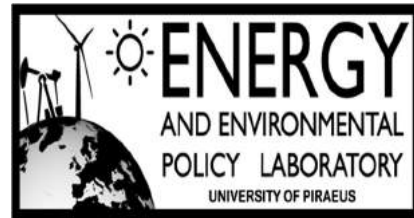




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Energy strategy of Russia in Western Balkans

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1. Abstract/Introduction

Energy security has been identified a crucial issue over the last decades, affecting considerably the political stability and economic growth of each country. Energy security is strongly linked with the availability of resources, as well as the political and military capability to enable the normal construction and operation of energy projects. The fast growing demand for energy, including both conventional forms such as hydrocarbons but also renewable sources, creates need for energy investments, which however does not only considers economic and market fundamentals but also geopolitical conditions. On the other hand, the situation in the world is constantly changing, where energy companies, including several state-owned, are competing on the exploitation of resources of natural gas and oil and the construction of energy facilities.

Russia, as an important gas producer in the world and as one of the most crucial oil producers, plays important role in this competition. After the break of the Soviet Union and clash of Russian power, it is noticed that Russia is coming back on the global scene and tries to improve its position, mostly through the energy field, by production and export of goods. The energy strategy of Russia is important for its balance sheet, as well as its political power in several regions in the world.

The aim of the paper is to stress the importance of Russia as one of the main world energy powers, based on the case of Western Balkans countries. Back in Russia to the global scene is rapid, especially through energy sector and well-organized politics based on exporting opportunities. In the last few decades, Western Balkans is constantly between EU and Russia, so it is of high significance to understand main reasons of high Russian impact on these countries. The Russian importance will be described from the perspective of historical facts, such as relation during the early history (starting from the 18th century), through World Wars cooperation, during the Balkan wars in the 90s and finally after the crash of Yugoslavia. It will be presented the current importance of Balkan for Russian foreign policy strategy, Balkan's high energy dependence and detailed picture of whole energy situation at Western Balkans. In this paper will be analyzed likewise every single country of Western Balkan separately and Russian impact on each of them. Moreover, the very important issue is infrastructure and some of the planned projects in order to improve it. The main focus is on the oil and natural gas sector for the reason of the huge import dependence of Western Balkans on this energy sources, logically from Russia.

Keywords: Russia, Western Balkans, Energy policy, Natural gas, Oil

2. History of the interconnection of Russia and Western Balkans

2.1. Early history

Through the centuries it has been noticed a huge connection between Russia and Western Balkans countries. Firstly, many historians have recorded religious connection as the main, but also the political and military connection. Countries that have been partners of Russia during the history were Serbia and Montenegro mostly. During the modern ages situation did not change drastically, Serbia is still one of the Russian's biggest Western Balkans partnership. In case of Montenegro, the country joined the sanctions against Russia¹.

Based on historical data, there is an information that Western Balkans was for centuries the region that was the border between Ottoman Empire and European powers. From that point of view, fact that Western Balkans culture, a significant part of religion and tradition are the most similar to Russia, that could be one of the conclusions why Russia always forced itself an influence on Balkan countries. Instead of the religion and cultural behaviors, most of the Balkan languages are the most similar languages in the Russian language.

2.2. World Wars

Following the worst situation that world ever experienced during the World War I, it has been predicted that conflicts will be continued in the next years. On the global level, each country faced huge loses, economic as well as energy caused by passionate war for glory and power. On the territory of Western Balkans has been established country well known worldwide as Yugoslavia². Made of six countries (FYROM, Montenegro, Bosnia and Herzegovina, Croatia, Slovenia and Serbia) it had a huge political role in the world, especially in Europe.

After the few decades of peace in the world, that was enough for several countries to restore their power, the world faced new war - named as World War II that caused, even more, conflicts, much more merciless and more brutal. As one of the important parts of Europe, Western Balkans was not out of this unbelievable ongoing, including both world wars that has dramatically changed the picture of Eastern Europe in every single point.

This world conflicts showed us that Russia has a huge role in Western Balkans, as an allied of several countries, mainly Serbia and Yugoslavia later in the second war. Based on believing that religion is the primary reason for this, many historians directly make the connection between Serbia and Russia as an eternally unbreakable partnership. On the other hand, many people worldwide believe that energy importance through the years is the main cause for this close relation between this country and all other countries in Western Balkans.

¹ Montenegro joined the sanctions of the EU against Russia in the 2014. Although period of Montenegro's sanctions has expired, country extend it until January 2018.

² Yugoslavia was established in 1918 as the Kingdom of Serbs, Croats and Slovenes, but official name was changed into Yugoslavia in 1929.

2.3. Period of Cold War

After the huge crash of world peace, economy, global power role, energy situation and all following impacts which followed World War II, the whole world was careful in way of international politics. Cold War brought in tension, separation on few political sides and caused establishment of several alliances, official or informal. Yugoslavia as the biggest and strongest Balkan country has experienced huge development, economic stability, military security, etc. Yugoslavia was marked as a country that is extremely important on the international level, but also very significant for the region of Balkans.

During the Cold War³, Yugoslavia was an independent country, as Albania was, and both countries were non-aligned, although NATO already existed and some of the neighbor countries joined Alliance such as Greece. Economic growth continued until the end of the '80s and at the start of '90s territory of Yugoslavia has faced with many instabilities, wars, military actions, and hyperinflation that reflected drastically on whole Balkan.

2.4. After the Yugoslavian wars

After several world interventions of global powers in the Korean war, Vietnam war and war in Afghanistan⁴, Eastern Europe witnessed the breakup of Yugoslavia⁵ and huge changes in Western Balkans, based on military conflicts, territory separation, and the establishment of newly independent countries. As it is well known, Russian influence had one of the key roles in these events also, mainly during the bombing of Serbia in 1999⁶. The specific issue that dates from that period is the independence of Kosovo, where Russia has been intermediate between Serbia and West. Almost two decades after this Balkan transition, Russia is still involved in all parts of the changes in Western Balkans on a huge level. Drastically changes in the energy sector, mostly based on the supply of natural gas gives Russia enough space for the development of state-owned companies abroad and to dictate terms to import-dependent countries, as the countries of Western Balkans are.

The current situation could be described as the moment where the one significant part of Russian foreign strategy is focused on Western Balkans. Geopolitical issues are mostly present, while on the other hand that is might not be the only interest of Russia in Balkan. A few different projects in energy infrastructure has been planned, but at the end, they were delayed. On that way, Russia had an idea to strengthen its energy position in Western Balkans, for instance through the construction of the South Stream that will significantly improve Russia export to not only to Western Balkans but to Southeast Europe and some parts of Central Europe.

³ Cold war started in 1947 and it takes a decades after it finished in 1991.

⁴ War between North Korea and South Korea that took place in 1950-1953, Vietnam war in 1955-1975, as well as war in Afghanistan that started in 1978.

⁵ Breakup of Yugoslavia had happened during the early 90s. In 1992 Slovenia, Croatia and Bosnia and Herzegovina formed independent countries, as well as FYROM in 1994.

⁶ Armed conflict in Kosovo, known as Kosovo war in 1999 caused the decision of NATO to intervene. The NATO bombing of Federal Republic of Yugoslavia lasted from from March to June 1999.

3. Russian foreign policy strategy

International system requests from each country to improve and organize their own foreign policy strategies on the highest level, based on country's goals and objectives in order to reach a significant place in the world arena. For that reason, many of the countries have drastically changed their strategies, made huge reorientation in their policy and on that way started building own power and respect worldwide. The strategies are not strict, they do not have to include anything while they do not have to exclude something other, it is countries decision. This decision made by the politicians, experts for a different field such as finance, energy, economics etc. can reflect positively or either give numerous harmful effects. Importance of the policy strategy is of high importance for every country regardless on the part of the world because it could be the main factor for the future developments on the domestic or regional level.

Russian foreign policy has been always one of the most dominant on the global level. For that reason, Russia made huge changes since Vladimir Putin is the leader of the country. After the clash of Soviet Union, Russia as well as all the other members of the ex-country experienced period filled with numerous problems and instabilities. The economic, political and social crisis that Russia has been faced with had cause high level of the criminal activities, corruption, political instability and dissatisfaction of the majority of the population. These are some of the main internal problems that have been recorded after 1991, until 1999 when the Putin has been named as Prime Minister of the Russian Federation.

After the country has resolved plenty of internal affairs, stabilize own situation in the country and was successful in this big challenge, it was time to again develop a foreign policy that will much more secure national interests. This has resulted in the economic growth, especially if we focus on the gross domestic product (GDP) that has grown drastically, few times in comparison to the GDP from 1999. A new ideology, different aims, and goals, numerous world partnerships that have been neglected or even new that has been established - Russia has started to position itself in the world arena as returning power.

Today Russian international position can be presented as the country that experienced huge transformations and made energy superpower of itself. The current policy of Russia is established by the using domestic energy resources, primarily natural gas, but oil too. Exporter state as Russia it is, has to develop their own production of energy, improve access in the international market and offer other countries cooperation, that Russia really did and still is doing. The most important impact in Russian foreign policy strategy has natural gas which revenues are wealth for Russia. In the era of the necessary energy supply with the resources that are less present equally in each part of the world, Europe is almost dependent on Russia, as well as Western Balkans. This provides more space for Russian impact in energy, that Russian state-owned companies recognized, and they are constantly working on it. Most significant state-owned companies of Russia are Gazprom⁷, the biggest player in Russian foreign policy, but also several more of them, such as Rosneft⁸, Lukoil⁹, and Surgutneftegas¹⁰. All mentioned companies are producers of the natural gas, as well as oil, for the domestic market, but mostly in exporting purposes.

⁷ Gazprom is Russia's biggest energy company that is controlled by the Russian government. It controls the largest natural gas reserves in the world, with approximately 70% of Russia's total gas output.

⁸ Rosneft is the biggest oil producer in Russia, majority owned by Russian government.

⁹ Lukoil is one of the Russian energy giants established in 1991, that currently operating in more than 40 countries all around the world.

¹⁰ Surgutneftegas is company that does not operates on international market, but it has significantly high rank among the Russian energy companies, as well as on the list of worlds' largest 250 companies in any industry.

4. Western Balkans between Russia and European Union

Decades ago show us that Western Balkans were constantly "zone" between West and East. On the one side is positioned the European Union, while from other Russia is impacting region of Balkan. Kind of rivalry that is noticed for years on the territory of Balkans, today might be presented as one of the most critical issues for both these powers, Russia and the European Union¹¹ as well.



Illustration 1 Map of EU members and non-members in Western Balkans
(https://europa.eu/european-union/about-eu/countries_en#map)

In the period of European Union establishment, Western Balkans countries were not included in the union of European countries, but it was assumed that will undoubtedly be important participants in the future development of EU. By the years and with the separation of Yugoslavia countries, European Union became much more interesting for some countries. On the other hand, some of them have not strict goals to join union soon. First of all, Western Balkans countries that have joined the European Union was Slovenia that became EU member country since 2004, as well as NATO¹² member since the same year where was the greatest expansion of Alliance. In the next extension of the NATO in 2009, Albania and Croatia joined Alliance, but not EU. In the case of Albania, the country is still developing internal situation and it has negotiations status, as well as Serbia, Montenegro, Bosnia and Herzegovina and FYROM. When it comes to Croatia, it was the last country that has been joined the European Union for now in 2013. After that extension EU has 28 members including the United Kingdom who decided for a possible withdrawal from Union on the referendum. Popular term Brexit¹³ will show us what will be the final decision and what

¹¹ For more information about EU visit: <http://europa.eu/>

¹² For more information on North Atlantic Treaty Organization visit: <https://www.nato.int/>

¹³ Brexit took place on 23 June 2016 when the British people voted in a referendum to leave European Union. Withdrawal of United Kingdom is delayed until March 2019.

consequences will have. The last extension of the NATO Alliance was in a current year when Montenegro joins Alliance.



Illustration 2 Map of NATO member states in WB

<https://www.nato.int/nato-on-the-map/#lat=37.9373006&lon=23.643140399999993&zoom=0>

Impact of Russia in this division could be seen as another option for security in all fields, but mostly in economy and energy. Russia as the main exporter of natural gas and one of the most important suppliers of oil products has a huge influence on the whole situation. Dependence on Russian natural gas and oil is not just in the case of Western Balkans, but also in the whole Europe, including the European Union. On the other hand, market regulation is one of the most common issues in Western Balkans. As contracting parties of Energy Community¹⁴ (Croatian status is a participant of the community), all countries in the region are obligated to establish an open market in each country, build more quality relations with neighbors, implement unbundling in the market, etc. This obligation is necessary for every participant, observer or contracting party in order to harmonize laws, regulations and market functions and create an integrated pan-European energy market that is one of the primary objectives of Energy Community. Until now all Western Balkans countries are working on it, more or less, while some of them have much better results than the others. After the Energy Community was established in 2005 in Athens, Croatia was the last country that joined the organization in 2013, following its accession to the European Union. Serbia, Bosnia and Herzegovina, Albania and FYROM are contracting parties since 2006, while Montenegro joined under the same conditions and status in 2007.

¹⁴ Energy Community has primary aim to create an integrated pan-European energy market. For more information visit: <https://www.energy-community.org/>



Illustration 3 Map of Energy Community members
(<https://www.energy-community.org/aboutus/whoweare.html>)

5. Energy situation in Western Balkans

5.1. Oil and gas sector

When it comes to oil and gas industry in Western Balkan countries, most of the countries are dominantly importers of both energy source, while some of them are totally dependent on export countries. The dominant oil and gas supplier in the Balkans is Russia undoubtedly, where almost all countries are heavily dependent on their exports to meet demand. Except for Montenegro who is absolutely dependent on oil import from Greece, all other countries have to be well-connected with Russia in energy way.

The main problems that are recorded in each country separately are current situation of the transportation systems. Actually, most of the pipelines have been constructed in the last century, while the plenty of it has been reconstructed with low investments. Secondly, a current number of pipelines and gas transportation systems isn't sufficient anymore, not just for one country, but for the whole region that requires energy interconnection and cooperation among countries. For instance, Bosnia and Herzegovina has just one transportation system on the territory while the demand is significantly rising from year to year.

5.1.1. Refineries

Another issue that has been recorded during the years in Western Balkans is a number of oil and gas capacities, based on the whole territory and compared with demand. The current situation could be presented in next diagram:

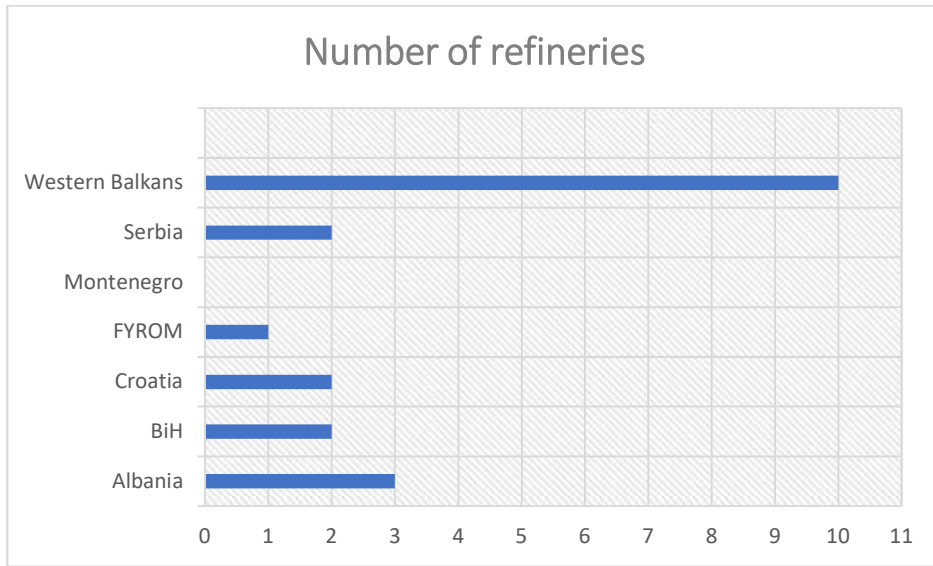


Diagram 1 Refineries statistics in Western Balkans¹⁵

The capacity of the 10 refineries that operate in Western Balkans can be analyzed in different ways for the reason that Montenegro doesn't have any of them, while FYROM has just one refinery. The biggest capacities are recorded in Croatia and Serbia, although Albania has the most refineries, while Bosnia and Herzegovina has the same number as Serbia and Croatia - two of them. The next diagram shows that relation:

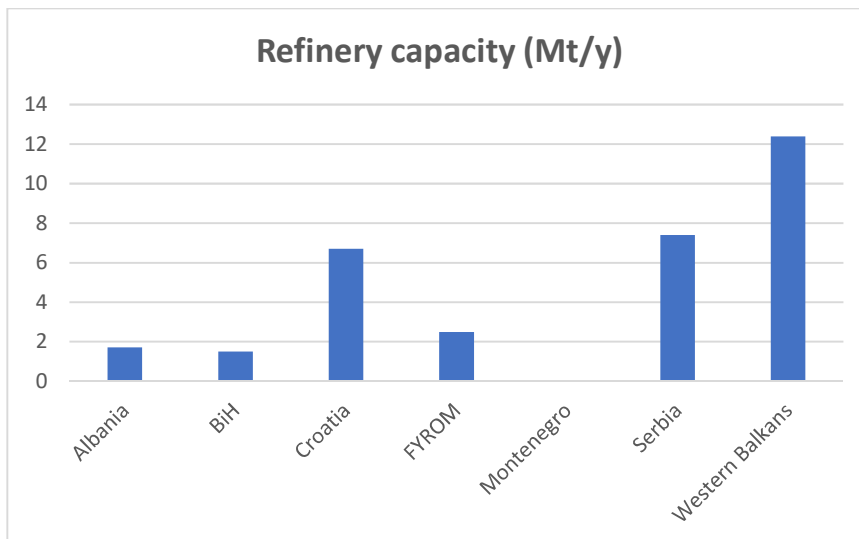


Diagram 2 Refinery capacity per country¹⁶

¹⁵ Data sources: IENE study "South East Europe Energy Outlook 2016/2017", Athens, 2017

¹⁶ Data sources: IENE study "South East Europe Energy Outlook 2016/2017", Athens, 2017

It is necessary to analyze ownership of each refinery that could be of high significance. First of all, both Serbian refineries, one located in Novi Sad and the other located in Pancevo are owned by NIS. Secondly, both Croatian refineries are owned by INA, refinery in Rijeka, as well as one in Sisak. The similar situation could be found in Albania where two out of three existing refineries have ARMO¹⁷ as owner, the largest one in Balsh and Fier refinery, while there is the third, Bitex refinery in Elbasan.

The only oil refinery in FYROM is ownership of OKTA. The refinery in Bosanski Brod, the biggest BiH refinery is owned by Zarubezhneft, while the another in Modrica by the NeftegalnKor¹⁸.

5.1.2. Oil demand and supply

European future oil dependence on exporters could be an economical and political issue for the almost whole continent. By the fact that European oil reserves, including all European countries (EU and non-EU members), are 11.561 million barrels and just Russian reserves count 80.000 million barrels of oil, total European reserves are 14% in comparison to Russian total oil reserves. When it comes to Western Balkans, it counts altogether 319 million barrels that are 2,6% of total European reserves. However, Western Balkans is well-known as low productivity region in Europe, but significant part of the continent in consuming crude oil and oil products. Oil reserves in million barrels for each country are presented in next chart:

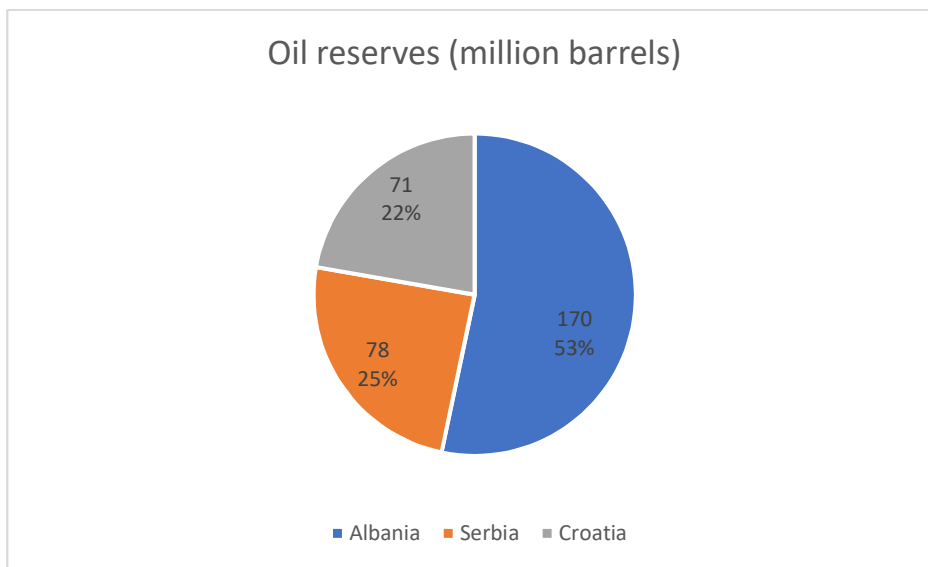


Diagram 3 Oil reserves in each country¹⁹

¹⁷ ARMO is owned by Taçi Oil, an Albanian petroleum company, since 2009.

¹⁸ State-owned company from Russia Zarubezhneft is also owner of NeftegalnKor company. Modrica refinery operates as producer of lubricants.

¹⁹ Data sources: World Oil and Gas Review 2016, ENI

According to the pie chart, Albania has the biggest reserves in Western Balkans, while they are already found in Serbia and Croatia. Only three mentioned countries are producing oil in this region, because Montenegro, FYROM, and BiH don't have oil reserves. For that reason, in the next statistics are calculated quantities for countries that have domestic production of oil:

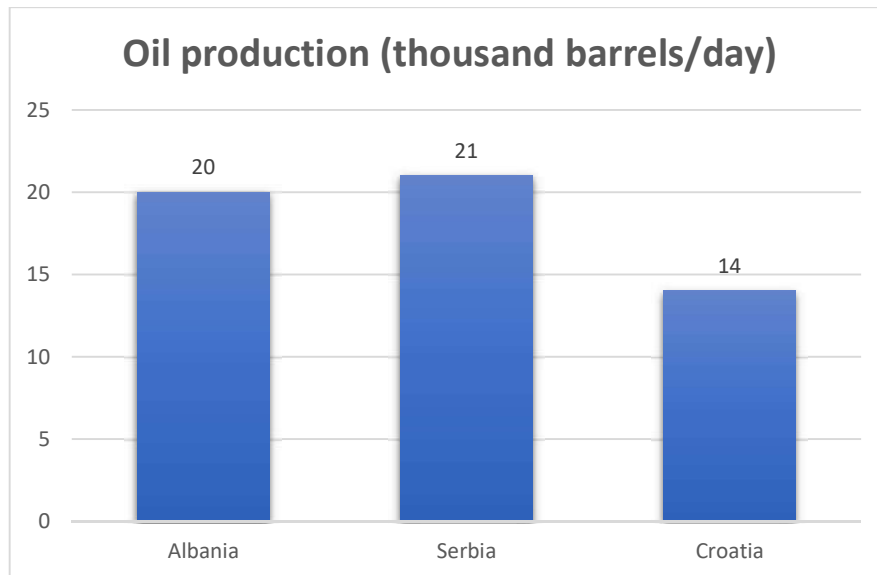


Diagram 4 Oil production in each country²⁰

In comparison to the previous years, it is recorded that production of oil is falling in all three countries. In Croatia is recorded decrease of 2,1%, while Serbia and Albania have 0.4% and 0.2% decrease in production. There is presented extremely significant ratio than could make a correlation between current reserves and production. A number of years that are predicted for production in each country based on relation present reserves/production is given by reserves/production ratio that is 10 years for Serbia, 14 years for Croatia and 23 years in case of Albania. On the other hand, average ratio for Europe is 9 years. For instance, the ratio for Russian production is 20 years, while Venezuela counts 316 years.

²⁰ Data sources: World Oil and Gas Review 2016, ENI

In order to understand Western Balkans' dependence on oil import in each country, the diagram shows average consumption:

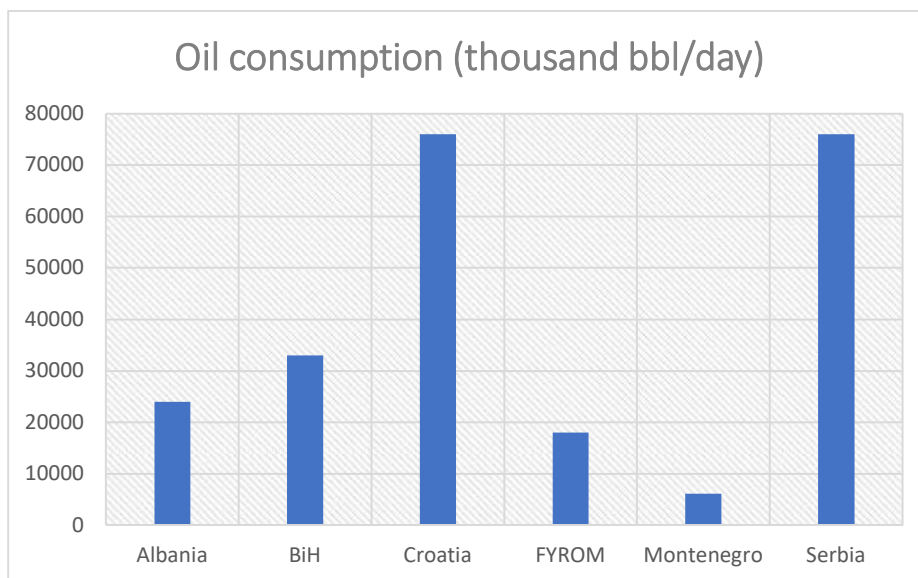


Diagram 5 Average consumption of oil in Western Balkans per each country²¹

Total consumption of oil in Western Balkans rates 1.56% of total European consumption that is 14923 thousand barrels per day. There is one more ratio that finally shows the percentage of domestic production meeting country's demand.

Finally, statistics based on production/consumption ratio shows that domestic production of oil meets 73% of demand in Albania, 25% in Serbia and 20% for Croatia. All other countries that are excluded from the previous statistics mean that is 100% dependent on oil import in order to meet demand.

Serbia and Croatia are not net importers of oil products because their domestic products cover some percentage of total country's demand. Export of oil to Serbia is secured from Russia, while Croatia imports its needs mainly from Azerbaijan (39,3%) and Russia (29,3%), but also from Iraq (17%). Oil that is produced in Albania, because of its poor quality is processed to bitumen and then exported to foreign markets, where is being used for roads construction. In the last couple of years, Albania has stopped the import of petroleum products or crude oil, as it was situation before. On the other hand, Montenegro, Bosnia and Herzegovina and FYROM are 100% dependent on import of oil products or crude oil. For this countries, precisely for Montenegro and FYROM, the most important exporter is Greece. In BiH case, oil is imported from Croatia, Serbia, Montenegro, and Hungary.

²¹ Data sources: IENE study "South East Europe Energy Outlook 2016/2017", Athens, 2017

5.1.3. Natural gas demand and supply

Natural gas production in the Western Balkans similarly follows the already presented situation in the oil sector. Precisely, the only natural gas producers in Western Balkans are again Albania, Croatia, and Serbia. On the other hand, Albania does not have natural gas consumption, although it is recorded production on the territory that is used for export. Statistics of their production are given in chart, as well as average consumption in every country where a natural gas market exists.

Total production of natural gas in Western Balkans counts 2,05 billion cubic meters. Recorded average natural gas production in Albania is measured in low quantities of 0,03 billion cubic meters and it presents only 2% of total production, while 24% is produced on the territory of Serbia. In this comparison, Croatia took first place with 1,52 billion cubic meters (74% of total Western Balkans production).

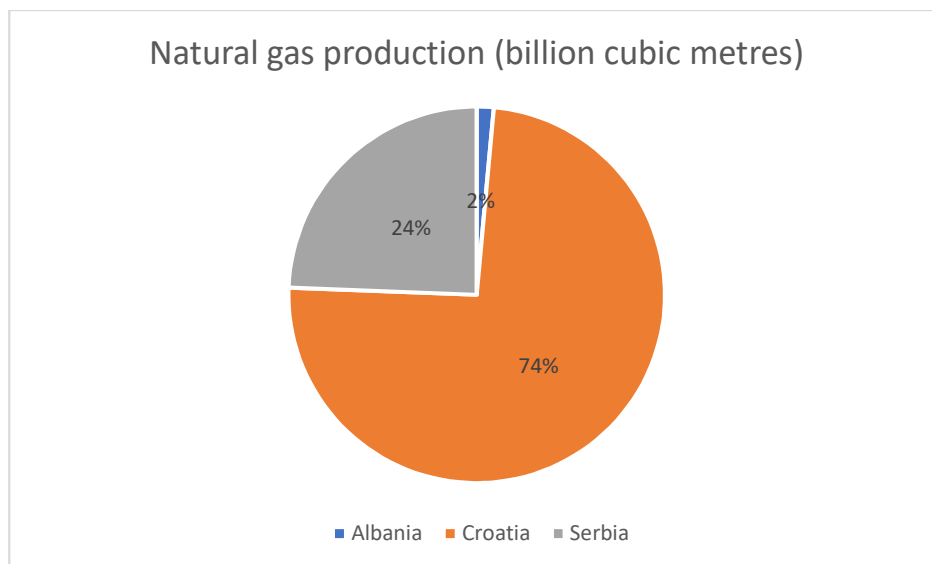
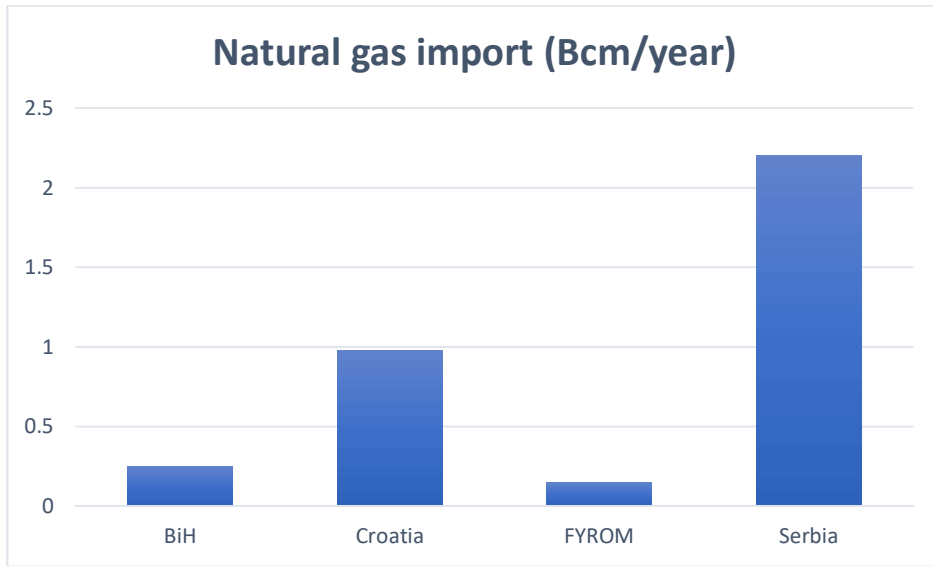


Diagram 6 Natural production in Western Balkans per country²²

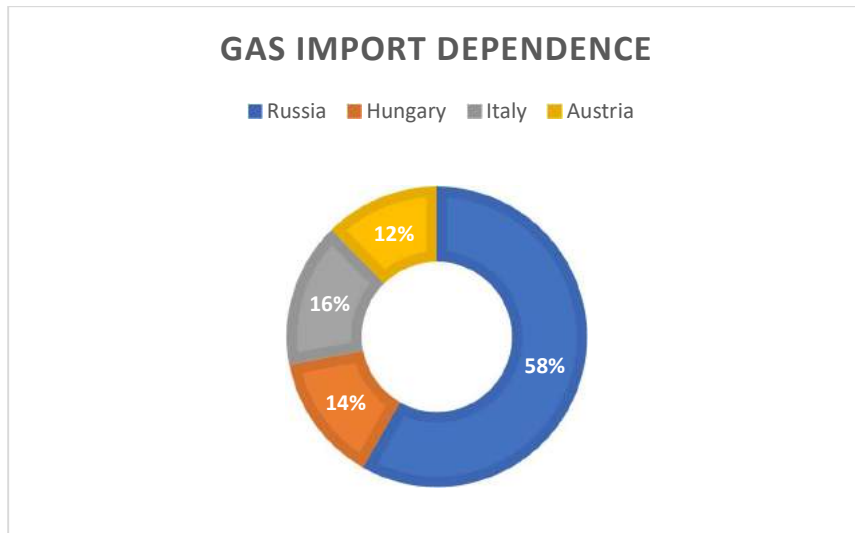
Import of the gas in Western Balkans is limited for a few reasons, although it is necessary for most of the countries. Firstly, some of the analyzed countries have efforts with transportation systems and need to plan high investments in that sector in order to connect their energy market to gas exporting countries. On the other hand, a few of them needs first to establish a natural gas market. A fitting example is Montenegro that does not have any gas pipeline on the territory, as well as the gas market. Secondly, Albania based their energy policy on usage of another energy sources such as hydro energy potentials. As well as Albania, Montenegro does not have significant gas demand compared to other energy needs, mostly coal, oil, and hydropower. Yearly gas import for each country is shown in the chart:

²² Data source: World Oil and Gas Review 2016, ENI



*Diagram 7 Western Balkans gas import per country*²³

It is noticed that the gas imports in Montenegro and Albania don't affect general statistics of regional gas imports. According to chart, Serbia is marked as the most important Western Balkans importer, while Croatia is second in the same statistics. Another important importer in Western Balkans is Slovenia. Gas demand in BiH energy policy is low, so it is understandable why they import significantly less than others. Finally, it could be easily presented which countries are necessary for Western Balkan's supply of gas:



*Diagram 8 Gas import dependence on different exporters*²⁴

²³ Data source: IENE study "South East Europe Energy Outlook 2016/2017", Athens, 2017

²⁴ Data source: World Oil and Gas Review 2016, ENI

The statistics show that 58% of total amount of natural gas import in Western Balkans is coming from Russia, where Serbia, FYROM and Bosnia and Herzegovina are fully dependent on gas import from the Russian market. Hungary has an important role in Croatian energy demand as a second highest exporter for that country, after Italy. To be more clear in defining necessity of natural gas, there are high heating dependencies on the natural gas in FYROM, Croatia, and Serbia, while heating in BiH is mostly based on coal, but natural gas demand exists.

5.2. Electricity generation

Many of the electricity markets in Western Balkans are strongly dependent on electric power production using the energy of coal, primarily lignite. In addition, most of the countries in the region use hydropower for electricity generation, but still insignificant less percentage than the total lignite usage, excluding Albania that generates almost 97% of electricity using renewables.

Albania is one of the countries in Western Balkans that has coal reserves, but until today they are not produced. The same situation of production is recorded in Croatia, but the reason is simple, Croatia does not have coal reserves. Its electricity generation is based mainly on hydro energy, significantly less on coal and natural gas, and also wind energy. Almost 65% of imported coal is coming from Russia. One of the biggest producers in the mining sector in Western Balkans is Serbia, Bosnia and Herzegovina, Montenegro and FYROM. Actually, only these four countries have coal reserves in the region of Western Balkan, while Serbia has Europe's largest proven deposits of lignite. Total Serbian deposits of coal are 21 billion tons of coal, but lignite is present by the 98%. All mines, as well as the production, processing, and transport of coal, electricity generation and electricity distribution is under the control of state-owned electric utility power company Elektroprivreda Srbije²⁵. Electricity generation in Serbia is separated mainly on coal and hydropower, where the coal has a more important role.

Specific for BiH is that only one-third of coal output comes from opencast mines, while two-thirds from underground mines. Most of the significant coal mines are ownership of state-owned companies. The main source of energy for electricity generation is coal, but also hydropower is of high significance. Montenegro's power generation is based on a combination of hydropower and usage of coal, mainly secured by three power plants. The mine in Pljevlja and its thermal power plant, and two hydropower plants provide about 86% of power generation. Elektroprivreda Crne Gore²⁶ own all three power plants. Finally, FYROM's production is of high importance for country's energy security because the main percentage of electricity generation is secured by the coal that is exploited in the several mines across the country. Another significant power generation comes from hydropower. Similar to the other countries, FYROM's coal production is owned by the state.

²⁵ For more information visit: <http://eps.rs/>

²⁶ For more information visit: <http://www.epcg.com/>

5.3. Renewables

Future of the world's energy is one of the most important issues these days worldwide. As it is well known, mining activities cause huge environmental problems. Actually, speculations on this issue constantly take part in each energy meeting all across the world. Development of the energy efficiency, demand growth on a global level, less non-renewable resources, and necessary environment safe are just some of the main reasons that cause changes in the energy sector and high investments in renewable energy sources.

The situation in Western Balkans when it comes to renewables could be explained as highly perspective, but still neglected. Priority in the renewable resources in Western Balkans has hydropower that is already in use in all countries, but until today it was not developed properly to the modern technologies and possibilities that countries have. The most developed country in this energy area is Albania that generates 97 % of electricity using hydropower plants located on the several rivers across the country. All other countries have at least one hydropower, but most of them are still focused on energy that could be produced by the coal.

Another significant fact is that solar power is not developed properly in any of Western Balkans country, except small plants in Croatia. A similar situation is recorded in case of biomass that has experienced small upgrading, as a perspective type of energy in this region, based on huge spaces covered by the forests. For now, in whole Western Balkans biomass is used only for personal needs, while the global usage is not yet developed, and it seems that it will take a lot of time until it becomes an important source of energy. Only Croatia until now recognized possibility to develop wind energy, while others did not. Finally, instead of Albania where the renewables are of high significance, and Croatia that tries to improve renewable energy sector, the interest of all other states are not yet significantly focused on the development of renewables.

6. Infrastructure and energy markets in Western Balkans

6.1. Serbia

Since 2008 Serbian oil industry known as NIS²⁷ company has been owned by the Russian state-owned company Gazprom. From that moment whole exploitation on the territory of Vojvodina is under control of Russian owner. At the same time, Gazprom has bought also both refineries, Pančevo and Novi Sad, as well as the only gas depot that Serbia has located in Banatski Dvor²⁸. At the same time, during the acquisition of NIS has also been signed an agreement that confirms future construction of the South Stream. By the official pipeline project, one part of the South Stream has to pass Serbia in length of 442km out of the total onshore pipeline length. Until today pipeline does not exist, although construction started in 2012²⁹. In the period of Crimean crisis Russia has been forced to stop the project by the European Union and Bulgaria as its member state, and finally, in 2014, Russia abandoned South Stream project. Until today, Serbia has only one transportation pipeline that comes through Hungary. That way is, for now, the only one that natural gas comes from to country.



Illustration 4 South Stream pipeline plan through Serbia
(<http://www.gazprom.com/press/news/2013/november/article178376/>)

NIS is operating on the several exploration projects, in order to reach new possible resources, for the simple reason that existing are in a late phase of exploitation. In the Pannonian Basin company, NIS also

²⁷ For more information visit: <https://www.nis.eu/>

²⁸ Active capacity of underground natural gas storage in Banatski Dvor, which is located in northern part of Serbia, is 450 million cubic meters.

²⁹ Construction of South Stream has been cancelled in 2014, although the onshore construction successfully started in 2012.

operates on the natural gas exploitation that covers about 16% of Serbia's demand. Srbijagas is a state-owned company dealing with natural gas transmission, distribution, and storage in Serbia. Until today Srbijagas operates in the supply of natural gas and transmission systems, and at the same time, it owns 49% of Banatski Dvor underground natural gas storage. Another owner is Gazprom with 51% of ownership. In the natural gas sector of Serbia, only these two players are present, while Srbijagas is dominant in retail with 87%.

The demand for oil products and crude oil is satisfied through import from Russia, but domestic production covers some percentage of it. Import is secured by the Gazprom, while instead of NIS and Gazprom on the Serbian oil market, there are present another companies such as Lukoil³⁰ and EKO³¹. Predictions for the future demand changes are that oil demand is increasing, while the domestic production is falling. For that reason, it is necessary to prepare a strong plan for the future in order to meet demand successfully.

6.2. Montenegro

Montenegro's energy situation is significantly different in comparison to Serbia, especially in liquid fuel sector. Firstly, on the whole territory of Montenegro, there is no exploitation of the oil or natural gas. Furthermore, the gas market does not exist yet at all. There has never been operated any well, except few of the exploration wells that did not have enough positive results about possible resources in the Adriatic Sea³². On the other hand, many of the experts claim that Montenegro's part of the Adriatic Sea coast has reserves, as well as Italian, the Croatian and Albanian part where exploitation already exists for years. For now, it is known that this research requests huge investments and many well-organized projects. Several companies have shown their interests in these potential projects.



Illustration 5 IAP pipeline

³⁰ For more information visit: <http://www.lukoil.rs/>

³¹ For more information about EKO company visit: <http://www.ekoserbia.com/>

³² Hydrocarbons exploration took place in period 1976-1981. In that period was done drilling of three wells.

[\(http://www.lngworldnews.com/greek-parliament-ratifies-iga-on-trans-adriatic-pipeline/\)](http://www.lngworldnews.com/greek-parliament-ratifies-iga-on-trans-adriatic-pipeline/)

Another problematic issue in Montenegro's energy sector is that Montenegro does not have any refinery, so it is necessary to import already refined oil. Moreover, in Montenegro does not exist any pipeline and this requests road transport of oil. In Montenegro's retail in the oil sector, the main company is EKO that has bought state-owned company Jugopetrol³³ in 2002, as a member of Hellenic Petroleum.

Finally, use of natural gas in Montenegro is not yet realized, although this type of the energy is one of the most significant today worldwide, especially for Europe. Until today, natural gas in Montenegro is just used for the private purpose. There are notified numerous projects and future plans that will possibly be successful in order to implement natural gas on the Montenegro market. On the other hand, still is not described which country could be the main exporter in that case, as well as what way will be used for transportation. For that reason, Montenegro government expect that Ionian Adriatic Pipeline (IAP) will be a realistic future project that will significantly improve the security of supply. As the country that has to have participation in part of the above-mentioned pipeline, Montenegro will be connected on a pipeline that has to pass through Bosnia and Herzegovina coming from starting point in Fier in Albania and finish at Split in Croatia. By this pipeline, all mentioned countries should make interconnection with Trans Adriatic Pipeline (TAP) and existing infrastructure in Croatia that in the future may be connected with potential LNG terminal on the island of Krk.

6.3. Croatia

Croatia as a member of European Union since 2013 had to start rapidly developing in the energy sector. Market regulation, transmission systems, infrastructure, energy security and etc. are just some of the necessary implementations that already particularly started in Croatia. In other words, Croatia needs to move forward much faster in comparison to the other Western Balkans countries, but the present situation is not that optimistic as it seemed to be. Until today, Croatia has developed several of the above-mentioned programs, but from the perspective of European Union, these changes could be faster and more efficient.

There are three Projects of Common Interests that are of high importance for Croatia in the natural gas sector, as well as for the European Union. As a member of the High-Level Group on CESEC (Central East South Europe Connectivity)³⁴, first and the most important project is the construction of Krk LNG terminal, while the significance of potential pipeline Zlobin - Bosiljevo - Sisak - Kozarac - Slobodnica³⁵ follows it. By this pipeline, Croatia will be able to continue interconnection with Hungary connecting existing pipeline Donji - Miholjac - Dravaszerdahely with the planned pipeline that will be directly connected to LNG terminal on the island of Krk. Instead of these two Projects of Common Interests that will enable the flow of gas from the LNG terminal, develop missing infrastructure and improve the security of gas supplies, a third project that has been planned is interconnection Croatia - Slovenia - Austria via Rogatec.

³³ For more information visit: <http://www.jugopetrol.co.me/>

³⁴ For more information visit: <https://ec.europa.eu/energy/en/topics/infrastructure/central-and-south-eastern-europe-gas-connectivity>

³⁵ The total estimated length of the Zlobin - Bosiljevo - Sisak - Kozarac - Slobodnica pipeline is 308km.



Illustration 6 Potential routes of natural gas flow from LNG terminal on island of Krk
(http://lng.hr/upload_data/editor/files/OS_PROCESS_PAPER.pdf)

All mentioned projects will enable Croatia to become a well-interconnected member of European Union and it could drastically change energy dependence on Russian export. In other words, the current situation in case of Croatia that is a net importer of oil and gas might be different. Until 2027 the Russian natural gas will be supplied to Croatia under the long-term contract of Gazprom and the Croatian Prvo plinarsko društvo d.o.o. (PPD). PPD is owned by the Enerгия Naturalis Group (ENNA) that his role in managing approximately twenty companies within the group.

The most important Croatian oil and gas company INA³⁶, that is currently mainly owned by Hungarian company MOL and Croatian government, is also one of the most aromatic issues. Precisely, although several companies were interested in buying the company from MOL, that issue is still not resolved. Currently the most interested in acquiring a stake in company INA is Russian energy company Rosneft. This giant is majority owned by Government of Russia and it seems that Russian foreign policy could impact one more Western Balkan country.

6.4. Bosnia and Herzegovina

Bosnia and Herzegovina is one of the Western Balkans countries that is marked as a net importer of the oil products and natural gas as well. The main companies that operate in the natural gas sector are Energoinvest³⁷, BH Gas, and several smaller companies. Energoinvest could be distinguished as the most important company in the country because it is directly responsible for procurement of natural gas from

³⁶ For more information about INA company visit: <https://www.ina.hr/>

³⁷ For more information visit official website: <http://www.energoinvest.ba/>

Russia. In the case of supplying natural gas to Bosnia and Herzegovina, one transport route is used, the same one that goes through Serbia and supplies neighbor country.

After the civil war in Bosnia and Herzegovina in period 1992.-1995., there was a lot of damage to transport systems, refineries, companies and all energy points in general. For that reason, the country had to invest and repair all detriments in order to provide important energy security. Since that period, more important investments are not recorded on the territory of Bosnia and Herzegovina, although they are necessary. In the last years, there has been presented a few potential future projects that could completely change global picture of Bosnia and Herzegovina, but neighborhood too. One of them is the route of natural gas supply from Croatia and processing in refinery Bosanski Brod. If that project exists, Bosnia and Herzegovina will be not more 100% dependent on Russian export of natural gas.

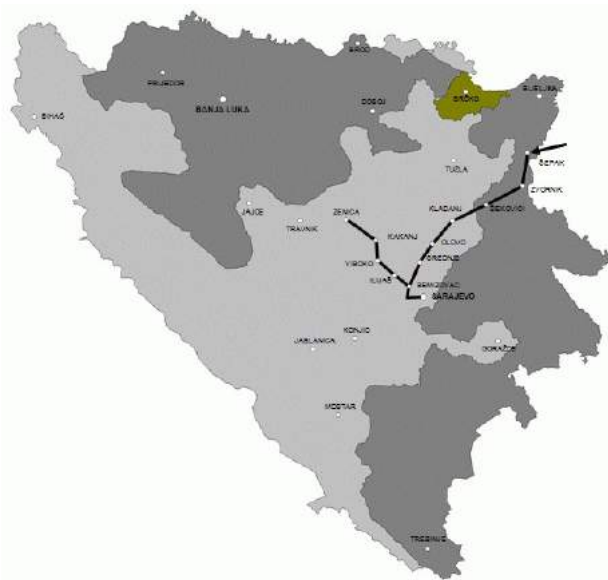


Illustration 7 Existing gas pipeline in BiH
(<http://www.gaspromet.com/djelatnosti/Transportni-sistem-u-BiH.html>)

Oil sector provides similar information. In the Bosnia and Herzegovina were found oil reserves that are not enough explored, but not natural gas resources, and for that reason, the country has to import all necessary oil from other countries. Without domestic production, with low quality and limitations of transport systems, this is a constantly big challenge for Bosnia and Herzegovina. Oil supply is secured from few countries, Croatia as the main exporter, then Serbia, Hungary, and Slovenia.

6.5. FYROM

The Formal Yugoslavian Republic of Macedonia has an existing gas market and usage of natural gas, but in comparison to the other Western Balkans countries that actively use natural gas, FYROM is a smaller player in the region. As it is well known, exploitation in FYROM is not developed and security of supply is necessary for this net importer country. Import of natural gas in case of FYROM is coming from one entry

point at Bulgarian border, arranged by the long-term contract between Makpetrol³⁸ and Gazprom. The pipeline that supplies FYROM with natural gas is finishing close to the capital city, Skopje. On the natural gas market are also present companies Promgas and GAMA that have a goal to become licensed TSO company in FYROM. Another potential TSO company is MER that plan construction of the pipeline Klecovce - Negotino.

On the other hand, the situation in the oil sector is similar to the natural gas sector. In other words, FYROM is a net importer of oil, as well as in case of natural gas, and similarly to natural gas, there is no exploitation or confirmed petroleum reserves. In FYROM there is a refinery in Skopje, owned by company OKTA³⁹ that operates on FYROM market. The refinery is directly connected with Greek port of Thessaloniki with the pipeline. It is the main importer of petroleum products and crude oil.

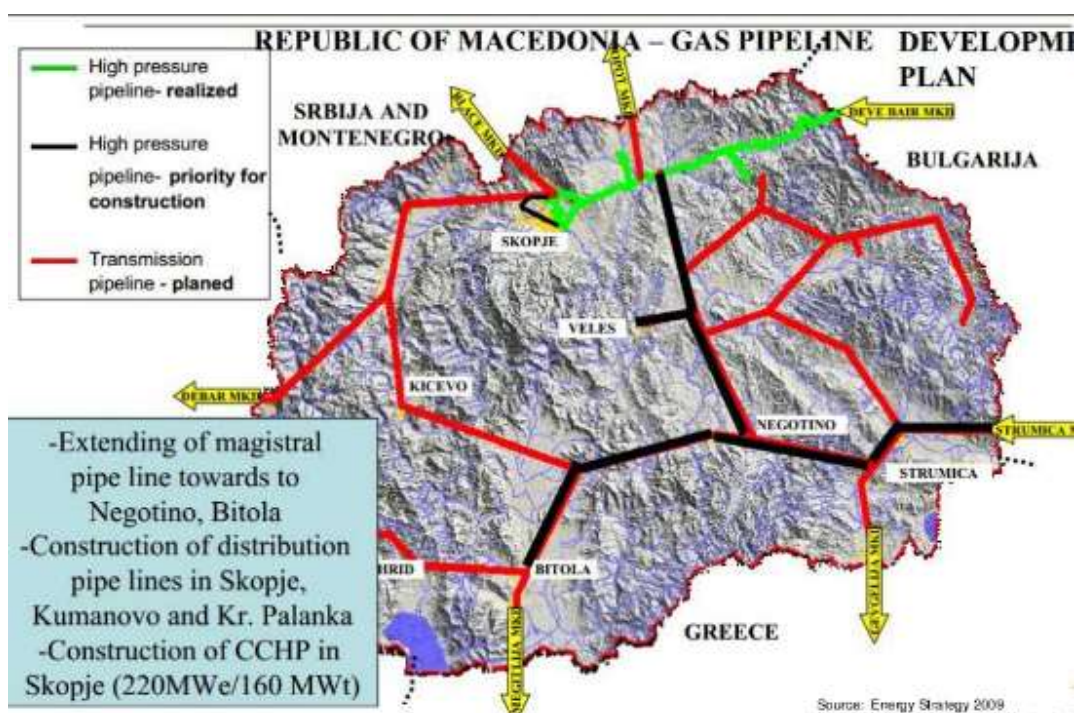


Illustration 8 Gas pipeline in FYROM

(<https://www.slideshare.net/MaccotMartin/petrushevski-south-stream-pipeline-in-macedonia>)

Until today, there are not planned infrastructure development projects that should pass FYROM and improve its position on an international level, instead of several projects on an internal level that means an extension of existing pipeline and improvement of connection within the country.

³⁸ Makpetrol is the largest natural gas importer and supplier on the natural gas market in FYROM. For more information visit: <https://www.makpetrol.com.mk/>

³⁹ Company OKTA is member of Hellenic Petroleum. More information about group on: <https://www.helpe.gr/>

6.6. Albania

Albania is the country that presents the largest exporter of crude oil among the members of Energy Community. It is necessary to focus on the fact that crude oil produced in Albania is low quality, but it is successfully used for bitumen production. When it comes to the oil production in the territory of Albania, offshore or onshore, there are present several companies, worldwide giants, such as Shell that operates on the few petroleum fields.

The pipeline in Albania will be approximately 215 km long, starting at Bilisht Qendër in the Korça region, on the border with Greece. By the construction of this pipeline that is marked as Project of Energy Community Interest⁴⁰, Albania will increase geostrategic and regional position, as well as improve integration of Albania with Europe. The most important benefit of constructing TAP is that Albania will finally experience established natural gas market for the first time. Until today, whole construction of the TAP project is 58% completed.



Illustration 9 Route of TAP, TANAP and SCP pipeline
(<https://www.tap-aq.com/the-pipeline/route-map>)

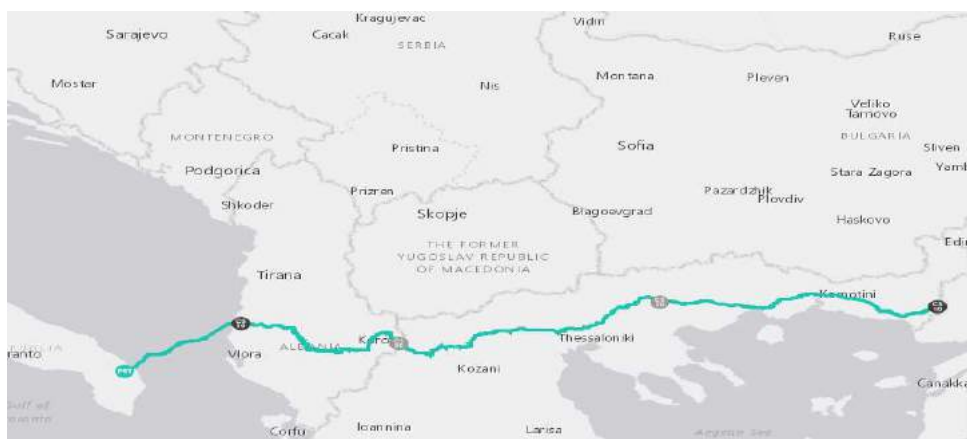


Illustration 10 TAP pipeline
(<https://www.tap-aq.com/land-access/who-is-affected/in-albania>)

⁴⁰ For more information on infrastructure projects visit:
<https://ec.europa.eu/energy/en/topics/infrastructure/projects-common-interest>

Another significant fact of regional importance is that the Ionian-Adriatic Pipeline (IAP) is a proposed pipeline that would run from Fier in Albania through Montenegro, and Bosnia and Herzegovina, to Split in Croatia. Above mentioned pipeline would be connected to TAP at the point of Fier. A project of IAP is not launched yet, but the construction of it is planned in the next years. This energy development should significantly improve Western Balkans relations, as well as energy security of supply in natural gas case.

7. Conclusion

The energy sector in Western Balkans is an interesting case where geopolitical, economic and market fundamental issues interact. The analysis carried out on the energy strategy of Russia in Western Balkans lead to numerous important conclusions.

Firstly, Russian influence in Western Balkans countries is present for centuries, while in the last years is rising, especially in the energy sector, as in the whole Europe. The main energy in Western Balkans are fossil fuels, as well as for heating and transportation usage, but also significantly important for electricity generation. Supply of the natural gas and oil is constantly going up in all the countries in Western Balkans, while their domestic production is lower or it does not exist. Moreover, most of the production, transportation, transmission or retail sectors in Western Balkans, in case of the natural gas and oil, are owned by the Russian giants.

The main among them is Gazprom that owns the only oil company that exists in Serbian downstream and middle stream sector, but also has the dominant role in retail and transport sector. The same state-owned company is dominant in gas market and export to BiH. On the other hand, all other significant oil companies in Bosnia and Herzegovina that owners both refinery capacities are owned by Government of Russia, such Zarubezhneft is. Croatian energy dependence on Russia has been observed in the import of coal, while oil industry should also strongly influenced by Russian company Rosneft, in the possible case that in the recent period it becomes mainly owner of INA. Furthermore, Croatia is also particularly dependent on Russian export of natural gas.

Although The Former Yugoslavian Republic of Macedonia is oil dependent on Greece and its export, natural gas demand and security of supply rely on the Russian export. Extremely significant data is that 58% of total natural gas import in Western Balkans is secured through contracts with Russian companies. Additionally, two countries, Albania and Montenegro do not have natural gas needs, so Russian natural gas is significantly high and constantly in the rising. Two above mentioned Western Balkans countries, Albania and Montenegro are not strongly dependent on Russian export of oil, but in the case that gas market will be established in the next years, they could become a net importer of natural gas from Russia. That fact is confirmed by the possible infrastructure projects that will mostly secure supply of natural gas from Russian territory.

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