

Energy Security in South-East Europe in Light of Russian Energy Policy

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„As things stand now, if we don't change our energy system in a radical way over the next ten years, the wheels will come off“, IEA, Fath Birol Chief Economist, 2008

Energy security, economic development and efficient environmental protection have long been fundamental interlinked goals. Consequently, no one national economy can claim to be *energy – secure*. This situation can be defined as bipolar – some countries have energy pathways at increasingly difficult political price, while others have huge supplies of energy resources with which they attempt to dictate future global growth.

In an attempt to secure energy, new opportunities are being opened for oil and gas companies, infrastructure owners, producers, distributors and others in the energy business, however, this, in term, creates new risks. Thirty years after the first energy crisis, the most important equation of global energy has not been solved – securing sufficient energy in an economic, efficient and ecological manner.

Apart from the urban myth, whereby nine months after the biggest blackout in New York (1977) the number of births increased by 35 percent, everything else is far from romantic. More important than looted stores, mugged citizens and estimated damage of around \$300million, the first signs of fear of shortage or lack of access to energy were clearly recognizable. That fear still exists today. Both in 1977 and 2009, after the second gas crisis, it is clear that energy is a condition of subsistence to modern society.

We have not left energy crises and wars behind us. They persist and directly influence energy and national security, through the reduction of energy efficiency, decreased supply, increasing prices and deep geopolitical tensions. There are no winners in energy wars – only losers

Reduced production in consumer countries (which increases their import dependency), lack of investment in energy infrastructure¹, political volatility and conflicts directly influence the level of energy security of the region and the world², reducing energy intensity and slowing down the implementation of region's energy policies. For instance, the well-known EU gas security issue concerns diversification, on one hand, (which is more theory than reality), but also cooperation within the EU to define and implement a united energy policy. It is clear that without a unified policy, there can be / will be no security of supply, consequently we live today in a constant energy crisis. Because the first and the second gas crisis occurred during the first few days of 2006 and 2009, does not mean that they lasted only a few days. The crisis started before those dates and continues to persist.

Unless energy supplies are reconciled with demand, development can not progress. It is realistic to observe, therefore, that countries with energy resources are in a more advantageous position than those without. Will Russia, for instance, benefit or loose from shutting down gas supply intended for Europe?³ Can Gazprom dispense with thousands of kilometers of gas and

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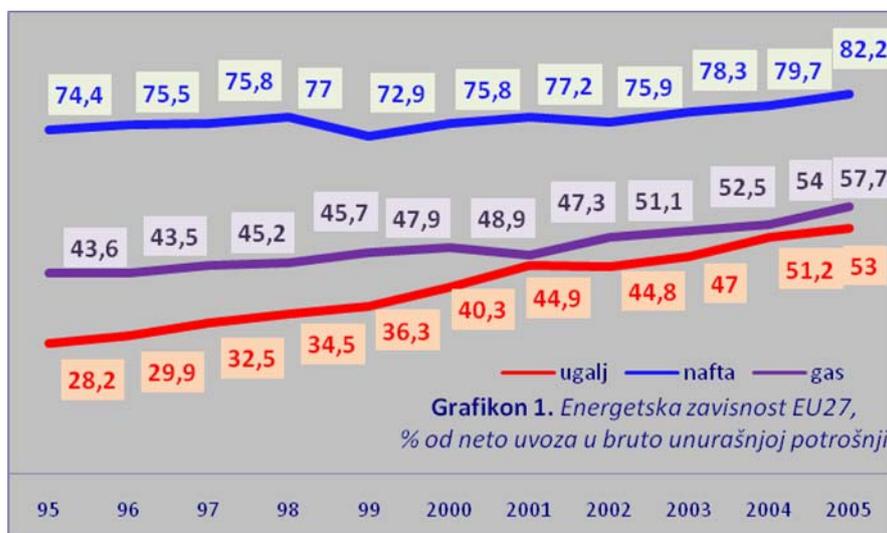
¹ The International Energy Agency estimates that around \$20trillion of investment in energy infrastructure is needed until 2025.

² The Iraq war (due to which decades will be needed to restore production to the pre-war level), conflicts in Equatorial Africa, deeply disturbed relations between suppliers and producers / consumers, political interests, guided reduction or increases in the flow of raw materials, such as oil and gas.

³ During the second gas crisis Gazprom was loosing \$200million per day.

oil pipelines worth billions? What would happen to the Russian economy, if this country's budget were to be reduced for 50 percent, if the EU stopped using and paying for its gas?⁴

It is a well-known fact that 94 percent of Russia's total gas exports is to European countries. Russian gas makes up 38 percent of the European import. Future projections serve as a warning to both sides and should be taken into account. By 2030, Europe's gas import will increase five to six times, compared to home production. Some European countries, such as Germany and Italy, have a significant share in gas import from Russia; consequently, it is not surprising if they are focused on bilateral deals with Russia at the expense of European solidarity. In recent years, Gazprom has signed agreements with ENI (Italy), Gaz de France (France), Gasunie (the Netherlands), BASF (Germany), E.On Ruhrgas (Germany). In a bid to access energy and, of course, profit, European companies play against one another, to achieve more favorable conditions and advantages. If one company refuses to play by Moscow's rules, others soon agree, leaving the first company with nothing. Moreover, this interdependence influences EU foreign policy, reducing the potential to influence and support key alliances, starting from the Balkan and Central European countries, as well as Asia; especially Ukraine, Azerbaijan, Georgia, Kazakhstan, Turkmenistan, which are the main producing and transit countries. Russian gas also accounts for 98-100 percent of consumption in Belarus, Estonia, Finland, Georgia, Latvia and Moldova.



Graph 1: EU 27 energy dependence, % of Net import in gross internal consumption, coal in red, oil in blue, gas in purple

Approximately one fourth of the EU supply comes from one company – Russian Gazprom. 80 percent of that quantity is being delivered through one route – Ukraine. This is a point of concern, especially for Russia.⁵ After the collapse of the USSR, Europe was faced with a dual monopoly: a Russian monopoly in quantity, i.e. volume of oil and gas and Ukrainian

⁴ In January and February 2009, the Ukraine gas transit was reduced by 50 percent. 11 billion m3 of gas transited the Ukraine, which is 53.2 percent less than in the same months in 2008. The main reason for this reduction in consumption in Europe was the economic crisis, but this surely affected the budget and economy of Russia. In the first half of 2009, Gazprom earned 36-42 percent less from gas exports to countries outside the CIS, than in the same period in 2008 (\$12billion).

⁵ Russia – Ukraine relations started to chill after the 2004 elections in Ukraine, when the pro-Western, pro-NATO politician, Victor Yushchenko, won, and the question of security of supply became an issue. The IEA analysts (Tom Gold) remarked: „It is difficult to remove politics from anything to do with Ukraine and Russia“. While Ukraine was being led by a pro-Russian politician, there were no such problems, and the price of gas for this country was, as it is today, non-competitive. Indeed, it was considered friendly at that time.

monopoly on transit routes. This diminished the room for maneuver of the EU, which, anyhow, lacks energy resources.

The EU will be able to solve its electricity shortages through a revival of nuclear energy, and partly through renewable energy sources, but existing problems with oil and gas can not move at such a pace. Liquid oil gas, bio diesel and bio fuel are options which require a lot of investments and can only partially satisfy the energy demand. Results of this front can only be expected in decades to come.

Since *it takes two to tango* any deterioration or improvement of EU – Russia relations will affect supply for European consumers. If the supplier refuses to provide gas or offers it at an unreasonably high price, the consumer is unable to react or avail of another source in a short period of time (the consumer can only accept the supplier’s conditions or go without gas, which is not an option). On the other side, if agreements on great infrastructure projects fall short because of a change of government, that is equally as bad as the use of a gas supply as political weapon.

One solution for the EU would be to have a clear relationship and agreement with the Russian side on all matters pertaining to this issue, including those connected to the construction of new gas and oil pipelines. Parallel and not less important are relations with the transit countries, such as the countries of South-East Europe, an indispensable link in establishing good quality cooperation between Russia and the EU. By signing the South-East Europe Energy Charter, these countries have taken a step closer to the EU. Bearing in mind their long-term political and economic links to the former USSR and the heritage of that period, the creation of the Energy Community has been a huge step forward for these countries and a great political success for the EU.

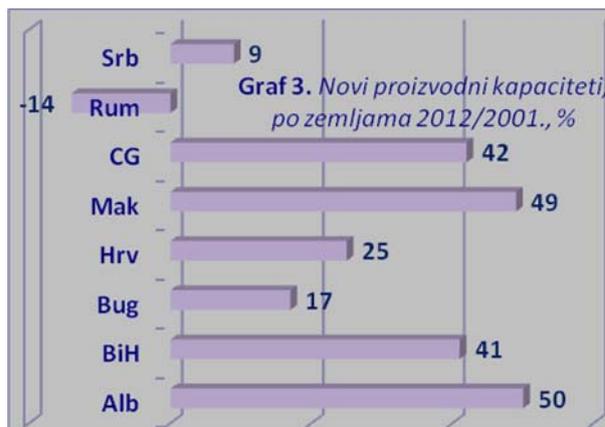
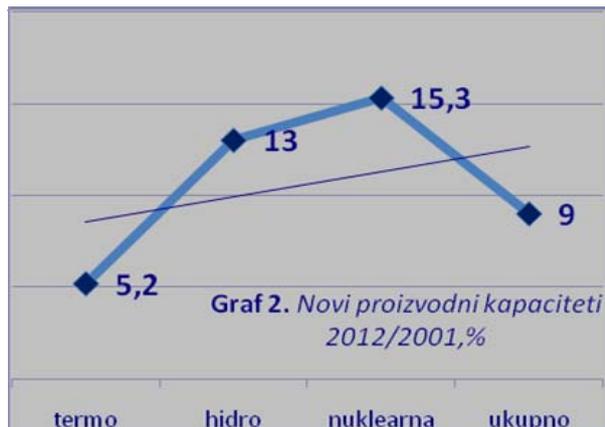
The SEE region has a population of 55 million inhabitants, approximately equal to that of Italy and France, spread across nine countries. Their GDP in 2008 was \$417billion. Without the SEE countries, the EU energy balance would fall short, while Russia would experience a drop in efficiency. This is the comparative advantage of the region, especially for countries, such as Serbia, Bosnia and Kosovo.

Unless these countries are politically stable, with sufficient investments, the comparative advantage of a good geostrategic position would become a disadvantage. They would become a lagging point of development not only for themselves, but also of the entire region. By 2012 this region will require 440MW of new energy capacities and further investments, estimated at €30billion, will be required by the year 2020.

Table 1. *Planned production and infrastructure energy capacities until 2012 in the SEE Region (in MW)*

	Thermo	Hydro	Nuclear	Total
Albania	578	243		821
Bosnia and Herzegovina	677	913		1590
Bulgaria	2100	-129	-109	1862
Croatia	807	146		953
Macedonia	10	694		704
Montenegro	210	150		360
Romania	-3594	194	800	-2600
Serbia	602	152		754
Region	1390	2363	691	4444
	31,3%	53,2%	15,5 %	

Graph 2 and 3:



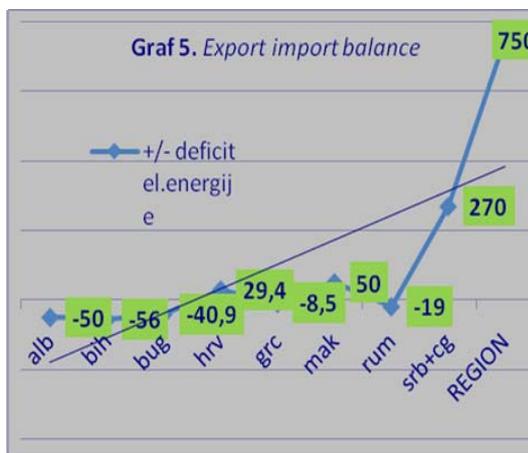
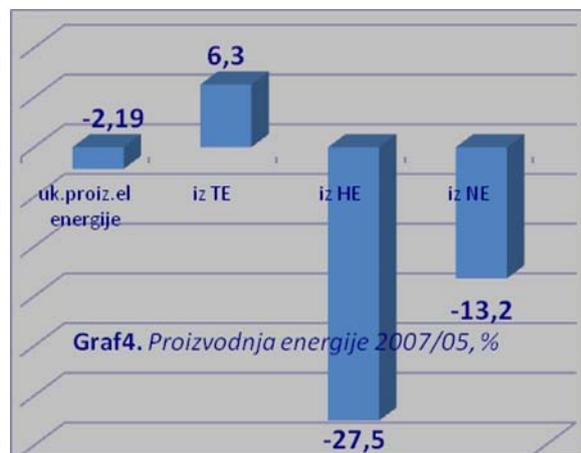
Graph2: New production capacities 2012/2001, in percentages, thermo, hydro, nuclear, total

Graph3: New production capacities, breakdown by country, 2012/2001, in percentages

There are many *points of concern* regarding the region's future energy status. The most important are listed below:

1. Insufficient energy capacity (49.5GW), which is the main cause of power interruption. The deterioration of infrastructure has created a need for additional 4500 MW, i.e. for an investment of around €billion by 2012;
2. The average annual increase in energy demand is estimated at 2.3 percent (from 1714 to 2194 TWh) by 2012 (double to the previous decade);
3. The investment environment is still unsuitable for investors in many countries, especially from the point of view of protection (political issues, legislation, regulations, tariff reforms);
4. Analysed by sectors, the biggest energy consumers are households. This highlights an insufficient development of the industrial sector, but also guarantees growing demand in years to come;
5. Oil and gas production is limited, due to the scarce deposits. The Western Balkans are heavily dependent on the import of fossil fuels from outside the region;
6. Energy intensity⁶ is high, more than 2.5 times higher than in the EU.

Graph 4 and 5:



Graph 4: Energy production, 2007/05, in percentages

Graph 5: Export import balance

⁶ Energy Intensity is an average quantity of energy necessary for the production of one unit of the GDP.

Although SEE governments at the beginning of 2000 expressed their readiness to restructure the energy sector and establish an energy market, and, although they have signed the Energy Treaty⁷, many activities are not being conducted at the desired pace, which directly affects the investment flow negatively, i.e. a slowdown in the building of new capacities.

While there are many investment potentials in the region, they will remain hypothetical unless these countries strictly apply the provisions of the Energy Treaty and EU directives.

Strategic energy goals in the SEE region cannot diverge from those of the EU, particularly those regarding security of supply, acceptable and foreseeable prices of energy sources (which boost competition and not monopolies), ecology, and energy sustainability. The current state of affairs in the region is far from these premises: energy security is decreasing, prices of electricity, gas and oil derivatives are neither predictable nor competitive, and the levels of carbon in energy sources and energy production continue to grow. The long-term solutions available to these countries are clear: increasing the share of renewable resources in the energy mix, the production of bio fuel, boosting global partnerships with the EU, investing in new energy technologies⁸ - especially in fossil fuels with low percentage of carbon dioxide and increasing energy efficiency.

Table 2. *Electricity production 2007/2005, in percentages*

	Bosnia and Herzegovina	Bulgaria	Croatia	Greece	Macedonia	Romania	Serbia and Montenegro
Total electricity production	-6,5	-13,8	-1,8	+4,0	-6,3	+2,8	-1,5
From Thermo-electric Plants	17,8	5,4	28,7	9,8	0,3	-3,4	8,0
From Hydro-electric Plants	-33,3	-47,5	-31,8	-40,5	-28,8	-21,5	-19,3
From Nuclear Power Plants?		-27,0				37,4	

Table 3. *Index of Economic Freedoms and the Perception of Corruption in SEE countries and Russia*

County	Economic Freedoms Index 2009	Corruption Perception Index 2008	Country	Economic Freedoms Index 2009	Corruption Perception Index 2008
Bulgaria	56	72	Albania	62	85
Romania	65	70	Turkey	75	58
Macedonia	78	72	Montenegro	94	85
Serbia	109	85	Croatia	116	62
Bosnia and Herzegovina	134	92	Russia	146	147

The geographic location between the energy-rich regions (Russia, Caspian region, Middle East) and the main energy consumers in Western and Central Europe, makes the SEE geopolitically and economically attractive and significant from the energy point of view. The opportunity for the SEE region to become the largest energy hub for gas transit from the

⁷ A Treaty Establishing the Energy Community of the South-East Europe countries, signed in Athens on 25 October 2005, ratified by the EU and entered into force on 1 June 2006. This is the first energy-related document which has a binding status, signed between the SEE countries and the EU. Ratification in the parliaments of the signatory states has created an obligation (EU plus nine partner countries) to establish a unique integrated energy market. The goals are: to create conditions to attract new investments into the energy sector, to open the energy markets of these countries in accordance to the EU directives, to strengthen conditions for unhindered environmental protection in the region energy market.

⁸ The EU annual investments in energy technologies will be around €1 billion between 2007 and 2012.

Middle East, Central Asia and Caspian region to the EU can only be possible if infrastructure is well developed.

Much remains to be done for this region to satisfy the constantly growing energy demand, especially the demand for gas. Although possibilities for electricity production exist, its current production potential and oil and gas reserves underline how this region has been and is dependent on imports. Russian gas makes up a large share of the gas import in Latvia, Lithuania, Hungary and Slovakia. Countries such as Lithuania, Estonia, Bulgaria and Poland use gas in large quantities in the petrochemical industry. If there is no gas, these factories would simply have to close and petrochemical products would be imported.

Some basic features of the SEE region’s gas industry include: a significant lack of gas storage facilities, non-existent or underdeveloped gas network, low gas consumption and high dependence on one supplier (Russia). Although SEE countries have decided to reform their gas industry, changes are happening a lot slower than expected.

The two gas crises, and especially the second (Jan 2009), demonstrate how sensitive the countries in the region are to gas-related issues and how much gas is a point of concern for EU supplies. The supply in Romania, Bulgaria, Serbia, Greece, Macedonia and Croatia was seriously jeopardized.

Table 4. Gas share in the energy mix of each country in the region and relation between gas imported from Russia compared to the total consumption, in percentages

	Bulgaria	Greece	Romania	Croatia	Serbia	Bosnia and Herzegovina	Macedonia
Gas share in Energy Mix	14	9	35	27	12	7	4
Gas import from Russia compared to the total consumption	87	80	35	39	88	100	100

In the case of most countries, gas primarily enters through Ukraine from Russia. Two countries (Romania and Croatia) have a significant domestic gas production, while another two (Bulgaria and Serbia) have gas, but in smaller quantities. Because the region is a bridge of gas supply between Russia and the EU, the SEE countries’ strategic goals, including future investments policies, are:

1. Increased gas consumption (either in the production of electricity, or in household consumption for heating and cooling);
2. Strengthened regional integration to reduce potential interruptions in supply to the minimum (investments in gas infrastructure and market development);
3. Investment in gas storages and interconnection networks.

The average annual gas demand in the SEE region will increase by 2.6 percent, but with large variations from country to country. Demands for gas are forecast to increase by 72 percent until 2025 (from 26.2 billion m³ in 2005 to 45 billion m³ in 2025). The supply gap, created in this period, will increase for as much as 96 percent.

The countries in the region, which are currently small consumers of gas with insufficiently developed gas infrastructures, will have the highest increase in average gas consumption – Albania, and Bosnia and Herzegovina. On the other hand, the shortage of sufficient gas supply will hit Bulgaria, Croatia and Serbia, including Kosovo.

Table 5. Gas demand and supply gap of SEE countries

	Romania	Bulgaria	Serbia	Croatia	Bosnia and Herzegovina	Macedonia	Albania	Kosovo	Montenegro
Average annual gas demand increase rate	1,7	3,2	1,9	1,0	6,1	3,8	10,2	15,5	1,0
2025/2015., supply gap percent	+92	+106,6	+140	+233	+83	+57	+42,8	+200	+16,6

The SEE market is relatively small under conditions of current and future gas consumption. For this reason, investments into the development of energy infrastructures are even more challenging. If gas is acquired at reasonable prices, one can expect economic and profit margins of investments to be better.

Many countries in the region have one importer and one gas distribution company with the exception of Serbia, which has JugoRosGaz, distributing in the south and Srbijagas in the north and central parts of Serbia. Despite being a small country with low gas consumption, Bosnia and Herzegovina has three distribution companies. On the other hand, the situation and trend in the region call for greater number of distribution companies.

Table 6. Regional gas sector

Market	Importers	Distribution Companies	Distribution Companies
Romania	Romgaz	Transgaz	Distrigaz Nort Distrigaz Sud Other small distribution companies
Bulgaria	Bulgargaz	Bulgargaz	Many
Serbia	JugoRosGaz	Srbijagas JugorosGaz	Srbijagas JugorosGaz Many other local distribution companies
Croatia	INA	Plinacro	Many
Bosnia and Herzegovina	Energoinvest	Gaspromet Pale Sarajevo Gas Lukovica BHGas SARajevo	Zvornik Stan SarajevoGas Sarajevo SarajevoGAS Lukavica Visokogas
Macedonia	Makpetrol	GAMA	

Since gas is supplied by one supplier, it is clear that potential sources of gas and supply routes for this region include, besides Russian gas (through existing and/or new routes), Caspian gas (*Nabucco* and/or other), and also gas from other southern sources (Iran, Iraq Egypt). Additionally, a way to bridge the *gas gap* is by using liquid oil gas (which could be delivered via the Mediterranean from North Africa, Egypt, Libya and Algeria).

Potential large-scale regional projects, which would supply the EU and cover future demand of the SEE region, necessarily involve those who would drill Russian gas and those who would pump Caspian gas. It could hardly be possible to build all these pipelines, nor build competing pipelines (*Nabucco* and *South Stream*), primarily because of the pay off rate.

Table 7. Potential Main Regional Projects

Main Pipeline	Gas	Transit Countries	Companies
TGI Turkey – Greece – Italy	Caspian	Turkey, Greece, Italy	Edison (Italy), DEPA (Greece), i Botas (Turkey)
TAP Trans Adriatic Gas	Caspian and/or Russian	Turkey, Greece, Albania and Italy	EGL, Swiss
IAP Ionina Adriatic Pipeline	Caspian	Turkey, Greece, Macedonia, Kosovo, Montenegro, Bosnia and Herzegovina, Croatia, Slovenia, Italy	EGL, Swiss Plinacro, Croatia
Nabucco	Caspian	Turkey, Bulgaria, Romania, Hungary, Austria	Botas (Turkey), Bulgargaz (Bulgaria), Transgaz (Romania), Mol (Hungary), i OMV (Austria)
GUEU White Stream Georgia-Ukraine-EU	Caspian, Azerbaijan	Georgia, Romania or Georgia Ukraine, Romania or Georgia, Croatia Poland	GUEU Inc, Private consortium, registered in the US
Blue Line, Blue stream II	Russian, Turkmen, via Russia	Bulgaria, Serbia, Bosnia and Herzegovina, Croatia	Gazprom
South Stream, Nord Stream	Russian, Turkmen, via Russia	Bulgaria, Romania Hungary	Gazprom

To resolve the situation and ensure the security of supply for European consumers in forthcoming years, something more is needed other than measures and changes in strategic plans, such as the new EU directive on increasing the security of gas supply to the EU⁹. It is necessary to reach an agreement between the main stakeholders, in the first instance, the EU and Russia, and subsequently, the transit countries, such as those in the SEE region and countries which are potential additional suppliers from the Caspian region. The common objective for all is to secure sufficient and economically sound gas supplies from viable energy sources. The dynamics behind the construction of gas and oil pipelines will depend on the maturity of the ‘shadow ruler’: politics and its sphere of interests.

⁹ The New EU Directive on the Security of Gas Supply (July 2009) obliges member states to undertake a series of activities to prevent potential interruptions in gas supply. By March 2014, they should have either secured sufficient capacities of gas storage or diversified their energy offer to withstand a minimum of 60 days interruption of gas supply. By 31 March 2010, an Emergency Plan should be defined and on 31 March 2014 member states should confirm that they have the gas infrastructure specified in the Directive.