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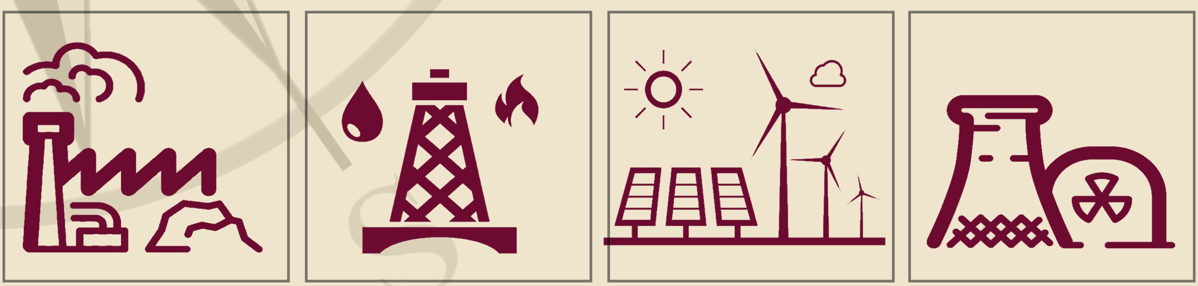

FOREIGN AFFAIRS RESEARCH PAPERS June 2022 16

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ENERGY AND CLIMATE DIPLOMACY

FOREIGN AFFAIRS RESEARCH PAPERS 16

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A NEW ENERGY ORDER IS BANGING ON THE DOOR

Slavtcho Neykov, Editor-in-Chief

Member of the National Consultative Council
of the Bulgarian Diplomatic Institute

This year's edition of the Energy and Climate Diplomacy Journal is in a way unique – not so much for its content, focusing on regional cooperation, but rather due to the uniquely specific political and economic set of circumstances in the world and in Europe.

In fact, the world as a whole – and Europe in particular – changed drastically in just a few months, with speed no one ever thought possible. And during these changes, the energy dimension started to lurk from each and every direction.

The onset was in the form of unprecedentedly high volatility in the prices of energy. However, the situation dramatically changed after Russia invaded Ukraine in February 2022.

At European level, this change has numerous manifestations with political, economic, social and even demographic aspects. The initial common reactions, caused by the fact that after more than seventy years of peace there was again war on the continent, were gradually shaped into very concrete national positions. These have in turn influenced, inter alia, common regional concerns – which are also well justified due to the existing interconnectedness.

Nonetheless, and regardless of the background, the considerations in the energy context were dominated by two major aspects – the current uncertainties of energy security and what is to come next.

Although this year the journal includes a relatively small number of articles, it offers, as usual, a set of views related to the European and regional energy cooperation – the latter focusing on South East Europe. Political analyses are accompanied by strictly expert positions concerning renewables, nuclear, market developments, etc. Politicians, heads of international organizations, diplomats, businessmen and scholars have presented their thoughts, touching upon different aspects of the recent energy policy challenges.

In this context, there are two aspects that I would like to explicitly mention.

On the one side, when it comes to energy policy, all countries in Europe in general, and in SEE in particular, are united by a common vision for the development of the energy sector – and in the concrete case this concerns both EU Member States and countries that do not have such status. The unification of this vision is based on the EU approach. Legally, this is being achieved via different formats – the Energy Community, the European Economic Area, EFTA, etc. And the processes in this context already have decades of history behind them.

On the other side, the energy dependence of the European countries on Russia (mostly but not only as a supplier) and Ukraine (mostly but not only as a transit country) exists also for many years; but – due to the war – this dependence acquired a completely new dimension within just a few weeks. Politically, this causes a lot of disturbances, including sanctions, as well as the emergence of completely new views on key steps, e.g., on the EU enlargement, etc. Economically, this brought immediate business-related concerns of different natures and provoked urgent policy reconsiderations at European level.

Certainly, the leading role of the EU institutions in these dimensions is crucial. However, in parallel to the European look at the situation, it should be also clearly noted that the effect of these steps at the national level is much more complicated than expected. The reasons behind this are of political, economic, technological and even historical nature; besides, these have completely distinct dimensions in the different countries. Thus, e.g., in Bulgaria, the national approach should be based on the fact that the country is an EU member, but in parallel, there are specific realities that should be also recalled (e.g., the enormous dependence on imported energy sources). A lack of relevant balance between the national political and policy positions and the EU approach might only lead to complications, concerning – in the concrete case – Bulgaria's national energy security, which will easily affect its national economy.

On this ground, the up-to-date analysis of some principally accepted European-level notions – like the common energy security and the Green Deal – needs to find new basis. In reality, the change in these aspects would not be related so much to the substance of the concepts themselves, but rather to the formats of their realization and the relevant timeline. This certainly would influence further the views on the energy policy developments in all directions. Thus, the initiative for these changes would be (and already is) quite diverse – being based both on a "bottom-up" and a "top-down" approach.

Further, it should not be forgotten that although some of these considerations are strongly provoked by the Russian-Ukrainian war (e.g., the move toward a rapid decrease of the European dependence on Russian energy resources), the relevant steps will continue long after the war is over.

Therefore, in practical terms – aside from the national-level views – there is already clear need for a complete reconsideration of the European energy policy. Certainly, this would not be a self-standing and speedy process. The reforms will go hand in hand with the overall reevaluation of the world economy, which is very much influenced by the technological boom in the energy sphere as well as by the substantial changes of the energy market and the general decarbonization trend.

Without any doubt, this would be hardly a smooth way forward. Besides, the process will continue to be complicated by the diverse individual interests of the countries, based on the difference in their economic development, energy import dependence, etc. When it comes to energy, a substantial additional problem in

SEE is also the difference in the energy market developments and the insufficient harmonization of the legal and regulatory rules.

On this ground, it would be fair to say that the authors of the articles in this edition of the journal are in a way privileged to be raising issues that go well beyond purely theoretical and scientific analysis.

Further, and to reiterate, the energy-related developments are moving forward very quickly. Thus, some of the expressed positions might need to be placed in a completely different factual set-up compared to the one relevant at the time of writing these articles. Nonetheless, the principle questions and views would remain valid and are definitely an excellent basis for debate.

And I hope the readers will be well provoked in this regard, while respecting the authors' views as they stand.

Mr. Slavtcho Neykov *has 30 years non-interrupted experience in the energy sector, including as Secretary General of the Bulgarian Ministry of Energy, Commissioner in the State Energy Regulatory Commission, expert at the Energy Charter Secretariat in Brussels and a Director of the Energy Community Secretariat in Vienna. Throughout the years, his area of activities has been linked to international and EU energy law, energy diplomacy and energy policy matters at national, regional and EU level. He was the leader of the Bulgarian negotiation team on Chapter 14 "Energy" during the Bulgarian accession to the EU. Prior to his involvement in the energy sector, he has worked as a state prosecutor and a legal advisor.*

His university level education in Bulgaria includes a law degree and two years postgraduate studies on International Economic Relations and Foreign Economic Activities. He also holds Master of Arts in European Integration from the University of Limerick in Ireland.

Since the end of 2014, Mr. Neykov acts as a Chairman of the Board of Managers of the Energy Management Institute (www.emi-bg.com).

Mr. Neykov is a member of the Board of Directors of EURELECTRIC. He is also a member of the National Consultative Committee of the Bulgarian Diplomatic Institute.

BULGARIAN ENERGY POLICY IN THE CONTEXT OF ENERGY SECURITY IN THE REGION*

Alexander Nikolov, Minister of Energy of the Republic of Bulgaria

The strategic role of the energy sector, driven by its impact both on the competitiveness of the economy and on the everyday life of all consumers, determines the need for balanced, long-term policies, and for decisions subject to the vision of developing a transparent and accessible energy market, in line with the challenges of climate change.

Unfortunately, the global COVID-19 pandemic, the crisis of energy prices in recent months, and last but not least, the military action in Ukraine, have put the development of the sector in a different context, not only in Bulgaria. Strategic decisions have been largely offset by the need to suppress the negative effects caused by energy resource prices increasing to unprecedented levels. We must add to this the unstable political situation in Bulgaria, the inability to establish a regular government for a long time, and the country's governance by caretaker cabinets unable to make strategic decisions.

In this situation, the main task for both the caretaker energy team and the current leadership of the Ministry of Energy, has been and remains to respond adequately to the challenges of the spike in energy prices. The caretaker Energy Ministry team started and the current leadership builds up and continues to develop various programmes for the protection of businesses and household customers from the effects of the spike. Measures have been taken to support all businesses – a total of about 633,000 companies. A programme for compensation of network operators has been developed and implemented in order to prevent their technological costs from skyrocketing. This limits the necessity to increase regulated energy prices in a subsequent price period to cover the financial deficits of operators. For the first time, at the end of last year, it was decided that household natural gas consumers would also be supported. All programmes continue with upgrading and implementation. The total financial resource for this measure has exceeded BGN 3 billion so far.

Despite the challenges of high energy prices, the long-term prospects for the energy sector set a number of tasks related to energy security in the region. They acquire even greater importance in the context of the military action in Ukraine, which calls into question the security of energy supply across the European continent.

This situation presents challenges related to the implementation of projects and policies which will reduce our country's energy dependence, will enhance energy security and will strengthen the role of Bulgaria as an energy leader in the region.

Diversification of natural gas sources and routes to the country is key to security of supply and the competitiveness of Bulgaria's economy, especially when facing a real threat of reducing or halting energy supplies as a consequence of the military action in Ukraine. Among the EU countries, Bulgaria is one of the most heavily dependent on import of energy resources, moreover, from one single source – namely Russia. We are forced, in coordination with our European partners, to rapidly seek solutions for our energy security, to make up for lost time and to accelerate the implementation of projects that will provide us with alternative energy supply for the sake of competitiveness of the economy and consumer welfare.

The interconnector Greece-Bulgaria (IGB) is a key project for the implementation of our policies related to diversification of natural gas sources and routes to the country. Without doubt, the interconnector will increase energy security both in Bulgaria and throughout the region, by providing (through a connection with the Southern Gas Corridor) alternative supply opportunities from a number of close or more remote countries. The commissioning of the pipeline, which – after many delays to date – is planned for the second half of this year, will ensure, not only for Bulgaria but also for the countries across the region, a real connection with the Southern Gas Corridor.

After maximum mobilisation aimed at minimising the risks of the accumulated delay in construction, the IGB project faces the final stage of its development. The project company ICGB has submitted applications for certification as an independent transmission operator to the national regulatory authorities of Bulgaria and Greece, the EWRC and RAE, respectively. An inter-service group is working on options for reducing administrative deadlines for commissioning procedures. In mid-March, hydro tests were conducted on 100% of the linear part of the route, which represents the final work on the linear part. All cranes are delivered, the valve cranes are being procured at an accelerated pace. The mobilisation in recent months gives grounds for optimism that in the second half of this year energy security in Bulgaria and the whole region will attain a new, higher level.

Bulgaria has concluded a contract for delivery of 1 billion cubic metres of natural gas per year from Azerbaijan. The functioning of the interconnector can help alternative imports of even larger volumes of natural gas. Despite many delays and difficulties, the project is nearing completion.

The past year of 2021 marked a new stage in the development of the South Gas Corridor – Bulgaria received the first quantities of natural gas from Azerbaijan. This undoubtedly proves the crucial role of the project in increasing energy security throughout the European Union. I am confident that the completion of IGB will contribute further to this process.

Another important project, which will lead to greater security of energy supply for the whole region, is the construction of the LNG terminal near Alexandroupolis. Bulgaria, through its gas operator “Bulgartransgaz”, holds 20% of the shares in the company “Gaztrade”, which implements the project . The facility in which Bulgargaz has reserved 500 million cubic metres per year is expected to start commercial operation at the end of 2023. Consequently, not only our country but also Romania, Serbia, Northern Macedonia, Moldova, and Ukraine will be able to benefit through alternative supplies from the US, Egypt, Qatar, and other countries.

The current energy crisis underlines once again the strategic importance of the project for the energy security of Bulgaria, Greece and the entire region of Southeast Europe. The team of the Ministry of Energy and I are confident that the participation of the Bulgarian state as shareholder in the LNG terminal will contribute to strengthening and developing the natural gas market in the region of Southeast Europe. Access to alternative supplies is a guarantee of competitive prices, energy security, and better conditions for consumers.

The interconnector Bulgaria-Serbia is another part of the energy connectivity projects aimed at boosting energy independence in the region to a new level. By October 2023 at the latest, the interconnector must be completed, which will contribute to expanding our country's opportunities for access to the European gas market. Its construction is a key driver of security in the region as it provides our western neighbour and other neighbouring countries with access to various sources of gas through the Southern Gas Corridor and the LNG terminal near Alexandroupolis. The pipeline from Novi Iskar to Niš, with a total length of about 170 km, is intended to operate as a reverive facility. The ability to change the direction of gas flows as necessary is an additional factor for security and independence.

For a more complete picture of the gas infrastructure in the region and the opportunities for energy connectivity, we must also note the development of the project to expand the capacity of the underground gas storage facility in Chiren.

The UGS Chiren expansion project is a Project of Common Interest under Regulation (EU) 347/2013. It is part of the North-South priority corridor between gas transmission networks in Central Eastern Europe and the south-east of the continent.

The project envisages an increase in the volume of active gas from the current 550 million cubic metres to 1 billion cubic metres. Daily production capacity will also be increased up to 10 million cubic metres. At present, this capacity is 3.82 million cubic metres per day. The daily injection capacity will be raised from the current 3.2 million cubic metres to 8 million cubic metres.

It is remarkable that the expansion of UGS Chiren was the only gas project for which the European Commission announced that an agreement had been reached among the Member States on its financing under the Connecting Europe Facility. In itself, this fact is a clear confirmation, by the entire European Union, of the importance of this project for EU's energy security and its contribution to achieving the objectives of decarbonisation and transition to clean energy.

The increased capacity of the storage facility provides flexibility in supply management, thus becoming a key factor for alternative natural gas supplies.

The Bulgarian Government, in particular the Ministry of Energy, regards interconnection projects – the LNG terminal in Alexandroupolis, the development of the Southern Gas Corridor, as well as the expansion of UGS Chiren – as comprehensive infrastructure which, in synergy, can provide energy security for the region, especially in the context of today's international situation.

Bulgaria's strategic location can be used as an asset not only for our country but also for all European partners, both in the EU and in the region. In this context, the expansion of the country's gas infrastructure from the Bulgarian-Turkish to the Bulgarian-Serbian border (the so-called Balkan/Turkish Stream) helps to deepen the opportunities for transit of blue fuel and the promotion of Bulgaria as a centre of these activities in the region. The issues that deserve separate attention are: how and at what cost has this project been implemented; what is the timeframe for its payment and is it justified from an economic point of view; and is there any available capacity so that other suppliers can use this infrastructure as well? I believe that these questions should be clearly answered, and I am ready to commit the necessary efforts on the part of the present team of the Ministry of Energy to do so.

Although at present it seems rather as a hypothesis, the prospect of developing own gas production deserves attention. The Bulgarian Government recently extended by two years the period for exploration of oil and natural gas in "Block 1-21 Han Asparuh", which is located in Bulgaria's exclusive economic zone in the Black Sea. The extension requested by the holder, as well as the proximity of this area to Romanian territorial waters where there is significant extraction potential, give reasons for optimism that oil and natural gas can be found in the Bulgarian aquatory. Within the framework of the extended period, additional geological and geophysical work shall be envisaged to specify the potential reserves.

Area "Block 1-21 Han Asparuh" is located in the exclusive economic zone of the Republic of Bulgaria in the Black Sea. The prospection and exploration contract there has been in force since September 2012.

Bulgaria is one of the countries in the EU with the highest dependence on oil and gas imports. More than 90% of the oil and gas consumed in the country is currently imported from Russia. An important factor in addressing this dependence, in the context of today's military action in Ukraine and threats to Bulgaria's energy security, is the maintenance of local electricity generation resources. The Bulgarian Government appreciates the challenges of the European Green Deal and the need to combat climate change, but at the same time our country's energy security is without an alternative. At present, Bulgaria also relies on the use of lignite coal – an indigenous energy resource.

On the grounds of this starting point, we did not include in the Bulgarian Recovery and Resilience Plan a commitment to close the coal-fired power plants in the Maritza Basin, which provide (depending on the season) between 46 and 60% of the electricity in the country. In today's unprecedented situation, they ensure energy security and independence. From the perspective of the entire region, the focus on the power plants complex should highlight its balancing role for both our country and our neighbours. Should we hypothetically imagine that the Maritza East complex stopped producing electricity tomorrow, that would have a negative impact and result in electricity price increases also for our neighbouring countries Serbia, Macedonia, Greece, and Romania. Today, our coal-fired plants provide sustainability to the system, and in the current situation this fact is of utmost importance for the decision to keep using them for as long as possible. It is our firm belief that the solution is to find the right balance between the need to preserve our energy security and the challenges of the European Green Deal that we have to meet.

At present, the attention of the international community is mainly focused on the military action in Ukraine and the revision of long-term prospects, including in the energy sector. The need to combat climate change, however, poses a number of challenges to Bulgaria's energy transformation. The Green Deal laid the foundation for planning the European Union's long-term development on the road to a zero-emission economy by 2050, with an intermediate target of reducing greenhouse gas emissions by at least 55% by 2030. To respond adequately to these ambitious targets is a task that lies ahead of us, and it requires precise and balanced solutions.

The way ahead

Bulgaria's revised Recovery and Resilience Plan, which is expected to be approved by the European Commission, must help solve two main problems in the energy field – on the one hand, reducing the country's energy dependence, and on the other, an energy transformation corresponding to the European objectives for decarbonisation and a green future.

Taking into account the challenges related to reducing our energy dependence, we have included in the revised Plan projects for hydrogen, biogas, and RES with batteries, instead of the steam power plants from the previous version.

The present team of the Ministry of Energy considers hydrogen a long-term solution for the transformation of the country's energy sector. Bulgaria has all the prerequisites to become one of the pioneers in replacing natural gas with green hydrogen as an energy source. Let us clarify that green hydrogen is produced from renewable energy sources, and over 15 GWh of new RES capacities are planned to be built in our country. Still, the question of the rapid implementation and connection to the network of these projects remains open. It is the role of the state to alleviate the bureaucratic procedures as much as possible and thus facilitate the transformation.

In principle, investment in new RES capacities can be subject to regulatory easing so that they are built fast, within a few months. These capacities, combined with the planned construction of energy storage batteries, have the potential to ensure sustainability and competitiveness of Bulgaria's energy system in the long term. In parallel, more efforts are needed to increase energy efficiency, a process that would significantly reduce energy demand and where Bulgaria is lagging significantly behind its partners.

These are the essential areas of focus for the present Bulgarian Government towards achieving energy transformation, reduction of energy dependence and energy diversification. Overall, these efforts must transform the Bulgarian energy sector into a modern, competitive, and transparently functioning industry in the medium term. Nevertheless, that could not happen without the crucial role of our partners from the EU, the US, Azerbaijan, the Mediterranean region, and our neighbouring countries. Our cooperation and joint efforts are a key factor to energy security and economic growth.

*The article was submitted for print on 31 March, 2022.

Alexander Nikolov *was Elected by the 47th Bulgarian National Assembly as Minister of Energy on December 13, 2021. Prior to that, he has been the executive director of an investment company for innovative green energy projects in Bulgaria, part of an international holding company. He has extensive experience in telecommunications, finance, investment and capital markets - executive director of a venture capital fund, led projects for the development of Fintech solutions, structuring mergers and acquisitions - from forecasting through planning and full implementation.*

He lectures on futures, options and investment management. He has an additional qualification aimed at digital transformation, and is currently working on a dissertation on a topic in the same field.

He holds MA in finance from the University of National and World Economy and speaks fluent English.

THE ENERGY COMMUNITY: A KEY INSTRUMENT OF EU EXTERNAL ENERGY POLICY TO HELP DELIVER ON THE EUROPEAN GREEN DEAL

Arthur Lorkowski, Director of the Energy Community

Introduction

The European Green Deal will involve nothing less than a complete transformation of the way energy is produced and consumed. The scale of the change needed will require strong engagement of not just the EU Member States and actors, but also of those in the EU's neighbourhood. In order for the Green Deal[1] to succeed, it needs to have a strong external dimension and be integrated into the EU's external energy policy.

Europe's transition to climate neutrality can only be effective if the EU's neighbouring countries also take meaningful action in energy, climate and environment. By extending the EU's tried and tested legal and regulatory framework to its neighbourhood, the Energy Community, an international organization which brings together the European Union and nine neighbouring countries[2] to create an integrated pan-European energy market, allows energy to flow more efficiently across borders and helps to improve the EU's security of energy supply. Moreover, the extension of the EU environment and climate acquis to these countries, which has intensified in recent years, further helps the EU meet the objectives of the Green Deal.

For over fifteen years, the Energy Community has acted as a facilitator and accelerator of energy reforms modelled after the EU, delivering direct benefits to citizens and businesses alike. The Energy Community is designed as an instrument for market opening and regional integration, but also for steering the member countries towards clean, sustainable development of their energy sectors. Membership in the organization has fostered economic development, improved energy infrastructure, contributed to better energy services for citizens, promoted policies stimulating energy efficient solutions and the use of energy from renewable sources, cleaner environment, etc.

But the benefits derived from the organization spill over to the European Union. As Jerzy Buzek, the former Prime Minister of Poland and former President of the European Parliament, once put it, the Energy Community is a win-win instrument.[3] For the EU, energy market integration and regulatory convergence with its neighbours – via the Energy Community – greatly contributes to ensuring energy security and affordable energy prices. The Energy Community's common institutions help tackle joint energy challenges, such as security of energy supply

[1] For more information on the Green Deal, see https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en.

[2] Albania, Bosnia and Herzegovina, Kosovo, North Macedonia, Georgia, Moldova, Montenegro, Serbia and Ukraine.

[3] "An Energy Community for the Future", Report by the High Level Reflection Group of the Energy Community, may 2014, https://www.energy-community.org/dam/jcr:ec8d48c9-c8ed-40c2-a2e7-d522932485d4/MC2014_Report_Future.PDF.

and climate change, which are key to the success of the European Green Deal.

This paper explores how the Energy Community serves as a pivotal instrument in the EU's external energy policy toolbox by contributing to the successful achievement of the energy-related objectives of the European Green Deal.

EU external energy policy and the Green Deal

Since 2020, the energy policy of the European Union is driven by the European Green Deal, which aims to make Europe the first climate neutral continent in the world, decouple economic growth from greenhouse gas emissions and at the same time ensure that the transition to a decarbonized future is just for all.[4] While Russia's invasion of Ukraine on 24 February 2022 has certainly shook up the EU's energy policy, the European Union has made it clear in its most recent energy strategy "REPowerEU" [5] that it will stay the course of the European Green Deal and even accelerate the actions therein in order to decrease its reliance on Russian energy supplies and fossil fuels in general. In fact, the European Commission underlined that "*the case for a rapid clean energy transition has never been stronger and clearer*".[6]

The ambitious objectives of the Green Deal for the energy sector (increasing the EU's climate ambition for 2030 and 2050; supplying clean, affordable and secure energy; and aiming to reach a zero pollution environment) signify that the EU cannot deliver on the overall efforts alone. Engaging with its direct neighbours has to be high on the EU's agenda. Given their post-communist legacies, the countries on the EU's doorstep are in many instances major emitters of carbon emissions as well as major polluters per capita. They have significant untapped potential with respect to energy efficiency, the uptake of energy from renewable sources as well as truly embracing climate action across sectors. In fact, the biggest challenge for EU neighbouring countries, especially the Western Balkans and Ukraine, is their strong reliance on fossil fuels for electricity production and heat and the very high carbon intensity of production processes compared to the European Union average. Decreasing their reliance on fossil fuels by pursuing renewable energy and energy efficiency policies will also benefit the EU.

The EU's neighbours must transform what today is still a historical liability into a future contribution to the EU Green Deal's goals, bringing clear benefits to both sides. Not only are many of these countries (the Western Balkans) eventually going to join the EU, but some (especially Ukraine) are major transit countries of gas to the European Union and thus of strategic importance when it comes to the EU's

[4] Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on the European Green Deal, Brussels, 11.12.2019, COM(2019) 640 final, https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52019DC0640&from=EN.

[5] Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions REPowerEU: Joint European Action for more affordable, secure and sustainable energy, Strasbourg, 8.3.2022, COM/2022/108 final, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2022%3A108%3AFIN.

[6] Ibid.

energy security. Moreover, some aspire to become major exporters of low-carbon gases and electricity in the future. In its Communication on the European Green Deal, the Commission underlined that the EU will put an emphasis on supporting its immediate neighbours and that the "*ecological transition for Europe can only be fully effective if the EU's immediate neighbourhood also takes effective action*".[7] In terms of the Eastern Partnership, the Communication envisages "*a number of strong environmental, energy and climate partnerships*".[8] For its Western Balkan neighbours, the EU has defined its external engagement strategy in the Sofia Declaration on the Green Agenda for Western Balkans.[9]

In its most recent Communication REPowerEU[10], which was shaped by the acute energy security crisis caused by the Russian invasion of Ukraine, the European Commission underlined that it will continue to work with its partners in the Western Balkans as well as Georgia, Moldova and Ukraine, all members of the Energy Community.

Introducing the Energy Community

The objective of creating affordable, secure and environmentally sustainable energy supplies, which is a precondition for economic and social stability, lies at the heart of the Energy Community Treaty, signed in October 2005 in Athens, Greece, and in force since July 2006. The European Union joined the Energy Community from the outset, together with nine Balkan countries.[11] Its creation after the wars that led to the breakup of former Yugoslavia is not coincidental. The objective was to restart the process of regional cooperation and use energy to help kick-start economic development and ensure social stability in the region by bringing much needed investment to reconstruct the energy sectors. Moreover, a key objective of the Energy Community Treaty was to prepare Balkan countries for EU accession in the energy sector, which became reality for Bulgaria and Romania in 2007 and Croatia in 2013.

The Energy Community's expansion to the east, with the accession of Moldova (2010), Ukraine (2011) and Georgia (2017), were critical milestones in the development of the organization. In fact, the nature of the organization shifted substantially and the organization clearly transformed into one of the key tools of the EU's external energy

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[7] Communication from the Commission, The European Green Deal, Brussels, 11.12.2019, COM(2019) 640 final, https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52019DC0640&from=ET.

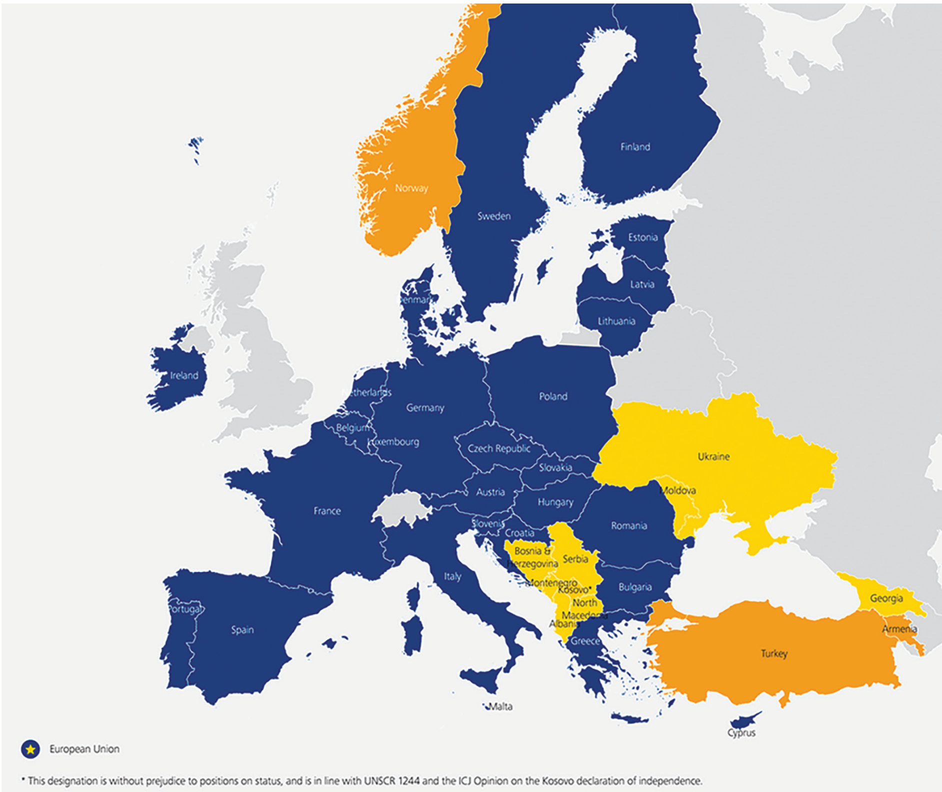
[8] Ibid.

[9] See https://www.rcc.int/download/docs/Leaders%20Declaration%20on%20the%20Green%20Agenda%20for%20the%20WB.pdf/196c92cf0534f629d43c460079809b20.pdf.

[10] Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions REPowerEU: Joint European Action for more affordable, secure and sustainable energy, Strasbourg, 8.3.2022, COM/2022/108 final, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2022%3A108%3AFIN.

[11] The founding Energy Community members were: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the European Union, Kosovo through the United Nations Interim Administration Mission in Kosovo (UNMIK), pursuant to the United Nations Security Council 1244, North Macedonia, Montenegro, Romania and Serbia.

policy. The 2011 Communication from the European Commission to EU institutions on security of energy supply and international cooperation, which is currently in the process of being updated, described the Energy Community as "*the reference point for the majority of the EU's neighbours willing to be a part of the European energy system*".[12]



Contracting Parties
Observer
EU Participants

Energy Community Map. Source: Energy Community Secretariat

The law of the Energy Community

The objective of the organization is to extend the EU internal energy market by exporting EU energy legislation, the so-called "acquis communautaire", to EU neighbouring countries that are willing to adopt and implement the EU energy and energy-related acquis. To keep up with the evolution of EU energy law, the

[12] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on security of energy supply and international cooperation - „The EU Energy Policy: Engaging with Partners beyond our Borders", Brussels, 7.9.2011, COM(2011) 539 final, https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52011DC0539.

Treaty envisages the incorporation of new EU legislation to the Energy Community upon proposal of the European Commission. Before its adoption in the Energy Community, the legislation is adapted to a certain extent to the specificities of the Contracting Parties and to its institutional set-up.[13] Today, the Treaty encompasses close to 40 directives and regulations.

Under the Energy Community framework, the EU neighbouring countries or so-called "Contracting Parties" have incorporated the EU's Second and Third Energy Package on electricity and gas, as well as legislation on security of energy supply for electricity and gas, infrastructure, oil stocks, climate, renewable energy, energy efficiency, environment and statistics. Most recently, the Energy Community adopted key elements of the Clean Energy for all European package.[14]

The mission of the Energy Community Treaty is to:

- Establish a stable regulatory and market framework capable of attracting investment in power generation and networks;
- Create an integrated energy market allowing for cross-border energy trade and integration with the EU market;
- Enhance the security of supply to ensure stable and continuous energy supply that is essential for economic development and social stability;
- Improve the environmental situation in relation with energy supply in the region and foster the use of renewable energy and energy efficiency; and
- Develop competition at regional level and exploit economies of scale.

Institutions

The Energy Community's strong institutional framework, partially modelled after the EU's predecessor – the European Coal and Steel Community, is one of the reasons for its success. The Energy Community process is supported by decision-making institutions, notably the Ministerial Council, and an independent secretariat based in Vienna.

The Ministerial Council meets once a year to establish key priorities and adopt new legislation. The Council brings together government ministers responsible for energy from each Energy Community Contracting Party and the European Union, usually represented by the European Commissioner for Energy and a high-level representative of the Presidency of the Council of the European Union. Its meetings are coordinated and prepared by the Permanent High Level Group, composed of one representative of each Contracting Party and two representatives of the European Union. As the only permanently acting institution, the Energy Community

[13] R. Karova, The Energy Community in its Second Decade: Where Does it Stand and Where is it Heading? in The transformation of economic law: essays in honour of Hans-W. Micklitz (Hart Publishing, 2019).

[14] For a comprehensive overview of Energy Community legislation in force, see https://www.energy-community.org/legal/acquis.html.

Secretariat is responsible for supporting the day-to-day activities of the Energy Community and monitoring the implementation of the Treaty.[15]

The EU plays a central role in the Energy Community process. It is the permanent vice-president of the Energy Community, playing a key role in the decision-making process and co-chairing all meetings. It is also responsible for making legislative proposals and is the only Party under the Treaty with a veto right.[16]

Membership

Today, besides the European Union, the Energy Community brings together the six Western Balkan countries (Albania, Bosnia and Herzegovina, Kosovo, North Macedonia, Montenegro and Serbia), as well as Ukraine, Moldova and Georgia. Armenia, Norway and Turkey are observers.

As the experience of Moldova, Ukraine and Georgia has shown, the Energy Community is open to new members. Compared to other international organizations, the accession process to the Energy Community is relatively easy as it requires unanimous agreement of the Energy Community Ministerial Council, but no ratification at national level.[17]

There is a close cooperation between the EU Member States and the Energy Community Contracting Parties, which gives the latter the benefit of the EU's experience from its own transition to an integrated market. Under the Energy Community Treaty, any EU Member State may acquire the status of "participant". Participants have the right to participate and take the floor during all institutional meetings of the Energy Community but without any voting rights.[18] Presently as many as 19 EU Member States hold Participant status.

Dispute settlement

One of the most unique features of the Energy Community Treaty is its dispute settlement system[19] and an independent Secretariat able to bring forth cases of non-compliance with the Energy Community *acquis*. Via its quasi-judicial role, it is the Energy Community Ministerial Council, which decides whether or not a Contracting Party has failed to comply with its obligations under the Treaty.

A Reasoned Request published by the Energy Community Secretariat, which establishes the full factual and legal background of the case, triggers the dispute settlement procedure before the Ministerial Council. Before the Ministerial Council

[15] For more information about the Energy Community institutions, see https://www.energy-community.org/aboutus/institutions.

[16] For more information on the Treaty establishing Energy Community, see https://www.energy-community.org/legal/treaty.html.

[17] J Kopac and D Buschle, The Energy Community in C Jones, The Role of Gas in the EU's Energy Union (Clays & Casteels, 2017).

[18] Treaty establishing Energy Community, see https://www.energy-community.org/legal/treaty.html.

[19] For more information about the Energy Community dispute settlement procedure, see https://www.energy-community.org/legal/cases/dispute.html.

takes a decision in the dispute settlement process, it must take into account the opinion of the Energy Community Advisory Committee, a body of independent legal experts with an advisory function.

In cases of a serious and persistent breach of the Treaty by a Contracting Party, the Ministerial Council can impose measures suspending certain rights derived from the application of the Treaty to the Party concerned, including but not limited to the suspension of voting rights and exclusion from the meetings or mechanisms provided for in the Treaty.

While the Energy Community's dispute mechanism does not include decisions by a fully independent judicial body such as the European Court of Justice, it has proven to be an effective enforcement mechanism on many occasions. Sometimes, even the opening of a preliminary procedure by the Secretariat creates sufficient pressure for the Contracting Party concerned to adopt the necessary measure. This makes the Energy Community one of the most effective external energy policy instruments of the European Union.

The Energy Community Secretariat's Dispute Resolution and Negotiation Centre

With their membership of the Energy Community, the Contracting Parties receive access to the resources of the Energy Community Secretariat's Dispute Resolution and Negotiation Centre, established in 2016. [20] The services offered by the Centre focus on facilitation and mediation of energy disputes between the Contracting Parties and private parties, as well as investor-state and state-state disputes and negotiation support to national authorities in their negotiations with private parties. One of the main goals of the Centre is to provide an affordable and efficient system of solving disputes. The services provided by the Secretariat's Dispute Resolution and Negotiation Centre are free of charge.

The successfully settled disputes between investors in the region and the Contracting Parties have served to increase investor confidence and bring foreign investment into the region.

Budget

All Parties to the Treaty contribute to the Energy Community budget, out of which nearly 95 % originates from the European Union.[21] The remainder is covered by the Contracting Parties.

The Energy Community – A key instrument of EU external energy policy

The following chapters describe how the Energy Community, as a key instrument

[20] For more information about the Energy Community Secretariat's Dispute Resolution and Negotiation Centre, see https://www.energy-community.org/aboutus/disputeresolution.html.

[21] For more information see https://www.energy-community.org/aboutus/budget.html.

of the EU's external energy policy, helps the European Union deliver on the energy-related goals of the European Green Deal.

Secure energy via a common European energy market

Given the EU's high dependence on energy from external sources, having countries in its neighbourhood follow the strong and reliable legal and regulatory framework provided by the Energy Community Treaty benefits European consumers as well as businesses in terms of ensuring affordable and reliable energy supplies. Ukraine's accession to the Energy Community in 2011 was a major win for the European Union and "*perpetuated the importance of the Energy Community's contribution to helping ensure pan-European energy security*".[22] The fact that Ukraine's legislation in the area of gas is almost "*a carbon copy of the Third Energy Package*" was a game changer in East-Western geopolitics of energy policy.[23] The Energy Community's strong role in ensuring the EU's security of supply was underlined in several strategic EU documents, including the European Commission's 2014 Communication to the European Parliament and the Council on the "European Energy Security Strategy".[24]

The original Energy Community Treaty signed by the Contracting Parties was founded on cooperation in the areas of network energy - electricity and gas - and the obligation to transpose and implement the so-called Second Energy Package aiming to harmonise and liberalise the internal energy market by introducing transparency and non-discriminatory market access and supporting the cross-border flows of energy. Following legislative developments in the EU, the Second Package was replaced by the Third Energy Package in the Energy Community in 2011, followed by the adoption of network codes and guidelines, a process which is still ongoing. The Directive on common rules for the internal market for electricity introduced by the Clean Energy Package is currently in the transposition phase. In 2015, the Energy Community Ministerial Council adopted the Regulation on Guidelines for trans-European energy infrastructure. In addition, the Contracting Parties have committed to comply with security of supply rules for gas and electricity, both of which underwent revision in November 2021.

Following the Russian invasion of Ukraine, the Energy Community's role in strengthening EU's energy security has come to the fore. Not only is the Energy Community Secretariat coordinating emergency assistance to Ukraine in terms of urgently needed supplies, such as materials to restore destroyed or damaged energy infrastructure, fuels and generators, to ensure the stability of its energy system, it is also actively looking for ways to address vulnerabilities to gas disruptions in South-East Europe. The Energy Community Contracting Parties face similar security of

[22] D Buschle, The Energy Community: Ready for the Clean Energy Transition in The European Energy Transition, Actors, Factors, Sectors (Clays & Casteels, 2019).

[23] Ibid.

[24] Communication from the Commission to the European Parliament and the Council on the European Energy Security Strategy, Brussels, 28.5.2014, COM(2014) 330 final, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A52014DC0330.

supply challenges as some EU Member States, most notably their reliance on one source of gas supply. Cooperation with the Contracting Parties to minimize energy supply risks serves the EU's own interests.

Via its SEEGAS platform[25], the Secretariat is coordinating actions and measures to ensure the stability of the regional gas system following the Russian invasion of Ukraine. This includes concrete measures to accelerate regional gas market integration and gas supply diversification, which is important not just for Ukraine but also for the South East and East European countries vulnerable to energy disruptions from Russia. The better utilization of the Trans-Balkan Pipeline, as a means of bringing gas through the Balkan counties to Ukraine and Moldova in reverse mode, as well as bringing greater volumes of liquefied natural gas to Europe are among the priority actions. Similarly, another example of the robustness of the Energy Community to deliver on security of supply is the idea of a joint purchase platform for gas, initiated by the European Union, open for the Contracting Parties to join and improve their negotiating position with powerful gas producing, upstream business.

The Energy Community Treaty supports the building of new infrastructure projects that contribute to the diversification of energy sources, both in the EU and the members of the Energy Community. A concrete example is the Energy Community's role in strengthening the EU's security of supply is the Southern Gas Corridor, a key element of the EU's energy security and diversification strategy.[26] The Trans-Adriatic Pipeline (TAP), which brings gas from Azerbaijan to Italy via Albania, serves the European Union's strategic objective of bringing gas form the Caspian and Middle Eastern sources to Europe in order to improve security of supply by creating alternative supply routes. The TAP was certified by the national energy regulatory authorities of Albania, Greece and Italy under the Independent Transmission System unbundling model fully in line with Third Energy Package and taking into account the opinions issued by the European Commission and the Energy Community Secretariat. Operating under the same legal framework was critical for making the pipeline operational.

More recently, membership of the Energy Community provided an important boost for Ukraine and Moldova to receive the green light from transmission system operators of Continental Europe to commence the trial synchronisation of the Continental European Power System with the power systems of Ukraine and Moldova, following their urgent request after Russia's invasion of Ukraine in February 2022. Thanks to their membership of the Energy Community, Ukraine and Moldova were already in a relatively advanced stage of aligning their legal and regulatory frameworks with EU rules and will receive enhanced support from the Energy Community Secretariat to complete the implementation of the full set of EU electricity network codes and guidelines. After

[25] The South-East European Gas (SEEGAS) initiative is a well-established platform bringing together gas transmission system operators, gas exchanges and other stakeholders in the SEEGAS region to work together to support the creation of a competitive liquid gas market in accordance with the EU acquis, and ultimately benefit end-consumers through increased competition in gas trading. The platform is chaired by the Secretariat.

[26] Ibid.

the Russian military aggression comes to an end, synchronization will translate into more energy security and more benefits for consumers and businesses also in the EU.

With the digital transformation of the energy sectors, cyberattacks currently pose one of the highest risks for energy system security. A cybersecurity incident outside the EU's borders could threaten the security and stability of the system operation of the interconnected European power grid. Against this background, the Energy Community has increased its focus on increasing cybersecurity capabilities in the Energy Community Contracting Parties and enhancing cooperation on cybersecurity issues at the level of the Energy Community and with EU Member States. The adoption of the new Electricity and Risk Preparedness Regulations by the Ministerial Council in November 2021 are the first steps in paving the way for cybersecurity-specific acquis to become mandatory in the Energy Community.

The Green Deal will have far-reaching economic and social implications on third countries. The EU's energy transition will not only affect energy exporting countries, but also transit countries as their income depends on the EU's energy demand and policies. The Energy Community provides a channel for communicating the EU's green energy transition ambitions. The Energy Community can serve as an instrument for maintaining relations with current and potential suppliers, as is the case of Ukraine as a potential exporter of green energy (e.g. green hydrogen) to the European Union.

The implementation of the Green Deal entails a massive expansion of energy from renewable sources and to a certain extent the EU will have to rely on imports of climate neutral energy. With the right regulatory and investment framework supported by the Energy Community, the EU will be able to increase cross-border renewables cooperation with its neighbours. This is especially relevant for Ukraine, which given its size has enormous renewables export potential. The Secretariat is supporting the revitalization of Ukraine's energy sector with a view to realize the country's huge decarbonisation potential that would also help the rest of Europe in achieving its renewables ambitions.

Towards a climate neutral European continent by 2050

Taking into account the realities of climate change, it is clear that the European Green Deal cannot succeed without ambitious climate policies in the EU's direct neighbourhood. Encouraging and supporting neighbouring countries to adopt the same climate framework benefits both the EU and its neighbours, not least because the majority of these countries are aspiring EU Member States. The Energy Community Treaty is the key regional instrument for facilitating the EU's objective of becoming the first climate neutral continent by 2050.

The 2016 Energy Community Ministerial Council took the first steps towards integrating climate issues in the context of the Energy Community by adopting a Recommendation on the implementation of the Regulation on a mechanism for monitoring and reporting greenhouse gas emissions. This was followed in early

2018 by the Ministerial Council's adoption of the Recommendation on preparing for the development of integrated national energy and climate plans, which became a legally binding obligation upon the decision of the Ministerial Council to adopt the Governance Regulation in November 2021.

The new climate dimension is supported by the Energy and Climate Committee of the Energy Community, which regularly gathers representatives of ministries and agencies in charge of energy, climate change and environment from the Energy Community Contracting Parties and observer countries.[27] Its key objective is to facilitate the development of climate policy, the integration of energy and climate planning and the transposition of related legislation into national legislation and to support its effective implementation.

National Energy and Climate Plans (NECPs) constitute the framework for integrating energy and climate policies and driving the decarbonisation of the energy sectors and the economy as a whole, in line with the 2015 Paris Agreement. Following the general structure of NECPs (decarbonisation, energy efficiency, energy security, internal market, research and innovation and competitiveness), the Energy Community members are to set ambitious objectives and targets, together with adequate policies and measures. A longer-term view towards 2050 should also be included.

Most Energy Community Contracting Parties are currently in the process of developing NECPs, while North Macedonia and Albania, the two frontrunners, have already submitted their plans to the Energy Community and the Secretariat has issued its recommendations on both drafts.

Through the recent adoption of the Energy Community Decarbonisation Roadmap[28], the Energy Community committed towards achieving 2030 and mid-century decarbonisation targets to contribute to the achievement of a carbon neutral Europe by 2050. The Roadmap is a political document outlining the sequence of adoption, transposition and implementation of decarbonisation-focused rules.

Adopting the same climate (and environmental) rules as the EU, is important for ensuring a level playing field between the EU and it neighbours and preventing carbon leakage outside the EU. According to a study commissioned by the Energy Community[29], the introduction of a carbon price in the Energy Community is important for three reasons. First, almost half of all electricity produced in the Contracting Parties still comes from old and inefficient thermal power plants burning solid fossil fuels, i.e. lignite and coal, despite mounting costs, generation adequacy concerns, air quality deterioration and public health effects. Second, solids-firing generation remains artificially cheap due to distortionary policies that conceal the true cost of

[27] See https://www.energy-community.org/aboutus/institutions/ECC.html.

[28] General Policy Guidelines 01/2021/MC-EnC Decarbonisation Roadmap for the Contracting Parties of the Energy Community, https://www.energy-community.org/dam/jcr:c28b58eb-22db-4ad5-9ed1-4e93b5b613b7/19thMC_Decarbonisation_Roadmap_301121.pdf.

[29] A carbon pricing design for the Energy Community, Report financed by the Energy Community, January 2021, https://www.energy-community.org/dam/jcr:82a4fc8b-c0b7-44e8-b699-0fd06ca9c74d/Kantor_carbon_012021.pdf.

carbon and hamper competition and the transition to a low-carbon power market. Third, solids-based electricity from the Contracting Parties is leaking into the EU, undermining Europe's climate policy and incentivising further the use of solids, i.e. coal and lignite, in the Energy Community.

With the heated debate on the EU's Carbon Border Adjustment Mechanism in the last months, the lack of carbon pricing in the EU neighbouring countries, which leads to carbon leakage as goods are imported to the EU, has come under the spotlight for clearly undermining the EU's ambition of a climate-neutral Europe by 2050. The Decarbonisation Roadmap will help the Energy Community to gradually transition away from fossil fuels and start introducing carbon pricing that will eventually lead to the adoption of the EU ETS Directive.[30] The immediate next step will be the adoption of the EU Regulation on monitoring, reporting and verification of greenhouse gas emissions by the Ministerial Council in 2022.

An important element of the transition towards carbon neutrality is encouraging countries to shift towards energy from renewable sources and boosting energy efficiency measures in order to decouple economic growth from energy consumption. Setting 2020 targets under the Energy Community process gave an important momentum to the uptake of renewable energy and energy efficiency measures in the Energy Community.

In fact, the Energy Community met the 2020 headline target for energy efficiency set by the 2012 Energy Efficiency Directive, while all Contracting Parties except Bosnia and Herzegovina met their indicative targets. With respect to renewables, policy targets helped wind and solar technologies to make a breakthrough in a coal-dominated power mix. Three Contracting Parties - Albania, Moldova and Montenegro - have overachieved their national 2020 targets under the 2009 Renewables Directive, while the remaining Parties came close.

However, the full potential of renewables and energy efficiency is yet to be exploited. At present, the Energy Community is preparing to adopt ambitious 2030 energy and climate targets in 2022 for the increase of renewable energy in overall energy consumption, increased energy efficiency and reduction of greenhouse gas emissions. The targets will help provide higher regulatory stability, transparency of national efforts and increased investment certainty.

Given the challenges of the energy transition, the Energy Community is working with the Contracting Parties to put in place an enabling framework for renewables to play an active role in the transition to a smart and integrated energy system and a decarbonised economy. Current activities are focusing on the introduction of market-based support schemes, citizen's participation in the development of renewable energy projects and implementation of a regional system for guarantees of origin.

Realising that turning a successful energy transition into reality will require helping those regions, which will be influenced most by the shift towards a carbon-

[30] Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union.

neutral economy, the Commission launched the Platform for Coal Regions in Transition in 2017. The Platform aims to assist EU countries and regions that are heavily reliant on coal in the preparation, development and implementation of transition-related activities. Three years later in 2020, the Energy Community together with the European Commission and five other principals[31] launched the initiative for Coal Regions in Transition in the Western Balkans and Ukraine.[32]

Like in the EU, the initiative aims to support countries and regions to move away from coal towards a carbon-neutral economy, while ensuring that the transition is just. The initiative provides an open platform allowing region-wide, multi-stakeholder dialogue and a space for sharing experiences, knowledge and best practices on transition-related issues, encouraging ties between coal regions in the Western Balkans and Ukraine and their EU counterparts through coal region-to-region exchanges. The initiative is proving to be a successful instrument in removing the political obstacles and social concerns about the energy transition.[33]

A zero pollution Europe

Air pollution remains one of the most pressing problems both in the Energy Community and Europe. A number of Energy Community Contracting Parties are unfortunately often at the top of world air pollution rankings due to the high level of emissions coming from coal-fired power plants, domestic heating and traffic. A study for the Western Balkans published in 2019[34] showed that air pollution from Western Balkan coal power plants had a major impact across the European continent and the majority of health impacts were in the European Union. Given air pollution's transboundary nature, tackling pollution in the EU's neighbourhood is critical to delivering on the Green Deal's objective of reaching a zero pollution environment.

The Energy Community Treaty provides a framework for countries in the EU neighbourhood to become less reliant on polluting energy sources and outdated power plants for energy production and thus lowering emissions from the energy sector. The most effective legal instrument for cleaning up power plants, reducing air pollution and improving public health in the Energy Community is the Large Combustion Plants Directive. Having entered into effect on 1 January 2018, it regulates the levels of sulfur dioxide (SO2), nitrogen oxides (NOx) and dust emissions from existing and new power plants. Requiring significant investments or shut-down, the Directive's implementation marks the beginning of the end of the coal and lignite era in the Energy Community. In fact, the first large combustion plant (the thermal power plant Pljevlja in Montenegro) has reached the end of its opt-out timeframe set by the Large Combustion Plants

[31] These are the World Bank, the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), Poland's National Fund for Environment Protection and Water Management (NFOSiGW) and the College of Europe in Natolin.

[32] See https://www.energy-community.org/regionalinitiatives/Transition/coal.html.

[33] Ibid.

[34] Chronic coal pollution, EU action on the Western Balkans will improve health and economies across Europe, HEAL, CAN Europe, Sandbag and CEE Bankwatch Network and Europe Beyond

Directive and has either to be retrofitted or closed down. In several instances, the Secretariat has opened dispute settlement cases against the Contracting Parties for not achieving significant reduction of air pollution from thermal power plants.

The Energy Community has also developed non-binding instruments to help its members tackle air pollution. The Energy Community's Clean Air Regions Initiative[35] is a voluntary instrument to assist municipalities develop, adopt and maintain Local Air Quality Action Plans with ambitious local air quality targets, policies and measures to help tackle air pollution. The initiative also hosts regular trainings and capacity building on the introduction of measures capable of reducing pollution into the air from the most critical sources of pollution such as domestic heating, industry and traffic.

Conclusion

As this paper has argued, the Green Deal needs to have a strong external dimension to succeed. The EU will have to intensify and strengthen its relations with third countries, including by exporting its model of the clean energy transition. For its own benefit, the EU must prove that the energy transition consists of no-regret measures boosting the welfare of citizens and is possible to be achieved without putting regions and local communities through major hardships. This will help the EU build the case that the energy transition is not just for the prosperous west but also for middle to low income countries, a process which is currently ongoing in the countries of the Energy Community.

The Energy Community has proved to be a powerful reform instrument for countries closest to the EU's doorstep and those further afield, with benefits spilling over to the European Union. Over the last fifteen years, the Energy Community has established itself as one of the most important instruments of EU external energy policy. The Energy Community's work helps to foster the energy transition in the EU's neighbouring countries and reach the objectives of the EU's Green Deal in multiple ways.

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Mr Lorkowski previously served as Special Envoy on Climate of the Minister of Foreign Affairs of Poland (2018-2020). Before that, he served as Polish Ambassador to Austria (2013 to 2017) and Deputy Director for energy security and climate change at the Ministry of Foreign Affairs (2010-2013). Mr Lorkowski graduated from the Warsaw School of Economics and the National School of Public Administration.

Coal, Brussels, 19.02.2019, https://www.env-health.org/wp-content/uploads/2019/02/Chronic-Coal-Pollution-report.pdf.

[35] See https://www.energy-community.org/regionalinitiatives/Transition/CARI.html.

SOLVING THE ENERGY AND CLIMATE SECURITY DILEMMA IN SOUTHEAST EUROPE

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In the wake of the Russian aggression, Europe found itself painfully unprepared to defend its interests and values, falling victim to a deeply rooted dependence on Russian oil and gas. A month into the war in Ukraine, the EU keeps holding back on critical sanctions against the Kremlin that target the Russian energy sector. Instead, it continues to be a primary source of funding for Russia's military invasion through ongoing hefty payments for oil and gas imports. Meanwhile, the EU is also suffering a heavy economic blow from the spike in energy prices and overall inflation, which in turn is fuelling political instability, sending national governments into panic mode. Suddenly, **energy security** has emerged from the dusty corners of EU policymaking.

History seems to have made a full cycle since the gas crisis of 2008, when Ukraine was again at the epicentre of events. Back then, when Russian gas supply to Europe was unexpectedly cut off in the middle of the heating season, amid Russia's attempt to pressure Ukraine back into its sphere of influence, Russia had no alternative routes to deliver natural gas to Europe other than the Ukrainian infrastructure. And unlike Europe, Russia learned its lesson. It redefined its energy strategy with the aim to overcome the strategic reliance on Ukrainian gas infrastructure and to solidify its grip on the European gas market, successfully undermining Europe's energy security.

Meanwhile, for the past 15 years, Europe has been sleepwalking into the current trap, following the naïve *Ostpolitik* approach until its ultimate catastrophe. All the warning signals were blindly ignored, with Russia's increasing aggression and growing security risks meeting the stubborn insistence from European and especially German politicians to continue business as usual and even increase engagement with Russia. This allowed Russian companies to serve as an effective arm of the government in its geopolitical agenda, operating under the veil of "it's just business" and enticing a growing informal network of European companies. During all this time, legitimate energy security concerns were consistently side-lined from the EU policy agenda. Strategic projects such as the Nabucco pipeline were left at the mercy of market forces and Russian sabotage, while Russia's strategic pipeline projects Nord Stream and Turk Stream received solid political and financial support and thrived. These projects, and the state capture networks growing around them, fuelled Russia's deep infiltration into the European economic and political systems. Ultimately, by complying with Russia's energy strategy, Europe became a key strategic enabler of the military aggression in Ukraine.

The spike in energy prices, aggravated by the slow pace of energy transition, and the excessive overreliance on Russian fossil fuel imports have clearly demonstrated the need for a new European Energy and Climate Security Strategy.

The European Green Deal should be the cornerstone of this new strategy.[36] The political fallout from the current energy crisis and the prospect of inflation getting out of control would require strong political will to deliver on the necessary reforms that maintain energy security without compromising the climate transition process.

Redefining Energy and Climate Security

European governments are not only struggling to guarantee a reliable and cheap supply of energy but are also failing to overcome a fossil fuel lock-in. Despite the unprecedented economic sanctions against Russia, European governments have more or less continued buying Russian oil and gas. Embracing short-term political interests and Russia-linked entrenched oligarchic networks, European governments so far are stalling at efforts to diversify their dependence away from Russia.[37] This is especially visible in the case of natural gas where Gazprom has actually increased exports to Europe since the war started in late February 2022.

The EU's decision to reduce Russian gas imports by two-thirds by the end of 2022 is already difficult even with dedicated and coherent efforts across the continent. Mixed signals from European capitals on their readiness to change course on Russian energy make the EU's mission impossible. Russia has proven that it can masterfully exploit internal European divisions on energy and still has strong leverage over the national energy champions in most EU countries.

Redefining the European energy and climate security strategy would require a comprehensive set of policy measures that include:

1. Countering the Russian aggression in Ukraine by cutting completely Russian oil and gas imports;
2. Implementing short, medium-term, and long-term actions to diversify the energy supply and improve Europe's resilience to supply shocks;
3. Reversing the fossil-fuel lock-in and accelerating the climate transition of the European economy.

Energy and climate security risks will not end with gas supply diversification. New emerging risks related to the dependence on mineral resources linked to the process of energy transition are looming next on Europe's agenda. Navigating through these challenges requires the development of innovative and actionable policy instruments for climate change mitigation and diagnostics.

Assessing Europe's Vulnerabilities

The current Western sanctions against Russia are not enough to stop the

[36] Stefanov, R., Vladimirov, M. (2022). The missing element of Europe's energy and climate security policy. Op-Ed for Euroactiv, January 31.

[37] Conley, H., Ruy, D., Stefanov, R., Vladimirov, M. (2019). The Kremlin Playbook 2: The Enablers (New York: Rowman & Littlefield, 2019).

Russian war in Ukraine. In fact, they may be aggravating the situation further by consolidating the power of the Kremlin regime, while at the same time undermining the macroeconomic stability of the global economy. As tensions rise between Russia and the West, energy prices have also increased, weakening an already fragile post-COVID economic recovery and strengthening inflationary pressures that may lead to a popular backlash against sanctions, in the short term, and against the European Green Deal in the long run.

It is of utmost importance to put an end to the three-decade-long process of Russian economic integration and political accommodation with the West after the Cold War. Russia's political elite has established trusted relationships with Western leaders that have matched the country's increased access and integration into the global financial and trade systems. Estimates show that close to $1 trillion was moved out of Russia and invested all across Europe after 1991.[38] The Russian capital inflows served to develop intricate state capture networks of economic and political actors that the Kremlin leveraged to achieve an outsized political influence over the strategic decision-making of European states.[39]

European oil and gas companies have locked-in national economies in a lasting dependence on Russia, supported by these companies' long-standing business relations with Russian counterparts. Their strategic interests, expressed in lucrative deals for oil and gas exploration and production in Russia or Russia-led infrastructure projects, are now directly exposed to potential sanctions against the Russian energy sector.

Over the past three decades, these European energy champions have dragged their feet on supply diversification. As a result, Europe relies on Russian crude oil for over a quarter of its imports. This amounts to about 2.7 million b/d on average over 2018-2019, with Germany, Poland, and the Netherlands alone accounting for over 40% of these volumes (see Figure 1).

Since the start of the war, many European companies have been proactively abandoning purchases of Russian crude, primarily due to the uncertainty about potential sanctions and difficulties with financing and insurance, as well as potential reputational damage.[40] While this has translated into unprecedented pressure on the price of Russia's key crude grade, in reality, the disruption of Russian crude flows has not been significant so far. Companies have limited only spot purchases, while the majority of trade is linked to existing long-term contracts and remains intact.

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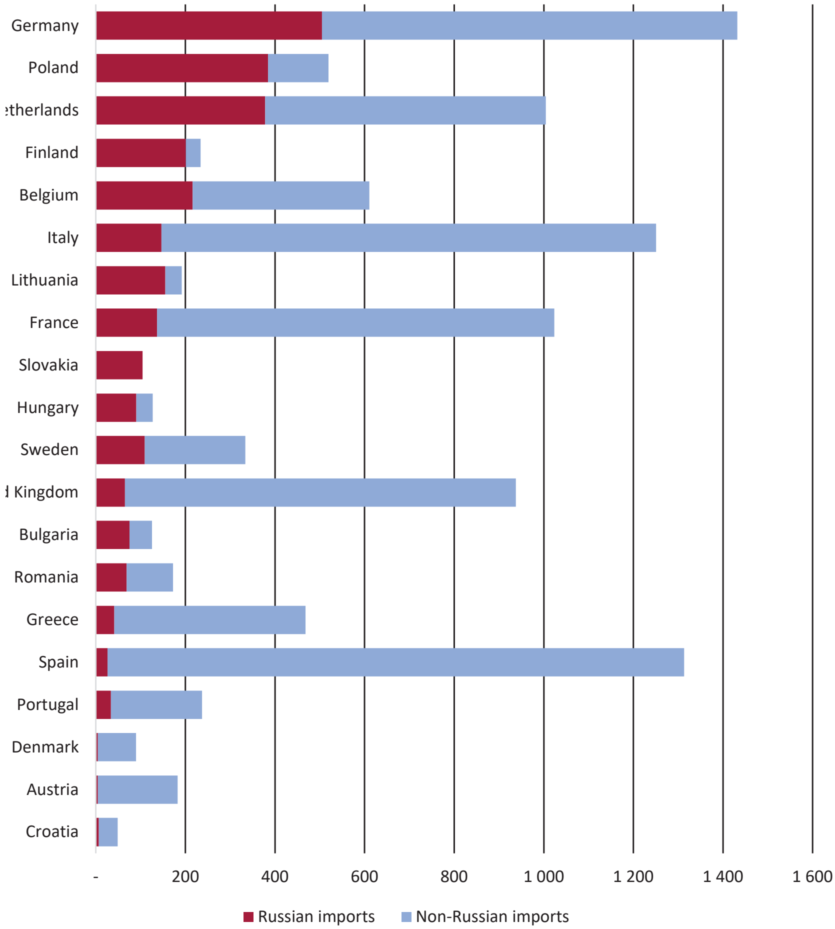
[38] Novokmet, F., Piketty, T., Zucman, G. (July 2017). From Soviets to Oligarchs: Inequality and Property in Russia 1905 – 2016. WID.world. Working Paper Series № 2017/09.

[39] Shentov, O., Stefanov, R., Vladimirov, R. (2020). The Kremlin Playbook in Europe. Sofia: Center for the Study of Democracy, 2020.

[40] A particular case in point is Shell, whose purchase of a cargo of Russian crude from Trafigura in early March received wide media coverage, leading to an official apology from the CEO Ben van Beurden a few days later and a commitment to stop all spot purchases.

Figure 1: Key Importers of Russian Crude Oil (‘000 b/d)



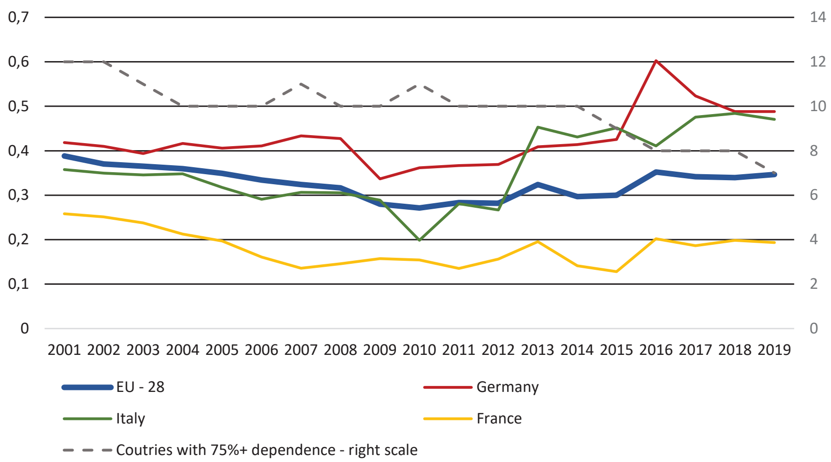
Source: CSD calculations based on DG Energy data (2018-2019 average imports)

Meanwhile, the continued talk about oil import sanctions has so far only served to support the rise in global crude and oil product prices.[41] This benefits the buyers of Russian crude, as they make considerable margins from refining the relatively cheaper Russian crude and selling to an overheated products market. It also benefits Russia, as it continues to sell its crude and products at high prices and refills its foreign currency reserves. The profitable business of buying Russian crude puts European refiners and oil traders in a willing dependency vis-à-vis Russia. Counting on their voluntary rejection of doing business in Russia would be wishful thinking.

[41] The average price of Urals in February was 20% higher than the average from October 2021 to January 2022. Despite the enormous pressure from limited spot buying, Urals has remained close to February levels on average over the first half of March. The 20% increase comes down to about $15 per barrel, which can mostly be ascribed to a geopolitical risk premium.

Europe's reliance on Russian natural gas imports goes beyond crude oil. Russian gas accounts for about 40% of total imports in Europe (see Figure 2). Crucially, with declining local natural gas production and a practically non-existent diversification strategy, the share of Russian gas in total imports has been increasing in recent years, up by 8 percentage points between 2010 and 2019. The biggest importers of Russian natural gas by volume, Italy and Germany, have been the key drivers behind the growing reliance. For Germany, the share of Russian gas has increased to 50% of total gas imports by 2019, compared to 34% in 2009. The number of countries that rely on Russian gas for over 75% of their imports and hence are the most vulnerable, has declined only marginally. Seven countries[42] fell into this category in 2019, representing 24% of European gas imports (40bcm).[43]

Figure 2: Share of Russian Natural Gas in Total Imports in Selected European Countries



Source: CSD calculations based on Eurostat data

Europe does not have sufficient alternative supply sources to fully offset a complete halt of Russian imports. Even at the record levels of early 2022, LNG imports would be able to cover only half of the shortfall. A significant further increase in LNG imports is out of reach, as infrastructure bottlenecks prevent the maximum utilisation of LNG regasification facilities in Spain, where most of the spare capacity remains. As a compound risk factor, gas storage was strategically emptied to unusually low levels ahead of the Russian invasion. Gazprom's ownership of about a third of the storage capacity in Germany, the Netherlands, and Austria has played a key role in enabling Russia's strategy

[42] Bulgaria (79%), Czech Republic (100%), Estonia (99%), Latvia (100%), Hungary (95%), Slovakia (100%), Finland (97%).

[43] CSD calculations based on Eurostat data.

to make Europe vulnerable to potential gas supply disruptions ahead of the invasion of Ukraine.

Similar to the oil sector, the companies importing Russian gas, mainly through long-term contracts, are currently benefitting from selling relatively cheaper Russian gas into an overheated market. For these companies, cutting off gas imports from Russia would lead to lengthy and costly legal battles with Gazprom and loss of their business with Russia. Without sanctions from the EU, these companies are unlikely to take meaningful action to undermine their own financial interests in maintaining close ties with Russia. Not surprisingly, these companies are the main voices against EU sanctions on Russian gas.

Towards an Index for European Energy and Climate Security Risks

The current geopolitical crisis has undeniably demonstrated that Europe needs to put energy security at the top of its policy priorities and make sure that it stays there even after the peak of the crisis subsides. Clearly establishing energy security as a core element of the EU's energy strategy, and synchronising energy security priorities with decarbonisation and market integration and liberalisation policies, is a crucial first step with implications for the medium-term and long-term policy objectives. It is essential to take this step as soon as possible to ensure the long-term consistency of measures and investments.

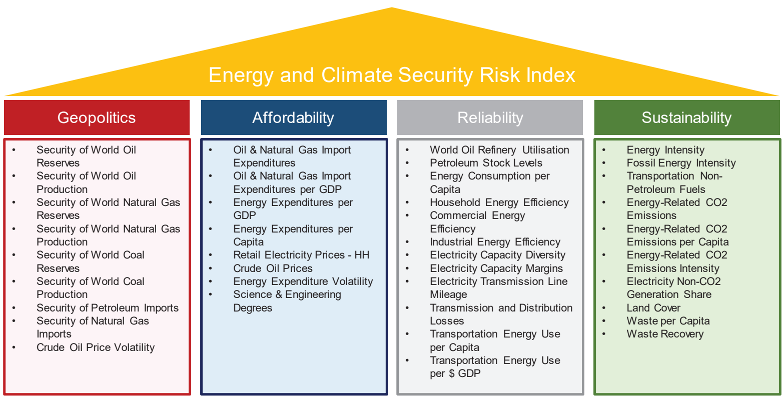
The process of achieving common European goals has been hindered by a policy ambition gap due to widespread energy sector governance deficits in a number of Member States. Evidence-based policy instruments to monitor Member States' progress, such as an **EU Energy and Climate Security Risk Index (ECSRI)** (see Figure 3), allowing for an objective, comparative assessment, could become an EU-wide instrument for policy convergence. By using the Index, the EU would be able to further and to deepen the coordination of national policies across sectors and policy areas on the back of a long-term political, financial and social commitment.

The ECSRI has four pillars, reflecting the four dimensions of energy security risks: geopolitical, affordability, reliability, and sustainability. The Index covers 39 individual risk indicators, based on thousands of data points. While these individual factors are distributed between the four pillars, they remain closely interlinked. For instance, global crude prices are reflected in the geopolitical dimension via the assessment of their volatility, as well as in the affordability dimension, as they are also included in the analysis of the level of energy expenditures. Similarly, oil and gas consumption has an impact not only on energy expenditures but also on the overall energy intensity of the economy, as well as GHG emissions.

The Index allows policy-makers and experts alike to fully reflect on a wide spectrum of risks associated with the high reliance on fossil fuels, as well as the risk mitigation potential of decarbonisation policies. In addition, the reliability dimension captures the risks associated with the structure of the energy system and its ability to absorb potential shocks. This is measured through indicators such as the energy efficiency of different economic sectors, the resilience of the electricity system (transmission losses, density of the electricity grid, etc.), and petroleum/natural gas stock levels.

The ESCRI can improve the understanding and transparency of the most important energy security and climate vulnerabilities faced by EU Member States based on data-driven policy action. It would help track the progress of European countries towards the diversification of supply sources, the liberalisation of energy markets, the decarbonisation of key economic sectors, as well as the improvement of energy affordability and energy system reliability. It will also monitor the impact of climate policies on key environmental and sustainability indicators.

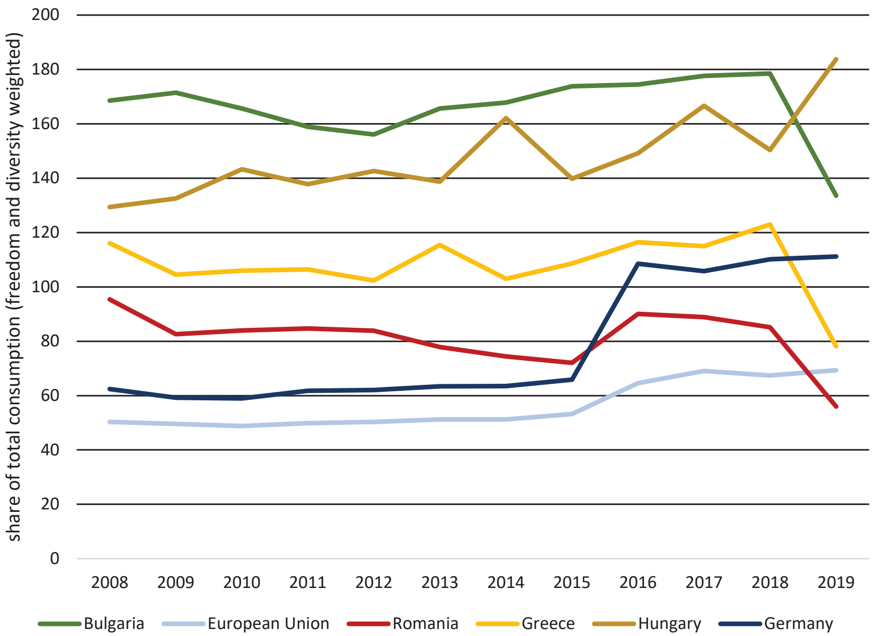
Figure 3: Energy and Climate Security Risk Index



Source: CSD

A critical element of this instrument is a common assessment of the risks related to natural gas, oil, and electricity imports based on: (i) overall reliance on imports, (ii) diversification of the import sources, and (iii) reliance on authoritarian states for imports. Such an assessment for the EU and several key Member States clearly reveals the strong increase in security risks since 2014 (see Figure 4). It also demonstrates the historically much higher risk exposure of Southeast Europe compared to the EU-level risk. From this perspective, reduction of natural gas demand, avoiding a natural gas lock-in, phase-out of coal in combination with massive renewable energy-based transition, and a smarter, more resilient and integrated electricity system, would be key policy actions to make the European energy system much more resilient. This would result in an overall reduction in energy security risks.

Figure 4: Security of Natural Gas Imports for Selected Countries and the EU



Source: CSD calculations based on Eurostat data on imports by origin country and consumption

Southeast Europe in Focus

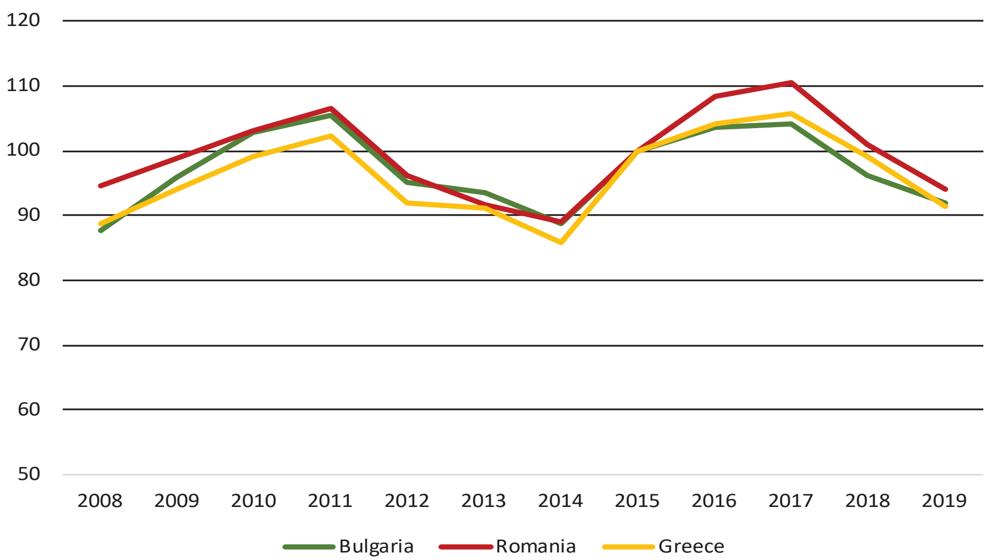
The Southeast European region is particularly vulnerable to energy security risks not only because of its historically greater dependence on Russian fossil fuel imports, which has also contributed to the entrenching of powerful state capture networks that control strategic policy, but also because of the region's excessive use of coal, the low energy efficiency of its economy and the high carbon-intensity levels. SEE also faces a persistent energy poverty crisis and slower progress on market liberalisation, integration, and low-carbon transition.

Many governments in the region, including Bulgaria, Hungary, Greece, Romania, and Slovenia, are actually doubling down on gas infrastructure investments. These projects come on top of the already-built Turk Stream gas pipeline, Nord Stream's smaller but equally detrimental-to-energy-security twin in the Black Sea. Such a wasteful gas gamble will in fact increase the dependence on Russia by between 30 and 50%, stalling efforts to diversify supply and complete the European gas markets integration.

The Turk Stream project has been instrumental in facilitating the Russian economic and political influence in Southeast Europe and demonstrates a number of severe governance deficiencies, including the lack of a detailed cost-benefit assessment of the project, or any public discussion on the consistency with the national long-term energy policy and security objectives.[44]

From a broader energy security perspective, the lack of a true supply diversification strategy has prevented any sustainable improvement in the geopolitical risks faced by the three EU Member States in the region – Bulgaria, Greece, and Romania. The main driver behind a temporary drop in the geopolitical risk across all three countries around 2014, and again in 2019, has been linked to the fall in global crude price volatility and the partial diversification of supply sources (see Figure 5). All of these processes have by now been reversed dramatically on the back of the 2021 energy crisis and the Russian war in Ukraine. The inherent volatility of commodity prices and the limited ability of national governments to control other geopolitical factors, such as the security of global fossil fuel production, call for more efforts to reduce the overall role of fossil fuels in the energy mix and in energy import expenditures across the region.

Figure 5: Geopolitical Risk Index for Bulgaria, Greece, and Romania



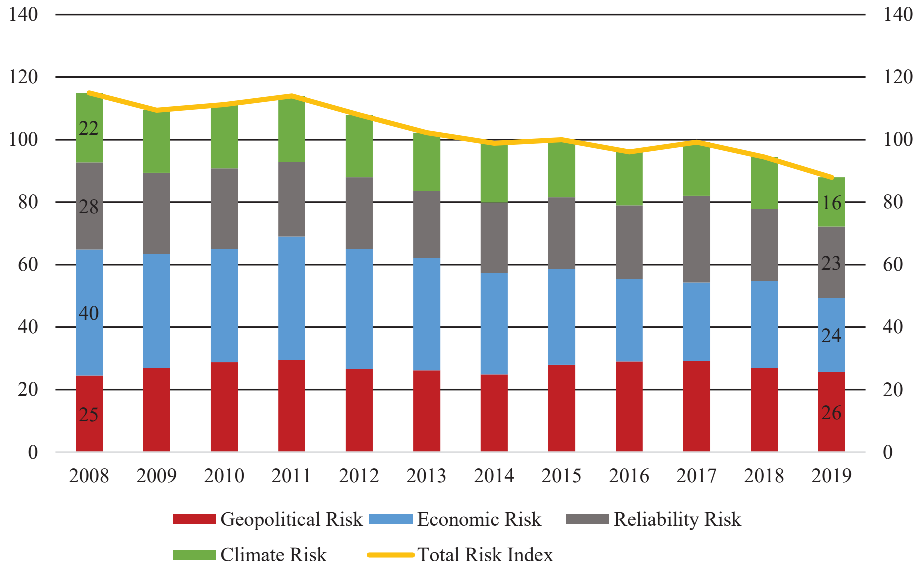
Source: CSD

Despite the slow improvement of geopolitical risks, the overall level of energy security risks in the region has declined across the three countries. In Bulgaria, a reduction in energy expenditures per GDP, as well as lower energy expenditure volatility, are among the key factors improving energy security. Additionally, the reduction of energy and carbon intensity has led to the improvement of sustainability

[44] Updated 2020 Energy Strategy of Bulgaria. Ministry of Energy. https://www.me.government.bg/files/useruploads/files/akt.strategiq2020.pdf

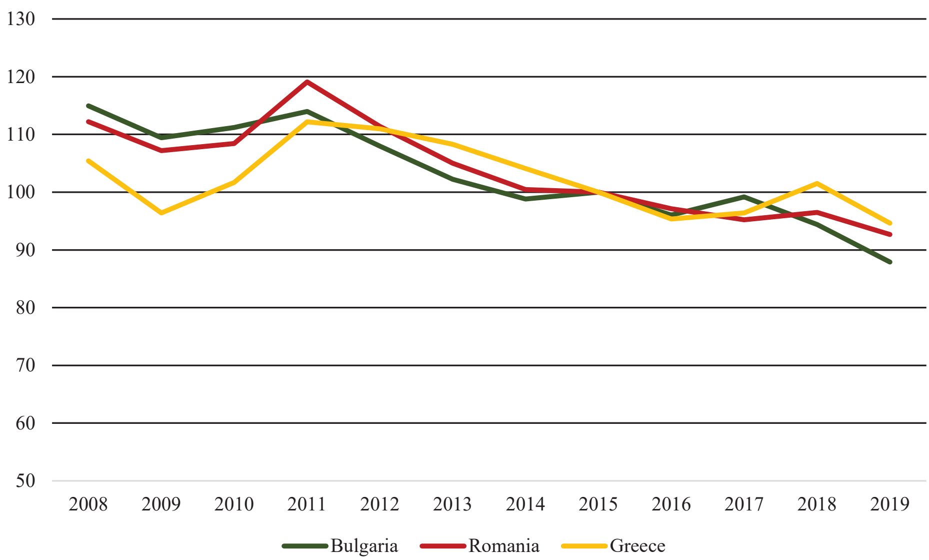
indicators and thus, by extension, of the overall energy security risk position of SEE countries (see Figure 6).

Figure 6: Bulgaria – Energy Security Risk Index



Source: CSD

Figure 7: Energy Security Risk Index – Bulgaria, Greece, and Romania

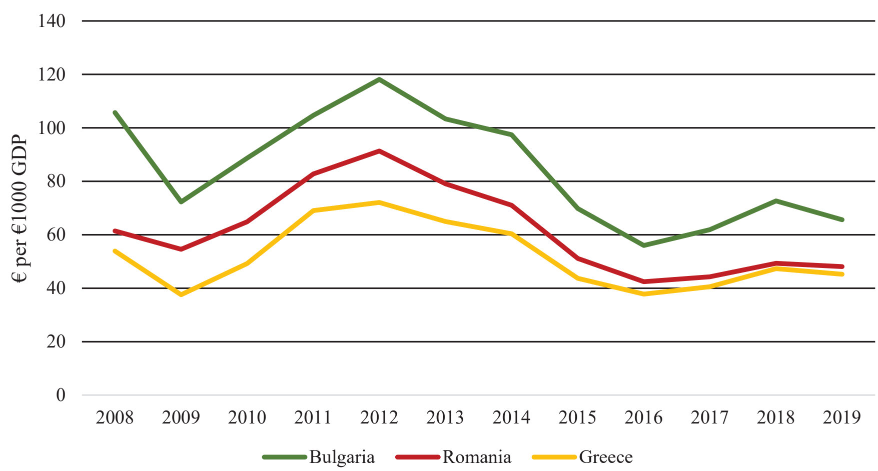


Source: CSD

Despite the improvement over the past several years, if we compare key risk metrics such as energy intensity and energy expenditures per GDP, Bulgaria still stands out as an underperformer relative to Greece and Romania. In 2019, estimated energy expenditures in Bulgaria for every EUR 1000 of GDP stood at over EUR 65, 37% higher than in Romania and 45% higher than in Greece (see Figure 8). The high energy intensity of the national economies in Southeast Europe, where Bulgaria is among the worst performers, as well as energy poverty issues, have made the region particularly vulnerable to the current energy crisis. In addition, the potential economic pain from more meaningful sanctions against Russia has made national governments hesitate or in many cases openly oppose measures to reduce dependence on Russia.

Meanwhile, the strong focus on energy costs and supply scarcity in the fossil fuel market do not sufficiently emphasise the key role of the low carbon transition and the European Green Deal as a solution to the challenges. Instead, governments are focusing on fossil energy subsidies that support the consumption of these fuels and do not provide a long-term solution to the problem.

Figure 8: Energy Expenditures per GDP – Bulgaria, Greece, and Romania



Source: CSD

Tackling the high energy intensity of national economies in SEE and reducing the oil and gas import bill is crucial for improving the region's energy security. They need to envision a long-term national energy and climate policy framework in line with the EU's objectives on decarbonisation and security of supply. Tackling the wide spectrum of geopolitical, economic, and other energy and climate security risks requires a comprehensive strategy for a deep transformation of the energy sector and the drivers of economic growth.

What's Next for Improving EU and SEE Energy and Climate Security?

Emergency Measures

In times of a military conflict directly affecting the European security of supply, first and foremost, the EU should cut the flow of funds to Russia by introducing an oil embargo within the next 30 days. A combination of alternative crude oil supplies and the release of the mandatory 90-day strategic inventories would avoid fuel shortages. On EU and national level, there is an urgent need for an aggressive information campaign to prevent panic-buying by end-users and to clearly explain that existing inventories are enough to cover 3 months of normal consumption in the event of a complete cut of all oil supplies. In addition, to block Russian influence networks in Europe, EU Member States should cancel all large-scale Russia-led energy projects such as nuclear power plants and natural gas infrastructure as soon as possible – following the example of Nord Stream 2.

Europe needs to also introduce emergency measures to withstand a Russian gas supply cut. The EU and national governments need to ensure that domestic consumption needs will be met and vulnerable consumers will be protected, including by:

- Ensuring that all EU Member States implement gas solidarity agreements with a focus on optimising West-to-East gas flows.
- Implementing a common EU gas purchasing mechanism to secure gas stocks and achieve economies of scale in mobilising alternative gas supplies.
- Urging all EU Member States to define a priority list of vulnerable consumers.
- Rolling out demand response tenders to urgently reduce natural gas demand and prevent large business losses.
- Developing an emergency spending package based on the national ETS revenues and the shifting of resources in national recovery and resilience plans.
- Temporary cutting excise and VAT duties on natural gas as additional support measures for vulnerable consumers.
- Temporarily taking over Gazprom-owned natural gas storage facilities across Europe in order to prevent Russian market manipulation.

Medium-Term Measures

In the medium term, the EU should implement an ambitious gas supply diversification strategy hand in hand with a phase-out of long-term contracts with Russia. EU Member States should temporarily raise domestic gas production in key fields such as Groningen, accelerate strategic interconnectors, new LNG regasification terminals in Germany, Italy, and Greece, and gas storage facility projects, as well as remove take-or-pay clauses on existing long-term contracts with Gazprom.

In addition to cutting the dependence on Russia, the EU should reduce the overall role that natural gas plays in Europe's energy mix by replacing it with locally-sourced renewable energy. This would not only limit the exposure to Russian imports, and to geopolitical risks more generally, but also to the inherent volatility of fossil fuel prices. Natural gas has proven to be a key driver behind skyrocketing electricity prices. Forward markets are pricing in continued supply scarcity through to at least 2023. Medium-term measures to phase out natural gas from the European energy mix include:

- Replacing natural gas in heating with heat pump roll-out strategies and electrification.
- Reducing overall gas demand with an accelerated energy efficiency investment strategy, focusing specifically on energy-poor households.
- Accelerating offshore wind and power storage projects to replace natural gas power plants being used for covering peak power demand.
- Avoiding a natural gas lock-in by abolishing any new EU-financed natural gas transmission and gas-fired power plant projects.
- Ensuring that only green hydrogen projects will be supported.

As the energy market dominance of Russian companies is enabled by the deep penetration of Russian capital in the European financial markets, there is an urgent need for halting all Russian strategic investments in Europe linked to Russian state-owned companies and oligarchic networks close to the Kremlin.

Long-Term Measures

In the long run, a full fossil fuel phase-out is the most sustainable way to improve energy and climate security. Decarbonising energy markets will also deliver a blow to Russia's ambition to increase its economic and political influence in Europe.

An accelerated decarbonisation strategy requires:

- Deep electrification based on cutting-edge renewable technologies such as offshore wind, green hydrogen, and synthetic fuels in industry and low-carbon transport infrastructure. A strong focus on market-oriented R&D and innovation must become the primary driver of the transition.
- Designing robust EU and national energy transition and energy poverty reduction strategies.
- Deep renovation programs to reduce energy consumption faster than the current 2030 targets.
- Improved integration and liberalisation of natural gas and power markets in Europe as a crucial step to removing bottlenecks that cause regional price divergence and wake up energy nationalism.
- Upgrading power transmission lines and smart grids to increase supply reliability and facilitate the integration of a larger share of renewable energy in the system.

Southeast Europe: Key Recommendations

Zooming in on the SEE, Member States in the region should work in close coordination with EU institutions on designing comprehensive national energy and climate security strategies, that:

- Clearly define fossil fuel reliance on Russia as a primary long-term energy security risk.
- Focus on the completion of gas diversification strategies, which will also underpin future hydrogen development plans.
- Link any hydrogen development plans to renewable energy sources, such as solar and wind.
- Define its 2030 and 2050 energy security and climate change goals. Current strategic documents are unfeasible, poorly coordinated, and in conflict with EU priorities, although predominantly reliant on EU funding.
- Prioritise energy technologies and markets of the future with a focus on R&D, innovation, and the uptake of new technologies, as well as market capacity building in these technologies, rather than on their passive consumption.
- Put energy-poor consumers first. All energy security and decarbonisation strategies should be clearly linked to alleviating energy poverty within a broader economic strategy for increasing prosperity. Hence, it is imperative to educate and empower poor households to benefit from the European Green Deal by also tackling climate change misinformation and propaganda.

An effective energy and climate security strategy requires a radical improvement in the quality of governance that focuses on countering corruption and state-capture risks in the energy sector.

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Before joining the Center for the Study of Democracy, Kostantsa was directing research activities at JBC Energy in Vienna, an independent consultancy, where she focused on international energy markets and geopolitics, providing advisory and data-driven insights to leading international energy companies, financial institutions, and international organisations.

Prior to that she gained professional experience within leading energy companies working on modelling the cost of different energy storage technologies as an intern at the corporate strategy department of Orano in Paris, as well as helping manage international research and development projects in the field of renewable energy technologies at EDF R&D in Paris.

Martin Vladimirov *works in the field of energy security in Europe and the Balkans, the energy transition, the alternative energy technologies, as well as the geopolitical dimensions of energy and financial markets with a strong interest in the different elements of the Russian and Chinese economic influence in Europe.*

He has been working in energy and political analysis for the last three years both academically and professionally. He worked as an energy analyst for The Oil and Gas Year, which produces in-depth overviews of the energy sectors of the major oil and gas producers around the world. In his capacity of an analyst, he discusses all relevant issues in the energy supply chain for a specific country. He completed two annual oil & gas reports for Kazakhstan, Azerbaijan and most recently Saudi Arabia.

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ENERGY SECURITY IN SOUTHEAST EUROPE – REGIONAL COOPERATION IN A NEW GLOBAL SECURITY CONTEXT

Assoc. Prof. Atanas Georgiev, PhD[45]

Introduction

The cascading crises at the beginning of the 2020s pose new threats and require new European and regional cooperation solutions, in a new global security context. The COVID-19 pandemic from 2020, the partial recovery accompanied by increased energy consumption, combined with European (and global) price shocks in the energy and other resources markets in 2021, and the war in Ukraine at the beginning of 2022, have overlapped.

This new context has redefined the Southeast European energy security challenges, which in turn will require redefined solutions.

One solution that may improve the overall situation of the region is to increase cooperation in the energy sector by removing all existing barriers for trade (of electricity, gas, and oil) as well as by defining, planning, financing, and operating new energy-related investments in a regional manner. Energy policy has been more important for the European Union than geopolitics in the past two decades. This may now change.

Likewise, one specific tool for tackling the new challenges may be intensive cooperation in research and education.

Scoping the challenges

Traditionally, Southeast Europe (SEE), in the narrow context, includes the following countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, North Macedonia, Romania, Serbia, and Turkey (its European part to the west of the Bosporus). In a broader context, to the east and to the south, the region is neighboring the countries of the Former Soviet Union, littoral countries of the Black Sea (Moldova, Ukraine, the Russian Federation, Georgia), as well as the Eastern Mediterranean countries (the rest of Turkey, Cyprus, etc.). To the west, some of the neighboring EU Member States can also be considered closely connected to the region (Austria, Slovakia, Hungary, and Italy).

SEE is a “border zone” in many respects – defining boundaries between Europe and Asia; between EU members and non-EU countries; between NATO allies and others (most notably the Russian Federation); and, last but not least – between energy exporters and energy importers.

Usually defined as a “crossroads of civilizations”, Southeast Europe is also a

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crossroads for energy flows – oil, natural gas, and electricity crisscross the region via pipelines, electricity grids, and ships. In the post-Soviet era, one of the first major oil transportation routes – from Baku in Azerbaijan to the port of Ceyhan in Turkey, which was negotiated in 1994, has been defined as "the contract of the century"[46]. Other major oil projects have been discussed around, including the Burgas-Alexandroupoli oil pipeline, and even the Istanbul Canal[47], which would allow much larger ships to enter and exit the Black Sea. Gas projects include Blue Stream, South Stream, and Turk Stream, as well as the Trans-Anatolian Pipeline (TANAP), and the Trans-Adriatic Pipeline, while the perspective of an EastMed pipeline also gains momentum.

Similar to the EU as a whole, which is around 60% dependent on imported energy, the Southeast European region is also heavily dependent on fossil fuels import. Most of the countries are net importers of electricity as well. Some of the key differences between SEE and other parts of the European continent include:

- A heavy reliance on local coal, mostly lignite;
- No sizable developed local resources of oil or gas;
- Small overall share of nuclear energy, except in some countries);
- Small total share of nuclear power in the energy mix;
- Lack of well-developed gas distribution grids (or lack of gas grids altogether[48]);
- Small share of renewable energy sources (RES), apart from hydro and rudimentary biomass burning;
- Lack of smart grids, microgrids, prosumers;
- Low personal incomes, and hence a large share of "energy poor" households.

Coal, gas, and nuclear – a revival or a last breath?

Over the last two decades, European energy policy has been based on three pillars: security of supply, liberalization of markets, and above all, decarbonization. In recent years, social tolerance and accessibility, mislabeled under the general term "energy poverty", have become increasingly important and have added to the initial three challenges, due to the large amounts of needed investments that eventually have to be repaid by end consumers and local businesses. This is especially valid for the SEE region, where personal incomes have always been substantially lower than in the rest of Europe, and GDP has been substantially lower than the average for Western European countries. As discussed in previous editions of the "Energy and Climate Diplomacy" journal, SEE has many reasons to keep coal around for a longer period, until other solutions are financially available for its businesses

[46] Azerbaijan Portal (2010) The Contract of the Century, Heydar Aliyev Foundation, https://azerbaijan.az/en/related-information/132

[47] Istanbul Metropolitan Municipality (2019) Kanal Istanbul, https://kanal.istanbul/

[48] See in: Georgiev (2020) Natural Gas in the Western Balkans in the Framework of the Future Energy Community Goals for 2030. A. Georgiev. Energy and Climate Diplomacy 2020, 108-117

and households. Natural gas is also considered a transitional fuel that could give breathing room to the local economies before a full switch to renewables.

The most difficult element in the European energy policy is the balance between goals, measures, and end results. Each measure can have different strengths, and sometimes direction, in relation to the main objectives of European energy policy. One of the most striking manifestations, despite the progress made in terms of diminishing the negative effects on the environment, has been related to the emissions. The European Emissions Trading Scheme has a clear goal – to reduce emissions through economic incentives. One of the reasons for rising electricity prices in Europe during 2021 has been the fact that the decarbonization measure has shown real effects: electricity prices from carbon-intensive power plants have risen. Natural-gas-fired generators took a larger share of the energy mix, replacing many coal-fired generating capacities. In combination with free markets, where the clearing price is determined by the most expensive operating source, this has led to the expected result – average prices rose to levels unseen before[49]. Why is then Europe still using so much coal and gas? And is it possible to do away with them, especially in the current geopolitical stand-off with Russia?

The energy sector's second defining factor in Europe during 2021 has been the natural gas market itself. It is considered a key factor in the Energy Transition. According to some, it has a huge potential for future development, others consider it to be part of the hydrocarbon era and believe that its apogee has passed. There are several key questions that will most probably find an answer in 2022:

- Is there a big enough alternative gas source for Europe?
- Is Europe bold enough to abandon gas as a transition fuel altogether?
- If gas still stays around, are there really no taboos regarding its local production from conventional and unconventional sources?

Gas is not only a direct participant in the primary energy mix. Apart from its energy applications in households and businesses (but also in non-energy applications), it affects the neighboring power production market as well. Natural gas is firing the peaking power plants, which define the market clearing levels in the national coupled day-ahead trading platforms. Several analyses by ACER and other institutions have clearly shown the link between gas availability, its wholesale price, and the wholesale levels of electricity prices in the second half of 2021 and the beginning of 2022[50].

Just as 2020 was marked by a pandemic, 2021 will go down in history as a year with significant energy shocks – perhaps for the first time since the 1970s. Developments half a century ago set the first steps for the decarbonization of energy consumption (one anecdotal example is the solar roof on the White House,

[49] ACER (2021) ACER's Preliminary Assessment of Europe's high energy prices and the current wholesale electricity market design, https://www.acer.europa.eu/node/6938

[50] ACER (2022) Wholesale Gas Markets in 2021: rebound of demand, lower LNG imports and a high reliance on gas storage stocks, https://www.acer.europa.eu/events-and-engagement/news/wholesale-gas-markets-2021-rebound-demand-lower-lng-imports-and-high

built by President Carter and removed by his successor President Reagan[51]). The 1970s shocks introduced renewables, strengthened nuclear development until the mid-1980s, and coined the term "energy efficiency". It remains to be seen whether current events will mark the watershed between the post-oil shocks era and a new one, increasing the speed of the energy transition.

Nuclear's role is also being reevaluated. Ever since the oil shocks of the 1970s, countries such as Japan and France, which had been heavily dependent on oil for electricity production, decided to rely more on nuclear energy. The construction of new nuclear power plants in the 1970s and 1980s, and their decommissioning in the 1980s and 1990s, are also evident from data from the International Atomic Energy Agency (IAEA)[52].

Several further developments in recent years have once again put wind in the sails of nuclear energy. The most recent of these is Europe's desire to cut off energy imports from Russia faster than planned. But we must also add technological change – with the announcements of more and more designs of small modular reactors. It is impossible to accelerate the low-carbon transition based only on renewable energy sources – increasingly, voices are heard that it would be possible only if the construction of new nuclear power plants becomes a priority. The inclusion of nuclear energy in the EU's green taxonomy is also not accidental, although its place there is not yet guaranteed as of April 2022[53].

Consolidating Europe vs. individual responses

The slow steps of the European Commission in 2021-2022, during the energy price shocks and during the weeks after the Russian invasion of Ukraine, regarding wholesale gas and electricity markets, are a challenge but also an opportunity. If the Member States choose the path of consolidation, the EU may become stronger after these two crises. If national populists achieve their self-preserving individual goals, the European energy policy may be in danger. It's certain, however, that the "shared competences" over the energy sector have no future in their current state.

Europe's path is not yet completely clear – apart from the pandemic and the current military conflict, the Old Continent must deal with its energy transition, which is showing mixed success, at least for now. Will gas be part of the EU's energy future (after the Taxonomy update), or will it be cut off for political reasons due to the dependence on Russia? Or will the moratorium on local extraction from unconventional sources (more specifically – shale gas) be reconsidered?

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[51] Biello, D. (2010) Where Did the Carter White House's Solar Panels Go?, Scientific American, https://www.scientificamerican.com/article/carter-white-house-solar-panel-array/

[52] IAEA (2020) IAEA Releases 2019 Data on Nuclear Power Plants Operating Experience, https://www.iaea.org/newscenter/news/iaea-releases-2019-data-on-nuclear-power-plants-operating-experience

[53] European Commission (2022) EU Taxonomy: Commission presents Complementary Climate Delegated Act to accelerate decarbonization, https://ec.europa.eu/commission/presscorner/detail/en/ip_22_711

As an energy importer, the EU has a clear “Endgame” – a complete break with dependence on imported fossil fuels – not only gas, but even more substantially, oil – and replacing them with low-carbon local sources: renewables, but also perhaps nuclear power.

Meanwhile, historical dependencies like the one on fossil sources from the Russian Federation remain. Until now, security of supply has been defined as the diversification of sources, routes, and suppliers, without any exclusions on political grounds[54]. This changed sharply in the beginning of March 2022, after the invasion of Ukraine. Now that there are not enough import alternatives, maybe Europe will start thinking outside the box. The emergency of the situation has heightened due to the high energy prices and the effects of the pandemic on the economy.

Current policies, both at European and at national level, are currently focused on implementing low-carbon investment measures, but they cannot provide a quick solution to the challenges posed by high energy prices. At the national level, in some countries, especially in the SEE region, there are not enough and not good enough measures to protect industrial production, while such measures are available in other national markets. In the short run, this risk is exacerbated by political instability. Additional budgetary resources are needed to deal with the crisis of high energy prices, while Europe spirals down in energy-induced inflation.

The measures at both national and European level must be in at least two directions: 1) mitigation of the price shock in the short term; and 2) national policies and funding for an accelerated industrial transition to reduce the vulnerability of consumers to the wholesale price shocks in the energy markets. Being shortsighted and aiming to finance only the current consumption is not enough. Betting only on the long-term vision (e.g., accelerating “transition”) is also wrong, especially in a world where larger global emitters are still not convinced enough to chip in.

The greatest risk of all in the current situation is to decompose the European energy policy down to non-coordinated national solutions to short-term problems. The greatest opportunity is – to forge a new energy policy based on geopolitical grounds and on sound realism.

Solutions for more cooperation in SEE

Energy security must be reviewed in all national energy policy platforms, and it must be based on the new realities on the ground. Some of the possible solutions include but are not limited to: energy supplies stress tests; more projects for interconnection of gas and electricity transmission systems; joint investment projects for electricity generation; and removal of existing barriers for trade between the national markets – including between current EU members and third parties.

One big challenge for the national and European policymakers will be how to

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[54] European Commission (2013) Regulation (EU) No 347/2013 of the European Parliament and of the Council, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02013R0347-20200331

deal with energy security while keeping decarbonization on track. High gas prices in 2021 and the war in Ukraine have increased the use of local lignite and coal for power production. This is the fastest measure to guarantee security of electricity supply while looking for other gas supply options.

In the medium term, depending on the European position on natural gas and its future in the decarbonization strategy of the EU, projects such as EastMed and LNG terminals must be either accelerated, or replaced (or supported) by local production of gas. It is now clear that these gas supply solutions will take time, but the faster these options are reviewed and, eventually, supported, the shorter the dependence on local coal and lignite will be.

Both options described above cannot be the long-term solution but can provide a cushion before low-carbon solutions kick-in.

Long-term decarbonization will also have to be reconsidered – if renewables are not fast enough for swift transition (during the 2030s decade), then nuclear must be explored as well. New, small modular reactor designs give the promise of smaller generating capacities, which have financial, security, and other practical advantages in comparison to traditional nuclear reactor designs.

Last, but not least, interconnection of electricity and gas transmission, combined with joint evaluations of security of supply among neighboring countries, may lead to a strategic partnership for achieving decarbonization faster, cheaper, and with other mutual benefits.

Rebuilding the Union through Research and Innovation

During the period 1979 to 1989, the European Parliament, as a new, directly elected political institution, put tremendous efforts into the completion of the single (or "internal") market of the European Economic Community. The European Commission, elected in 1985 with its President Jacques Delors, defined as its main priority the completion of the single market by 1992. One of the cornerstones of this single market is the free trade of electricity and natural gas over the national borders of the Member States.

The period coincided with the aftermath of the 1970s oil shocks, the founding of the International Energy Agency (as part of the OECD), and the push to replace fossil fuels gradually with low-carbon alternatives – nuclear and renewables. All these processes had relied heavily on innovations in terms of new technologies and new policies. They may provide many solutions to the current crises as well.

The Energy Union strategy, presented in 2015, put research, innovation, and competitiveness as one of the five cornerstones of the European energy policy – in order to "drive the energy transition and improve competitiveness"[55]. According to it, if Europe strives to be a global leader in renewable energy sources, it has to innovate in terms of renewable technologies and storage solutions. Instruments such

[55] European Commission (2015) COM/2015/080 final

as Horizon 2020 and the new Horizon Europe programs are targeted exactly at this.

The European Green Deal and the "Fit for 55" communication[56] build on this strategic basis, supporting "the shift to climate neutrality, including research, skills, industrial, competition and trade policies". Universities and research institutions will be key players in this process. Current challenges include the need for environmental, digital, and societal transformation in Europe for ensuring the decarbonization path.

Collaboration between academia and research institutions may be based on several key activities: joint research, mobility, new joint curricula and diplomas, and new joint institutions.

Some of the fields which may be included in such partnership are: energy balances and energy planning; energy security and energy diplomacy; energy markets and energy services; energy technologies and energy innovation; etc.

Cooperation should include a bilateral exchange of experiences. On one side, EU Member States can share practical advice with the Western Balkans (WB6)[57] and Eastern Partnership[58] countries regarding successes (and failures) of the diverse reforms implemented in the past two decades. On the other side, these 12 countries may share a number of experiences related to the situation on the ground – from political, economic, security, or other perspectives. These information exchanges may be based on a sound research and education program, which builds on findings on the ground and sharing of knowledge.

It is common for these 12 countries to look at experiences in the West, rather than sharing among themselves the challenges of energy transition and policy implementation. This has to be turned around, as some solutions may be closer than we think. More trainings, joint research, and cooperation among SEE countries themselves may bring innovative solutions that are not available elsewhere. One good example of such initiatives for cooperation are the ones organized by the Bulgarian Diplomatic Institute. Experiences from universities in the region and their cooperation can also be explored.

The greatest challenge of this priority area is not the lack of funds since new programs such as Next Generation EU will provide extensive funding to national governments in the European Union to foster recovery and innovation. The European nations should not consider these funds as another conventional stream for financing research and academic institutions. They should use its maximum potential as an incentive for regional cooperation, academic exchanges, knowledge sharing, and last but not least – innovative solutions.

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[56] European Commission (2021) COM/2021/550 final
[57] Albania, Bosnia and Herzegovina, Kosovo, Montenegro, Northern Macedonia, and Serbia
[58] Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova, and Ukraine

Conclusion

The only constant thing is change. New crises require new solutions, based on successful experiences. The global security framework in Europe has changed for good. The war in Ukraine may lead to a final push to replace imported fossil fuels from the East with alternative solutions. The new geopolitical situation will redefine energy priorities and will need new policy tools.

Apart from conventional solutions – related to local resources, new import infrastructure, and sustainable energy investments, the national governments in Southeast Europe should also consider more extensive cooperation in academic, research, and outreach programs. The best answers to the hardest questions may be found closer than previously considered.

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POLICY PROCESSES AND POLICYMAKING IN THE ENERGY TRANSITION IN THE WESTERN BALKANS

Nadežda Kokotović, Brussels Energy Club

Introduction

The present paper explores the Western Balkans' adherence to the EU policies in energy, environment, and climate from the perspective of policy process theory. For this exercise, we will use the Punctuated Equilibrium Theory[59] developed by F. Baumgartner and B. Jones. The analysis is focused on five countries in the Western Balkans (WB): Albania, Bosnia and Herzegovina, North Macedonia, Montenegro, and Serbia.

All these countries are firmly on the European integration path; however, in reality, they tend to make incremental steps when it comes to aligning to the European policy framework and markets in this area. The WB countries have an overall low level of economic, industrial, and infrastructure development compared to the EU's firm-level productivity, as well as a lack of market competition, limited regional economic integration, and weak institutions[60]. The EU is their largest donor and trade partner - in this context, climate neutrality is certainly a part of the further relations with the countries within the accession process.

Looking at the EU's offerings to the region, it seems they contribute substantially to the socio-economic development opportunities. And indeed, apart from the legally binding obligations, the WB leaders have been acknowledging and committing to different declarations, statements, conclusions, and processes related to the climate and green agenda, organized by the EU in previous years[61], as a group and in rather a declarative way.

Common sense and the economic analyses by the World Bank and the EU suggest that the green transition could be a new chance for development for this region, as the EU announced the Green Agenda for the Western Balkans at the end of 2020, with some EUR 9 billion available to support countries in the transition process; and this comes in addition to the overall Economic and Investment Plan for the WB. Thus, the EU plans to unleash an investment package that would support the countries' transition toward „competitive knowledge-based, sustainable,

[59] See, e.g., https://www.ncchpp.ca/docs/2018_ProcessPP_Intro_PunctuatedEquilibrium_EN.pdf, and others.

[60] Greening the Recovery. Western Balkans Regular Economic Report No 21. Fall 2021. World Bank Group, https://documents1.worldbank.org/curated/en/900381634670558017/pdf/Greening-the-Recovery.pdf

[61] Regional Cooperation Council | Sofia Declaration on the Green Agenda for the Western Balkans (rcc.int).

innovation-oriented and thriving economies[62]“.

However, it would be further argued that the Western Balkans are stagnating in the field of energy transition and green agenda as set by the EU accession negotiation framework due to several policymaking and policy process factors. Besides, the potential of sources that could change the current negative stability of the system is also explored. In this relation:

- The first part of the paper presents the Punctuated Equilibrium Theory (PET);
- The second part describes the present policy framework and the current level of implementation by the states;
- The third part provides material for discussion on some of the reasons for stagnation and potential drivers of policy change.

I Equilibrium vs. punctuation

The PET was developed in the US but is applicable worldwide[63]. According to this theory, policy processes generally tend toward stability, equilibrium, and longer periods of stagnation, marked by only incremental changes. Political institutions, policymakers, and interactions between them are core factors in this theory. They usually deal with a broad range of social and economic problems that require their attention, which is limited because of limited resources and imperfect information, which in turn makes their rationality bounded. Policymakers are bombarded with diverse information from many different sources, so they tend to focus on some and ignore the rest. This has multiple consequences for how policy decisions are made and how they are prioritized. Policymakers naturally resist change, try to keep the stability of the system and implement only incremental steps to satisfy those who are pushing for them. Therefore, equilibrium (stability) is the norm. However, the periods of stasis are occasionally interrupted (punctuated), resulting in drastic policy changes. These changes can come from endogenous and exogenous factors. The endogenous sources of change are sub-policy groups - different interest groups that have been pressured for a longer time. The exogenous come in the face of external economic triggers that force the system into a quick change. The punctuation is usually preceded by drama, shock, and scandal[64].

[62] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions. An Economic and Investment Plan for the Western Balkans, 6 October 2021, https://ec.europa.eu/neighbourhood-enlargement/system/files/2020-10/communication_on_wb_economic_and_investment_plan_october_2020_en.pdf

[63] True, James L, Jones, Bryan D, Baumgartner, Frank R (2006) Punctuated-Equilibrium Theory, Explaining Stability and Change in Public Policymaking. To Appear In Paul Sabatier, Editor, Theories of the Policy Process, 2nd Edition, Chapter 5.

[64] Kern, F, Rogge, K (2018) Harnessing theories of the policy process for analysing the politics of sustainability transitions: A critical survey, Environmental Innovation and Societal Transitions Volume 27, June 2018, Pages 102-117.

II The current policy framework and the implementation level

It is generally assumed that the countries of the WB region to a large extent share common structural problems, due to their shared economic, social, and historical development. Montenegro, Serbia, the Republic of North Macedonia, and Albania are official EU candidates. Accession negotiations and chapters have been opened with Montenegro and Serbia, and Bosnia and Herzegovina is a potential candidate country[65]. In this regard, the EU and the WB have a „leader-follower“ relationship. Apart from the official EU accession negotiations process, the continuous reconciliation efforts of the EU established a broad, horizontal, regional integration setup. The first such initiative in this regard established the Regional Cooperation Council[66] in Sarajevo, the central regional organization that 15 years later got a mandate to coordinate the Green Agenda for the Western Balkans.

In the meantime, the WB countries have committed to aligning their legal frameworks in the field of energy, climate, environment, and transport with that of the EU, not just within accession processes and aspirations, but also in the form of the EU-designed and managed regional treaties and initiatives. These are complex institutional systems created to stimulate energy transition, decarbonization, and diversified energy supplies. The three core frameworks are the Energy Community Treaty (2006), followed by Transport Community Treaty (2019), and the most recent EU's Green Agenda for the WB (2020-2021). Here, the Transport Community Treaty (TCT) will be only mentioned in those areas where it affects the energy and environmental policies of the countries, namely in the area of decarbonization.

A look at the recent status of these frameworks is presented below, along with relevant references to the WB countries.

Energy Community

The purpose of the Energy Community Treaty (ECT)[67] is to integrate the neighboring countries into the EU's internal energy market, in parallel to the process of the EU accession negotiations, which can be reactive to political circumstances. The idea was that the ECT modernizes regulatory aspects of the countries' energy markets, primarily in the field of electricity, gas, and oil, making it investment-attractive and stable. However, the content of the Treaty is evolving in parallel to the EU's internal market developments - thus, it is constantly incorporating new directives and rules. Presently, the *acquis* covers legislation on electricity, gas, oil, infrastructure, renewable energy, energy efficiency, competition and state aid, environment, statistics, climate, and cybersecurity. Every year, its highest decision-making body, the Ministerial Council, represented by the ministers of energy, meets to establish key priorities, adopt new

[65] More on the EU enlargement: https://ec.europa.eu/neighbourhood-enlargement/enlargement-policy/glossary/accession-negotiations_en

[66] www.rcc.int

[67] More details on each of the analyzed aspects related to the Energy Community are available at: www.energy-community.org

legislation, and set deadlines. In 2020-2021 there were 28 pieces of legislation plus 3 principles (competition-related) that countries are legally bound to transpose and implement in their national (or sub-national in the case of Bosnia and Herzegovina) legislations. In 2021, the Ministerial Council decided on a total of six new legal acts in the area of electricity, gas, renewable energy, energy efficiency, and governance. The Vienna-based Secretariat of the Energy Community, comprised of the European Commission and national authorities' experts, prepares a yearly implementation report that provides an overview of the progress that the states have made. The progress is measured against 39 legislative indicators and 3 that are related to governance.

The latest report states that „most Contracting parties made progress in important areas but continue to lag in others[68]". Serbia, Montenegro, and North Macedonia are successful in around 2/3 of the indicators, while Albania managed to fulfill only half of them. Bosnia and Herzegovina is at the bottom of the list with 21% of achieved progress. Still, although these numbers might seem disappointing at first, we have to bear in mind that legislation is constantly being updated and added to – as soon as one obligation gets fulfilled, another one is added: „Global energy transitions are prolonged and multidecadal processes[69]".

Percentage of progress made	Full transposition or significant progress	Partial transposition and ongoing activities	No transposition progress
Bosnia and Herzegovina	21%	51%	28%
Serbia	67%	26%	8%
North Macedonia	59%	31%	10%
Montenegro	69%	23%	8%
Albania	49%	44%	8%

The Secretariat also assesses how controlling authorities are doing their job. The discrepancies between the states are rather high:

%	Regulatory Authority	Competition Authority	State Aid Authority
Albania	78	60	30
BH	39	65	50
Montenegro	80	40	30
Republic of North Macedonia	80	30	50
Serbia	71	75	65

Dispute settlement cases are open against countries for improper implementation of the Treaty: Bosnia and Herzegovina (8), Serbia (6), Albania (1), North Macedonia

[68] Official website of the Energy Community. Implementation. Energy Community Homepage (energy-community.org).

[69] Kern, F, Rogge, K (2018).

(2), Montenegro (2). The two recent examples come from Montenegro („The Pljevlja coal power plant exceeded the agreed remaining number of operating hours as concerns compliance with the Large Combustion Plants Directive, while its reconstruction to work in line with modern environmental standards was delayed. The Energy Community launched a procedure against Montenegro. Despite this, Montenegro continues to operate the plant with explicit agreement of the government") and Bosnia and Herzegovina („Bosnia and Herzegovina remains heavily reliant on lignite coal and still plan to increase its energy generation based on fossil fuels, jeopardizing its commitments to decarbonization and climate neutrality by 2050. Preparations for an extension of the Tuzla coal power plant (Block 7) continue. This may increase the country's security of supply, but at the same time significantly prolong dependency on coal. In 2020 the Energy Community Secretariat launched an infringement case on Tuzla Block 7 because of a state guarantee of the Federation for a Chinese loan due to possible violation of State Aid provisions of the Energy Community *acquis*. Because a supplier of important equipment has recently stepped out, the Tuzla 7 project's future is uncertain").

The European Commission Reports

Accession negotiations have been opened with Montenegro in 2012, Serbia in 2014, and North Macedonia, and Albania in 2020. Bosnia and Herzegovina has had the status of a potential candidate since 2016. Every year, the European Commission publishes Reports for each country with an assessment of the progress of reforms in a country. As of 2020[70], the chapters (topics) of the EU *acquis* are grouped into 6 clusters of chapters, the fourth of which is dedicated to the green agenda and sustainable connectivity: „The green transition and sustainable connectivity are key to economic integration within the region and with the EU, facilitating cross-border trade within the region and creating real benefits for businesses and citizens[71]". It consists of 4 chapters: Transport policy, Energy, Trans-European networks, and Environment and climate change. This cluster and the reforms concerned have significant links to countries' Economic Reform Programmes, the Commission's Economic and Investment Plan, and the Green Agenda for the Western Balkans. Serbia has opened negotiations for Cluster 4 at the end of 2021. Chapter 4, on Transport policy, includes EU *acquis* on technical and safety standards, security, social standards, state aid, and market liberalization in road transport, railways, inland waterways, combined transport, aviation, and maritime transport. These

[70] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions. Enhancing the accession process - A credible EU perspective for the Western Balkans, Brussels, 5.2.2020, European Commission, https://ec.europa.eu/neighbourhood-enlargement/system/files/2020-02/enlargement-methodology_en.pdf

[71] 2021 Enlargement package: European Commission assesses and sets out reform priorities for the Western Balkans and Turkey. Press Release. 19 October 2021. Report on Bosnia and Herzegovina. All references to the countries' reports were taken from here: https://ec.europa.eu/commission/presscorner/detail/en/IP_21_5275

topics are highlighted in the Transport Community Treaty, concluded between the EU and the WB and ratified in 2019. The Permanent Secretariat is based in Belgrade and seems organized on the same principles as the Energy Community Secretariat in Vienna, where heads of secretariats are appointed by the EU. Chapter 15, on Energy, includes energy supply, infrastructure, the internal energy market, consumers, renewable energy, energy efficiency, nuclear energy, and nuclear safety and radiation protection, and overlaps with the ECT to a certain extent. Chapter 21 promotes Trans-European Networks (TEN) in transport, telecommunications, and energy (e.g., gas interconnectors). Chapter 27 is usually the largest in the negotiations process and deals with climate change, water, and air quality, waste management, nature protection, industrial pollution, chemicals, noise, and civil protection.

An overview of the Commission's assessment scales from its Reports 2021 (November 2021) is presented below[72].

The report assesses the overall status of the realization of each chapter and the progress made during the previous reporting period (12 months) relative to the previous report's recommendations. It uses one assessment scale for the state of play: early-stage, some level of preparation, moderately prepared, good level of preparation, and well advanced. The following scale has been used for progress made during the reporting period: backsliding, no progress, limited progress, some progress, good progress, and very good progress.

State of play **Progress made**	**Transport policy**	**Energy**	**Trans-European networks**	**Environment and Climate change**
Montenegro	Moderately prepared/ A good level of preparation No progress	A good level of preparation Limited progress	Moderately prepared/ A good level of preparation Limited progress	Some level of preparation Limited progress
Serbia	A good level of preparation Limited progress	Moderately prepared Good progress	Moderately prepared Some progress	Some level of preparation Limited progress
Albania	Some level of preparation Some progress	Moderately prepared Some progress	Some level of preparation Some progress	Some level of preparation Limited progress

[72] 2021 Enlargement package: European Commission assesses and sets out reform priorities for the Western Balkans and Turkey. Press Release. 19 October 2021. All references to the countries' reports were taken from here: https://ec.europa.eu/commission/presscorner/detail/en/IP_21_5275

Bosnia and Herzegovina	Some level of preparation Some progress	An early stage of preparations Limited progress	Some level of preparation Some progress	An early stage of preparation/ Some level of preparation Limited progress
North Macedonia	Moderately prepared Limited progress	Moderately prepared Some progress	A good level of preparation Limited progress	Some level of preparation Limited progress

This provisionary table indicates that the countries are predominantly in the stage of „some level of preparation“ or „moderately prepared“, while the progress in the reporting period is described as „limited progress“ or „some progress“. In certain chapters, Serbia (2), Montenegro (2), and North Macedonia (1) have achieved a good level of preparation.

The Reports point out the governance, strategy, and management issues related to Cluster 4 that are preventing states from achieving more substantial results. This is reconfirmed by the World Bank, which states that „When compared to EU peer countries, key areas in which the Western Balkans lags, and that would bring the bulk of the growth, are business regulation and the quality of institutions - that is, governance[73]“.

Certainly, the EC governance-related assessment is of key importance due to the accession process and the operational and strategic support for the countries of the WB. The EC remarks[74] can be grouped and structured in the following way:

• **Human and technical capacities:** „Administrative capacities need to be strengthened in all sectors“ (NM), „Administrative capacity and inter-institutional coordination need to be strengthened“ (NM, water quality management), „the human and financial resources are very limited“ (NM, climate change); „The Ministry of Transport and Maritime Affairs became part of the new Ministry of Capital Investments. The reorganization led to the resignation of experienced staff and there is an urgent need to rebuild the capacity of staff working in regulatory functions“ (MN), „The lack of sufficient administrative capacities at the central and local level and inspection bodies“ (MN, environment); „Staff levels decreased in the reporting period from 44 to 40, though a level of 55 staff has been set in the organigram. Increasing staff numbers is necessary“ (SRB, regulatory agency), „Human resource capacity in the line ministry remains insufficient. The newly established Directorate for energy efficiency requires robust financial, institutional and human resource capacities to take the sector forward efficiently“ (SRB); „BH needs to urgently

[73] Greening the Recovery. Western Balkans Regular Economic Report No 21, Fall 2021, World Bank Group, https://documents1.worldbank.org/curated/en/900381634670558017/pdf/Greening-the-Recovery.pdf

[74] 2021 Enlargement package: European Commission assesses and sets out reform priorities for the Western Balkans and Turkey. Press Release. 19 October 2021. All references to the countries' reports were taken from here: https://ec.europa.eu/commission/presscorner/detail/en/IP_21_5275

address the problem of chronic lack of adequately trained and qualified personnel within the Directorate of Civil Aviation to avoid the risk of safety oversight“ (BH), „The country will have to mobilise sufficient resources and administrative capacity to implement the Transport Community Treaty and the numerous measures proposed in the action plans“ (BH), „Institutional capacities need to be considerably strengthened“ (BH, environment), „The country’s administrative capacities should be significantly reinforced at all levels of government, covering all relevant sectors to ensure meaningful implementation of the required measures“ (BH); „Albania has not yet strengthened its inspection capacity“ (AL, road safety), „Albania needs to ensure that a fully operational energy agency is in place, equipped with adequate staff and budgetary resources (AL, renewables, energy efficiency), „the National Agency of Water Supply, Sewerage and Waste Infrastructure needs to structure and strengthen its resources and capacities“ (AL), „Lack of specific administrative structures and available staff for handling climate change issues remain a matter of serious concern“ (AL), „It should strengthen its administrative capacity for preparing strategic noise maps and action plans. The enforcement capacity of the National Environment Agency and the Ministry of Interior is very limited“ (AL), „The administrative capacity, infrastructure and systems for early warning, prevention, preparedness, and response are still inadequate“ (AL).

• **Institutional independence and enforcement power**: „The Energy Regulatory Commission is functional but its independence is hampered by political interference“ (NM), „Limited human and technical capacity at the Energy Department of the Ministry of Economy and the Energy Agency“ (NM); „AERS needs to have more effective enforcement power to ensure compliance of regulated companies“ (SRB), „Industrial pollution and risk management: Inspection and law enforcement remain areas of concern. Serbia needs to increase capacities for managing the integrated permitting processes“ (SRB); „Following the approval of its new organizational structure in April 2020, ERE needs to develop its capacity as an independent institution to address shortcomings in the national energy markets much more actively“ (AL), „Nature protection: Policy and law enforcement remain generally weak despite numerous capacity building activities and technical assistance“ (AL).

• **Strategic priorities and coordination**: „Lack of focus on key priorities, lack of coordination and cooperation between government levels“ (BH, transport); „the cost estimation and maturity statements on transport projects remain outdated and the reconfirmation of the single project pipeline priorities by the new government is still pending“ (MN), „insufficient inter-institutional coordination“ (MN, environment); „needs an effective institutional set-up to improve strategic planning, co-financing and managing its environmental investments“ (SRB); „urgently formalize the procedures for the appointment and functions of the national focal point for BH for the implementation of all environmental conventions to which BH is a signatory. The long-overdue requirement (...)“ (BH), „BH needs to designate institutions, ensure the necessary human and financial resources and establish structures to fully implement the Convention on international trade in endangered species of wild fauna and flora (CITES)" (BH); „strategies, action plans and legislation in these sectors need to be coherent with the principles and priorities of the Green Agenda and to ensure consistency between relevant sectoral documents (NM).

• **Transparency and public consultations**: „Implementation of Environmental Impact Assessments and Strategic Environmental Assessments Directives needs to be improved, notably the public consultation processes and the quality of the reports. Dialogue with civil society and public consultation processes in this sector needs to be significantly improved. Lack of transparency and access to information is a recurring issue" (NM); „BH should exploit and invest in hydropower responsibly, in constructive dialogue between all stakeholders including the civil society as well as in compliance with EU rules and procedures, particularly the environmental *acquis*, and with due respect to the general principles of transparency, legal certainty and accountability" (BH); „Such investments (hydropower plants) require full compliance with the national legislation as well as with the environmental and Energy Community *acquis*, and notably with regard to public consultations (Aarhus Convention) and quality of EIAs and SEAs" (AL), „Public participation and consultation in decision-making need to be improved as well, particularly at the local level" (AL, environment); „Serbia needs to ensure transparency about investments and their environmental effects and respect for freedom of expression and assembly in the environmental sector" (SRB).

Green Deal Action Plan

In that same reporting period, in November 2020 in Sofia, the countries' representatives signed the Sofia Declaration on the Green Agenda for the Western Balkans[75], together with the EU representatives[76]. The Declaration is based on all the previous declarations that were signed within the Berlin process[77].

The Declaration mirrors the EU Green Deal „adapted to the WB reality" in 5 areas:

- Climate, energy, mobility,
- Circular economy,

[75] Regional Cooperation Council | Sofia Declaration on the Green Agenda for the Western Balkans (rcc.int).

[76] In the presence of WB6 Prime Ministers and Ministers of Foreign Affairs, Prime Ministers (and/or representatives) of Austria, Bulgaria, Croatia, Germany, France, Italy, Poland, Slovenia, and UK, EC President, EU High Representative/Vice-President, EU NEAR Commissioner and EU NEAR Director, EEAS Secretary-General, European Commissioner of Innovation, Research, Culture, Education and Youth, RCC Secretary General, Representatives of CEFTA, OECD, EIB, WB, and EBR. Berlin Process | The Berlin Process - 2020.

[77] The Berlin Process started „as an initiative of several EU Member States, under German leadership, to engage with the six Western Balkan partners and promote regional cooperation and the European perspective of the region". It consists of annual summits and a series of ministerial meetings. https://www.berlinprocess.de/en/the-berlin-process-2020

- Depollution,
- Sustainable agriculture and food production,
- Biodiversity.

Based on that, the European Commission and the Regional Cooperation Council developed the Action Plan for the Green Agenda for WB (GAWB)[78], while the RCC is in charge of coordination and setting up and implementing the monitoring system. The Action plan includes some old and some new obligations (67 in total, with half of it devoted to decarbonization (energy, climate, mobility). The decarbonization commitment consists of 29 actions, 11 of which are ongoing. Most of the actions have already been part of commitments under the Energy Community Treaty, the Transport Community Treaty, National Determined Contributions to the Paris Climate Agreement, Low-Carbon Development Strategies, and National Energy and Climate Plans, as well as under the *National Adaptation Plan (NAP) process developed under the UNFCCC.* A substantial part of these has to be finalized in 2022-2025. One-third of actions refer to Transport Community Treaty obligations and the newly developed (in July 2021) Sustainable and Smart Mobility Strategy (3 areas with 10 flagships that consist of 64 actions)[79]. In addition, the region got another 38 actions in the circular economy part - Depollution, Sustainable agriculture, and Protection of nature and biodiversity, where some of these actions are already part of the accession process and existing treaties, while the Circular Economy is a completely new concept.

The management and the oversight of the Green Agenda for the WB seem to have multiple vertical layers and horizontal coordination mechanisms: „a multi-stakeholder approach, cross-sectoral collaboration, regional ownership, and cooperation[80]". The role of the RCC is to provide a dialogue platform with the European Commission and all the relevant regional organizations. In 2015, the RCC set up the Regional Working Group on Environment (RWG Env), with high-level representatives of ministries responsible for the environment, water resources, land, energy, and climate change. This group will continue its work with the new mandate to be „a backbone of this process" and in this case be supported by the SEE Biodiversity Task Force, an advisory body established in 2017. In addition, GAWB will be coordinated by Energy Community Secretariat, Transport Treaty Permanent Secretariat, International Union for Conservation of Nature (IUCN), Environmental Partnership Programme for Accession (EPPA), and Standing Working Group on Regional Rural Development (SWG RRD). The implementation will be additionally supported by the representatives of youth, the NGO Forum, the business community, vulnerable populations, local self-governments, and IFIs.

[78] Action Plan for the Implementation of the Sofia Declaration on the Green Agenda for the Western Balkans 2021-2030, Regional Cooperation Council, 6 October 2021, https://www.rcc.int/docs/596/action-plan-for-the-implementation-of-the-sofia-declaration-on-the-green-agenda-for-the-western-balkans-2021-2030

[79] Strategy-for-Sustainable-and-Smart-Mobility-in-the-Western-Balkans.pdf (transport-community.org).

[80] Action Plan for the Implementation of the Sofia Declaration on the Green Agenda for the Western Balkans 2021-2030.

III On the causes of stagnation and potential drivers of change

The states do differ in the level of alignment with the EU *acquis* in the field of energy and climate, but they have also a lot in common. The latter refers, e.g., to the fact that the changes happen incrementally, sometimes followed by regression, and that they share common governance problems, such as lack of capacity and inability to handle overly complex EU-related processes. However, „at the core of low carbon energy transitions is firm political commitment at all levels of governance[81]". Another key reference in this relation concerns the change in the policy approach: „For policymakers - the low carbon energy transition requires an increase in strategic policy intelligence, openness to experimentation and policy learning, new capabilities and novel procedural policy instruments as well as the development of strategies to manage resistance to the decarbonization of the energy system[82]".

There is a low political appetite for speeding up the transition in the region due to enormous costs, and deep socio-economic consequences, even though „business-as-usual is no longer available to the countries of the WB. The external environment is going through a fundamental structural change[83]".

It seems that - aside from the financial aspects - there are several possible causes for such a situation.

A low level of ownership over policy formation and policy adoption processes can be one of the reasons, as policies of the WB countries are in reality mostly provided by the EU. These countries are in a unique position due to their candidate or potential candidate status as they are bound to accept the policies that are voted upon in the EU without their participation. There is an option to be against something at the Ministerial Councils of the legally binding treaties; however, due to their dispersed power against the solid block of EU MS and the European Commission, it is difficult to expect that they would substantially challenge their current position. This is especially valid in circumstances of high reliance on the EU in trade, investments, and grants. This lack of connectedness can be observed on the websites of the respective ministries and in public statements by officials. It is difficult and sometimes impossible to find on the sites references to any of the abovementioned governance mechanisms, strategies, actions plans, treaties, and programs[84]. The Action Plan of GAWB is translated into the local language on the site of the Federal Ministry of Environment and Tourism in BH, but only as one of the documents within the environment protection section, as it

[81] Kern, F, Rogge, K (2016) The pace of governed energy transitions: Agency, international dynamics and the global Paris agreement accelerating decarbonisation processes. Energy Research & Social Science, Volume 22, December 2016, Pages 13-17.

[82] Kern, F, Rogge, K (2016).

[83] Greening the Recovery.

[84] Some examples, Montenegro: Energetika - Javne Politike, Serbia, Environment: Европске интеграције | Министарство заштите животне средине (ekologija.gov.rs), Macedonia, Environment: https://www.moepp.gov.mk/, Serbia, Environment: https://www.vladars.net/sr-SP-Cyrl/Vlada/Ministarstva/mgr/Pages/default.aspx, Albanian Ministry of Tourism and Environment is poorly presented online. Some websites are not operational: http://www.economy.gov.mk/

has nothing to do with waste management, air, water and soil pollution, etc., and other topics of GWAB for which the Ministry is in charge.[85]

The impression is that national authorities are leading their national policies, with little or no connection to the EU-designed institutions and policies described above. Public officials are mentioning the Green Agenda only in the presence of EU or IFIs officials, and donors' representatives (e.g., GIZ, USAID, UNDP, SIDA, Environment Agency Austria, different party foundations, etc.)[86].

And the assessments in these aspects are quite clear. „A particular approach to a policy problem can resist pressures to change for a while. One way to do this is to 'satisfy' those who challenge the approach by implementing incremental changes. These incremental changes to policy do not threaten the overall approach to the problem[87]". From this perspective, the relationship between the leader and the follower seems stable. Such a status quo speaks of a „policy monopoly[88]" that prevents significant changes, constructed on the idea of EU membership and a complex, invisible to the outsiders, institutional structure, where both sides are content with incremental changes[89], as they provide stability.

The Green Agenda of WB also generalizes the issue: „Abandoning technologies that WB economies heavily rely on and switching from coal to renewable energy will bring serious socio-economic challenges which the WB region has to resolve to prevent unwanted consequences such as unemployment, economic disruption, migration of workforce and other potential negative impacts. This transition is, however, clearly needed for the sake of human health, the environment, and the climate".

Another possible explanation for the path dependency policy of WB is that due to the bounded rationality and limited human and technical capacities described above, decision-makers have little or no relevant information when committing to additional obligations. Moreover, as these plans and commitments are long-term, longer than the election circle, perhaps policymakers don't see the full benefits of their actions[90].

At the stage of policy implementation, the accountability is thinly dispersed

[85] Federalno Ministarstvo okoliša i turizma BiH. Zaštita okoliša, https://www.fmoit.gov.ba/bs/okolis/zastita-okolisa

[86] Serbia: Zelena agenda - prilika za rast privrede u zemljama regiona (nezavisne.com) Вујовић: Подршка ЕУ Србији у испуњавању циљева Зелене агенде | Министарство заштите животне средине (ekologija.gov.rs), North Macedonia: https://www.moepp.gov.mk/?s=green+deal Green Agenda for the Western Balkans, Vienna, 8 February 2022, Environment Agency Austria, Green Agenda for the Western Balkans (umweltbundesamt.at).

[87] True, James L, Jones, Bryan D, Baumgartner, Frank R (2006).

[88] True, James L, Jones, Bryan D, Baumgartner, Frank R (2006).

[89] True, James L, Jones, Bryan D, Baumgartner, Frank R (2006): The main focus is on identifying stable relationships between, for example, interest groups and public officials. These relationships endure because there is broad agreement on the nature of the policy problem. As a result, a 'policy monopoly' is constructed whereby a powerful idea or image of a problem is shared and there is a definable institutional structure responsible for policy-making in the area of that issue. While that monopoly exists, only incremental change - if any - will happen; only when the monopoly collapses can major change occur.

[90] Weimer D., Vinning A. (2017) Policy Analysis - Concept and Practice. Taylor and Francis Group.

among many participants: ministries, agencies, regulatory authorities, working groups, secretariats, task forces, coordination platforms, local governments - all of them working on treaties, agreements, and benchmarks, roadmaps, flagships, etc. Strategic and legal commitments overlap in a proliferation of documents. And - in general - it is difficult to get a clear understanding of the direction that a state has taken. There is an impression that the GAWB hasn't genuinely acknowledged this problem as it adds new mechanisms that countries should take part in. Thus, e.g., on the website of the Montenegrin government, there are 524 Strategies and 125 action plans[91]. The government tried to put things in order and in August 2020 „adopted a single project pipeline, which includes 58 projects in the energy, transport, environment, and social sectors as well as digital infrastructure worth EUR 5.1 billion[92]" (but the new government hasn't adopted it). A decentralized system means a diffuse authority[93] and authorities often operate within narrow mandates[94] - factors that do not contribute to the successful implementation of multi-sectoral, long-term strategic issues.

A recent non-governmental report recommends to the national authorities to „adopt integral planning approach, to review and harmonize all existing documents (plans, strategies, and similar) that are presently in force. The content and reporting deadlines should be streamlined to avoid double work and situations where opposing goals are set in different documents covering the same issue. The existing legal framework should be aligned with new policies, strategies, and plans[95]".

The goals, arising from harmonization with the EU *acquis,* demand cross-sectoral cooperation on three levels: within a national system, in the regional realm, and reporting to the EU bodies. It would be much easier to progress in this field if countries would establish well-defined national inter-institutional mechanisms in this field, with clearly specified roles and responsibilities[96]. Thus, e.g., Serbia has recently set up a Working Group on Green Agenda, under the Ministry of Environment - with 66 members from 18 national institutions[97]. Judging by the fact that the GAWB setup will probably follow the same organizational path as other institutional mechanisms in this field, it can be expected (by the Punctuated Equilibrium Theory) that it will not result in a serious breakthrough. This might turn into a challenge, as the region needs to accelerate its work on „promoting efficiency gains, expanding green industries and technologies, supporting green jobs, and proactively building up resilience to climate

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[91] The website of the Government of Montenegro, retrieved on 5 April 2022, strategija - Pretraga - GOV.ME (www.gov.me).

[92] The Commission's Report on Montenegro Progress in 2021.

[93] Weimer D., Vinning A. (2017).

[94] Weimer D., Vinning A. (2017).

[95] Zelena agenda za Zapadni Balkan - Implementacija u Bosni i Hercegovini. Udruženje Pravni institut u BiH. Radna grupa za okoliš. Policy paper, ZELENA AGENDA ZA ZAPADNI BALKAN – IMPLEMENTACIJA U BOSNI I HERCEGOVINI (lawinstitute.ba).

[96] Zelena agenda za Zapadni Balkan - Implementacija u Bosni i Hercegovini.

[97] Održan prvi sastanak Radne grupe za primenu Zelene agende. Ministarstvo zaštite životne sredine, 23 September 2021, Одржан први састанак Радне групе за примену Зелене агенде | Министарство заштите животне средине (ekologija.gov.rs).

and disaster risks[98]". Besides, there is another factor that can negatively influence the situation - the current energy crisis related to the war between Russia and Ukraine. Certainly, if the security of supply becomes more important and decarbonization is respectively delayed in Europe, this can „lock-in growth on an unsustainable (brown as opposed to green) trajectory[99]".

However, the GAWB contains one potentially strong punctuation factor (except for Albania which is not reliant on coal in its electricity production) that can lead to „drama, shock, and scandal that precede the policy change[100]". It's action 5 of the GAWB: „Align with EU ETS and/or introduce other carbon pricing instruments". The EU Carbon Border Adjustment Mechanism (CBAM) proposed by the European Commission is „the first tangible manifestation of the costs that could be faced by countries that continue a business-as-usual growth model[101]". Pricing carbon would also offset the negative externality of the CBAM for WB exports competitiveness[102]". States have to move quickly on this issue, as the CBAM regulation will come into force on 1 January 2023 and will be applied as of 2026. An exemption until 2030 could be granted under certain conditions. Therefore, the lack of sound strategy on this subject could get countries into a state of „ perfect storm", when a confluence of many negative causal factors leads to a situation in which it becomes impossible to manage processes and make decisions[103].

The other potential punctuation point can come from within. On this occasion, it has been specified that: „If the pressure is sufficiently high, it can lead to previously uninvolved political actors and government institutions becoming involved. As these new actors become involved, they seek to redefine the image of the policy problem, and so major change becomes possible[104]". Besides, the consensus on energy transition within states has been assessed as playing an important role to accelerate the process[105]. In parallel, it has been clearly stated that the important actors in governing energy transitions are not only policymakers but also businesses (cleantech companies or finance sector actors), as well as actors from civil society, such as grassroots initiatives or environmental groups[106]. Nonetheless, the European Commission's assessment has often made clear that there is not enough public dialogue about important projects, and certainly not about the GWAB. The GWAB affects the general population, business community, and industries, and still, there

[98] Greening the Recovery.
[99] Greening the Recovery.
[100] Kern, F, Rogge, K (2018) Harnessing theories of the policy process for analysing the politics of sustainability transitions: A critical survey, Environmental Innovation and Societal Transitions, Volume 27, June 2018, Pages 102-117.
[101] Greening the Recovery.
[102] Greening the Recovery.
[103] Savršena oluja ili ubrzana dekarbonizacija. Oporezivanje emisija CO2 iz elektroenergetskog sektora u BiH. RESET Sustainable Energy Transition Center. mr. Damir Miljević, prof. dr. Mirza Kušljugić, 4 October 2021, https://reset.ba/wp-content/uploads/2021/10/SAVRSENA-OLUJA-ILI-UBRZANA-DEKARBONIZACIJA_v3.pdf
[104] True, James L, Jones, Bryan D, Baumgartner, Frank R (2006).
[105] Kern, F, Rogge, K (2018).
[106] Kern, F, Rogge, K (2018).

are no broad public consultations that would lead to consensus. However, the public polls show that the population is concerned about climate change, pollution, and CO_2, and the level of public awareness of environmentally friendly behavior is high in the region[107]. Moreover, there is already one regional environmental protest movement („Let's defend our rivers"), protests against Rio Tinto's Jadar project, in 2021 in Serbia, and fierce environmental protests in Albania[108]. In all these cases, there was a lack of dialogue with the protesters.

In other words, the energy transition process is not inclusive in the WB. There have been clear views that „governments need to involve experts and the wider public in discussions, to ensure that the vision is widely shared and balanced. Besides, updated information with the public on the costs and benefits of energy transition should be regularly exchanged, including via consultations at an early stage, when all options are open. Aside from the national level, it has also been emphasized that active participation of the local communities in strategy development would improve vertical and horizontal coordination of actors in the country[109].

Yet, it seems that that sort of consultation has more weight within national systems than in the regional fora[110]. The more practical role of regional fora could be to introduce to national stakeholders modern mechanisms for achieving sustainable decisions, such as gross ecosystem product (GEP) or Inclusive Green Growth Index[111]. These would allow them to transparently assess social and environmentalbenefits and losses and to identify balancing measures. Another positive role that they could play is to include in the regional civil society discussions those street-protesting NGOs that have the potential to punctuate the system. The next wave of changes can come from these social groups, as the rise of Green arties[112] in the region is visible, and new local governments can come to power based on their green agendas.

IV Conclusion

The ambition of this paper was two-fold: to prove that there is a governance-related stagnation in the energy transition in the WB and that the Punctuated Equilibrium Theory is well suited to explain it. The analysis offered several possible

[107] Balkan Public Barometer. Regional Cooperation Council, https://www.rcc.int/balkanbarometer/results/2/public

[108] Environmental organizations slam construction of new airport in protected area, Alice Taylor, Euractiv, 30 November 2021, https://www.euractiv.com/section/politics/news/environmental-organisations-slam-construction-of-new-airport-in-protected-area/

[109] Inclusive Energy Transition in Southeast Europe as an Opportunity.

[110] 1st NGO Forum on the Implementation of the Green Agenda for the Western Balkans, Regional Cooperation Council, 9 June 2021,https://www.rcc.int/events/1436/1st-ngo-forum-on-the-implementation-of-the-green-agenda-for-the-western-balkans

[111] Long-NiLiang, Group of authors (2021) „Measuring gross ecosystem product of nine cities within the Pearl River Delta of China", Environmental Challenges, Volume 4, August 2021, 100105. Jha S. Sandhu S.C, Wachirapunyanont R. (2018) Inclusive Green Growth Index: A New Benchmark for Quality of Growth, Asian Development Bank Institute (2018).

[112] Radio-Televizija Srbije, „Bitka za Skupštinu - srpska nacija i zelena agenda", video, 3 March 2022, RTS :: Bitka za srpsku skupštinu – srpska nacija i zelena agenda.

explanations for the negative stability of the system from the perspective of policy processes and elaborated on two potential punctuation points - one external and one internal. On the ground of the noted facts, one can easily argue that the current system in WB will have difficulties producing a gradual, sustainable change toward green growth due to its complexity and constant change. This presupposes that the countries in the region should streamline their national processes and define clear long-term priorities in broader public consultations, using modern socio-economic mechanisms. Otherwise, without any doubt, „if the transition is not managed sustainably, it will be uncontrolled, influenced by the market and external political pressures, which in turn could lead to an uncontrolled transformation of the economy and society that may result in a "perfect storm" scenario[113].

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[113] REPCONS 2.0: BiH, Serbia, Montenegro not ready for successful energy transition, Balkan Green Energy News, 16 February 2022,https://balkangreenenergynews.com/repcons-2-0-bih-serbia-montenegro-not-ready-for-successful-energy-transition/

ENERGY GEOSTRATEGY IN THE EASTERN MEDITERRANEAN AND ITS REPERCUSSIONS ON THE REGIONAL CONFLICTS

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I. Introduction

The Eastern Mediterranean is located at the crossroads of three continents - Europe, Asia and Africa, making it a region of strategic geopolitical importance. First and foremost, it is a bridge between the Middle East and North Africa - region rich in energy resources and precious metal deposits, and the European countries. Next, through the Suez Canal, it plays a key role in the global trade and economic system. On the other hand, it enables access to the Black Sea basin and influence in Eastern and South Eastern Europe.

The first discoveries of hydrocarbons in the Eastern Mediterranean were made in the 1970s but remain largely unexploited. Interest in the region was renewed between 2009 and 2015, when large discoveries were made in Israel, Cyprus and Egypt with a volume that turned the region into a potential major exporter of energy resources[114],[115]. Deposits in the Eastern Mediterranean are of great importance especially for countries in the region seeking to ensure their energy security and economic development. To date, Cyprus, Egypt, Israel and Palestine have discovered gas deposits. In a disputed area regarding the delimitation between Israel and Lebanon, deposits have also been identified. According to a study by the United States Geological Survey[116], the Levant[117] basin contains 3.5 trillion cubic meters of gas.

The discovery of hydrocarbons has led to an escalation of existing regional conflicts. The conditions for confrontation between Greece and the Republic of Cyprus on the one hand, and Turkey on the other, related to the definition of the Exclusive Economic Zone (EEZ) and the rights to explore and extract hydrocarbons, have emerged. Turkey also disputes the right of the Republic of Cyprus to exploit the deposits without also guaranteeing the rights of the

[114] Offshore Technology, “Timeline: game-changing gas discoveries in the eastern Mediterranean”, https://www.offshore-technology.com/features/timeline-game-changing-gas-discoveries-eastern-mediterranean/, Последно посещение: 28/06/2021, 17:19.

[115] Israel - Leviathan (620 bcm), Tamar (280 bcm), Karish and Tanin fields (both about 70 bcm); The Republic of Cyprus - Aphrodite (130 bcm), Calypso (170-220 bcm) and Glaucus-1 (142-227 bcm) fields.

[116] Christopher J. Schenk et al., “Assessment of Undiscovered Oil and Gas Resources of the Levant Basin Province, Eastern Mediterranean”, in U.S. Geological Survey Fact Sheets, No. 2010-3014 (March 2010), United States Geological Survey, https://pubs.usgs.gov/fs/2010/3014/pdf/FS10-3014.pdf. Последно посещение: 27/06/2021, 06:35.

[117] Levant refers to a geographical concept that in its broadest historical sense includes the entire Eastern Mediterranean with its islands from Greece to Cyrenaica, i.e., Syria, Lebanon, Israel, Jordan, Egypt, Turkey.

Turkish Cypriots in the so-called "Turkish Republic of Northern Cyprus" (TRNC), which is recognised only by Turkey. The interests of a number of foreign energy companies are also interfering in the region. In the Republic of Cyprus, these include ENI (Italy), BP (UK), Total (France), ExxonMobil (USA). BP operates in Palestine's only field and has a significant percentage of activity in Egypt. Noble (USA) and some Israeli companies are developing fields in the Tel Aviv EEZ. Rosneft and Novatek (Russia) have significant stakes in Egypt and Lebanon, and Russia is the main gas supplier to Turkey. This determines the intervention of a number of foreign actors that influence the security paradigm, the development of regional conflicts and the foreign economic policies of the countries in the region.

The newly discovered energy resources are a potential solution to many of the problems that have arisen in the period 2019-2022. On the one hand, they would support the economic recovery of the Eastern Mediterranean and Europe after the COVID-19 pandemic. On the other hand, in the context of Russia's aggression on Ukraine, which began in February 2022, the region's natural gas reserves are key to achieving energy diversification and reducing Europe's dependence on Russian gas as soon as possible. The potential role of natural gas as a transition fuel for achieving the 2050 carbon neutral economy targets to tackle climate change should also be considered.

The discovery of significant gas reserves and the formation of a number of strategic alliances, including the Eastern Mediterranean Gas Forum[118], necessitate an active policy on Bulgaria's part. The opportunities for the transportation of natural gas from the fields in the region offer the possibility for the country to position itself as a major transit route for resources to South East Europe through the LNG terminal near Alexandroupolis and the interconnector between Bulgaria and Greece (IGB), once finalised. It also creates conditions for diversification of gas supply sources and routes. Lower prices for energy resources could also be achieved, stimulating economic activity in the country. Also, in relations with Greece and Turkey, it should be borne in mind that good neighbourliness is also a top foreign policy priority.

Stronger need for diversification after 24th February 2022

The war in Ukraine has brought up the issue of Europe's energy dependence on Russia. The EU imports 90% of the natural gas it consumes, 27% of its oil and 46% of its coal. Natural gas is imported through 4 main gas corridors: the Northern

[118] Бобанац, Бранислав, "2019 - решаваща за източносредиземноморския газ", https://3e-news.net/%D0%B0%D0%BD%D0%B0%D0%BB%D0%B8%D0%B7%D0%B8/2019-%D0%B0-%D1%80%D0%B5%D1%88%D0%B0%D0%B2%D0%B0%D1%89%D0%B0-%D0%B7%D0%B0-%D0%B8%D0%B7%D1%82%D0%BE%D1%87%D0%BD%D0%BE%D1%81%D1%80%D0%B5%D0%B4%D0%B8%D0%B7%D0%B5%D0%BC%D0%BD%D0%BE%D0%BC%D0%BE%D1%80%D1%81%D0%BA%D0%B8%D1%8F-%D0%B3%D0%B0%D0%B7_66055, last accessed, 29/06/2021, 07:15.

(Norway), Eastern (Russia), Mediterranean (Africa) and Southern (Caspian and Middle East - Azerbaijan, Turkmenistan, Iraq, in the future - Iran and Egypt). However, the largest share is gas coming from Russia - 40% of EU consumption. There are several routes: one of the main ones is via Ukraine and Slovakia, along with Turkish Stream to Turkey and Bulgaria, Yamal-Europe to Poland and Germany, and Nord Stream 1 via the Baltic Sea to Germany.

Long before the war in Ukraine, the EU was already planning a major restructuring of its energy sector through the Green Deal, which aims to decarbonise Europe and make the EU completely carbon neutral by 2050 and reduce emissions by 50% by 2030, compared to 1990.

EU is considering various actions to reduce its dependence on Russian energy sources as soon as possible. There are calls to speed up the Green Deal and, in the short term, to find an alternative to Russian supplies. In this connection, after Vladimir Putin recognised the independence of Donetsk and Luhansk and Russian troops entered Ukraine, Germany stopped the certification of the Nord Stream 2 pipeline. The project had previously been a cause of friction between Germany and the US because it was strengthening Russia’s influence in Europe, while isolating Ukraine and making it vulnerable to Russia. Nonetheless, all analyses indicate that, in the short term, Europe can hardly give up Russian gas completely. Therefore, although Europe-Russia relations to date are complex and there is strong condemnation of Russian aggression in Ukraine, Russian gas supplies to Europe remain active.

The EU has outlined different paths to reduce its dependence on Russia and its dependence on natural gas in general, which in the framework of the transition to climate neutrality is classified as a transitional fuel and not as a sustainable source of green energy, and therefore its use will not be supported in the long term. The medium- and long-term measures that the EU intends to implement are related to promoting the development of renewable energies and creating all the technological and legal preconditions to facilitate the implementation of renewable energy projects, promoting the development of hydrogen technologies, measures for greater energy efficiency. The issue of nuclear energy still remains controversial, but the latest OECD recommendations are in favour of it. In order to avoid Russian dependence, even more extreme ideas are being considered, such as the use of coal and liquid fuels, something that is contrary to the Green Deal. However, all this requires time, investment and research, and the need to diversify energy sources and routes is pressing.

In the short term, the aim for the EU is to distance itself from Russian supplies as quickly and sustainably as possible by importing natural gas through the other three gas corridors (from Azerbaijan, Norway, Qatar, Algeria, etc.) and importing liquefied natural gas (LNG). In response to the increased demand for LNG in the EU, the main suppliers are the US and Qatar, but it should be borne in mind that European gas needs cannot be met by LNG supplies alone and it is therefore not possible to completely exclude the supply of Russian gas from the European market. Also, the use of LNG requires the construction of appropriate infrastructure and LNG terminals. There is another problem with LNG - there are currently insufficient quantities to cover the needs of both Europe and Asia. Although Qatar is a strong competitor to Russia on the European market, as it has increased its supply to Europe by 50% in one year, if Qatar decides to transfer its entire LNG export capacity to Europe, it could replace well over half of the volume of its exports. At the same time, this would leave China, India, Japan, South Korea, Taiwan and some other larger consumers without supplies. Some of these countries would buy LNG from the US, but this would not be able to supplement the entire volume of LNG for the Asia-Pacific region. Should LNG be diverted from Asia to Europe, there will be a shortage in Asian markets and prices there will rise accordingly. Given that most Asian countries have no LNG alternative of their own, this will lead to increased coal consumption in the region, which was already in short supply in 2021. In this sense, the non-market shift of gas from Asia to Europe could exacerbate the global energy crisis. Moreover, according to energy experts, large additional LNG capacities will not appear in the world before 2025.

On other types of energy carriers, opinions in Europe differ. On the issue of oil, the Baltics are in favour of an embargo on imports of Russian oil, while Germany is against it because it is heavily dependent on Russian energy and fears that Russia could, as a countermeasure, stop natural gas supplies. How likely this is is debatable, because for Russia itself gas exports are the second-largest source of budget revenue after oil and oil products.

Regardless of momentary disagreements on the specific measures, the way forward is likely to continue towards diversification of natural gas sources, but also towards reducing dependence on natural gas in general. In any case, the role of the other three gas corridors, and especially the Southern Gas Corridor, will increase significantly in attempts to reduce dependence on Russia. Turkey plays a key role in the transit of natural gas because almost all the energy routes from the Caspian and Black Sea regions, the Middle East and the Eastern Mediterranean pass through its territory.

II. Overview of the current dynamics of available hydrocarbon resources in the Eastern Mediterranean region. A look at the Southern Gas Corridor. Role of regional powers.

The newly discovered gas fields have created a new political-economic paradigm in the Eastern Mediterranean. Leading energy companies are active in the region - Eni, Total, Noble Energy, Exxon Mobil, BP, Royal Dutch Shell, Qatar Petroleum and Novatek. The resources also determine the attention of regional and global actors such as Turkey, Greece, the US, Russia, France, Italy, Lebanon, Jordan, Qatar and the UAE.

Two main stages can be identified in the recent development of the region as a source of hydrocarbons and a potential major exporter of natural gas. The first phase started with the discovery of the Tamar, Leviathan and Aphrodite fields in the Israeli and ROC EEZs in 2009-2010. These discoveries are seen as a means to accelerate the political, social and economic development of the region. Various transportation options are being discussed, including transporting liquefied natural gas (LNG) and compressed natural gas (CNG) to distant markets and via pipeline to Turkey, Egypt, Greece, Jordan and Palestine[119]. This did not have the expected effect, as the implementation of these plans was delayed, and it subsequently became clear that the reserves in the EEZ of the Republic of Cyprus are far from the volume indicated in the original studies[120]. The exploitation of the gas fields has also been hampered in the context of the maritime delimitation disputes between countries in the Eastern Mediterranean and the outbreak and development of the Arab Spring. Meanwhile, Egypt's energy sector has been affected by the political developments at the beginning of the second decade of the 21st century in the

[119] Ayla Gürel, "Eastern Mediterranean Gas: Source of Prosperity for the Region?", in Silvia Colombo, Mohamed El Harrak and Nicolò Sartori (eds), The Future of Natural Gas. Markets and Geopolitics, Hof van Twente, Lenthe/European Energy Review, May 2016, p. 131-135, https://www.iai.it/en/node/6340, Последно посещение: 11/07/2021, 11:20.

[120] Simone Tagliapietra, "An Opportunity for Natural Gas in the Eastern Mediterranean", in Financial Times, 8 March 2019, http:// bruegel.org/2019/03/an-opportunity-for-natural-gas-in-theeastern-mediterranean, Последно посещение: 11/07/2021, 10:30.

country and the region. Foreign investment in the sector in the country declined, leading to a decline in exports and the ability to meet domestic consumption. This has negatively affected both Egypt's role as a regional leader in the Arab world and the country's economy.

The discovery of the Nooros deposits, near the delta of the Nooros River, can be pointed to as the beginning of the second stage - Nile, and Zor, located about 190 km from Port Said in the EEZ of Egypt, and Calypso in the EEZ of Cyprus. The amount of gas available in Zor and Calypso is estimated at around 1,050 bcm. Due to this interest, the region has gained strategic importance, with initial projections that it could meet regional and European gas needs for decades[121]. The EU has stepped up efforts to diversify energy sources in view of its dependence on Russia. The increase in available natural gas reserves also responds to the aspirations to decarbonise the economy in view of the potential use of gas as a transitional fuel to reduce the use of coal. Some of these energy resources should be used for the development of the countries of the Middle East and North Africa in order to contain military and political crises on the ground, raise the living standards of the population and overcome the migration pressure towards Europe.

In order to exploit resources, stakeholders focus their efforts on securing their transportation. Egypt's Damietta and Idku LNG terminals play a leading role in this respect. The Italian company ENI controls the supply from Damietta[122]. ENI's leading role in LNG exports through this terminal, as well as its participation in the drilling of most of the larger fields discovered during the decade, gives Italy a position to influence the export routes for natural gas from the Eastern Mediterranean. On the other hand, the capacity of Idku and Damietta does not meet Europe's needs.

Another option for transporting hydrocarbons from the region is the construction of the EastMed pipeline. According to the project, the pipeline will be nearly 2,000 km long, connecting the Tamar and Leviathan fields in Israel's EEZ, as well as those of the Republic of Cyprus, with Greece and Italy, and from there with other European countries. It is intended to supply about 10-12 billion m^3 of natural gas per year from gas fields in the Eastern Mediterranean. This will enable the Republic Cyprus and Israel to connect directly to the European gas system and guarantee a steady supply of a certain amount of energy gas resources[123]. According to a number of experts, the realisation of the EastMed project would be very costly and time-consuming - estimated as of July 2021 to be between 7 and 9 years, at a cost of approximately $7 billion, and as a result of the deepening economic consequences of COVID-19 and the Ukrainian crisis, these costs are likely to be higher at this time. However, its importance for achieving a carbon neutral economy, diversifying the sources and routes of energy resources to Europe and recovering from the effects of the COVID-19

[121] Clifford Krauss and Declan Walsh, "Egypt Looks to Offshore Gas Field for Growth and Influence", in The New York Times, 11 March 2019, https://www.nytimes.com/2019/03/11/business/energyenvironment/egypt-gas.html, Последно посещение: 10/07/2021, 16:40.

[122] First LNG cargo to Europe delivered from Egypt's Damietta LNG plant

[123] Eastern Mediterranean Pipeline Project

crisis in the Middle East, North Africa and Europe, makes the project strategic. The European Commission has identified EastMed as an initiative of common interest and has provided €34.5 million to complete technical studies for its implementation. The implementation of this project could negatively affect the geopolitical interests of the Russian Federation in Europe. Although its capacity does not seriously threaten Russian supplies, the project will contribute to the Russian Federation losing some of its leverage in negotiating the price of energy resources. Other experts, given its economic inexpediency, point out that it is currently a political rallying around an economic goal on an anti-Turkish basis, aimed at creating a coalition preventing the expansion of Turkish interests in the region. The project initially enjoyed strong support from the US and Israel, and for Washington, it is part of its strategy to thwart Russia's energy cooperation with European countries. In early 2022, the US withdrew its support for the project, thereby reducing its viability. In conjunction with the EU's goals of achieving a climate-neutral economy by 2050, investment in a new pipeline with Europe as its final destination becomes unviable. On the other hand, regional tensions over the Cyprus issue and the delimitation of maritime spaces in the Eastern Mediterranean pose risks to its operation. At this stage, the focus is on the need to increase liquefied gas exports from the region via the ports in Egypt, as well as on the construction of infrastructure for the transmission of electricity from renewable sources.

Енергийни проекти в Източното Средиземноморие и Югоизточна Европа (Alex Kassidiaris, "The Intricacies of Energy Diplomacy and Geopolitics in the Eastern Mediterranean" - 2021, Inside Arabia, https://insidearabia.com/the-intricacies-of-energy-diplomacy-and-geopolitics-in-the-eastern-mediterranean/, Последно посещение: 13/07/2021, 5:17)

Also under discussion[124] is the construction of a 380 km pipeline between Egypt and Greece, following the route of the electricity interconnector between the two countries. The route poses no political problems, but bypasses the Republic of Cyprus, which would weaken Greece's role in the region.

The project presented in 2016 that suggested the construction of a gas pipeline between Israel and Turkey should be taken into account as well. Through the existing TAP and TANAP infrastructure, the raw material will reach the EU. At the latest high-level contacts between the two countries in March 2022, this possibility was again brought to the fore. The implementation of this project has a relatively low cost of around $2 billion, but places Europe in a position of dependence on Turkey. The country would become a major energy hub in view of the fact that Russian, Azeri and Mediterranean gas destined for Europe would also pass mainly through its territory.

Turkey's energy potential

Turkey is simultaneously a Balkan, Mediterranean, Black Sea, Aegean and Caucasian country. Its territory is in close proximity to both the Caspian and Persian energy basins. It is on the crossroads of three major energy corridors: from the post-Soviet republics to Southern and Western Europe; from the Caspian and Black Sea countries to the Mediterranean; and from the Arab countries to the Balkans. It stands in the way of both Russian gas via Blue Stream and Turkish Stream and Azeri gas via TANAP/TAP. The country's geographic location is a reason for both geo-economic advantages and geopolitical risks. For example, the war and political crisis in Iraq has adversely affected Turkey's commercial and geopolitical interests. The closure of the 986 km long Iraq-Turkey oil pipeline alone has caused billions of dollars in direct and indirect losses to the Turkish economy. This has forced Ankara to look at new energy suppliers and transport routes.

Since 2000, Turkey has experienced an economic boom resulting in increased energy consumption, hence the need for energy provision for the Turkish economy. Urbanisation, population growth and especially industrial production have led to a boom in energy consumption and Turkey's overdependence on imported energy carriers. Turkey produces three times less energy than it consumes and covers two-thirds of its energy needs with imports. Turkey's energy production is growing at a much slower rate than consumption growth.

Imports of energy carriers are first on Turkey's import list (oil and natural gas). This puts it in a position of considerable economic and political dependence - a problem with

[124] Liaggou, Chryssa, "Redrawing the energy map", https://www.ekathimerini.com/economy/1180785/redrawing-the-energy-map/, 27/03/2022; Coskun, Orhan; Rabinovitch, Ari, "Israel-Turkey gas pipeline an option for Russia-wary Europe, say sources", https://www.ekathimerini.com/news/1180891/israel-turkey-gas-pipeline-an-option-for-russia-wary-europe-say-sources/, 29/03/2022; "PM meets with Egypt's Al-Sisi to discuss energy link", https://www.ekathimerini.com/news/1178920/pm-meets-with-egypts-al-sisi-to-discuss-energy-link/, 03/03/2022; Papantoniou, Stavros, "Athens and Cairo discuss energy links, possible LNG supply", https://www.ekathimerini.com/news/1180861/athens-and-cairo-discuss-energy-links-lng-supply/, 29/03/2022.

major geopolitical risks. From this point of view, the construction of a nuclear power plant is urgent for Turkey's energy policy, but it will not ensure its energy independence either. Turkey has relatively abundant reserves of solid fuels - lignite, fuel shale, hard coal, asphaltite, and has a powerful hydropower potential (after Russia and Norway, Turkey is the country with the third-largest hydropower potential in Europe). It should be noted that a large part of Turkey's territory is still not well geologically explored, therefore two-thirds of lignite and half of the country's hydropower resources are not exploited. Today, the largest thermal power plants in Turkey operate with lignite coal, which would create environmental problems in the future and thus prove to be a significant obstacle to coal power in the future. The last 10-15 years have seen a rapid increase in the country's natural gas consumption, and in recent years Turkey has been able to diversify its natural gas suppliers considerably, thus reducing its overdependence on Russian gas. With the commissioning of the TANAP (Trans-Anatolian Natural Gas Pipeline) in 2018, the country receives additional gas volumes from Azerbaijan. This helped to reduce the share of Russian gas to 30% in 2020.

Although Turkey has oil-rich neighbours, the country itself has poor reserves, about 70% of which are already depleted. It has, however, built up oil processing facilities, and strategic pipelines for the Turkish economy have been built between oil-producing areas inside and outside Turkey, on the one hand, and oil refining and port centres, on the other (for example, the 986 km Iraq-Turkey pipeline is of great importance). The Baku-Tbilisi-Ceyhan oil pipeline was put into operation in 2006. Thus, Turkey's geopolitical and geo-economic importance as an energy terminal connecting the Caspian region, the Caucasus and the Middle East with Southern and Western Europe is growing noticeably.

Turkey is very poor in natural gas. The country has two main gas-producing regions, Thrace and South-Eastern Anatolia. Since 1990, new gas deposits have been discovered in the northern part of the Sea of Marmara, and geological exploration and drilling continues in other regions of the country. Its own fields meet a minimal percentage of its needs. Natural gas is imported from Russia, Iran, Algeria, Azerbaijan, Egypt and Nigeria. Ankara is also developing projects to import gas from Kazakhstan and Turkmenistan to reduce its energy dependence on Russia.

In order to reduce its external dependence on energy sources and due to the increased energy needs (6-8% per year), Turkey needs additional and new energy sources. In this respect, Turkey has set itself the objective of building more hydropower plants, the number of which should reach 700 by 2060, and it is trying to replace natural gas with liquefied natural gas - mainly from Algeria, Qatar, Nigeria and the US - and is continuing its exploration for natural gas deposits on the Turkish continental shelf in the Mediterranean Sea.

It is also trying to distance itself from coal power by building nuclear power stations. The Akkuyu nuclear power plant, which will be Turkey's first nuclear power plant, is currently under construction. The plan calls for the plant to be commissioned in 2023, when Turkey celebrates the centenary of the establishment of the Republic.

The project is led by Rosatom. The Akkuyu plant is intended to supply about 10% of the electricity needed for Turkey's domestic market, but even that is not enough and Ankara needs to do more to drastically reduce its reliance on coal-fired power plants - a major element in air pollution and a target in the fight against climate change. In 2018, President Erdogan announced that Turkey would also build a nuclear plant in the Thrace region, near the border with Bulgaria, this time in cooperation with China.

Turkey's energy ambitions

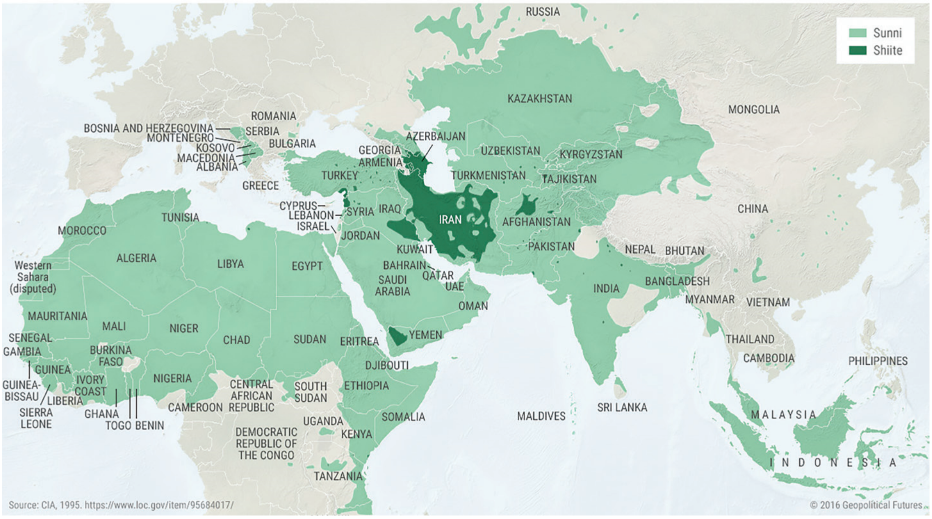
Besides meeting its own growing energy demand and diversifying its imports, Turkey has other goals - to become a regional energy hub and an energy hub for European markets. The implementation of the Turkish Stream gas pipeline is in this context. The pipeline runs from the Russian city of Anapa and reaches the Turkish town of Kaiköy on the Black Sea coast. It consists of two lines, 935 km long, with the first line intended to supply gas to Turkish consumers and the second to Southern and South-Eastern Europe. This is an important step in making Turkey a gas energy distribution hub, mainly through the Turkish Stream and TANAP projects. The connection of the second Turkish Stream pipe to the Bulgarian gas transmission network, or the so-called Balkan Stream, redirects Russian gas supplies to the Balkans from Ukraine via Turkey and is vital for the countries of Europe's south. The pipeline also strengthens Turkey's role in the energy security of Bulgaria, Serbia and Hungary, whose gas supply needs will be met by Turkish Stream. The pipeline provides an advantage for Russia as it strengthens its gas monopoly in Europe and, together with Nord Stream 2, isolates Ukraine from the gas transport route.

Turkey is also interested in having natural gas coming from the Middle East, the Eastern Mediterranean and the Persian Gulf pass through its territory. In this case, its interests are intertwined with those of several regional powers, including Iran.

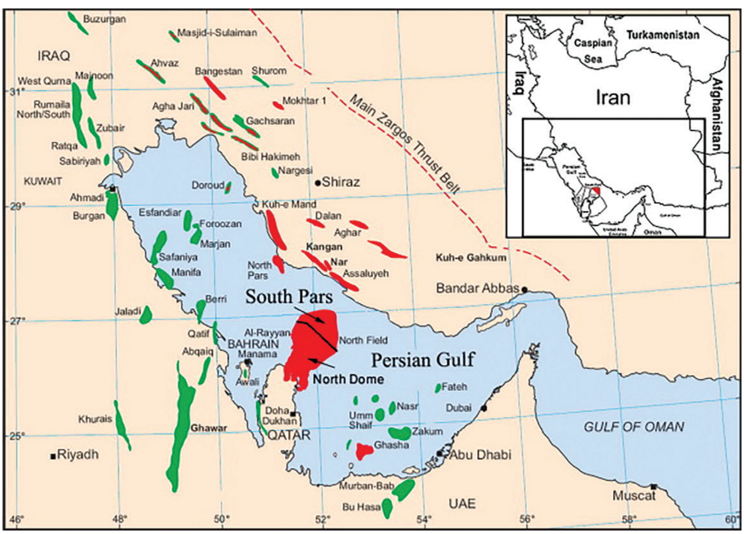
A little more about a potential Syria-Iraq-Iran gas pipeline

In July 2011, when the war in Syria had already begun and NATO and Gulf States operations against the Syrian regime were already underway, Syria, Iran and Iraq signed an agreement to build a new gas pipeline worth about $10 billion, to be completed in three years. The pipeline is to link the Iranian port of Asaluya, near the giant South Pars gas field in the Persian Gulf, with Damascus, passing through Iraqi territory. Going forward, the Iranians plan to extend the pipeline from Damascus to Lebanese Mediterranean ports, from where the gas would be supplied to the European market. To clarify, South Pars is part of the huge Gulf field that Iran and Qatar share, which is believed to be the world's largest single gas field. In effect, this pipeline would represent a kind of 'Shia gas pipeline' - from Shia Iran, through Shia-majority Iraq, to Shia-friendly Syria, ruled by the Alawi Assad, and Lebanon, where Shia Hezbollah is based.

DISTRIBUTION OF SHIITE AND SUNNI MUSLIMS



Things are complicated by the fact that the South Pars gas field is located right in the middle of the border in the Persian Gulf between Shiite Iran and Sunni (and Salafi) Qatar and this justifies certain interests of Qatar and not only its own. Qatar is home to the US Central Command (CENTCOM) command centre, the headquarters of the US Air Force's General Headquarters, the British Air Force's Expeditionary Air Group 83, and the US Air Force's 379th Expeditionary Air Squadron. Al-Jazeera television, which has been openly critical of the Assad regime in Syria, is also there. Turkey also has a military base in Qatar. Qatar and the US are in a strategic partnership, and Qatar has been granted the status of a close ally without being part of NATO. Other countries in the Gulf region that have this special status are Kuwait and Bahrain.



In this sense, Qatar is also planning the construction of a pipeline to export resources from the South Pars common gas field in the Persian Gulf, but unlike the Iranian project (via Iraq), the Qatari option passes through Saudi Arabia and Jordan before reaching Syria. The options for transporting the gas are through the Jordanian Gulf of Aqaba or to build a pipe through Saudi Arabia to Syria and Turkey and from there to Europe. In the end, the Syrian government prefers the Iranian option, taking into account Russia's interests among others, thereby further antagonising the ruling family in Doha. This has motivated Qatar to undertake a kind of 'infrastructure war' in Syria to implement its crucial land transportation projects, which would provide it with alternative access to world markets and eliminate the problems associated with tanker passage through the narrow Suez Canal and the dangerous Strait of Hormuz, which is controlled by Iran and is critical for transporting Qatari gas. In this case, Qatar is in direct competition with Iran (as a producer) and Syria (as a destination) and to a lesser extent Iraq (as a transit country).

Thus, Qatar's plans for its share of the field do not include joining forces with Iran. Qatar has the third-largest natural gas reserves in the world and has no interest in the success of the Iran-Iraq-Syria pipeline, which would be completely independent of Qatar's or Turkey's transit routes to the EU market. In fact, Qatar has an interest in doing everything it can to derail the construction of this pipeline, including with the help of the armed Syrian opposition, many of whose members are jihadists who have come from abroad, including Saudi Arabia, Pakistan and Libya.

In addition, in August 2011, a large Syrian field was discovered in the Kara area, close to the Lebanese border and not far from the Russian-leased naval port of Tartus in the Syrian Mediterranean. Future exports of Syrian or Iranian gas to the EU will pass precisely through the Russian-linked port of Tartus. According to some sources, Syria's new gas fields (although the government in Damascus deliberately avoids highlighting their importance) are as large, if not larger, than Qatar's. According to a 2010 US geological report, there are 122 trillion cubic feet (3,455 billion cubic meters) of gas and 1.7 billion barrels of oil off the coasts of Israel, Gaza, Cyprus, Syria and Lebanon.

An additional aspect to be taken into account is that Qatar supports the Muslim Brotherhood in its expansion in the western Middle East (Syria and Jordan), while Iran and Iraq are firmly opposed to regime change in Damascus. If the Syrian regime is indeed replaced with the help of Qatar's actively promoted foreign military intervention, the new rulers in Syria, who will most likely come from Muslim Brotherhood circles, will also be favourably disposed towards the Qatari pipeline, which in turn will make its extension to Turkey much more feasible. A strike on Syria would therefore hamper Iran's attempts to seek a new gas export route.

Another energy player in the region – Israel

Israel has also stepped in with its own plans with the discovery in 2010 of huge reserves of natural gas in the Israeli shelf - the Tamar gas field. The field was discovered jointly with a Texan company and is believed to be capable of covering Israel's natural gas needs for 100 years to come. Energy self-sufficiency has been unattainable for the State of Israel since its founding in 1948. During this period, extensive exploration activities have been undertaken repeatedly with modest results. Many believed that, unlike its energy-rich Arab neighbours, Israel did not have the same natural resources. It is a famous joke Israelis tell about themselves - that it took Moses 40 years to bring the Jews to the only place in the Middle East where there is no oil. Until the discovery of Tamar, Israel was thought to have gas reserves for only three more years. However, since the discovery of Tamar, Israel has gone from an energy-starved country to a gas leader that is also competing for Europe's energy markets.

In this context, Israel faces a strategic and dangerous dilemma - on the one hand, it is not at all happy about the possibility that Assad's Syria, in alliance with Israel's sworn enemy Iran, and also with Iraq and Lebanon (where Shiite Hezbollah is), could sideline future Israeli gas exports to EU markets. This explains why the Netanyahu government is committed to the war in Syria, and on the side of the rebels. On the other hand, a future Muslim Brotherhood government in Syria would confront Israel with far more hostile neighbours. However, rivalries over access to energy resources may prove more important in determining allies and enemies than religious ties.

Russia

The development of the Southern Gas Corridor to Europe is in direct conflict with Russia's interests and its role as a major supplier of natural gas to the EU through the Nord Stream pipelines that reach Germany through the Baltic Sea. Strategically important for Russia is the opportunity to take a key role in the development, extraction and exploitation of the recently discovered gas fields of its erstwhile Cold War 'neighbour' Syria, especially if Assad survives thanks to Russia. This also determines Russia's significantly more active role in the war on the side of the ruling regime in Syria.

All of the above explains in energetic terms the actions of the states that have an active position in the conflict in Syria and the formation of the respective coalitions.

III. Current Geopolitical Situation

The increased interest in the region following the discovery of rich energy deposits has resulted in a number of new initiatives to exploit them, the conclusion of a number of political agreements and a further exacerbation of regional conflicts. In December 2018, Greece, the Republic of Cyprus and Israel agreed to sign a memorandum of cooperation for the construction of the EastMed pipeline, also supported by Italy. Final signing of the text took place in 2020.

Meanwhile, in 2019, Turkey and Libya[125] signed a memorandum on maritime delimitation between the two countries. Under its terms, Turkey's maritime border now passes near Crete and other smaller islands falling within Greek territory. Thus, the Republic of Cyprus finds itself surrounded by Turkish waters and the so-called SCT. The treaty also designates part of Greece's territorial waters as Turkish. The boundaries outlined by the agreement cover part of the route of the EastMed pipeline, which is under discussion at the moment. The memorandum has provoked strong reactions among the countries in the region and from the EU.

It is of interest that Turkey is not a member of the 1982 UN Convention on the Law of the Sea, which regulates the issue of maritime spaces between ratifying states. Turkey claims that the proximity of a number of Greek islands in the Aegean Sea prevents it from making full use of its EEZ, and Greece claims 200 nautical miles in each direction from these islands under the provisions of the Convention. Where countries have not acceded to the Convention in question, the possibility of a bilateral settlement remains. Despite repeated talks, Greece and Turkey have been unable to reach a consensus on the delimitation of their maritime borders. It should be recognised that the conflict in Ukraine has given new impetus to Turkish-Greek relations. In March 2022, Greek Prime Minister Kyriakos Mitsotakis visited Turkey. In this context, there is optimism, albeit timid, for the realisation of agreements relating to the exploitation and transport of liquefied gas from the Eastern Mediterranean fields, as well as with regard to the gas transmission network linking Europe and the Eastern Mediterranean.

In mid-2020, Greece in turn concluded bilateral delimitation agreements with Egypt and Italy. These agreements defined the EEZs of these countries in the Eastern Mediterranean and the Ionian Sea. Turkey rejected the agreement concluded between Greece and Egypt and declared that it violated its territorial shelf since the exclusive zone agreed between them crossed the EEZ agreed between Turkey and the internationally recognised Libyan Government.

The Eastern Mediterranean Gas Forum (EMFG), established as a result of these arrangements, institutionalises cooperation between countries in the region to exploit natural gas deposits. Headquartered in Cairo, the member countries are the Republic of Cyprus, Egypt, France, Greece, Israel, Jordan, Italy and the Palestinian Authority. The EU and the US have observer country status. Among the main objectives of the initiative is to create a gas market that would allow its members to pool their resources. Working together will allow the region's potential as an energy hub for Europe to be realised by reducing the cost of building infrastructure and offering competitive prices. In the context of the conflict in Ukraine and the EU's priority to reduce its dependence on Russian natural gas supplies, cooperation between the EU and EMFG should be intensified to secure volumes for EU Member States.

[125] The agreement was signed between Turkey and Libya's internationally recognised Government of National Accord in Tripoli of Fayez el Sarraj; the Memorandum was registered by the Secretary of the United Nations on September 30, 2020, meaning it is considered legitimate under international law - COR-Reg-56119-Sr-69975.pdf (un.org).

Also, the exclusion of some regional powers such as Turkey, Lebanon and Syria from the regional energy projects, and especially the EMFG, creates difficulties for their implementation. According to Yannis Ioannou, a journalist and founder of the think tank Geopolitical Cyprus, "Turkey has changed the paradigm" by conducting exploration activities in gas fields in waters that both the Republic of Cyprus and Greece claim. This creates new conditions for the development of the so-called Cyprus issue, making it part of a larger geopolitical case. On the one hand, Ankara defends its right and that of the so-called SCT to benefit economically from the available deposits in the waters off the island of Cyprus. On the other hand, it disputes Greece's claim to a wider EEZ on certain islands close to Turkish territory, including the Mediterranean Kastelorizo and Crete. In this context, and in accordance with the maritime boundaries outlined by the Memorandum concluded with Libya, Turkish research vessels carried out drilling[126],[127] in the EEZ of the Republic of Cyprus in mid-2019. The exploration activities provoked strong negative reactions from Greece, and the EU imposed sanctions on the managers of the Turkish state-owned company carrying out the research. Exploration licences were also issued for fields near Crete, Rhodes and Kastelorizo. Since January 2021, three rounds of negotiations to define the EEZs of Greece and Turkey have been held unsuccessfully. In April 2021, a new attempt was made in Geneva to resolve the Cyprus issue. Negotiations were held between representatives of the political leadership of the Republic of Cyprus and the so-called JCPOA, with the involvement of Greece, Turkey and the UK. No result was achieved due to the still diverging positions, which has left the conflict unresolved to this day. Subsequently, Turkey announced the resumption of exploration activities in the Eastern Mediterranean[128],[129]. The development of the situation shows that without a fruitful dialogue with Turkey, all options for transporting the reserves to Europe are risky.

On the other hand, in 2021 there was a warming of Turkey's relations with Middle Eastern countries, including Israel and Egypt. Since the start of the conflict in Ukraine, Turkey has taken on a key role as a mediator between the parties to the conflict on the one hand and for the potential realisation of the diversification of natural gas sources for Europe on the other. A number of energy projects are being discussed for the transmission of gas from the Eastern Mediterranean fields, as well as for electricity, the entry and transit point of which would be either Greece or Turkey. This gives rise to a new aspect of regional rivalry between the two countries. Account should also be taken of the attempt to reduce tensions between

[126] The surveys carried out by the Turkish ships are seismic, not deepwater drilling. This reduces the effectiveness of the survey. It can be argued that the escort of the Turkish survey vessels by warships rather defines the activities as marking the EEZ of the country.

[127] Напрежение между Анкара и Атина: Турция продължава със сондажите в Средиземно море

[128] Николов, Даниел, "Турция няма да спре да търси газ в Средиземно море, обяви Ердоган", 2 юли 2021 г., Bloomberg.

[129] "Без пробив в преговорите за Р Кипър след среща в Женева", 29 април, 2021 г., DarikNews.

Greece and Turkey, as evidenced by the visit of Greek Prime Minister Kyriakos Mitsotakis to Turkey in March 2022[130].

Considering the role of both countries in the EU's energy security, some of the initiatives in their territorial waters should be taken into account. On the one hand, Turkey is also focusing on potential natural gas deposits in the Black Sea. It is claimed that there are currently around 405 bcm identified in the Sakarya field. An area close to Bulgaria's EEZ[131] is also currently being explored. In this sense, the "Blue Homeland" doctrine of the current government in Turkey is important for the identification of the Bulgarian policy towards the country in the medium and long term. This concept, developed by former Admiral Jagzi, essentially puts forward Turkey's claim to become the first naval power in the Aegean, the Eastern Mediterranean and the Black Sea[132],[133]. On the other hand, Greece began exploratory activities in its own territorial waters - off Crete and in the Ionian Sea. According to data based on seismic surveys from 2019, the estimated quantities are around 280 bcm[134],[135]. The country is also expanding the volume of its storage in order to ensure its energy security, but also to ensure that quantities are available for export. Greece also has a major role to play in the import of liquefied natural gas into Eastern Europe.

The war in Syria

The war in Syria began in March 2011 with protests in the southern city of Daraa, provoked by the drought year, but in fact the causes are much more - corruption of the regime of Bashar al-Assad, discontent with the government, social inequality, religious and ethnic heterogeneity of the population. On the principle of the avalanche, in a very short time it has grown into an international conflict in which almost all world powers and regional actors in the Middle East have intervened, including through the deployment of troops (the US, Russia, Iran and Turkey). In the war in Syria, the geopolitical confrontation of global and regional players has found expression, each with its desire to advance its interests.

The Syrian crisis is both an element and a consequence of the so-called 'Arab Spring' and the energy it has generated in the MENA region. However, it has failed to lead to the removal of President Assad from power. Firstly, because the Arab Spring itself failed to achieve its declared goals and lost momentum, secondly, because of Russia's and Iran's firm support for the regime in Damascus, and thirdly,

[130] Edit: Gotev, Georgi, "Turkey, Greece agree to improve ties amid Ukraine conflict", https://www.euractiv.com/section/global-europe/news/turkey-greece-agree-to-improve-ties-amid-ukraine-conflict/, 14/03/2022.

[131] Daily Sabah: Турция говори за нови залежи на газ в Черно море, 24.05.2021.

[132] Блянът на Ердоган: нова Османска империя | Новини и анализи от Европа, DW, 24.08.2020.

[133] Denizeau, Aurélien, "Mavi Vatan, the 'Blue Homeland': the Origins, Influences and Limits of an Ambitious Doctrine for Turkey", Etudes de l'Ifri, April 2021, ISBN / ISSN: 979-10-373-0362-2.

[134] "Gas deposits south of Crete may reach 280 bcm, early data suggests", ENERGYPRESS, 23/30/2021.

[135] "Greece to survey off Crete, Ionian Sea for possible natural gas reserves, says PM", (keeptalkinggreece.com), 24/03/2022.

because the Sunni elites failed to shape a national alternative, despite the initial convergence of positions and support from Turkey and the Gulf monarchies for the so-called ‘moderate opposition’. What has emerged is a dynamic and even chaotic situation with a war on many fronts and many actors, with conflicting interests and actions between allies. Confrontations have emerged along different lines: supporters of the Assad regime versus oppositionists, moderates versus radicals (Free Syrian Army versus Islamic State), Shiites versus Sunnis (Iran and Hezbollah versus Saudi Arabia and Turkey), East versus West (Russia versus the US). As already mentioned, one of the well-founded assumptions is that the involvement of all these countries in the conflict is driven by their energy interests, because Syria is a corridor for the passage of natural gas coming from the East to Europe.

Syria itself has modest energy potential. It is not a significant oil and gas producer, averaging 400,000 barrels per day between 2008 and 2010. The parties to the conflict are therefore also seeking to establish control over them in order to extract economic benefits. Further exploration would confirm the presence of gas deposits on the continental shelf in the Mediterranean, similar to the giant deposits found in the waters off Egypt, Israel and Cyprus.

Syria’s real advantage, however, is that it lies at the crossroads of north-south and east-west trade routes from south-west Asia to Europe via the Eastern Mediterranean. Syria therefore has a significant role to play in the regional energy transport projects to Europe mentioned above.

This brings to the fore the question of who will lead Syria and therefore whose interests will be supported and promoted. Thus, the main opposing groups in the Syrian conflict have emerged - supporters of Bashar al-Assad’s government (Iran, Russia and China) and those supporting his opposition to varying degrees (Turkey, the Western powers and several of the Gulf Arab states). The US has been indirectly involved in military action against the Assad regime through its NATO ally Turkey, providing logistical support, arms, fighters, intelligence and communications. However, Washington then withdrew and this opened the way for the Assad regime to establish control over eastern Syria, including the oil wells located there. Currently, the government has no control over the oil fields, as they are guarded by some 500 military personnel left behind by the US in Syria, precisely to prevent the oil from getting into the hands of Assad and Russia. Nevertheless, the end of the US presence has indirectly helped to stabilise and strengthen the Syrian regime. Israel is also in the coalition of Western countries. In October 2012, when Turkey became militarily involved in the Syrian conflict, the Israeli army took actions aimed at distracting Damascus from the Turkish threat and simulating a two-front war (the Israeli army significantly increased its military grouping stationed on the Syrian border in the Golan Heights region, which had been a relatively peaceful place for a long time until then). Israel’s main motivation for taking an active part in the conflict by bombing Syria is to counter the influence of Iran and the Shiite organisation it supports, Hezbollah, recognised as a terrorist organisation by the US. However, in doing so, Israel is waging war against the Assad regime, risking helping to bring a Muslim Brotherhood-controlled regime to power in Syria. If this happens, Israel could find itself in the neighbourhood of an Islamist regime that does not tolerate the Jewish state, as when a Muslim Brotherhood government led by Mohamed Morsi rose to power in Egypt in the aftermath of the Arab Spring, ruling for two years (2011-2013) before being overthrown in a military coup. For its part, Ankara is also seen as supporting the Muslim Brotherhood, although President Erdogan officially rejects these claims.

Assad's main ally in his fight for survival is Russia. The reason for this is the port of Tartus, where Russia maintains a military base. A possible regime change in Damascus would mean the loss of Moscow's geopolitical positioning in the Eastern Mediterranean region. The base in Tartus is linked to the one in the annexed Crimean peninsula, from where Russia can deploy military forces to Europe's doorstep. Russia launched an air campaign in support of Assad in 2015, and it was crucial in turning the tide of the war in the government's favour. Some of the criticism, of former US President Trump specifically, was that the US withdrawal from Syria brought tactical benefits to Russia and Iran. China is driven by economic interests - in 2017 it signed bilateral agreements with Syria on trade and economic cooperation, including to attract Chinese companies to the Syrian market. As part of post-war reconstruction, Chinese firms are expected to participate in more than 20 large-scale projects in industrial, energy, transport and communications infrastructure, including oil and gas sector facilities. It should be borne in mind that the China National Petroleum Corporation owns large stakes in Syria's two largest oil firms, the Syrian Oil Company and Al-Furat Petroleum.

Against this background, Turkey's positioning is interesting. Until 2011, Turkey's position in the EU was very interesting. Turkey and Syria are strategic allies historically, culturally, economically and even religiously, as the majority of the population in Syria as well as in Turkey is Sunni. In October 2012, in a presumed and unproven Syrian army shelling of a Turkish border village, Turkey found a pretext to launch military action against the Assad regime. One of the reasons Turkey intervened was the Kurdish issue. Turkey has been fighting against the Kurdish separatists for decades and fears the creation of a Kurdish quasi-state on its borders as a result of the chaos of war, like the de facto autonomous Kurdish Northern Iraq - especially if, with Russia's help, Assad strengthens his position in Damascus. In the war in Syria, Turkey has been a major supporter of the opposition and has used rebel factions to contain and neutralise the Kurdish militia (the People's Protection Units - YPG), accusing it of being an offshoot of the Kurdistan Workers' Party (PKK), which is banned and declared a terrorist organisation in Turkey. Turkish troops and rebels are seizing territory along Syria's northern border to stop the government forces' assault on the last opposition stronghold of Idlib, but their main motivation is to prevent the establishment of a de facto YPG-administered zone along the entire northern border of the country. In March 2020, Russia and Turkey reached an agreement for Ankara to accept Russian support for the Assad regime and the growing Russian military presence in Syria, and for Moscow not to protest the Turkish offensive in the country's northern regions (thus halting the government's offensive to regain control of Idlib). This has stabilised the situation in the Idlib region to a certain extent, despite spontaneous and episodic clashes between opposition and government forces. As a result, a 'safe zone' has been established in north-eastern Syria by Turkish forces and Syrian rebels. It is intended to settle Syrian refugees who are on Turkish territory, as well as those internally displaced within Syria. The Turkish side does not see its intervention on Syrian territory as an occupation, but as guaranteeing a security zone (to be understood as 'clear' of Kurdish militias) along its southern border to safely accommodate the refugees. The zone is occupied by Turkish forces and is along the Syrian side of the border, about 120 km long and 10 km wide. Turkey is de facto seeking to clear the area of Kurds.

Another reason for Turkey to intervene in the conflict in Syria is its ambitions to become a regional leader and global player by rising to a third leading pillar in the Islamic world on the basis of political (secular) Islam, alongside Saudi Arabia and Iran (representing Sunnis and Shias, respectively). The realisation of these ambitions has manifestations in various spheres, one of which is Turkey's energy policy in the context of the conflict in Syria. Ambitions for regional leadership make Turkey's relations with its neighbours and other Middle Eastern countries, especially those that also have claims to a leading role, such as Iran, Egypt, Saudi Arabia, very delicate. More generally, Turkey is trying to create its own regional 'security zone', which covers the Persian Gulf, North Africa, East Africa, the Eastern Mediterranean and the Caucasus. Turkey's relations with the Turkish Cypriots, the Turkish military presence in Syria and in the northern provinces of Iraq are also explained in this context. Turkey seeks to strengthen these collaborations with political, economic, social and military agreements. Let us not forget that Turkey also has interests in Central Asia along the lines of pan-Turkism.

Turkey's ambitions place Ankara in specific relations with the main international actors, including friction with the US and Russia. Its attempts to use its importance as the only NATO member directly bordering the conflict region to solve domestic political problems (the fight against Kurdish separatism), as well as the debate over the use of the Incirlik air base, have caused tensions and some distrust in relations with the US and the EU. As a result, initial US support for the Turkish idea of establishing a security zone in northern Syria was withdrawn.

In the initial stages of the war, Turkey tried to maintain good relations with Russia, but as the conflict progressed and Russia intervened militarily, this became increasingly difficult. The Russia-Iran-Syria alliance is not acceptable to Turkey. Nevertheless, Ankara is cooperating with Tehran and Moscow in finding a political solution to the crisis in the framework of the Kremlin-initiated peace talks in the Kazakh capital of Nur Sultan, known as the Astana process. The 16th round of talks took place on 7-8 July

2021, in which the three main parties to the process (Russia, Iran and Turkey) declared their "firm commitment to preserving the sovereignty, independence, unity and territorial integrity of the Syrian Arab Republic". Turkey's main motivation in supporting Syria's territorial integrity is to prevent any possibility of the establishment of an autonomous Kurdish government, following the example of northern Iraq. There is something else regarding Russia - Ankara is very interested in the implementation of major energy projects with Russia (the Akkuyu nuclear power plant), and in the conditions of growing instability of the Turkish economy (in the last two years, the socio-economic crisis in Turkey has been deepening), it would be difficult to find an alternative investor. Turkey also imports one-third of its natural gas from Russia.

IV. Opportunities for Bulgaria

Diversification of natural gas sources and transmission routes.

Due to its specific geopolitical position, Bulgaria is affected by the processes related to the exploitation of the natural gas fields in the Eastern Mediterranean, as well as by the changes in the security architecture in the Black Sea. On the one side, Sofia is dependent on Russian hydrocarbon supplies. On the other, bordering Greece and Turkey at the same time, the country cannot afford to take sides in the disputes between them. On the third, as an EU and NATO member, Bulgaria is tied to common positions on EastMed and regional conflicts, but it is also a possible entry point for Mediterranean gas to Europe. Taking all this into account, the country has the chance to become an energy distributor and secure the necessary conditions for its economic development. The realisation of this prospect would increase Bulgaria's influence among the countries of the Western Balkans region. Diversification of natural gas supply sources and routes is necessary to realise these opportunities.

Potential instruments to achieve this include liquefied natural gas terminals, interconnectors with neighbouring countries, and the construction of the EastMed pipeline. The Egyptian Zor field is assessed as the most recent and feasible option for LNG supplies via the Idku and Damietta terminals. Other potential LNG suppliers are Azerbaijan, the US and Qatar. For this purpose, the LNG terminal near Alexandroupolis, Greece, should be implemented. At the end of January 2021, the deal for Bulgarian Bulgartransgaz EAD's 20% participation in the project was finalised. Commercial operation of the terminal is scheduled to start in 2022.

Priority projects for energy diversification include plans to build interconnectors with Greece (IGB), Serbia (IBS) and Turkey (ITB). A reversible interconnector between Bulgaria and Romania has already been built and in operation since 2016 as part of the Baltic-Aegean corridor. The four projects meet the EU's 2050 carbon-neutral economy targets, being a key part of Bulgaria's energy transition options towards green and sustainable solutions. IBS and IGB are planned to be operational in 2022. They are also priority projects with a view to achieving energy diversification within the EU.

In order to achieve Bulgaria's priority objectives in the energy sector, the country should pursue a rather active policy. Efforts should be made to ensure the implementation in the short term of gas interconnections between Bulgaria and neighbouring countries. In view of the country's dependence on Russian gas, efforts should be made to ensure the diversification of the eastern energy resources, i.e., efforts are needed to deepen contacts along this line with the producer countries of the Eastern Mediterranean. It is recommended that an assessment be made as to the approach to be taken - bilateral negotiations or active efforts at EU level through the format of the Eastern Mediterranean Gas Forum. In the medium to long term, investment in new pipeline construction is risky in view of the EU's carbon neutrality objectives. On the other hand, as a result of the effects of the pandemic and the conflict in Ukraine, some countries in the Union are increasing their use of coal and nuclear power. Taking this into account, and the potential of natural gas as a transitional fuel to achieve the above objectives, along with the need to ensure Europe's energy security (i.e., consistent gas volumes, affordable prices and diversification of sources), consideration should be given to which of the above-mentioned Eastern Mediterranean gas transmission projects is the most optimal. There is also a need to intensify work with Turkey in view of its key role both in the Eastern Mediterranean region and as a transit point by land and water between it and the EU.

Bulgaria as part of the Southern Gas Corridor

In the context of the crisis in Ukraine, as part of the EU and with its significant dependence on Russian natural gas, Bulgaria should seriously consider the opportunities for diversification of Russian supplies. In this respect, the construction of the Interconnector between Greece and Bulgaria (IGB) should be a top priority. It will provide Bulgaria with access to Azeri gas via TANAP/TAP and to LNG from the Alexandoupolis LNG terminal in Greece, which comes from destinations other than Russia - Qatar, the US, etc. According to the latest statements of the Bulgarian government, the interconnector will be ready this year, before the new winter season. It will provide real diversification of natural gas sources and routes for Bulgaria, not least because talks are underway with Azerbaijan to increase natural gas volumes and new LNG partnerships are being sought. This will reduce dependence on Russia (as a source) and Turkey (as a route). Bulgaria has increased its dependence on Turkey for energy supplies, as since the beginning of 2020, Russian natural gas has been flowing through the second Turkish Stream pipeline, while the pipeline through Ukraine, Moldova and Romania was virtually empty. It should be noted that under normal relations with Russia, Bulgaria had an important role in the transit and redistribution of Russian natural gas in South-East Europe.

The interconnector has another important aspect - it provides an opportunity to diversify gas supplies to Ukraine through the Trans-Balkan pipeline with natural gas sources from the Southern Gas Corridor and the LNG terminal in Greece - with a Turkey-Bulgaria-Ukraine route.

In the context of energy, it is worth mentioning that Bulgaria is discussing various interactions with neighbouring countries to provide electricity. For example, the possibility of new nuclear capacity in Bulgaria to provide power to Greece. Regarding Turkish plans for a third nuclear power plant in Thrace (a Turkish site of strategic importance in European Turkey), Bulgaria has no interest as this would undermine Bulgaria's intentions to implement the Belene NPP project in any form.

** For the purpose of this article, the term "energy geostrategy" is defined as an investment mechanism for the construction of infrastructure facilities significant for the external relations of the state, including participation, obstruction, blocking or competitive alternative spatial duplication of infrastructure projects of regional or global importance (Avdzhiev, Rusev, 2013). Examples include oil and gas pipelines, oil and gas fields, liquefied natural gas terminals, and oil and gas processing refineries.*

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PUBLIC-PRIVATE PARTNERSHIPS IN SOUTH EAST EUROPE: A KEY REQUIREMENT TO TACKLE CLIMATE CHANGE

Olivier Marquette, Director for AES Bulgaria

Introduction

The **2015 Paris Agreement** acknowledges that the threat posed by climate change cannot be addressed by governments alone. The Agreement relies on binding National Determined Contributions (NDC) reflecting the countries' mitigation efforts and highest possible ambition to contribute to global carbon objectives. It also encourages stakeholders including civil society, private sector corporations and sub-national authorities to contribute to these efforts.[136]

Private sector engagement and cooperation with authorities is essential in transitioning to clean energy. For private investors to be able to fully take up their role in the fight against climate change, the right market conditions must be in place. Specific conditions are required to ensure that markets function adequately and that market participants can maximise their efforts to contribute to net-zero objectives.

Moreover, today's geopolitical uncertainty and energy market instability only strengthen the case for solid collaboration between privately owned energy suppliers and the public sector.

The measures put in place by the EU Institutions to reform the energy sector and the finance instruments devoted to this purpose are unprecedented. International and EU fora consider dialogue and cooperation with private stakeholders a key component for the attainment of their policy objectives.

A wider regional cooperation must be developed to provide a stable and reliable framework and to keep pace with the rapid development of the energy transition. In Central and Eastern Europe, such cooperation is already bringing tangible results through recently constructed infrastructure projects and market integration.[137] However, Member States should intensify their cooperation on the decarbonisation of their national economies, e.g., along the lines of the Three Seas Initiative mentioned below. This would enhance economies of scale and efficiency in encouraging new investments in RES generation and other new technologies.

However, particularly throughout the region of South East Europe, where the need for investments is essential, it is now up to the national authorities and market players to reap the benefits of this new partnership. And this concerns not only

[136] "Key aspects of the Paris Agreement", United Nations Climate Change, 2022 <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement/key-aspects-of-the-paris-agreement>

[137] CEEP, Cross-border energy cooperation in Central Europe; Towards flexible, secure and sustainable regional energy markets, Policy Paper 2018

the EU Member States. For illustration purposes, some concrete examples and analysis in this aspect are further provided in the case of Bulgaria.

How to achieve functioning markets for energy suppliers

Over the years, the **Organisation for Economic Cooperation and Development** (**OECD**) has spoken at length of the benefits of liberalised energy markets; specifically, how increased competition leads to higher efficiency and innovation in the market, bringing the largest benefits to consumers and ensuring the adequate functioning of electricity markets. The OECD also stressed the need for a 'robust political framework' and strong government support for a successful liberalisation.[138]

There are several conditions for a functioning energy market. Fair competition is the backbone of functioning markets as it ensures a greater range of choice and suppliers. Reform of the electricity sector has to take into account the following elements:

- A **responsible transition to decarbonisation**: Any responsible transition to the decarbonisation of the economy must ensure that stability is preserved and that power prices are kept in check.
- **Security of supply**: Diversification of energy sources and integration to the grid are key to maintaining reliability and successfully transitioning to renewable energy sources. Decarbonisation of the energy markets should ensure that security of supply is maintained while progressively transitioning. In the case of Bulgaria, the phasing out of thermal power plants can only be gradual, and should maintain the most modern and efficient plants in the medium-to-long term to avoid security of supply and grid stability problems.
- **Grid stability**: The proposed measures have to safeguard the stability of the energy sector and ensure that the power grid responds to the volatility in voltage and frequency disturbances that can follow the installation of renewable energy sources. In this regard, battery-based energy storage is key to unlocking a cleaner energy future while at the same time guaranteeing grid stability: development of energy storage solutions is needed to enable the incorporation of large amounts of intermittent renewable energy into the grid.
- **Social and economic effects of liberalisation**: Market reforms will necessitate support for job seekers and their families. In order to create jobs, new, competitive industries and services could be established. The conversion of thermal power plants and the installation of wind or solar plants provide promising reemployment opportunities for thermal plant workers. They will have to adjust to new sectors, a different set of skills or an alternative location in the region to benefit from reemployment. Re-education activities of varying intensity should be provided to enable workers to adjust their skills through different activities, ranging from comprehensive re-training programmes and apprenticeships, to short-term on-the-job training.
- **Complete balancing markets**: These would allow for competitive tenders and bids to be submitted without limitations on the value of bids and offers, and prevent

[138] OECD, Lessons from Liberalised Electricity Markets (Paris, International Energy Agency, 2005)

structural congestion of the energy supply; locational signals can be introduced as a prelude to investment in network capacity.[139]

• **Interconnection**: Another element of liberalised markets is market coupling with other Member States, as it effectively expands the size of a market by removing the levies which operate as barriers to trade.[140]

• **New technologies**: Investments and integration of new technologies to the grid represents an important element of an efficient market, as any functioning market seeks to implement innovation, improve itself and satisfy demand. Innovation is a key component in achieving the green transformation providing the greener and smarter energy solutions the world needs.

The Bulgarian energy market

The Bulgarian electricity market is concentrated at production level: the top three market participants are state-owned power plants – (NPP Kozloduy, TPP Maritsa East 2 EAD and NEK EAD) and have a cumulative share of 80-85% of the total generation mix. Bulgarian Energy Holding (BEH) owns Natsionalna Elektricheska Kompania EAD (NEK), which is active in electricity generation and trading. NEK operates over 2,700 MW of the installed electricity generation capacity in Bulgaria.

Market concentration is also high in the retail segment of the market. In the household retail segment, NEK continues to serve almost 100% of the market. The non-household retail sector is liberalised, with demand served under freely negotiated prices. Still, even this segment shows high concentration.

Furthermore, the Independent Bulgarian Energy Exchange (IBEX) is strongly limited in the variety of products offered in the forward market segment. In addition, the IBEX still lacks an operational clearing house to act as a central counterparty to transactions, to reduce risk and improve the credibility of its price discovery mechanism.[141]

Bulgaria has achieved important milestones in the energy sector over the past years. This reform momentum needs to continue to ensure a competitive and sustainable supply of energy to businesses and society as a whole. The Bulgarian electricity market is still in need of investments in interconnections with

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[139] Bulgarian Implementation Plan, European Commission, 2021 <https://ec.europa.eu/energy/sites/default/files/bg_implementation_plan_20012020.pdf>

[140] "Commission Staff Working Document Country Report Bulgaria 2020: Accompanying the document Communication from the Commission to the European Parliament; The European Council, the Council, the European Central Bank and the Eurogroup 2020 European Semester: Assessment of progress on structural reforms, prevention and correction of macroeconomic imbalances, and results of in-depth reviews under Regulation (EU) No 1176/2011", European Union, 26 February 2020, COM(2020) 150 final

[141] "Commission Staff Working Document Country Report Bulgaria 2020: Accompanying the document Communication from the Commission to the European Parliament; The European Council, the Council, the European Central Bank and the Eurogroup 2020 European Semester: Assessment of progress on structural reforms, prevention and correction of macroeconomic imbalances, and results of in-depth reviews under Regulation (EU) No 1176/2011", European Union, 26 February 2020, COM(2020) 150 final <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0501&from=EN>, pages 54-55

neighbouring countries. Bulgaria is also facing a delay in the implementation of the EU's Third Energy Package – which details the required reforms of the national electricity market – compared to other Member States.

Although certain steps were recently taken to address the main vulnerabilities in state ownership practices, such as through the implementation of a new Bulgarian "Law on Public Enterprises", further reforms are needed to achieve a fully functioning, liquid and transparent electricity market for all operators.

The planned reforms of the energy sector in Bulgaria

In 2021, the EU published the **Bulgarian Implementation Plan** (**BEMIP**) which sets out a number of reforms to continue the liberalisation of the electricity market to meet EU requirements.[142] The BEMIP describes some possible reforms to improve market functioning. A principal recommendation is reducing the reliance on regulated retail prices, and enabling the active participation of consumers in the electricity market,[143] thereby making the forces of supply and demand the principle determinants of electricity prices. Linked to the ambition to improve the active participation of consumers, it is recommended to eliminate "distortions to the 'merit order' of generation".[144]

The BEMIP also recommends that 'support' services, such as "balancing and ancillary" functions, be offered through the market, with no limits placed on price formation.[145] It also calls for low entry and exit costs within "intraday and day-ahead markets".[146] This is done to enable the plentifulness of providers in the electricity market. For instance, Renewable Energy Sources (RES) projects in Bulgaria have not been deployed recently. Some technologies, such as solar energy, are lagging, and there is appetite to see them developed further in Bulgaria.

The current Bulgarian Government is close to finalising the negotiation with the Commission on the **National Recovery and Resilience Plans** (**NRRP**), which describe the reforms of the energy sector and investments that a country wishes to make with the support of the Recovery and Resilience Facility. These plans must follow country-specific recommendations. The reforms of the energy sector proposed in Bulgaria's NRRP would: i) allow coal phase-out, once new alternative capacity from RES has been installed; ii) foresee additional battery-based energy storage; iii) consider other technologies such as geo-thermal energy, biomass or SRF to the previously promoted natural gas.

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[142] Bulgarian Implementation Plan, European Commission, 2021 <https://ec.europa.eu/energy/sites/default/files/bg_implementation_plan_20012020.pdf>

[143] Bulgarian Implementation Plan, European Commission, 2021 <https://ec.europa.eu/energy/sites/default/files/bg_implementation_plan_20012020.pdf>

[144] Bulgarian Implementation Plan, European Commission, 2021 <https://ec.europa.eu/energy/sites/default/files/bg_implementation_plan_20012020.pdf>

[145] Bulgarian Implementation Plan, European Commission, 2021 <https://ec.europa.eu/energy/sites/default/files/bg_implementation_plan_20012020.pdf>

[146] Bulgarian Implementation Plan, European Commission, 2021 <https://ec.europa.eu/energy/sites/default/files/bg_implementation_plan_20012020.pdf>

To ensure energy security without increasingly relying on imported gas, we might consider developing gas from waste and biomass. Decisions to use these energy sources depend on security of supply issues and proper information related to the origin of waste, which can be ensured through high standards set at the EU level.

This will be possible thanks to the EU funds available through the **Recovery and Resilience Facility** and the **MFF 2021/2027**.

The NRRP sets ambitious reforms of the energy sector that require the upgrade of existing infrastructures as well as the construction of new infrastructures and capacity. The objectives set forth in the NRRP can be achieved with adequate and timely changes and the contribution of private investors, taking into account that:

- some/most of the investments required to decarbonise Bulgaria's power sector, while ensuring security of supply, are not profitable based on energy market revenue alone;
- a non-fully liberalised electricity market does not provide to market participants predictability for their investments;
- the EU target model will not provide sufficient coordination and investment incentives to make sure decarbonisation targets are met while ensuring security of supply.

For these reasons, a successful transition must be accompanied by a new investment framework for new capacities and a transition mechanism securing lignite operation in the interim and a progressive phase-out.

The opportunities provided by public-private partnership

The energy transition requires substantial capital, necessitating a major mobilisation of both public and private investment. Cooperation between investors and authorities is crucial to efficiently reach shared objectives and enable a sustainable energy transition that supports targeted investments and the development of innovative solutions to address the requirements of specific regions in the EU.

Private investors need an investment framework for new renewable generation capacities and battery-based energy storage. Dedicated mechanisms should be allowed, in order to guarantee a predictable profitability of investments that tend to decrease over time. In this sense, the authorities should introduce support measures such as PPPs, feed-in premiums or contracts for difference.

Public-Private Partnerships (**PPP**) can play a key role in bringing together the necessary stakeholders for needed and targeted investments. PPP is a type of long-lasting contract concluded between a public authority and a private corporation with the aim of developing public infrastructure and delivering key services.[147] According to a recent analysis of PPPs from the Bocconi University in Milan, "*over the last 20 years PPP has been playing a crucial role worldwide in the matching of public and private resources to close the infrastructure gap and to bring innovation*

[147] "EPEC", European Investment Bank, 2022 <https://www.eib.org/epec/>

to the way public resources are delivered".[148]

This enables a more efficient provision of goods and services to the wider public: "*PPP is the ideal tool to attract capitals and know-how able to ensure the efficiency and effectiveness of public services. Furthermore, PPP can foster competition (for the market) even in a context of natural monopoly such as a network infrastructure".[149] Furthermore, PPPs are often tied to high standards set by governments, which leads to companies adapting to these standards and thereafter sticking to them. This ensures high levels of innovation while advancing societal objectives, such as environmental protection.*

Power Purchase Agreements (**PPA**) are contracts concluded between investors and off-takers (either corporate or public bodies) that offer predictability to investors by guaranteeing that their long-term investments could be recovered, while also offering price stability to the off-taker and - by extension - to consumers. PPAs can also help advance key climate objectives by focusing on developing key technologies such as renewables. For this reason, PPAs are a suitable way of guaranteeing necessary investments and predictability in the market.

Another option to ensure investment predictability is a **Contract for Difference** (**CfD**). This scheme is normally used by authorities to support low-carbon electricity generation. CfDs incentivise investment in renewable energy by providing developers of projects that have high upfront costs and long lifetimes with direct protection from volatile wholesale prices, and they protect consumers from paying increased support costs when electricity prices are high. Contracts for difference may also involve paybacks from beneficiaries to taxpayers or consumers for periods in which the reference price exceeds the strike price.

Finally, the **Feed-in-Premium** contract is a type of price-based policy instrument whereby eligible renewable energy generators are paid a premium price, which is a payment in addition to the wholesale price.

During the energy transition, the intermittent availability of renewable energy can pose a challenge, and security of supply can be preserved through a **Capacity Remuneration Mechanism** (**CRM**). CRMs enable power plants to be available for generating electricity when needed, in exchange for additional payments. This ensures generation adequacy, so that the available and expected energy capacity is sufficient to meet demands at all times.

The transparent and reliable granting of permits also contributes to an attractive investment climate. In fact, this is fundamental to stimulate investments in renewable energy that is essential for decarbonisation. A CRM is also an important element which can provide additional investor confidence when there is not enough capacity in the market.

[148] Vecchi, Veronica, Francesca Casalini, Niccolò Cusumano, and Velia M Leone, Public Private Partnerships (Cham: Springer, 2021)

[149] Vecchi, Veronica, Francesca Casalini, Niccolò Cusumano, and Velia M Leone, Public Private Partnerships (Cham: Springer, 2021)

The prerequisites for successful public-private partnership

As previously stated, the energy transition should be not only target- but also business-driven, through the meaningful mobilisation of private investment. This would require substituting the 'compensation' discourse, prevalent in the region's transition discussion, with a discourse on opportunity, for example around low-carbon value chains such as renewables, storage, hydrogen and IT.

The commitment from utility companies to non-governmental organisations and industry is paramount for delivering market reforms and decarbonisation solutions. Public-private partnership is only possible when regulatory frameworks:

- **are transparent and are the result of the involvement of all stakeholders**: optimal results are achieved when private companies and other non-state stakeholders are invited to actively coordinate with national authorities to overcome long-persisting regulatory and market deficiencies.
- **take into account the investments that private stakeholders have made in the past**: the power sector is a capital-intensive business with long-term investment cycles, due to the long operation period of power plants (20 years or more). Investors need a stable framework that ensures that investment costs are recovered in reasonable payback times.[150]
- **provide long-term predictability**: a stable regulatory framework and long-term predictability for power providers is a way of ensuring continued private investment in a country. The protection of current investors also plays an important role in attracting new investments.
- **lead to a well-functioning market in the long-term**: The promotion of competition is the backbone of functioning markets as it ensures a greater range of choice and suppliers.-

Therefore, any reform of the electricity market should consider the investments that private energy producers have made so far. Guaranteeing this stability would contribute to ensuring legal certainty for investors and maintaining attractive investment prospects for future investors.

Any sudden reform which does not take into account investments completed by private energy producers would further jeopardise investments, undermine the position of foreign operators in the region (such as AES), deter new investors from investing in the country, and ultimately impact consumers.

Research, Innovation and Standard setting – how businesses partner with government to innovate for sustainability

Public-Private Partnerships are vital to ensure not only that necessary

[150] CEPS Special reports: The EU power sector needs long-term price signals, Fabio Genoese, Eleanor Drabik, and Christian Egenhofer – No. 135 / April 2016

investments are made but also to promote research and innovation in the energy sector by combining the know-how of companies with public services, which at times lack the toolkit to develop key technologies.[151]

It is through innovation that we will be able to accelerate climate change objectives. For instance, wind farms and solar power plants can be cost-effective and plentiful producers of clean energy. However, their output can be intermittent and variable. These technologies do not yet provide the necessary stability needed in the market due to their exposure to external climate factors. This can be addressed through battery-based energy storage installations, another important technology which will promote grid stability and green energy.

Battery-based storage can incorporate large quantities of intermittent renewable energy into the grid. As the world transitions to decarbonised energy systems, energy storage technologies will be critical for supporting the wide-scale deployment and integration of renewable energy sources. The evolution of batteries allows us to solve more challenges, but regulations around it are evolving slowly and need to become more mainstay and competitive. Regulatory regimes must be updated to provide value for the services that battery-based storage can provide. Battery technology is no longer just for storage/backup power, it can be used for frequency regulation, transmission congestion relief, auxiliary systems/voltage support, and demand charge reduction, among others. Further investments are required to deploy the technology at a larger scale. Scaling these technologies would also reduce deployment costs.

Different funding streams established by the EU will help drive research and innovation in the clean energy sector and develop technologies needed for the green transition. These funds will help Member States decarbonise and achieve climate ambitions whilst supporting the social aspects of the transition. They will also enable the installation of new green technologies that will develop energy capacity. For instance, the **Just Transition Fund** (**JTF**) takes into consideration the social aspects of the transition, for example by reskilling workers.[152] The **Modernisation Fund** will support the investment in renewables and the modernisation of energy networks.[153] The **Innovation Fund** will specifically look to develop low-carbon technologies such as Carbon Capture Utilisation and Storage (CCUS).[154]

A sizeable amount of EU funds are also backed by **Multilateral Development Banks** (**MDBs**) such as the **European Investment Bank** (**EIB**). This is the case of the Just Transition Mechanism (JTM) and its **InvestEU** scheme which will dedicate

[151] Vecchi, Veronica, Francesca Casalini, Niccolò Cusumano, and Velia M Leone, Public Private Partnerships (Cham: Springer, 2021)

[152] “EU Fund To Facilitate The Green Transition”, AES Bulgaria, 2021 <https://www.aesbulgaria.com/en/eu-fund-facilitate-green-transition>

[153] “EU Fund To Facilitate The Green Transition”, AES Bulgaria, 2021 <https://www.aesbulgaria.com/en/eu-fund-facilitate-green-transition>

[154] “EU Fund To Facilitate The Green Transition”, AES Bulgaria, 2021 <https://www.aesbulgaria.com/en/eu-fund-facilitate-green-transition>

capital to developing energy infrastructure in line with green objectives. The **Bulgarian Development Bank** (**BDB**) is also looking to contribute by guaranteeing instruments under InvestEU for the development of low-carbon infrastructure aiming to unlock up to EUR 1.3 billion in funding.[155]

Dialogue at global, regional and national levels, such as participation in COP and National Energy Forums

Discussions at global, regional and national levels on energy matters are essential to addressing the climate emergency, as it requires large-scale emission reduction by all actors. This can only be accomplished through multilateral and regional cooperation. These forums also enable the relevant stakeholders to engage with one another.

A key forum in this regard is the **UN Climate Change Conference of the Parties** (**COP**). **COP26** (the 26th edition) was hosted by the UK in November 2021. The Glasgow Climate Pact adopted at COP26 seeks to advance important issues in the transition to net-zero and reaffirm delegates' key pledges.[156] As a key stakeholder involved in COP26, the AES Corporation used this opportunity to announce its partnership with the Chilean government for the development of an additional 1.563 MW of battery-storage capacity, contributing to the decarbonisation of the country. In the announcement of the new partnership, Bernerd Da Santos, the Executive Vice-President of AES and Global Leader of Operations and Infrastructure, stressed the importance of cooperation between the public and private sectors to innovate, advance key technologies, and reach key climate objectives.[157] AES also announced its partnership with Microsoft for the development of renewable data centres through which AES is decarbonising the energy-intensive data storage industry.

Another important forum for engagement is the **Three Seas Initiative** (**3SI**), which brings together 12 Member States from Central and Eastern Europe with the central objective of contributing to economic growth and ensuring greater connectivity and security of supply in the region.[158] In the 2021 edition of the forum, held in Sofia, Bulgaria, delegates signed a Joint Declaration in which they committed to improve infrastructure, increase the diversification and security of energy sources and increase the speed of digitalisation and innovation.[159] A dedicated 3SI Investment Fund was established to finance important projects in the region.

155 "BDB Starts Market Consultations On Participation In Investeu", Bulgarian Development Bank, 2021 <https://bbr.bg/en/news-bbr/bdb-starts-market-consultations-participation-investeu/>

156 "The Glasgow Climate Pact – Key Outcomes from COP26", United Nations Climate Change, 2021 <https://unfccc.int/process-and-meetings/the-paris-agreement/the-glasgow-climate-pact-key-outcomes-from-cop26>

157 "Chile To Dual Its Energy Storage Capacity Along With AES", List Solar, 2021 <https://list.solar/news/chile-to-dual/>

158 "Objectives", Three Seas Initiative, 2022 <https://3seas.eu/about/objectives>

159 "10 Amchams Signed The 2021 Sofia Declaration To Support Three Sees Initiative Future

Success story Bulgaria – how AES and Bulgaria are cooperating on energy security and a transition to carbon neutrality

During its 20-year presence in the country, the AES Corporation has heavily invested in Bulgaria and provided important impetus for economic growth and sustainable development. AES' assets include the Galabovo thermal power plant and the St Nikola Wind Farm, which is the largest wind farm in the country. AES' operations in Bulgaria play an essential role in ensuring the stability of the domestic electricity grid. As a major foreign investor operating in Bulgaria's electricity market, the AES Corporation is supportive of liberalisation and reform of the electricity market.

The AES Corporation plays a fundamental role in ensuring energy security in Bulgaria. AES Galabovo has a total installed capacity of 690 MW and the ability to supply around 7% of the market.[160] The plant is key to ensuring security of supply and adequate generation capacity in Bulgaria, and has proven to be indispensable in times of an increased electricity demand. For instance, during the harsh winter of 2016-2017, the AES Galabovo plant was key for avoiding a serious electricity shortage and ensured a quarter of total electricity demand.[161]

Innovation is at the core of AES' operations, which allows it to bring greener and smarter energy solutions to Bulgaria. A key example of AES' use of innovation is through the digital tools that the company implements to ensure the safety, reliability and efficiency of the St Nikola Wind Farm windmills.[162]

AES uses drones to perform blade inspections on its wind turbines: on one side, this solution provides a better and safer inspection of the blades; on the other, it avoids operators having to climb into the nacelle of each wind turbine. Machine learning technology at Saint Nikola has also optimised the wind farm's operations and helps to predict with greater accuracy the energy generation based on a mass of historical data.

Globally, the AES Corporation is committed to a more sustainable energy future and is a leader in the execution of responsible energy transitions through the deployment of innovative technologies. AES invests in sustainable growth, along with technological and commercial innovations which will enable companies and industries to rapidly decarbonise.

In another example of collaboration with MDBs, the **European Bank for Reconstruction and Development** (**EBRD**) recently provided 50% of a total envelope of EUR 64 million to develop AES' St Nikola Wind Farm in a sustainable

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Development", AmCham Bulgaria, 2021 <https://amcham.bg/2021/07/08/10-amchams-signed-the-2021-sofia-declaration-to-support-three-sees-initiative-future-development/>

[160] "AES Corporation: Advancing Bulgaria's energy transition through innovation", AES Bulgaria, 2021 <https://www.aesbulgaria.com/en/aes-corporation-advancing-bulgarias-energy-transition-through-innovation>

[161] "Keeping the lights on: energy security in Bulgaria and across the EU", AES Bulgaria, 2021 <https://www.aesbulgaria.com/en/keeping-lights-energy-security-bulgaria-and-across-eu>

[162] "Olivier Marquette", Twitter, 2021 <https://twitter.com/AESBulgariaPres/status/146885644103 7471748?s=20&t=jed8Lb-LGyuxtRYnPN_1zQ>

manner.[163] Due to the wind farm's size, this project is a key element of Bulgaria's green transition. These are valuable examples of the important role MDBs play in developing sustainable infrastructure.

By closely cooperating towards achieving their shared objectives, AES and Bulgaria are working together, also in dialogue with the EU, to ensure Bulgaria's energy future becomes a success story.

Conclusion

Private investments will be crucial to help the energy transition proceed efficiently and responsibly. If driven effectively, predictably and fairly, public-private cooperation in the EU energy sector will ensure a win-win solution for all.

However, given the characteristics of the sector, investments in energy infrastructures can be promoted only if a stable and predictable market environment creates the prerequisites for promoting a reliable public-private partnership, including investor protection, regulatory certainty, and equal treatment of domestic and foreign investors, all of which are important factors shaping investment decisions.

This would ensure the ultimate goal of attracting private investment to pursue objectives of public interest. The long presence of AES in Bulgaria and the diversification of its portfolio in the country are a sign that both private stakeholders and authorities, and ultimately consumers, can reap the benefits of this partnership.

[163] "St Nikola Wind Farm Receives EUR 64 Million Loan From EBRD And Two Commercial Banks", AES Bulgaria, 2021 <https://www.aesbulgaria.com/en/st-nikola-wind-farm-receives-eur-64-million-loan-ebrd-and-two-commercial-banks>

Olivier Marquette *is the President for AES Bulgaria and the head of Business Development for Eurasia.*

Olivier joined the AES group in 2006 in the North America Business Development team. He contributed to various early-stage projects in financial modeling, contract negotiation, permitting. In 2008, he transferred to AES Singapore office as Director, Business Development, and led development in Indonesia. In 2011, he joined AES Tiete S.A. as Vice-President of Business Development, in charge of the execution of AES Tiete's growth strategy based on natural gas and renewable generation. In 2013, he joined AES Dominicana to lead the development of growth projects leveraging AES existing platform.

Prior to joining AES, Olivier held various positions at Electricite de France, first in Research and Development, then in Operations. Olivier was Operations Manager at a 500MW coal-fired power plant in Paris suburb, and was later promoted to the position of Plant Manager at the Saltillo 250MW combined cycle plant in Mexico.

Olivier is the president of Amcham Bulgaria Board of Directors since January 2019, and a co-chairman of the National Energy Chamber since March 2016.

Olivier holds an Engineer Degree from Ecole des Mines de Paris, France, a Master of Science Degree in Mechanical Engineering from Texas A&M University, and a Master of Business Administration Degree with Distinction from Harvard Business School.

THE EU GREEN DEAL AND THE ROLE OF NUCLEAR

Tim Yeo, New Nuclear Watch Institute

Introduction

In 2022 Europe faces the most severe energy challenge in its history. This has been caused by severe supply disruptions and sharp price rises occurring at a time when the transition away from fossil fuels urgently needs to accelerate for climate reasons. All three circumstances should have been anticipated and planned for. Unfortunately the warning signs were ignored by most of Europe's leaders.

Their heads in the sand complacency is now inflicting severe pain on all European energy consumers, domestic and business alike. It is also endangering progress towards the net zero targets adopted by the EU and its neighbours like the UK. If those targets are not met there is a real risk that by the middle of this century climate change will be irreversible.

At the start of 2022 the security of Europe's energy supply was already weak because of its heavy dependence on imported gas. President Putin's invasion of Ukraine was not widely foreseen even though it was consistent with his previous actions in Crimea and his known policy aims. It made a weak situation perilous. Only immediate and drastic action can prevent energy shortages from damaging thousands of European businesses and disrupting the lives of millions of European citizens.

Demand for energy was rising before the invasion of Ukraine as the global economy began to recover from Covid in the second half of 2021. The application of sanctions against Russia has driven the price of gas sharply higher, exacerbating the inflationary pressures which were already acute. High inflation weakens the European economy, makes many industries less competitive and raises the cost of living for the public.

It became clear at COP26 last November that greenhouse gas (GHG) emissions must now fall faster than ever before and that this fall must begin before 2030. If GHG emissions are still rising in the 2030s it will very probably be too late to prevent the concentration of GHG concentrations in the atmosphere from reaching the level at which climate change is irreversible.

Climate change is not, as many people wrongly assert, a threat to our planet. The planet has survived huge changes in climate in the past and will almost certainly exist for another eight billion years.

What climate change threatens is the survival of human beings, a recently arrived species whose extraordinary success in the last few thousand years has been made possible by conditions of climate stability. Self-interest alone should therefore spur every man, woman and child into faster action. Constant references to “saving the planet” are misleading and unhelpful.

As European leaders ponder how to confront these challenges the overwhelming need for one positive measure is clear. A substantial and rapid increase in Europe’s nuclear energy capacity will improve energy security, stabilise energy prices and reduce GHG emissions.

Nuclear power and the security of energy supply

Every modern economy depends on the continuous availability of electricity. Neither business nor domestic electricity users tolerate frequent power outages. Governments which fail to maintain an uninterrupted supply of power in their countries will be extremely unpopular and may be forced out of office.

Furthermore, demand for electricity is rising steadily as it replaces both oil as a transport fuel and gas as a heating fuel. The spread of electricity intensive data processing technologies is also accelerating.

All these factors have been well known for more than a decade. Regrettably the preparations made to address them by most of Europe have been woefully inadequate.

Some actions have actually made the situation worse. Germany’s crass phase-out of its nuclear power stations was a political reaction to the Fukushima accident. This made the EU’s largest member state more dependent on imported Russian gas, polluted its air, increased its GHG emissions and raised prices for its consumers.

In 2020, the last full year for which European Commission data is available, imports accounted for 83 percent of total EU gas consumption. This is an uncomfortable position at a time when, driven by the needs of fast growing Asian economies, global demand for gas is rising steadily.

To make matters worse, as Oaktree Co-Chair Howard Marks has pointed out, Russia supplies one third of Europe’s oil, 45 per cent of its imported gas and nearly half its coal. Marks observed that “Europe appears to have allowed its dependence on imports to increase so greatly because it wanted to be more ecologically responsible at home. Security does not seem to have received much consideration”[164].

This cannot continue. Improving Europe’s energy security is now a top priority. Firstly European countries must move quickly to greater energy self-sufficiency. Secondly they must diversify the sources of imported energy to cut excessive dependence on a single supplier.

One way to strengthen energy security is to ramp up investment in renewable

[164] https://www.ft.com/content/d992865e-eafd-4a18-8e17-c3bf778cc218

energy including wind and solar power. Good progress in doing this has been made. By 2020 renewable energy provided 37 per cent of gross EU electricity consumption[165].

Wind power, which provides over one third of the EU's renewable energy, and solar which has risen from 1 to 14 percent since 2008[166] have both been helped by falling costs. Capacity will continue to expand though land use considerations impose constraints on growth in some countries.

However wind and solar are intermittent sources of electricity. In the third quarter of 2021 milder than usual wind speeds meant that the three largest European wind energy producers, the UK, Germany and Denmark only harnessed 14 per cent of installed capacity compared with an average range of 20-26 per cent in previous years.

A sharp spike in prices ensued as utility companies were forced to switch away from wind to coal and scarce expensive natural gas. The resulting squeeze caused European gas prices to jump more than 250 per cent in 2021. In turn some power suppliers were forced to close down. In the UK this left the taxpayer to pick up the high cost of company defaults.

The more countries depend on wind and solar power the more they need electricity and gas storage to protect against the risk of power outages and price spikes. Putin's invasion of Ukraine woke up European politicians to the fact that Gazprom controlled much of Europe's electricity storage capacity. Belatedly the European Commission is now proposing new mandatory certification for gas storage owners[167] .

Relying entirely on wind and solar to supply electricity in any country severely compromises energy security. An essential part of the energy mix in most countries is therefore nuclear - the only large scale reliable supplier of almost zero carbon baseload electricity.

Nuclear energy has the further advantage that its fuel is available from a wide range of geographically and politically diverse sources. Nuclear plants, once operational, enhance the energy security and independence of any country in which they are situated.

European countries wanting to invest in new nuclear energy capacity can buy from vendors of large scale plants in the US, China, Russia, South Korea and Japan, as well as closer to home in France. The introduction of Advanced and Small Modular Reactors (SMRs) will probably extend this list to include the UK and Canada by the end of this decade.

This background constitutes a buyers' market for nuclear plants. Vendor companies often offer attractive finance to their potential customers, usually

[165] https://ec.europa.eu/eurostat/en/web/products-eurostat-news/-/ddn-20220126-1

[166] https://ec.europa.eu/eurostat/en/web/products-eurostat-news/-/ddn-20220126-1

[167] https://www.euractiv.com/section/energy/news/eu-tables-plan-to-certify-gas-storage-operators-threatening-russias-gazprom/

with the support of the governments of the countries where those vendors are based.

Finally there is the myth, popular among anti-nuclear conspiracy theorists, that nuclear plants built and owned by a vendor from China or Russia might be interfered with once they had been commissioned. This can be dismissed. It would not be in the interests of China or Russia to do this, though recent events are a reminder that dictators don't always act in their country's best interests.

In any case safeguards, including ensuring that operational control of all nuclear plants rested with an entity whose management was controlled by the authorities within the country where the plants are located, could easily be built into the contractual arrangements with the vendor from the start.

Energy prices – can nuclear help?

In addition to the volatility of energy prices experienced last year strong inflationary pressures were affecting most of the world economy at the start of 2022. The stable prices and very low interest rates enjoyed by investors and consumers for more than a decade had already come to an end.

Since Russia and Ukraine supply almost one third of the world's wheat the current crisis will spark a jump in food prices later this year. This will be painful for consumers worldwide.

However the sanctions applied on Russia in response to the invasion of Ukraine will have an even bigger and more direct impact on economic activity. Even if the conflict is swiftly and peacefully resolved it is unthinkable that exports of Russian oil and gas will return to pre-crisis levels. All oil and gas importing nations now want to minimise their dependence on Russian supplies. This means a chunk of global demand must be met from other sources.

Consumption of oil will probably decline as consumers respond to higher prices. The worldwide switch to electric vehicles will accelerate. Heavy trucks and buses will move to hydrogen power. In the long term surface transport almost certainly will be totally decarbonised.

For gas the likely scenario is different. The continued growth in electricity consumption and the increasingly urgent need to phase out coal together ensure a big role for gas at least until the middle of the century. Fulfilling this role during a period when the use of Russian gas is falling will keep gas prices high for the foreseeable future.

At the same time the switch from power plants burning plentiful cheap coal to more sustainable energy sources will also drive prices up. This trend is likely to be reinforced by wider use of carbon pricing following the strengthening of carbon market rules agreed at COP26. According to Wood Mackenzie the volume of GHG emissions covered by emissions trading systems will now "increase substantially"[168]

More expensive energy inevitably breeds demands for governments to intervene to alleviate the burdens on consumers. These should be resisted. The answer to fuel poverty lies in social policy, not energy policy. Indeed, higher energy prices have some helpful consequences. They are a powerful incentive for greater energy efficiency, a no regrets goal which improves energy security, cuts greenhouse gas emissions and helps poor consumers.

Nuclear power offers protection against unexpected energy price increases. The running costs of a nuclear plant are low relative to the high original capital costs of construction. With plentiful supplies of uranium available there is miniscule risk of a sudden jump in its price. Even if one occurred its impact on the cost of nuclear generated electricity would be very small.

There is also a good chance that the rollout of SMRs will start to reduce the capital cost of new nuclear capacity by the end of this decade.

Climate change - why nuclear is a necessary part of the solution

As mentioned earlier climate change is an existential threat to the human species. The latest Report of the Intergovernmental Panel on Climate Change (IPCC) was published in August 2021 after eight years of preparation. It is the sixth in the series dating back to 1988 which first brought the subject to the attention of policy makers around the world.

One of its lead authors, Joeri Rogelj, Director of Research at Imperial College London's Grantham Institute, said that the Report "shows we can stay within [a rise in global average surface temperature above pre-industrial levels of] 1.5C but only just - **only if we cut emissions in the next decade**"[169] [emphasis added].

A key message from COP26 was that tougher emissions reduction targets are a necessary but not sufficient condition for successfully addressing this threat. Paragraph 17 of the Glasgow Climate Pact published on 17 November 2021 stated that "rapid, deep and sustained reductions in global greenhouse emissions" are needed to keep 1.5C in reach.

This is consistent with the IPCC Report which calculated that global GHG emissions must be reduced "by 45 per cent **by 2030** [emphasis added] relative to the 2010 level".

The critical factor determining the level of GHG concentrations in the atmosphere is not the level of annual emissions. It is the cumulative historic global total of GHG emissions. This is because once emissions have occurred they mostly remain in the

[168] https://www.woodmac.com/news/the-edge/carbon-markets-cop26-breakthrough/

[169] https://www.theguardian.com/science/2021/aug/09/humans-have-caused-unprecedented-and-irreversible-change-to-climate-scientists-warn

atmosphere for decades. The timing of the emissions reductions is therefore vital.

The post-Covid recovery in the global economy caused emissions to start rising again before the end of 2021. The situation was then aggravated by the Ukraine crisis which led some countries to reconsider their pathway to net zero.

UN Secretary-General Antonio Guterres warned that the goal to limit the temperature rise to 1.5C is on “life support” and “in intensive care”[170]. While highlighting the progress made at COP26 he pointed to “the enormous emissions gap” and said that “the main problem was not solved – it **was not even properly addressed”[171]** [emphasis added].

The COP26 pledges are already insufficient to set the world on a fast enough trajectory down to net zero. Any dilution of them spells disaster for the global response to climate change. Nevertheless the pressure on governments to slow down the phase-out of coal in order to facilitate a cut in their dependence on Russian gas is understandable.

In the face of this pressure Europe’s leaders must remember that the longer the world delays the phase-out of coal the more expensive the process will eventually be. Cutting emissions in a rush later will cost more than doing so steadily sooner. Similarly, leaving too much to be done in the 2030s and 2040s will impose greater disruption on domestic and business energy users alike than making a start in the 2030s.

Historically only two countries, France and Sweden, have ever cut GHG emissions as fast as every country must now do. France’s emissions fell by 29 per cent between 1979 and 1990 and Sweden’s by 37 per cent between 1979 and 1991[172].

These cuts occurred in the wake of the 1970s oil crisis. They were achieved then by rapidly ramping up investment in nuclear capacity, as both countries recognised that heavy dependence on oil imports from the Middle East jeopardised their energy security. Five decades later the world needs to wake up to the similar consequences of too much reliance on Russian oil and gas.

Unlike the 1970s a significant part of the solution now rests in the development of more renewable energy capacity. But as pointed out above, the intermittent nature of the biggest renewable energy sources, wind and solar, effectively prevents them from being the sole supplier of electricity to any one country.

So, nuclear still has an essential role to play as the only large scale provider of reliable baseload low carbon electricity. Once coal and gas are phased out there is no alternative to including an element of nuclear in the energy mix if power outages are to be avoided. The only exceptions are the tiny number of countries where hydropower can meet all demand.

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[170] https://www.washingtonpost.com/climate-environment/2022/03/21/15c-climate-guterres-life-support/

[171] IBID.

[172] https://data.worldbank.org/indicator/EN.ATM.CO2E.KT

The future of nuclear within the European outlook

To its great credit the EU, alongside its former member state the UK, has long understood and recognised the threat posed by climate change. Europe has prioritised decarbonisation of its economic and business models more than any other part of the world. It has thereby set an example to other regions.

The EU has championed renewable energy and energy efficiency. After a faltering start its Emissions Trading System has grown into the world's largest and most liquid international carbon market. The price of EU carbon allowances has risen tenfold since 2017 to a level which is beginning to impact on investment decisions.

The European Commission has courageously argued for border tax adjustments as the best way to overcome the problem of carbon leakage. Individual member states retain control over their own energy mix but their policies are influenced by those of the EU as a whole.

Despite this strong leadership some EU member states now face difficulties as they try to cut fossil fuel consumption more quickly. Europe is more vulnerable to the painful energy consequences of Putin's invasion of Ukraine than any other continent in the world. Adapting to the new circumstances of 2022 is both uncomfortable and expensive for all consumers and many businesses.

For this reason the actions which the EU now take are unusually important. First and foremost the priority given to reducing GHG emissions, even in the face of pressure to relax this in the short term because of the need to strengthen energy security, must be maintained.

Secondly the growth of all low carbon electricity generation technologies must be promoted. The EU Taxonomy now recognises this.

Thirdly more help must go on being given to those member states where coal mining is still a large employer. This is needed to ensure that the switch away from coal not only carries on but speeds up.

Fourthly regional cooperation within the EU must continue to demonstrate how it can promote a unified and coherent response to the threat of climate change.

Fifthly by maintaining tough climate related criteria for accession countries the EU can show how its policies exercise a positive influence over the decisions of non-members.

Sixthly by insisting on objective data based analysis of different low carbon energy technologies the European Commission can offset the damage done by irrational fanatical opposition to nuclear from Austria and from some civil society organisations.

Conclusion – the opportunity for nuclear

The ambivalent attitude, and sometimes downright hostility, of the European Commission towards nuclear energy is changing. Last year the Commission's Joint Research Centre declared that its analysis "did not reveal any science-based evidence that nuclear does more harm to human health than other electricity production technologies already included in the EU taxonomy for sustainable activities" alongside low carbon renewable energy technologies.

The same report pointed out that Generation III nuclear plants have the lowest accident fatality rates of all electricity generation technologies. It confirmed that average life cycle GHG emissions for nuclear produced electricity are comparable to those of hydropower and wind. It stated that the Nox and Sox emissions from nuclear energy are very low, comparable to or better than those from solar PV and wind energy. Finally it made clear that the land needed for nuclear energy is significantly less than for wind and solar farms.

On the crucial "do no significant harm" test nuclear came out as equal to or better than other electricity generation technologies. This was enormously encouraging. It opens the door for the nuclear industry to expand in all those member states who are willing recognise its benefits.

It is also very timely. North America, much of Asia including China and India, the Middle East and other regions all understand that nuclear energy is the historically proven way to cut GHG emissions quickly.

The UK is, regrettably, no longer part of the EU. It is encouraging however that "the UK Government intends to source 25% of its electricity from nuclear plants by 2050 in a strategy to help the country reduce its dependence on Russian fossil fuels"[173].

Investment in more nuclear capacity has the potential to transform European energy security. It can mitigate the damage done by soaring gas and oil prices. It will deliver low carbon baseload power. It provides a fast track to much lower GHG emissions.

What are we waiting for?

***Tim Yeo** is chairman of the New Nuclear Watch Institute, industry funded think tank for promoting nuclear energy as an essential part of the global response against climate change. He is also UK Honorary Ambassador in promoting Foreign Investment for South Korea. Between 2010/2015, Mr. Yeo was former Chair of UK Energy and Climate Change Select Committee. He is Cambridge graduate and Honorary professor at University College in London.*

[173] https://www.power-technology.com/news/uk-nuclear-power-plants/

EUROPE'S ENERGY SECURITY: A MAJOR ROLE FOR CASPIAN GAS

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The European Energy Crisis

Amid the global economic recovery from the COVID-19 pandemic, demand for energy imports has been on the rise, while the supply has remained relatively limited due to delayed maintenance of oil and gas fields and underinvestment. The supply and demand mismatch has sent global energy prices soaring. Energy bills have been particularly high in Europe due to a set of reasons including declining domestic production of fossil fuels, limited availability of liquified natural gas (LNG) supplies owing to the strong pull from premium markets in Asia, delayed infrastructure maintenance, lower-than-expected electricity generation from renewables, and natural gas storage shortfall. Russia's limited provision of more gas on Europe's spot markets beyond its long-term contractual obligations put additional pressure on the tightening European gas balance.

The launch of the Russian military campaign in Ukraine on 24 February 2022 with the consequent increase of natural gas prices to an all-time high in Europe[174] has further exacerbated the continent's energy crisis, prompting Brussels to speed up its energy diversification strategy. In an outline of a plan called REPowerEU, proposed by the European Commission on 8 March 2022, EU countries will seek to end their energy dependence on Russian fossil fuel imports, which would require the diversification of supplies, electrification of economies, and acceleration of energy efficiency and deployment of renewables. The realization of the REPowerEU plan will be a daunting task, entailing significant policy effort across multiple sectors and strong international cooperation.

Diversifying gas supplies will be especially critical for making the European energy market affordable and secure. In 2021, around 43 per cent of the EU's natural gas imports came from Russia.[175] While there are numerous potential options for both pipe and LNG supply sources on the table, few of them can provide sizeable supplies swiftly and cost-effectively. Norway, the EU's second-largest gas supplier after Russia, already produces and exports hydrocarbons at its maximum capacity,[176] although the country might be able to add some volumes after receiving a permit to produce more from the Oseberg, Troll, and Heidrun

[174] Sylvia Pfeifer, "European industry braced for pain from latest surge in oil and gas prices," Financial Times, March 8, 2022, https://www.ft.com/content/82340b2a-f027-4b0e-8217-d016135f1e83

[175] "In focus: Reducing the EU's dependence on imported fossil fuels," European Commission, April 2022, https://ec.europa.eu/info/news/focus-reducing-eus-dependence-imported-fossil-fuels-2022-apr-20_en

[176] Stine Jacobsen, "Baltic Pipe won't increase Norway's gas exports in maxed out system, PM says," Reuters, March 9, 2022, https://www.reuters.com/business/energy/baltic-pipe-wont-increase-norways-gas-exports-maxed-out-system-pm-says-2022-03-09/

fields on 16 March 2022.[177] Algeria, EU's third-largest supplier, considers boosting gas exports to Italy, but the Algerian energy industry has been restrained in recent years by a lack of investment and political instability as well as growing domestic demand.[178] Building the EastMed pipeline to deliver natural gas from Israeli waters to Europe via Cyprus and Greece, excluding Turkey, is not commercially viable and will take too long to implement, as it was reiterated by U.S. Under Secretary of State Victoria Nuland on 7 April 2022.[179] With Washington's help, European buyers have recently imported significant volumes of LNG, but it will be challenging and costly to win that much of the limited global spot market continuously amid high energy demand in Asia.[180]

Caspian Energy Resources

The Caspian basin region, by contrast, is well-positioned to boost natural gas exports to Europe at a competitive price. The region has long been eyed for direct energy supplies to Western markets. The Caspian basin is one of the oldest oil-producing areas in the world, with the first-ever oil well drilled in 1846 near Baku, in what is now Azerbaijan's capital.[181] The area had been a major source of oil production for the Russian Empire and then for the Soviet Union. When the latter collapsed in 1991, the Caspian basin's vast oil and gas resources became a battleground for competing interests. The West has been particularly interested in tapping the region's hydrocarbons and establishing an energy-pipeline corridor that would bypass both Russia and Iran.

On 20 September 1994, the State Oil Company of Azerbaijan Republic (SOCAR) and a bp-led consortium of 11 foreign oil companies from six nations signed the Production Sharing Agreement (PSA) for the development of an area that covered three major oil fields in the Azerbaijan sector of the Caspian Sea – Azeri, Chirag, and Deepwater portion of the Gunashli field (ACG). The agreement was the first major investment by Western multinational companies in any country of the former Soviet Union and became known as the "contract of the century" due to its importance for the Azerbaijani and global energy industry.[182]

The evacuation of the ACG crude to global markets required developing a new

[177] Nora Buli and Nerijus Adomaitis, "Equinor exploring ways to further increase gas output, says executive," Reuters, March 16, 2022, https://www.reuters.com/business/energy/equinor-exploring-ways-further-increase-gas-output-says-executive-2022-03-16/

[178] Chiara Albanese, Alessandro Speciale, and Salma El Wardany, "Draghi Heads to Algeria as Italy Seeks to Cut Russia Gas Imports," Bloomberg, April 10, 2022, https://www.bloomberg.com/news/articles/2022-04-09/algeria-to-expand-natural-gas-exports-to-italy-by-almost-half

[179] "US snubs proposed EastMed gas pipeline as not viable," Daily Sabah, April 7, 2022, https://www.dailysabah.com/business/energy/us-snubs-proposed-eastmed-gas-pipeline-as-not-viable

[180] Rochelle Toplensky, "The High Cost of Europe's Energy Security," The Wall Street Journal, March 14, 2022, https://www.wsj.com/articles/the-high-cost-of-europes-energy-security-11647262236

[181] "Background Reference: Azerbaijan," US Energy Information Administration, January 7, 2019, https://www.eia.gov/international/content/analysis/countries_long/Azerbaijan/azerbaijan_bkgd.pdf

[182] "The contract of the century – a national strategy for success," bp, https://www.bp.com/en_az/azerbaijan/home/who-we-are/operationsprojects/acg2/the-contract-of-the-century---a-national-strategy-for-success.html

corridor through Turkey. One of the most optimal and cost-effective options was going through Armenia. However, the country's occupation of Azerbaijan's territory resulted in Yerevan's isolation and blocked its participation in the project. As a result, a bp-led consortium chose a route to the Mediterranean coast of Turkey through Georgia, which become known as the Baku-Tbilisi-Ceyhan (BTC) pipeline. The project has proved a success and currently serves as the major artery for shipping most of the Azeri crude to European customers.[183]

Baku has played a crucial role in facilitating investments in the Caspian oil and gas reserves and their exports. The successful realization of large energy projects has promoted significant investment into other major projects in the region such as Kazakhstan's Kashagan field, which is one of the world's largest oil deposits discovered in the last forty years.[184] While the lion's share of Kazakh oil exports traverse Russia, some volumes also travel through Azerbaijan's terminals and pipelines. Most of the Kazakh crude goes to Europe and some is also shipped to the United States.[185] Turkmenistan, another producer of crude in the Caspian basin region, albeit a modest one in comparison with Kazakhstan and Azerbaijan, consumes 60 per cent of its oil production domestically and exports the remainder over the Caspian Sea, including through the energy infrastructure in Azerbaijan.[186]

After the discovery of the giant Shah Deniz gas field in Azerbaijan's section of the Caspian Sea in 1999, the country also became an exporter of natural gas. A trilateral strategic partnership between Baku, Tbilisi, and Ankara promoted the construction of the South Caucasus Pipeline (SCP) in 2006, which allowed exporting the Azeri gas from Shah Deniz Stage 1 to Georgia and Turkey. With the development of Azerbaijan's Shah Deniz Stage 2, an extensive partnership including seven national governments and 11 different companies[187] was forged to export natural gas to the European markets, in a project known as the Southern Gas Corridor (SGC). The SGC project, which was proposed back in 2008 by the European Commission and successfully completed at the end of 2020, is a $33 billion 3,500-kilometer pipeline system taking natural gas from Azerbaijan's Shah Deniz natural gas field in the Caspian Sea to European markets for the first time ever.[188] Representing an alternative supply route, the SGC helps to diversify Europe's natural gas imports and improve its energy security. The SGC Phase I annually delivers 6 billion cubic meters (bcm) to Turkey and 10 bcm to European

[183] "Azerbaijan," US Energy Information Administration, September 13, 2021, https://www.eia.gov/international/analysis/country/AZE

[184] "Kashgan: offshore oil and gas in Kazakhstan," ENI, https://www.eni.com/en-IT/operations/kazakhstan-kashagan.html

[185] "Crude oil exports from other countries may pass through Russian infrastructure," US Energy Information Administration, March 29, 2022, https://www.eia.gov/todayinenergy/detail.php?id=51838

[186] "Turkmenistan – Country Commercial Guide," US Department of Commerce, 15 October, 2022, https://www.trade.gov/country-commercial-guides/turkmenistan-oil-gas

[187] "bp welcomes completion of Southern Gas Corridor mega-project," bp, December 21, 2020, https://www.bp.com/en/global/corporate/news-and-insights/reimagining-energy/southern-gas-corridor-mega-project-completes.html

[188] "The Southern Gas Corridor," Trans Adriatic Pipeline, https://www.tap-ag.com/about-tap/the-big-picture/the-southern-gas-corridor

markets, of which 8 bcm go to Italy and the remaining 2 bcm are divided between Greece and Bulgaria.

Unlike Azerbaijan, neighboring Kazakhstan and Turkmenistan have primarily exported natural gas to China and Russia. For China, natural gas coming from Turkmenistan and Kazakhstan accounted for around two-thirds of its pipeline supply, with the remaining volumes coming from Russia and Myanmar.[189] Russia generally imports natural gas from the Caspian littoral states for re-exporting purposes. Uzbekistan also used to sell natural gas to China and Russia, but its growing population amid decreasing domestic production leaves no room for exports. As a result, Tashkent has completely halted gas exports and redirected all gas volumes to domestic consumers since January 2022.[190] The energy sector of Iran, whose production of hydrocarbons is primarily concentrated in the Persian Gulf area, has been severely constrained by sanctions. Nevertheless, the country does export some volumes of natural gas to Turkey, Iraq, Armenia, and Azerbaijan. The latter is engaged in swap trade with Iran to supply its landlocked exclave Nakhchivan.

More Gas From the Caspian to Europe

Now that the SGC is up and running, the project's stakeholders and potential clients are interested in expanding the corridor's capacity. The above-discussed European crisis and Brussels's ambitions to promptly diversify its energy supplies make the expansion of the SGC project especially relevant and timely. The intensification of visits of European leaders to Baku and intense political consultations within the 8th annual Ministerial Meeting of Southern Gas Corridor Advisory Council in February 2022 clearly indicated that. Baku, in its turn, reiterated its support to the expansion of the corridor.

All three pipelines within the SGC are expandable. The annual capacity of the South Caucasus Pipeline, the first in a series of the corridor's pipelines taking natural gas from Azerbaijan's Sangachal terminal to Georgia, can be increased from its current 24 bcm up to 31 bcm.[191] The corridor's middle leg, the Trans-Anatolian Pipeline (TANAP), carrying natural gas across Turkey up to the Turkish-Greek border, can be expanded from its current 16 bcm to 31 bcm. The annual capacity of the Trans Adriatic Pipeline (TAP), the corridor's final leg taking Azeri gas further to Italy via Greece and Albania, can be doubled from its current 10 bcm to 20 bcm within 45-65 months, depending on requests to be received during the binding phase of a market test and the accumulated requests resulting in an

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[189] Homayoun Falakshahi, "What's at stake for oil and gas markets in the Kazakhstan protests?" KPLER, January 6, 2022, https://www.kpler.com/blog/whats-at-stake-for-oil-and-gas-markets-in-the-kazakhstan-protests

[190] "Uzbekistan ends gas exports to China, abandons price increases at home," Eurasianet, January 10, 2022, https://eurasianet.org/uzbekistan-ends-gas-exports-to-china-abandons-price-increases-at-home

[191] "South Caucasus Pipeline (SCP)," Southern Gas Corridor, https://www.sgc.az/en/project/scp

economically viable outcome.[192] While the next binding phase is scheduled for July 2023, TAP can speed up this timeline and launch the binding phase of the market test during 2022, provided that the company receives interest for an earlier start in the ongoing public consultation.

Currently, Azerbaijan's Shah Deniz Stage 2 is the only source of gas for the SGC. However, besides the giant Shah Deniz field, accounting for around 40 per cent of the country's proven reserves, there are other promising fields, including Absheron, Babak, Umid, the deep gas section of Azeri-Chirag-Gunashli, etc. Azerbaijan's total proven gas reserves are estimated at around 2.6 trillion cubic meters.[193] Depending on the investment and purchasing commitments of stakeholders as well as the country's production and consumption patterns, Azerbaijan has the potential to boost its gas exports to Europe via an expanded version (Phase 2) of the corridor. In any case, assuming a long-term capacity booking is made for TAP this or next year, which is quite feasible given the intensification of contacts between Baku and European capitals, Azerbaijan will be able to boost its natural gas exports by around 10 bcm in 4-5 years.

Turkmenistan is another potential candidate for gas supplies to Europe. The country is home to the fourth-largest natural gas deposits in the world, including the world's second-largest field Galkynysh. Unlike Baku, however, Ashgabat has had limited opportunities for monetizing its natural gas potential. Despite the country's massive resource base, only a fraction of it has been put into production. Today, Turkmenistan produces around 60 bcm of natural gas per year, with half of it being exported to foreign markets.[194] Most of the Turkmen gas goes to China via the Central Asia-China Pipeline, and some volumes are being purchased by Russia. In these circumstances, Ashgabat is highly motivated in diversifying its natural gas exports base and launching a westward energy corridor to European markets, potentially via the Southern Gas Corridor.

Besides the economic rationale, the region's recent political developments also facilitate the delivery of Turkmen gas in western direction. Relations between Baku and Ashgabat have improved dramatically over the past three years. Amid the thaw in relations, the adoption of the Convention on the Legal Status of the Caspian Sea, the end of the Second Karabakh War, and the commissioning of the SGC paved the way for signing a historic agreement on energy partnership on 21 January 2021: a Memorandum of Understanding (MoU) between Azerbaijan and Turkmenistan on joint exploration and development of hydrocarbon resources of the Dostlug (Friendship) field in the Caspian Sea. The landmark agreement allows the two Caspian littoral states to launch joint work on the development of a once-

[192] "TAP currently able to reach full transport capacity," Caspian Barrel, March 17, 2022, http://caspianbarrel.org/en/2022/03/tap-currently-able-to-reach-full-transport-capacity-managing-director/

[193] https://azertag.az/en/xeber/8th_Ministerial_Meeting_of_Southern_Gas_Corridor_Advisory_Council_was_held_in_Baku__President_Ilham_Aliyev_attended_the_meeting_VIDEO-2000519

[194] https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2021-full-report.pdf

disputed section of an undersea hydrocarbons field in the Caspian Sea for the first time. More importantly, it paves the way for a direct gas connection between Azerbaijan and Turkmenistan and promotes Ashgabat's participation in the SGC.

At the initial stage, instead of laying a full-fledged undersea pipeline across the Caspian Sea, known as the Trans-Caspian Pipeline, Baku and Ashgabat will likely concentrate their efforts on the development of a short interconnector between the Dostlug field and Azerbaijan's existing offshore infrastructure. Starting with such a modest approach would help to deepen trust between the two Caspian littoral states. In addition, from the legal perspective, the realization of the interconnector, unlike a full-fledged shore-to-shore pipeline, will not require the consent of all Caspian littoral states, as indicated in the Convention on the Legal Status of the Caspian Sea. Finally, building the interconnector would be easier to sell geopolitically. Moscow and Tehran have long sought to restrain the construction of the Trans-Caspian Pipeline as they see the project potentially competing with their own natural gas exports to Europe.

Besides being able to supply substantially greater quantities of gas in the future, once all the necessary investments are made for expanding relevant production and pipeline infrastructure, Turkmenistan can also provide some volumes immediately, making the country especially attractive for European consumers. The country is reported to have up to 10 bcm of spare production capacity, which is largely flared.[195] Some of the natural gas volumes can be sent to Azerbaijan via the above-mentioned interconnector. If commitment for the gas supplies is made, such a line could become operational within months.[196]

Turkmenistan is already sending some of its spare volumes to Azerbaijan via Iran. In November 2021, the three countries signed a gas swap deal for up to 2 bcm per year. Under the swap deal, Iran receives gas from Turkmenistan and delivers an equivalent amount to Azerbaijan at the Astara border.[197] Thanks to Turkmenistan's spare production capacity, the swap volumes could be promptly increased by a few bcm within months.[198] Interestingly, the three-way agreement apparently made it possible for Baku to provide emergency supplies to Turkey and increase exports by 4 to 5 million cubic meters per day in February 2022, as Iran temporarily stopped gas flow to Turkey due to technical problems at the Gurbulak gas entry point on the Turkish-Iranian border.[199]

For Baku, an increase in supplies from Turkmenistan can create more room for

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[195] John Roberts and Julian Bowden, "Removing Russia from the European gas balance: A major role for Caspian gas," Atlantic Council, March 20, 2022, https://www.atlanticcouncil.org/blogs/energysource/a-major-role-for-caspian-gas/

[196] Ibid

[197] Louise Heavens and Alexander Smith, "Iran, Turkmenistan and Azerbaijan sign gas swap deal," Reuters, November 28, 2021, https://www.reuters.com/markets/commodities/iran-turkmenistan-azerbaijan-sign-gas-swap-deal-2021-11-28/

[198] Ibid

[199] Zeynep Beyza Kilic, "Azerbaijan to send extra gas to Turkiye, offseting supply lack from Iran," Anadolu Agency, February 9, 2022, https://www.aa.com.tr/en/energy/natural-gas/azerbaijan-to-send-extra-gas-to-turkiye-offseting-supply-lack-from-iran/34593

boosting its own natural gas exports to Turkey and Europe. Generally, Azerbaijan's natural gas balance looks tight as it effectively consumes and exports everything it produces. However, the country's growing domestic consumption and industrial ambitions might well increase demand for natural gas. Against this backdrop, gas imports from Turkmenistan might be used, at least partially, for domestic consumption purposes, especially if Azerbaijan's own production capacity growth will not be fast enough. If Baku manages to get a good price for gas supplies from Ashgabat, it could even monetize its domestically consumed gas by contracting it to Turkish and European markets while importing cheaper gas from Turkmenistan.

Technically, a similar arrangement can be made between Baku and Moscow. If Azerbaijan manages to get cheaper gas from Russia, it could free up its domestically consumed volumes for exports. On the one hand, Moscow might not be interested in selling inexpensive gas to Baku to facilitate the latter's exports to European markets. On the other hand, Europe is already decreasing its dependence on Russian fossil fuel imports, so having Azerbaijan as a customer, albeit a modest one in terms of potential volumes, might work for everyone. In fact, Azerbaijan used to import up to 5-6 bcm of gas per year from Russia via the Mozdok-Makhachkala-Kazi Magomed pipeline in the 2000s.[200] With the launch of the Shah Deniz Stage 1 project in 2006, Azerbaijan has halted gas imports from Russia and gradually become a net exporter of natural gas.

Iran's gas potential has been increasingly in the spotlight, too. The Islamic Republic is home to the world's second-largest and third-largest reserve holder of natural gas and oil, respectively.[201] Despite the abundant resource base, Iran has been unable to monetize its energy potential due to international sanctions and underinvestment. The likely imminent conclusion of a new nuclear deal between Tehran and world powers, coupled with Europe's aspirations to attract new gas supplies, might play well for Iran's energy industry. Besides the enormous resource base in the Persian Gulf region, Tehran claims it has found a massive natural gas deposit, the Chalous field, in the Caspian Sea in August 2021.

Arranging exports of Iranian gas would not be a quick fix, however. Boosting the country's production and export capabilities would require significant investments and time. Besides upgrading the existing producing facilities and developing new fields, investors will also need to allocate significant funds to pipeline and/or LNG infrastructure for evacuating Iranian gas to European markets. Assuming sanctions are lifted, Tehran might have several options on the table. One such option could be sending gas to Azerbaijan and joining the SGC. Another option for Tehran is to send more gas via the existing Iran-Turkey pipeline. The outlet could be also used for realizing a new Turkmenistan-Iran-Turkey swap arrangement. In addition, Tehran can build liquefaction facilities in the Persian Gulf area and ship liquified

[200] "Itera i Gazprom delyat Azerbaijan," Neftegaz Ru, December 24, 2003, https://neftegaz.ru/news/transport-and-storage/307894-itera-i-gazprom-delyat-azerbaydzhan/

[201] "Iran," US Energy Information Administration, July 20, 2021, https://www.eia.gov/international/analysis/country/irn

gas directly to European re-gasification terminals via LNG vessels. Finally, Iran might also opt for going eastward – either to Pakistan via the existing pipeline or China via Turkmenistan. However, the Islamic Republic's first choice will likely be the lucrative European and Turkish markets.

Then, there is the Kurdistan Regional Government (KRG) in Iraq interested in boosting its oil and gas output. KRG Prime Minister Masrour Barzani has recently stated that the autonomous region, possessing around 3-6 trillion cubic meters of natural gas deposits,[202] will soon become a net exporter of gas to the rest of Iraq and to Turkey and Europe. Starting natural gas exports, however, according to him, may not be in the interest of major regional energy producer Iran. In fact, Reuters reports that the Iranian missile attack in March on Erbil, the capital of the autonomous Kurdistan Region of northern Iraq, was prompted in part by the KRG's ambitions to supply natural gas to Turkey and Europe with the involvement of the United States and Israel.[203]

In addition, the domestic politics might impede the KRG's plans to send natural gas to European markets. The regional government has been pumping oil and gas independently of the federal government, and in 2007 enacted its own law that established the directives by which the region would administer these resources. On February 15, 2022, however, Iraq's federal supreme court ruled the KRG's 2007 oil and gas law was unconstitutional,[204] thus complicating Erbil's plans to start gas exports in the future.

Conclusion

The EU has long sought to decrease its energy dependence on the Kremlin. The launch of the Russian military campaign in Ukraine on 24 February 2022, with the consequent increase of natural gas prices to an all-time high in Europe, has further reinforced the continent's quest for eliminating its dependence on Russian fossil fuels and fostering its energy diversification strategy. Diversifying gas supplies is especially critical for making the European energy market affordable and secure. In 2021, around 43 per cent of the EU's natural gas imports came from Russia.

While there are many potential alternative options on the table, the Caspian region, with its vast hydrocarbon resource base and proximity to European markets, seems to be one of the most feasible solutions to promptly boost natural gas imports into the EU. Since December 2020, the region has already been supplying

202 Simone Tagliapietra, "Turkey and the Regional Natural Gas Geopolitics. The 'Hub Vision' in Light of the Future Prospects of the Southern Gas Corridor," European Institute of the Mediterranean, 2022, https://www.iemed.org/publication/turkey-and-the-regional-natural-gas-geopolitics-the-hub-vision-in-light-of-the-future-prospects-of-the-southern-gas-corridor/

203 Ahmed Rasheed and Orhan Coskun, "EXCLUSIVE Iran struck Iraq target over gas talks involving Israel – officials," Reuters, March 28, 2022, https://www.reuters.com/world/middle-east/exclusive-iran-struck-iraq-target-over-gas-talks-involving-israel-officials-2022-03-28/

204 Dania Saadi and Claudia Carpenter, "Iraq's Kurdistan region denies oil fields takeover as Erbil-Baghdad tensions escalate," S&P Global, May 15, 2022, https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/oil/051522-iraqs-kurdistan-region-denies-oil-fields-takeover-as-erbil-baghdad-tensions-escalate

natural gas to Europe via the Southern Gas Corridor, a $33 billion 3,500-kilometer pipeline system taking natural gas from Azerbaijan's Shah Deniz natural gas field in the Caspian Sea to European markets for the first time ever.

Azerbaijan has the potential to further increase its gas exports to Europe via an expanded version (Phase 2) of the corridor. Similarly, Turkmenistan, Iraq, and Iran have also the potential to boost natural gas exports to the Turkish and European markets, including via the Southern Gas Corridor. However, besides various obstacles in the way of boosting gas supplies from the above-mentioned countries, a sizeable increase in natural gas output will first require significant investment and purchasing commitments. Increasing gas supplies from the Caspian region via the Southern Gas Corridor might also take at least 4-5 years, assuming a long-term capacity booking for the Trans Adriatic Pipeline (the European leg of the corridor) is made this or next year. While this is not nearly enough to cover Russia's existing supplies to Europe, substantially greater volumes from the Caspian region are also feasible, but that would require more time and investments for expanding production and transportation infrastructure, and strong political coordination.

Finally, natural gas supplies from the Caspian region should not necessarily need to reach Europe to ease the continent's quest for energy diversification, at least in the short term. If the Caspian natural gas finds its way to the Turkish market, then LNG volumes received by Turkey (totaling 14 bcm in 2021) could become available to Europe, which currently enjoys a surplus of LNG regasification capacity.

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ELECTRICITY TRADING IN SOUTH EAST EUROPE AND THE PLACE OF BULGARIA

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South East Europe in the context of the European Energy Union and the concept of 'common energy market'

From 1996 onward, the European Union's (EU) political initiatives related to the electricity and natural gas sectors are characterized by the adoption of a number of directives and regulations, grouped together under the name 'Energy Packages'. The connecting link between all regulations related to the sector is the evolutionarily-shaped concept of building a European Energy Union with a common energy market, developing in several main areas: energy security, solidarity and trust; energy efficiency; decarbonization of the economy; development of research, innovation and competitiveness.

These objectives clearly show that the energy sector is not only key to the EU's economic development but is also an essential component of integration between Member States, and in addition to being a commercial good, it can be considered a security good. Of paramount importance to this process is the Nord Pool[206] market union that uses the electricity exchange model, which in 2018 fully joined the cross-border intraday market project XBID. The HVDC[207] connections built over the years between northern European countries (connecting Germany and Sweden, Poland and Sweden, Denmark and Sweden, the Netherlands and the UK, France and the UK), and between southern Italy and Greece, are an example of supranational cooperation that supports the development of local economies, which increasingly rely on the electricity generated by offshore wind farms and its storage through hydroelectric power plants in Scandinavia and the Alps.

The development and modernization of the European Electricity System (EES) ensures its flexibility and the security of supply at regional level, through coordinated management of the electricity flows between the countries. In addition to these advantages, a report on the 'European Energy Security Strategy'[208] states that the potential net economic benefit of an internal energy market varies between EUR 16 billion and EUR 40 billion per year.

The electricity transmission network of the countries from South East Europe

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[206] Today, 360 companies from 20 countries from the Nordic-Baltic region, the United Kingdom (excluding Northern Ireland), Central and Western Europe (including Austria, Belgium, France, Germany, Luxemburg and the Netherlands) and Poland trade in the Nord Pool's markets.

[207] Direct current power grids.

[208] https://www.europarl.europa.eu/doceo/document/A-8-2015-0164_BG.html

(SEE) is part of the unified transmission network of the countries of continental Europe, and its development is closely related to the development of the networks of the neighboring countries. Although they are not part of the European Union, all Western Balkan countries are included in the Energy Community, and Turkey has observer status in the organization. In 2015, an agreement was signed to connect Turkey's electricity transmission network to that of the European countries, and tests for synchronization with the European Network of Transmission System Operators for Electricity (ENTSO-E) were carried out.

At the regional level, works are also underway on projects that fit into the EU's concept of expanding and developing networks through the construction of electricity interconnectors and the unification of markets in the 'intraday' and 'day ahead' market segments.

Although they are still catching up in technical and economic terms, as well as in introducing innovations, the countries of South East Europe are following the Western European example of development of the electricity sector. Its potential to deepen cooperation and integration processes between the countries of the Western Balkans, through the adoption of EU legislation in the field of energy, should not be neglected. In a broader context, this contributes to their future accession to the Union.

The role of national regulatory authorities, and the cooperation between them, in developing the electricity market and trading in energy

The electricity market is a designed market, it is based on a number of regulatory processes that shape its design. The specific characteristics of electricity from a technical and economic point of view (often seen as both a commodity and a service), the pursuit of EU energy independence, and the mass influx of energy from renewable sources into the energy mix, strengthen the regulatory work of the specialized national bodies in the sector.

Since the adoption of the Third Energy Package in 2009, the main functions of regulators have been to develop the liberalization of the electricity and natural gas sectors, to increase the competitiveness and liquidity of the local market, to ensure free access to it, and to comply with the conditions and rules of trading. The establishment of an EU internal energy market and the possibility of trading in electricity and natural gas without borders has also been accompanied by the establishment of the Agency for the Cooperation of Energy Regulators (ACER) in 2011.

ACER helps to deepen cooperation between the national regulatory authorities and ensures that the integration of the national energy markets and the implementation of the legislation in the Member States is carried out in line with the set goals of the energy policy and the related regulatory framework: to develop competition, to build efficient infrastructure and energy transmission networks, to integrate renewable energy sources, and to ensure security of supply.

Compliance with the rules set out in Regulation (EU) No. 1227/2011 of the

European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency is essential for the functioning of the European energy market. It provides that the monitoring of wholesale energy markets by ACER is carried out in close cooperation with the national regulatory authorities and taking into account the interaction between the wholesale markets and the Emissions Trading Scheme[209]. Cross-border monitoring of European rules and reduction of abuses in energy markets is essential, as the possible market manipulations in a country affect not only wholesale prices and international trade but also retail prices for household consumers and micro-enterprises.

The other current rules related to the functioning of the electricity market and the attraction of new investments were adopted in 2019 through the Electricity Directive 2019/944/EU together with three regulations constituting the Fourth Energy Package.

At the regional level, a Tripartite Cooperation Agreement was signed in 2017 between the energy regulators of Bulgaria, Greece and Romania, focusing on the liberalization of energy markets, on their unification, and on joint efforts to build gas interconnections as part of the Vertical Gas Corridor.

During the Bulgarian Presidency of the Council of the EU, in 2018, an Advisory Forum of the national regulatory authorities of the Balkan countries was established, including representatives of the energy regulators of Bulgaria, Greece, Serbia, Macedonia and Montenegro. Its main objectives are to create a stable regulatory and market framework in order to attract investment in the electricity and gas sectors and to provide sustainable, competitive and affordable services to consumers.

The electricity market in South East Europe

Although official EU documents speak of a single electricity market, cross-border trading takes place mainly between neighboring countries. This is due to the different levels of interconnection and the existence of so-called ‘bottlenecks’, which hinder the physical transmission of electricity. From a statistical[210] and technical point of view, it is difficult to trace trade flows after they cross a border.

Of paramount importance are the market platforms Nord Pool, EPEX Spot[211], OMIE[212], and the platforms of the Eastern European countries, which are in a process of consolidating and strengthening their interconnectedness. However, the continent’s electricity markets remain fragmented. On all market platforms, transactions are made in different market segments, the most common being

[209] The Emissions Trading System is the world’s largest market for carbon emissions trading. In addition to the EU countries, it includes Norway, Iceland and Liechtenstein.

[210] The Methodological Notes of the NSI on Import/Export of Electricity state that the quantities that have crossed the border of the country are considered to be imported or exported. With transit transmission, the quantities are reported as both imports and exports.

[211] EPEX SPOT is a power exchange that operates in the markets of Germany, France, the UK, Austria, the Netherlands, Belgium, Switzerland and Luxembourg.

[212] OMIE runs the power wholesale market on the Iberian Peninsula.

the ‘intraday’, ‘day ahead’ and ‘centralized market for the purchase and sale of electricity through bilateral agreements’ segments.

In 2021, the unification of the ‘day ahead’ market segment between Bulgaria and Greece took place, as part of the regional project Italian Borders Working Table (IBWT), along with the unification with Romania, which connected Bulgaria with the European single ‘day ahead’ market (SDAC: Single Day-Ahead Coupling). The implementation of these projects aims to enhance competition between producers and buyers and to prevent large price fluctuations, especially during the winter and summer months, when electricity consumption traditionally increases.

Electricity trading in South East Europe is highly dependent on the price levels at the power exchanges in Hungary, Romania, Greece and Bulgaria. In addition to being a traditional importer of electricity, in recent years Greece has started a gradual replacement of lignite-fired thermal power plants with gas-fired power plants (about 5 GW) and renewable energy sources (RES) (mainly wind power plants), in order to comply with Directive (EU) 2015/2193 of the European Parliament and of the Council of 25 November 2015 on the limitation of emissions of certain pollutants into the air from medium combustion plants. Greece plans to remove coal-fired power plants from the country’s electricity mix by 2023. The strong dependence of the Greek electricity system on natural gas prices has a major impact on the import and export of electricity. When the prices of natural gas are low, the local production increases, and when the prices are high, it decreases, as these actions have a direct impact on the price levels in the ‘day ahead’ market segment of the Bulgarian power exchange.

Greece ranks seventh in the EU in terms of installed wind power plants, with capacities of 3,600 MW connected to the European Electricity System in 2019. This allows the country to be not only an importer but also an exporter of electricity, as the local market is dependent on connections with Italy (balancing the generation of renewable energy from offshore wind farms) and on Bulgaria (which has a reliably predictable generation base).

Similar processes are also taking place in Romania, where despite the similar electricity mix with Bulgaria, the local market often runs into either a shortage or a surplus of electricity. The reason is Romania’s stronger dependence on renewable energy sources (mostly hydroelectric power plants and wind power plants). Consequently, high prices are observed on windless days, low rainfall levels or accidents, and vice versa in the opposite situations. Recently, the country has been a net importer (about 600-700 MW per day), with quantities imported mostly from Bulgaria.

Hungary has pursued an active energy policy over the last decade, and although it is also a traditional importer of electricity, this is likely to change. It is expected that in 2028-2029 the two power units at the Paks-2 nuclear power plant will be put into operation. The plans are that in 2030, 90% of the electricity generation will be free from carbon emissions, and after 2040 electricity imports will fall below the current average of more than 30% to less than 20%[213]. At the moment, however, the Hungarian market is more expensive than the Romanian due to Hungary's connection to the markets in Central and Western Europe.

So far, Serbia is not in a market platform with any of its surrounding markets. Its old generation base, relying mainly on coal-fired power plants, is reason for declining generation capacity and frequent accidents[214]. Internal market deficits are usually covered by imports from Hungary, due to the good infrastructural connection between the two countries, or from Romania[215]. When it is not possible to import from these two countries, import is realized from Bulgaria.

There is no 'day ahead' market in North Macedonia, Albania, Bosnia and Herzegovina and Albania, and what they have in common is that they are transit zones to Serbia or Italy. They are generally net importers, and internally they rely mainly on electricity produced from hydroelectric power plants, which leads to a direct dependence on the average annual rainfall.

Based on the analysis above, we can draw a reasonable conclusion that the countries of the Western Balkans are lagging behind in the integration processes and the development of the energy sector. During the Bulgarian Presidency of the Council of the EU, a number of activities were undertaken related to the development of the regional electricity market model and to increasing the interconnection in the Western Balkans region, in line with the priorities of the European Energy Union.

Declarations on Common Regional Market and Green Agenda for the Western Balkans were signed at the EU-Western Balkans Summit in Sofia, held in 2020 as part of the Berlin Process. They express the desire of the countries in the region to work toward climate neutrality by 2050, the phasing out of subsidies for coal-fired power plants, the introduction of market mechanisms to support the RES sector, and the development of the Initiative for Coal Regions in Transition, co-organized by the EU and the Energy Community. The security of energy supply also occupies a leading place in the adopted documents.

Similar to the integration processes in Western Europe presented above, the energy sector plays and will continue to play a leading role in connecting the economies of the region and deepening cooperation between them. Apart from the fact that the common market can unite 20 million people from the Balkans, the accompanying decarbonization initiatives, the investments in RES, the transition to a circular economy, and the renewal of the building stock, could attract EUR 9 billion of investments by financing projects from the EC's Economic and Investment Plan for the Western Balkans.

[213] https://ec.europa.eu/regional_policy/bg/newsroom/news/2020/05/25-05-2020-solid-foundations-support-hungary-s-ambitious-plans

[214] The last big accident in Serbia happened on December 12, 2021 in the largest coal complex 'Nicola Tesla' (generating over 3 thousand MW of electricity).

[215] The Djerdap hydropower complex on the Danube River was built jointly by Serbia and Romania and is used jointly by both countries. The Serbian part of the complex includes HPP Djerdap 1 (1,058 MW) and HPP Djerdap 2 (270 MW), while Romania operates six turbines (each with a capacity of 194.3 MW).

It should be noted that the Chairmanship of the Berlin Process in the period 2019-2020 was held jointly between Bulgaria and North Macedonia, and cooperation in the energy sphere can be used as a point of reference for overcoming the political differences between the two countries.

Despite the start of establishing a common market in the Western Balkans, the regional electricity mix is still unbalanced, and coal remains the main raw material for electricity generation. Outside the EU-Western Balkans relationship (part of the Energy Community), common regulatory practices have not yet been developed to attract investment in alternative energy sources, including conventional ones.

In addition to the above-mentioned policy initiatives for faster integration and accession of the Western Balkans to the EU, and the specifics of electricity trade in South East Europe, the dependencies on neighboring markets must also be taken into account. The cross-border connection with Germany, Italy, Ukraine and Turkey has a major impact on the regional price levels.

Germany is not only a European but also a world leader in the transition to a low-carbon economy. This shift is far from being smooth, however. The production of electricity from renewable energy sources has reached a share of 15% and is concentrated in the areas around the North Sea. On some days, offshore wind farms can provide 70% of the energy needed for the internal market, but there are also days when they produce only about 5%. The strong dependence on natural gas imports is key to the still unfinished transition to cleaner energy because, after Germany abandoned nuclear energy, it is the gas power plants that have to provide base power and cover the frequently occurring energy imbalances.

According to a scenario by Agora Energiewende (2019), Germany needs another 4 GWh generated by gas power plants in order to ensure its energy transition. It is also important that the wind and solar parks have a relatively short period of operation of about 30 years, which means that every year Germany has to renew about 6-7 GWh of capacities[216].

The specific characteristics of electricity can also lead to specific advantages, which Germany has been actively using so far, by specializing in the production and export of electricity from renewable sources.

The lack of such geographical advantages in South East Europe poses a number of risks to the regional market, which is influenced both by the production of renewable energy in Germany and by the high prices of natural gas on the European gas exchanges.

The electricity market in northern Italy is a traditional importer and maintains high price values, which raises the price levels in South East Europe. The reason is that the good connectivity between Croatia and Slovenia allows Hungary to make cross-border transmission to the more liquid Italian market.

On the other hand, Ukraine traditionally exports electricity to Hungary (about

[216] The total installed capacity of renewable sources in Germany is estimated at about 200 GWh.

half of its total exports) as well as smaller quantities to Romania. After the start of the war in Ukraine, it can be assumed that neighboring Romania and Hungary will be deprived of Ukrainian imports based on production from coal-fired power plants and nuclear power. This will further increase the prices on local electricity exchanges, and the desire to import, especially from Bulgaria, will increase.

The factors discussed above are the basis for the formation of the regional price levels of electricity and their growth over the past year. The electricity costs for European households increased by about 20%, which necessitated the adoption of targeted measures to protect vulnerable consumers, and in Bulgaria, a moratorium was even imposed on the increase of prices of electricity and on heat and water services.

Eurostat data show that despite the negative price trend, the electricity consumed in Bulgaria is at lower levels compared to the neighboring countries and EU's economic leader Germany.

Table No. 1. Electricity prices for households

Electricity prices – medium households (EUR/Wh)								
Year/ country	**Bulgaria**	**Germany**	**Greece**	**Hungary**	**Italy**	**Romania**	**Serbia**	**Turkey**
2010	0.0813	0.2375	0.1181	0.1701	0.1965	0.1031	n/a	0.1342
2011	0.0826	0.2528	0.125	0.1682	0.1987	0.1082	n/a	0.1218
2012	0.0846	0.2595	0.1391	0.1549	0.2132	0.105	n/a	0.131
2013	0.0924	0.2919	0.1563	0.1397	0.2292	0.1323	0.0564	0.1495
2014	0.0832	0.2981	0.1767	0.1202	0.2446	0.129	0.0607	0.1192
2015	0.0942	0.2951	0.1767	0.1127	0.245	0.1303	0.0575	0.136
2016	0.0956	0.2969	0.1716	0.1114	0.2342	0.126	0.0641	0.1267
2017	0.0955	0.3048	0.1711	0.1125	0.2132	0.1198	0.0664	0.1048
2018	0.0979	0.2987	0.1672	0.1123	0.2067	0.1333	0.0705	0.0904
2019	0.0997	0.3088	0.1595	0.112	0.2301	0.1358	0.0706	0.0847
2020	0.0997	0.3043	0.1674	0.1031	0.2226	0.1459	0.0738	0.0995

Source: Eurostat[217]

In the current crisis situation, it is a positive fact that Bulgarian households are still protected by regulated prices, approved by the Energy and Water Regulatory Commission, and in this respect Bulgaria is the only EU country where household consumers do not buy electricity on the free market. In the absence of a regulated market, they will be even more disadvantaged due to their low average monthly income compared to the other EU countries, which will enhance the effect of the increase in wholesale electricity prices.

The prices for non-domestic, average consumers (most of the business in Bulgaria) are also below those in the neighboring countries.

[217] https://ec.europa.eu/eurostat/databrowser/view/ten00117/default/table?lang=en

Table No. 2. Electricity prices for non-household, medium consumers

Electricity prices – non-household, medium consumers (EUR/kWh)								
Year/ Country	**Bulgaria**	**Germany**	**Greece**	**Hungary**	**Italy**	**Romania**	**Serbia**	**Turkey**
2010	0.0639	0.0921	0.0855	0.1037	n/a	0.085	n/a	0.0863
2011	0.0638	0.09	0.0917	0.0978	0.1145	0.0803	n/a	0.076
2012	0.0684	0.0895	0.1006	0.0888	0.1193	0.0833	n/a	0.0831
2013	0.0803	0.086	0.104	0.0904	0.1122	0.0904	0.0568	0.0891
2014	0.0736	0.0844	0.109	0.0836	0.108	0.0753	0.0507	0.072
2015	0.0682	0.0809	0.1037	0.0778	0.0943	0.0707	0.0591	0.079
2016	0.0992	0.0788	0.0929	0.0729	0.0841	0.0635	0.0616	0.0722
2017	0.0753	0.0761	0.0862	0.0638	0.0829	0.0642	0.0587	0.0615
2018	0.08	0.0771	0.079	0.0738	0.0892	0.071	0.0647	0.0571
2019	0.0877	0.0855	0.081	0.0861	0.0952	0.0821	0.0767	0.0683
2020	0.0805	0.0849	0.0823	0.0849	0.0856	0.089	0.0748	0.0774

Source: Eurostat[218]

These data somewhat refute the claim at the local level that high levels of electricity export subsidize not the Bulgarian but foreign economies. The increasing price convergence between countries in the region is not to be overlooked. It shows that in the future, industrial consumers will have to take into account the pan-European concept of 'day-ahead' markets – cheap electricity to be made available to more expensive market areas and to help lower price levels in a pan-European context. In this sense, cross-border trade should not be seen only as a pursuit of greater profits for local producers.

Current state of the electricity sector in Bulgaria and factors influencing the export and import of electricity

The presence of a relatively well-balanced electricity generation base (consisting of nuclear power plants (NPPs), thermal power plants (TPPs) and facilities generating energy from renewable sources) allows Bulgaria to be one of the few countries, not only in the regional but also in the European context, that have positive net export/net production ratios.

According to a report from July 2021 by the Energy and Water Regulatory Commission to the European Commission, the total installed capacity in 2020 was estimated at 10,313 MW and the electricity generated was 33,795,104 MWh[219]. There was a tendency for a decrease in the production from lignite thermal power plants, by 21.93% compared to 2019, and a slight increase in electricity produced by nuclear power plants, by 0.48%.

[218] https://ec.europa.eu/eurostat/databrowser/view/ten00117/default/table?lang=en

[219] Energy and Water Regulatory Commission, Annual Report for the European Commission / July 2021, p.19.

The market liberalization and the gradual unification with neighboring market areas have become an economic stimulus for the increasingly active foreign trade in electricity with neighboring countries. The availability of easily predictable base capacities is the reason why Bulgaria is permanently established as a major exporter of electricity in the region. A number of specific local characteristics, not just the EU's drive to build a single energy market, have contributed to this leadership position.

Among the main exporters of electricity from Bulgaria to the neighboring countries are mostly foreign companies operating in different trade zones and having greater financial resources than local Bulgarian companies. Much of the revenue goes to the producers, which are mainly state-owned companies that stimulate employment in the sector.

As of March 2022, most of the criticism of the local industry to the electricity sector in Bulgaria is related to the record-high price levels internationally, which are an incentive to increase exports and the level of prices on the Bulgarian energy exchange. On the other hand, production is generally export-oriented. Exports in the period 2001-2017 are balanced in terms of their geographical structure, with the main 5 partner countries being Germany, Italy, Romania, Turkey and Greece, which account for between 43 and 51% of the total exports of goods from Bulgaria (Nestorov, 2019).

It should be noted that the traditional influence on the formation of electricity prices is exerted by the increasingly restrictive EU policies on coal-fired power plants, relying on economic instruments to achieve the set environmental goals and introduce renewable energy sources into the mix of each European country. The prices of CO_2 emissions allowances of EUR 25 per ton in 2020 reached EUR 80 per ton at the end of 2021 – values expected to be realized in 2025. This puts the thermal power plants in the Maritza Basin in a non-competitive market position due to the increase in the cost of their production.

A number of other external factors also influence the formation of prices for the domestic market. These are the prices of natural gas, the seasonal temperature amplitudes influencing the generation from renewable energy sources, and the prevailing exchange market trading model, focusing on short-term contracts. Over 80% of the exchange trading in electricity in Bulgaria takes place in the 'day ahead' market segment, which leads to strong price volatility, which may be due to various factors, including supply problems or increased/decreased regional demand due to the intermittent generation from renewable energy sources.

One of the main problems facing the energy sector in Bulgaria is the lack of in-depth macroeconomic and sectoral analyses to outline a clear roadmap for development. Their need is palpable, including as a precondition for preventing possible shock economic and political impacts on the sector, which can cause an energy crisis not only domestically, but also regionally.

The policies at European level should be taken into account in their preparation.

For example, in 2020, the EU expanded the Union's long-term budget for the period 2021-2027 to include the Next Generation EU instrument – a stimulus package worth more than EUR 2.018 trillion, designed to help repair the immediate economic and social damage caused by the COVID-19 pandemic. The recovery plan focuses both on the consequences of the health crisis and on building a green, digital and sustainable economy. Each of the Member States prepares and submits for approval its own recovery plan, in accordance with the goals and guidelines set by the European Union.

To date, most of the substantive proposals for reforms in the sector remain open for discussion at expert level rather than shaping a final vision for its development, although they are important not only for the internal energy security but also for the cross-border opportunities for electricity export.

After 2014, Poland and Croatia launched the Three Seas (3SI) political initiative[220], designed to complement the policies of the European Union. The economic aspect of this project is also related to the modernization of existing and the construction of new infrastructure connections in Central and Eastern Europe in the fields of transport, energy and digital communications.

The green deal, the energy security of the countries in the region, and the diversification of routes and sources of energy supply are priorities for 3SI. Through the use of funds from the Three Seas Initiative Investment Fund (3SIIF) (amounting to EUR 5 billion and expected to generate investments totaling up to EUR 100 billion), Bulgaria's economic focus will be on the development of energy infrastructure and connectivity in South East Europe and the Black Sea Region.

It is clear that the future of the sector is closely linked to the EU's plans to decarbonize the energy system, increase the cross-border and regional cooperation, and integrate the renewable energy sources. However, for this transition to be successful, the national specifics of the industry and the local economy need to be clearly taken into account.

Bulgaria has not yet committed to a specific timeframe for closing its coal-fired power plants, while Greece has announced it will do so by 2025 and Romania by 2028, which hinders the future development of the energy policy. There is also no clear concept for the development of the lignite coal mines operating by the open-pit technology in the Maritza East complex, whose production area has great potential for investment in renewable energy sources, and in combination with good infrastructure, can attract investors in environmentally-friendly production, based on green energy.

From the review of the prospects for the electricity sector, based on the current facts, it can be concluded that Bulgaria has the potential to maintain its leading position as an exporter of electricity in the region. However, it is necessary to

[220] The Three Seas Initiative (3SI) is a political and economic project aimed at the catching-up by the EU Member States from Central and Eastern Europe with Western Europe in terms of infrastructure, and at improving connections among 12 EU Member States located between the Baltic, Adriatic and Black Seas: Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Hungary, Slovenia, Austria, Croatia, Romania and Bulgaria.

find a balance between the economic benefits for the electricity sector and the sustainable development of the country's industrial sector. There are still no specific measures for the coal-fired power plants and the transition to renewables, which could jeopardize export opportunities in the medium and long term due to the rapid development of the neighboring countries in this field.

Conclusion

The specifics of electricity trading in South East Europe outlined above clearly show the positioning of Bulgaria as a net exporter. However, this is not due to any purposeful strategy, but rather to the generation capacities inherited from previous periods, the closure of large unprofitable enterprises in the industry sector, and the European aspiration to build a single energy market.

Export revenues have a positive effect on the sector, but rising price levels in the region in the medium term could cause serious damage to the local economy and reduce its competitiveness. To avoid such a scenario, it is necessary to set clear goals for the development of both the energy sector and the Bulgarian industry. This has already been done to some extent in the existing regulations at national level, but they do not reflect the dynamic economic and political changes in the European Union and local economic realities.

Unlike Bulgaria, other countries (such as Greece, Romania and Hungary) are dynamically developing and changing their electricity mixes, attracting foreign investment in 'green' projects. A positive example is Hungary, which is gradually becoming an energy hub and a transit country through which the cheap electricity passes from the region to the expensive markets of Central Europe. At the same time, the country is implementing projects that will not only build a generation base that meets the requirements set in the Green Deal but will also largely satisfy the electricity needs of the growing local economy.

The presented examples point to the idea that the Bulgarian exports could play, in the short and medium term, a significant role in the transition of countries in the region to a low-carbon economy, covering emerging imbalances. However, the lack of a clear vision and structurally defining projects could in the long term turn Bulgaria, if not into a net importer, then into a country that has the ability to satisfy only its domestic electricity needs.

Even at present, there is no clear scheme for the allocation of revenues from electricity exports to economic entities that are really in need. The 'protection' of household consumers from a shock increase in prices through a regulated market is also not the result of a clear strategy but of an unfulfilled market liberalization. For the time being, both the Bulgarian industry and the Bulgarian households still consume cheaper electricity than the average levels in the EU, but there are no guarantees that this will continue in the absence of adequate planning and reforms.

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REGIONAL COOPERATION IN THE FRAMEWORK OF COAL MINING REGIONS IN TRANSITION

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Introduction

Over the last 30 years, leading industrial countries have joined efforts to mitigate the effects of climate change, while looking for universally applicable technological and technical solutions to significantly decrease greenhouse gas emissions.

Coal has been a solid base for industrial development and a secure source of economic power all over the world for ages. However, coal-related issues have started to appear more pressingly in recent years, due to the negative impact it has on the environment.

Thus, it is not surprising that the EU has made coal phase-out its centerpiece initiative for tackling and alleviating climate change effects. This process had started well before that, but the issue was intensely brought into focus at EU level in 2019, when the Green Deal concept was officially launched.[221] Decades ago, EU funds had already started investing significant amounts of money into coal-related R&D projects aiming to find technical solutions like Carbon Capture, Storage and Usage technologies (CCSU) so that coal could be turned into a clean energy source. Since the Green Deal concept was announced in 2019, the EU has focused significant investments into projects related to coal mining phase-out and repurposing, coal-fired power plants closures and energy source greening.

The Green Deal is supposed to make possible the achievement of EU's climate goals. Aiming at helping Europe become the first climate neutral continent by 2050, the European Commission has adopted a set of proposals to make EU's climate, energy, transport and taxation policies fit for reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.[222]

Different businesses, politicians and other stakeholders who oppose the goals set by the Green Deal, and the strategy to phase out the use of coal, have repeatedly pointed out its importance for the national energy independence and the security of EU Member States.

Seventy years ago, the idea of coal's powerful role in the development of industry – and the related military power – laid the foundations of the EU by uniting several countries under the European Coal and Steel Community Treaty of 1951. The Treaty itself can be seen as a form of energy diplomacy involving a number of countries. It has been upgraded to a climate and energy diplomacy

[221] See, e.g., https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en, and others.

[222] https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

issue by the EU Green Deal. Today, the EU coal policy and security has divided the Union into supporters and opponents of the idea of coal phase-out. The divergence of views has now grown stronger, especially in the context of the military conflict in Ukraine, which has sharply emphasized EU's dependence on energy imports and its security of supplies. The economic and social price that businesses, governments and citizens would pay is also an issue viewed through the prism of coal phase-out.

All this calls for an updated look at the coal dimension of energy policies at European and national levels.

The coal issue and regional cooperation – from the treaty of Rome to the coal regions in transition

Regional cooperation, regardless of whether it refers to political or institutional mechanisms, can play a significant role in dealing with various types of challenges, be they caused by natural forces or human actions.

Regional cooperation could also be defined as a universal approach that can be applied at different levels: internal (referring to a state or region) and international (between several states/regions, in order to overcome an issue that affects them all in some way).

The targeted reduction of CO2 emissions, for example, cannot be achieved by a single or even several governments. This is a goal whose achievement will depend on the involvement of many more states, regions, governments, and international organizations.

It should be clarified that the notion of "coal regions in transition", which appeared in 2017[223], does not always refer to states, but also to administrative and territorial units as defined by internal legislation or defined for statistical purposes within the NUTS classification (Nomenclature of Territorial Units for Statistics). It is a hierarchical system of dividing the economic territory of the EU for the purpose of collecting, developing and harmonizing regional statistics and framing the regional policies of the EU. Regions eligible for support from the Cohesion Policy have been defined at NUTS-2 level.[224]

Coal accounts for about a fifth of the total electricity production in the EU. It is also a significant economic driver, providing jobs to around 230,000 people in coal mines and power plants across 31 regions and 11 EU countries.[225]

Since the 1990s, highly developed countries have been working on ways to find universally applicable solutions to reduce greenhouse gas emissions through a number of international conventions and agreements. An overall

[223] General information on the initiative is available at https://energy.ec.europa.eu/topics/oil-gas-and-coal/eu-coal-regions/coal-regions-transition_en, etc.

[224] https://ec.europa.eu/eurostat/web/nuts/background

[225] https://energy.ec.europa.eu/topics/oil-gas-and-coal/eu-coal-regions/coal-regions-transition_en

ban on the use of fossil fuels is generally thought to be the most beneficial approach. The focus is on coal since it is found to be the most polluting source of heat and energy.

In this scenario, the coal-producing regions in the European Union are considered as becoming major obstacles in the transition to a low-carbon economy. After the official launch of the European Green Deal at the end of 2019, the topic of coal regions in transition has been gaining prominence and shaping the debate.

The decline of coal-based energy production is an ongoing reality in Europe. Since 2012, the total coal power generation has dropped by almost a third in the EU. The declining use of coal has led to coal mines closing down and power plants being decommissioned in a number of regions across Europe.[226]

This brings the case of coal-to-clean-energy transition to a supranational level, necessitating suitable supranational policies – which, unsurprisingly, require regional cooperation.

However, the cooperation at EU and regional level concerning coal, including in the context of the clean energy transition, has some substantial background. The so-called Cohesion or Regional Policy of the European Union is perhaps the largest internationally coordinated policy tool to foster regional cooperation politically, legislatively, and financially in order to achieve common goals.

Here is a quick look at the philosophy, the mission, and the evolution of regional cooperation in the EU over the last 60 years. This background experience has a direct impact on the process of planning and programming of the Just Transition Mechanism[227] – the EU policy tool for promoting and supporting the low-carbon transition in fossil-dependent EU regions.

Since signing the Treaty of Rome in 1957, one of the main tasks of the Community has been to promote a 'harmonious development of economic activities' (with just a small focus on regions).

The Single Act of 1986 had the main objective of launching the Internal Market strategy, as well as its accompanying mechanisms, concerning economic and social cohesion policies serviced by EU Structural Funds. The set of legal acts also strengthened the powers of the European Communities in environmental protection.[228] As stipulated, its aim was to reduce the gap between different regions and the economic backwardness of less prosperous regions, which were lagging behind.[229]

The methods are well-known and still functioning today: a number of funds aiming to promote structural development, the so-called "Structural Funds", with the European Regional Development Fund being one of them.

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226 https://energy.ec.europa.eu/topics/oil-gas-and-coal/eu-coal-regions/coal-regions-transition_en

227 See, e.g., https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism_en, and others.

228 https://european-union.europa.eu/principles-countries-history/history-eu/1980-89_en

229 https://ec.europa.eu/regional_policy/sources/slides/2007/history.ppt

The Treaty on the European Union of 1992 upgraded what was already introduced by the Regional Policy. Its Mission, as stated in (Art. 2) is: Promotion of balanced and harmonious development of activities in the whole of the Community; of durable growth; …; of economic and social cohesion and solidarity between the Member States.[230]

The above-mentioned treaties established the Regional Policy of the EU, which promotes and supports regional cooperation in a variety of fields. This policy is being continuously updated through the relevant legislative framework and adequate programming. The long-term goal is to improve flexibility and effectiveness in achieving results in the context of the challenges that the regions face. Its funding has also been increasing ever since, beginning at 4% in 1975-1977 and rising to €351.8 billion in 2014-2021, or roughly 30% of the EU budget.

Based on the Cohesion Policy traditions and experiences, the EU has launched an initiative for European coal regions in transition, as far as coal phase-out is a common EU goal, which implies and calls for cooperation on national and interregional level.

In the case of coal regions in transition, particular reforms would perhaps have a greater impact on regional level: the EU has introduced the so-called Smart Specialisation Strategy[231] with the main vision of concentrating financial means in priority aspects and projects based on resources available in each particular region. Perhaps it is high time that these Smart Specialisation Strategies became the firm basis for discussions and negotiations between the European Commission and the coal regions in transition. This would allow for the preparation and realization of coordinated research and production projects, which can form interregional clusters to cater for the internal needs of the European Union. Such approach would save time and money, which usually goes into financing open-competition-call projects, usually having the same focus but whose impacts remain fragmented, despite the strict requirements for sustainability and multiplication of results. This approach, also known as a concrete beneficiary procedure, will have the capacity to catalyze the process of reshoring, which was introduced as a term at the height of the COVID-19 crisis to draw attention to Europe's dependence on imported raw materials and products. This would also allow for financing provided by EU funds to be multiplied many-fold through private investment into production projects, which can close the supply chain on the basis of regional specialization and leave the added value within the EU. The Investment Plan for Europe,[232] more popular as the Junker Plan, rationalized and upgraded the Regional Policy of the European Union.

On the definition of "coal regions in transition"

The definition was suggested by the Joint Research Council (JRC, 2018) and

[230] https://ec.europa.eu/regional_policy/sources/slides/2007/history.ppt
[231] See more at https://joint-research-centre.ec.europa.eu/scientific-activities-z/smart-specialisation_en
[232] https://ec.europa.eu/info/investment-plan-europe_en

reads as follows: EU coal, peat and oil shale regions are defined as NUTS-2 regions with over 100 jobs in coal, peat or shale oil extraction.

Coal is found in 19 EU countries and 94 NUTS-2 regions.

In 2018, 90 coal mines were operating in 11 EU countries: Bulgaria, the Czech Republic, Germany, Greece, Hungary, Italy, Poland, Romania, Slovakia, Slovenia and Spain. Collectively, they produced 442 million tonnes of hard coal and lignite.

In 2020 there were 166 coal-fired power plants operating in 18 EU countries, with a total capacity of 112 GW.[233]

The initiative for coal regions in transition was started to support the regions heavily dependent on fossil energy resources (the so-called "coal+ regions"). It is based on the philosophy, principles, and management approaches of the Cohesion Policy of the EU.

In summary, the initiative addresses challenges related to the transition to a low-carbon economy by providing funding and cooperation opportunities to support public administrations and other relevant stakeholders. It starts with several important steps: the critical first one referring to enabling collective communication among regions and the wider stakeholder community, promoting good practices and cooperation, and organizing working groups and high-level political events. The next step concerns provision of technical support, focused on personalized, need-based assistance and capacity-building. The third step aims at ensuring the required supportive resources through the creation of relevant materials such as toolkits, guidelines, etc. These are meant to address key transition issues for coal regions, such as governance, environmental rehabilitation, employment, financing, clean air, and clean technologies. In the first half of 2019, a secretariat was established, dedicated to managing all initiative activities jointly with the European Commission.[234]

Following the good governance practices of the Cohesion Policy, the EU has launched another tool, known as a Secretariat Technical Assistance to Regions in Transition (START). The latter is supposed to fill in gaps in the technical assistance presently provided to EU coal regions. It is intended to provide targeted, needs-based expertise and capacity building to assist regions in their attempts to take action in two primary areas:

- economic diversification;
- decarbonization.

Following an open call for applications, seven regions were selected to receive initiative support through the START programme: Asturias (Spain); Jiu Valley (Romania); Karlovy Vary (the Czech Republic); Małopolska (Poland); Megalopolis (Peloponnese, Greece); Midlands (Ireland); Silesia (Poland).

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[233] Science for Policy report by the Joint Research Centre (JRC), 2021

[234] https://energy.ec.europa.eu/topics/oil-gas-and-coal/eu-coal-regions/initiative-coal-regions-transition_en

These 7 recipients represent a diverse cross-section of regions and communities. They differ across features including resource types (hard coal, lignite, peat); socio-economic structure; industrial characteristics (mono-industrial and diversified); and geographic features (rural, urban, availability of natural resources and assets). Besides, the regions are at different stages in the process of transition. Such variety will assist the transferring of lessons on transition to low carbon across different types of regions.[235]

Following the already applied approach of the Cohesion Policy, the EU has created a number of opportunities for funding the energy sector and the research and development related to it.

This includes variety of tools, mechanisms, and institutions, available for different stakeholders, e.g., the **Cohesion Fund**; the **Connecting Europe Facility** (CEF); the **European Investment Bank** (EIB); the **European Fund for Strategic Investments** (EFSI); the **Modernisation Fund**,[236] etc. Yet, the Just Transition Mechanism is intended to be the major implementation mechanism of the roadmap, set out toward a new growth policy for Europe. This growth strategy has been built on ambitious climate and environmental goals, as well as participatory procedures that bring residents, communities, and regions together to combat climate change and to protect the environment. The Just Transition Mechanism has been the most anticipated tool after the announcement of the adoption of a Communication on the European Green Deal by the European Commission on 11 December 2019.

The European Commission presented a draft rule on 14 January 2020 with the goal of creating a Just Transition Fund. It should be noted that the mechanism is built on three pillars:

- a shared-management Just Transition Fund;

- a dedicated scheme under Invest EU; and

- a public sector loan facility with the participation of EIB Group to mobilize additional investments in the affected regions combining European, national, local, and private public funding.

Overall, the Just Transition Mechanism appears to have the greatest benefit in the fact that it generates a positive dynamic impetus by European public authorities with the goal of ensuring a transition based on solidarity for all territories.

The Just Transition Fund Regulation implements one of the priorities – the coal phase-out, set out in the European Green Deal Communication (the European Green Deal), and it is also part of the Sustainable Europe Investment Plan.[237] Thus, the Just Transition Mechanism offers dedicated funding in the context of the Cohesion Policy addressing the economic, social, and environmental cost of the transition toward

[235] https://energy.ec.europa.eu/topics/oil-gas-and-coal/eu-coal-regions/secretariat-technical-assistance-regions-transition-start_en

[236] It contributes to the investment needs of the 10 lower-income EU countries: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia.

[237] COM(2020) 21, 14.1.2020

a climate-neutral and circular economy. Its recipients are all regions that meet the grant criterion. The regulatory framework guiding the EU's cohesion strategy for the current programming period 2021-2027 contributes to the duty of the EU to fulfil the Paris Agreement by focusing EU spending on green objectives.

On the reasoning and the support of coal related cooperation

Among all fossil fuels, coal is considered the most polluting and negatively impacting the environment, both through its extraction and burning.

Overall, coal infrastructure is present in 108 European regions, with close to 237,000 people working in coal-related activities – far more than in the peat extraction sector, which employs close to 10,000 people, and the shale-oil business, which employs only 6,000 people.[238] The fossil fuel value chain and the greenhouse gas-intensive industrial processes also support a large number of indirect jobs.

Not only do all these regions have to reform their economies, but they would also have to transform their societies. For decades, they have been relying on a comfortable, long-term job security, providing them with good living standards, secure job prospects, high regional GDP, and last but not least – satisfied voters in local/regional elections.

The issue has been brought to a pan-European supranational level by this common denominator.

It is considered that some of the challenges and the obstacles these regions are currently facing or are expected to face are related to the negative impacts of an unmanaged transition. This may include economic decline; decay of community culture and identity; loss of livelihoods and job security in fossil fuel-based industries or businesses; loss of energy access and affordability for poor populations; and rising inequality and poverty in communities dependent on the sector.

The general approach toward the implementation of clean and renewable energy transition includes a set of specific aspects. These are related, for example, to pricing (both social cost and investment); limited data availability; gaps in communication and coordination between local and national government authorities; lack of regulations or inefficient enforcement of existing regulations; an immature energy service companies (ESCOs) market; and lack of financing mechanisms, to name just a few. On the part of governments, there is often tension between local, central, and sectoral needs, as well as a lack of stakeholder engagement, capacity-building, and policy coherence.[239]

On this ground, it is obvious that there is a great number of reasons for the coal regions in transition to cooperate both on an internal regional and a cross-border level.

The European Commission has already established and is continually

[238] JRC Science for Policy report, Recent trends in EU coal, peat and oil shell transition regions, 2021

[239] Issues Paper: Challenges and Opportunities for a Just Transition | weADAPT

improving the environment and the infrastructure for regional cooperation in the field of coal phase-out. Besides, it has persistently emphasized that the transition to a sustainable and climate-neutral economy will require substantial investments across Europe. This is based on the fact that the concentration of extractive industries (such as hard coal and lignite) will undoubtedly pose a significant challenge to territories that are heavily reliant on such activities. The necessity for these regions to restructure and/or diversify their economies, to maintain social cohesion, and to (re)train affected employees and prepare young people for future occupations is also widely acknowledged.

In order to address specific challenges, the European Commission usually introduces supportive, targeted, and financially secured legislative tools, like those mentioned above.

In this context, it seems that is the beginning of a change of the mindset of authorities starting to think and plan in a regional cooperation style: "… together in the fight against climate change and for environmental protection".[240]

However, establishing a legislative and financial structure, such as the Just Transition Fund Regulation, for such a grand transition over a wide variety of regions, seems insufficient.

It should be emphasized once more that the fundamental concerns involve issues of pricing, both social and in terms of investment, as well as who and how will be paid. However, while clearly there are existing financial mechanisms, potential beneficiaries in some places are not ready to apply for them, nor do they have the enthusiasm or capacity to do so. What is more, they are also not ready to undertake the personal effort to pay the social cost of the transition.

In this regard, the Commission launched the Just Transition Platform in the first half of 2020, to react to one key fact: not all Member States, regions, or cities can begin the transition at the same time or have the same capacity to respond. Besides, citizens and workers are expected to be affected in different ways. The Platform could be described as a tool, meant to encourage regions in transition to seek not only funding but also cooperation and partnership. It was created to encourage EU countries and regions to take advantage of the support available through the JTM, which offers a variety of benefits, such as:

- a single access point for support and knowledge related to the just transition;
- a co-shared area with all the necessary knowledge and information for authorities and beneficiaries, etc.

Thus, the exchange of best practices among all stakeholders involved regular physical meetings, sessions, and events, which has been undoubtedly one of the most positive aspects actively promoted by the Platform. Certainly, the Platform will continue building on and expanding the activities of the current Coal Regions in Transition Initiative, along with the operational needs.

[240] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1056

The role of national governments

It is clear that no regional or local activities toward coal phase-out can be done in any Member State without the participation of national governments, as they are in charge of the strategic framework and the implementation of respective policies. In practical terms, this means that such decisions and actions will depend greatly on the politicians' maturity and responsibility.

Here are two particular cases – **Poland and Bulgaria,** where coal plays an enormous role in their national energy security; and they can be viewed as specific examples in this context. Both countries are among the 4 Member States which have not been prepared to consider their coal phase-out in short terms. Their experience has been well-analyzed and presented both within the countries and abroad.[241]

Coal is used significantly in the energy sector in **Poland**, accounting for 78% of the total energy consumption in 2018. The biggest obstacle to a proper transition programme in Poland is the lack of a negotiated and accepted timeframe for more gradual closure of coal mining. The fact that it is unavoidable has even been challenged by several nations. Instead, it is claimed that coal mines' closure would undermine Poland's energy security. Thus, it has been considered a high priority for the country to be able to rely on domestic resources, as this would spare them the scourge of disadvantageous natural gas agreements with Russia. Contrastingly, however, increasing the amounts of coal import, particularly from Russia, has been aided by low costs and the inefficiency of domestic coal mining. High coal consumption has been envisaged in Poland's Energy Strategy and National Energy and Climate Plan 2030. Furthermore, the market capacity mechanism, which went into effect in 2018, has been helping anthracite and lignite power plants that have signed long-term, high-cost contracts as a precaution guarantee in future electricity supply decline till the end of 2035.

In 2019, with regard to Poland's energy transition, the main opposition party gradually incorporated the perspective of coal mining phase-out in its political agenda, for the first time ever, during their parliamentary election campaign. In 2019, Poland established their first-time Ministry of Climate Change.

Despite the lack of debate on coal mining phase-out, three Polish regions are members (as pilot regions) of the Coal Transition Initiative of the European Commission. One of them is Upper Silesia.

Upper Silesia's three largest coal companies, each with significant state participation, have been fighting for financial survival in recent years. In light of climate-change-related restrictions, they have been working on a set of projects to meet the challenges. These projects concern inter alia reduction of coal pollution, diversification of energy sources by using renewables, and the identification of

[241] See, e.g., the article "The Just Energy transition – a path to carbon neutrality. Examples from the coal regions" https://wwfeu.awsassets.panda.org/downloads/wwf_just_transition_to_climate_neutrality.pdf

research and development solutions for the utilization of existing infrastructure (e.g., hydrogen production from coke oven gas), etc. Coal-mining businesses have also asked the Coal Regions in Transition platform (CriT)[242] for help in increasing the time it takes to extract coal or in producing hydrogen by using existing infrastructure and waste gases (coke oven gas). Unfortunately, some of the proposals include the development of the so-called "clean coal technologies", which are not considered acceptable for the coal-based energy transition. The search for a new, higher-value supply chain and production, as well as workers' and communities' commitment to the need to change the economic model, are not happening, or such have – at least – not been communicated to stakeholders. The proposals submitted to CRiT still demonstrate a significant lack of concern about a much-needed retraining and reskilling of workers in the coal and energy sectors.

However, some local authorities are much more ready to work and cooperate in the just transition context, with seven of them having signed the 'Declaration of Mayors on a Fair Transition',[243] presented and discussed during the second Fair Mayors Forum, which took place in September 2019 in Weisswasser, Germany.

Bulgaria is in a similar situation, although not so dependent on coal for its energy mix as Poland. To counterbalance present trends, Bulgaria indicated in an early draft of the National Plan on Energy and Climate Change (NPEC) 2030 that national coal stockpiles will be sufficient for electricity production in the next 60 years.[244] Bulgaria is attempting to use these resources as a local source of electricity in a desperate attempt to maintain the status quo, stating that this is vital for the country's energy security and independence, in order to safeguard a reduction in future electricity supplies by the year 2035.

The municipal elections in October 2019 revealed that most of the decision-makers, and politicians running for elections, tend to avoid discussing issues related to the coal mining phase-out and just transition. This topic was also avoided by all politicians and parties during the several elections for a National Parliament held in the second half of 2021.

In April 2019, due to European and local elections, Bulgaria formally withdrew at the last minute from participating in the CRiT. In fact, Bulgaria has been the only Member State which has regions in transition but is not a member of the Platform. The actual reason behind this decision was that such an accession posed a significant risk of losing voters from both the coal-mining and other economic sectors in the country. Such a risk was considered in the frame of the sensitive issue of restructuring coal-fired electricity production, redirecting local economies to other economic activities, and transitioning to alternative energy sources such as

[242] https://energy.ec.europa.eu/topics/oil-gas-and-coal/eu-coal-regions/initiative-coal-regions-transition_en

[243] https://wwfeu.awsassets.panda.org/downloads/mayors__declaration_on_just_transition.pdf

[244] The Just Energy transition – a path to carbon neutrality. Examples from the coal regions. WWF Germany

renewables.[245] The fact that the concept of just transition is still relatively unknown to the general public in the region of Stara Zagora, where the lignite-production is concentrated, has also played a role.

However, the bigger problem for the regional cooperation amongst the three Just Transition Regions in Bulgaria, namely around the cities of Stara Zagora, Pernik, and Kyustendil, as well as regional cooperation with the national government, is the lack of strategic approach toward the energy sector as a whole.

Certainly, the reference to Poland and Bulgaria presents just two examples to illustrate the situation. Similar examples, however, can also be found in other EU and non-EU countries, where similar dependence on coal is a pressing issue.

The role of non-governmental organizations

NGOs continue to be some of the most active stakeholders in the coal phase-out processes. They have been advocating, supporting, and urging local and national governments to be more decisive and responsible. This role of NGOs is with overall validity, but in the concrete case, some examples concerning Bulgaria and Poland will be provided further, for illustration purposes.

A significant part of all projects related to information campaigns, training, and different initiatives bringing together key stakeholders, has been carried out exactly by NGOs. Funding for such initiatives is provided by vertical and horizontal EU programmes, as well as some similar international ones. This has made it possible for NGOs to function independently, against the local context of resistance and rejection of ideas. In many coal regions in transition, this has, in fact, given them the only possibility to actively develop initiatives related to the industrial transition we are currently facing.

Examples in this direction could be provided for all just transition regions in the EU. The two projects described below are examples following on the information about Poland and Bulgaria presented above.

In Bulgaria, an example case is the De Carb project, cofounded by the INTERREG EUROPE Programme, managed by the Stara Zagora Regional Economic Development Agency[246] (SZ REDA), based in Stara Zagora Region. This NGO has been the first regional organization to raise the issue of coal phase-out for public debate in the Mini Maritsa East basin. It is a public non-governmental organization uniting local governments, universities and business associations.

With the help of the Policy Learning Platform of the Programme, SZ REDA organized a Peer Review on the topic of Clean Coal at the beginning of 2020. INTERREG EUROPE selected a group of peers from Greece, the Czech Republic, Denmark, and the Netherlands who have critical expertise and experience in low-

[245] The Just Energy transition – a path to carbon neutrality. Examples from the coal regions. WWF Germany

[246] https://www.szeda.eu/en/

carbon economies for regions in transition. SZ REDA also invited key stakeholders like experts, national and regional authority officials, trade unions, private company executives, academic community leaders, and ecologists to participate in the peer review and provide input toward forming a shared approach.

The set of recommendations developed by the peers, with some input from the host region authorities and stakeholders during the peer review, was an essential output of the event. The host region should consider these recommendations in terms of feasibility and inclusion in the Region Strategy.

The other active NGO in the region is WWF-Bulgaria.[247] The organization is a partner in the Regions Beyond Coal Project, funded by the European Climate Initiative (EUKI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. These projects have enabled them to encourage local, regional, and national stakeholders to actively collaborate in finding joint solutions and to identify joint initiatives to overcome this common challenge.

In comparison with Poland, some significant differences between the way the just transition concept is understood should be noted.

Poland has been "defending" its coal industry at all levels of the EU, but it is also an active participant in international and regional cooperation initiatives such as those described above – during the RFCS Summit 2022, held March 21-22, 2022, a number of projects led by or involving Polish beneficiaries were presented.

Bulgaria has been conspicuously but persistently absent from all tools, efforts, and programmes promoting regional cooperation. Despite all above-mentioned tools enabling regional cooperation in the field, a lot of voices and attempts have been made to promote CCSU, but no real project or even involvement in project proposals has been achieved so far.

Some conclusions

Regional cooperation practices that could be found throughout the EU coal regions in transition reveal substantial level of avoidance of this useful approach for overcoming crises or obstacles or for achieving investment synergies.

After years of efforts and a lot of money spent, regional cooperation in the coal transition is still primarily focused on so-called "soft measures". Thus, e.g., the EU supports internal PV panels and storage facilities production, but no such cooperation projects between or with the involvement of coal regions in transition have been implemented as of today.

Part of the explanation could be the word "transition" itself, which reminds CEE countries of the 30-year post-socialist transition period that failed to deliver on the bright promises of a better future.

In the case of Bulgaria, the main reason could be attributed to a significant lack

[247] www.wwf.bg/en

of tradition in regional cooperation between local governments. In recent years, the EC has sparked and pushed some projects under the Operational Programmes, but with no long-term consequences.

In Bulgaria, whatever the reasons may be, this absence of tradition in regional cooperation means that municipalities in transition miss out on opportunities – e.g., to collaborate in designing and implementing projects and efforts to attract investments or establish entrepreneur-friendly conditions and ecosystems.

The national government, local authorities in transition regions, and businesses in the country should find a way to work in a coordinated manner in order to overcome the impacts of the passive transition policy. This is crucial as the transition regions need to urgently develop a new economic environment. During stakeholder meetings and public events, the topic of whether such environment can be built on the basis of already available lignite has been posed several times. There are ideas, scientific research and experiments which demonstrate availability of options – the problem is with their actual realization. This is unfortunate as the coal regions have a lot of potential for attracting and developing these types of businesses based on local resources, including trained staff.

Meanwhile, fossil fuels like coal and lignite are gradually being phased out of the energy mix, with new clean-energy technologies taking their place. Nevertheless, fossil fuels could be used in fields where they have potential – e.g., for the production of natural fertilizers. In this specific case, such business steps could really create more jobs and attract public and private investment, including such linked to the greener Common Agricultural Policy of the EU.

The Russian invasion of Ukraine has put Europe's energy and climate security to the ultimate test so far. It has caused some disruption in EU energy discussions, with the leitmotif of the necessity of coal for EU energy independence and security being reintroduced. Businesses, trade unions, and other stakeholders have again brought up for discussion ideas that the Green Deal should be halted or postponed, or even frozen, and the coal-targeted funding be made available under the three pillars of the Just Transition Mechanism. Such voices have recently been heard all around the EU during conferences, round-table debates, and other public events. The topic was also discussed during the Research Fund for Coal and Steel Summit 2022 but without any positive results achieved.

As a matter of fact, it should be noted that proposals for steps in this direction have been made numerous times earlier, particularly in public debates after the first quarter of 2020 when the COVID-19 pandemic had already had a detrimental impact on businesses.

Nowadays, the main focus of the debate is the EU dependence on imported energy resources – be it from Russia or other countries. One of the main reactions by the European Commission to Russia's invasion of Ukraine was the so called

REPowerEU,[248] an outline of a plan to make Europe independent from Russian fossil fuels well before 2030, starting with gas. This plan also outlines a series of measures to respond to rising energy prices in Europe and to replenish gas stocks.[249]

The energy crisis that had begun even before the war became a stark reminder that the energy policy trilemma of achieving affordability, reliability of supply, and environmental sustainability at the same time, is far from solved. The spike in energy prices, aggravated by the excessive over-reliance on Russian oil, gas, and coal imports, has clearly demonstrated the need for a new European Energy and Climate Security Strategy. Its development and implementation, however, divide the countries into policy takers and policymakers. Bridging the policy ambition gap calls for introducing new evidence-based policy instruments to monitor Member States' progress, such as a European Energy and Climate Security Risk Index.

However, a lot of stakeholders at regional and EU levels have started calling for more R&D spending on green and clean energy technologies, identifying them as the most effective approach to attain EU clean and green energy independence. In the middle of September 2020, 62 mayors from European coal regions in 11 European countries pledged their commitment to a sustainable future, supported by the EU's Just Transition. They signed the 'Declaration of mayors on just transition', with which they committed to local level action on just transition, and welcomed the EU Just Transition Fund. The document emphasized, however, that the Fund must be used exclusively for sustainable economic activities and job creation.[250]

Thus, it seems that the EU still remains separated in its position on the future use of fossil fuels.

What must not be forgotten is that the just transition issue needs to be solved for the sake of the environment and the generations to come. The current focus on company revenues and profits, employment, and compensation levels, has the potential to turn into a cruel joke on societies and local communities if investment in R&D is not increased.

Despite the European Commission's efforts and modifications of the Cohesion Policy over the last 60 years, the regional development gap has not been bridged. Although billions of euros have been spent from the EU budget, the progress in the regions' development is still evident rather marginally and, in this sense, difficult to measure. In this context, coal-transition regions, especially those in CEE, need to be more decisive and active in planning and implementing cooperation measures over the next 10-12 years. Such approach will allow them to make significant progress toward new energy technologies, a higher standard of living, increased GDP, and improved environment.

All the necessary conditions and infrastructure, including the financial side

[248] See for details, e.g., https://ec.europa.eu/commission/presscorner/detail/en/fs_22_1513
[249] https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1607
[250] https://wwf.panda.org/wwf_news/?877791/62-coal-region-mayors-unite-for-sustainable-future

assuring such steps, are available. They seem to be also well-backed by clear rules for the coal regions in transition. Nevertheless, the support would be only available for working projects that bring value in the areas of the twin digital and green transition. In most cases, stakeholders from various coal regions in transition are required to collaborate on joint initiatives in order to unite their diverse expertise, experience, skills, and knowledge in the quest for broadly applicable and multiplier solutions. This is the regional cooperation-based approach that the EC has been promoting over the last 60 years – and without any doubt, it is also definitely needed for the coal regions in transition.

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MORE ABOUT THE BULGARIAN DIPLOMATIC INSTITUTE

The Diplomatic Institute (DI) was created on 23 September, 2003, pursuant to a Decree of the Council of Ministers. Its status and functions were regulated by the Diplomatic Service Act adopted by the National Assembly on 13 September, 2007. Its work meets the high demands and professional expectations pursuant to Bulgaria's membership in EU and NATO, and displays continuity that allows the Bulgarian diplomatic profession to have the place it deserves in the large Euro-Atlantic family.

Our mission is to:

- Guarantee the high-level expertise and skills of the diplomatic staff and the public administration by applying up-to-date professional standards of training;

- Enhance continuity in the Bulgarian Foreign Service by promoting exchange of experience and good practices among generations of diplomats;

- Promote the diplomatic profession and Bulgaria's foreign policy by reaching out to the general public;

- Provoke exchange of expertise on foreign policy issues by providing a platform for debate among government and non-government actors;

- Support the diplomatic profession and the foreign policy debate by research and publications;

- Develop national and international cooperation by implementing joint projects.

TRAINING PROGRAMMES

We provide trainings for both Bulgarian and foreign diplomats and government officials, as well as experts from the NGO and private sector. They meet all demands of modern diplomacy and use the good practices of our counterparts from all over the world. To respond to the need of high-quality training, we focus on interactive and practical sessions and have as trainers Bulgarian and foreign diplomats, university professors and other highly qualified experts, providing the benefit of a broad range of opinions and approaches.

Among our major training programmes are the courses for the MFA trainee attaches and consular staff, foreign language training, courses for diplomats, representatives of the public administration and of the NGO and private sector in the field of regional issues and security, energy diplomacy, economic diplomacy, environment, public diplomacy, diplomatic protocol, as well as tailor-made trainings for foreign diplomats and our traditional Winter School of Diplomacy.

PUBLIC POLICY AND COOPERATION

To provoke public interest and debate on current foreign policy issues, we hold public lectures by prominent public figures, leading politicians and diplomats. We also organize conferences and round-table discussions with Bulgarian and foreign experts, to contribute to the exchange of expertise and to the foreign policy theory and practice. We interact actively with the young public by organizing essay competitions on foreign policy topics, visits of school and university students within our “Open Doors” programme, and by implementing a coherent internship programme. To enhance our public outreach, we aims at strong media and digital presence, and maintain our own radio broadcast, a webpage in Bulgarian, English and French, Facebook and Twitter account. The Institute’s national and international partnerships with government, research, NGO and academic institutions is visible in the implementation of joint projects and exchange in the field of training, research and public activities and EU policies.

RESEARCH AND PUBLICATIONS

A strategic task of the DI is to provide comprehensive analyses by internal and outside experts on international topics to meet the needs of the MFA and to enhance the expertise in foreign policy theory and practice. As of 2013 the Institute also holds national contests for applied research projects.

Among our publications, in Bulgarian and/or English, are the Foreign Policy Research Papers series, the Energy Diplomacy collection, books and textbooks on EU matters, security and environment issues, diplomatic skills and practice, as well as the long-established Diplomacy Journal which has already grown into an online platform for foreign policy analysis and research.

To assist its activities and programmes, the DI manages a library of over 65 000 titles in over 20 languages, in the field of international relations, European Studies, security, international organizations, diplomacy, law, history, sociology, political sciences, economy, etc.

MORE ABOUT THE BULGARIAN DEVELOPMENT AID

Development cooperation and humanitarian aid are an integral part of the foreign policy of Republic of Bulgaria and contribute to the achievement of its goals. Official Development Assistance (ODA) is an important tool for promoting sustainable growth of developing countries, helping them integrate themselves into the world economy and build fairer and more democratic communities. The purpose of the humanitarian aid is to save lives, to protect human dignity during and as a result of crises, to help prevent such situations and to increase preparedness for them.

With its accession to the European Union (EU), Bulgaria has made important commitments to participate in the Union's Common Foreign Policy, including development policy as its importance for the security is growing. Affirming the EU's leading role as the world's largest donor in international development cooperation remains one of the top priorities in the EU's 2016 Foreign Policy Strategy. Bulgarian development assistance and humanitarian aid successfully complements our participation in the EU's common external action instruments to assist neighbouring countries and regions, developing countries, and to provide humanitarian assistance.

Through development cooperation, Bulgaria contributes to a more balanced and equitable global development, taking its share of responsibility in the efforts to eradicate poverty and achieve sustainable development. As a responsible and active member of the international community, together with its partners it strives to protect human dignity and ensure a sustainable, just, inclusive, safe and prosperous future for all.

Bulgarian development aid also includes humanitarian assistance, through which Bulgaria expresses its solidarity with the affected countries and persons facing emergency situations as a result of large-scale natural and other disasters or armed conflicts.

The Med-Term Program for the period 2020 - 2024 further develops and enriches the geographical and sectoral priorities of the Bulgarian ODA, as set out in the previous strategic documents on the topic, and expands the circle of participants. It is a proof that from a primarily recipient of development aid, Bulgaria country is increasingly establishing itself as a donor actively preparing for the implementation of one of its most important foreign policy tasks - membership in the Organisation for Economic Co-operation and Development.

Accession to the Organisation for Economic Co-operation and Development (OECD) is among the main foreign policy priorities of the Republic of Bulgaria.

On the 25th of January, 2022, the OECD Council decided to open accession discussions with the 6 candidates to OECD Membership, including Bulgaria.

With a view to improving the coordination and accelerating the preparation for prospective membership in the Organisation, in December 2017 an Interinstitutional

Coordination Mechanism for accession of Bulgaria to the OECD was established.

Representatives of Bulgarian institutions, agencies and a number of experts work actively in the committees and working groups in which Bulgaria participates with the status of “Member”, “Participant” or “Guest”.

Bulgaria has established cooperation with the OECD in the early 1990 s., where the interaction was carried out through the participation of our country in some of the working bodies of the Organisation and within separate thematic initiatives and specific programmes on the basis of identified mutual interest. Bulgaria is an active participant in the **OECD Regional Programme for South East Europe** and participates in statistical and information reporting systems, comparative analyzes, such as the **PISA -** International Student Assessment Program, publications and policy reviews, etc.

For the first time, Bulgaria officially expressed its interest in OECD accession in 2007, and the request to join the global community of the Organisation has since then been repeatedly affirmed, most recently in 2017.

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