WB6
Energy Community

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WB6 Energy Transition Tracker

ENERGY COMMUNITY SECRETARIAT / February 2021

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Energy transition tracker

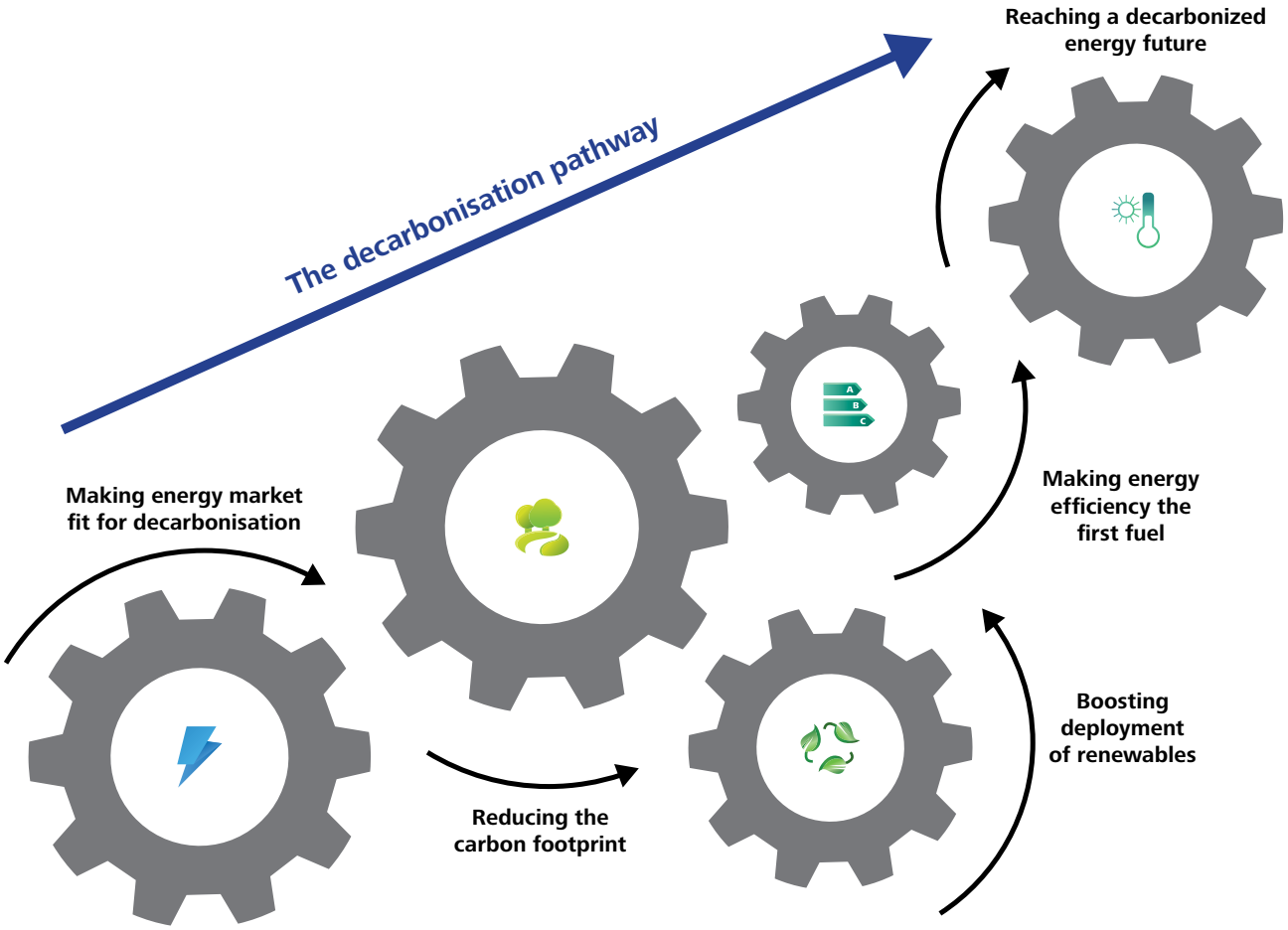
By signing the Sofia Declaration[1] on the Green Agenda for the Western Balkans as part of the "Berlin Process" in November 2020, Albania, Bosnia and Herzegovina, Kosovo[2], Montenegro, North Macedonia and Serbia pledged to follow the European Union in its decarbonisation path towards a carbon neutral economy by 2050.

The Energy Community Ministerial Council reinforced this commitment in December 2020 by tasking the Secretariat in cooperation with the European Commission to develop decarbonization roadmaps for 2030 and beyond. The Ministerial Council reconfirmed that the European Commission will propose the 2030 targets for renewables, energy efficiency and GHG emission reduction in 2021.

While high-level political commitments such as these can help grease the wheels of the energy transition process, the Secretariat's Energy Transition Tracker tries to weigh up how these political pledges are matched with policies and measures to meaningfully drive the energy transition forward.

In the Sofia Declaration, the WB6 also committed to introduce carbon pricing and align these with the EU Emission Trading Scheme (ETS); decrease and gradually phase out coal subsidies while strictly respecting State aid rules; and introduce market-based renewables support schemes. All these and other essential elements needed for the energy transition are assessed in this edition of the Tracker.

With upcoming editions, the Secretariat's Tracker will continue monitoring the endeavours of all relevant stakeholders on the path to decarbonisation.



1 The Sofia Declaration on the Green Agenda for the Western Balkans

2 Throughout this Report, this designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.

The generation mix reality

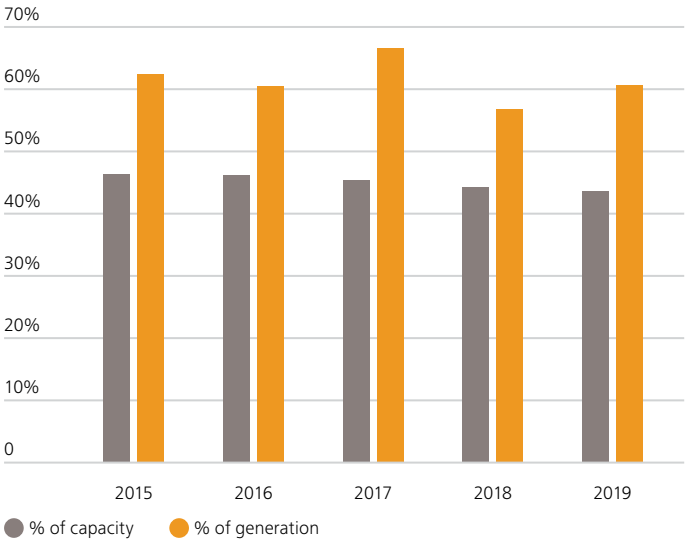
Moving away from fossil-fuel electricity production, which accounts for two thirds of the region's carbon dioxide (CO_2) emissions, is the most crucial and challenging task for the WB6, in working towards carbon-neutrality by 2050 in line with the 2020 Sofia Declaration. The only exception is Albania where electricity production is 100% from renewables. At present, fossil-fuel thermal power plants still hold the lion's share, around 48%, of the capacity generation in the WB6. In the region, coal-fired power plants constituted 43% of total electricity generation capacities and 61% of total electricity production in 2019. As no new coal-fired capacities have been put into operation recently and no existing ones have been decommissioned, the installed capacity of coal-fired power plants has remained constant at around 8,2 GW.

North Macedonia was the first among WB6 parties to announce a gradual decommissioning of its thermal power plants (TPP) in its draft National Energy and Climate Plan (NECP), starting with TPP Oslomej in 2021 and TPP Bitola in 2027. In contrast, the remaining four WB6 parties are moving on with their plans to refurbish existing coal-fired capacities or commission new capacities before 2030. The construction of a new 450MW unit at the TPP Tuzla in Bosnia and Herzegovina continues despite the ongoing infringement case initiated by the Secretariat for non-compliance with the State aid acquis. Following termination of the contract for the construction of TPP Kosovo e Re, the state-owned production company in Kosovo commissioned a feasibility study on the rehabilitation of the TPP Kosova A in December 2020. A 350MW unit in the TPP Kostolac in Serbia is planned to be completed by end of 2022. In Montenegro, rehabilitation of the TPP Pljevlja, whose operational hours have expired according to the Large Combustion Plants Directive, is in its initial phase. Should these and other plans for commissioning of new thermal power plants materialise, the current level of coal-fired generation capacities will remain until 2025 and even increase by 1,5 GW until 2030. However, the political commitment to decarbonise, legal obligations under the Energy Community Treaty and the impact of market forces put these plans into question.

In recent years, many investors benefited from feed-in tariffs to support the construction of renewables projects, which was reflected in a sharp rise of renewables capacities in 2018 and 2019. Nevertheless, this increase resulted in only a 1% drop in the share of coal-fired power capacity from 2018 to 2019. For renewables to continue to gain ground beyond 2020, ambitious targets for 2030 and market-based support schemes should be set and auctions be rolled out across the WB6. Administrative procedures should be simplified to attract more investments.

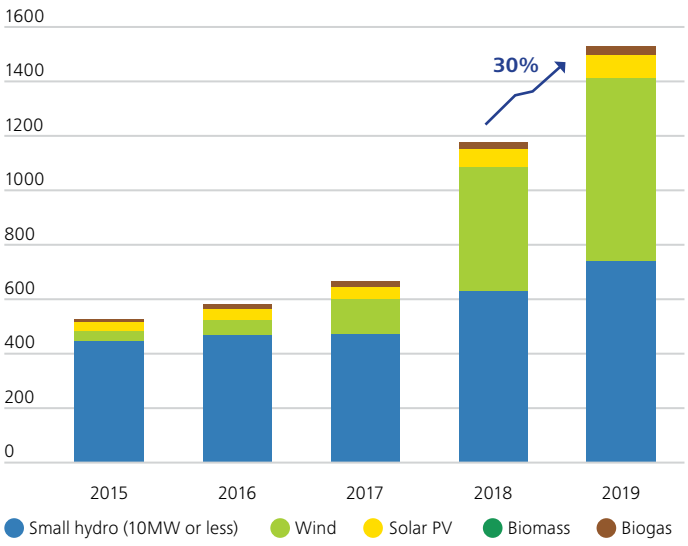
Furthermore, effective de-risking mechanisms may support mitigating the high capital costs in the region. The European Commission's plan to mobilize, under the new Economic and Investment Plan for the Western Balkans, a new guarantee facility to potentially raise investments in renewables by up to EUR 20 billion with the support of International Financial Institutions (IFIs) via the Western Balkans Investment Framework (WBIF) is a welcome development in this regard.

Share of coal-based capacity/production in total WB6 capacity/production (%)



Source: compiled and calculated by the Energy Community Secretariat.

Installed electricity generation capacities from RES (excl. large hydro) (MW)



Source: compiled and calculated by the Energy Community Secretariat.

Reducing the emission footprint

Introducing carbon pricing

Emissions of carbon dioxide from electricity and heat production in Western Balkans amounted to 56,5 million tonnes in 2019, 1% more than 2018, with electricity production as a key contributor to CO_2 emissions, mainly in coal-fired plants. The generated carbon emissions relative to final electricity demand are 3 times higher than the EU-27 average.

The WB6 on average emit ten times more CO_2 than EU-27 to create the same amount of gross domestic product. This result is a combination of inefficient electricity consumption of the WB6 economies and high carbon emissions from power generation relative to total generation. Emission of CO_2 per capita in 2019 was more than 3 tonnes, a slight decrease in comparison to 2018.

The power sector's efforts to reduce CO_2 emissions have to begin with the internalization of emission costs by introducing a carbon price.

This is reaffirmed by the WB6 leaders' commitment, under the 2020 Sofia Declaration, to continue alignment with the EU ETS, as well as to work towards introducing other carbon pricing instruments to promote decarbonisation in the region.

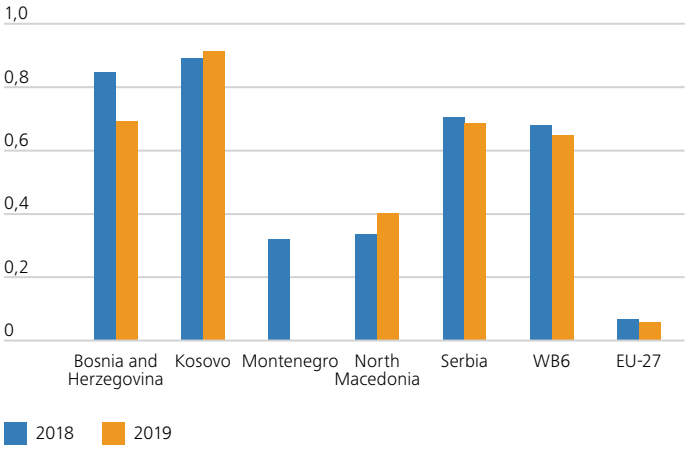
At present, most WB6 parties do not have any kind of carbon pricing scheme in place, except for Albania, which introduced a nominal tax in 2011, and Montenegro, where a national ETS covering the industry and power sectors was introduced in 2019.

In January 2021, the Energy Community Secretariat released the study "Carbon Pricing Design for the Energy Community".

After conducting an in-depth analysis of different carbon pricing scenarios and their impact on reduction of CO_2 emissions, the study identified cap and trade to be the first best policy option for introducing carbon pricing in the power and district heating sectors of the Contracting Parties.

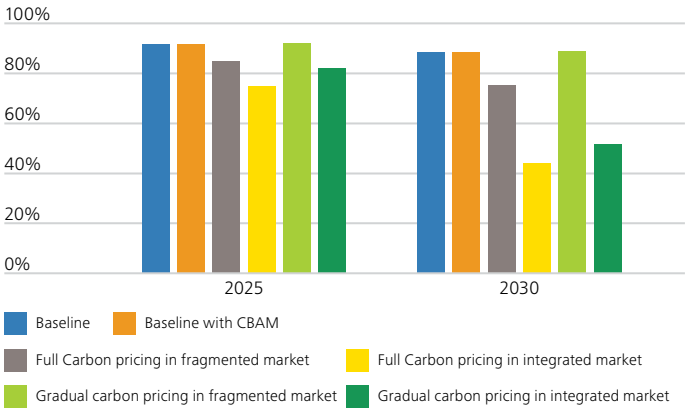
The study recommends the Gradual Carbon Pricing and Market Integration Scenario as the optimal approach for the Energy Community.

CO_2 emission from power and heat sector per GDP [kg CO_2/EUR]



Source: EUROSTAT and IEA

Projected change of CO_2 emissions from TPPs 2020-2030 in different policy scenarios (2020=100%) WB6



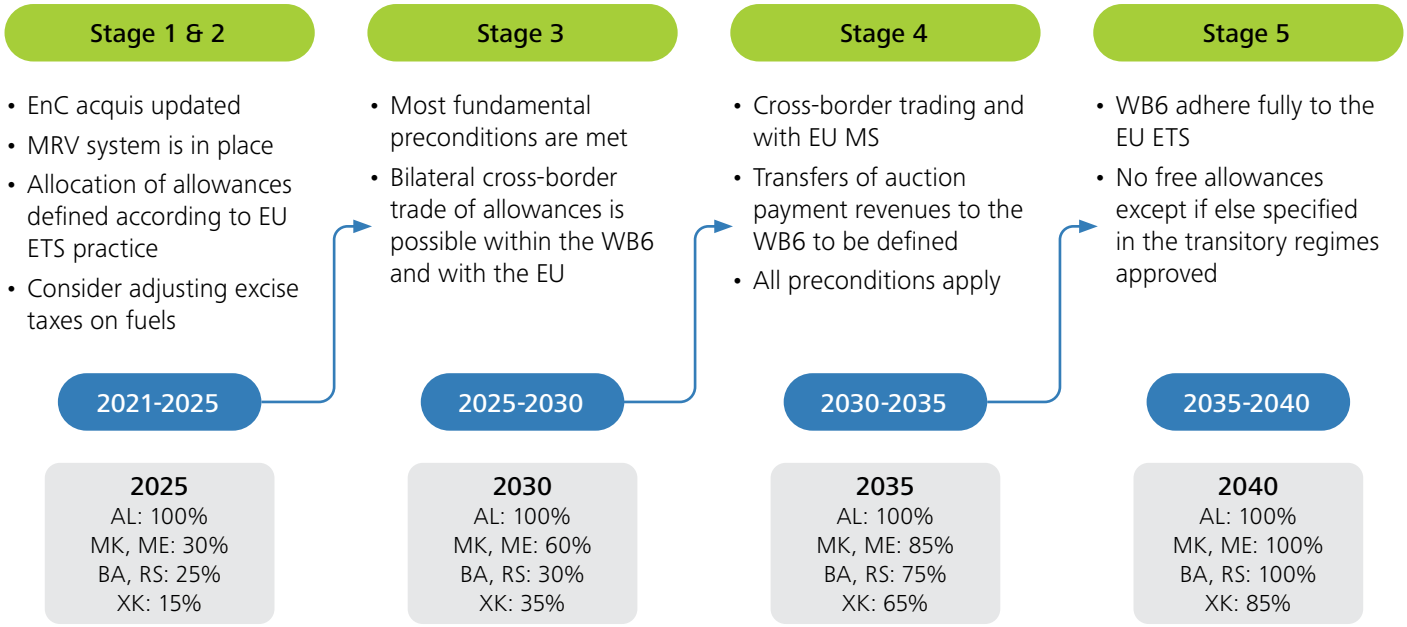
Source: Study On Carbon Pricing Design for the Energy Community

The implementation of the Gradual Carbon Pricing and Market Integration Scenario assumes that all WB parties adopt carbon pricing in a coordinated way the earliest possible, but under a transitional regime, where different rates and timeframes for auctioning allowances apply.

Such a policy option would support coal phase-out within a reasonable timeframe, without disproportionally affecting less flexible parties. In combination with integrated markets, the gradual introduction of carbon pricing would enable the diversification of the power mix and bring emissions down fast, without compromising security of supply; helping relax system constraints while enabling the increased penetration of variable renewables.

An indicative timeline and action points for implementation of the proposed carbon pricing policy option with an overview of the implementation stages starting from 2021 is provided in the diagram below.

Indicative timeline and steps for joining EU ETS



According to the study, the WB6 parties would be able to adhere to the EU ETS under a transitional regime from 2030 onwards, which implies that cross-border trading of allowances can take place at the regional level already beforehand.

Once auctioning is in place, carbon pricing is expected to generate an important stream of public revenues. Under the recommended scenario, revenues from emission charging in the WB6 would be gradually increasing and reach EUR 420 million in 2030. These funds could be used to mitigate the risks and social costs in the affected areas and compensate other associated costs of transition.

Implementation of carbon pricing should involve transposing legislation related to the implementation of the EU ETS, requirements of the Governance Regulation as well as alignment with the EU Climate Law once it is adopted, as agreed under the 2020 Sofia Declaration. It is of paramount importance that the new policies are coupled with strong enforcement provisions, and that it is clear that the revenues from carbon pricing would be used for supporting clean energy and the just transition.

Implementing the Large Combustion Plants Directive

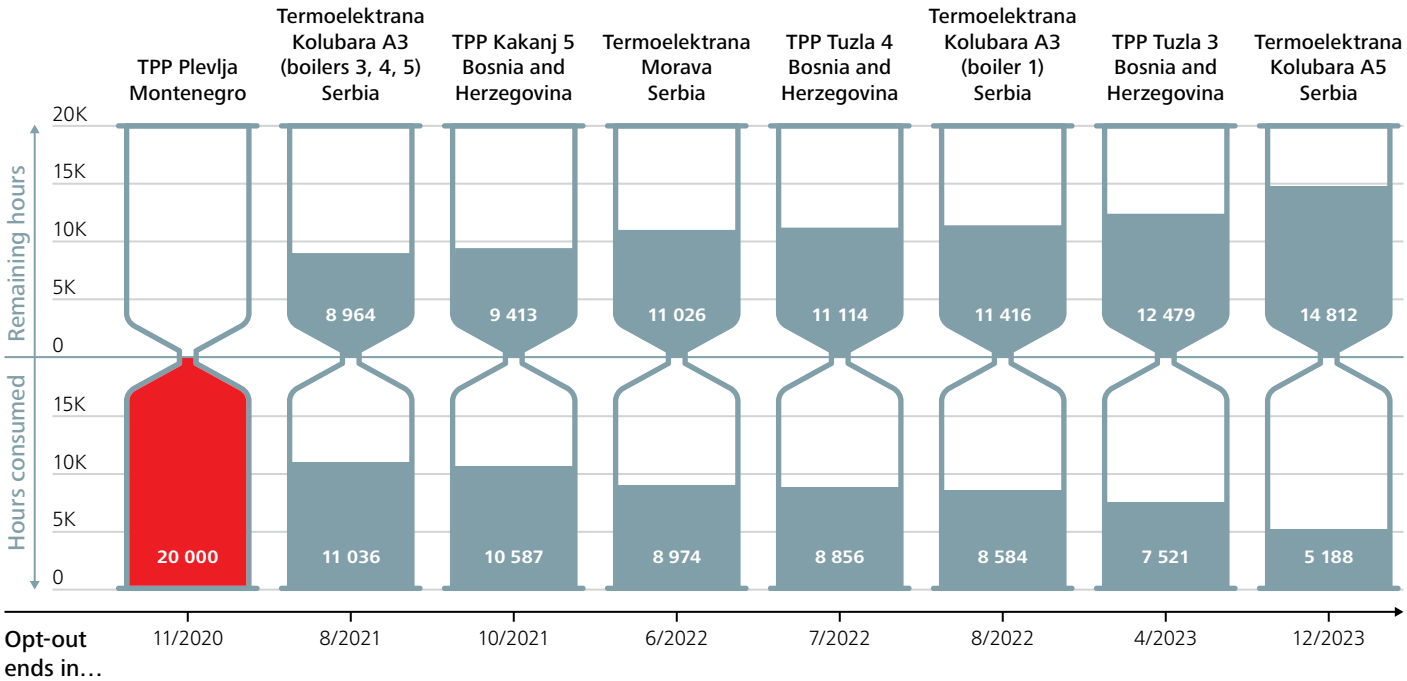
The Large Combustion Plants Directive entered into effect on 1 January 2018 in the Energy Community. This piece of the environmental acquis regulates the emission levels of sulfur dioxide (SO_2), nitrogen oxides (NO_x) and dust emissions from existing thermal power plants. Requiring significant investments or shut-down, the Directive's implementation is the first step towards putting a price on fossil fuels and thereby marks the beginning of the end of the coal and lignite era in the WB6.

Bosnia and Herzegovina, Kosovo, North Macedonia and Serbia do not comply with the emission ceiling for SO_2 for 2020 under the National Emission Reduction Plans. This is due to the high sulphur content of lignite used in the plants and the lack of progress in installing emissions abatement technology (flue gas desulphurization). It is expected that with the investments already ongoing in Bosnia and Herzegovina, Montenegro and Serbia, the situation will improve over the coming years.

With the exception of Kosovo, all WB6 parties have met their ceilings for NO_x emissions for 2020. NO_x ceilings are to decrease gradually by approximately 50% between 2018 and 2023. While compliance can be reached relatively easily at the beginning, it will become increasingly difficult further on. Bosnia and Herzegovina, Kosovo and North Macedonia have dust emissions higher than the ceiling, while Serbia narrowly met the limit.

Another implementation alternative under the Large Combustion Plants Directive, known as opt-out, provides the possibility for Contracting Parties to exempt individual plants from the Directive's compliance regime. In exchange, these plants are not allowed to be operated for more than 20,000 operational hours between 1 January 2018 and 31 December 2023. The first opted-out plant, TPP Pljevlja in Montenegro, has recently reached the end of its opt-out timeframe and can only be further operated if it meets the stricter requirements of the Industrial Emissions Directive. Subject to their current load factor, it is expected that additional plants (TPP Kakanj 5 in Bosnia and Herzegovina and boilers 3, 4 and 5 of TPP Kolubara A3 in Serbia) will reach the end of their opt-out timeframe in the course of 2021.

Expected closure of opted out plants



Source: compiled and calculated by the Energy Community Secretariat.

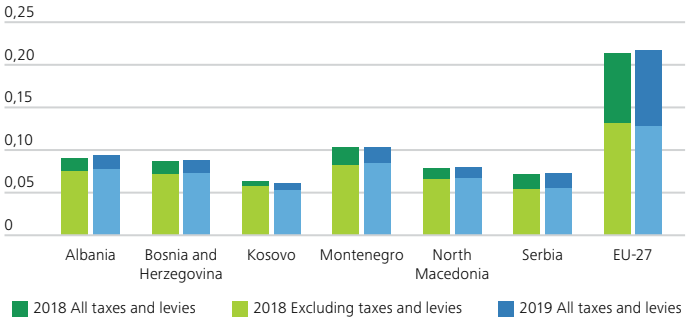
Making the electricity market fit for the energy transition

Getting the price signal right

The electricity market must send the investment signals needed to achieve a cost-effective energy transition. This is not yet the case in the WB6 as markets continue to be driven by low prices of electricity from incumbents which still hold their dominant position on account of depreciated assets, state subsidies, operation under profit margin and lack of carbon pricing. Despite a decrease of market dominance in 2019, the largest producers' wholesale market share remained above 50% in all WB6 parties, ranging from 57% in Albania up to 96% in Serbia. Bosnia and Herzegovina is the only exception with a drop from 40% to 37,5%.

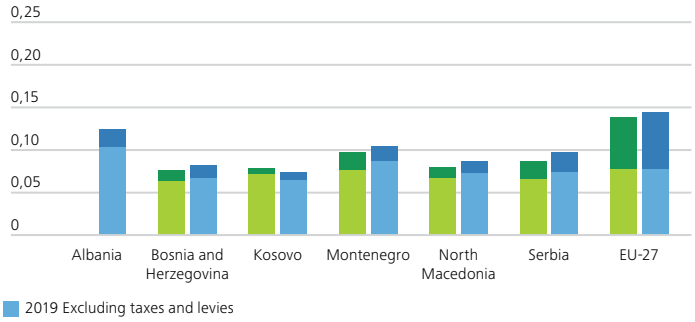
In the retail market, industry prices in most of the WB6 increased at the same rate as the EU average. The gap between WB6 and EU household prices, however, continued to widen. Low household prices do not incentivise supplier competition or active end-user participation in the market. During 2019, this led to the market share of the three largest suppliers increasing to 97% in Bosnia and Herzegovina and 99% in Serbia. North Macedonia saw no change with 92%, while it remained at 100% in the other three WB6 parties.

Household prices in EUR/kWh
band DC consumption 2500-5000 kWh



Source: EUROSTAT

Industry prices in EUR/kWh
band IC consumption 500-2000MWh

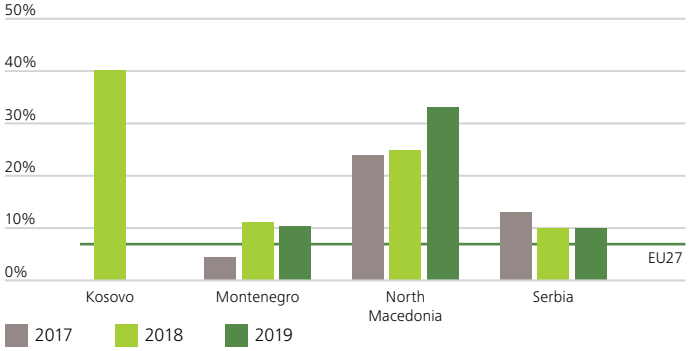


Addressing energy poverty

The success of the energy transition hinges on avoiding and minimizing its adverse social and economic impacts. This is especially important when it comes to the energy poor. The majority of the WB6 parties defined vulnerable customers in their legislation and put in place measures for their protection[3]. According to the parties' own individual definitions, the share of vulnerable customers for electricity ranges from 2,2% in North Macedonia to 7% in Kosovo. However, the effects of energy reform measures on energy poverty have never been comprehensively assessed[4]. Various sources point to substantially higher levels of energy poverty in the WB6 than in the EU. For example, an EU-SILC survey shows that 10% to 40% of WB households were not able to keep homes adequately warm in 2019.

By signing the 2020 Sofia Declaration, WB6 leaders committed to develop programmes for addressing energy poverty and financing schemes for household renovation and providing basic standards of living. A forthcoming study commissioned by the Secretariat will help the WB6 identify and address energy poverty. The results are expected in summer 2021.

Inability to keep home adequatly warm
(% of households)



Note: data for Albania and Bosnia and Herzegovina not available, for Kosovo only for 2018.

Source: EUROSTAT

3 ECRB annual retail market monitoring reports regularly take stock on treatment of vulnerable customers.
4 For more information on energy poverty definitions, indicators and policies implemented towards its reduction, see the EU Energy Poverty Observatory

Creating an integrated energy market

Interconnectors and the way how their cross-border capacities are utilised will play a significant role in enhancing competition, boosting renewables and facilitating decarbonisation of the WB6 parties' energy sectors in a cost-efficient and secure way. The WB6 transmission networks are strongly interconnected, including with neighbouring EU Member States. As the existing nominal transmission capacity of interconnectors is significantly higher than the installed generation capacities and system peak load in all WB6 parties, as shown in the left figure below, the transmission networks in the Western Balkans can be considered fit for hosting cross-border energy trade and market integration. However, the level of the transmission capacities offered to the market shows that the cross-border lines are still largely underutilised.

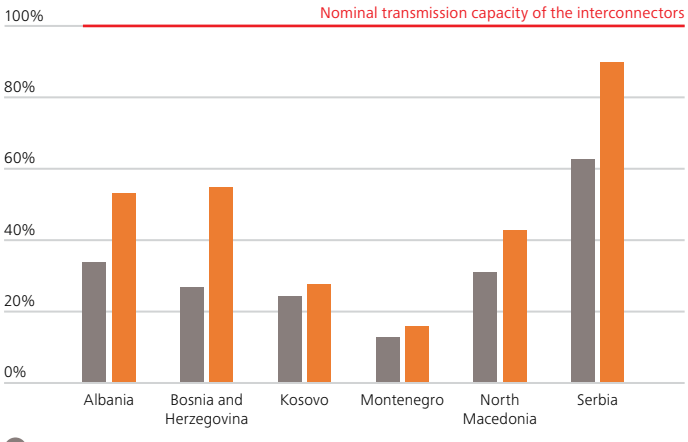
As presented in the right figure below, the net transfer capacity (NTC), the maximum possible transmission capacity that can be used for cross-border trading based on the transmission system operator's calculations, is significantly lower than the EU minimum 70% target for electricity interconnector capacity for cross-zonal trading. For a major part of 2020, the NTC values were less than 30% of the nominal transmission capacities, limiting the potential for cross-border exchange of electricity and fostering the market power of domestic producers. An efficient usage of interconnection capacities should be ensured, including through the implementation of a coordinated capacity calculation and market coupling.

While the timeline for adoption of a legally binding framework for market coupling between WB6 and EU Member States based on the reciprocal application of CACM is uncertain, activities on fulfilling preconditions for market coupling are progressing in all WB6, except in Bosnia and Herzegovina.

Albania and Kosovo intensified activities on setting up their day-ahead markets, which are to be operated as two bidding zones by the Albanian Power Exchange ALPEX, established by the transmission operators of Albania and Kosovo in October 2020. According to the project timeline, the day-ahead markets are expected to become operational in Q3 2021. The Montenegrin power exchange company BELEN resumed activities on setting up the day-ahead market, starting with the preparation of a tender for the selection of a service provider. The Macedonian electricity market operator was appointed as a nominated electricity market operator in North Macedonia, following which the market coupling project with Bulgaria was restarted. The go-live of the market coupling is envisaged in Q2 2022. A day-ahead market is operational only in Serbia.

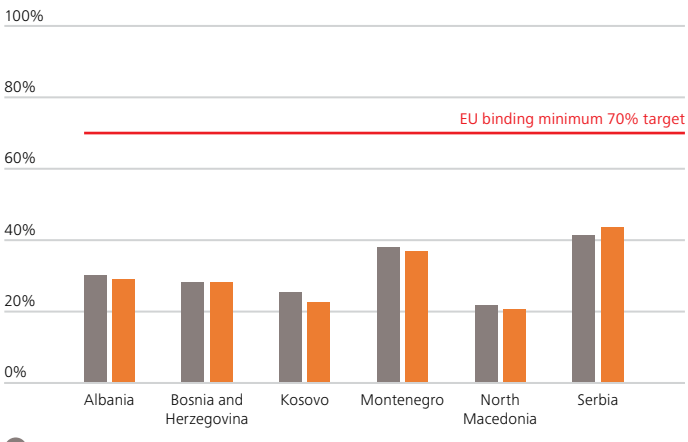
Along with market coupling, a gradual integration of WB6 bidding zone borders into EU Capacity Calculation Regions (CCRs), as proposed by the Secretariat, would contribute to the better utilisation of cross-border capacities.

Interconnectors, peak load and installed generation



Source: National TYNDPs, data updated by WB6 TSOs in December 2020/January 2021, compiled and calculated by the Energy Community Secretariat

Maximum usage of interconnectors



Source: Ten Year Network Development Plan 2020: Regional investment plan Continental South East, updated by KOSTT, OST, EMS and NOS BiH in December 2020/January 2021

Phasing out coal subsidies

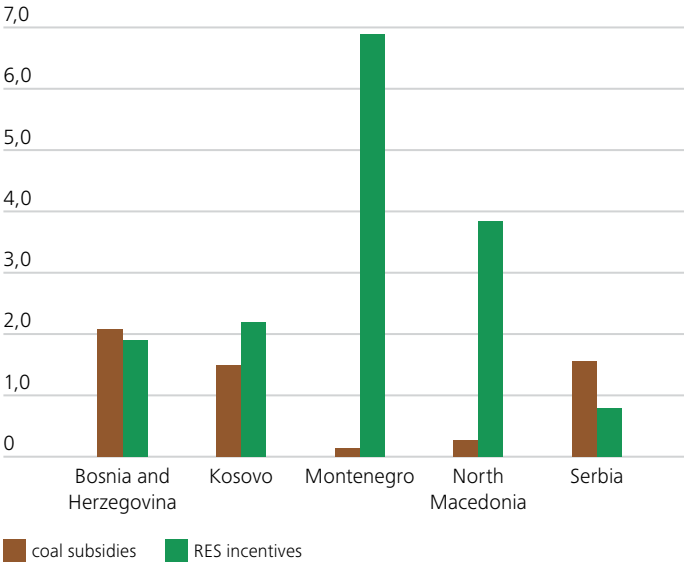
By the 2020 Sofia Declaration, the WB6 parties commit to gradually phase out coal subsidies and strictly respect State aid rules.

At present, the WB6 parties continue to heavily support the use of coal for power production. According to a study[5] published by the Secretariat, the total amount of direct subsidies to coal mines and coal-fired thermal power plants reached EUR 73 million EUR in 2019. In Bosnia and Herzegovina and Serbia, the two parties with the highest coal-fired capacities, coal subsidies per unit of final electricity consumption exceeded the incentives paid to renewable energy producers.

The estimated price for emitted CO_2 from the WB6 coal-fired TPPs in 2019, measured at the average price of allowances in the EU in 2019, exceed EUR 1 billion.

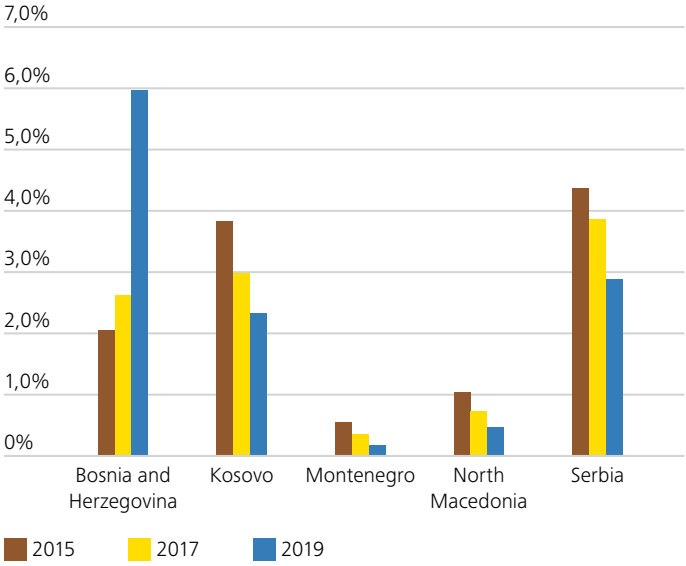
Taking into consideration not only the direct subsidies but also the scale of the exposure of public finances and budget as a consequence of the support measures, the exposure of public debt reached EUR 2,6 billion in 2019. At a time when the future of coal is in question, there is an imminent risk that if the beneficiary defaults on its debt, the corresponding total amount of due taxes, charges and contributions is written off or a guaranteed loan becomes public debt. The 2019 state guarantee for an EUR 614 million loan for the TPP Tuzla 7 in Bosna and Herzegovina is particularly striking in this regard.

Direct subsidies for coal-based electricity and RES incentives per final consumption [EUR/MWh], 2019



Source: compiled by the Energy Community Secretariat on the basis of Coal Subsidies Study 2020 and EUROSTAT database

Exposure of public debts from support measures to coal-based electricity production as % of GDP



Source: compiled by the Energy Community Secretariat based on the data from the Coal Subsidies Study 2020 and national reports

5 An analysis of Direct Subsidies to Coal and Lignite Electricity Production, 12/2020 study and 06/2019 study

Boosting the deployment of renewables

Renewable energy is gaining momentum in the WB6 region. Deployment of renewables is increasing and first market-based auctions attained significantly lower prices than those under administratively set feed-in tariffs. In spite of the progress achieved, it is not yet enough to reach the 2020 target in most parties.

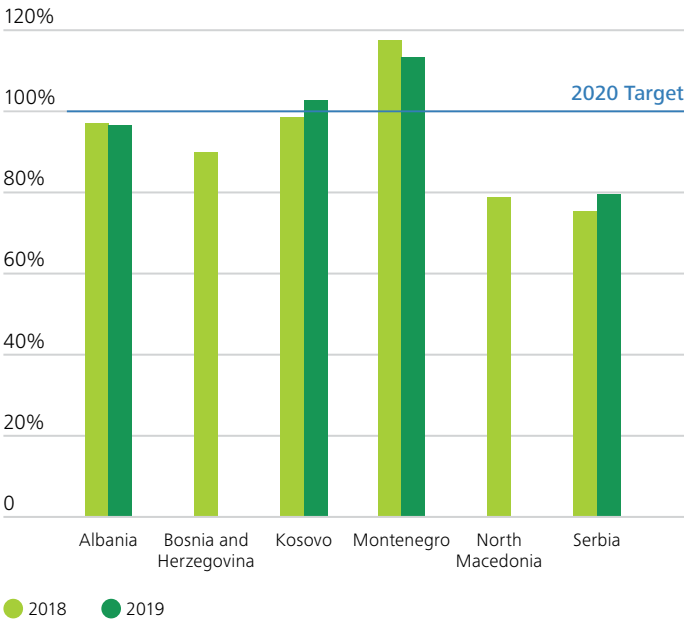
Newly released EUROSTAT data for 2019, which are available for four out of six parties by the date of finalization of this report, revealed that Kosovo joined Montenegro in meeting its 2020 target for the share of renewables in gross final energy consumption. Kosovo's earlier revision of biomass data contributed to overreaching the share of renewables in heating and cooling, whereas sectorial targets in electricity and transport remain substantially below the target.

Albania is close to reaching its 2020 target, however, its achievement is highly dependent on hydrology conditions. Bosnia and Herzegovina and North Macedonia have achieved sectorial targets for heating and cooling and are close to reaching the electricity target. Both are lagging behind in the transport sector, as is the case for all WB6 parties, primarily due to the absence or non-implementation of sustainability criteria for biofuels.

Serbia continues to increase its renewable energy capacities but not fast enough to keep up with increasing energy consumption, which widens the gap in achieving the 2020 target.

At the same time, some WB6 parties are working on setting ambitious 2030 targets through the preparation of integrated National Energy and Climate Plans under the Energy Community umbrella.

Share of renewable energy in gross final energy consumption (relative to 2020 target)



Source: EUROSTAT data, compiled and calculated by the Energy Community Secretariat.

Guarantees of origin

With the primary goal to certify the renewable origin of energy sold to final consumers, the demand for guarantees of origin (GoOs) is rapidly increasing, especially in the corporate sector. Besides informing final consumers about the source of their electricity, GoOs can trigger their more active participation in the energy transition. This can be an additional driver for renewables investment. However, the electronic system needed to issue and trade GoOs is not yet established in the WB6 parties, except in Serbia, despite mandatory under the Renewable Energy Directive.

All the WB6 parties have the legal basis for governing GoOs in place. In the case of Kosovo and Montenegro, existing secondary acts need to be updated. The parties have designated the competent bodies to manage the schemes. Serbia is the first party to introduce a functional system of GoGs and become a full member of the European Association of Issuing Bodies (AIB).

The Ministerial Council invited the Secretariat to assist countries in developing a regional system of guarantees of origin. The Secretariat has initiated a discussion on the options regarding renewable energy certification with the relevant stakeholders, including for the establishment of a regional certification system at the Energy Community level.

Renewables support schemes

The ongoing reform aimed at moving away from administratively set feed-in tariffs to market-based support schemes is the most important driver to sustainably increase the share of renewable energy and provide the necessary investment conditions in the WB6, in line with the Energy Community acquis and the 2020 Sofia Declaration.

Albania, Montenegro and North Macedonia were the first WB6 parties to enable market-based support schemes in their primary legislation and hold auctions. However, Albania is yet to provide further clarity on the details of the support regime via secondary legislation.

Non-existence of the day-ahead electricity market in all parties, except Serbia, brings an additional complexity and uncertainty to the implementation of support schemes. To bridge the gap until a day-ahead market is operational, Albania's auctions were designed to bid for a fixed purchase price, which is to be converted into a Contract for Difference (CfD) once the day-ahead market is operational and liquid. However, criteria for when exactly this conversion will happen remain unclear and need to be defined in secondary legislation. In North Macedonia, auctions were based on a fixed feed-in premium. Montenegro held auctions in accordance with the Law on State Property, where investors offered a land lease price to gain the right to build plants on state-owned land without any support. Market-based support mechanisms are not yet in place in Montenegro.

North Macedonia and Albania have designated entities to implement the auctions.

Most recently, reform activities began in Kosovo and Serbia. In Kosovo, a stakeholder working group, including the Secretariat, is drafting a proposal for a market-based support mechanism and a first auction. Serbia's new draft renewable energy law, currently in public consultation, introduces a market-based support scheme, yet many details remain unclear.

Bosnia and Herzegovina's concept for the use of a feed-in premium mechanism and implementing legal acts, which were assessed by the Secretariat in May 2020 as generally in line with the relevant acquis, are still pending adoption.

None of the WB6 parties have fully aligned their thresholds for feed-in tariffs with the Guidelines on State aid for environmental protection and energy.

Once 2030 targets for renewable energy and quotas for support are defined, the WB6 parties should publish a long-term schedule anticipating the expected allocation of support. Such a long-term roadmap will facilitate investment planning and encourage higher participation in the auctions, which will result in increased competition and lower prices.

Market based support scheme implementation status

	Legal framework	Market-based support mechanism defined	Quotas and long term auctions schedule	Operational entity in charge for implementation of auctions	Auctions implemented
Albania	In progress	In place	Not in place	In progress	In place
Bosnia and Herzegovina	In progress	In progress	In progress	In progress	Not in place
Kosovo	In progress	In progress	In progress	In progress	Not in place
Montenegro	In progress	Not in place	Not in place	Not in place	Not in place
North Macedonia	In place	In place	In progress	In place	In place
Serbia	In progress	In progress	In progress	In progress	Not in place

In place In progress Not in place

Source: compiled by the Energy Community Secretariat.

Introducing renewable energy in the transport sector

Being a significant source of emissions, the transport sector should play an important role in the Western Balkan 6 parties' efforts to reach carbon neutrality by 2050.

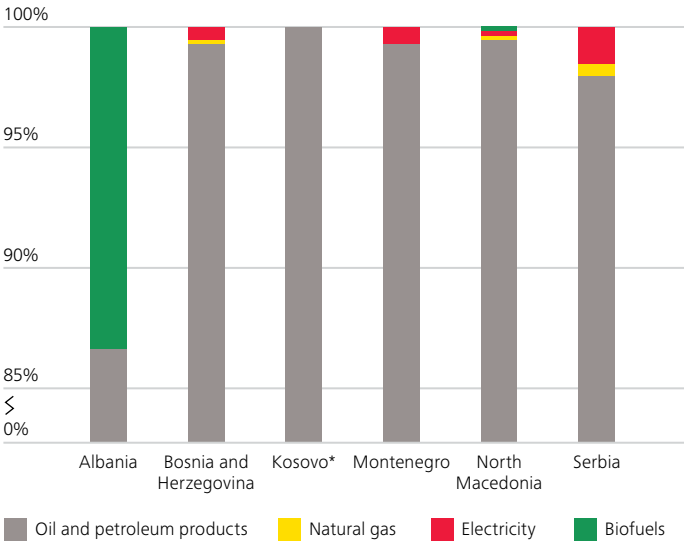
Transport consumes a major part of energy used in the region. In Albania, it accounts for the highest share of primary energy consumption, 39%, and uses almost as much energy as the residential and industrial sectors combined, followed by North Macedonia with 38% and Montenegro with 35%. Bosnia and Herzegovina and Kosovo are at the level of 29%, while transport in Serbia consumes 25% of primary energy.

Road transport is by far the most dominant in all Western Balkan 6 parties, accompanied by negligible contributions by rail and waterway transport in only a few WB6 parties. This is reflected in the fuel structure, with oil and oil products being almost the only fuels used in the region.

Despite having an obligation to reach the 2020 target of a 10% share of renewable energy in transport, none of the Western Balkan 6 parties moved significantly away from 0%. The most advanced is Serbia, with a 1,2% share of renewables in the transport sector due to a relatively high contribution of electrified rail and public transport and production of electricity from renewables. Albania is the only WB6 party with significant quantities of biofuels used in road transport. However, they cannot be counted towards the target as the country has not implemented the sustainability criteria and verification scheme, as required by Renewable Energy Directive 28/2009/EC.

2021 could be a game changing year. Reaching ambitious 2030 targets, already defined in the National Energy and Climate Plans developed by some Western Balkan 6 parties, will not be possible without tackling emissions in the transport sector in terms of public transport strategies and introduction of new fuels and technologies. The signing of the 2020 Sofia Declaration and its emphasis on tackling transport emissions, aligning with EU technical standards and sustainable urban mobility is a promising step forward.

Share of fuels in primary energy consumption of transport sector [%], 2018



Source: EUROSTAT

The future of transport - biofuels, electricity and hydrogen

A recent study[6] commissioned by the Secretariat recommended that advanced biofuels, electricity and hydrogen should be the main pillars of the decarbonisation of the transport sector in the Energy Community.

For biofuels, the WB6 should shift away from crop-based biofuels towards advanced biofuels, made from a defined list of waste, based on residues and cellulosic feedstocks. The potential for electrifying the transportation system from public transport to passenger cars and delivery vehicles is ready to be harnessed.

Hydrogen in transport based on fuel cell-electric vehicles is in an early phase of commercialization worldwide and shows major potential for decarbonizing road transport after 2030, while sustainable liquid fuels can help decarbonize aviation, shipping, etc. The potential for the implementation of hydrogen technologies will be explored in a forthcoming Energy Community study.

6 Modalities to foster use of renewable energy sources in the transport sector by the Energy Community Contracting Parties

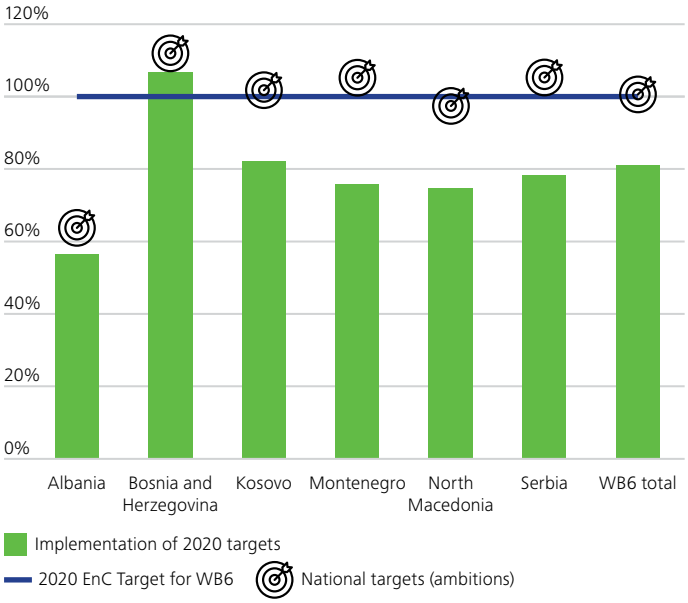
Making energy efficiency the first fuel

Reaching 2020 energy efficiency targets

While meeting their 2020 energy efficiency targets for primary energy consumption, the Western Balkan parties have not tapped their potential for energy efficiency improvement. Energy productivity remains low in all parties, indicating that energy efficiency saving measures and investments are not implemented to a large enough extent. The pace that the economies are transitioning towards an energy efficient future is still very slow.

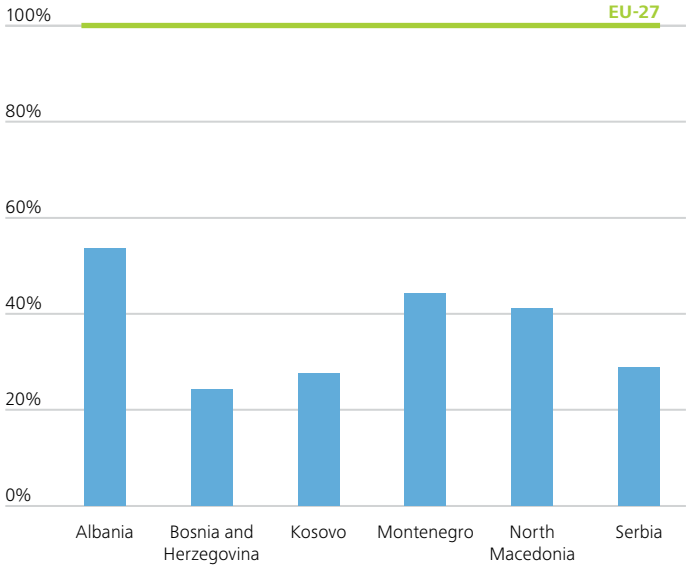
A current analysis of the target achievement, based on 2018 primary energy consumption data and the 2018 WB6 target trajectory, shows that the WB6 parties' consumption, with the exception of Bosnia and Herzegovina, is well below the maximum cap for 2018. However, energy productivity (the output and quality of goods and services per unit of energy input) of all Western Balkan parties still remains low in comparison with the EU. EUROSTAT statistical data for 2019 were not yet available at the date of publication of this issue and will thus be featured in the next edition of the WB6 Energy Tracker in 2021.

Implementation of energy efficiency 2020 targets



Source: compiled and calculated by the Energy Community Secretariat.

Energy productivity[7] [% of EU average], 2018



Source: compiled and calculated by the Energy Community Secretariat.

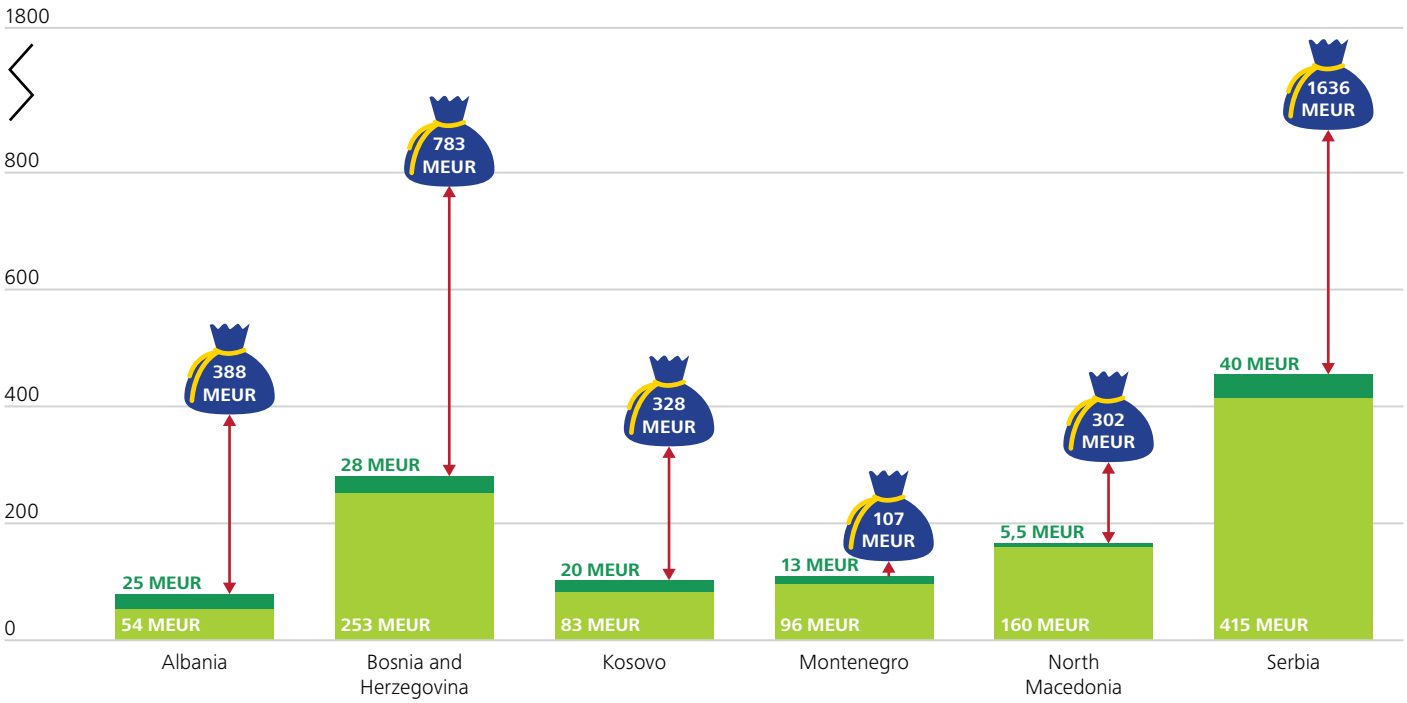
Investing in energy efficiency in buildings

In the Western Balkans, the building sector is the largest final energy consumer with approximately 43% of total energy consumption. Renovating buildings to meet the minimum energy performance requirements set in the Energy Performance Buildings Directive will ensure higher living, health and comfort standards for citizens and achieve energy savings as high as 40% in the building sector.

The EU, international financial institutions and donors have all made substantial contributions to support the WB6 in this area, however, the overall investment level remains very low compared to the needs. The amount of investments in building renovations in the Western Balkans amounted to approximately EUR 1191,35 million between 2010 and 2020 (12% increase from WB6 Energy Tracker July 2020). Nevertheless, this represents only 34% of the investment needs of approx. EUR 3543,75 million for 2011-2020.

7 The energy productivity indicator is calculated in line with Eurostat methodology (GDP divided by the gross available energy) and expressed in relation to the EU average (set to equal 100%). It shows a degree of decoupling of energy use from growth in GDP.

Investment gap in energy efficiency in buildings programmes



Energy efficiency investments in all types of buildings in WB6 CPs 2010-2020 in EUR million
Source: Energy Community's own data collection

New energy efficiency investments since WB6 ETT1 (07/2020)
Source: Energy Community's own data collection

Energy efficiency investment needs in all types of buildings in WB6 CPs 2011-2020
Source: Energy Efficiency in Buildings in the Contracting Parties of the Energy Community Report

Investment gap

Buildings Renovation Wave – an opportunity and a challenge

On 6 October 2020, the ***European Commission Investment Plan for the Western Balkans*** was published. The plan includes the "RENOVATION WAVE" as a flagship initiative, following the EU renovation wave model. The EU together with international financing institutions have committed to support the efforts of the WB6 to triple the current renovation rate and energy savings in existing buildings and achieve nearly-zero energy and emission standards in new buildings.

To bring this plan to life, there are already a number of regional instruments, such as the Western Balkans Green Energy Financing Facility (WBGEFF I) established in 2017, which is supported by an EBRD credit line of EUR 85 million and EU grant funding of EUR 17,5 million; by November 2020, EUR 71,5 million were invested in residential buildings rehabilitations (EUR 4 million more than before June 2020). In November 2020, EBRD approved WBGEFF II with additional EUR 50 million (35 million for building renovations and 15 million for new buildings)*.

Another instrument set under the umbrella of the Regional Energy Efficiency Programme is the public buildings renovation window, in which both EBRD and KfW are blending EU grant funding with their own sources. In the second half of 2020, EBRD signed an EUR 8 million loan with EUR 2 million EU grants for school renovation projects in Bosnia and Herzegovina, and KfW signed an EUR 20 million loan plus EUR 4,785 million EU grants for renovation/new construction of student dormitories in Albania.

The biggest challenge remains the large scale renovation of multi apartment buildings. In order to make the Renovation Wave a success in the Western Balkans, the Secretariat's view is that only a coordinated intervention on multiple levels (intensive work on housing policy and regulatory framework; dedicated financial products; and extensive capacity building at central and municipal levels involving the construction industry, project developers, energy auditors, monitoring and verification experts and last but not least, homeowners' associations) will provide a chance for the WB6 to deliver the expected results.

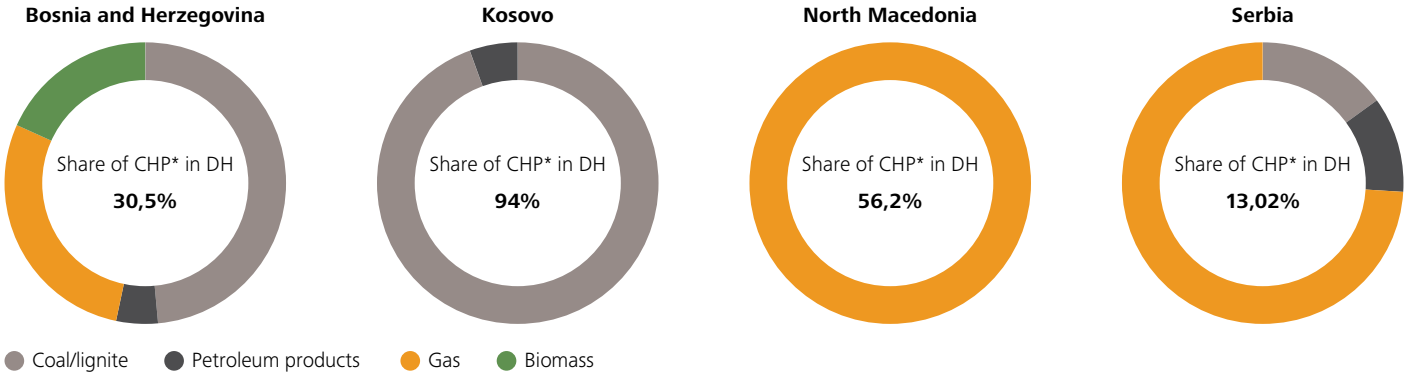
* These figures are not yet allocated per country and not reflected in the chart above.

Introducing renewable energy in district heating systems

The region's heating sector, which is mostly based on hydrocarbons and coal/lignite or inefficient use of wood, is a significant contributor to air pollution and GHG emissions.

Around 14% of total heat demand (~900 ktoe) is produced and distributed to final users in district heating systems. It is based predominantly on fossil fuels (coal/lignite ~21%, petroleum products ~9% and natural gas ~67%), with renewable energy such as biomass and waste heat only reaching approximately 3% of total production, 20% of which is produced in co-generation plants.

Fuels used and share of co-generation in district heating (%), 2018



*combined heat and power
Source: compiled and calculated by the Energy Community Secretariat.

The ***Green Agenda for the Western Balkans and the Economic and Investment Plan*** identified energy efficiency, including modernisation of district heating (DH) systems, as a solution for greening cities. District heating based on renewable energy or residual heat is the most economic, clean and efficient solution for supplying heating services to high population density urban areas. The current situation in the WB6, where hydrocarbon based district heating is dominant, is changing.

In the municipalities of Mali Zvornik and Priboj, Serbia, new biomass based boilers will supply the district heating system from January 2022. Another project under construction is in the city of Gjakova, Kosovo, where a biomass based cogeneration plant will produce electricity and heating for the city; completion is expected in spring 2021.

Similar game-changing projects are in the pipeline, supported by the Renewable District Energy in the Western Balkans (REDEWeB) programme implemented by the EBRD, with financing from the Austrian Government and the Swiss State Secretariat for Economic Affairs (SECO), in partnership with the Energy Community Secretariat, as follows:

Albania:	1 (new greenfield DH system based on several renewable heat solutions)
Bosnia and Herzegovina:	2 (heat pump utilising geothermal heat and industrial waste heat)
Kosovo:	1 (solar thermal)
Montenegro:	1 (greenfield biomass-based DH)
Serbia:	8 (5 solar thermal, 3 heat pumps utilising heat from a waste water treatment facility)

Reaching a decarbonized energy future

Contributing to global climate efforts

Nationally Determined Contributions (NDCs) summarise countries' plans to reduce greenhouse gas (GHG) emissions under the Paris Agreement. All WB parties, with the exception of Kosovo[8], ratified the Agreement and submitted their NDCs to the UNFCCC. In line with the call to submit new or updated NDCs (NDC2s) every five years, the WB parties are expected to share their plan ahead of the next Conference of the Parties (COP26) in November 2021. The draft WB parties' NDC2s include more ambitious targets than the NDC1s and encompass all emission sectors and GHGs other than CO_2. Beyond mitigation, the majority of NDC2s also focus on adaptation, financial support and gender sensitivity.

Albania has thus far elaborated a detailed methodology for updating its NDC2, which remains to be drafted. It is expected to include actions and targets on agriculture, forestry, and other land use (AFOLU) as well as adaptation, with a special focus on coastal zones, due to the increasing risk of flooding.

In Bosnia and Herzegovina, the final draft, which underwent public consultation, features mitigation and adaptation and is currently in the adoption process within the Government. In its current form, the document includes increased investments in coal capacity and the proposed targets are less ambitious than the GHG emission reduction targets under the draft NECP.

A draft NDC2 has also been elaborated by Montenegro. The document includes both mitigation and adaptation measures and focuses on disaster risk reduction and calculation of GHG emissions for land use, land-use change and forestry (LULUCF). Measures on gender equality and vulnerable groups are also reflected and reference is made to alignment with the NECP.

The draft NDC2 of North Macedonia went through stakeholder consultation and passed the first stage of governmental procedure. It is focused on mitigation, while the adaptation component will be included in subsequent submissions. Policies and measures on AFOLU are also reflected. The NDC2 echoes the green scenario from the National Strategy for Energy Development up to 2040 and is fully aligned with the draft NECP.

The draft Low Carbon Development Strategy will serve as a basis for the revision of Serbia's NDC, initiated in 2020. Its main components, mitigation and adaptation, were consulted with stakeholders. The draft NDC2 is expected to reflect on nature-based solutions and strengthening the synergy between air protection measures and reducing GHG emissions. In addition, the document will contribute to the development of the first roadmap for a just transition to low-carbon development.

The actions contained in the NDC2 should pave the way towards meeting the political pledges on climate neutrality under the 2020 Sofia Declaration. The ambition level and targets of the NDC2s should be harmonized with those reflected in the NECPs.

State of Nationally Determined Contributions (NDC2) preparation

	GHG other than CO_2 covered	All emission sectors covered	Adaptation strategy	Participatory process	Gender sensitivity	NDC2 submitted to the UNFCCC
Albania	●	●	●	●	●	●
Bosnia and Herzegovina	●	●	●	●	●	●
Montenegro	●	●	●	●	●	●
North Macedonia	●	●	●	●	●	●
Serbia	●	●	●	●	●	●

● In place ● In progress ● Not in place

Source: compiled by the Energy Community Secretariat.

8 Kosovo is not a signatory to the UN Framework Convention on Climate Change and to the Paris Agreement, therefore it has not submitted its NDC.

Planning for a decarbonized energy future

By signing the 2020 Sofia Declaration, the six Western Balkan parties committed to develop and implement integrated National Energy and Climate Plans (NECPs), the drafting of which has already been initiated under the Energy Community umbrella. Setting ambitious 2030 targets, along with clear policies and measures to reduce GHG emissions with an outlook to 2050, should pave the way towards achieving climate neutrality.

Activities to put in place a legal basis for the adoption of the NECPs through updating energy laws or drafting climate laws are ongoing in all WB6 parties, except in Bosnia and Herzegovina and Kosovo. Albania became the first WB6 party that has defined the responsibilities and established a legally binding obligation for the approval of the NECP via its Law on Climate adopted in January 2021.

The drafting of the NECPs is under way in most WB6 parties, starting with summarizing current policies and measures and building up a reference scenario as part of a sound analytical basis for the NECPs. So far, the Secretariat has reviewed the working draft NECPs of Albania, Bosnia and Herzegovina and North Macedonia.

The NECP structure should follow the requirements set in the Recommendations of the Energy Community Ministerial Council in line with the EU acquis. In the reporting period, the Secretariat issued the first formal recommendations on the official draft NECP submitted by North Macedonia. The draft provides a solid basis for the development of an ambitious final NECP.

The recommendations are to be taken into account in the final NECP, which will be assessed by the Secretariat. Montenegro and Kosovo announced that they will submit their official drafts in Q1 2021. Serbia is yet to establish a working group and start the NECP development process. As a next step, the Secretariat will monitor the progress in achieving the targets and implementing the policies and measures set therein at the national and Energy Community level on the basis of biannual national progress reports.

Regional consultations, key for avoiding inconsistencies between NECPs and preventing potential negative impacts on neighbouring countries, took place under the facilitation of the Secretariat. A series of regional exchanges among modelling experts supported by the German Corporation for International Cooperation (GIZ) and the Secretariat complements the process.

Furthermore, a project extending the modelling capacities of the EU to the Contracting Parties was launched jointly by the European Commission and the Secretariat in the beginning of 2021. On the basis of the project's results, the Commission is expected to table 2030 GHG reduction, energy efficiency and renewables targets alongside the relevant legislative package for adoption in the Energy Community in the second half of 2021.

Further information on the process, the status of the plans and the Secretariat's recommendations can be found on the recently launched NECP sub-page on the Energy Community's public website.

State of National Energy and Climate Plans preparation

	Legal basis adopted	Working group operational	Modelling capacity exists	Policy section (A) drafted	Analytical section (B) drafted	Submitted to the Secretariat for peer review	Final version submitted to the Secretariat
Albania	●	●	●	●	●	●	●
Bosnia and Herzegovina	●	●	●	●	●	●	●
Kosovo	●	●	●	●	●	●	●
Montenegro	●	●	●	●	●	●	●
North Macedonia	●	●	●	●	●	●	●
Serbia	●	●	●	●	●	●	●

● Finished ● Started ● Planned

Source: compiled by the Energy Community Secretariat.

Towards a comprehensive climate framework

The 2020 Sofia Declaration foresees the alignment of the Western Balkans with the future European Climate Law, which proposes a legally binding target of net zero GHG emissions by 2050 at the EU level.

Alongside policies to boost renewables and energy efficiency, the adoption of such a framework law will serve as an essential tool for the WB6 parties in defining the 2050 decarbonization objective and the collective 2030 target on GHG emissions as a legal obligation.

All WB6 parties have embarked on the initial steps towards putting in place the necessary elements of a climate legal framework. The most critical of these is the introduction of carbon pricing via an ETS mechanism, the launching of which requires a competent authority, national GHG inventory systems and registries and rules on monitoring, reporting and verification of emissions as well as enforcement provisions for reporting and operating within the ETS.

The WB6 are in various stages of putting in place the necessary prerequisites for an ETS mechanism as shown below, with Montenegro having taken the lead by already introducing a form of emissions trading.

Other elements of a comprehensive climate legal framework include the establishment of a national Low Carbon Development Strategy, which is under preparation in the WB6, and embedding a 2050 decarbonisation roadmap into national law or strategy, a pending task in all WB6 parties.

Elements related to a Climate Law

	Low Carbon Development Strategy	Legally binding national 2050 climate neutrality objective	National GHG inventory system	Monitoring, reporting and verification systems	Other requirements for an ETS	ETS establishment
Albania	●	●	●	●	●	●
Bosnia and Herzegovina	●	●	●	●	●	●
Kosovo	●	●	●	●	●	●
Montenegro	●	●	●	●	●	●
North Macedonia	●	●	●	●	●	●
Serbia*	●	●	●	●	●	●

● Finished ● Started ● Planned

* The colours represent the status quo before the adoption of the Climate Change Law in Serbia since at the time of finalizing the table the law was not yet adopted.

Source: compiled by the Energy Community Secretariat.

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