AICEI PROCEEDINGS

TRANSFORMATION IN THE WESTERN BALKANS: THE READINESS FOR A SUSTAINABLE ENERGY LANDSCAPE

Ivana Vuchkova

Friedrich-Ebert-Stiftung Skopje Office

ABSTRACT: A review into the political trends and dynamics reveals that current energy developments are overwhelmingly influencing the political discourse and security dialogue in many regions. Though energy demands are demonstrating growing tendencies, the confrontation of climate change urges governments to collectively respond and decarbonize the energy systems through promotion of renewable energy sources, innovative technologies, and sustainable solutions. However, the complexity of the established energy networks and the strong lobbies of coal and other conventional sources in regions like the Western Balkans, represents an impediment to a smooth transformation. In a crucial momentum, all conditions point towards elevating the just energy transformation at the core of the political and cooperation dialogue on a regional level. The main aim of this paper is to provide a comprehensive analyses of the readiness of government policies to support of energy sources in the countries of Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia. Furthermore, a more detailed focus will be given on the current conditions and challenges for promoting renewables within the legal context and undertaken obligations towards the international community, as well as the needs for adequate adaptation towards the expected changes in weather conditions due to climate change. The data used for the purpose of this research were collected from the official statistics records and public reports from relevant countries.

KEYWORDS: *climate change, just energy transition, renewables, regional dialogue, Western Balkan.*

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INTRODUCTION

The countries of the Western Balkans (Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia) are more than ever, firm in their commitment to progress into a stable, secure and prosperous region soon to be integrated in the EU family. Consequently, enforcing the European agenda towards clean energy and ambitious climate policies remains a priority, and at the same time a challenge that deserves attention. This paper reviews **the relevant tendencies that are shaping the future of the energy sector** in the countries of Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia and hence, **their readiness for pursuing a sustainable energy landscape.** Challenges are not lacking especially since most of the current political trends in the region demonstrate support of the old energy infrastructure that is represented in the national policies and strategies of these countries. Given the natural endowments, the existent resistance towards renewables taking over, arises again the question of the power that energy could have in shaping inter alia political transformation processes in the region.

The EU-wide energy dialogue has the task to promote energy security while promoting just transition and strongly adhering to social and ecological aspects. Taking into consideration the suggested content of the European Green Deal, the ongoing trends in the Western Balkans are expected to uptake a significant role in the transformative processes beyond their geographical frame. Through examining the energy challenges arising from market, legal and security factors, as well as opportunities for transformation that will enhance energy democracy and ensure stability, this paper will show how these potential EU member countries can position energy at the core of the political dialogue in the region. Considering that their willingness to join the EU family is accompanied by their endowment with wind and sun, **this paper will analyze their preparedness for renewables deployment that will enable a sustainable energy landscape in accordance to the EU *acquis* on energy reforms,** especially the ones recently initiated with the European Green Deal. The conclusion will be followed by suggestions on **how renewables can play a vital role in the process of resolving other energy related emerging issues that the Western Balkans are facing these days.**

LITERATURE REVIEW

The current global energy choices have the power to shape political, social, and economic transformation and *vice versa*. Providing the various social and economic impacts of energy trends, the International Renewable Energy Agency (IRENA) suggests that doubling the share of renewables in the global energy mix by 2030 would increase global GDP by up to 1.1% or 1.3 trillion USD. The report shows also positive implications in human well-being and overall welfare that stands for the economic impacts on consumption and investment, social impacts based on expenditures on health and education and environmental impacts, based on measurements of greenhouse gases (GHGs) and material consumption. Furthermore, benefits in the socio-economic transformative processes are estimated to reach approximately 24.4 million jobs (both direct and indirect employment included) by 2030 due to the distributed and labor-intensive nature of renewable energy (IRENA, 2016). Based on its analyses of the socio-economic benefits behind renewable energy choices, IRENA estimates that the deployment of renewables could create up to 4% increase in human welfare. Considering the potential employment, well-paid jobs would certainly contribute to increased

consumption and thus strengthen development on both local and national level.

A view into the political transformative processes reveals that gender equality is considered as one of the main benefits of shifting the traditional energy sectors based on conventional resources into renewables that are also coupled with modernized technology and lateral managing models. A Report on Gender Perspective published by IRENA (2019) indicates that representation of women in the renewable energy sector is 10% higher than in the oil and gas industry. Moreover, as the usage of these resources for power generation allows for decentralization of the sector and entrance of small entities as market players, including individual and households, it also allows for energy democracy. Alongside the decentralized nature of the off-grid renewable energy solutions, there are increasing opportunities for active engagement of women within the energy value chain that would further strengthen gender equality and increase socio-economic benefits for the community (The World Bank, 2014).

To harness the modestly described potential of benefits, it is very important to evaluate the readiness for scaling up renewables in a country or region. For that same purpose, the World Bank Group has developed the Readiness for Investment in Sustainable Energy (RISE) as a suite of indicators that assesses the legal and regulatory environment for investment in sustainable energy. The main objective is to serve as a tool to policymakers and other relevant stakeholders that provides clear overview of the national enabling environment to attract investment into sustainable energy, and thus, to support the objectives of the Sustainable Energy for All initiative (SE4ALL): ensure universal access to modern energy services, double the share of renewable energy in the global energy mix, and double the rate of improvement in energy efficiency by 2030. The pilot report depicts the readiness for sustainable energy solutions in 17 countries on the basis of 28 indicators and 85 sub-indicators in 4 categories and 3 pillars.

It is well-known in the energy research field that significant number of factors determine the energy systems, including political circumstances, natural conditions, and technological advancements. As a market oriented good, the demand and supply, as well as regulation discrepancies in different countries, have taken a large stake in shaping existing energy policies including their price. All of the mentioned determining factors become only relevant after assessing the basis that needs to reflect no opinion, but the actual situation given the laws, regulations and established practices.

Therefore, it is crucial to provide a clear overview of the existing legislative and institutional environment that will show the current level of readiness of the region for integrating further renewable energy sources into the grid. Renewable energy sources or renewables refer to the resources that are derived from natural processes that are replenished constantly, such as sunlight, wind, rain, tides, waves, and geothermal heat (OECD/IEA, 2005). It is very important to note that some of the resources considered as renewables can be depletive or exhaustible after certain period as a result of the deployment ratio. For instance, if water for hydroelectric power generation is used at a ratio higher than the natural water cycle, the flow could be largely affected and cause further environmental damage on land use, natural habitats and biodiversity in the immediate surroundings. Considering the impact, many countries do not consider hydropower as renewable energy. Looking into the Western Balkans energy landscape, this argument has to be considered beforehand in order to provide a better overview of the challenges these countries face in their attempt to deploy

renewables at a larger scale in their current energy production mix.

Complex Energy Landscape in the Western Balkans

The evolution of the energy sector in the Western Balkans from the previous system, had a great influence on the understanding what today an energy sector in this region is. An energy infrastructure, dominated by state enterprises mainly reliant on the extracting lignite and coal that this region is well endowed with, continued after 1991 as well. Most of the coal power plants continued to run at their full capacity, supplemented by hydropower and almost non-aware for years for the ongoing global transition and rapid move towards renewables due to concerning climate change and available solutions. Whether a missed chance due to financial and technical grounds, or a strategic positioning on lignite and coal, the countries that are known to be in the top sunny regions of Europe, have not taken advantage of it and thus become leaders in generating solar energy.

Entering the third decade of the new century, in a time when people in various regions around the globe are taking future back into their hands (e.g. children and youth are skipping classes to provoke the attention of decision-makers and substantial changes to save our planet), the Western Balkans are still trapped into various challenges inherited from the previous system, that do not allow for smooth transition towards modern trends in energy self-sufficiency. Partnerships and cooperatives are becoming popular more than ever and reinventing the idea about a community, where personal development goes hand in hand with social engagement and responsibility. The system errors of the region are not allowing for globalization to bring positive effects at local and individual levels.

Poverty and inequality are issues of crucial matter and combined with low levels of technological improvements that prevent market players to reach modern productivity and efficiency levels, increase the challenges in integrating with the global market. A research conducted by RES Foundation (2018) specifically on the Energy poverty in the Western Balkans presented during the Sustainability Forum of the Energy Community in Vienna in 2018, indicated that 50% of households cannot afford sufficient warmth in Kosovo. At the same time, the average heated space per household in North Macedonia accounted for 37 square meters only. The opportunities for keeping an adequate temperature during summer periods when heat is on the rise, have been exempted from the discussion on existing issues emerging from energy poverty.

Furthermore, a view into the EU integration aspiration as a process that first and foremost has to ensure stability and security in the region and the continent, positions the issue of energy as of particular importance. For more than a decade, reforms in this sector are taking place in order to stabilize the political scene and enable fertile grounds for growth and development. Characterized by an old energy infrastructure, mostly built during the time of Yugoslavia and significantly damaged in the period after the break-up, from net-exporters during previous system, all of the countries are energy importers today and thereby face various challenges arising from their dependency. The inefficient, highly dependent on hydrocarbons and to a large extend monopolized energy sector, takes away up to 15-20% of the annual GDP of these countries. At the same time, these countries remain as least developed upper- and middle-income economies in the wide European context and cannot largely invest in capacity building and modernization of the energy sector due

to the less efficient systems and largely present vested interests.

Energy Landscape Overview of the Western Balkans

The International Energy Atlas (2017) shows that after three years of stability, global carbon dioxide emissions from fuel combustion restarted growing in 2017, reaching 32.8 billion tons of CO_2, and provisional data indicate an even faster growth in 2018. The major countries and regions responsible for emissions were: China (the People's Republic of China and Hong Kong, China) (28%), the United States (14%), the European Union as a whole (10%), India (7%), the Russian Federation (5%), Japan (3%), Korea (2%), Canada (2%), Indonesia (2%) and Iran (2%). Taking the trends of CO2 emissions from fuel combustion in the Western Balkans, in 2017 in almost every country they are on the rise if compared to 2016, but not necessarily if compared to previous years or the average emissions since 1991. Considering the low development levels of the region and modes industrial activity, in absolute numbers they are significantly lower than the previously indicated countries that account as biggest emitters.

Table 1.
Key energy statistics in the Western Balkans, Part 1. Source: IEA Atlas of Energy, 2017.

	TPES (Mtoe)	TPES/GDP (PPP) (toe/thousand, 2005USD)	Self-sufficiency (%) Total energy production/TPES	Electricity consumption per capita (TWh/capita)	CO2 emissions (MtCO2)	CO2/population (tCO2/capita)
Albania	2.35	0.07	69	2.15	4.34	1.51
Bosnia and Herzegovina	6.76	0.17	69	3.78	22.33	6.37
Kosovo	2.57	0.15	70	2.71	8.17	4.46
Montenegro	1.02	0.10	62	4.97	2.21	3.55
North Macedonia	2.72	0.10	43	3.16	7.44	3.57
Serbia	15.61	0.17	67	4.71	46.13	6.57

Looking into the key statistical data reflecting the energy context of the region, the energy balance indicators show total primary energy supply (TPES), energy intensity and energy self-sufficiency (or energy dependency), electricity consumption and the level of CO2 emissions as an absolute and per capita value. These indications are important in terms of defining the energy sector and its correlation with socio-economic indicators as GDP and population, especially if considering the first one. They are presented according to the latest available statistical data published by the International Energy Agency. In this paper, they will allow for better understanding of the key challenges that Western Balkan countries are facing in terms of complexity of already established energy networks, lack of investment in innovative and backstop technologies and energy efficiency, strong lobbies of coal power generation structures and pressing environmental issues with air quality as a rising cause of early deaths in the latest years.

Important to note in terms of defining challenges, is that the self-sufficiency rate as the ratio between total primary energy supply (dominated by coal with an exception of Albania) and consumption, shows that all of the Western Balkan countries rely on energy imports due to certain extend. When discussing energy security and stability, the level of energy dependency is an important factor that has to be taken in consideration and as a result, many countries strive to use renewables in order to become less-energy dependent or even more, or to become energy self-sufficient.

Table 2.
Key energy statistics in the Western Balkans, Part 2. Source: IEA Atlas of Energy, 2017.

	Share of RES in TPES (%)	Total Final Consumption (Mtoe)	Share of Industry in Total Final Consumption (%)	Share of Residential in Total Final Consumption (%)	Share of Transport in Total Final Consumption (%)
Albania	27	2.09	21	23	39
Bosnia and Herzegovina	12	3.55	25	29	35
Kosovo	15	1.56	23	37	26
Montenegro	27	0.76	21	35	32
North Macedonia	13	1.94	23	27	37
Serbia	12	9.25	34	31	23

An interesting trend observed in the process of data analysis that deserves attention is the **increasing, but not enough share of renewables in TPES and electricity production, as well as rising levels of coal production and CO2 emissions.** As visible from the graphic below, the renewable energy sources known to be in tremendous potential of development in the Western Balkan countries, **are showing modest improvement in terms of increased share of the total primary energy supply.**

On the other side, the Western Balkans are standing as countries where environmental degradation and air pollution are pressing issues. The coal power plants, with the youngest one dating from 1988 emit a significant amount of CO2 that is not in a process of decline in recent years. On the contrary, CO2 emissions are on the rise in Serbia, Bosnia and Herzegovina, Montenegro, and North Macedonia.

In the recent Chronic Coal Pollution report based on the methodology by the World Health Organization (WHO) and the European Commission, it is presented that air pollution caused from the coal power plants in this region is responsible for 3.900 premature deaths annually and 8.500 cases of bronchitis and other chronic diseases of children. Only in North Macedonia this percentage is twice as high if compared to the EU and only the number assessed in the capital of the country stands for more than 1.300 premature deaths due to bad air quality. A research conducted by the UN Environment Programme (2019) in 6 selected cities in the region pinpoints that pollution contributes to 4 to 19 % of total premature mortality and reduces life expectancy by between 0.4 and 1.3 years.

Figure 1.
Share of RES in TPES (%) in the Western Balkans. Source: IEA Energy Atlas, 2017.

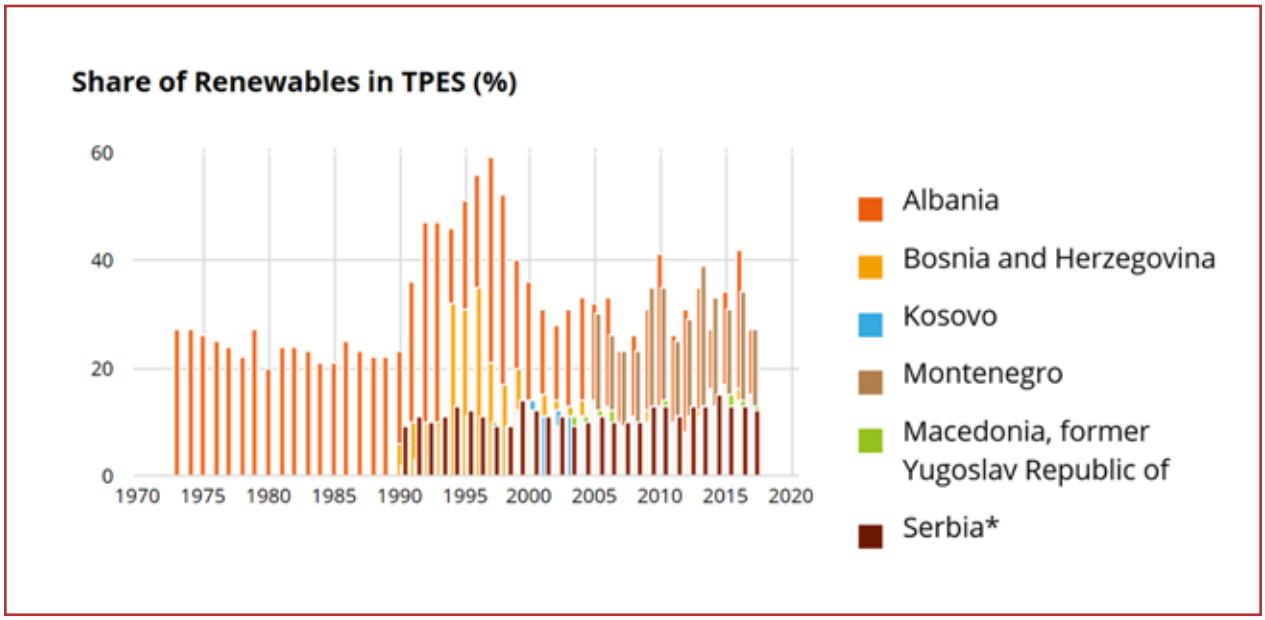
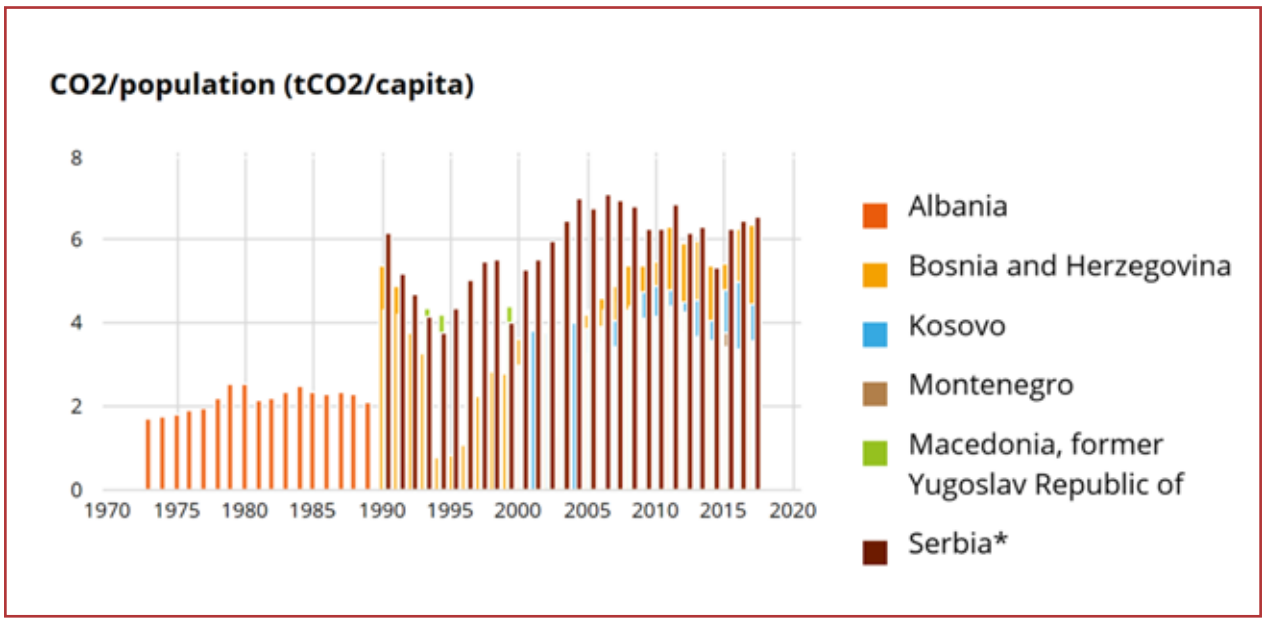


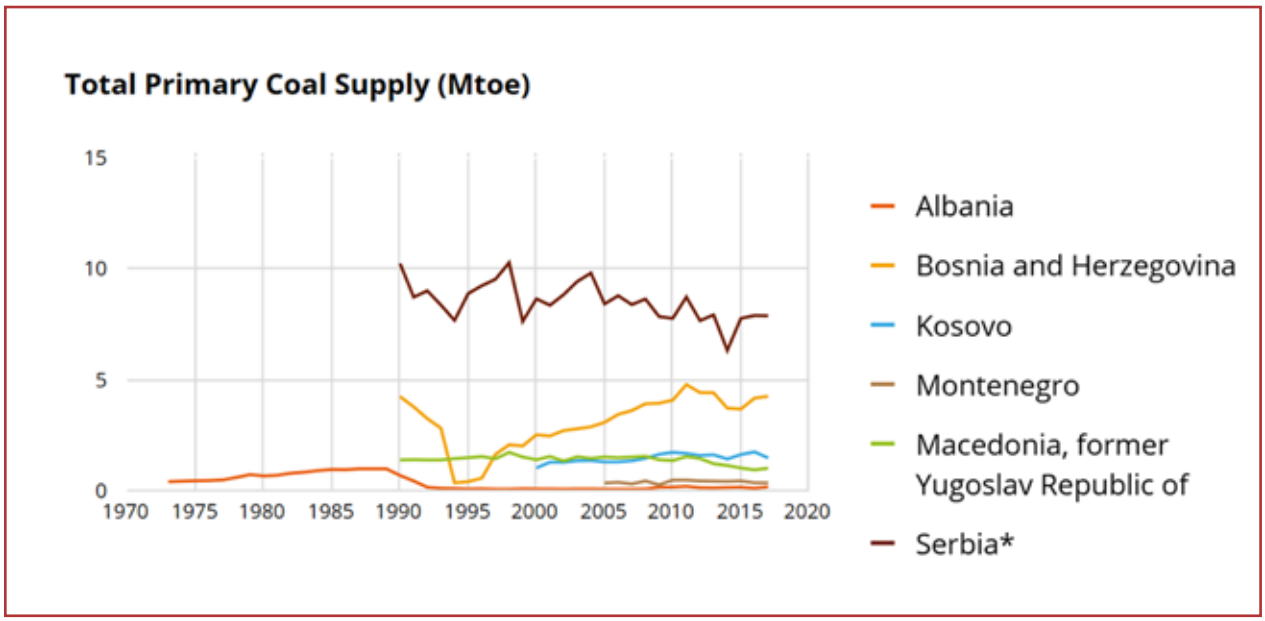
Figure 2.
CO2 emission per capita in the Western Balkans. Source: IEA Energy Atlas, 2017



Despite the Chronic Coal Pollution report results that should be a topic of serious discussion followed by urgent measures, the primary coal supply and its share in power generation and other transformation as well as electricity production, continues to be at a very high level in the entire region. Over 70% of the average regional electricity production is from coal, reaching even 97.5% in Kosovo. An exception is only Albania, where 100% of the electricity supply is generated from hydropower. Yet, these countries are continuing to increase their investment in coal power plants. Two huge coal projects are on the horizon as Chinese banks have confirmed their interest to finance them. Evidence show (Bankwatch

CEE Network, 2019) that three financing deals are signed so far for Stanari (CDB, June 2012, already built), Kostolac B3 (Eximbank, December 2014) and Tuzla 7 (Eximbank, November 2017), but at least six more plants have been subject to Memoranda of Understanding between Chinese companies and governments in the region (Serbia and Bosnia and Herzegovina). This is beside the released worrisome facts that 16 coal power plants in this region spewed out as much sulfur dioxide (SO2) pollution as the entire fleet of the EU's 250 coal power plants in only one year (Jovanovic, 2019). The Bankwatch's report (2019) also shows that one coal power plant in Bosnia and Herzegovina has emitted SO2 beyond the level that all German coal power plants have reached together. There come again the worries from the previously mentioned Chinese-financed coal projects that by any means are exhibiting breaches of EU legislation on environment, state aid and/or procurement and they will also lock EU accession countries into several decades of harmful and expensive coal use. Additionally, they threaten to spawn a group of pro-coal countries in the EU once accession takes place, which could further weaken the EU's climate ambitions.

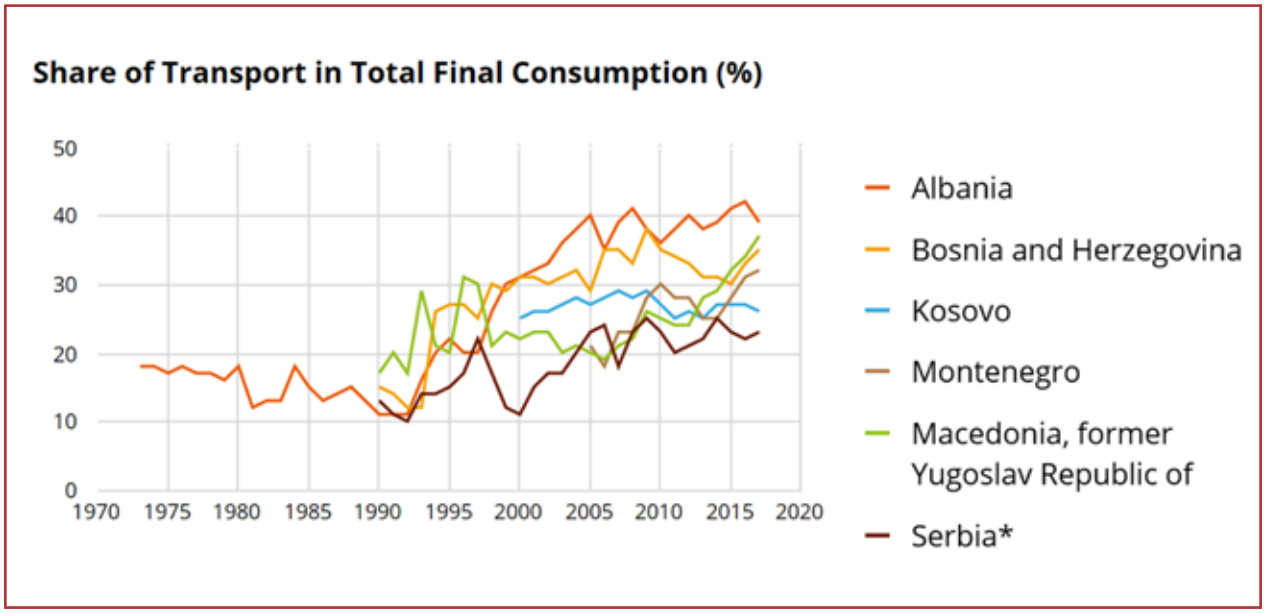
Figure 3.
Total Primary Coal Supply in the Western Balkans. Source: International Energy Atlas, 2017.



As presented in the figures, the emerging energy related issues are not following the slow process of development of these countries but require immediate attention and sustained measures. The continuously increasing energy demand is expected to reach 70% increase by the end of 2030. The statistical data shows a rising trend in total final energy consumption in the Western Balkan countries. **Looking into the different sectors, it is transport that has doubled the share in the energy consumption pie over the last two decades. Household is losing share if compared to transport, but still remains significant part in the total final energy consumption mix. If taken together with the significant levels of CO2 emissions, as well as the steady development of coal supply, the Western Balkans are to face significant challenges in the energy transformation processes they have committed to.** This adds upon the expected benefits

of the shift towards sustainable energy sources in these sectors, especially in the opportunity for job creation. The construction, transport and energy efficiency sectors are all labor-intensive sectors that would create considerable number of jobs. A recent discussion on the third biannual report of the UNFCCC in North Macedonia suggest a possibility of 10.000 jobs only in the energy efficiency of buildings sector until 2035.

Figure 4.
Share of Transport in Total Final Consumption (%) in the Western Balkans. Source: IEA Energy Atlas, 2018.



Between Pressing Environmental Issues and Rising Energy Demand

As noted by the International Energy Agency (2008) in their Energy Policy Review of this region, the Western Balkans are facing many energy challenges including the need for capacity building and policy formulation, energy market reform and regulation, energy security and energy efficiency, environmental policy and climate change, energy poverty, energy co-operation and trade, oil and gas transportation. For many investors, the Western Balkan countries seem to **not be open enough and developed yet in terms of modern energy infrastructure and institutional readiness and for that reason not attractive enough for them to place investments.** This emphasizes the urgent need for improvements in the energy regulatory framework and orientation towards exploration of the tremendous but untapped renewable energy resources. Capacity building and adequate investment in research and innovation is also required in order to facilitate knowledge-based transformation of the fragile parts observed as challenges in the energy sector.

Each of these challenges has a promising solution if adequately connected with the potential renewables in this region have. Beyond air pollution and environmental degradation, the region has to foster the energy transition in order to observe a future aligned with European Union's standards and commitments that will certainly lead towards sustainable development, as well as other international obligations as the ones arising from the Paris Agreement. In order to reduce the

energy dependency and the large reliance on fossil fuels which causes environmental degradation and bears high economic burden, but also contribute to air pollution and as a result increasing the numbers of premature deaths, the Western Balkans have committed themselves to adopt and implement the European energy policy. A powerful endorsement for such a commitment came with their decision to become Contracting Parties of the Energy Community in 2006 with exception of Montenegro which joined a year later.

To support the development of the region through modernizing the energy infrastructure, enabling energy connectivity and sustainability, the Energy Community consciously fosters the implementation of soft energy measures. As a very important step forward, the Memorandum of Understanding signed in April 2016, brought at the table stakeholders from all six neighboring EU countries: Bulgaria, Croatia, Greece, Hungary, Italy and Romania to support the Western Balkans in their future endeavors in the energy sector (EC, 2016). Primarily focused on establishing common regional electricity market, the Memorandum has also recognized the need of increasing support for penetration of renewables generation. Again, the importance of the EU Network Codes and Guidelines from the EU energy *acquis* and their implementation in the national and regional context is confirmed. Hence, the Western Balkans once again reaffirmed their commitment to follow the positive examples of western economies and introduce the EC energy regulatory framework.

The readiness for a sustainable energy landscape

According to the International Energy Atlas, since 1990, renewable electricity generation worldwide grew on average by 3.8% per annum, which is greater than the average growth rate of total electricity generation (2.9%). Whilst 19.4% of global electricity in 1990 was produced from renewable sources, this share increased to 24.5% by 2017. A trend of modest increase has also been observed in the Western Balkans as well, mainly due to the undertaken commitment's countries have as participating states of the Energy Community in the last years. In these undertaken commitments, the Energy Community is obligated to provide countries with financial and technical support for developing and implementing energy projects and fulfilling the EC criteria. Yet, a remains a challenge for some countries in region is to meet the 2020 RES targets by the end of the year, that represent a decision of the Ministerial Council of EC supported by RES Directive. These targets are to be achieved by all six Contracting Parties through setting binding national targets that will increase the use of renewable energy in the electricity, heating and cooling, and transport sectors. The targets should be met by 2020. For instance, one of the targets implies that the share of renewable energy in the transport sector is to rise to a minimum of 10% in every member and Contracting Party of the Community by 2020. The main idea behind the Directive is 7% increase of the renewables share in the total energy consumption of the Western Balkans. As explained previously, it is exactly the transport that requires particular attention due to it significant rise over the last two decades and as such requiring tremendous increase in total energy consumption. This is also reflected in the provisions Directive 2009/28/EC of the European Parliament.

Looking into the later developments, many of the practical results foreseen in the Memorandum as well as in other regional energy acts have yet to see the light of day, mostly due to the weak administrative capacities of each country and lack of regional coordination. To re-

ceive a proper treatment, these and other related topics get their place at the table during the regular Western Balkan Summits, as a platform for strengthening dialogue within the Berlin process initiative for EU integration of the region. Tangible outcomes put forward both energy and transport, through A Connectivity Package (EC, 2019).

Figure 5.
Share of renewable energy in gross final energy consumption, 2012 and 2017. Source: Key Figures on Enlargement Countries, 2019.

Despite the tremendous potential of the region well known for a frequently sunny weather, the situation shows lack of utilization and penetration of renewables into the energy generation system. According to the latest available statistics in the report by the Energy Community focused on all enlargement countries except Bosnia and Herzegovina (no data available as written in the report), the share of renewables in the gross final energy consumption ranged from 19.7 % in North Macedonia to 40.0 % in Montenegro. Looking into the period between 2012 and 2017, there is only a minor increase of renewables usage in most of the countries, while Montenegro and Albania reported a decrease. It was Kosovo that succeeded to increase the percentage of utilization of renewable energy potential the most in the respective period, yet the country remains far behind the other neighbors as well as the RES targets.

The current conditions suggest that all the countries in the region have implemented regulatory policies that outline renewables as priorities into their national strategies and energy action plans. Mainly, this is due to their obligations towards the Energy Community and transposing EU legislation into domestic legal acts. It is still worth acknowledgment as most of the countries have certain incentive measures into their national energy policies such as feed-in-tariffs and feed-in-premiums for hydro and for non-hydro technologies that are to support the previous regulatory policies. Feed-in-tariffs refer to a system that has implemented tariffs as a policy mechanism to encourage deployment of renewable electricity technologies, usually by guaranteeing that customers who own a renewable electricity generation facility, such as a roof-top solar photovoltaic system, will receive a set price from their utility for all of the electricity

they generate and provide to the grid. In addition, the feed-in-premiums provide RES producers with a premium payment on top of the market price of the electricity they produce, not exceeding the defined tariff (EIA, 2013).

A noticed problem in the Western Balkans with this system is those hydro technologies are considered as most cost-effective, which impose strict budgetary limits on the other technologies and therefore prevent wind expansion and solar energy development. The existing policies that impose caps on the energy production from several sources like wind and solar, are also adding onto the challenges in reaching the RES targets by 2020. To motivate more energy production from solar and wind power, North Macedonia with the recent Energy Law has allowed feed-in-premium only for energy produced from wind power plants and photovoltaic power plants (Balkan Energy News, 2019). Yet, they are to be implemented and show practical results by the end of next year.

Table 3.
Renewable energy regulatory policies in the Western Balkans. Source: Renewable Energy Status Reports 2018.

	RES Target	Energy Efficiency Targets	GHGs Emission Reduction Targets	Biofuels obligation/ mandate	Electric Utility Quota Obligation/ RPS	Feed-in Tariff/ premium payment
Albania	√	√	√	√	√	√
Bosnia and Herzegovina	√	√	√	√	√	√
Kosovo	√	√	√	√	√	√
Montenegro	√	√	√	√	√	√
North Macedonia	√	√	√	√	√	√
Serbia	√	√	√	√	√	√

Table 4.
Renewable energy regulatory policies in the Western Balkans. Source: Renewable Energy Status Report 2018.

	Ministry of Energy	Long Term Energy Strategy	RES	Prosumerism	Energy Cooperatives	Energy Poverty	Energy Access	Just Transition	Infrastructure
Albania	√	√	√	√	x	x	x	√	x √
Bosnia and Herzegovina	√	√	√	√	x	√	x	√	x √
Kosovo	x	√	√	x	x	x	x	√	x √
Montenegro	x	√	√	√	x	√	√	√	√ √
North Macedonia	x	2040	√	√	x	√	x	√	x √
Serbia	√	√	√	x	√	√	x	√	x √

Beside the policies that are all in favor of renewables expansion, not all of the countries in the region have a separate institution on a ministry level that is held responsible and accountable for the policies implementation and execution. Further research shows that the governing structure of the energy sector can be spread among departments from the Ministry of economy, Ministry of environment, Agencies, Committees and Regulatory Committees. In addition to the complex governing structure, the Annual Report of the Regulatory Committee for Energy of North Macedonia (2017) shows that there are also complex regulatory and administrative barriers such as property rights, long administrative procedures and, as well as infrastructural shortcomings in a form of limited transmission network and lack of approval for new or low-scale capacities, also confirmed by the number of complains of citizens and business entities.

The expected effects of the offered incentives, to motivate small-scale investors in renewables that will contribute towards increasing their share in the total energy production, are constantly challenged throughout the implementation process due to inefficient institutional capacities that these countries face. With a range of administrative barriers that increase investment costs and make an additional burden to the access to affordable finances, these countries are deterring investors instead of attracting them. Market uncertainty and lack of affordable technology, as well as an immense need of human capital, make the further development of the energy sector towards renewables more inclined towards hydropower schemes that are traditionally present in the region (Komila, 2018).

The Western Balkans are also facing the problem of frequent hydrology variations and lack of forest management. As a result, there is inefficient usage of the available biomass. There are some efforts to improve the legacy in this sector. However, these countries are not developed enough to raise projects and provide sufficient funds that are essential for sustainable development and efficient exploitation of renewables. They are very modest when it comes to available funding instruments. Beside the dedicated credit lines, energy efficiency funds, risk sharing facilities and Energy Performance Contracting, these have no other available funding models, both traditional and modern. They can apply real estate funds, loan portfolio sale, revolving instruments etc. but unfortunately their financial markets are not developed enough to support their energy projects (Rugova, 2016).

The 2020 RES targets do not end with 2020, but the Energy Community has stipulated further adjustment strategies – the 2030 RES targets that North Macedonia has already adopted, which are more ambitious and foresee a further improvement based on the 2020 targets, or achieving a level of 40% of decrease of carbon greenhouse gases, 32.5% increase of energy efficiency and 32% of renewables share.

Consequently, the Western Balkans have to continuously invest in renewables and meet the EEC standards. But, according to some energy marketers, even if the Western Balkans meet all the requirements; invest in management and energy infrastructure and fulfill the 2020 and 2030 RES targets, the current low export energy prices will not be sufficient to justify all the costs. The response of the Energy Community is that if additional grid connections to the EU are built for renewables electricity export, which will include two new under-sea interconnection lines to Italy, a new opportunity for the Western Balkans will arise to turn from net-importers to net-exporters of energy. According to the BETTER (Bring-

ing Europe and Third countries closer together through renewable Energies, 2016) project's scenario, the Western Balkans will benefit significantly compared to other regions by meeting 2020 and 2030 RES targets. But, to seize the opportunity - political, legal, financial and technological adjustments are needed as well as regional cooperation.

Considering the complex energy landscape of the Western Balkans and the specific energy related issues that are emerging lately and threatening the energy security of the region, the increased exploitation and orientation towards renewables can play a crucial role in the process of energy modernization and development. By meeting the 2020 RES targets and increasing the renewables share in total energy consumption, these countries will reduce largely their energy dependency. Renewables will also help in increasing energy security and energy efficiency. The market will experience some positive changes and reduce the monopoly power supported by the largely present vested interests and corrupted policymakers. Most important, by following the policy of the Energy Community and relying on renewables, the Western Balkans will decrease pollution, impede environmental degrading and lower the economic costs of deaths caused by air-pollution.

It is certain that everyone in the economy and the society in general will benefit from the increased use of renewables. Decentralization is important as it is the entire transition and there the institutional support and policy measures would play the main role in stipulating just and smooth transformation of the sector. The decentralized energy production on small and medium scale will foster energy democracy and provide opportunity for everyone including individuals. In a momentum when citizens are ready to merge efforts in taking concrete steps in reducing their ecological footprint and protecting the environment, it is up to governments to strengthen their agenda and enable the local green actions to entail global impact.

With a regional approach and common measures in following the attempt to integrate the countries on the round of energy, the region would also strengthen cooperation and improve neighboring relations with one another. The mutual and close action of countries could also play a major role in responding to challenges arising from increasing energy demands and developing an advanced energy system based on renewables. Taking in consideration the size, the Western Balkans would only be attractive to investors if shown a common agenda and strong cooperation based on institutionalized mechanisms added to the already undertaken agreements and memorandums.

The Western Balkan "Green Agenda"

The beginning may be difficult because of the long and challenging process of fulfilling EEC and EU's requirements, including 2020 and 2030 RES targets. In reality the targets are ambitious, but not unachievable. Therefore, in the long run the Western Balkans will enjoy the benefits of the current struggle to implement energy reforms and modernization. A very important step forward is the joint "Statement on Clean Energy Transition in the Western Balkans" that the Ministers of Energy and of Environment from the region signed in Podgorica on 21st February 2019. In addition, they have committed themselves intend to create a joint ambitious Green Agenda, that will contribute in fulfilling the EU *acquis* and align with the EU Green Deal, as well as to strengthen regional dialogue and safeguard principles in the implementation of climate mitigation and adaptation measures. The Green Agenda is expected to fortify the us-

age of significant natural potential for the development of renewable energy sources and finally enable effective regional energy market integration

Climate change and the consequent extreme environmental conditions do not tend to stop at borders. Joint efforts and mature response by all countries is needed. The Western Balkans can decisively show their commitment for a regional approach in climate change mitigation and adaptation through the announced Green Agenda. What is crucial in order to achieve valuable results and show substantial change, is to set the needed conditions for energy transition through favorable legislative framework and offer maximal support to all stakeholders involved in the process. Sustainable management of natural resources and their utilization in the energy grid is a bottom-up matter and relies on business initiatives, workers and local communities. The grounds for them to act accordingly is missing and it is up to governments to back-up their efforts and provide them an adequate role in the decision-making processes.

In countries that are known for their natural beauties in wide rural areas, merging traditions with modern technologies can lead towards creating sustainable local communities following the examples of eco and energy self-sustainable villages across Europe. Within the process of connecting business initiatives with local communities, it is of particular importance to keep rural development viable, but not at the price of land use. The use of land and natural resources has to be in a responsible and sustainable manner and accordingly to the previously well-defined property rights and legislation that promotes environmental protection. To avoid misuse and another example of the Prisoner's Dilemma as presented by Perman et al. (2003), the Western Balkan countries shall be aware about integrating their national energy strategies and legislation and create joint bodies that will monitor the process of energy transition. Strengthening institutional structures and capacities should be also done in a manner that will enable exchange of best practices, joint management of shared natural resources and intra-regional cooperation and exchange alongside alliances with the EU and EU countries.

CONCLUSION

The manifested developments around the globe in the last decade have demonstrated that global challenges are reaching another dimension due to the need to reduce inequalities and eradicate poverty, while minimizing the ecological footprint from economic activities, that urges for new concepts and strategies. Considering the past developments of the Western Balkans, the progress of the region is mainly determined by political, social, economic, but also ecological dynamics occurring both in the local context and beyond the regional and European trends. Fulfilling the energy transition agenda that foresees a region less reliant on fossil fuels and well positioned renewables, is possible if looking into the readiness for sustainable energy landscape, based on all the key policies that countries have adopted in order to elevate renewables. Building upon them with the suggested measures that foresee reducing administrative burdens and infrastructural shortcomings, would create a favorable environment for shifting the economies to renewables, that would create tremendous benefits not only to the environment, but also strengthen the process of democratization and god governance. Following the principals of functional democracy, the Western Balkans can promote just transition as a concept that would not only create value added to the green agenda and environmental portfolio, but also ensure eco-

nomic growth that is based on fair distribution and social justice.

With socio-economic benefits being expected to take the lead in jobs creation and engagement of the local community through the energy market and network decentralizations schemes, the energy transition would secure a prosperous future for the region. More affordable and clean energy would mean clean environment that ultimately affects the quality of life of all citizens. Collided with promising economic opportunities, the investments in renewables would entail energy self-sufficiency and elevate these countries into energy net exporters, that would have a great value added also to the energy security and stability of the region. In combination with adequate policies and legislation on energy efficiency, the promotion of renewables penetration into the energy generation schemes would significantly foster regional cooperation and ensure peace and security as main pillars of a modern society that go hand in hand with sustainable development. Ultimately, such goal would certainly contribute towards the long-standing objective of EU integration and the Green Agenda of the Western Balkans would propel an immense step forward.

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