

15 Energy policy (Dimension 12)

The competitiveness of any economy is heavily influenced by its energy policies. This chapter investigates the energy policies in the six Western Balkan economies (WB6) and analyses to what extent their energy markets follow international good practices to optimise their efficiency and competitiveness. It does so by assessing three sub-dimensions. The first, governance and regulation, focuses on how the energy markets are governed and whether policy is conducive for establishing efficient and competitive energy markets. The second explores how stable and secure the energy supply is, whether it is diversified, and how it promotes sustainable energy. The third sub-dimension analyses how energy markets are operated, whether competition is used to promote efficient allocation of energy resources, and the degree of regional integration of the WB6 energy markets. A cross-cutting dimension, energy incentives and subsidies, explores whether such measures embody hidden and long-term costs which distort competitiveness. For each sub-dimension, the chapter includes suggestions to strengthen energy policies and their implementation, which in turn will foster the competitiveness of the WB6 economies and lead to climate-resilient energy sectors.

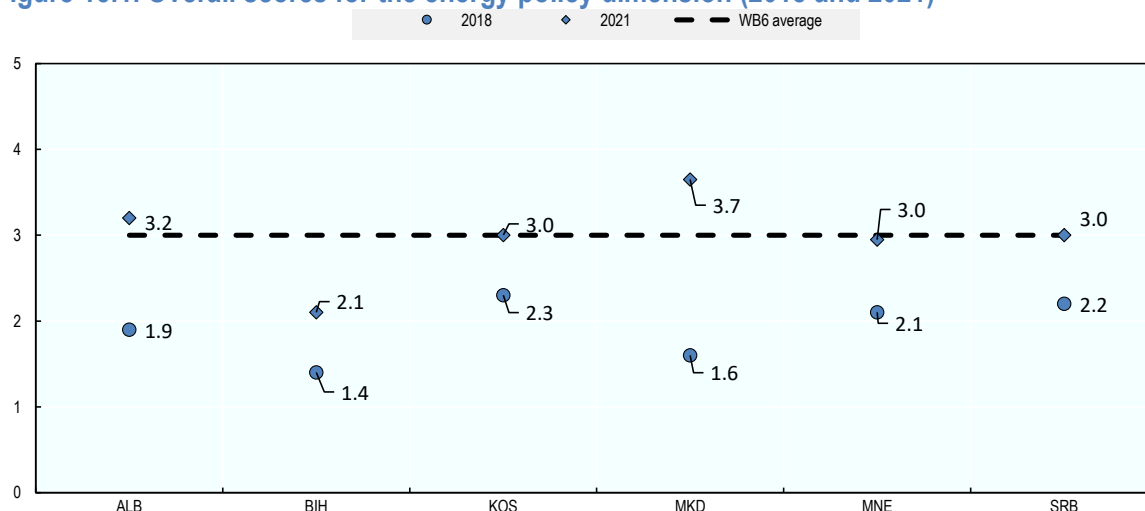
Key findings

- **The WB6 have advanced legislative frameworks that transpose a significant share of the EU's Third Energy Package.** These frameworks are supplemented by a large number of policies that conform with international good practices. However, implementation has significant room for improvement and key policy documents urgently need to be updated. For the most part this issue is currently being tackled by the WB6 as they are drafting their new National Energy and Climate Plans.
- **There has been significant progress in deploying EU-style organised markets in energy.** Most recently, Albania, Kosovo and Montenegro have established power exchanges.
- **WB6 economies differ in the quality of their markets and their associated frameworks, including across the main forms of energy within an economy.**
- **Some of the fundamentals of competitive energy markets are still missing in some WB6 economies.** These include unbundling of key natural monopolies – i.e., transmission system operators and distribution system operators – and lack of third-party access to key energy infrastructure.
- **Renewable energy and energy efficiency are both in their early stages across the WB6 region.** Aside from hydropower generation, renewable energy's share in energy generation remains low and the WB6 economies' approaches to subsidising and assigning new renewable energy projects need to be improved.
- **Energy efficiency is slowly being improved as building certifications are rolled out across the WB6.** However, funding is scarce and often limited to public buildings. Moreover, strategies for industrial energy efficiency are often lacking, and the legislative framework for energy efficiency labelling of products is patchy.
- **Regional market integration and market coupling amongst the WB6 economies and with their European neighbours remain largely absent.** However, increased use of joint co-ordinated auctions for interconnector capacity is a positive step forward.
- **Human resources in key public entities involved in regulating energy markets lack technical capacity,** especially for energy efficiency.
- **Subsidies continue to distort markets in the region.** The continued subsidisation of fossil fuels is particularly counterproductive to economies' goals of reducing greenhouse gas emissions and governments' financial support for renewable energy and energy efficiency.

Comparison with the 2018 assessment

The WB6 have made significant progress in reforming their energy policies since 2018, and most of the foundations for a competitive energy market have been laid. Accordingly, the average regional score has progressed from 1.9 just three years ago to 3.0 (Figure 15.1). However, further improvement is needed. The legislative framework needs to be finalised, and the WB6 economies need to begin implementing this legislation in order to truly establish a competitive and integrated energy market across the region.

Figure 15.1. Overall scores for the energy policy dimension (2018 and 2021)



Note: Scores for 2021 are not directly comparable to the 2018 scores due to the restructuring of relevant qualitative indicators. Therefore, changes in the scores may reflect the change in methodology more than actual changes to policy. The reader should focus on the narrative parts of the report to compare performance over time. See the Methodology and assessment process chapter for information on the assessment methodology.

Implementation of the Competitiveness Outlook 2018 recommendations

The previous assessment suggested several recommendations that would, if implemented, see the WB6's energy sectors be driven by competition and in turn help to support the overall competitiveness of the economy. While progress has been made, in some economies more than others, a significant share of the recommendations remains to be implemented (Table 15.1). A major reason for this slowdown in progress is certainly the global COVID-19 pandemic, but significant internal roadblocks such as lack of political will to undertake certain reforms and resistance by energy sector stakeholders are also playing their part. The deployment of organised markets, lack of liquidity, and market integration and coupling remain the most significant challenges for most energy sectors in the WB6 region. Nonetheless, the WB6 energy sector remains vibrant and offers much potential.

Table 15.1. Implementation of the CO 2018 policy recommendations: Energy policy

Competitiveness Outlook 2021		
2018 Policy recommendations	Main developments during the assessment period	Regional progress status
Remain committed to reforming national and regional energy markets.	<ul style="list-style-type: none"> The WB6 continue to bring their energy sector framework into line with their international commitments associated with their Energy Community membership and EU accession aspirations. For most WB6 economies (Albania, Bosnia and Herzegovina, Kosovo, North Macedonia and Montenegro), the functional and operational deployment of organised markets remains outstanding and the WB6 are still at the early stages of regional market integration and coupling (i.e. only Serbia has an operational day-ahead market while all but Serbia use the joint auctioning allocation of capacity platform SEE CAO). 	Moderate
Adopt and implement urgently, the EU Third Energy Package with compliant primary and secondary legislation.	<ul style="list-style-type: none"> All WB6 economies have made progress in transposing the EU Third Energy Package as can be seen by comparing the transposition assessment of the Energy Community Secretariat in 2020 to that of 2018. Similarly, overall implementation has increased as shown by the Energy Community Secretariat's assessments (Energy Community Secretariat, 2018^[1]) (Energy Community Secretariat, 2020^[2]). However, neither the transposition nor implementation of the Third Energy Package is complete. 	Moderate
Ensure that energy policy strategies and action plans set-out measurable objectives and outcomes.	<ul style="list-style-type: none"> The WB6 economies have developed various policies with measurable objectives, including energy strategies, national renewable energy action plans, and national energy efficiency plans. However, most of these strategies and plans provide guidance until 2020 and thus need to be updated. The WB6 are all drafting National Energy and Climate Plans—although they are at different stages of the process, with Serbia's being the furthest from completion (Energy Community Secretariat, 2021^[3]). 	Advanced
Implement energy policy fully, including action plans and strategies.	<ul style="list-style-type: none"> The WB6 have made progress since the last Competitiveness Outlook but most policies and action plans have only partially been implemented, as delays have hampered progress. Some of the identified infrastructure projects have also experienced delays. Several WB6 economies are unlikely to achieve their renewable target for 2020, signifying that not all National Renewable Action Plans have been implemented as expected. 	Moderate
Strengthen administrative and institutional capacity and provide additional resources.	<ul style="list-style-type: none"> There remains a need to endow energy regulators with additional human resources. Across the entire WB6 there is a significant shortage of staff competent in tackling issues like renewable energy and energy efficiency. 	Limited

Introduction

Primary energy consumption in the WB6 stood at 72 megajoules (MJ) per capita in 2018—versus 129 in the European Union (EU) and 108 in the CEEC-11¹ (Eurostat, 2021^[4]; Eurostat, 2021^[5]). Energy plays a pivotal role in almost any economic activity. Accordingly, the competitiveness of the entire economy is heavily influenced by its energy market. If an energy market is efficient and competitive with regard to price formation and allocation, and if the energy is provided in a stable, predictable and secure manner, economic activities will be more competitive. Conversely, if a market is distorted, has market barriers, or provides an unstable supply, the cost of energy and thus the cost for any subsequent economic output in the value chain will be higher and therefore less competitive on an international basis.

Given the centrality of energy to overall competitiveness, this chapter investigates the WB6 energy policies and analyses to what extent their energy markets employ international good practices to optimise their efficiency and competitiveness. Energy policy typically addresses five overarching objectives: energy

market structure, energy security, environmental and climate considerations, competitiveness, and economic development. These objectives are particularly relevant for the WB6 economies, as they are in transition from monopoly-driven closed-off markets with ageing infrastructure to EU-style organised and integrated energy markets with new legislative frameworks and modernised infrastructure.

Given the breadth and depth of the impact of energy on the operation of the economy, this chapter is closely linked to several other chapters in this report. The most pertinent links are:

- **Chapters 4 and 6. Investment policy and promotion and access to finance.** There is a need for substantial financial investment in the energy sector, particularly for the deployment of renewable energy and energy efficiency.
- **Chapter 5. Trade policy.** Changes in the energy sector will have an impact on any economic activity, and thus also on economies' competitive positions on the international market.
- **Chapter 14. Transport policy.** Energy is the key input for various modes of transportation. As such, it is also related to the transport sector's level of greenhouse gas emissions.
- **Chapter 16. Environment policy.** Energy is a key contributor to greenhouse gas emissions. Therefore, policies on greenhouse gas emissions, greenhouse gas pricing and renewable energy are all highly relevant to energy policy.

Assessment framework

Structure

This chapter assesses policies related to energy in the WB6 by assessing three broad sub-dimensions and one cross-cutting sub-dimension:

1. **Sub-dimension 12.1: Governance and regulation** focuses on how the energy markets are governed and guided by policy makers, and whether policy is informative and conducive to establishing an efficient and competitive energy market.
2. **Sub-dimension 12.2: Security of energy supply** focuses on how stable and secure the energy supply is and thus how susceptible the WB6 economies are to supply disruption. This sub-dimension also investigates the extent to which the energy supply is diversified, and how it promotes sustainable energy supply and efficient consumption in preparation for becoming a climate-resilient energy sector.
3. **Sub-dimension 12.3: Energy markets** focuses on how energy markets are operated and to what extent competition is used to promote efficient allocation of energy resources. Moreover, given the size of markets and the positive forces of international trade in promoting efficiency, this sub-dimension also investigates to what extent the WB6 energy markets are coupled and integrated, and thus open to international competition.
4. **Cross-cutting sub-dimension: Energy incentives and subsidies** focuses on the scale of subsidisation and cross-subsidisation in the energy sector and the extent to which they distort competition and fairness in the market.

The assessments for these sub-dimensions were carried out by collecting qualitative data with the help of questionnaires filled out by governments, as well as face-to-face interviews with relevant non-government stakeholders. Alongside these qualitative inputs, quantitative data on certain indicators – provided by the economies' statistical offices, relevant ministries and agencies, and other databases – formed an integral part of this assessment. Figure 15.2 shows how the sub-dimensions and their indicators make up the energy policy dimension assessment framework. For more information on the methodology see the Assessment methodology and process chapter.

Figure 15.2. Energy policy dimension assessment framework

Energy policy dimension		
Outcome indicators <ol style="list-style-type: none"> 1. WB6 progress on transposing the EU's Third Energy Package 2. Share of firms experiencing electrical outages 3. Share of firms identifying electricity as a major constraint 		
Cross-cutting sub-dimension: Energy incentives and subsidies		
Sub-dimension 12.1 Governance and regulation	Sub-dimension 12.2 Security of energy supply	Sub-dimension 12.3 Energy markets
Qualitative indicators <ol style="list-style-type: none"> 1. Energy policy, legal and institutional framework 2. Energy regulator 3. Management of energy infrastructure 	Qualitative indicators <ol style="list-style-type: none"> 4. Gas supply framework 5. Electricity supply framework 6. Renewable energy policy 7. Energy efficiency policy 	Qualitative indicators <ol style="list-style-type: none"> 8. Market operations 9. Unbundling and third-party access rules 10. Regional market integration
Quantitative Indicators <ol style="list-style-type: none"> 1. Distribution losses as a share of injected electricity 	Quantitative Indicators <ol style="list-style-type: none"> 2. WB6 energy mix 3. WB6 energy mix compared to CEEC-11 and EU-28 4. WB6 gross electricity generation mix 	Quantitative Indicators n.a.

Key methodological changes to the assessment framework

There have been two main changes to the methodology in the Competitiveness Outlook 2021. The first main change is a restructuring of the sub-dimensions and what they cover—various topics have been merged and indicators have been moved.

Moreover, this latest assessment is more focused on the energy markets' organisation and the energy sources covered. The assessment foregoes an in-depth analysis of oil and oil products' markets in WB6 economies. This does not mean that oil and oil products are not relevant for the WB6 economies' competitiveness, nor that these markets are in perfect alignment with international good practices and standards, but rather that the oil markets are globally integrated. In other words, the analysis has instead focused on markets that are largely still absent and are more driven by economy-specific or regional factors—such as electricity and natural gas markets.

Energy performance and context in the WB6

Overall, the WB6 economies have made strong progress towards introducing legislative frameworks that reflect international good practice. The Energy Community (Box 15.1) estimates that WB6 transposition of the EU's Third Energy Package (Box 15.2) rose from 48% in 2018 to 55% in 2020 (Figure 15.3). The Third Energy Package is the international good practice benchmark for WB6 economies. Its importance stems from several factors. First, the EU is the largest integrated energy market bordering the WB6 region. Second, all of the WB6 economies are Energy Community members and thus have committed themselves to transposing the Third Energy Package. Finally, many of the WB6 economies are in the process of negotiating their entry into the EU, which also requires them to transpose the Third Energy Package.

Box 15.1. The Energy Community

The Energy Community is an international organisation operating as an international regulatory entity that brings together the European Union (EU) and its neighbouring market, including the WB6 economies, under one unifying legislative and regulatory framework in support of a widely integrated energy market.

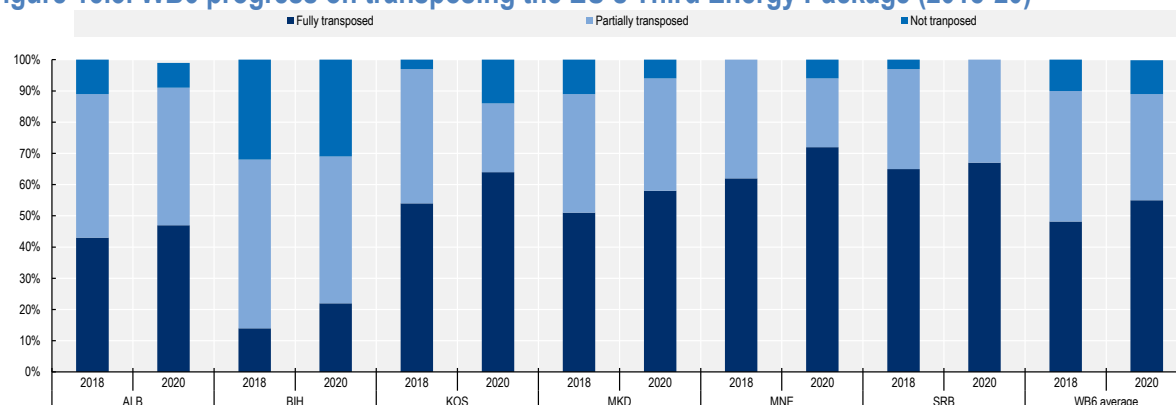
The Energy Community was established in 2005 and consists of a variety of bodies which are governed by the Energy Community's Council of Ministers and supported by a Secretariat. The Energy Community's operational sphere encompasses the entire EU and all the WB6 economies, as well as Ukraine, Moldova and Georgia, with Norway and Turkey participating as Observers.

The Energy Community *acquis*, which contracting parties need to transpose and implement, largely consists of the EU's Third Energy Package and a significant number of associated Network Codes.

In its role as a permanent body within the Energy Community structure, the Energy Community Secretariat continuously monitors and assesses the state of the energy markets within the Energy Community. It offers in-depth analysis to the public as well as support to contracting parties in transposing and implementing the Energy Community *acquis*. To this end, the Energy Community Secretariat's work on the WB6 economies' energy markets is an invaluable source of information for this chapter.

Source: For more information, please see <https://www.energy-community.org/aboutus>.

Figure 15.3. WB6 progress on transposing the EU's Third Energy Package (2018-20)



Note: Please note that the WB6 score reflects the unweighted economy score provided by the Energy Community.

Source: (Energy Community Secretariat, 2018^[1]), 2018 Implementation Report, <https://www.energy-community.org/implementation/IR2020/IR2018.html>; (Energy Community Secretariat, 2020^[2]), 2020 Implementation Report, https://www.energy-community.org/dam/jcr:0af3b17a-3759-4a23-a2ef-3134784e217c/EnC_IR2020.pdf.

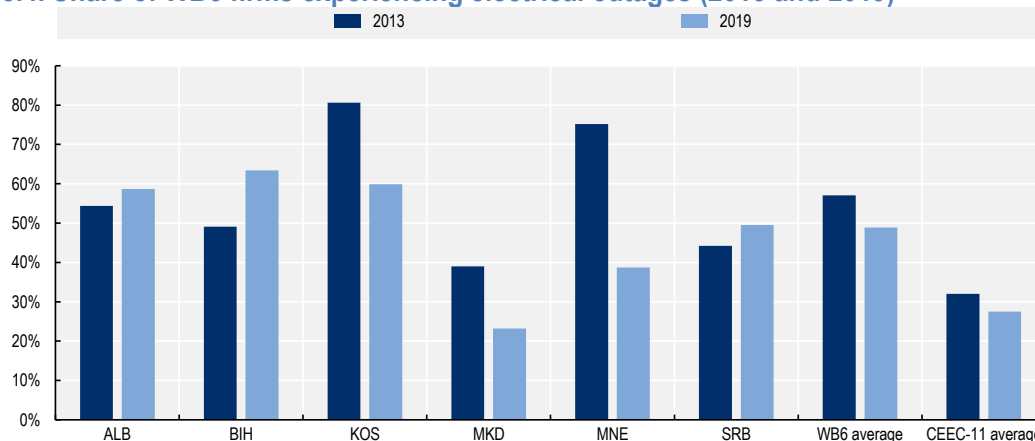
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However, despite these positive developments, businesses' perceptions of the energy sector in the region, and thus its impact on the competitiveness of the economies, remain negative. While the percentage of surveyed firms experiencing energy outages has gone down since 2013, it remains high, at just under 50% (World Bank, 2021^[6]) (Figure 15.4). Moreover, the share of surveyed companies that identify electricity as a major constraint has increased by 10 percentage points (World Bank, 2021^[6]) (Figure 15.5).

The rising share of surveyed companies that perceive energy to be a major constraint is driven by a variety of factors—for example, the share of industries that rely on energy as a major input is growing, as is the number of companies facing rising electricity prices. Another factor is likely the constraints imposed by the difference between the energy market legislation and how the market actually operates. This factor can

also be seen in the Energy Community's rating of the WB6's implementation of the Third Energy Package. The Energy Community perceives the implementation of the Third Energy Package in the WB6 to be at 56% (Energy Community Secretariat, 2020^[2]), which has risen from 46% in 2018 (Energy Community Secretariat, 2018^[1]).

Figure 15.4. Share of WB6 firms experiencing electrical outages (2013 and 2019)

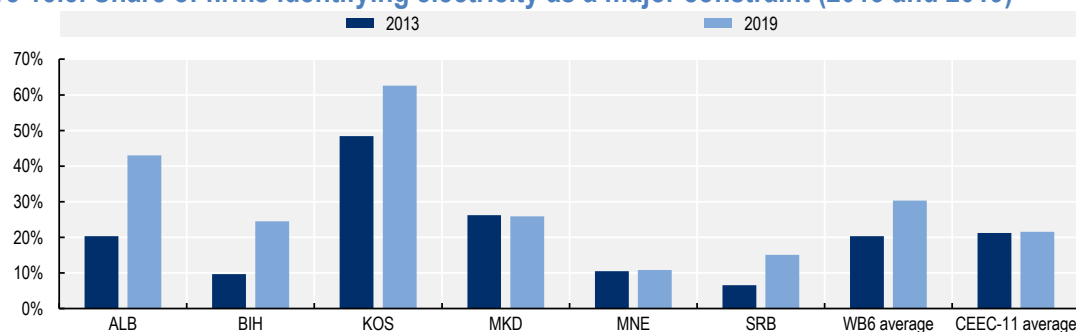


Note: Please note that the WB6 percentage is the *unweighted* average. CEEC-11=Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia.

Source: (World Bank, 2021^[6]) *Enterprise Survey*, <https://www.enterprisesurveys.org/en/custom-query>.

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Figure 15.5. Share of firms identifying electricity as a major constraint (2013 and 2019)



Note: Please note that the WB6 percentage is the *unweighted* average. CEEC-11=Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia.

Source: (World Bank, 2021^[6]) *Enterprise Survey*, <https://www.enterprisesurveys.org/en/custom-query>.

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Overall, the WB6 have solid legislative frameworks in place. Although these frameworks are not complete and need to be further developed, they do represent a good base for a competitive energy market. Accordingly, the focus should now be on implementing these frameworks, and on reducing the negative impact of energy outages and constraints on the WB6 economies by improving the quality of the energy supply.

Governance and regulation (Sub-dimension 12.1)

The governance and regulation sub-dimension analyses to what extent the WB6 economies have the necessary framework to establish competitive energy markets and to foster their growth in the long run. More precisely, the sector's governance and regulation provide the backbone for energy sector

development, influencing the climate for investment and security of returns. In markets that have strong governance, clear directions and independent regulation, the energy sector responds to market signals and is more likely to lead to sustainable and efficient outcomes driven by competition (OECD, 2001^[7]).

The Western Balkans as a region has made tremendous progress on governance and regulation. The sub-dimension regional score has risen from 2.2 in the last Competitiveness Outlook to 3.1. Leading the region are North Macedonia and Albania, which have strong legislative and policy frameworks in place as well as strong independent regulators (Table 4.3. Scores for Sub-dimension 1.1: Investment policy framework). Nonetheless, there remains room for improvement within each of the indicators across the Western Balkans, with Bosnia and Herzegovina holding the greatest potential for improvement—in particular as in some sectors Bosnia and Herzegovina (particularly the Federation of Bosnia and Herzegovina) is not even compliant with the Second Energy Package.

Table 15.2. Scores for sub-dimension 12.1: Governance and regulation

Sub-dimension	Qualitative indicator	ALB	BIH	KOS	MKD	MNE	SRB	WB6 average
Sub-dimension 12.1 Governance and regulation	Energy policy, legal and institutional framework	3.0	2.0	3.5	3.5	3.5	3.5	3.2
	Energy regulator	4.0	1.5	3.0	4.0	4.0	3.5	3.3
	Management of energy infrastructure	3.5	1.5	3.5	3.5	2.0	3.0	2.8
Sub-dimension average score		3.5	1.7	3.3	3.7	3.2	3.3	3.1

Energy policy and legislative frameworks are progressing well and should now be fully implemented

A comprehensive policy framework, supported by strong primary and secondary legislation as well as efficient institutions, sets the goals for economies. Furthermore, it sends strong signals to investors about the stability of returns on their investments. This indicator measures and analyses the extent to which the WB6 economies have designed and implemented a primary framework that promotes competition and efficiency in the energy market based on international good practices.

Overall the WB6 economies have a strong foundation; many have extensive legislative and policy frameworks in place that mirror those of the European Union. This in large part means that WB6 economies follow the EU principles of an organised market, employing competitive price formation—with equal opportunities and without discrimination, and ensuring sustainability and transparency of the market in meeting future energy needs. However, not all of the Third Energy Package has been transposed, and less of it has been implemented. For example, Bosnia and Herzegovina (with a score of 2.0; Table 4.3. Scores for Sub-dimension 1.1: Investment policy framework) is largely behind the rest of the WB6, operating some of its natural gas market segments based on an out-of-date legislative framework.

While most of the WB6 economies have extensive energy policy frameworks in place, in most cases these are only valid until 2020, and therefore need to be updated to reflect current international good practice. To this end, it should be noted that all WB6 economies, while at different stages, are working on drafting new policy based on the latest standards in the National Energy and Climate Plans² (Energy Community Secretariat, 2021^[3]).

Box 15.2. The EU Third Energy Package

In 2007, the European Commission proposed a new legislative package, the Third Energy Package, in an effort to further enhance and harmonise the EU's Energy Union and internal energy market. This package entered into force in September 2009 and consisted of several important directives and regulations.¹

The Third Energy Package largely rests on four pillars: 1) transparency; 2) non-discrimination; 3) a strong, independent national regulator; and 4) sustainability. Together, these pillars represent EU best practice and aim to establish a fair and level playing field for competitive energy markets that seek to optimise scarce resources. For example, the first two pillars drive the need for unbundling the transmission and distribution system, combined with guaranteed, non-discriminatory and open access to those networks to all users backed by transparent rules and prices. Without such unbundling requirements and third-party access, it is very possible that the system operators, which are natural monopolies, could prohibit market entry and lead to sub-optimal market outcomes.

In addition to these pillars, the Third Energy Package also seeks to enhance international co-operation within the EU by establishing an international regulatory agency (the Agency for the Co-operation of Energy Regulators, ACER) and promoting regional integration. Regulation (EC) No 714/2009 contains clauses that open and allow for further regulation to be drafted to enhance harmonisation in the form of network codes.

In 2019, the EU introduced the Clean Energy Package which supplements and in part replaces the Third Energy Package. That is, while the Clean Energy Package retains the key legislative aspects of the Third Energy Package, it expands measures for sustainability and green energy growth, as well as consumer rights and protections. Despite this, the Third Energy Package remains a good starting point for all of the WB6 economies as many of its key pillars have so far not been introduced or implemented in their entirety in the region. Aligning with it is also a requirement for the WB6 economies as members of the Energy Community, whose *acquis* reflects most of the Third Energy Package. Moreover, with many WB6 economies aspiring to become EU members, the transposition and implementation of the Third Energy Package and subsequent Clean Energy Package are accession requirements. To conclude, the Third Energy Package provides for the implementation of international best practice on competitive markets, and is also a firm requirement for the Western Balkan economies.

1: Directive 2009/72/EC concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC; Directive 2009/73/EC concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC; Regulation (EC) No 714/2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003; Regulation (EC) No 715/2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005; Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Co-operation of Energy Regulators.

Energy regulators could be more independent financially and politically

Energy regulation is a key aspect for an economy's competitiveness. The responsibility of the energy regulator is to provide clear and transparent implementation and enforcement of the energy sector rules, without prejudice or favouritism. To do so, the regulator must be fully independent from any other state enterprise, and its functions and responsibilities must be clearly defined with full accountability. If the regulator is able to carry out its functions independently and without prejudice, the investor climate is significantly improved by greater stability. Accordingly, this indicator assesses the extent to which WB6 economies' energy regulators conform with international good practice in terms of independence and endowment of powers and resources.

The WB6 economies have strong institutional frameworks for their energy sectors, reflected in the overall strength of their independent regulators. In principle, the WB6 regulators follow the standards for independent regulators set out in the European Union Third Energy Package. To this end, they are equipped with sufficient powers and resources to act as key market enforcers.

However, there are some common shortcomings when comparing the WB6 energy regulators to their counterparts in the EU. First, the energy regulators of Kosovo and North Macedonia are not as strongly financially independent as they could be. In the case of Kosovo, the energy regulator's budget is a line item in the government accounts, rather than an independent account held by the regulator. Moreover, in some WB6 economies, energy regulators' salaries are bound to public salary schemes or conditions, which limits their ability to retain key staff in a competitive sector where technical staff are highly priced.

Furthermore, the regulators in North Macedonia and Serbia have expressed a need for additional staff going forward—although additional staff for all WB6 regulators would be recommended. The additional staff are needed to maintain current output levels as the regulators are taking on an increasing number of roles and responsibilities. There are also some issues surrounding the selection of the commissioners, i.e. the governing bodies of a regulator. Some economies have failed to fill all the positions on the board of commissioners. In Kosovo, for example, there are currently three vacant positions, meaning the regulator's governing body lacks a quorum to make decisions. In other cases, such as Bosnia and Herzegovina, Kosovo, Montenegro and North Macedonia, the selection of commissioners is either unnecessarily complex and lengthy, or is open to political influence, as the shortlisting of candidates for parliament approval is done by government, and there are limited requirements for who the government nominates. Moreover, in Serbia the regulator is limited in its ability to define its internal structure - requiring approval from parliament.

Infrastructure management is outdated

Energy security and reliability of supply are closely linked, and both require dependable and efficient energy infrastructure. Energy infrastructure includes all parts of the energy system—from fuel production and generation to transmission and distribution. This indicator assesses whether or not the WB6 economies have a clear vision for rehabilitating, maintaining and expanding their infrastructure.

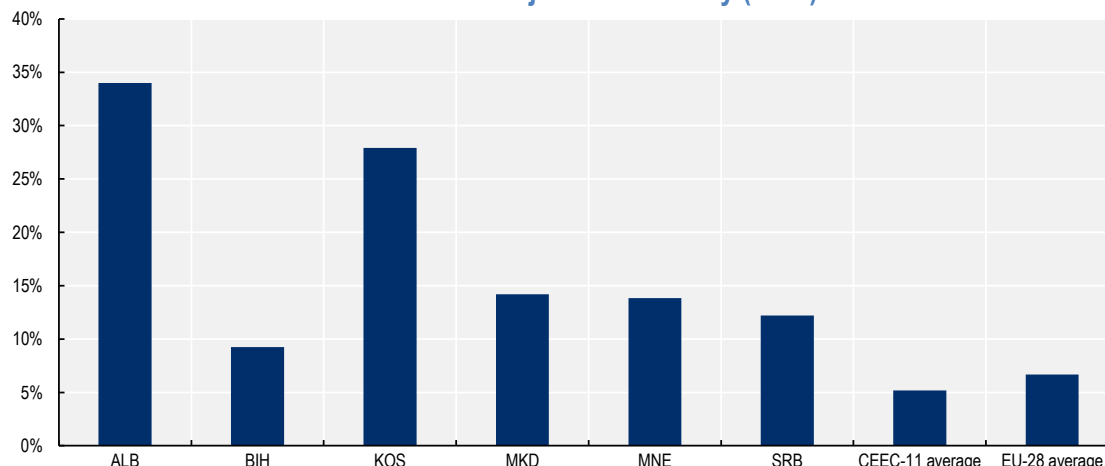
Unlike the regulators' shortcomings, for the most part the WB6 policies on infrastructure management closely reflect the practices of the European Union. That is, Most WB6 economies have extensive policy documents that guide the expansion of infrastructure, with the Ten-Year-Network Development Plans produced by the distribution and transmission system operators of electricity and natural gas being particularly important.

However, the WB6 economies continue to use existing approaches to generation infrastructure, often still relying on coal (Figure 15.7), which they plan to continue to rely on in the future as a key source for electricity generation. This situation is aggravated by the sluggish expansion of infrastructure for diversifying energy sources. Moreover, WB6 asset management often reflects a rather basic approach to asset capturing and maintenance planning using simple software tracking tools.

Another key issue related to infrastructure is the quantity of losses in the distribution of electricity. All WB6 economies have very high distribution losses—ranging from nearly 35% in Albania to around 10% in Bosnia and Herzegovina. These are well above the EU and CEEC-11 averages of 6.7% and 5.2% respectively (Figure 15.6). These losses are detrimental to the WB6's economic competitiveness as they represent cost and risk to companies. The WB6 need to tackle the issue from two angles. The first angle, technical losses, reflects the need for infrastructure improvements. The WB6 distribution systems require sizeable medium to long-term investment for modernising and refurbishing existing infrastructure and building new infrastructure. In this respect, medium to long-term planning is key, including plans for the recovery of funds necessary to carry out the investment. Addressing the second problem of non-technical

losses will require a mixture of infrastructure investment and improvement in customers' payment morale and reduction of energy theft.

Figure 15.6. Distribution losses as a share of injected electricity (2018)



Note: This figure shows the distribution losses as a percentage of injected electricity into the distribution grid. EU average is EU-28 but excluding Bulgaria and Romania. CEEC-11 average includes Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic and Slovenia, but excludes Bulgaria and Romania.

Source: Adapted from (Council of European Energy Regulators, 2020^[8]) *2nd CEER Report on Power Losses*, <https://www.ceer.eu/documents/104400/-/-/fd4178b4-ed00-6d06-5f4b-8b87d630b060>; (ERE, 2020^[9]) *Annual Report – The situation of the power sector and ERE activity during 2019*, https://ere.gov.al/doc/ERE_annual_report_2019_26102020.pdf; (FSHU Sh.A., 2020^[10]) *Application for the retail price of electricity for 2020*.

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The way forward for governance and regulation

- **Complete the transposition and implementation of the Third Energy Package.** This is essential as it will ensure that WB6 economies have a comprehensive legislative and policy framework for the energy sector. The Third Energy Package still reflects in many ways the international good practices to establish and stimulate a competitive energy market, even though it has now been replaced in the EU by the Clean Energy Package (Box 15.2).
- **Strengthen the regulators, including their independence, their powers and their resources.** Specifically, the following issues should be tackled:
 - **Improve the selection of commissions** and reduce government influence in the selection process. The improvements should aim to reduce the timeframe of the selection process and thus ensure that the regulator's governing body has a decision-making quorum—this is particularly relevant for Kosovo.
 - **Strengthen the WB6 regulators' power to set salaries.**
 - **Increase staffing levels, especially of technical staff**, to continue to operate at current, or even higher levels of quality despite expanding roles, requirements, and responsibilities for regulators.
- **Invest further across the entire WB6 region to achieve four key goals:** 1) replacing ageing infrastructure; 2) diversifying supply and sources/routes; 3) increasing interconnections; and 4) strengthening the climate resilience of the energy sector. These investments would go a long way towards increasing the stability, security and efficiency of infrastructure, and would promote competition by establishing the physical flows that create opportunities for trade flows.
- **Reduce distribution losses.** This will require investment accompanied by legislative changes and enforcement that increase the cost of illicit consumption of energy.

Security of energy supply (Sub-dimension 12.2)

Security of supply is essential for steady economic activity. The uninterrupted supply of energy allows for planning and cost minimisation across all sectors, while the absence of steady supply increases operational costs and reduces competitiveness. Supply security can be split into two elements:

1. **The supply security of energy:** whether or not WB6 economies are in a position to provide an adequate supply of energy for day-to-day consumption of the entire economy, are prepared for supply distribution or demand emergencies, and are seeking to diversify the energy mix and supply of energy.
2. **The long-run sustainability of the energy sector:** including the development of renewable energy sources and improving energy efficiency to simultaneously increase the viability of an economy while also increasing its resilience to and co-operation on climate change. Given the mounting pressure on non-renewable energy sources globally, and the reliance of many economies on a single source of energy, the benefits of diversifying the energy mix through renewables and curbing demand growth through energy efficiency have enormous potential to improve the competitiveness of the energy sector. While the development of sustainable energy also faces challenges, mainly due to insufficient global market development, governments are encouraged to prioritise this policy direction in the face of climate change.

The WB6 economies have made significant progress in this sub-dimension since the last CO assessment, with the score rising from around 1.8 to 2.9. The improvement in the score reflects the implementation of policies to guarantee energy supply security. This includes the increased diversification and expansion of the natural gas supply, increasing renewable generation, and the deployment of energy efficiency measures (Table 15.3). However, despite advances, and almost uniformly across the WB6, there remains significant room for improvement in the area of renewable energy penetration and energy efficiency improvement. Nonetheless, North Macedonia is leading the region as it has consistently implemented frameworks and policies in line with international standards and practices.

Table 15.3. Scores for sub-dimension 12.2: Security of energy supply

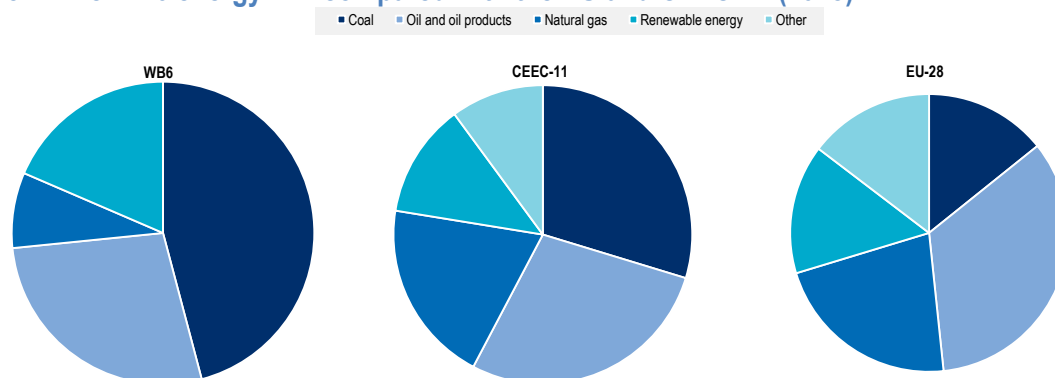
Sub-dimension	Qualitative indicator	ALB	BIH	KOS	MKD	MNE	SRB	WB6 average
Sub-dimension 12.2: Security of energy supply	Natural gas supply framework	2.0	3.0	1.5	3.5	2.0	2.0	2.3
	Electricity supply framework	4.0	3.0	3.5	3.5	3.0	3.0	3.3
	Renewable energy policy	3.5	2.5	3.5	4.0	3.0	3.5	3.3
	Energy efficiency policy	2.0	2.0	2.5	3.5	2.5	3.0	2.6
Sub-dimension average score		2.9	2.6	2.8	3.6	2.6	2.9	2.9

The natural gas supply framework exposes the WB6 to single-supplier and supply-route risks

The natural gas supply framework indicator assesses to what extent the WB6 economies are prepared to overcome emergencies or diversify their energy mix to include natural gas in order to ensure a continuous energy supply to customers. Failure to provide this steady supply could have detrimental effects on the competitiveness of these economies.

When considering the natural gas supply framework, it should first be highlighted that in the WB6 economies natural gas accounts for a considerably smaller share of the primary energy consumption mix than in their European Union, CEEC-11 and regional counterparts (Figure 15.7).

Figure 15.7. The WB6 energy mix compared with the EU and CEEC-11 (2018)



Note: Energy mix reflects primary consumption excluding geothermal and net imported or net exported electricity. CEEC-11=Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia.

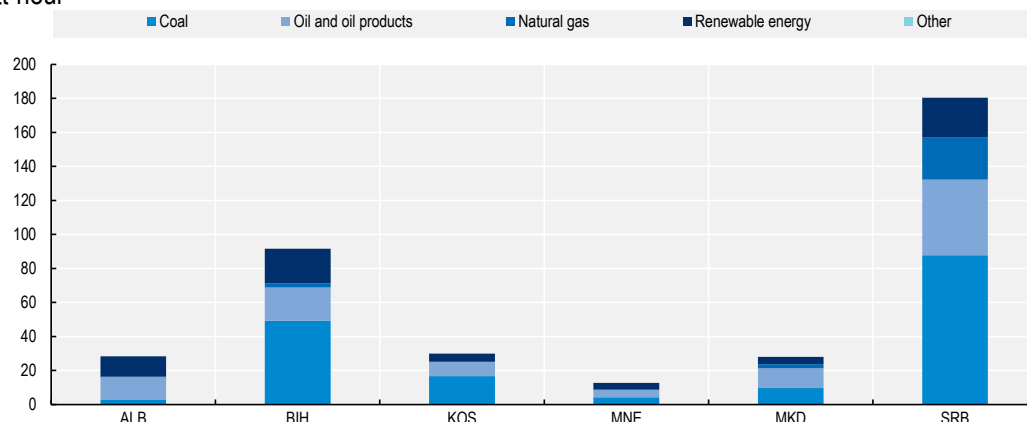
Source: Eurostat (2021_[4]), *Complete Energy Balance*, <https://ec.europa.eu/eurostat/web/energy/data/database/>.

StatLink <https://doi.org/10.1787/888934254753>

This is due in large part to the fact that Kosovo and Montenegro do not have a natural gas market at all (Figure 15.8), and Albania has been only recently connected to an international natural gas pipeline via the Trans-Adriatic Pipeline.³

Figure 15.8. The WB6 energy mix (2018)

Terawatt-hour



Note: Energy mix reflects primary consumption excluding geothermal and net imported or net exported electricity.

Source: Eurostat (2021_[4]), *Complete Energy Balance*, <https://ec.europa.eu/eurostat/web/energy/data/database/>.

StatLink <https://doi.org/10.1787/888934254772>

Given the limited natural gas penetration and spread of markets in the WB6, it is no surprise that the legislative framework for natural gas and associated markets is not as well-developed as for electricity in the region. Furthermore, those WB6 economies that do have natural gas markets are almost exclusively sourcing their gas from Russia and often via a single import route, with Serbia building an alternative import route for Russian natural gas. Albania is the only WB6 economy not to receive its natural gas from Russia, obtaining it from Azerbaijan instead. Consequently, the region is very exposed to single-supplier and supply-route risks. Moreover, Bosnia and Herzegovina and Serbia's natural gas supplies continue to be oil-indexed, even though this is not in line with EU good practice, as it disconnects the natural gas pricing from supply and demand market realities.⁴

Given the low natural gas share in the energy mix, and the substantial level of oil and coal consumption, there is further room to expand natural gas as a substitute for other fossil fuels, thereby diversifying the energy mix while lowering greenhouse gas emissions. However, the environmental and security benefits

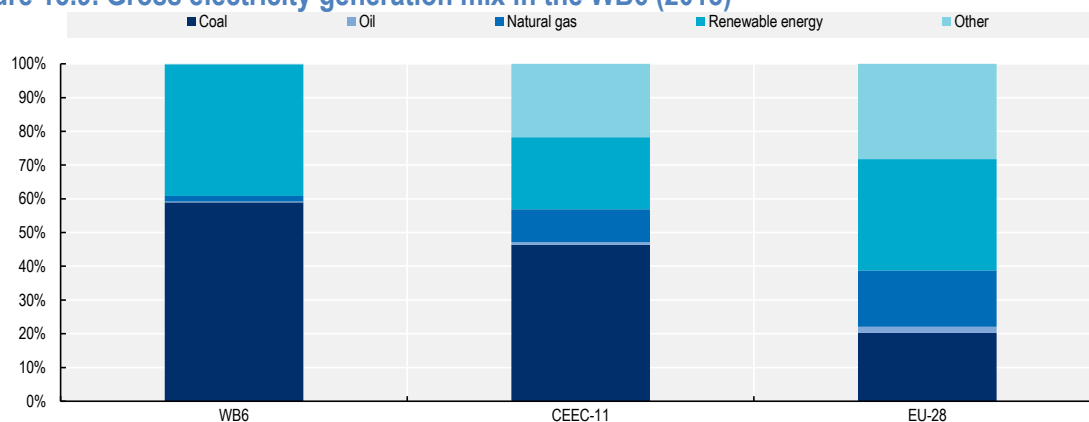
of expanding the natural gas market should be carefully weighed against the cost of the additional infrastructure required to do so. A possible outcome of this consideration could be to skip investing in natural gas infrastructure and instead concentrate on renewable energy and energy efficiency measures instead.

The electricity supply framework is well-advanced but over-reliant on coal

A reliable electricity supply is vital for any well-functioning economy. Communication infrastructure, as well as industrial and service sectors, all depend on reliable and efficient electricity systems. The electricity supply framework assesses the extent to which governments have designed policy, legal, and institutional frameworks to ensure the delivery of a reliable and efficient electricity supply in a timely manner.

The WB6 economies have well-advanced legislative frameworks, and most have some form of emergency plan or strategies in place and have undertaken stress tests. However, several gaps remain. The WB6's electricity generation mix is dominated by coal, which accounted for over 50% of gross generated electricity in 2018 (Figure 15.9). Moreover, the WB6 region appears to be planning to continue relying on coal-fired generation, with new generation capacity planned, both to meet growing demand and to replace ageing capacity. This is particularly challenging as WB6 economies are, as part of the Berlin process formulated in the Sofia Declaration (Berlin Process, 2020^[11]), committed to the transition to a low-carbon electricity sector. However, the policies of expanding coal generation are often old, and in most circumstances, based on information provided by WB6 governments, it appears that they will not materialise.

Figure 15.9. Gross electricity generation mix in the WB6 (2018)



Note: CEEC-11=Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia.

Source: Eurostat (2021^[4]), *Complete Energy Balance*, <https://ec.europa.eu/eurostat/web/energy/data/database>.

StatLink  <https://doi.org/10.1787/888934254791>

Renewable energy policy has scope to move beyond hydro generation

Renewable energy development should be one of the key areas of energy policy in all economies. Increasing renewable energy has several benefits. For one, it strengthens energy security as it is a local source of energy, diversifies the local energy mix and helps reduce reliance on imported energy. For another, once established, the low marginal cost of renewable generation compared to fossil fuel generation capacity can put downward pressures on energy prices. Finally, increasing renewable generation has the potential to lower greenhouse gas emissions and other air pollutants, which in turn would improve the quality of life in WB6 economies and support the sustainability and climate resilience of the energy sector. It is an essential element for most economies to reach their COP21 commitments. However, as a relatively new global supply, renewable energy sources face significant challenges.

The renewable energy policy indicator assesses to what extent the WB6 economies have a clear strategic vision for renewable energy development, backed by a legal and regulatory framework. These are mostly in place in the WB6 in the form of National Renewable Energy Action Plans, as well as strong institutions and support mechanisms for their implementation.

Renewable energy accounted for nearly 40% of the WB6's generated electricity in 2018, yet nearly all of this was derived from hydro generation, which has been an energy source in the WB6 for many years now (Eurostat, 2021^[4]). Hydro generation continues to dominate renewables despite the great potential for wind and solar generation, whose combined potential in the WB6 region as a whole could be three times the size of the remaining hydro potential (IRENA, 2019, p. Table 3.1^[12]). Thus, renewable generation other than hydro is still very much in its infancy. The WB6 economies urgently need to support the expansion of renewable generation by establishing a supportive and sustainable environment—most notably with regards to pricing and grid integration.

One tool for increasing the attractiveness of renewable energy generation is the Guarantee of Origin certificate. These are provided to renewable generators who can sell them on to consumers who would like to certify that their consumption originates from renewable energy. These certificates also represent an additional income source for renewable generators as they allow them to capture customers paying higher margins. Many WB6 economies are in the process of deploying such certification systems, but with the exception of Serbia, they are not yet fully operational in most economies.⁵ The legislation governing the certificates reflects the EU's Third Energy Package, which permits economies to forgo issuing the certificates to generators who receive public aid, which many economies have opted to do. It should be stressed that in its Clean Energy Package, the EU reformulated the clause to require certificates to be issued to subsidised generation, although income from the certificates needs to be accounted for in the subsidy.

Energy efficiency is still in its early stages in the WB6

Energy efficiency is an economy's "hidden fuel", providing significant potential for curbing demand growth and redirecting energy consumption. Accordingly, the energy efficiency policy indicator assesses to what extent the WB6 economies are in a position to undertake the necessary investments, based on whether or not they have competitive energy efficiency markets, a clear policy direction, strong legislation, and modern building codes.

While the WB6 economies do have extensive energy efficiency policies in place—such as National Energy Efficiency Action Plans – the legislative framework is patchy.⁶ This is particularly true for energy efficiency labelling of products for which North Macedonia has the most extensive Third Energy Package-compliant legislative framework, and Albania and Bosnia and Herzegovina have the least compliant frameworks (Energy Community Secretariat, 2020^[2]). Moreover, while the legislative framework is mostly in place for the energy efficiency performance of buildings, the certification of buildings is in the early stages, and the focus is mainly on new builds at the moment. In part, the slow uptake of energy efficiency provisions could be due to limited funding, as the funds that are available seem to be almost exclusively focused on the energy performance of public buildings. Energy efficiency audit requirements are in the process of being deployed across the WB6, in line with Article 8 of the Energy Efficiency Directive. However, progress is being slowed down by a lack of trained and certified auditors. In general, there is a significant shortage of technical staff in public institutions that deal with energy efficiency.

The way forward for security of energy supply

- **Increase the stability of energy supply** by enhancing the policies tackling supply emergencies and implementing existing energy (supply) strategies more rapidly as projects are falling behind schedule. While some of the WB6 economies plan to continue to rely primarily on coal-fired power

generation to help ensure energy supply security, with the increasing need for energy sectors to minimise their carbon emissions, it would be advisable for these economies to look to renewable sources instead—in combination with the possible introduction of some form of greenhouse gas pricing. Finally, key infrastructure investment is needed to reduce the WB6 electricity distribution losses, which impose additional costs on the competitiveness of the WB6 economies.

- **Pursue a policy of increased renewable generation as the primary source of supply growth.** This will be particularly important should carbon border taxes be introduced, as is currently being discussed in the European Union, since this would mean that energy-intensive economic sectors would be increasingly uncompetitive. This can be achieved as follows:
 - **Improve the value-added proposition of renewable energy projects** by implementing, in line with international standards, competitive assignment of renewable projects (e.g., auctions) and by adjusting support schemes from feed-in tariffs to feed-in premiums or contract-for-differences (Box 15.3). These changes should build investors' confidence as the new approaches imply increased sustainability in the market due to their competitive nature and alignment with market realities.
 - **Develop and deploy Guarantee of Origin certificates.** This will primarily involve establishing or designating a platform where stakeholders, such as renewable generators and consumers, request the issuing, registration and eventual transfer and calculation of certificates.
- **Prioritise the increased implementation of energy efficiency.** Doing so will help reduce energy price rises and climate impacts on consumption, and thus also support the overall economy in becoming more efficient and competitive. The following steps can improve energy efficiency:
 - **Improve national strategies** to provide more economic sectors with detailed guidance on energy efficiency requirements.
 - **Finalise the legislative base for energy efficiency** to include requirements for industrial and commercial enterprises, energy product labelling, and certification of energy performance for buildings. The operational deployment of energy efficiency audit requirements for industry should be accelerated—including the training and certification of auditors, and all economic entities should be encouraged to undertake energy audits.
 - **Transpose and implement the European Union's Clean Energy Package** (Box 15.2). This package reflects the EU's latest best efforts for promoting a clean and sustainable energy sector, with a focus on energy efficiency.
 - **Increase the human resource capacity of public entities.** Many of the WB6 economies have a significant shortage of key staff to tackle energy efficiency, which is hampering progress. If they have not done so already, all WB6 economies should establish and equip energy efficiency agencies.
 - **Increase the availability and coverage of energy efficiency funding**—including for private endeavours—to accelerate energy efficiency measures across society. The widening of the financial support base can take different forms, from cheaper loans tied to energy efficiency requirements to direct financial support, such as tax credits, etc.
 - **Increase public acceptance through public information campaigns** on the need for and benefits of energy conservation.

Box 15.3. A new approach to subsidising renewable energy

Feed-in tariffs were the dominant form of financial support for renewables within the EU at the beginning of the 21st century. In this system, power plant operators receive a fixed payment for each unit of electricity generated independent of the electricity market price (Banja et al., 2017, p. 15_[13]).

Feed-in tariff schemes offer several advantages, but mainly they insulate new market entrants from market price risks, which lowers their capital costs and enables private investment. The simplicity of feed-in tariffs makes them suitable for markets with a large number of non-commercial participants such as households or local community-based initiatives (Council of European Energy Regulators, 2018, p. 12_[14]).

However, feed-in tariff schemes exclude producers from actively participating in the market, which hinders efforts to develop large, flexible and liquid electricity markets as the share of renewable energy grows. This limits growth to certain technologies and sizes of installations, and creates difficulties in setting and adjusting appropriate tariff levels (European Commission, 2014, pp. 12-13_[15]). The latter has been a problem especially as costs of renewable generators have fallen rapidly in recent years.

The European Commission suggests switching from feed-in tariff to feed-in premium schemes (European Commission, 2013_[16]). In these, plant operators sell the electricity generated directly on the electricity market and earn an additional payment on top of the electricity market price. This is received as a fixed payment or one adapted to changing market prices, thereby limiting price risks for plant operators, as well as the risks of providing windfall profits (Banja et al. 2018). Feed-in premium schemes are beneficial because they force renewable energy producers to find a seller on the market. They also ensure that renewable energy operators are exposed to market signals. A well-designed premium scheme can limit costs and drive innovation by using a competitive process to allocate support. Such schemes also include automatic and predictable adjustments to cost calculations, which give investors the information and confidence necessary to invest (European Commission, 2013, p. 8_[16]).

The European Commission suggests using a feed-in premium scheme in combination with the following good practice recommendations (European Commission, 2013_[16]):

- Do not pay premiums for production in hours where the system price is negative or above the level of remuneration deemed necessary.
- Assign renewable project and associated premiums using competitive allocation mechanisms such as auctions.
- Make planned volume-based premium reductions for new installations dependent on when they are approved, connected or commissioned.
- Conduct regular, planned and inclusive reviews of premiums for new installations.

However, the Council of European Energy Regulators reports that in 2016/17, 17 of the 27 European Union member countries still used some form of feed-in tariff, although mainly for small projects, while around 16 used feed-in premiums, including to complement feed-in tariffs (Council of European Energy Regulators, 2018_[14]).

For further and more detailed exploration of renewable energy subsidies and best practice please see the sources below. Meanwhile, for more information on the different renewable support schemes employed across Europe please see <http://www.res-legal.eu/home/> and for an overview of auctions and outcomes (including databases on auctions) see <http://aures2project.eu/>.

Source: (Banja et al., 2017_[13]), “Renewables in the EU”, <https://e3p.jrc.ec.europa.eu/sites/default/files/documents/publications/kjna29100enn.pdf>; (Council of European Energy Regulators, 2018_[14]), *Status Review of Renewable Support Schemes in Europe for 2016 and 2017*, <https://www.ceer.eu/documents/104400/-/-/80ff3127-8328-52c3-4d01-0acbdb2d3bed>; (European Commission, 2013_[16]), European Commission guidance for the design of renewable support schemes, https://ec.europa.eu/energy/sites/ener/files/com_2013_public_intervention_swd04_en.pdf; (European Commission, 2014_[15]), *Guidelines on State Aid for Environmental Protection and Energy 2014-2020*, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52014XC0628%2801%29>.

Energy markets (Sub-dimension 12.3)

Energy markets provide a platform for energy trade and can range widely in size, type and level of competitiveness. Differences in energy markets are influenced by all the afore-mentioned aspects of the energy sector, including governance, legislation, regulation, energy mix, and infrastructure.

Overall, a sub-optimal market stifles competition and leads to inefficiency through prices that do not reflect the true scarcity of an energy product. This ultimately results in inadequate investment signals and sub-optimal energy consumption.

The average score for the WB region has risen from 1.9 in the last Competitiveness Outlook to 3.0 (Figure 15.1), as the WB6's energy markets have improved with increased liberalisation, price deregulation on the wholesale level, and deployment of power exchanges. Albania and North Macedonia are leading the regional scores in part due to their efforts to deploy an organised market and efforts to increase regional integration (Table 15.4). Meanwhile, Kosovo and Montenegro are prime examples of improvement in the area of the unbundling of, and third-party access to, their energy markets. However, there remain significant hurdles in the region with regard to unbundling within and third-party access to natural gas markets—in particular in Serbia and Bosnia and Herzegovina—and room for improvement in the deployment of organised markets. Moreover, regional integration and market coupling are largely absent.

Table 15.4. Scores for sub-dimension 12.3: Energy markets

Sub-dimension	Qualitative indicator	ALB	BIH	KOS	MKD	MNE	SRB	WB6 average
Sub-dimension 12.3: Energy markets	Market operation	3.0	1.5	2.5	4.0	3.5	3.5	3.0
	Unbundling and third-party access	3.5	1.5	4.5	3.5	4.0	2.5	3.3
	Regional market integration	3.5	2.5	2.0	3.5	2.0	2.5	2.7
Sub-dimension average score		3.3	1.8	3.0	3.7	3.2	2.8	3.0

Energy markets are moving towards international good practice

Market operations are an essential cornerstone of market development and integration as they account for the physical implementation and operation of the market. The efficient implementation of physical markets is, together with non-discriminatory treatment of market participants, a necessary precondition for efficiency gains through an economy's own internal market, as well as through regional integration. The latter is especially relevant for the WB6 economies, as integrating their relatively small energy markets regionally and with their EU neighbours could allow them to reap the benefits of competitive energy markets. Accordingly, the market operation indicator assesses the state of the physical markets in the WB6 economies, including how efficient they are and to what extent they encourage competition.

The WB6 economies have made good progress on this indicator—most markets have been partially liberalised, and prices are increasingly being deregulated. However, some market segments remain regulated, in particular the retail markets, where consumers are captured by dominant market incumbents—often under the umbrella of universal suppliers⁷ whose position as sole supplier is reinforced by the lack of competition. Nonetheless, it is positive to note that more economies have deployed organised wholesale markets. The most recent economies to do so are Albania, Kosovo and Montenegro, which have all set up power exchanges,⁸ although they have yet to start operating. North Macedonia has nominated the market operator and is working on deploying the organised (wholesale) market, but is very much in the early stages. In addition, state law does not cover the operational deployment of an organised market so deployment is subject to the adoption of a new law. However, there are several market segments in the WB6 economies that still lack working organised marketplaces. These are urgently needed as their absence is a significant barrier to market integration and coupling.

Unbundling and third-party access are also approaching international good practice

Unbundling the operations of different parts of the energy sector is one of the key requirements for competitive markets. This means that companies that operate electricity and heat generation, electricity or gas transmission and electricity, gas, or heat distribution should be managed and operated by separate entities. This separation is necessary in order to avoid vertical integration and minimise monopolistic behaviour. Transmission and distribution networks are natural monopolies, providing opportunities to limit third-party access if the same entity owns and operates both the network and generation. Markets with fully integrated operators and lack of third-party access tend to distort fair competition; thus, unbundling in combination with full third-party access to the network is a prerequisite for a competitive market. This indicator assesses the extent to which these key natural monopolies are unbundled and grant access to infrastructure in line with international good practice.

The WB6 region is nearing full implementation of international good practice on unbundling. This is also true for allowing non-discriminatory third-party access to natural monopoly-owned infrastructures. Most WB6 economies have the legislative basis for unbundling, in line with the EU's Third Energy Package (apart for some market segments in Bosnia and Herzegovina). Albania is a particularly positive example, as, after many years of having had a bundled electricity distribution company, it is making progress in conjunction with an international donor project to unbundle the company. Most recently, the distribution system operator has been legally unbundled, but functional unbundling is yet to be completed. Meanwhile, Bosnia and Herzegovina and Serbia are lagging behind, particularly with regard to natural gas, where unbundling and third-party access are lacking. Bosnia and Herzegovina has not even started unbundling; whereas in Serbia progress has been made towards legal unbundling, but functional unbundling is not in place yet.

Regional market integration is making slower progress

The regional market integration indicator assesses to what extent markets can be and are efficiently integrated and coupled. Market integration and its benefits are based on two pillars:

1. **Harmonised regulations within the region.** These allow for the faster, more efficient development of energy trade and the integration of several economies into a common shared market. Prices in these regional markets respond to various supply and demand forces, often resulting in more competitive prices and a larger variety of market products—while simultaneously lowering supply risk.
2. **Improved and co-ordinated interconnection management.** A co-ordinated network and interconnection reliability are paramount for transferring trade flows to consumers in the most efficient way possible on a regional level. Networks with high congestion and poor reliability are unable to operate a highly competitive market with a large number of transitions and heavy flows. Alternatively, when congestion and reliability are properly managed, markets are able to respond by providing fast responses and higher quantities, and thus also competitive prices.

Progress towards regional integration is limited. The Energy Community Secretariat found that the transmission networks of the Energy Community Contracting Parties—including the WB6 economies—are more strongly interconnected than those of the majority of EU Member States (Energy Community Secretariat, 2021, p. 85^[17]). However, it noted that although market integration in the WB6 area is not hindered by the lack of interconnectors, it is limited by inefficiencies arising from the absence of short-term co-ordinated capacity calculation and an efficient mechanism for allocation and use (Energy Community Secretariat, 2021, p. 85^[17]). Moreover, despite various international projects, market coupling remains absent. However, this is in part due to the absence of working organised markets in most WB6 economies until very recently.

The way forward for energy markets

- **Seek to expand the competition-driven efficiency gains of an organised energy market.** In particular:
 - **Continue the liberalisation and price-deregulation of the wholesale and retail market.** WB6 economies need to eliminate existing market barriers. Moreover, in some cases due to lack of competition, the balancing market is also still regulated. Accordingly, as markets are deregulated and liberalised, the WB6 economies need to devise and implement strategies that promote market entry, liquidity, and, ultimately, competition.
 - **Deploy and operationalise organised energy markets.**
- **Unbundle key natural monopolies**, such as the transmission system operators and distribution system operators. Separating these entities from vertically integrated energy companies is essential to create a level playing field for all generators and suppliers.
- **Prioritise non-discriminatory third-party access** to the market on a functional level. Together with unbundling, non-discriminatory third-party access is crucial for promoting market entry and participation, and thus also competition and efficiency of markets—particularly for international flows, given the small size of most WB6 energy markets.
- **Enhance regional co-operation and move towards eventual market integration and coupling.** Specifically this requires improvements to the optimised and co-ordinated allocation of cross-border interconnections; better regional market coupling, so that there is a regional price response and anchoring; reducing regional barriers, including recognising licences from other economies; and accommodating regional market coupling by promoting cross-border trading activities. These steps should help ease market variations and fluctuations, while simultaneously safeguarding the market against manipulation by dominant energy entities in a specific market.

Energy incentives and subsidies (cross-cutting sub-dimension)

Subsidisation and cross-subsidisation in the WB6 energy sectors is a cross-cutting sub-dimension assessed in this edition of the Competitiveness Outlook, though it is not scored. Given the nature of subsidisation and cross-subsidisation, this sub-dimension does not have any specific indicators that can be considered. While broadly speaking there is subsidisation of primary energy, conversion of energy, and consumption, the subsidisation that occurs within these areas and across them can take many forms. The absence of a score also reflects the fact that every economy has some form of subsidisation in place, often to protect consumers or to encourage the development of a new market segment such as renewable energy or implementation of energy efficiency measures. Thus, the presence of subsidisation is not always negative, making scoring it a difficult and very subjective task. This section therefore explores the presence of subsidisation outside of common norms and analyses their potential distortive impact on market equilibrium.

Subsidisation is an essential tool for directing energy policy and the energy market, since it can help support fragile or nascent energy sources. However, any subsidisation, whether direct or indirect, does distort the market away from the competition-driven optimal equilibrium created between price-driven supply and demand. Therefore, subsidisation needs to be carefully designed and, in many cases, limited to certain conditions (e.g., on time, form or size). Failure to do so will lead to a sector that distorts either consumption or supply to the point where the market deviates from its long-term equilibrium. This deviation tends to be associated with increased hidden and long-term costs, which in turn lower the competitiveness of the entire economy.

Significant levels of subsidisation across the WB6 are distorting the market

One main area of concern for subsidisation in the WB6 energy market is the systemic subsidisation of coal-fired power generation across most of the region. Miljević (2020^[18]) estimates that taken together, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia provided EUR 72.71 million in direct subsidies to coal and lignite electricity producers in 2019. However, it should be noted that this level of subsidisation has been significantly reduced from the nearly EUR 165 million provided in 2015. Overall, this subsidisation distorts the energy market in the WB6 by artificially increasing the economic viability of coal-fired generation and lowering energy prices. Furthermore, this subsidisation is counterproductive to the region's aim of reducing carbon emissions and of subsidising renewable energy and energy efficiency, since it increases the financial support required to make renewable energy or energy efficiency viable.

Another concern is the market distortion arising from the blanket use of universal suppliers to supply small consumers, and exclusive generation contracts between generators and universal suppliers. The functional impact of these two practices is a reduction in market liquidity and thus a weakening of the economic forces that drive efficiency in a competitive energy market to lower prices. Moreover, the use of universal suppliers to supply all households and small consumers is often associated with low prices—possibly below market prices—which then have to be offset by higher prices for industrial consumers or through state subsidisation. This can also take the form of regulated retail prices that do not reflect market prices. Overall, lower prices push household, small industrial, and commercial consumer demand above the optimal level, and the cost of this distortion is carried in one way or another by the economy. Ultimately, these practices introduce inefficiencies into the market that negatively affect economic competitiveness.

Another form of subsidisation in the WB6 region is differentiation of payment for electricity consumption, in particular for public entities. In Albania, Kosovo and Serbia the different payments approach for public entities has largely resulted in transferring the cost of their electricity consumption to wider society. This means these entities' consumption is distorted from their efficient level, and the cost of this deviation is carried by society.

Albania demonstrates yet another subsidisation practice present in the WB6 – the existence of outstanding payments between non-energy sector stakeholders and energy stakeholders, outstanding payments among energy stakeholders, as well as outstanding payments owed by energy stakeholders to the government. These outstanding payments are a form of subsidisation as they imply that the costs associated with their activities are not paid and thus that the entities had lower operational costs than other non-state entities. This in turn leads to distorted demand and sub-optimal market outcomes.

Also of particular interest are exemptions in Bosnia and Herzegovina and Kosovo for renewable generators to bear full responsibility for their electricity imbalances.⁹ Taking Kosovo as an example, the legislation governing renewable energy stipulates that renewable generators need only pay 25% of their imbalance cost. While in general financial support is seen as necessary for aiding renewable generation growth, this particular subsidisation approach encourages renewable generators to forgo good forecasting practices to the extent where imbalances become greater. These increased imbalances create a security of supply risk, and avoidable extra costs that end up being carried by society or specific groups of consumers in a non-transparent manner.

A final form of subsidy in the WB6 is the use of congestion revenues for reducing transmission tariffs. In essence, international trade flows are subsidising domestic consumers. Since regional integration is a key consideration for the WB6 energy markets and their liquidity, congestion revenues should, in line with EU good practices, be used to increase or maintain cross-border interconnection capacity and to reduce regional or national congestions. However, the use of revenue to reduce transmission tariffs is not prohibited by EU regulations.¹⁰

The way forward for energy incentives

Overall, the WB6 should strive to keep market interventions to a minimum—in particular subsidies. Of course, certain types of subsidies are inevitable, such as those for vulnerable customers and renewable energy generation, or those in places where markets fail to consider long-run externalities. However, beyond those exceptional circumstances, money spent on subsidisation largely distorts markets that inevitably costs society both directly in terms of the value of the subsidisation and indirectly through the loss of efficiency in market-driven outcomes. Therefore, the WB6 economies should:

- **Eliminate the subsidisation of fossil fuels—in particular coal and coal-fired generation.** This is particularly important given the rise of climate pressures on energy markets and the associated subsidisation of renewable energy. While both are supported simultaneously, subsidising coal is counterproductive to the subsidisation scheme for renewable energy as it increases the need for financial support for renewables.
- **Undertake an extensive information campaign** which highlights the need to reduce subsidies—including large-scale or blanket subsidies for consumers.

Conclusion

Overall, the WB6 economies have made good progress in establishing the foundations for competitive energy markets by developing extensive legislation, regulation and policy frameworks. The focus now needs to be on implementing and deploying these frameworks. This includes measures to ensure non-discriminatory access to the markets, promotion of competition—including reducing the dominance of incumbents—and perhaps most importantly, deploying organised markets together with the promotion of regional integration and coupling. Overall, these measures will ensure that markets are driven by competition, and thus will lead to the most cost-effective approach to energy in the WB6. This in turn would support the wider competitiveness of the economies in general, given the importance of energy in any value chain.

Improvements in energy supply security have been slow and renewable energy deployment and energy efficiency improvements are still very much in their early stages. Tackling these will help ensure access to a stable, quality supply of energy on a business level, while diversifying energy sources and supply options on the macro level. Finally, the WB6 economies are only at the beginning of creating a sustainable energy sector.

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Notes

¹ The 11 Central and Eastern European countries (CEECs) joining the European Union: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia.

² Under EU Regulation 2018/1999 on the Governance of the Energy Union and Climate Action, all EU Member States are required to draft a National Energy Climate Plan (NECP) every two years. The NECPs are integrated plans that require co-ordinated government planning and should cover five areas: 1) Energy efficiency; 2) renewable energy; 3) Greenhouse gas emissions (reduction); 4) interconnections, and 5) research and innovation. The drafting requirement was extended to the Energy Community Contracting Parties—including WB6 economies – through the adoption of Ministerial Council Recommendation 2018/1/MC-EnC. For more information please see https://ec.europa.eu/energy/topics/energy-strategy/national-energy-climate-plans_en and <https://www.energy-community.org/regionalinitiatives/NECP.html>.

³ The Trans Adriatic Pipeline (TAP) connects Italy, Albania, and Greece to the Trans-Anatolian Natural Gas Pipeline so that supplies from Azerbaijan can be transported via Turkey and Georgia to these economies. The TAP started commercial operations on 15 November 2020. For more information see <https://www.tap-ag.com>. It should be stressed that prior to TAP, Albania did have some domestic natural gas supply and consumption. According to Instat (Instat, 2021^[24]) natural gas consumption accounted for around 2% of primary energy consumption. This share is expected to rise now that TAP has started commercial operations.

⁴ Oil indexation was once the dominant pricing format for natural gas in Europe. This largely reflected that at the time, natural gas spot markets were not liquid enough to provide good price signals. Moreover, natural gas was competing with oil consumption in power generation and heating and oil indexation was a good approach to ensure that natural gas was competitive with the main alternative fuel. Oil indexation is often also justified due to natural gas being a by-product of oil exploration or by natural gas investment competing with oil for capital investment. However, oil indexation implies that in the current market situation the natural gas price does not reflect the supply and demand realities which are largely now disconnected from oil, both in terms of alternative demand and on the production side. Furthermore, Europe has a variety of liquid natural gas spot markets that offer good pricing and indexation points, especially considering the interconnected nature of Europe's natural gas markets. There is an extensive literature on the benefits and drawbacks of natural gas being priced via oil indexation; this endnote only scratches the surface. Some examples of the literature are: (Dubreuil, Gergely Molnar and Jeon, 2020^[19]), (European Commission, 2015^[20]), (Melling, A.J. (2010), Natural gas pricing and its future- Europe as the battleground, 2010^[22]), (IEA, 2020^[21]), and (Stern, 2007^[23]).

⁵ A Guarantee of Origin certificates mechanism is operational in Serbia. The Serbian transmission system operator is the issuing body and has been a member of the Association of Issuing Bodies (AIB) since September 2019. In November 2020, the Serbian transmission system operator connected to AIB HUB, which allows exchange (import and export) of Guarantee of Origin certificates between Serbia and other AIB members.

⁶ It should be stressed that in the context of the Berlin Process the WB6 economies have committed to “Prioritise energy efficiency and improve it in all sectors” (Berlin Process, 2020^[11]).

⁷ As per EU regulation 2019/944 Article 27, a universal supplier is a designated entity charged with the duty to make sure that all households (and if applicable small enterprises) have access to electricity at specified quality at competitive, easily and clearly comparable transparent and non-discriminatory prices.

⁸ A power exchange, also referred to as an energy exchange, is a multi-layered system operated by a market operator that facilitates the trading/exchange of energy between third party buyers and sellers. Such markets can include wholesale markets with day-ahead, intraday and futures markets.

⁹ Imbalances refer to the difference between the nominated versus actual consumed, generated or supplied electricity. More precisely, EU regulation 2019/943 Whereas (15) defines imbalances to be the “difference between the allocated volume and the final position in the market”. Furthermore, Article 5 of the same regulation states that “all market participants shall be responsible for the imbalances they cause in the system”. For more information please see (Emissions-EUETS.com, 2021^[25]).

¹⁰ See EU Regulation 714/2009, Article 16, Paragraph 6.



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