UDC 620.9:[327::911.3(497)
DOI: https://doi.org/10.18485/iipe_ria.2022.73.1186.5
Biblid 0543-3657, 73 (2022)
Vol. LXXIII, No. 1186, pp. 105–124
review article

THE GEOPOLITICS OF RENEWABLES AND THE PLACE OF THE WESTERN BALKANS

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Abstract: The energy transition and moving forward towards renewable energy sources have become one of the top priorities of national agendas in the XXI century. Related to the energy scarcity challenge, combat against climate change and environmental protection, renewables are one of the most exploited themes when it comes to contemporary energy policies. This article should offer insight into the relationship between renewables and geopolitics, i.e., possible geopolitical consequences in the context of the new energy race to gain the status of a leader in the domain of energy transition. Besides, the place of the Western Balkans in this context is also highlighted due to its high renewable energy potential. In doing so, this article employs a literature review and the major issues analysed are: 1) possible geopolitical consequences of the energy transition towards renewables; 2) renewables and their geopolitical importance; and 3) the place and potential of the Western Balkans countries in geopolitical reconfiguration based on the transition towards renewables.

Keywords: geopolitics; renewables; energy transition; the Western Balkans.

Introduction

Although the literature on the geopolitics of renewable energy can be tracked back to the 1970s and 1980s (Vakulchuk et al. 2020; Scholten et al. 2020), the body

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The paper presents findings of a study developed as a part of the research project "Serbia and challenges in international relations in 2022", financed by the Ministry of Education, Science, and Technological Development of the Republic of Serbia, and conducted by Institute of International Politics and Economics, Belgrade.

of knowledge on this topic is of a more recent date. This is not surprising when bearing in mind that hydrocarbons and their transportation routes have dominated international energy relations so far. However, with the paradigm and policy shifts towards energy transition, which should bring more sustainable energy options for the environment and people, renewable energy sources (RES) have seen an uprising on the global, regional, and national agendas. Commonly understood as "a game changer for interstate energy relations" (Scholten 2018, 1), renewables are thus seen as the XXI century fuel, i.e., the "Al-Dorado of the XXI century" (EC 2015).

Fossil fuels have traditionally had strong geostrategic and geopolitical determination; coal, oil, and natural gas have long been the subject of geopolitical competition among states and have helped establishing international geopolitical map(s) during history. While coal led to the Industrial Revolution and shaped relations during the XIX century, oil determined the XX century world's politics and was gradually replaced by natural gas in defining relations among states. However, power politics and states' interests have included renewables recently as the energy transition took off in the first decades of the XXI century. Therefore, some of the authors compare the technological conversion that will take off in the next decades with the industrial revolution at the end of the XIX century (Criekemans 2018, 40). Considering fossil fuels determined energy relations between countries so far, the main question that arises is how the energy transition towards renewables will shape those relations in the future.

The goal of this paper is to highlight some key renewables geopolitical trends and to position the place of the Western Balkans countries in this context. In doing so, the article is structured as follows: it starts by defining some basic concepts and highlighting the nexus between renewables and geopolitics in order to contextualise the main research inquiry. The further section is dedicated to the place of the Western Balkans in the previously identified context of the interplay between renewables and geopolitics and its energy map and potentials in the domain of energy transition towards renewables. It concludes with the notion that the Western Balkans could benefit from the energy transition and have a prominent place in the context of the new energy race.

The Geopolitics and Renewables Nexus: Defining Basic Concepts

To avoid further terminological ambiguity with "green" and "clean" energy, it should be stated that renewables, according to the International Energy Agency, are "derived from natural processes" and "replenished at a faster rate than they are consumed", including sources such as "electricity and heat derived from solar, wind, ocean, hydropower, biomass, geothermal resources, and biofuels and hydrogen derived from renewable resources" (UN 2013, 194). Renewable energy is also often called sustainable energy due to its constant and natural replenishment. On the

other hand, green energy often comes from renewables, but with the notion that it excludes any environmental pollution or harmful effects on the environment, such as releasing greenhouse gases (TWI n.d.). In other words, while most green energy sources are renewable, not all renewables are seen as completely green.[2] In addition, clean energy is energy that produces little or no pollution, thus including renewables, but also nuclear energy and the carbon-neutralising impact of technologies (such as carbon capture and storage – CCS) (Collins 2022). Finally, energy transition is considered as a "pathway toward transformation of the global energy sector from fossil-based to zero-carbon" with 2050 as a crucial deadline (IRENA n.d.). In this context, renewables and energy efficiency measures are seen as a key tool for achieving 90% of the required decarbonisation of the energy sector within the stipulated period (IRENA n.d.; ENEL n.d.). As the energy transition is progressing incontinently, renewables are starting to appear as an obvious critical resource over the upcoming energy trends, both globally and regionally, and as a new strategic factor in the states' competition. Renewables and their role in the energy transition eventually became accompanying issues of the global energy and climate policies based on the Paris Agreement, the UN Sustainable Development Goals, and many other initiatives, as well as part of the public narrative dedicated to combating climate change and decarbonising energy sectors worldwide.

Although a detailed definition of the conceptual development of geopolitics is beyond the scope of this article, some basic understandings of the concept should be underlined. Geopolitics, put simply, refers to the state's power projection within a specific geographic space (Šekarić 2021). The political environment, determined by specific geographic criteria, thus becomes a defining factor when deliberating (contemporary) international relations.[3] In other words, it could be said that geopolitics refers to specific spatial criteria that generate strategic interests of stakeholders. This key element of classical geopolitics – how to use space in order to increase the power of a state – becomes evident in terms of the specific, uneven geographic distribution of crucial natural resources. Geopolitics and natural resources, undoubtedly, have always been intrinsically connected due to their expressed territoriality. Geopolitics has been considered as an "integral to the drive to secure access to vital global resources" (Sarpong 2021, 1132) – those who have had access to critical resources and/or were abundant with energy sources were those with strong strategic advantages. Starting from the assumption that the operational logic of geopolitical power projection is confrontation (Wigell and Vihma 2016, 605), interstate relations with a geopolitical dimension regarding

[2] For instance, power generated from biomass or hydropower comes from renewable sources, but the process of its production "creates difficult trade-offs" when it comes to the environmental impact (Shinn 2022).

[3] Cohen (2014) saw geopolitics as the "geography of international relations".

natural resources are primarily seen as competitive, rivalry, and even conflicting. These behavioural patterns have resulted in competitions over crucial hydrocarbons throughout history and even over space resources and rare earth elements in recent years. For the purpose of this article, geopolitics refers to the geography and state power nexus and deals with interstate relations regarding energy transition towards renewables. In the context of this research, i.e., in specific relation to (renewable) energy, geopolitics has the meaning of "great power competition over access to strategic locations and natural resources" (Overland 2015, 3517). This is certainly the case with the "new energy race" over the materials needed for the construction of renewable technology infrastructure, which is largely determined by competition among states and gaining the status of an "energy transition leader". Geopolitics in relation to renewables, on the other hand, has the potential to relieve confronting behavioural patterns in favour of states disposing with some forms of RES.[4] In other words, while rare earths needed for renewable tech could be (and are) a subject of those strategic interests, energy from solar, wind, or hydropower, if utilised in an adequate way, could make a state more energy independent and thus improve the producer-transit-consumer ratio characterising international energy relations.[5] This leaves less room for possible "weaponizing" of energy resources that has characterised oil and gas energy relations so far.[6] The question whether RES leads to more or less geopolitical tensions (Scholten 2018, 14) is difficult to answer primally because the nature of their production and distribution beyond national boundaries and overall functioning of renewable energy systems within international context is still unknown. This is why the body of knowledge on the geopolitics-renewables nexus is still underdeveloped and is gaining more attention lately. Therefore, the next subsection is dedicated to highlighting possible geopolitical implications in the domain of energy transition towards renewable energy sources.

Geopolitical Importance of Renewables

As already mentioned, the literature on renewables is not novel but has come to the fore with the increased dynamics of the energy transition from fossil fuels to zero-carbon energy sectors. By virtue of their geographic, chemical, and technical characteristics and contrary to fossil fuels, renewables are more abundant, decentral-generated and mostly electric-distributed, including rare earth materials in clean tech

[4] What makes this conclusion possible is the fact that every country disposes of some forms of RES, whether it be solar, wind, hydropower, ocean, or biomass.

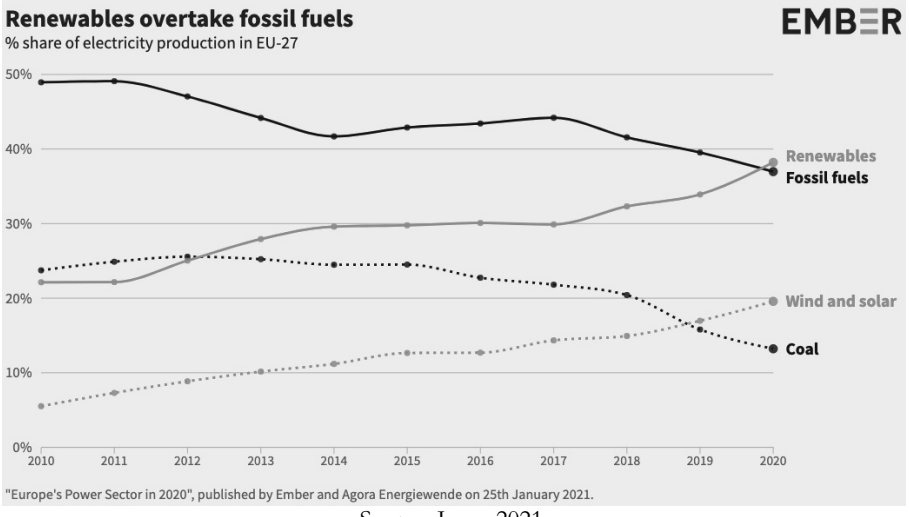
[5] However, this could be just one aspect of the geopolitics of renewables and is more rooted in local and regional levels of analysis when considering international relations.

[6] More on the "weaponizing" of different energy resources could be seen in: Lilliestam and Ellenbeck 2011; Obrenović 2020.

equipment (Scholten 2018, 1), and are more dispersed rather than concentrated in just a few locations like hydrocarbons (Hook and Sanderson 2021). Their characteristics thus could have some implications for states' energy relations when it comes to states' tendencies to use the potentials of RES and challenges posed by the currently undergoing energy transition.

Renewables' geopolitical importance has grown as their presence on the global energy map has grown, whether for reasons of diversification away from hydrocarbons, combating climate change, or stock depletion (Scholten 2018, 3). The share of renewables in global energy consumption is rising – for example, the growth rate per annum in the period 2009–2019 was 13.4% (BP 2021, 55). The EU, one of the greatest energy consumers, records a rising percentage of renewables in electricity production – while "clean" electricity replaced power from coal gradually from 2011 to 2019, the energy crisis and high gas prices resulted in replacing gas-generated electricity with the one gained from renewables (Jones 2021) (Illustration 1). In general, the EU more than doubled the share of its gross final energy consumption from renewable sources – from 9.6% in 2004 to 22.1% in 2020 (Eurostat 2022a). Moreover, energy investments across the globe have also favoured lower-carbon energy resources lately (IRENA 2020).[7] The electricity sector has seen the most recent growth in RES, accounting for roughly one-quarter of global electricity production (IRENA 2019, 16).

Illustration 1: % share of electricity production in the EU-27



Source: Jones 2021.

[7] However, the share of fossil fuels is still expected to cover the biggest part of world energy consumption due to the gap between rising global energy demand and energy transition dynamics.

So far, specific geographical and technical characteristics of fossil fuels (primarily oil and natural gas) have been reflected in trade patterns and energy markets, leading to the politization and securitization of energy relations between states in a number of cases.[8] The geopolitical map traditionally linked with hydrocarbons that has prevailed so far has witnessed reconfiguration with the growing importance of RES nowadays. In this manner, IRENA's Report from 2019 stated that energy transformation driven by renewables will change international energy relations in years to come (IRENA 2019, 14). This especially comes to the fore when bearing in mind that more than 70% of proved hydrocarbons lie in countries in politically unstable regions such as the Middle East and Central Asia (Goldthau 2016, 13), which, in turn, has several destabilising effects on overall energy relations. The idea of using RES in order to become more energy independent thus enables a possible reduction of the prevailing geopolitical risks that have accompanied production, transportation, and consumption of fossil fuels so far. Due to their abundance, RES are present in every country in some form, which, if utilised in an adequate way, could result in decreased energy imports. Contrary to fossil fuel markets, where just a few well-endowed states dominate with significant amounts of hydrocarbons (Scholten 2018, 19), renewables could result in more competitive markets. A zero-sum energy relations perspective based on hydrocarbon trade patterns could be thus replaced with a room-for-everyone view based on renewable energy sources.[9]

IRENA's Report presented three types of countries which will have the potential to emerge as new renewable energy leaders – the first type refers to exporting electricity or green fuels; the second one is about controlling critical materials used in clean energy (lithium, copper, and cobalt mostly)[10]; and the last one refers to gaining a technological advantage (such as electric vehicle batteries) (IRENA 2019, 39–40). Those shifts impose considerations that a new energy race will result in "a new set of winners and losers" (Hook and Sanderson 2021). For instance, considering the "global South" is naturally richer in solar radiation, the question is whether the energy transition will bring some geopolitical reconfiguration in favour of the global South in this context. Those countries that import a huge percentage of their energy but are abundant with solar, wind, or hydropower will benefit most from the transition. In contrast, countries that rely heavily on fossil fuel exports and are characterised by lower GDP per capita are likely to struggle the most with new

[8] Oil crises in 1973 and 1979, as well as few gas crises between Russia and the EU in the first two decades of the XXI century, are cited as examples.

[9] However, it should not be neglected that some countries are by nature "better endowed to become efficient renewable energy producers than others" due to better positioning of solar, wind, or biomass stocks (Scholten 2018, 19). This implies qualitatively different (though significantly reduced) differences between energy exporters and importers.

[10] While copper is crucial for electric cables and wind turbines, lithium and cobalt are used in electric vehicle batteries.

energy trends (Hook and Sanderson 2021). In a similar manner, Stegen (2018, 76, 79), relying on (neo)realism and (neo)liberal institutionalism as two predominant theoretical perspectives in International Relations, identified states with "raw renewable energy potential that are able to attain a high degree of energy self-sufficiency and export dominance" as winners in a renewables world. In addition, Sainteny saw three geographical zones[11] as key players in the geopolitics of renewable energy – the EU (with Germany as a core country), the US, and Asia (with China, India, South Korea, and Japan as core states) (Sainteny 2010 according to Criekemans 2018, 52), endeavouring to benefit from the energy transition. This set of possible winners of the energy transition clearly rests on renewable energy potential associated with adequate economic, personnel, technological, and know-how equipment.

Trying to catch the refined geopolitics-renewable nexus, Scholten et al. (2020) identified six clusters of possible geopolitical implications of RES. The first refers to the abundant and dispersed nature of renewables, which allows every country to produce its own energy to some extent and thus become less energy dependent on energy imports. This, in turn, qualitatively changes established energy patterns that have been dominant so far. The second one is in relation to more decentralised options in operating energy from renewables, opening the room for other, non-state and more local stakeholders, with possible impact on state energy policies. The third cluster of possible geopolitical implications highlights increased competition over critical materials used for renewable generation technologies. This is the case with rare earth materials, which are even now witnessing great powers' competition over their extraction and constructing renewable generation technology. The fourth cluster brings increased electrification of energy systems since electricity from RES is currently leading, among others, thus having significant implications on the established energy transportation modes prevailing so far. Changes in the volume and nature of energy trade make up the fifth cluster of possible geopolitical implications, which, in turn, leads to the question of possible politization and even securitization of those trends. And finally, the sixth one refers to the intensified competition between renewable technologies coming from the West and China and ultimately getting the epithet of industrial leader in the energy transition. As can be seen, while some of those implications stem from the nature of RES, such as their physical, chemical, and technical characteristics, there is no doubt that those specifics could (and are) used by great powers to gain and maintain strategic advantages in the domain of energy transition. This could be primarily seen via competition on the West-China spectrum.

Great powers' strategies and projects are already competing over renewable generation technologies and employing research of rare earth materials for the

[11] These zones correspond with the biggest investors in the renewable energy sector as well as with the locations where are concentrated the world's biggest solar power plants (Wolfe 2021) and wind farms (*Ronergy* 2022).

construction of necessary infrastructure. More specifically, the question that arises is about possible dependency on rare earth materials necessary for renewable generation technologies. While those countries that dispose of rare earths are by nature "winners" of this competition, others interested in renewable technology could develop a new kind of dependency from prior ones. In this context, China could become a top leader in producing "clean technologies" due to the largest concentration of cobalt, lithium, and other rare earths needed for renewable generation tech (Pistilli 2022). The question posed justifiably is whether rare earths are new oil or gas that could possibly be used as a tool of political pressure. These dynamics, in addition, lead to questioning the position of petrostates and "traditional" energy powers during the period of energy transition and posing the question of whether they are going to be "losers" in the new energy race. As expected, those states that have adequate personnel and financial resources will benefit most from the energy transition. By taking the role of a leader in the energy transition, states are expected to impose themselves as energy powers with strong geopolitical advantages.

The EU energy policies contain a strong renewable energy dimension. The European Green Deal puts clean energy transition and renewables at the top of the political agenda(s) with the goal of becoming the world's first carbon neutral continent by 2050 (EC COM [2019] 640 final). These renewables transition goals are being accelerated in the context of the undergoing conflict in Ukraine, with the goal of reducing energy dependency on Russian hydrocarbons as quickly as possible. The US is also one of the expected "winners" of the new energy race due to the fact that it is strongly investing in the development of renewable technologies – in a seventeen-year period, its investments in clean energy have risen more than 10 times, from 10 billion dollars in 2004 to 105 billion dollars in 2021 (Statista 2022). As already mentioned, China's dedication to green investments and energy transition puts it at the top of the battle for energy transition leader (Tables 1 and 2). The high concentration of critical materials and overall renewable energy activities makes China a "country in pole position", with the help of producing more than 70% of solar photovoltaic panels on a global level, half of the world's electric vehicles, and a third of all wind power (Hook and Sanderson 2021). Furthermore, China dominates critical materials supply chains, which results in economic benefits for this country regardless of which other states invest in the renewable energy sector. On the other hand, current energy powers such as petrostates and natural gas powers will face an urge to not reduce placement of their key energy exporting sources. If oil or gas demand starts to decline, this could result in lower incomes from hydrocarbons for net-exporters and, consequently, political instabilities in exporting regions (Scholten 2018, 19). Thus, it is anticipated that Russia and the OPEC nations won't be passive spectators in the new energy race. These conflicting interests are also one of the potential implications of the undergoing energy transition.

Table 1: Top 10 countries by electricity generation from solar in 2018

No	Country	TWh
1.	China	178
2.	U.S.	85
3.	Japan	63
4.	Germany	46
5.	India	31
6.	Italy	23
7.	UK	13
8.	Spain	13
9.	France	11
10.	Australia	10

Source: Hook and Sanderson 2021.

Table 2: Top 10 countries by electricity generation from wind in 2018

No	Country	TWh
1.	China	366
2.	U.S.	276
3.	Germany	110
4.	UK	57
5.	India	55
6.	Spain	51
7.	Brazil	48
8.	Canada	32
9.	France	29
10.	Turkey	20

Source: Hook and Sanderson 2021.

However, it will be a one-sided story if we do not mention some of the key disadvantages when it comes to the faster transition towards renewables. Many questions remain unanswered in the energy transition, ranging from the producer-transit-consumer relationship in the context of renewables, to the impact of national-driven energy needs on foreign energy relations, to new potential stakeholders in the form of non-state and more local actors. While fossil fuel markets were dominated by (multi)national energy companies, renewables created space for more local businesses due to their decentralised energy production. Also, the question of renewable technology know-how and investments in the RES sector has become one of the most important. According to some estimations, renewable technology is not ready yet for complete usage – out of 46 technologies, only 6 of them are ready for commercial usage at this moment (Stanojević 2021). This puts the future of RES and the speed of technological innovations into a specific dependency relationship. In other words, not only renewable sources are important when it comes to the energy transition but also renewable energy systems comprising of adequate infrastructure capable for its usage, processing, and storage. Also, the high cost of those development projects makes RES technologies far from their full utilisation. Another implication of the new energy race is related to increased competition for rare earth materials used for renewable generation technology. This competition could result in new harmful environmental effects and controversial projects for an energy generation that should be safe for the environment in its basis.[12] Intermittency of RES is also

[12] For instance, the Republic of Serbia has witnessed several ecological protests during 2021 and 2022 against lithium exploitation and the Rio Tinto Corporation, as well as against the construction of small hydropower plants.

seen as one of the disadvantages of energy transition – unpredictability of weather conditions impacts expected and needed amounts of renewable energy. Finally, the world will not witness the complete end of fossil fuels in recent years – data on fossil fuels' share in global consumption and some expectations are clear about that. In other words, the pattern that will be prevailing in the near future will probably see the coexistence of fossil fuels and renewables or, as Scholten saw, "understanding of the geopolitics of renewables is in essence about how the energy transition affects fossil fuel dominated interstate energy relations" (2018, 11). Nevertheless, considering that RES and energy transition are "more than a mere change in the energy mix" resulting from changes in technologies and infrastructure, markets, and sector regulation (Scholten 2018, 5) and starting from the assumption that all endeavours are dedicated to overcoming the mentioned obstacles, it is highly likely that they will be overcome at some point in the future, which will open the room for a fast transition towards renewables. The truth is that energy transition could take decades (Stegen 2018, 76), but states' declared and operational commitment to renewable energy transition is what will make this energy shift worthwhile in the years ahead.

The Place of the Western Balkans in the Energy Transition

The abovementioned section served to highlight the potential geopolitical implications of the energy transition towards renewable energy sources. While this, as expected, deals with great powers and possible global geopolitical reconfiguration in a new energy context, the question is how more locally oriented states will face those challenges, such as those from the Western Balkans (WB countries).[13] The purpose of this section is to contextualise the energy environment of the Western Balkans in order to understand its energy transition stage as well as to identify the potential for the Western Balkans to profit from the shift to renewable energy sources.

The Energy Context of the Western Balkans

The Western Balkans countries' diverse energy needs have resulted in a diverse energy mix. However, some of the common denominators could be underlined. The primary Western Balkan energy sources are derived from coal, natural gas, oil, and renewable energy sources (mostly from wind, solar, and hydropower energy). In most of the Western Balkans countries, the biggest amount of electricity is still produced from coal-fired power plants, which, together with ageing energy

[13] Although the author, in analytical terms, considers Croatia as part of the Western Balkans (together with Serbia, Montenegro, Bosnia and Herzegovina, North Macedonia, and Albania), it will be omitted from the analysis due to its EU membership and functioning in accordance with the European energy *acquis communautaire*.

infrastructure, makes those states some of the greatest pollutants in Europe (Todorović 2022), thus presenting a threat to fulfilling commitments from the European Green Deal (Morina 2022).[14] Notwithstanding, investments in regional coal-fired power plants continue to be made, especially when it comes to the Chinese energy projects in this part of Europe within the BRI mechanism that are strongly opposed by the EU (Zakić and Šekarić 2021).[15]

Setting aside consumption of coal, the Western Balkans countries are largely dependent on Russian oil and gas. According to some data, Serbia, Bosnia and Herzegovina, and North Macedonia import about 99% of their natural gas from Russia (Stanojević et al. 2020, 29; *Al Jazeera* 2022; Ichord 2022). Their high dependency on energy imports marked them as one of the regions with the most harmful effects of possible disruptions of all supplies from Russia (EC SWD [2014] 330 final/3). What further complicates this situation is the fact that the Western Balkans states lack diversifying options, whether when it comes to energy sources or supplying routes. As the war in Ukraine continues, the Western Balkans face an energy crisis where the need for diversification of energy production and supply routes thus becomes of crucial importance.

When it comes to the other great powers' presence in the Western Balkans in the domain of energy, it is worth considering the fact that the Western Balkans countries exist in an energy environment that is highly determined by their membership in the Energy Community, which obliges them to function in accordance with the European energy *acquis communautaire*. This essentially means that those countries need to transpose the entire EU energy and climate legislation into their own. Besides, the EU is also present in the energy sectors of those states via diverse financial tools in the form of grants and loans coming from EIB, EBRD, and other platforms and programmes (EC [SWD] 2020 223 final).[16] However, it is not unusual that the Western Balkans countries are thorned between European obligations and cheap and pragmatic energy solutions that meet their short-term energy needs. Good illustrations are cases raised against the Western Balkans countries in the domain of breaking such European energy rules.[17] Considering the

[14] For instance, while 22 EU countries emit 992 248 SO_2 t/year and 11 946 PM 2.5 t/year, 5 Western Balkan countries emit 750 893 SO_2 t/year and 20 188 PM 2.5 t/year (WBIF 2019, 5).

[15] Nevertheless, it should be mentioned that China has been simultaneously investing in the renewable energy sectors in the BRI countries lately, contrary to coal-favoured projects, which, in turn, result in (almost) no EU resistance.

[16] For instance, the EU provided €1 billion in grants to energy and transport projects via the Western Balkans Investment Framework (WBIF) (WeBalkans 2022), while the new Economic and Investment Plan for the Western Balkans opens room for potentially raising investments in the renewables sector by up to €20 billion (ECS 2021a, 4).

[17] Those cases could be tracked at the Energy Community's official webpage: https://www.energy-community.org/legal/cases.html.

strong EU's dedication to energy transition goals (especially in the context of undergoing conflict in Ukraine), it is expected that Western Balkans procrastination in the domain of energy transition will not be tolerated. This is further complicated by some of the common energy challenges in the Western Balkans in the domain of renewable energy, such as significant dependence on oil and gas imports; harmful environmental impact of fossil fuels; underdeveloped renewable energy sector; lack of integration of electricity and gas markets; etc. (Jovanović 2016, 196). Therefore, the abovementioned *state-of-the-art* created a challenging environment for fast energy transition in the region and tore apart the region between the reality of energy dependence and a potential energy hub (Turčalo 2020).

The Energy Transition in the Western Balkans

A faster energy transition towards renewables in the Western Balkans is seen as a good way to achieve energy independence from energy imports (Kešmer 2022). This especially becomes important in the context of the Western Balkans' dependence on Russian oil and gas in terms of the current war in Ukraine and depleting coal reserves (not to mention its harmful environmental impact). Primary worries are connected to slow energy transition processes in the Western Balkans compared to European tendencies to end energy dependency from third parties, which also extends to the countries of the Western Balkans as EU candidate states and members of the Energy Community.

Some of the key advantages of using RES, as highlighted in the literature, are energy diversification, lower energy-import dependency, positive environmental impact, etc. Although RES require significant financial means, they reduce energy risks in a long-term (Jovanović 2016, 3) – if energy is used from domestic renewable sources, it reduces needs for energy imports which, in turn, ensures the sustainability of supply. Additionally, renewables are seen as a significant reducing-energy-poverty category; the social aspect of RES is primarily seen through the positive correlation of increased energy production and greater energy availability, on the one hand, and the improvement of quality of life (Jovanović 2016, 10). The Western Balkans has high renewable energy potential (Đurašković et al. 2021), disposing of significant hydropower, solar and wind resources, and biomass. This is what makes the WB region a zone of interest[18] of the EU in the domain of energy transition, especially in terms of its dedication towards European integration and firmer integration with the WB energy market (Jovanović 2016, 160). For example, the EU established a €339 million investment package to support 7 projects in the clean energy sector, environment, and the climate sector in the WB countries (Spasić 2022).

[18] Or potential "energy hub" (Turčalo 2020, 6).

The Western Balkans countries are dedicated to developing renewable energy sectors. They adopted medium-term to long-term strategies in order to increase the share of renewables in their overall energy consumption (Energy Strategy RS 2015; Energy Strategy MNE 2014; Energy Strategy BiH 2019; Energy Strategy NMC 2019). However, data from the Energy Community on the Western Balkans' energy transition progress paints a slightly different picture. As for renewable implementation criteria, according to the Energy Community Progress Report, the WB countries are showing positive annual capacity change (Table 3). However, they mainly failed to achieve a certain percentage of energy generated from renewable sources and thus stayed below scheduled 2020 targets (except for Montenegro) (ECS 2021b, 24, 45, 124, 145, 165). For illustration, the share of renewable energy sources in electricity generation in 2010 and 2020 in the WB countries is presented in Table 4.

Table 3: Summary of renewable energy implementation criteria for 2020 for the WB countries

WB country	Implementation status	Description	Annual capacity change	Total capacities of renewable energy (MW)
Albania	55%	Moderately advanced	+ 221 MW	2398
B&H	48%	Moderately advanced	+ 22 MW	2373
Montenegro	69%	Well advanced	+ 21 MW	816
N. Macedonia	57%	Moderately advanced	+ 15 MW	782
Serbia	64%	Well advanced	+ 25 MW	3515

Source: ECS 2021b.

Table 4: Electricity generated from renewable energy sources in the Western Balkans, 2010 and 2020 (% of gross electricity consumption)

WB country	% in 2010	% in 2020
Albania	74.6%	100%
B&H	40.6%	45.5%
Montenegro	45.7%	61.5%
N. Macedonia	15.8%	23.5%
Serbia	28.2%	30.7%

Source: Eurostat 2022b.

On the other hand, the answer to what is slowing down the energy transition in the WB countries cannot be reduced to a single factor. According to some authors, outdated infrastructure, regulatory and market issues, low transparency levels, lack

of appropriate legislation, limited regional market integration, and poor institutional coordination are key obstacles to faster development of RES and increased investment in the renewable energy sector in the Western Balkans countries (Dunjic et al. 2016; Đurašković et al. 2021). In addition, some of the investments in energy sectors across WB countries "are mainly shaped by the preferences of a closed circle of domestic decision-makers and interest groups and, importantly, external signals and pressures" (Ćetković 2022). This leaves room for deeply rooted corruptive manoeuvres that characterise the Western Balkans' governments, especially in energy sectors that are highly dominated by the states' authorities.

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Given the geopolitical perspective that coloured this analysis, some remarks on the WB countries and energy transition should be made in the first place. The energy context of the region and some of the still unresolved political and security issues at the bilateral and multilateral level have shaped it as a challenging environment for energy transition. The mentioned presence of great powers with often conflicting energy interests in this part of the European continent could thus have a spillover effect when it comes to establishing international relations underpinned by renewable energy sources. This raises questions about the possible implications of importing RES technology originating from different suppliers, such as the US, the EU, or China. From a more local perspective, the already mentioned lack of regional electricity integration opens room for possible joint projects in the domain of RES, which, in turn, could ameliorate debased neighbouring relations and improve the export and import capabilities of those countries on a regional level. Undoubtedly, more investments in renewable energy sectors and an adequate legal framework to attract those investments are seen as key tools in a faster energy transition in the Western Balkans countries (Kešmer 2022). Despite identified barriers to faster development of renewable sectors in the WB countries, those countries could benefit from the energy transition in the long run if the process is managed properly. This is primarily seen through reducing import energy dependency, diversifying energy sources and supply routes, fully utilising raw renewable energy potential, improving regional integration in the electricity sector, generally improving renewable energy transportation infrastructure, and extenuating energy relations. Those benefits could enthrone the WB countries as potential "winners" of the new energy race. However, this must be done in accordance with global and regional energy transition goals, which necessitate political will to take necessary actions, among others.

Concluding remarks

Though fossil fuels remain significant energy resources, the world's dedication to the energy transition towards renewables and their rising share in world energy

consumption should not be neglected in years to come. This becomes especially important in the context of geopolitical competition among states over the label of leader in the new energy race. By virtue of their geographical and technical characteristics, RES and rare materials needed for renewable technology are becoming an object of new energy competition among states as the energy transition takes off in the XXI century, reconfiguring geopolitical maps established by fossil fuel trade patterns so far. Whether they serve as a diversification tool or the main source of dominating the energy mix of a country, renewable energy sources present a new instrument of states' strategic drive.

This article reviewed the geopolitical consequences of the energy transition towards renewables and questioned the position of the Western Balkans in this context. The Western Balkans, traditionally, saw great powers' presence even in the domain of energy in the form of dominantly the EU, Russia, and (more recently) China. This geopolitical picture could be qualitatively changed by the ongoing energy transition, especially when keeping in mind that the region abounds with some key renewable energy sources such as solar, wind, and hydropower. Despite the good renewables environment, the Western Balkans countries are characterised by some of the obstacles when it comes to the faster energy transition related to weak institutions, ageing infrastructure, lack of appropriate legislation, and limited regional market integration. However, if the Western Balkans countries use their high renewable potential and effectively govern energy transition, they could benefit from many aspects of this process, including increased energy independence, full utilisation of renewable potential, lower energy risks, better positioning in the new energy race, and improved energy relations on both regional and global levels.

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ГЕОПОЛИТИКА ОБНОВЉИВИХ ИЗВОРА ЕНЕРГИЈЕ И МЕСТО ЗАПАДНОГ БАЛКАНА

Апстракт: Енергетска транзиција и прелазак на обновљиве изворе енергије постали су један од главних приоритета националних агенди широм света у XXИ веку. С обзиром на њихову повезаност са оскудицом енергетских ресурса, борбом против климатских промена и заштитом животне средине, обновљиви извори енергије једна су од најексплоатисанијих тема када је реч о савременим енергетским политикама. Овим чланком пружа се увид у везу између обновљивих извора енергије и геополитике, односно сагледавају се могуће геополитичке последице нове енергетске трке око стицања статуса лидера у домену енергетске транзиције. Осим тога, истакнуто је и место земаља Западног Балкана у овом контексту услед њихових великих потенцијала поводом обновљивих извора енергије. У анализи је коришћен преглед литературе, а главна анализирана питања су: 1) могуће геополитичке последице енергетске транзиције ка обновљивим изворима енергије, 2) геополитички значај обновљивих извора енергије и 3) место и потенцијал земаља Западног Балкана у геополитичкој реконфигурацији заснованој на транзицији ка обновљивим изворима енергије.

Кључне речи: геополитика; обновљиви извори енергије; енергетска транзиција; Западни Балкан.

Received: 01 July 2022
Accepted: 24 September 2022