itemid=8044>

project that will include many European countries⁷ is to provide new energy sources for the European natural gas market. Like the other two main pipelines, Nabucco will pass through the countries of Southeast Europe, granting the region the importance of the main European transit region in the 21 century. Nabucco is the biggest pipeline project with length of 3,300 km, investment of 7.9 billion dollars and transport capacity 31 bcm per year. The pipeline is planned to be operational latest until 2018. The largest part of the natural gas transported through Nabucco lies in the Caspian region. However, there are some concerns over the required quantity of natural gas in this region, an issue that has been increasing the costs of the project and postponing the field works for Nabucco.

- The **South Stream pipeline** is the Russian alternative to the Nabucco pipeline in Southeast Europe and the last symbol of the Russian energy domination in Europe, being an alpha and omega when it comes to the natural gas supply. From Bulgaria the pipeline is splitting to two wings – a North one from Bulgaria, Serbia, Hungary, Slovenia, and Austria to Italy. The southern wing is agreed to pass through Bulgaria and Greece with the final destination Italy and is estimated to be ready until 2012.

These major pipeline projects have opened the door to the Balkan countries as strategic partners to guarantee the stability of their energy supply, to become more energy sustainable and furthermore to contribute for the stabilization of the energy crisis in the region and Europe. Thus, Serbia and Greece have promoted themselves as regional energy knots when it comes to the natural gas. Being in strategic partnership with Russia, Serbia has secured participation in the South Stream pipeline, with 400 km of the transport pipeline, transiting one third of the total capacity of the pipeline, collecting transit taxes, while using the rest of the pipeline capacity of 10 bcm per year for domestic consumption.⁸ As a transit country for the TGI, TAP and South Stream pipelines Greece has enhanced its geopolitical position in SEE becoming an energy bridge between the East and South countries producers of natural gas and the consumption countries of Western Europe.⁹

Where is Macedonia standing in this regional energy perspective? How is the regional cooperation framework translated on national level?

Contrary to its neighbour countries, which have managed to take the leading role in the new energy constellation in the region Macedonia has not managed to secure connection to the main pipelines or to become one of the transit countries of natural gas. The closest that Macedonia got to joining one of the transmission pipelines in SEE is the TAP pipeline, sponsored by the Swiss company EGL. After the completed feasibility study in 2004, the realization of the project was supposed to start in November 2005 and finish at the end of 2008. The trace of the pipeline was planned to pass through Delcevo, Prilep until Struga, with total length 200 km. The total capacity of the transit pipeline was planned to be 8-12

⁷ The transit European countries of the Nabucco gas pipeline are: Bulgaria, Romania, Hungary, up to Austria where it will connect to the larger pipeline networks of natural gas. See the Nabucco pipeline web site: <http://www.nabucco-pipeline.com/>

⁸ Popovic for B92 <http://www.energetika.com.mk/poveke.php?nid=16999>

⁹ Greek Prime Minister Karamanlis underlined the Greek clear, continuing and open politics for energy security, in the wider frame of the regional and EU energy interests, at the “energy stability and climate change” conference in Athens in May 2008. See at: <http://www.energetika.com.mk/poveke.php?nid=1778>

bcm per year, out of which 1 bcm would be used by the transit countries.¹⁰ The benefits for Macedonia would have been in creation of joint venture responsible for the sustainability of the pipeline system; opening of new jobs; Macedonia would benefit from collection of the transit taxes for the pipeline; new investments; inclusion in the regional network of natural gas pipelines; price competition and decreasing of the current gas price that the Macedonian citizens and industry are paying. The Macedonian government has signed a Memorandum for understanding with the countries of the pipeline and the Macedonian government gave an approval to the project in 2004. This Memorandum has been also signed by the Italian, Albanian and Bulgarian government. However, the European Commission (EC) deciding for the routes of TAP at the end made the final decision that excludes Macedonia as a transit country. Thus from the three optional routes of TAP: north, central and south (out of which Macedonia was the central route), the EC has chosen the south one that passes through Greece, very close to the southern Macedonian border with Greece.

Consequently, the only feasible opportunity for Macedonia to connect to the regional network of pipelines, to secure the supply with natural gas in the years to come and to remain competitive in the common EU natural gas market is the Energy Community Treaty, namely the project of the Energy Community Gas Ring in Southeast Europe. The Energy Community Gas Ring is a project that aims to link the existing and planned gas pipelines in the seven contracting countries of the Energy Community.¹¹ This gas ring will help in gasification of these counties, which in turn will be a significant contribution to their economic development, strengthening of the regional market of natural gas and diversification of the fuel sources beneficial for the whole region.

- *New energy projects* -

In the regional process of developing the energy projects the European Union has evaluated Macedonia third in the region after Croatia and Serbia, showing progress in the legislation but low development of the infrastructure of natural gas. For the purpose of further development of the natural gas sector the Macedonian government is developing several projects that are aimed at: **first**, indirect connection of Macedonia with the main gas pipelines in the region; **second**, start of the large-scale gasification of the country and **third**, use of the natural gas for electricity production.¹²

- 1) The arterial gas pipeline Skopje –Tetovo is the missing infrastructure from the Energy Community Gas Ring on the Macedonian territory. It is an extension pipeline of the main transmission line from Skopje to the Albanian border with connection branches towards Debar, Struga and Ohrid. Alongside this project a construction of secondary pipeline network for gasification of Tetovo is planned. The total length of the pipeline will be 48 km, annual consumption of 350 mcm and total cost of 20 million dollars. The

¹⁰ *Informacija za Trans-Jadranskiot gasovod (TAP)*, Ministerstvo za Ekonomija, 2004.

¹¹ The contracting parties with the European Union in the Energy Community Treaty are Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Macedonia, Montenegro, Romania, Serbia and the Interim Administration in Kosovo.

¹² See the presentation by the Ministry of Economy, *Basic Characteristics and current development projects in the gas pipeline system of the Republic of Macedonia* at the Second Gas Forum in Maribor, April 2008, available at: <http://www.energy-community.org/pls/portal/docs/36267.PDF>

construction period is 18 months. After the construction of the transmission pipeline the further gasification of Tetovo will take place, administered by the local authorities in Tetovo.

Another main transmission pipeline of natural gas is the Petrich - Strumica arterial pipeline. This pipeline will be connected to the south branch of the already existing transmission pipeline that goes from Sofia to Petrich, using the same energy source of Russian natural gas as the existing pipeline in Macedonia. The length of this transmission pipeline will be only 25 km on Macedonian territory, with capacity of annual consumption of 71 mcm, cost of 21 million dollars and construction time of 12 months. The importance of this pipeline is the possibility for development of secondary, distributive pipeline network for the wider region around Strumica. In other words the towns of Strumica, Gevgelija, Dojran etc, can become potential corridors of the transmission pipeline. More important is the potential of the Petrich - Strumica pipeline to connect Macedonia with the major transmission pipelines transiting in the region, most likely to the TGI and TAP pipeline, with the transit line very close to the Greek - Macedonian border. This is very important for the security of supply in Macedonia because it will mean diversification of the supply with natural gas from the Caspian region and the country will not be left depended exclusively on the Russian gas, like is the case today.

- 2) For the domestic gasification of the country the important project is the arterial gas pipeline Klecovce – Veles – Stip – Negotino. The project presents a plan for further completion of the secondary pipeline network in Macedonia and supply with natural gas of several towns in Macedonia: Sveti Nikole, Veles, Shtip, Kochani, Gradsko, Demir Kapija, Negotino and Kavadarci with natural gas. There is also a plan for connection of the oil powered TPP Negotino and Feni to the gas system in Macedonia. The total length of this pipeline will be 101 km, capacity of 286 mcm annually with additional 400 mcm if TPP Negotino is connected to the system. The total costs are estimated to be 40 million dollars and the time period for realization of this project 24 months.
- 3) In order to decrease the shortage of electricity in the country, to provide cheaper electricity for the citizens in Macedonia and to comply with the international standards for the GHG emission there are two main projects for co-generative power plants (CHP). One is the private investment, the CHP “TE-TO” - conversion of “Toplifikacija” from fuel oil to natural gas for combined production of electricity and heating power. Its construction has started in October 2007. The government’s priority is the construction of a gas co-generative thermal power station – ENERGETIKA in Skopje. The project involves re-adaptation of the existing thermo power plant currently using fuel oil as an energy source with natural gas. Its installed capacity would be 300 MW electric power and 150 MW heating power. It will produce 2000 GWH electricity and 500 GWH heat productions annually. The timeframe of construction of the CHP is estimated to 3 years, until 2010. The total cost of the project would be 250 million euros, out of which the state, as the owner of the plant through ELEM will participate with 41 million euros. In February the government has published a call for investors for a strategic partner for the other 49%, but then due to the political turbulences in the political life in the country and the early elections the procedure has been halted.

Recommendations and Conclusion

At present the road of the development of the sector of natural gas in Macedonia is traced within the Energy Community Treaty and the perspectives that this treaty is offering for the energy stability of the SEE through regional cooperation of the energy sectors from the neighbouring countries. In this framework Macedonia has obtained the opportunity to connect with the natural gas pipeline networks in Southeast Europe. The previous part of this report outlined the projects that the government (Ministry of Economy) has planned, as a starting point for the development of the natural gas sector in the country. However, the realization of these projects is a slow process that requires fulfilment of several conditions that will mean creation of well-built legal, political and economic basis in Macedonia.

- The best available strategies of Macedonian government for connection to the network of natural gas pipelines in Southeast Europe are the active participation and cooperation in the Energy Community, as well as more powerful lobbying activity and strengthening of the economic and political relations with the key players and decision-makers in the sector of natural gas - Russia, EU, USA, Turkey, the Black Sea and the Middle East countries.
- Domestically, the best policies for development of the natural gas market are the ones that empower the legislation regulating this market, guarantee the rule of law, the transparency and openness of the market. Here we can include the adoption of the new National Energy Strategy. It should be based upon the assessment of the current energy policy of the neighboring countries, as well as EU, USA, Russia, Black Sea, Middle East countries and their strategic approach towards the projects for building pipelines for transit of oil and gas from the Caspian region and Middle East. Parallel with that is the continuation of the process of approximation of the legislation on natural gas and timely implementation of the energy projects in order not to lose step with the raise of energy demand in the wider region.
- In this report, we have outlined the most beneficial projects for the increased use of the natural gas as important resource for the country's energy stability. All of them involve big investments, political stability and time period of several years for their completion. Currently all projects of natural gas are in their planning phase and their realization is awaiting better days. The government has to create a positive investment climate and to demonstrate political maturity in the following period, in order to attract new investors and to finally start with the constantly postponed infrastructure projects for natural gas. The latter requires respect of the principles of transparency in the government's work, law enforcement and lawful resolution of the pipeline ownership dispute between "Makpetrol" and the Government of Macedonia. Without resolution of this issue, mobilization of finance for projects reliant on the pipeline (e.g. Skopje CHP and Skopje gas distribution system) will be problematic. Given that these projects may otherwise move forward in a relatively short time frame, it is a matter of urgent priority for the Government of Macedonia to resolve this issue.¹³

¹³ See also the recommendations in the World Bank Energy Policy Paper on Macedonia from 2004, also available at: http://www-ds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2004/07/26/000012009_20040726100157/Rendred/PDF/29709.pdf ;

- The political will is the moving force for this development that should go hand in hand with the economic development of the country. In this respect every positive political sign of readiness and openness for energy cooperation and new investments between the Macedonian government and other countries and energy companies will be of immense importance for development of the natural gas market in Macedonia and stability with energy supply of the country. Also bigger involvement of the private companies in the gas market in medium and long term will make this market more attractive and profitable.
- In the new geopolitical constellations in SEE region and Europe, the agreed energy projects are a result of the political goals and negotiations between the countries of the energy source and the energy dependant countries. In this situation, the political lobbying between the major energy stakeholders is the crucial instrument of the energy cooperation. Macedonia is a small country with limited energy sources but as a central country in the Balkan Peninsula Macedonia holds crucial geographical position in the SEE region. However until now the country has not used the transit potential and has not felt the economic and political benefits of the geopolitics of supply. Besides all other objective reasons the most logical explanation for this situation is the weak Macedonian energy lobby in the EU institutions and throughout the wider energy community. The most notable example is the one with the TAP gas pipeline and its transit route that bypassed the Macedonian territory after previously agreed route and signed Memorandum of cooperation. How to improve the situation? The best promotion of Macedonia in the energy community will be with projects for improvement of the existing infrastructure and building new quality infrastructure, quality Law on energy approximated to the EU standards, drafting and effective implementation of other bylaws for the gas market, implementation of the EC Directives in the Macedonian laws and overall compatibility with the EU legislation.

Taking in consideration the situation of the entire energy sector in Macedonia we can conclude that the development of the sector of natural gas in the country currently remains under the satisfactory level. The favorable geopolitical position of Macedonia in the center of the Balkan Peninsula hasn't been used as an advantage in the creation of the new European energy outlook. The SEE region has embraced the natural gas as the stable energy resource and is becoming the cradle of the Euro-Asian gas pipelines. However, the penetration of the big natural gas pipeline projects in Macedonia won't happen "on a big door" like in some of the other countries of the region. Rather, when it comes to the natural gas, the security of the energy supply with natural gas the Macedonian government will achieve through the more general concept of regional cooperation and integration, through the auspices of the Energy Community for Southeast Europe.

Energy and Infrastructure Program

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"Macedonia needs a Power Plant:
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