A Bulgarian Perspective on South-East Europe Energy Issues

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Whether or not the economic crisis is over soon, most of the energy experts are sure of one thing: the European Union's energy consumption will grow. At the same time, the local fossil energy resources are diminishing and will play an ever smaller role in the EU's consumption. This puts energy issues as a key priority for the Union, alongside climate change.

South-East Europe's energy sector is following the European trend – regional consumption is expected to grow as well, mainly because of economic growth. There are still many aspects of the SEE energy sector that are not clear. The countries in the region have to comply with European requirements and, at the same time, ensure their energy balances. This can only happen if new investments in energy infrastructure are made.

Bulgaria's position in the region's energy sector is significant for several reasons. As a new member of the EU, the country has to deal with energy issues in a new way, following an ever larger number of requirements. At the same time, as a long-term partner of Russia, the Black Sea countries, the Caucasian region, and some Middle East states, Bulgaria may play a very important role in connecting supplies of oil and natural gas with European demand.

European energy policy

The EU's 20/20/20[1] target is a focal point of Europe's energy policy. De-carbonizing the energy sector, energy efficiency and renewable sources express the Union's will to diminish its role in climate change. This factor will grow in importance alongside the will of some EU-members to reach even greater individual targets. The United Kingdom, France, Germany and others have expressed their will to support their own energy and technology industry to provide solutions at home and abroad.

During the transition to low-carbon and renewable energy, however, the EU has to deal with short-term and mid-term challenges. Currently, the Union is dependent on energy imports for about 50 percent of its consumption. According to IEA analyses, by 2030 this dependency could reach 70 percent, if no alternative measures are taken. Oil consumption in EU-27, which is currently about 10 billion tons per year, may reach up to 18 billions tons by 2030. Until new technologies are available, the EU countries will require secure fossil energy supplies, mostly oil and natural gas.

According to European Commission data from 2007, about 37 percent of the EU-27 energy consumption depends on oil, 24 percent on natural gas, and 18 percent on coal and other fossil fuels. Only nuclear (13 percent) and renewables (8 percent) are provided entirely from local energy production (Figure 1).

At the same time the EU depends on imports for about 60 percent of its natural gas consumption. In 2007, most of the imported gas came from Russia (24.3 percent), followed by Norway (15.9 percent) and Algeria (10.1 percent). All other sources (Nigeria, Libya, Qatar, Egypt, etc.) provided less than 10 percent of the EU's gas imports in 2007 (Figure 2).

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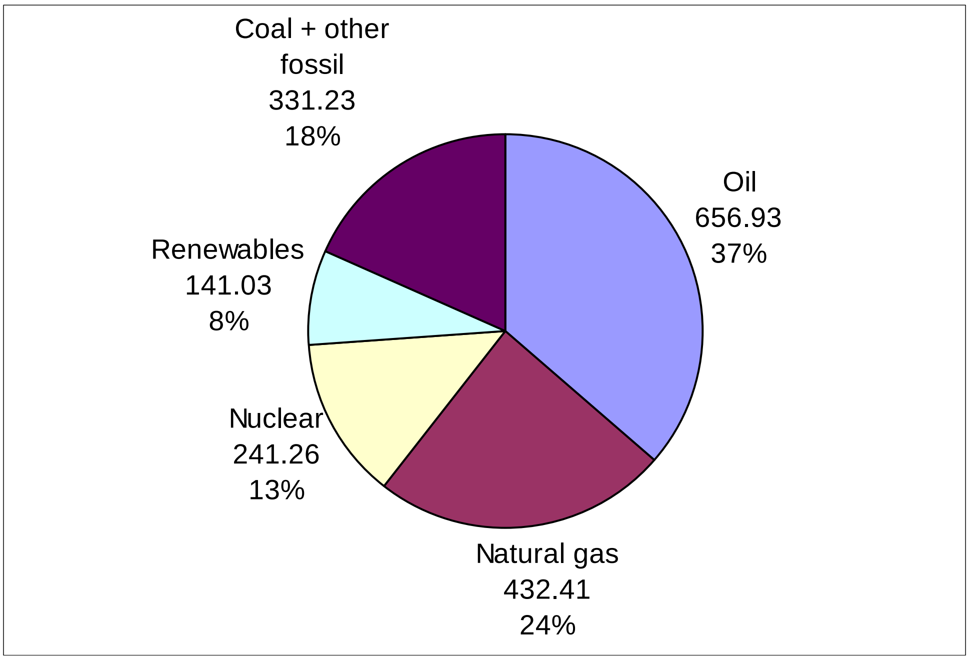
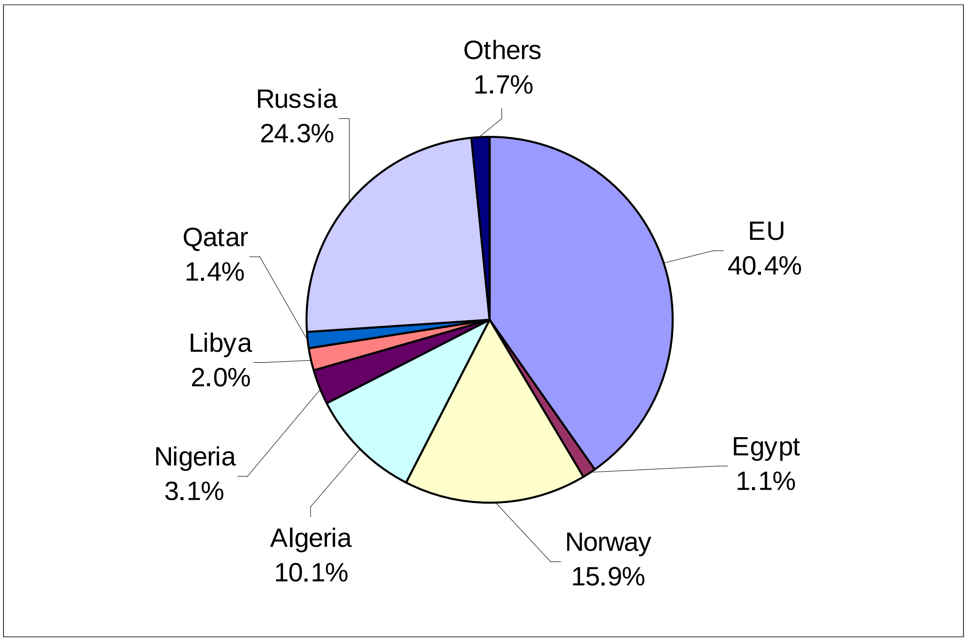
[1] By 2020 EU has to diminish carbon emissions by 20 percent, to improve energy efficiency by 20 percent, and to ensure that 20 percent of the energy consumption is provided by renewable sources.

Figure 1: *EU-27's energy mix during 2007 in million tons of oil equivalent (toe)*



Source: The European Commission

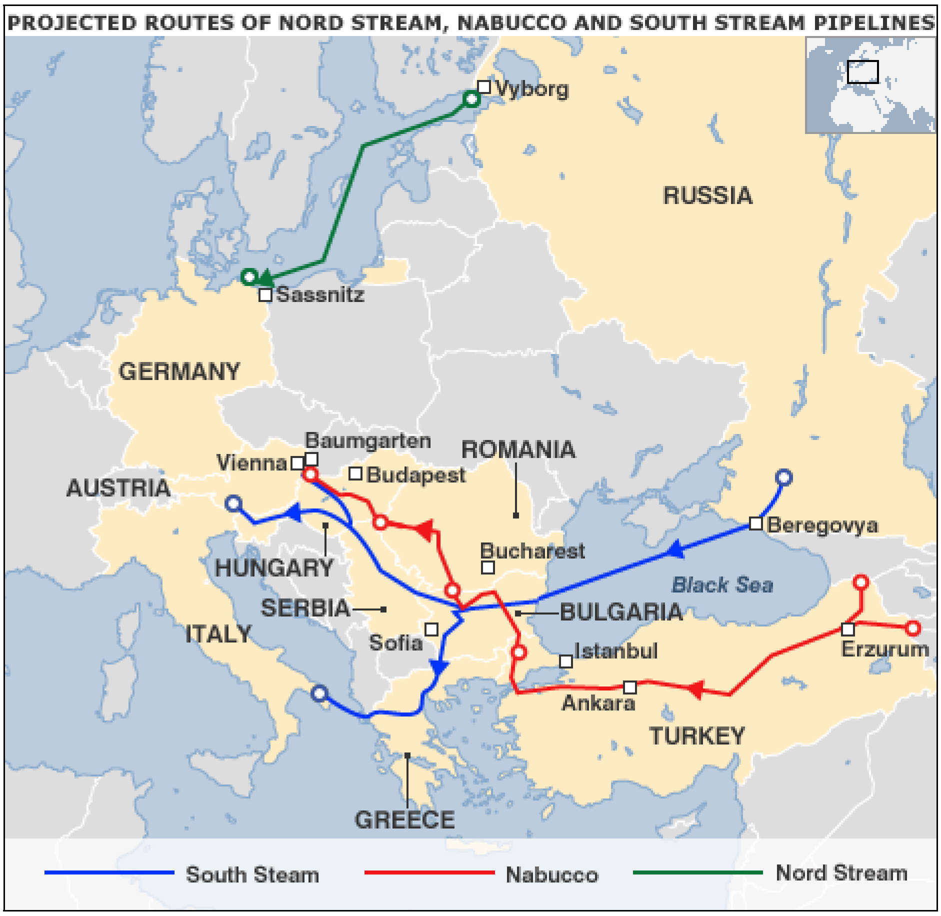
Figure 2: *EU-27's sources of natural gas (in percentages) during 2007*



Source: The European Commission

This dependence on foreign energy has sharpened the need to diversify not only suppliers, but also routes and sources of natural gas. Part of this policy is using more routes for supplying Russian gas, i.e. the *Nord Stream* and *South Stream* pipelines, as well as looking for new resources in the Caucasian region and the Middle East, via the *Nabucco* pipeline (Map 1 and Table 1). In both cases, these projects depend on and, at the same time, affect South-East Europe. If the entire planned energy infrastructure is built, it will bring not only energy, but also more stability to this part of Europe.

Map 1: *European gas pipelines*



Source: www.energy.eu

Table 1: *The most important future natural gas pipelines in the EU*

<u>North Stream:</u>
Connection: Russia-EU (via Baltic Sea)
Transport capacity: 55 billion cubic meters/year
Partners: Gazprom 51%, BASF/Wintershall 20%, E.ON 20%, Gasunie 9%
Scheduled for operation: 2 Lines. First scheduled for 2011, second for 2012

<u>South Stream:</u>
Connection: Russia-EU (via Black sea)
Transport capacity: 63 billion cubic meters/year
Partners: Gazprom 50%, ENI 50%
Scheduled for operation: End of 2015

<u>Nabucco:</u>
Connection from: Caspian region, Middle East, Egypt to EU
Transport capacity: 31 billion cubic meters/year
Partners: BOTAS, BEH, MOL, OMV, RWE, Transgaz. Each 16.67%
Scheduled for operation: End of 2015

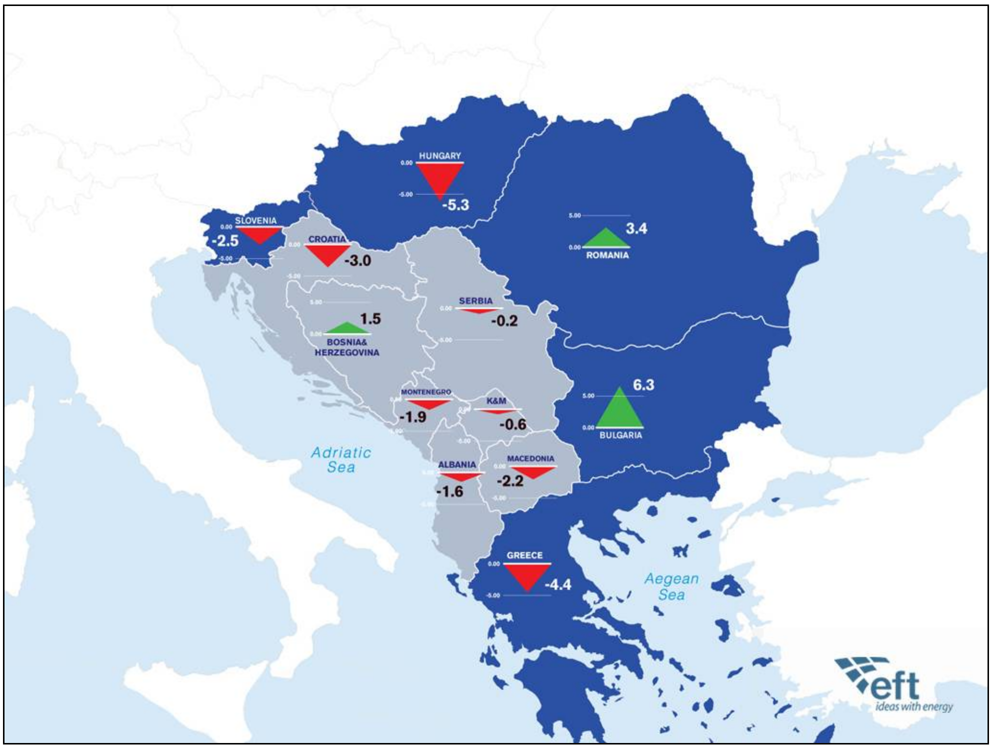
Source: www.energy.eu

Southeast Europe's energy situation

The region of South-East Europe has been an important trade route ever since the Silk Road. The geographical location provides the opportunity to link several important energy-rich regions with Europe: Russia and Asia, the Caucasian countries and the Middle East, as well as even Africa and the Mediterranean basin. Moreover, SEE may play a significant role not only as an energy transporter, but also as an energy supplier, especially on the electricity market. Currently, South-East Europe has an electricity deficit, but large new projects, like the nuclear plants Belene (Bulgaria) and Cerna voda (Romania) and the coal potential of Kosovo could provide new power sources in the mid-term.

According to the EFT Group, August 2009, the average electricity deficit of SEE in the period 2005-2008 is 10.4 TWh and only three of the countries in the region (Bosnia & Herzegovina, Bulgaria, and Romania), have been net exporters of electricity during this period (See: Map 2). Currently, according to the same source, the consumption per capita of natural gas and electricity in the region is only 46 percent and 53 percent respectively of the EU average. Further economic development, expected in the region, despite the current economic crisis, most probably will lead to an increase in end-use of all types of energy.

Map 2: *SEE average energy balance (2005-2008)*



Source: EFT Group data from August, 2009

The region's European perspective is a good basis for developing energy relations with regard to EU policy. As a natural step, seven countries from South-East Europe have signed a common energy document with the EU. The Treaty establishing the Energy Community, also known as Energy Community South-East Europe Treaty or ECSEE[2], was signed on October 25, 2005 in Athens, Greece. It entered into force on July 1, 2006. The contract aims at establishing a single regulatory framework for trading energy across South-East Europe and the EU on the same terms. It was signed by energy and trade ministers, representing the EU,

[2] Official website: www.energy-community.org

Albania, Bosnia and Herzegovina, Croatia, Republic of Macedonia, Montenegro and Serbia, as well as UNMIK (as Kosovo representative under Security Council Resolution 1244). The treaty affects electricity, natural gas, and oil products. Bulgaria has participated in this initiative since its accession to the EU – January 1, 2007. Other 13 EU states participate in the Energy Treaty as well. Currently, Georgia, Moldova, Norway, Turkey, and Ukraine are taking part as observers.

Unfortunately, many of the regulatory reforms that are required by this document are still not present, which creates obstacles for free energy trade in the region. Moreover, the current energy infrastructure in SEE is not capable of providing capacity needed for full-scale energy trade between the countries in the region and the EU. According to data from the South-East Europe Development Watch[3], issued on December 8, 2008, the Western Balkan countries are highly dependent on energy imports, ranging in 2005, from 32 percent for Serbia and Bosnia & Herzegovina to 51 percent and 58 percent for Albania and Croatia, respectively. The same document also points out some of the main energy projects planned in the region:

<u>Oil projects</u>

- The Burgas-Alexandroupolis oil pipeline (Bulgaria-Greece): 30-50 million tons per year;
- The AMBO oil pipeline (Albania-Macedonia-Bulgaria): 30-40 million tons per year;
- The Pan-European Oil Pipeline – PEOP (Romania-Serbia-Croatia-possibly Slovenia-Italy): 60-90 million tons per year;
- The integration of the existing Druzhba and Adria pipelines (Croatia-Hungary-Ukraine-Russia).

<u>Gas projects</u>

- Nabucco (Turkey-Bulgaria-Romania-Hungary-Austria): up to 31 billion cubic meters per year;
- South Stream (Russia – Bulgaria, dividing into Greece-Italy and Serbia/Romania - Hungary-Austria/Slovenia - Italy): around 30 billion cubic meters per year (increasing to about 63 billion cubic meters per year subsequently);
- Trans-Adriatic Pipeline (Greece-Albania-Italy): 10-20 billion cubic meters per year.

According to different sources, the structure of electricity demand in South-East Europe will not be impacted very much by the economic crisis. The reason is that the region has relatively low electricity consumption in the industrial and services sectors. There is, however, a possibility of delays or failures in planned investments in new capacities and infrastructure, because of a lack of financing – both from state budgets and from international bank institutions.

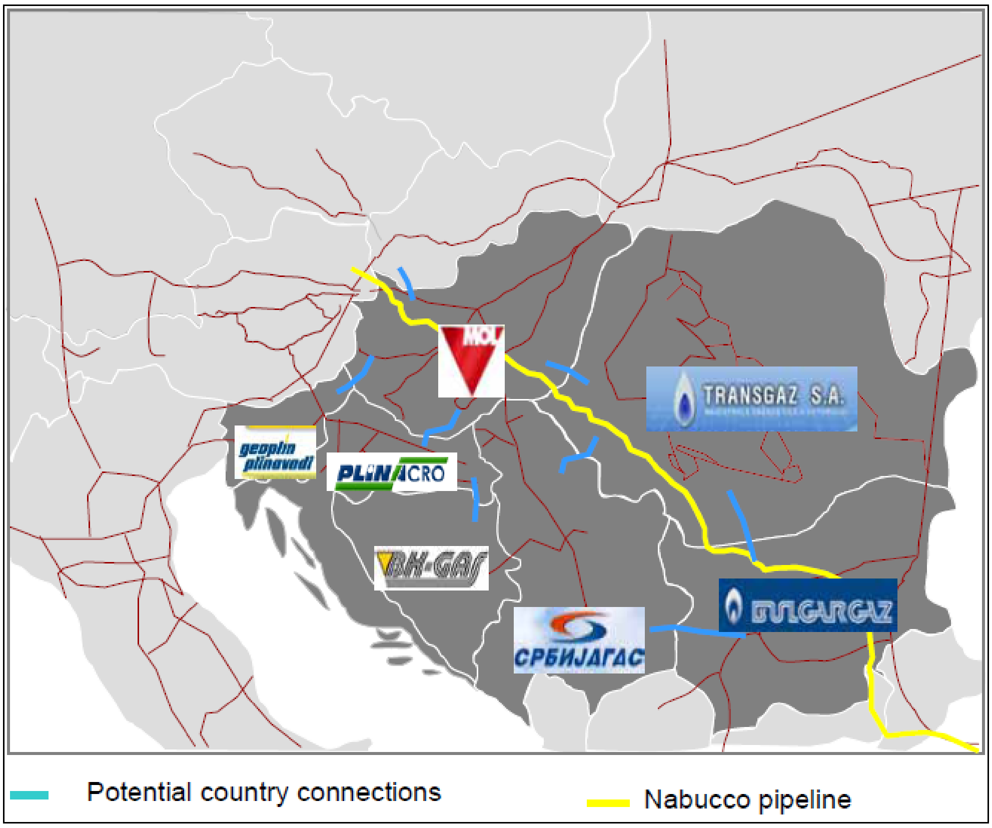
However, the high-priority projects for the region of SEE seem the new gas pipelines that are planned to cross the Balkan Peninsula. *Nabucco* and *South Stream* have been defined by some experts as competing projects, but others claim that there is enough room for both. Initially, they were planned with the same maximum capacity (about 30 billion cubic meters per year), but later Gazprom announced that *South Stream* will carry twice as much – about 63 billion cubic meters per year. Currently, the chances that both pipes will be built appear to be equal. Gazprom and ENI have secured the route of the *South Stream* pipe everywhere, even

[3] South-East Europe Development Watch (SEEDW) - formerly known as Stability Pact Watch - is a coalition of South-east European environmental non-governmental organizations (NGOs) monitoring and campaigning on the investments made by international financial institutions (IFIs) and the European Union (EU). SEEDW is a project within CEE Bankwatch Network

under the Black Sea after signing an agreement with Turkey. *Nabucco* has many supporters as well. One recent supporting opinion voiced by Dušan Bajatović, CEO of Srbijagas. In a report by SEEbiz/B92[4], he said that “Serbia would agree to negotiate on the *Nabucco* pipeline project should an invitation arrive.” According to the same source, he pointed out at the daily Politika that “It would not be bad to link up with the *Nabucco* pipeline as well, even if it isn’t passing through Serbia’s territory, since gas would be arriving from the Caspian Sea and Central Asia via this pipeline”.

Another interesting gas project, proposed by the Hungarian gas company MOL, is the so-called “New Energy Transport System – NETS”. The idea of NETS is to provide a common ground for interconnecting the gas transmission networks of South-East European and Central European countries. This provides another opportunity to secure gas supplies during short-term crises. NETS (See: Map 3 below) might also compete in trading some quantities of natural gas, although the capacity will be considerably smaller than that of the proposed pipelines *Nabucco* and *South Stream*.

Map 3: *The proposed interconnections of the NETS project*



Source: MOL

The energy sector in Bulgaria

About half of the aforementioned energy infrastructure projects should pass through Bulgaria – *Nabucco*, *South Stream*, *Burgas-Alexandroupolis*, and AMBO. The country has the chance to build an energy bridge between its traditional Western and Eastern partners. Currently, a member of the EU, Bulgaria has long-term trade relations with Russia, the Caucasian region, and some Middle Eastern countries. Some of the trade relations have been lost during the transition to a market economy in the period after 1989, but others have been strengthened over the last several years.

[4] http://www.seebiz.eu/en/corporate/serbia-wants-in-on-nabucco-pipeline-project,51025.html

Currently, Bulgaria is dependent on foreign oil for almost 100 percent of its consumption and on foreign natural gas for over 90 percent of its consumption. However, because of its nuclear power plant Kozloduy, Bulgaria's overall energy dependency in 2008 was only 46.2 percent, which is a little lower than the EU-average for the same year – 53.8 percent[5]. The country is still a net exporter of electricity with an average export of 6.3 TWh per year in the period 2005-2008, according to data from the EFT Group.

The Bulgarian oil market does not have a clear "market leader" as several international companies are in competition: Eko Bulgaria (owned by Hellenic Petroleum), Lukoil, OMV, Petrol, Rompetrol and Shell. However, the largest refinery in Bulgaria is owned by Lukoil, which is also investing in a local distribution chain. Thus, the petroleum situation in Bulgaria suffers mostly from volatile prices, but no supply shortages are expected.

The natural gas market in Bulgaria is not in a similar situation. Currently, all natural gas imports are of Russian origin, using a single route via Ukraine. One of the companies supplying gas to Bulgaria is Overgas (50 percent owned by Gazprom), which also operates most of the gas distribution network in the country. The network was built in the period after 1991, as Bulgaria did not have any household consumption of gas prior to that.

The lack of alternative natural gas supplies was felt very negatively during the Russia-Ukraine gas dispute in January 2009. Left without gas supplies, Bulgaria could only avail of the gas from its storage facility "Chiren". However, as its current capacity could cover less than half of the daily consumption in winters, gas supplies for industrial consumers as well as for district heating companies was diminished or stopped during the crisis. Large consumers with a possibility to use reserve fuel (such as gas oil or coal) did not suffer great discomfort, but some industrial consumers had significant losses, since they had to stop work.

The gas crisis in January gave additional impetus to the government in seeking new energy infrastructure opportunities. The Bulgarian Energy Holding (100 percent state owned), which owns the gas transmission and gas transit network operator Bulgartransgaz, and the single wholesale buyer Bulgargaz, started several initiatives over the next months. Some of the main events during and after the crisis were:

- **January 19, 2009**, Bulgaria successfully negotiated gas imports from Greece by reversing the flow and using the same pipeline, which supplied Russian gas to the Greek network. This happened a little before the gas flow through Ukraine was restarted. The imports were negotiated for a quantity of 2.5 million cubic meters daily, about 20 percent of the daily winter consumption in Bulgaria.

- **End of January 2009** in Vienna, Austria, Bulgaria agreed with Azerbaijan to import 1 billion cubic meters of natural gas from the Caucasian country, when the needed infrastructure is present (*Nabucco* or LNG terminals), or, when there is a transit contract with Russia or Turkey, to use their transit lines.

- **April 24-25,** the Bulgarian president organized a summit, called "Natural Gas for Europe. Security and Partnership"[6], which was attended by political figures from the EU and energy-exporting countries. During the summit, the Bulgarian Energy Holding organized a conference, called "Sofia Energy Business Forum"[7], which gathered representatives of international energy companies.

- **May 15, 2009**, in Sofia, the executive director of Bulgarian Energy Holding signed the agreement with Gazprom on *South Stream*. The Russian part signed the

[5] Source: www.energy.eu
[6] Official website: http://www.energysummit2009.bg/en/
[7] Official website: http://www.bgenh.com/sebf/index.html

agreement in Moscow on April 28, 2009. The document provides that the two companies will create a new entity and will initiate a feasibility study of the project.

- **July 13, 2009**, the inter-governmental contract for *Nabucco* was signed in Turkey. According to the former Bulgarian Prime Minister Sergei Stanishev, who signed the contract, this is a very important step ahead for the project implementation.

- **July 14, 2009**, the Bulgarian Energy Holding signed two gas agreements. The first memorandum is with two companies: DEPA S.A., Greece, and Edison International Holding BV, Italy. BEH will participate with 50 percent in a common venture, which will build, own and operate a gas connection between Greece and Bulgaria. The second contract is between BEH and the Greek company Hellenic Gas Transmission System Operator (DESFA S.A.) and involves partial use of the capacity of the Revithoussa LNG terminal in Greece.

- **July 16, 2009,** the Bulgarian Energy Holding announced that it will seek for funds to increase the capacity of the gas storage "Chiren". The Holding could guarantee a loan of up to €250 million for its subsidiary company Bulgartransgaz, which operates the storage facility.

Current political situation in Bulgaria

In July 2009, Bulgaria elected a new parliament for a four-year term. The former ruling coalition, formed by three parties (BSP, NDSV and DPS) completed a full four-year mandate, during which its energy positions were qualified as pro-Russian. These opinion was based on support that the government had given to several pro-Russian projects: the construction of the new nuclear plant Belene (with main contractors Atomstroyexport, Areva, and Siemens), the signed contract for the *South Stream* pipeline (with 50/50 Bulgarian and Russian ownership), as well as agreements for the Burgas-Alexandroupolis oil pipeline (51 percent Russian, 24.5 percent Bulgarian, and 24.5 percent Greek). The former government was formed on the principle of political quotas with a ratio 8-5-3. Thus, different ministries were managed by different parties from the coalition and sometimes the political wills of the partners were not unanimous on important energy and economic issues.

The new government and the new minister of energy Traicho Traikov[8], former manager in EVN Bulgaria and energy expert, have pleaded for a revision of all energy deals in economic terms. The reason for this, according to the new government, is the expected budget deficit in Bulgaria in 2009. The economic crisis, which could have its strongest effects on Bulgaria in both 2009 and 2010, is the new government's main concern, as the budget may not cover the expenses of some of the larger energy projects, especially if the agreements made by the former government turn out to be disadvantages. The new government has 116 seats in the 240-seat Parliament. All the right-wing parties support the government, but without making a coalition with the ruling party GERB. The Prime Minister Boiko Borisov, former Mayor of Sofia, decided to take the risk and form the government alone to provide a clear political vision about its activities.

The construction of the Belene nuclear plant has cost about €400 million to date, mainly in engineering, consulting and preparation works. The project is lead by NEK, the national electric company, which is 100 percent owned by the Bulgarian Energy Holding. An international tender for 49 percent of the project was won by RWE (Germany), but still no financing for the project has been secured – either through finance or bank loans. However,

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[8] Biography of Traikov is available at: http://www.mee.government.bg/eng/about/about.html

Russian officials have proposed that Atomstroyexport could finance almost €4 billion of the expenses through leasing contracts. Both the prime minister and the energy minister have expressed their concern about the project's financing several times and promised a full-scale audit of all contracts.

Bulgaria owns 24.5 percent of the Trans Balkan Pipeline's Burgas-Alexandroupolis project through the state-owned companies Bulgarian Energy Holding (under the control of the Bulgarian economy and energy ministry) and Technoexportstroy, each of them having 12.25 percent of the shares. On May 15, 2009, BEH decided to cease its participation in the project and transfer the shares to Technoexportstroy. The company is under the control of the Bulgarian regional development and public works ministry. According to the new minister, Rosen Plevneliev, former manager of Lindner in Bulgaria and construction entrepreneur, the project has no economic sense. However, a final decision has still not been made about how Bulgaria will participate in it. Moreover, many of the municipalities on the pipeline route have expressed their concerns about the project's environmental risks. The new government is expected to make an in-depth review of all such risks.

According to an article of the Russian news agency Prime-TASS, cited by Euractiv[9], the new government's actions have caused concerns in Russia regarding Bulgaria's pro-Russian orientation and its energy projects, especially *South Stream*. Still no contract has been changed or terminated, but the new government's tone sounds different from its predecessors. Even before the elections, the leader of the current ruling party GERB, while still a member of the opposition, urged the previous government not to sign any energy deals in July 2009, as all contracts would have to be implemented by the new government, which did not want to be excluded from any negotiations. The only exception that GERB made was for the signing of the *Nabucco* inter-governmental contract (Turkey, July 13, 2009). The new government will have to negotiate with Gazprom for new gas supplies in the coming months as the current contract is valid until the end of 2012.

If Bulgaria's new government follows the European position on new gas pipelines through SEE, then we could expect that both *Nabucco* and *South Stream* will be built. The official EU position is that both projects will improve the Union's energy security. However, according to the EU energy policy, *Nabucco* should have priority. While *South Stream* is diversifying routes for supplying Russian gas, *Nabucco* is expected to support diversification of routes, suppliers and sources of natural gas – by providing access to the gas-rich Caucasian region and Middle Eastern countries. At the same time, the new government is expected to strengthen relations with the USA as well. This could be a chance for more American energy companies to enter the Bulgarian market and provide additional funding for local energy projects.

Conclusion

The European perspective of the SEE countries is a key factor for the development of their energy sectors. The region lies in the middle of the routes that connect energy suppliers (Russia, the Caucasian countries, and the Middle East) with the large energy consumers in Central and Western Europe. At the same time, the region itself is increasing its energy consumption. The energy "crossroad" can provide many benefits for SEE countries in terms of new investments in energy capacities and energy infrastructures, if the political will for this is present.

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[9] http://www.euractiv.com/en/energy/bulgaria-gets-cold-feet-south-stream/article-184086