

## Energy Projects in South-East Europe: Financing Possibilities and Perspectives

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### Abstract

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South-East European (SEE) region is an important geo-strategic energy corridor and transit energy region, and there is a strong need for new energy projects in order to ensure energy security and energy transit towards and across Europe. Despite the interest of SEE countries to actualise energy investment projects, the implementation proved to be a slow process since no major regionally significant project in the oil and gas sector has been completed during the last decade. In most SEE countries, regional co-operation in the field of energy has been perceived as a necessary part of the European integration process. At the beginning of the present decade, the main targets of the EU energy policy have been incorporated in the long-term strategies of SEE countries. The focus has been redirected towards modernisation of existing energy facilities and construction of new ones, improvement of energy efficiency and increasing share of renewable energy sources. The aim of this paper is to provide an overview of planned energy projects and to discuss problems in their realisation. Since the results of many initiatives were inadequate due to the lack of financial mechanism, our analysis focuses on financial possibilities within various financial institutions with special reference to EU institutions and funds whose resources can be used by SEE countries.

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**Keywords:** South-East Europe, energy projects, financing, European Union

### 1. Introduction

South-East Europe (SEE) is commonly identified with the Balkan Peninsula and is usually considered as a region that consists of nine countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo, the Republic of Macedonia, Montenegro, Romania, and Serbia.

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Although the SEE region could be analysed in a broader sense that includes another three countries (Greece, Turkey, and Moldova), our paper adopts the first, narrower approach.

SEE represents a very important geo-strategic energy corridor and transit energy region, which creates a need of building a new energy infrastructure that could transport necessary quantities of oil, natural gas and electricity in order to ensure energy security and energy transit towards and across Europe. Multilateral co-operation in the energy sector, including the participation in regional and Pan-European infrastructure projects, became one of the energy policy priorities of all SEE countries. A strong need for regional co-operation in the field of energy infrastructure derives from the fact that all SEE countries are small economies in terms of demographic and economic size and therefore, they should be naturally interested in joint regional energy projects in order to reach economies of scale. However, recent history of wars in the beginning of the 1990s in most ex-Yugoslav republics hindered regional co-operation and readiness for implementing joint energy projects. Many regional energy projects in SEE have been discussed during the last decade, but until now, only one big joint project has been completed. On the other hand, there is a growing interest of European Union in developing modern and efficient energy infrastructure network in South-East Europe due to its strategic importance in energy transit towards EU Member States.

The aim of this paper is to provide an overview of planned energy projects and to discuss problems and limits in their realisation. Since the results of many initiatives were negligible due to the lack of financial mechanism, special attention is devoted to financial possibilities within various financial institutions with special reference to EU institutions and funds whose resources can be used by SEE countries.

The paper is organised in the following manner: Section 2 provides the overview of possible energy projects as well as problems in project realisation, while Section 3 analyses financing possibilities for regional energy projects: EU funds for energy efficiency, European financial institutions and opportunities within Western Balkans Investment Framework. The final section contains the conclusions.

## 2. Energy Infrastructure in South-East Europe

The South-East European countries face the common challenges of an over-dependence on the utilization of oil and coal in electricity generation, which also has a direct negative environmental impact, high dependency on oil and gas imports, a significant lack of energy efficiency, under-development of the renewable energy sector, insufficient market integration and a lack of interconnectors across the region. They have also experienced similar transition processes and energy sector's reform model. However, there are some important differences among them. Some of them have already become EU Member States (Bulgaria, Romania, Croatia), while all other Western Balkan countries are at differing positions along the path of European integration and they each hold varying energy and environmental standards and targets. The level of alignment with EU practices and legislation within the region, especially regarding electricity and gas market liberalization and interconnectivity, leaves much to be done.

Consumption growth of oil and gas in Europe with constant decrease in production has an important impact on increased oil and gas imports, respectively increasing energy supply. This opens an issue of security supply and construction of new oil and gas pipelines for European countries. Certainly, one of the most important objectives of the European energy policy is increasing the security of energy supply in order to reach sustainable economic growth and competitiveness of European economy. The countries of South-East Europe in particular will have a special part in achieving the goals of the European energy policy, because they would be consumers as well as transit countries for imported oil and gas for the Central and Western Europe (Grozdanic 2008). Improving the balance between energy supply and demand is crucial to stimulate and sustain economic growth.

Energy security is the ultimate goal of Energy Community, as well as a certain level of regulatory, investment and liberalization maturity in all European energy markets. The Energy Community Treaty was signed in Athens on 25 October 2005 and represents the achievement of the largest internal market for electricity and gas in the world, with effectively 34 participating countries: the 25 European Union Member States and Croatia, Bosnia and Herzegovina, Serbia, Montenegro, Albania, the Former Yugoslav Republic of Macedonia, Romania, Bulgaria, and UNMIK Kosovo.

The Energy Community Treaty is a key element of the EU strategy in Southeast Europe that aims to extend the benefits of the Internal Energy market before the states of the region may become members of the European Union. There are several reasons why the European Commission spearheads this process of energy restructuring and integration into EU internal energy market. Firstly, improving the balance between energy supply and demand is crucial to improve and sustain economic development in Southeast Europe. It requires a strong legal commitment by the countries of the region towards market oriented reforms, regional integration and investment security. Secondly, the security of supply of the European Union is based on diversifying supply of electricity and gas and is being politically able to counter threats to energy disruption in the European Union.

The goals of the regional market are to improve the reliability and security of supply, achieve economies of scale and enhance complementarities between systems. According to the IEA projections (IEA 2008), the regional market is expected to promote use of the most cost-effective capacities and reduce overcapacity of the existing base load, thereby reducing electricity generation costs by around 10%. The improvement in security of energy, and especially electricity supply, becomes a crucial need in times of energy crisis and uncertain energy supply, especially in the context of Russian-Ukraine gas disputes.

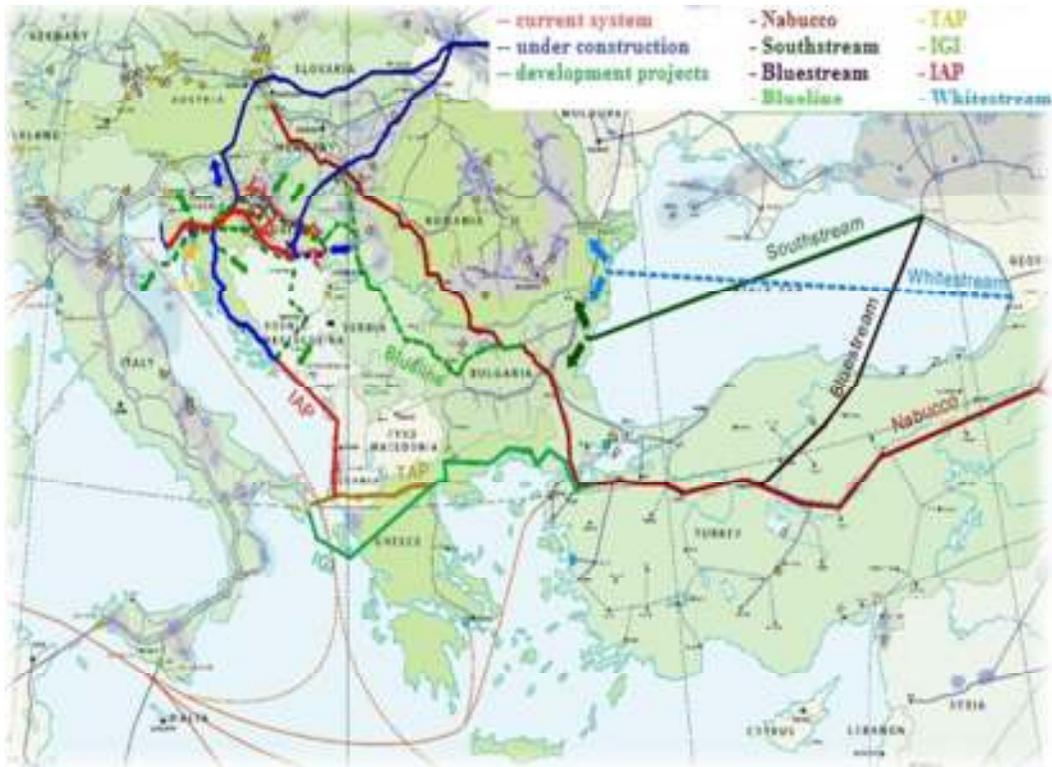
Besides the short-term benefits of the SEE regional market, final economic goal of such regional energy market is its impact on creation of larger and more stable regional market, which will be more cost-effective, competitive and therefore more interesting for investors. More developed and reliable energy market will enhance the region's capacity to attract investments in infrastructure. There is a need for new investments in many electric systems of SEE countries, especially in generation capacity that would be capable to meet environmental standards set by the EU and in upgrading transmission and distribution networks. New investments would be crucial in increasing technology and operational efficiency. Well-functioning competitive markets should provide the right signals for investment and therefore promoting secure and reliable energy supply in the most cost-effective way. Investment support mechanisms (often called "capacity schemes") can play an important role in Southeast Europe by providing incentives for investment in generation capacity (Vlahinic-Dizdarevic and Zikovic 2011). Insufficient cross-border capacity hampers market integration and therefore it is important to ensure adequate investment incentives in order to foster new energy projects.

Inadequate energy infrastructure is one of the major limitations for economic growth of South-East Europe, especially since the period of recession has finally finished in most SEE countries. While countries are still recovering from the economic and financial crisis, they are facing the increased demand for energy, which creates growing pressure to cover the gap between energy supply and demand. This implicitly requires a large investment in electricity interconnectors and electricity generation, the gas and oil infrastructure as well as the infrastructure for the production and acceptance of energy obtained from renewable sources (Energy Community 2011b). A further limitation is that the countries in South-East Europe are in deficit of energy and greatly dependent on energy imports, and therefore the issue of security of energy supply is very important. The security of energy supply depends on the construction of production capacities for electricity, connecting transport networks and the realisation of projects for oil and gas supply in SEE countries, as well as the construction of gas storage (Granic 2009).

## 2.1. Possible Energy Projects

The major international pipelines concentrated in the Caspian region are very important for Europe's energy supply. Several projects are under consideration (European Commission 2013): under construction is oil pipeline Odessa - Brody through Poland with sections in Latvia, Germany, Slovakia, and the Czech Republic; Bratislava - Schwechat; Burgas - Aleksandroupolis; Constanta - Trieste; (i.e. Pan-European Oil Pipeline, PEOP); several more are under the consideration. In the comparison with the oil sector, gas sector is considered more important due to the high gasification of EU and high concentration and import dependency on Russia. SEE countries should have a significant part in supplying gas to Europe in the future due to their geo-strategic position. Gas pipelines considered to be built in this region are supposed to meet growing demand in SEE and other EU countries, as illustrated in Figure 1.

**Figure 1. Projects of the Gas Transportation System Planned in the Region of South-East Europe**



Source: Francic 2009

These potential regional projects of energy supply would cover the future demand for gas in South-East Europe from both sources: Russian gas, as well as Caspian gas. However, there is no possibility for all of the proposed gas pipelines to enter the process of construction since it is economically inefficient and unprofitable to build two competitive gas pipelines, for example Nabucco and South Stream. Prospective gas pipelines are specified in Table 1.

**Table 1. The Major Regional Prospective Projects**

Major Gas Pipelines	Gas	Transit Countries	Companies
TGI Turkey-Greece-Italy	Caspian	Turkey, Greece, and Italy	Edison (Italy), DEPA (Greece), and Botas (Turkey)
TAP Trans Adriatic Pipeline	Caspian and/or Russian	Turkey, Greece, Albania, and Italy	EGL (Switzerland)
IAP Ionian Adriatic Pipeline	Caspian	Turkey, Greece, Macedonia, Kosovo, Montenegro, Bosnia and Herzegovina, Croatia, Slovenia, Italy	EGL (Switzerland) Plinacro, Croatia
Nabucco	Caspian	Turkey, Bulgaria, Romania, Hungary, Austria	Botas (Turkey) Bulgargaz (Bulgaria) Transgaz (Romania), Mol (Hungary), and OMV (Austria)
GUEU White Stream Georgia-Ukraine – EU	Caspian, Azerbaijan	Georgia-Romania or Georgia-Ukraine- Romania, and Georgia- Croatia-Poland	GUEU Inc., a private consortium registered in the U.S.
Blue Line, Blue stream II	Russian, Turkmenistan's gas across Russia	Bulgaria, Serbia, Bosnia and Herzegovina, Croatia	Gazprom
South Stream, Nord Stream	Russian, Turkmenistan's gas across Russia	Bulgaria, Romania, Hungary	Gazprom

Source: Mihajlovic-Milanovic 2011

There is no doubt that energy infrastructure is the necessary precondition for higher economic competitiveness, efficiency and security supply by lowering consumer prices. Therefore, the energy infrastructure development is of vital importance for the European Union and for the Energy Community. According to Energy Community, here are specified the most important projects from regional perspective (Energy Community 2012):

- 1) Interconnection of electricity networks:
  - a) 400kV interconnection between Macedonia (Bitola) and Albania (Elbasan);
  - b) 400kV interconnection between Albania and Kosovo;
  - c) 400kV interconnection between Serbia (Pancevo) and Romania (Resita);

- d) 400kV interconnection between Serbia, Montenegro, and Bosnia and Herzegovina;
- e) 400kV interconnection between Serbia (Nis) and Macedonia (Skopje);
- f) The 1000 MW HVDC interconnection line between Italy and Montenegro.

2) Gas infrastructure:

- a) gas interconnections between Serbia (Niš - Dimitrovgrad) and Bulgaria (Sofia / Dupnitsa);
- b) IAP (Ionian Adriatic Pipeline) provided for connecting Croatia (Ploče) and Albania (Fieri);
- c) TAP (Trans Adriatic Pipeline) gas pipeline throughout Bulgaria, Macedonia, Albania and Italy;
- d) gas interconnections between Bosnia and Herzegovina (Mostar) and Croatia (Zagvozd / Ploče);
- e) gas interconnection between Romania, Moldova, and Ukraine;
- f) gas interconnections between Moldova (Uhgheni) and Romania (Iasi);
- g) pipeline from the gas fields Shah Deniz (South Caucasus Pipeline) Baku - Tbilisi

- Erzurum, called Poseidon Pipeline and other gas pipelines from fields Shah Deniz II: Nabucco gas pipeline throughout Turkey, Bulgaria, Romania, Hungary, and Austria; South Stream<sup>3</sup> with North and South Pipelines, White Stream - GLUEU; TANAP (Trans Anatolian pipeline) Pan-European Gas Pipeline - PEGP, Blue Line; Azerbaijan - Georgia - Romania Interconnector (AGRI); South East Europe Pipeline (SEEP) pipeline from the eastern part of Turkey through Bulgaria, Romania and Hungary to Austria; ITGI - Turkey - Greece - Italy pipeline;

h) gas storage in Croatia and Serbia.

3) Power plants

- a) hydro power plant (HPP) and Cebren (HE) Galiste on the Black River in Macedonia;
- b) twelve hydropower plants on the Vardar River in Macedonia;

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<sup>3</sup>In time when this paper is written and accepted for publishing, South Stream was still an option. However, it has been stopped in December 2014.

- c) hydropower plant (HPP) Boskov Bridge in Macedonia;
  - d) thermal power plant (TPP) Kolubara B in Serbia;
  - e) four hydropower plants on the Moraca River in Montenegro;
  - f) Maoca coal mine and power plant in Montenegro;
  - g) hydropower plant (HPP) Komarnica in Montenegro;
  - h) hydropower plant (HPP) Zhur in Kosovo;
  - i) hydropower plant (HPP) Caplje, (HE) Krusevo and (HE) Zeleni vir in Bosnia and Herzegovina;
  - j) Adria LNG terminal on Krk, and pipeline Omisalj - Zlobin and Zlobin - Rupa in Croatia;
  - k) Poklecani wind power in Bosnia and Herzegovina;
  - l) Belene nuclear power plant in Bulgaria and Cernavoda in Romania;
  - m) Combined Cycle Gas Turbine (CCGT) plant of 100 MW, Kakanj, Bosnia and Herzegovina.
- 4) Oil Infrastructure (Energy Community, 2006):
- a) pipeline from Bulgaria (Bourgas) to Greece (Alexandroupolis);
  - b) pipeline from Bulgaria (Bourgas) to Macedonia (Skopje) and Albania (Vlore);
  - c) PEOP (Pan European Oil Pipeline) pipeline from Romania (Constanta) to Italy (Trieste) through Serbia, Montenegro and Croatia;
  - d) Samsun - Ceyhan oil pipeline from the Black Sea to the Mediterranean Sea;
  - e) Integration of the Adria pipeline (Central Europe) and Druzba (Eastern Europe).

Among these mentioned projects, projects TAP and TANAP represent a strategic step in diversification of natural gas supply, establish the European Southern Gas Corridor as well as open the possibility of natural gas supply from new Caspian and Middle Eastern sources. Southern Gas Corridor will have a significant part in European energy security and guarantee the diversification of supply routes towards markets in Western and South-East Europe. In addition to the TAP project, the Energy Community of South-East Europe and the European Commission gave their full support to the IAP project. Its significance is remarkable, because it brings environmentally friendly, competitive, multi-functional energy source to the region, facilitating the gasification of the region, and provides a diversified supply of natural gas. It will provide significant income from its transit to Albania, Montenegro, and Croatia, as well as the ability to access and use Albanian and Croatian underground gas storage facilities.

## 2.2. Problems in Project Realisation and Perspectives

Obviously, SEE countries are strongly interested in the transformation of the region into a corridor for the transit of oil and natural gas in Central and Eastern Europe. As emphasised earlier, the main objectives of SEE countries are security and diversification of energy sources, including reduction of their enormous energy dependence on Russia, especially for natural gas. However, the implementation of major energy infrastructure projects in South-East Europe proved to be a slow process. From the beginning of the century to 2014, no major regionally significant project in the oil and gas infrastructure was completed. The majority of large-scale projects for the construction of oil and gas pipelines through South-East Europe was stopped with uncertain realisation by the end of this decade.

The main reason for these delays in implementation of projects is the difficulty in providing the necessary sources of oil and natural gas, as well as providing financial resources for completion of the planned projects. It was planned to complete only the South Stream gas pipeline by 2017 and 2018, which should then start operating. Opening of the planned South Stream Corridor would reduce dependence of SEE countries on gas imports from Russia. However, delays in construction of most of the projects had a negative impact on fulfilling of energy policy objectives of the SEE countries. The exception is Turkey and, to a lesser extent, Greece, which, during the first decades, built several oil and gas pipelines (the Blue Stream gas pipeline, Baku – Ceyhan oil pipeline, and the gas pipeline between Turkey and Greece) (Tsachevsky 2013).

Despite the great interest and desire of SEE countries to realise significant energy investment projects, it is difficult to reach these goals with limited human resources, lack of available funds, etc. Also, the tenders for construction of (large) power plants last for 3-4years, and there are many delays in the selection of investors or the conclusion of a construction contract. At the national level, countries should prioritise energy projects and make things easier for investors in order to conclude the contract, carry out the necessary administration process and construction, provide the necessary professional staff in order to reduce the long waiting periods for approval and implementation of feasibility studies of proposed projects (Energy Community 2011a).

The common interest of all SEE countries is to form and implement a major priority regional infrastructure projects. Such projects should provide new sources and supply routes of energy and have a significant impact on the EU countries, as well as countries of the region. Regional energy projects that are accepted and implemented should be of strategic importance for the European Union. The aim is that the European Union accept all the proposed projects as priority, and then this will be determined by the possibility of their grant schemes from European structural funds, because infrastructure projects are unprofitable. This certainly includes energy interconnection between countries, as well as major projects of construction of new oil and gas pipelines, gas storage, new capacities from renewable sources and the construction of an LNG terminal (Vujec 2011).

### **3. Financing Possibilities for Regional Energy Projects**

The implementation of the internal energy market is crucial for a modern energy infrastructure which can, at the same time, allow the European Union to fulfill its climate and energy targets. In order to develop infrastructure in the fields of transport, energy and information system, the European Commission has proposed many measures and funding, through funds or EU institutions. The plan of the European Union is to provide strategic electricity network, gas pipelines, oil pipelines and gas storage by 2020 at the latest (European Commission, 2012).

Big energy infrastructure projects that have a regional significance, but also a wider dimension, combine economic and political relationship in terms of co-operation according to mutual dependence for accelerating regional integration and liberalisation of the energy market, which is the main objective of the European Union. Their financing possibilities should be considered in a wider political and geostrategic framework. However, smaller energy projects aiming to modernize energy, especially electricity network, improve energy efficiency and use renewable energy sources have become most interesting for the SEE countries. The following sections will present the EU institutions and funds whose resources can be used by the SEE countries that do not have sufficient own capital for the preparation and construction of such energy projects. These funds represent assistance in the form of credit lines and grants, as well as technical assistance.

### 3.1. EU Funds for Energy Efficiency

In order to reduce developmental inequalities of its Member States, the European Union has set financial instruments i.e. European funds, which strive to support common and balanced development of Europe. European funds have always been a supplement to national financing: central government, local governments or other authorities. There are many programmes that are financed from the EU budget, which are very different considering the objectives, areas of intervention, or the value of support and methods of implementation. The rules for each programme are defined for a period of several years, during which certain changes can be made in order to adapt them to new challenges and needs.

Considering the importance of increasing energy efficiency as one of the main focuses of the EU energy policy, financial support has been designed for programmes and projects of improving energy efficiency through several EU programmes and instruments with the aim of implementing EU policies in the area of energy efficiency and initiating the necessary investments. Some of the EU funds can be used by non-EU Member States in order to achieve common goals: reducing energy consumption, increasing energy efficiency, and reducing greenhouse gas emissions in Europe.

Financing of energy efficiency projects is usually provided by financial intermediaries, such as local banks, which can offer many different forms of financing in order to reduce the risk of investment and the availability of users, or can be financed through EU funds. International financial institutions, whose resources are available in the form of loans which can be obtained through the local banks at lower interest rates, have a greater share in funding of the energy infrastructure. In March 2013, 34 projects using financial and / or technical assistance for improving energy efficiency were identified (Table 2).

**Table 2: Overview of the Main Funded Projects of Energy Efficiency and Renewable Energy in the Countries of South-East Europe, 2013**

	Number of projects	mil. EUR	total (%)
<b>Regional Funds</b>	15	1.075,35	69,85%
Regional Funds for loans with technical assistance and grants	12	1.062,95	69,04%
Regional programmes and funds to provide technical assistance services	3	12,40	0,81%
Government loan funds with technical assistance	5	66,66	4,33%
Croatia	1	*	*
Montenegro	1	7,71	0,50%
Serbia	3	56,35	3,66%
Government loan funds (mixed)	6	348,00	22,60%
Bosnia and Herzegovina	2	60,00	3,90%
Montenegro	1	50,00	3,25%
Serbia	3	238,00	15,46%
Government funding for the provision of technical assistance services	2	3,00	0,19%
Montenegro	1	1,50	0,10%
Kosovo	1	1,50	0,10%
Government funds in grants	4	16,53	1,07%
Macedonia	3	16,33	1,06%
Serbia	1	0,20	0,01%
<b>Government guaranteed Funds</b>	2	30,00	1,95%
Bosnia and Herzegovina	1	15,00	0,97%
Macedonia	1	15,00	0,97%
<b>TOTAL</b>	34	1.539,54	100,00%

Source: WBIF 2013a

Among the presented projects, fifteen have been financed from regional funds that are active in each of the countries, of which twelve are regional funds that provide loans (usually with technical assistance and subsidies), while three funds provide technical assistance. There are also two government-guaranteed funds identified in the region, in Bosnia and Herzegovina and Macedonia. The total funding available through regional funds amounts about EUR 1,100 million (more than in 2011, when the amount was EUR 830.36 million), of which 98% are loan funds (including technical assistance and subsidies).

Since 2007, German Technical Cooperation Organisation (GTZ) has formed a new instrument to finance regional development projects and established the Open Regional Fund for South-East Europe. GTZ projects are of ten oriented towards achieving the technical preconditions in the local governments to voluntarily sign up to the EU fund projects or to work in partnership with other local governments. Open Regional Fund complements the standard instruments of technical cooperation as well as consulting, network building, knowledge management, and training. These projects contribute to the harmonisation with the EU rules through the provision of support for the stabilisation and association process, or through the implementation of the *acquis communautaire*.

### 3.2. European Financial Institutions

EU Member States have available credit lines through European financial institutions (EIB - European Investment Bank, the EBRD - European Bank for Reconstruction and Development) which can be realised through commercial banks and for which it is possible to obtain subsidies of the European Commission (grants) to stimulate energy efficiency and technical assistance consultants (EIB 2013). In all countries, funds from various institutions of the European Union result in the development of infrastructure, institutions and markets. However, projects could be successful, but it is essential that Member States have a good development strategy and the help from EU should be only one segment that will support the implementation of the set objectives.

In addition to funding through the EU funds and grants for energy efficiency projects, there is also the Agency for Renewable Energy Sources whose function is also to support the construction of energy infrastructure. Since the International Energy Agency (IEA) has allocated only 2% of its budget towards investments in renewable energy, the establishment of IRENA - International Renewable Energy Agency, has become a necessity. IRENA is founded by Germany, France and the Netherlands in order to support capacity development of renewable energy sources, improving the legal framework and financial mechanisms for renewable energy. Among several projects that IRENA considered crucial for the development of the European energy system, Mediterranean energy ring stands out with extremely large potential in producing energy from the sun and wind, and it strengthens the energy interconnection between the European Union and South-East Europe (Rebic 2008).

In many cities and regions, required technical expertise and organisational capacity to implement large projects of energy efficiency and renewable energy are missing. Although countries are aware of the benefits of reduction of energy consumption and pollution, the greatest challenge is to ensure value for money and timeliness, as well as providing additional financial resources.

The total amount invested in the energy infrastructure of South-East Europe by international financial institutions between 2007 and the first half of 2013 is EUR 3,293.35 million. Figure 2 shows investments in the energy sector of SEE countries financed by international financial institutions (IFIs).

**Table 3. Investments in the Energy Sector of SEE Countries in the Period 2007-2013 (mil. EUR)**

Sector-Energy Country	mil. EUR	%
Albania	283.79	9%
Bosnia and Herzegovina	785.42	24%
Croatia	437.22	13%
Macedonia	223.77	7%
Kosovo	179.33	5%
Montenegro	247.03	8%
Regional	277.90	8%
Serbia	858.89	26%
TOTAL	3,293.35	100%

Source: Authors according to WBIF 2013b

According to the Energy Community Treaty, all SEE countries have committed to implement the relevant EU directives related to energy efficiency and renewable energy, with implementation from December 31, 2011 to January 2017. In order to simplify the implementation of EU directives, all countries have prepared the National Energy Efficiency Action Plans (NEEAP) which direct activities towards the energy sector in order to successfully fulfill the obligations of the Treaty.

European Commission, international financial institutions, and many bilateral donors with different strategies and programmes in countries of Southeast Europe are planning to invest in the energy sector, in order to improve the energy efficiency of existing infrastructure, as well as in technical preparation and construction of new energy infrastructure. The level of active co-operation and coordination among donors has increased substantially since 2009, showing increased resources in the existing funds as well as the establishment of new ones, such as the Green Growth Fund. The table below shows how much was invested in the energy sector of SEE countries by international financial institutions in 2013.

**Table 4. Overview of Investments by International Financial Institutions in SEE Countries in 2013 (mil EUR)**

European Bank for Reconstruction and Development – EBRD	923.19
European Commission – EC	271.84
European Investment Bank – EIB	427.00
European Western Balkans Joint Fund - EWBJF	11.55
International Bank for Reconstruction and Development –IBRD	30.69
International Development Association – IDA	22.18
<i>Kreditanstalt für Wiederaufbau – KfW</i>	687.56
Western Balkans Investment Framework – WBIF	39.05
World Bank – WB	140.82
TOTAL	2,553.88

Source: Authors according to WBIF 2013b

The data show that the largest investment is the one by the European Bank for Reconstruction and Development (EBRD), with over 900 million, followed by the Reconstruction Credit Institute based in Frankfurt (*KfW -Kreditanstalt für Wiederaufbau*) with investment of over EUR 650 million and the European Investment Bank (EIB) with EUR 427 million. The administration and technical assistance for the majority of the projects have been financed by WBIF, while the actual construction is financed by a number of international financial institutions.

### 3.3. Western Balkans Investment Framework

WBIF was established as an innovative program with the main objective to facilitate investment projects which contribute to economic, social, and environmental development of Western Balkans countries in accordance with the priorities of the accession to the European Union. In 2012, WBIF helped in the preparation of 112 energy investment projects (over 123 grants in the total amount of EUR 220 million), representing a total potential investment value of about EUR 10 billion. WBIF aims to provide more than EUR 5.5 billion funding for these kinds of projects (WBIF 2012).

In 2008, the European Bank for Reconstruction and Development established a special fund called the Western Balkans Sustainable Energy Direct Financing Facility (WeBSEDF), intended to fund projects for sustainable energy development in the Western Balkans. The objective of this credit line is to finance projects that promote energy efficiency, with private small and medium-sized enterprises as end users. The facility will continue providing debt financing for renewable energy and energy efficiency for local enterprises in Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, and Serbia. In March 2013, the Western Balkans Sustainable Energy Direct Financing Facility (WeBSEDF) had a very large list of projects. The portfolio consisted of 15 signed projects for a total of EUR 63.9 million of EBRD financing and a total project value of EUR 124.2 million. As a result of this funding, a total of 60 MW generating capacity from renewable energy sources was installed, which would lead to a reduction in CO<sub>2</sub> emissions of about 442,000 tons per year. Despite this program, there is still a significant unexplored potential for improving energy efficiency and developing renewable energy sources in the region, mainly due to the lack of experience of local authorities, banks, and project sponsors.

Western Balkans Sustainable Energy Financing Facility (WeBSEFF) is a financing instrument under which the EBRD provides loans to partner banks in Croatia, Bosnia and Herzegovina, Serbia, and Macedonia to extend credit companies and municipalities that want to invest in energy efficiency and small renewable energy projects. WeBSEFF is a part of the EBRD - Sustainable Energy Financing. WeBSEFF is part of the Regional Energy Efficiency Programme for the Western Balkans (REEPWB).

Due to the success of previous programmes, in October 2013, EBRD launched WeBSEFF II - a new credit line valued at EUR 75 million. WeBSEFF II is designed to solve the untapped potential for investment in energy efficiency and removes entry barriers in accordance with objectives of Action Plans for Energy Efficiency (NEEAPS) of the participating countries, giving a significant role to the public sector.

In 2012, the Western Balkans Investment Framework (WBIF), a joint initiative of the European Union and other international partners, has approved EUR 20 million to the European Bank for Reconstruction and Development (EBRD) for the establishment of the Regional Energy Efficiency Programme for the Western Balkans. REEPWB uses a combination of financial instruments (as WeBSEFF), technical assistance and policy support to create a sustainable market for energy efficiency in the region and support energy efficiency in the private and public sector (WeBSEFF 2013). An additional EUR 3,35 million was paid from European Western Balkans Joint Fund. The program is built on the success of the two predecessors: WeBSEDF – Western Balkans Sustainable Energy Direct Financing Facility, and WeBSEFF – Western Balkans Sustainable Energy Financing Facility. Both programs successfully combine funding, technical assistance and subsidies for investments in energy efficiency and renewable energy. The programs have led to significant improvements in the investment environment for renewable energy in the region.

According to many analyses, SEE countries have great potential concerning the exploitation of renewable energy sources and implementation of measures to improve energy efficiency. Regional Energy Efficiency Programme for the Western Balkans (REEPWB) has a goal to exploit the potential of providing combinations of financing instruments, technical assistance and policies that support the development of a sustainable market for energy efficiency in the Western Balkans. REEPWB seeks to support the countries of South-East Europe in order to achieve the objectives of sustainable energy infrastructure and markets for renewable energy as set out in the National Energy Efficiency Action Plans (NEEAP).

In order to accelerate the implementation of National Energy Efficiency Action Plans, the European Council adopted a decision on the financing of projects that are primarily focused on achieving energy security and stability of Europe.

European Economic Recovery Plan (EERP) was allocated EUR 4 billion to cover up one-third of the total investment costs for the construction of energy and

infrastructure projects and innovations in the three major areas of energy: gas and electricity, wind power and CCStechnology (CSIS 2010).

European Economic Recovery Plan has co-financed 59 projects and is used to achieve higher reliability of supply, help reduce green house gas emissions and, at the same time, strengthen Europe's economic recovery.

European Commission, EIB, EBRD and the Council of Europe Development Bank (CEB) have developed instruments for financing infrastructure projects (IPF – Infrastructure Project Facility) for the Western Balkans. IPF is an integral part of all investments in the Western Balkans (WBIF Framework). The aim of WBIF is to streamline collaboration and increase the volume of funds to finance investments that contribute to the socio-economic development and the accession process of Western Balkans to the European Union. WBIF focuses on key sectors of the economy of the Western Balkans, including the energy, environment, transport, social infrastructure, and private sector development.

WBIF provides support for 14 regional projects amounting to EUR 72 million. Table 4 shows the importance of WBIF grants for individual countries of the Western Balkans.

**Table 5. WBIF Projects by Country**

	Number of projects	Number of signed loans	The value of grants allocated funds (grants and other WBIF)	Total estimated investment value WBIF		% projects with signed loan
				mil. EUR	% GDP	
Albania	25	190	92	1,098	11%	28%
B. and H.	32	670	82	1,793	14%	38%
Croatia	8	0	8	1,790	4%	0%
Kosovo	14	34	53	824	17%	29%
Macedonia	12	248	17	1,416	18%	67%
Montenegro	20	154	15	980	29%	35%
Serbia	27	1,381	34	3,828	13%	48%
TOTAL	138	2,677	301	11,729	10%	37%

Source: WBIF, 2013b

Distribution of projects over the years is important when evaluating project financing by WBIF.

About 37% of the projects that received grants from WBIF signed contracts for loans, which represents 25% of the total investment value of WBIF supported projects (EUR 2,677 million of 11,729million) provided through grants and signed loans. According to the presented data, Croatia has by far the least projects due to her accession to the EU, and for this reason, some pre-accession funds are closed and there treat of money from such funds is disabled. Therefore, Croatia has fewer such projects and more projects that will be financed from the EU Structural Funds, the realisation of which will be a common interest of Croatia and the European Union. As a new Member State of the European Union, Croatia has other options; it will have benefits from the so-called "projects of common interest" in accelerating administrative procedures and improved regulatory conditions, and it will gain access to EUR 5.85 billion from the new fund in the period from 2014 to 2020.

#### **4. Concluding Remarks**

South-East European region is an important geo-strategic energy corridor and transit energy region, and there is a strong need for new energy projects in order to ensure energy security and energy transit towards and across Europe. Regional energy infrastructure is insufficient and inadequate, and therefore represents one of the major obstacles for sustainable economic growth. There is a strong need for a large investment in electricity interconnectors and electricity generators, the gas and oil infrastructure as well as the infrastructure for the production and acceptance of energy obtained from renewable sources. Despite the high interest and desire of SEE countries to realise significant energy investment projects, the implementation of major energy infrastructure projects in South-East Europe proved to be a slow process. From the beginning of the century until today, no major regionally significant project in the oil and gas infrastructure has been completed. The majority of large-scale projects for the construction of oil and gas pipelines through South-East Europe was stopped with uncertain realisation by the end of this decade. Besides political and non-economic arguments, the main reason for these delays in implementation of projects is the difficulty in providing the necessary sources of oil and natural gas, as well as providing financial resources for completion of the planned projects. It was planned to complete only South Stream gas pipeline by 2017 and 2018, but this project has been stopped in December 2014.

Although SEE countries are aware that regional co-operation in the field of energy infrastructure is a necessity, in most SEE countries, it has so far been

perceived as a necessary part of the European integration process. Therefore, improvement of co-operation appeared to be mostly the result of SEEC's effort to show their readiness to become a full EU Member State. At the beginning of the present decade, the main targets of the EU energy policy (20x20x20 until 2020) have been incorporated in the long-term strategies of the majority of SEE countries. Therefore, the focus has been redirected towards modernisation of existing energy facilities and construction of new ones, improvement of energy efficiency and increasing share of renewable energy sources in energy mix and final energy consumption. The most important factor for their fulfilment is the financial and other sorts of assistance the EU provides for SEE countries through its instruments and funds.

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