

Albania:

Attempting to escape a dependence on oil and hydropower



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Albania has a population of just under 3 million. Its coastal location and mountainous terrain offer **excellent conditions for the development of renewable energy**. RES currently account for around 37% of the energy mix, thanks to the fact that 90% of electricity is generated from hydropower. The country is thus in an advantageous position with regard to decarbonisation of the electricity sector and its CO₂ emissions remain very low. However, its dependence on hydro makes it vulnerable to climate change. The inadequate regulatory framework and non-transparent environment also means that hydroelectric construction has been plagued by corruption scandals and environmental problems.

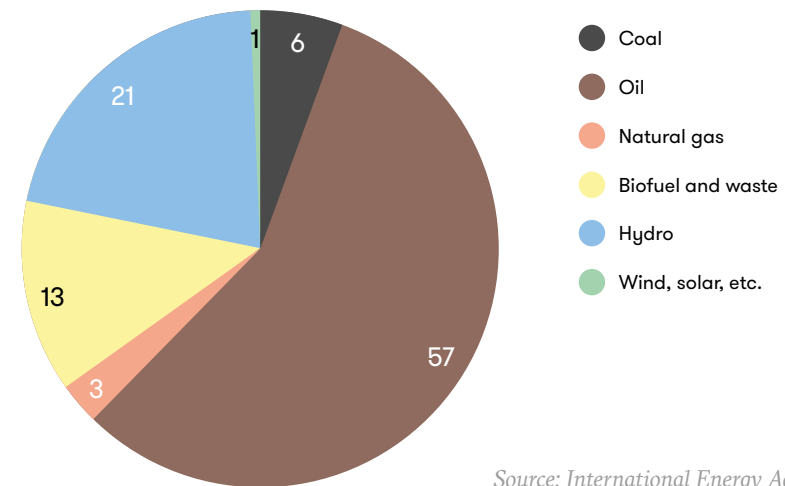
The country has faced power outages in recent decades due to low water levels and losses in the distribution network. The situation has improved, but **Albania imports on average around a third of the electricity it consumes**. Given the rapid development of the economy and rising consumption, **it is essential to build new generation capacity**.

The considerable potential of wind and solar energy is still untapped, but the **2017 Renewable Energy Law** has set the regulatory framework and a feed-in tariff system, **opening the door for investment**. Many projects are now in the process, including large solar and wind parks. Another priority for the government is the **gasification of the country**. Albania is not connected to the regional gas infrastructure and its old gas network is dysfunctional. It is a transit country for the TAP gas pipeline, but a connection to it is only in the planning phase. The construction of an LNG terminal in Vlorë and the conversion of an idle oil power plant to gas therein should also be a part of this endeavour.

Alongside hydropower, **oil is currently the key energy component, accounting for more than half of the total energy mix**. Albania is one of the few Balkan countries that produces oil but cannot process it. Most of its production is exported and domestic consumption is dependent on imports.

Energy savings are an important opportunity for Albania.

Total energy supply by source, 2019 (%)

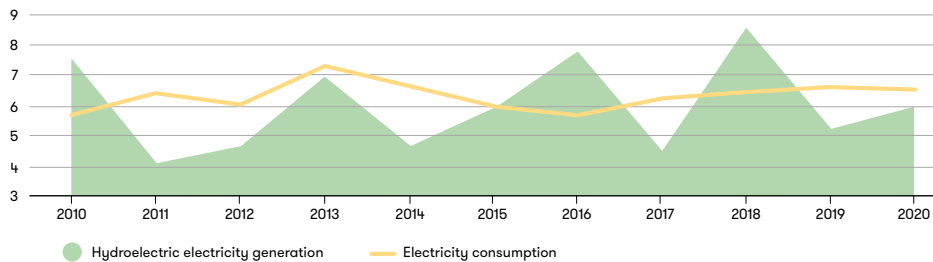


Source: International Energy Agency

Key challenges for the energy transition

- **Reducing the massive fluctuations in inter-annual electricity production** by diversifying renewable energy sources; the **development of photovoltaics** is particularly promising.
- **Reducing energy losses in the transmission and distribution system and making energy use more efficient**, including by modernising heating (electric and wood heaters are the most common).
- **Reducing dependence on oil**, which fuels the entire transport sector and that accounts for 40% of total energy consumption. **Modernising and greening transport** is therefore a key challenge.
- **Improving the legal and regulatory environment** for the development of renewables and gasification, increasing transparency, tackling corruption and genuinely assessing environmental risks.
- **Alignment with the EU ETS** so that the country would not be negatively affected by the introduction of the CBAM.

Fluctuations in electricity generation



Source: International Energy Agency

Position of domestic actors

Although the private sector accounted for 43% of total electricity generation in 2019, the main actors in the electricity market are state-owned. The power company KESH owns three large hydroelectric plants on the Drin River as well as a diesel power plant in Vlorë, which has not started operating due to problems in the cooling system. The state-owned transmission operator (OST) and distribution company (OSSH) were separated from KESH 20 years ago and returned to state hands after the ČEZ anabasis. Other important actors are the state regulator (ERE) and the agencies for energy efficiency, the environment (responsible for EIA), and for natural resources (in charge of identifying suitable zones for solar and wind development or granting oil production licenses).

At the government level, the **Ministry of Infrastructure and Energy, led by Belinda Balluka** since 2019, is in charge of the sector. Although the ruling Socialist Party of Prime Minister Edi Rama has been in power since 2013, Balluku has made several personnel changes (including to the leadership of the KESH and OST). Immediately after taking office, she also announced a moratorium on new hydropower plants and initiated a review of 182 licenses due to unclear benefits, implementation status and environmental impacts. Under her leadership, the ministry has been able to attract foreign investors and move forward with the construction of larger solar and wind power plants as well as the development of gas infrastructure. **Rama appointed Balluka as Albania's deputy prime minister this summer, a testament to the importance given to the sector.**

International actors

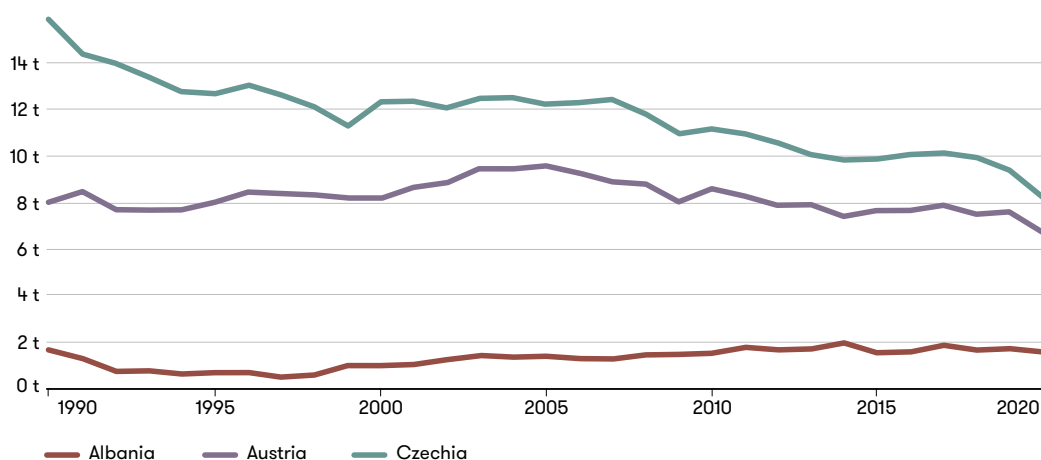
- **Albania's strongly pro-Western orientation**, which is not a given among the Western Balkan states, **is also reflected in the energy sector. European companies and banks, development agencies and international financial institutions such as the World Bank, the European Investment Bank and the European Bank for Reconstruction and Development are key foreign players.** European companies are also heavily involved in the current development of renewable energy sources. An example could be the French company Voltalia that recently won contracts to build two large solar parks – Karavasta (140 MW) and Spitalle (100 MW).
- **European companies are present among the small and medium hydropower plants, several of which are also owned by Turkish companies.** However, the experience with European companies has not always been positive, as in the case of the fiasco of the construction of the Vlorë thermal power plant by an Italian company or the takeover of the OSSH distribution company by the Czech utility ČEZ.
- **Of the non-Western players, only China has made a significant entry into the energy sector.** In 2016, as part of Albania's largest investment in decades, the Chinese company Geo-Jade Petroleum bought the Canadian company Bankers Petroleum. It operates the Patos-Marinza oil field, which **generates about 90% of Albania's total oil production.** Albania, like Montenegro and Kosovo, **is not dependent on natural gas from Russia and has a diversified oil supply.** The envisaged gasification of the country should bring in gas from Azerbaijan and LNG from the USA.
- Chinese investment has attracted US attention to Albania. **In March 2021, Albania signed an agreement with US ExxonMobil and Excelerate Energy to build a LNG terminal in Vlorë and convert the local oil plant to gas.**
- **Albania's energy market is integrated with Kosovo's**, and both countries plan to cooperate on gasification projects. As part of the Open Balkans initiative, Albania has set up a **working group with Serbia and Northern Macedonia to cooperate in the energy sector**, in particular on renewable energy investments and the integration of energy markets.

Role of the EU

The European Union is key in shaping Albania's energy sector. Albania has been an EU candidate since 2014 and accession talks were launched at the beginning of the 2022 Czech Presidency. Like other Western Balkan countries, it is also a **member of the Energy Community**, which aims to create a single energy market. Albania is thus **bound by the EU regulatory framework and is working to transpose European legislation** in the areas of supply, infrastructure and distribution, energy market liberalisation, diversification of resources including renewable energy and increased energy efficiency. The EU is financially supporting Albania's transition under its pre-accession assistance (IPA) programmes.

Albania is also a **signatory to the Sofia Declaration on the Green Agenda for the Western Balkans**, which is linked to an EU investment package aimed at increasing energy efficiency, introducing an emission allowance system or developing renewable energy sources. Albania is committed to decarbonising its economy by 2050, harmonisation with European climate laws and taking further steps in policy making and strategy development to reduce emissions and protecting the climate.

CO₂ emission per capita (t)



Source: Our World in Data

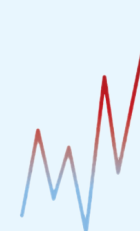
Relevance for Czechia

The Czech Republic has left a significant footprint in the Albanian energy sector in the form of a negative experience with ČEZ, which in 2009 acquired a 76% stake in the distribution company OSSH in a privatization tender. In 2013, the Albanian regulatory authority revoked ČEZ's license on the grounds that it had failed to secure electricity imports and invest in the grid. The state administrator took over the management while ČEZ triggered arbitration proceedings with Albania. As part of a settlement agreement, the company withdrew from Albania in an exchange for a remuneration of the original investment. ČEZ was also accused of corruption and bribery in Albania, but the accusations were never proved either before the Czech or the Albanian courts.

Opportunities for Czech companies include expanding renewable energy capacity, especially small solar power plants, and **modernising the transmission and distribution system**, which is one of the government's strategic goals. Reducing transmission and distribution losses (through smart grids and network digitisation) and developing long-distance transmission capacity including the construction of substations, opens up the possibility for Czech companies to subcontract equipment, transformers or technologies for monitoring losses and optimising transmission and distribution. **Transport is also a promising sector** for Czech companies, which could participate in its modernisation and greening. Large investments planned, for example, in the reconstruction of the railway network.

Another area for experienced and qualified Czech companies are gas projects. However, as a long-standing supporter of Albania's integration into the EU, the Czech Republic should be restrained in its supporting gas projects that may put Albania off track from achieving its climate goals.

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Bosnia and Herzegovina:

Potential for decarbonisation held hostage by politics



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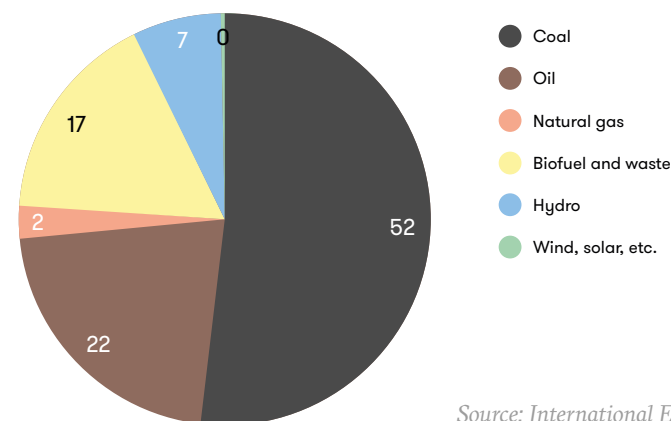
Three decades after the devastating war, Bosnia and Herzegovina (BiH) remains an unstable and politically divided country. The legacy of the **conflict in the 1990s** is not only a complicated institutional set-up and the continued supervision of the international community, but also an ethnically divided society, a weak economy, massive emigration and a **stalled process of European integration**.

Due to its industrial past and its natural conditions, (BiH) has considerable capacities in both **fossil and renewable energy**. The country is the only net exporter of electricity in the region, but this is predominantly produced from **obsolete coal-fired sources**. Non-fossil fuel sources, mainly composed of large hydroelectric power plants, account for only 7% of the energy mix. At the same time, BiH has considerable **potential for the development of a full range of renewable energy sources** that could cover not only domestic consumption but also existing exports.

The long-term **carbon lock-in is deepened by the lack of an energy transition strategy** allowing BiH to meet its climate targets. The priority across the divided country is not decarbonisation, but rather **revitalisation of the outdated coal capacities, building new coal-fired power plants**, and strengthening the country's so far weak **gasification**. In the field of renewables, the focus is mainly on construction of new **hydropower plants**, which are often accompanied by negative local **environmental impacts**, and on strengthening the share of biomass, so far mainly used as fuel in outdated local sources. The considerable **potential of wind and solar energy sources** remains almost untapped.

The causes of the current situation are to be found in the country's **long-term political instability and post-war decentralisation**, which have a direct impact on the energy sector. In addition, the strategic energy sector in this unstable country is becoming a space where, in addition to domestic elites, **external actors seeking economic and political influence** are increasingly asserting their interests.

Total energy supply by source, 2019 (%)



Source: International Energy Agency

Key challenges for the energy transition

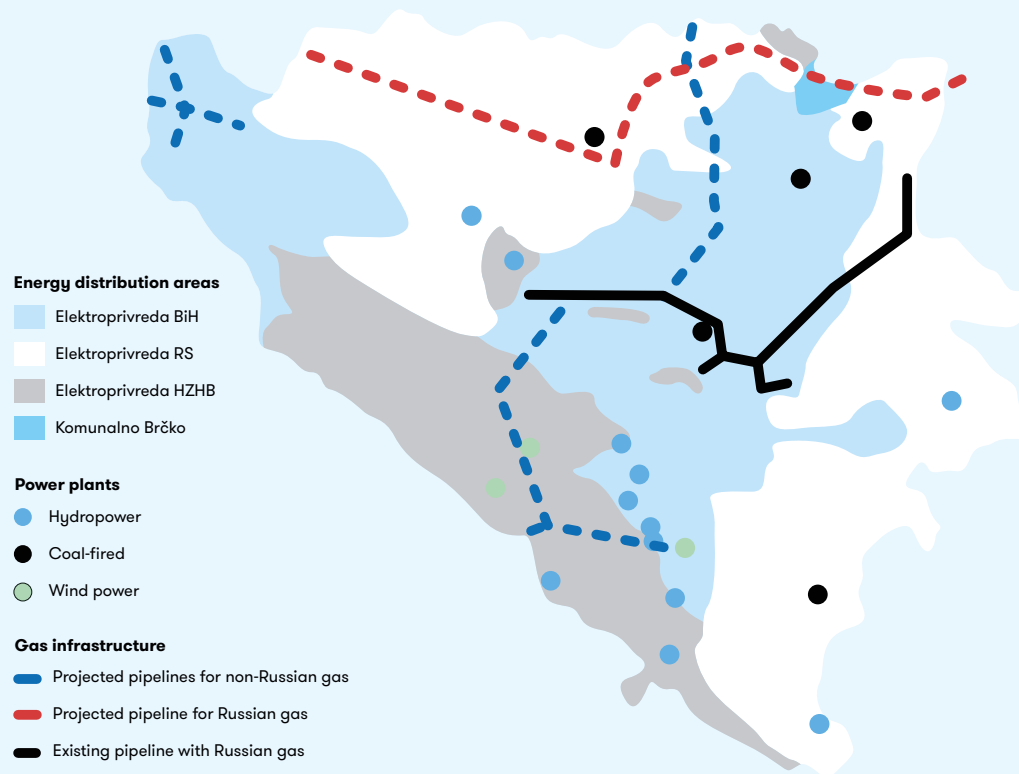
- **Escaping the carbon lock-in:** finding sustainable replacements for obsolete coal capacities with huge environmental impact.
- **Depoliticizing and liberalizing the energy sector**, allowing for its effective reform and integration with the European market.
- The **dilemma of economically and geopolitically costly gasification** as a temporary and partial instrument of decarbonisation.
- Efficient **use of the large potential of renewable sources** from water, wind and sun, taking into account local environmental requirements.
- **Balancing the assertive positions of China and Russia** in the energy sector leading to geopolitical vulnerability, **with the energy security and climate policy requirements of the EU**.
- Dealing with the impact of the planned implementation of CBAM on the competitiveness of economically important fossil energy exports and energy-intensive metallurgical products.

Position of domestic actors

A characteristic feature of post-war Bosnia and Herzegovina is the high degree of **decentralisation of the state, following the ethnic division** of the country among Bosniaks, Serbs and Croats. This division is directly reflected in the energy sector. The competences of the central structures are very limited and most powers are concentrated at the **level of ethnically defined entities** – Federation of Bosnia and Herzegovina (FBiH), and Republika Srpska (RS). They each have their own ministries of energy, which are main state institutions with regulatory powers. The entities also own key **state-owned energy companies**. Within the Bosniak-Croat FBiH, some competences are further devolved to the level of the ten cantons. As the **energy sector is only partially liberalised**, ethno-political structures have strong control over it not only through regulatory but also executive powers.

Each of the three ethno-political structures has its own **‘national’ electricity supplier**, controlled by the entity government, which provides distribution and sales in addition to generation and export/import of electricity. On the territory of RS, this role is played by the state-owned company *Elektroprivreda RS*, while within the FBiH, two parallel national structures operate: *Elektroprivreda BiH* in majority Bosniak areas and *Elektroprivreda HZ Herceg Bosne* in regions with a Croat population. The electricity sector is thus effectively **monopolised at the level of the three ethno-political parts of the country**. Several domestic private companies are also active in coal mining and electricity generation, but they are closely intertwined with political structures. The situation is similar in the gas segment, which, due to the lack of infrastructure, is limited to the central part of the country, where BH Gas, owned by the FBiH, is the monopoly supplier. In contrast, the **fuel market is liberalised** and a number of domestic and foreign companies operate in an open competitive environment.

The close intertwining of the lucrative energy sector with the ruling political structures has resulted in a long-term **politicisation of the energy sector**, which has hindered the necessary structural reforms, full liberalisation and a transition towards sustainable production.



International actors

In the past decade, **China** has been the main bidder for the **revitalisation of the existing and construction of new coal-fired power plants**, facing criticism by the EU for its impact on deepening the carbon lock-in. However, only the construction of the new Stanari thermal power plant in Republika Srpska has been implemented. Other announced strategic projects remained only at the planning level and, given **China's declared divestment from coal power**, it can be assumed that they will not go ahead. At the same time, Chinese companies are bidding for several large hydropower projects.

Russia has a **monopoly on supply** in the relatively small **gas sector** limited to the Federation of BiH, due to the country's connection to a single TurkStream pipeline. However, at the political level, negotiations are ongoing on the **gasification of the RS in cooperation with Gazprom**. Russian companies have a strong position on the oil products market, especially within the RS. Russian capital has been involved, along with Chinese capital, in a strategic project to build a new coal-fired power plant in the RS, although its implementation is uncertain.

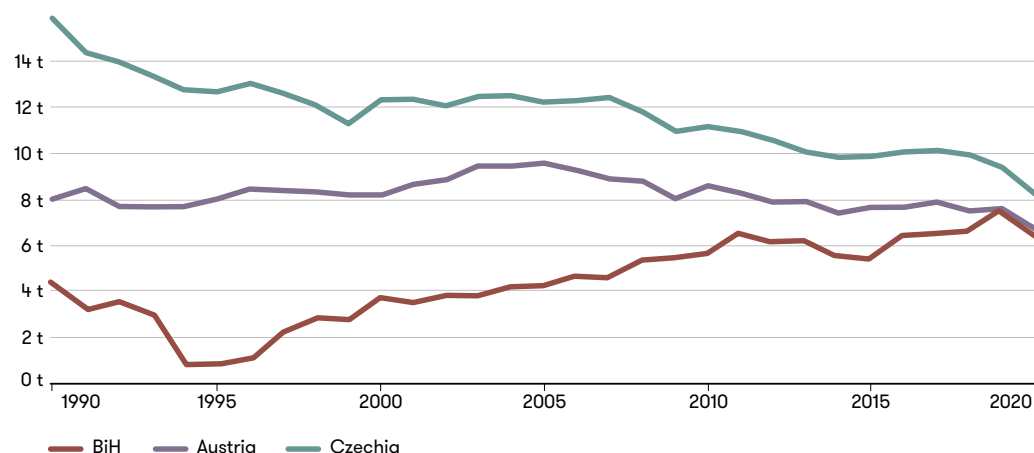
Role of the EU

In contrast to Russian and Chinese fossil-focused endeavours, the EU has long been involved in **regulatory activities aimed at reducing emissions, and the energy transition**. The main actor in this respect is the **Energy Community**, which aims to integrate the local energy market with the European one, while meeting legislative and environmental criteria. However, these efforts have so far been hampered by the **lack of domestic political will for structural reforms** as well as the absence of concrete EU support for large energy projects that would provide an alternative to Chinese and Russian investment.

The Energy Community has strongly **criticised projects to refurbish outdated and build new coal-fired power plants with Chinese technological and economic participation**. The announced start of the construction of a new unit of the Tuzla coal-fired power plant, financed with Chinese loans and implemented by a Chinese-US consortium, was one of the main reasons for the **imposition of Energy Community sanctions on the BiH**. The strategic project, more than a decade in the making, was eventually suspended at the last minute, to the displeasure of domestic politicians and Chinese partners, as a result of the withdrawal of the US technology supplier.

In the area of planned gasification, the **project to connect large parts of the Federation of BiH to the Croatian gas network** through the Southern and Northern Interconnection pipelines, which would have been an **alternative to Russian gas, has EU political and financial support**.

CO₂ emission per capita (t)



Source: Our World in Data

Relevance for Czechia

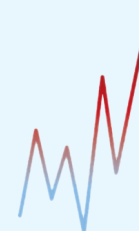
Bosnia and Herzegovina has long been a **priority country** for Czech development cooperation. The Czech Republic is active in promoting the use of renewable energy sources in BiH through bilateral development assistance. The focus of these activities should be primarily on projects that contribute not only to **structural decarbonisation but also take into account environmental needs** at the local level.

The **Czech experience in its own energy transition** and in addressing the structural impacts of the coal phase-out should be effectively shared with relevant state and non-state actors in BiH and used in their bilateral support, for example through twinning. Czech state and non-governmental structures should furthermore provide targeted **support to local NGOs** focusing on the environmental impacts of energy projects and acting as watchdogs in relation to the often unsustainable approach of local political-economic structures.

The EU-supported energy transition in the BiH is an **opportunity for Czech exporters** operating in the expected expansion of solar, hydro and biomass renewables. On the other hand, the entry of Czech companies into the coal part of the energy sector seems undesirable in light of the unsuccessful previous activities of ČEZ and the growing efforts to decarbonise the energy sector. However, **revegetation projects** in regions affected by the decline of coal mining and processing, where Czech companies can offer experience gained in the Czech Republic, may be an economic and development opportunity.

At the political level, the **Czech Presidency of the EU Council** in the second half of 2022 provides opportunity for the Czech political representation and diplomacy to **accent the topic of energy transition** in the framework of the ongoing negotiations on the integration of BiH into European structures.

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Kosovo:

‘Coal superpower’ seeking a sustainable way out of energy crisis



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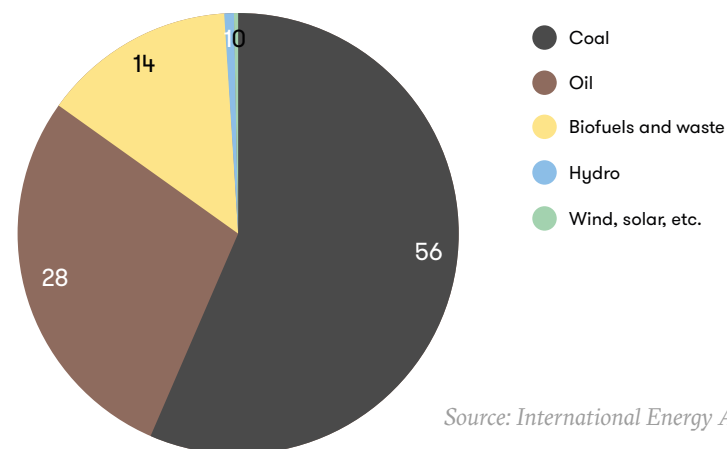
Fifteen years after its unilateral declaration of independence, Kosovo, a small landlocked state with a population of 2 million, is still struggling with incomplete recognition of its statehood due to an ongoing **dispute with Serbia**. In addition to its fragile international position, the country faces a variety of **economic, social and environmental challenges** that are closely linked to its massive yet obsolete energy sector.

Kosovo's energy system is entirely **dependent on mining and processing of coal**, which has historically been the backbone of an otherwise underdeveloped economy. Kosovo has significant lignite reserves, even on a global scale, which are massively exploited for domestic energy needs. The two **outdated thermal power plants**, which provide 96% of electricity generation, are at the end of their lifetime and represent a **huge environmental burden**. The environmental impact is compounded by the location of coal mining, processing and combustion in the vicinity of the capital, Prishtina. Although the **project to build a new coal-fired power plant was halted in 2020**, extending the service of the existing units will be inevitable given the energy instability.

Despite the use of coal, Kosovo **imports electricity** due to the unreliability of outdated capacities and little diversification of energy sources. Domestic production does not cover rapidly growing consumption and the government recently resorted to widespread **distribution outages**, which have only been solved by importing power from hydroelectric plants in neighbouring Albania.

Renewables, which have the potential to contribute to solving the energy crisis, so far represent only a **marginal share** of the energy mix. A few small hydropower plants produce 3% of electricity. However, the potential for greater use of hydropower is small compared to the rest of the region and limited to mountainous areas where the construction of power plants has significant environmental impacts. The development of **solar and wind power plants** as the main sustainable alternative is at an early stage. The first smaller wind and solar parks have recently been commissioned and other larger projects are planned. There is **potential for biomass processing**, which is so far mainly used for local non-ecological wood heating, but could significantly lighten the environmental load if used in regional heating plants.

Total energy supply by source, 2019 (%)



Source: International Energy Agency

Key challenges for the energy transition

- **Breaking out of the carbon lock-in:** finding a long-term, economically, energetically and environmentally sustainable replacement for the obsolete coal-fired sources.
- Finding a medium-term **replacement for ageing coal-fired units while taking into account climate targets** and the need to stabilise the energy system.
- Urgently **addressing the environmental impacts of coal power and the long-term socio-economic impacts of its decline**.
- **Exploiting the RES potential** while maintaining economic viability and environmental sustainability.
- **Ensuring stability of energy supply** by diversifying production capacities and regional market and distribution integration.
- **Minimising large losses** in electricity distribution and consumption.
- The **economic and geopolitical dilemma related to gasification** as a 'transitional' replacement for coal combustion.

Position of domestic actors

The current government, led by the leftist Vetëvendosje movement since 2020, places significant **emphasis on energy transition** as opposed to previous conservative governments. Vetëvendosje itself has historically been associated with an activist networks, but now it has to manoeuvre between its original ambitions and real possibilities. The government's stated desire to move away from traditional coal-fired power is thus running up against **economic and social limits and a deepening energy crisis**. While Prime Minister Kurti has clearly rejected the planned construction of a new coal-fired power plant, his government admits the **necessity to revitalise existing coal-fired units**.

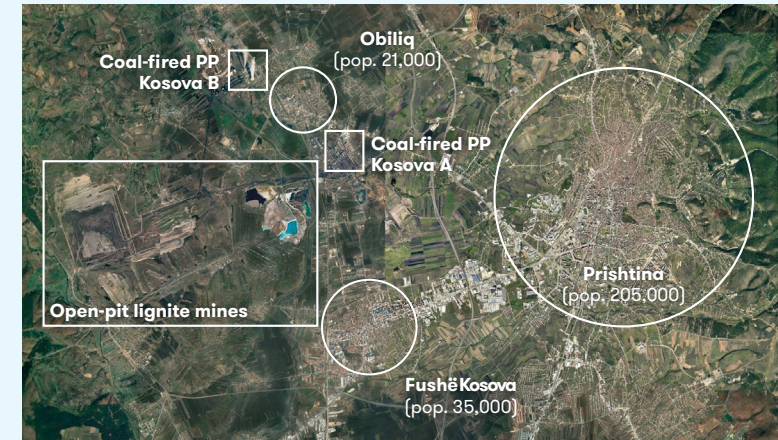
The central state actor responsible for energy is the **Ministry of Economy**, led by the independent Artane Rizvanolli, who declares **energy transition as her priority**. In 2022, the ministry presented a draft of the new energy strategy that strongly accentuates decarbonisation. While the previous strategy from 2017 prioritized the renewal of coal-fired capacity and gasification, the new strategy emphasizes the **development of RES**, whose share in electricity generation is expected to **jump from the current 6% to 35% by 2031**. However, according to critics, the proposed strategy only vaguely defined targets in this regard and does not offer concrete tools to achieve them.

The **energy sector**, which is one of the largest employers in a country suffering from extreme unemployment, is an important **subject of domestic political struggle**. Therefore, in the case of a future change of government, an overhaul of energy policy cannot be ruled out. The conservative parties, which are now in opposition, have long supported the construction of a new coal-fired power plant and gas power generation.

The electricity sector was **partially privatised and liberalised** after independence. While the main electricity producer **KEK** and the infrastructure operator **KOSTT** remained under state control, the distribution company **KEDS** was controversially privatised into the hands of a Turkish consortium. The public Energy Regulatory Office sets the rules for the functioning of the market and also sets the **end-use energy prices, which are artificially kept well below market levels**.

The **energy sector in the north of the country**, predominantly populated by the Serb minority, **operates de facto independently** of Kosovo's structures, with electricity distribution provided by **Elektrosever**, a company controlled by Serbia.

Location of the coal industry within the agglomeration of Prishtina



International actors

Due to Kosovo's problematic international status, **only Western actors, together with Turkey**, are active in the energy field. In contrast, Russia and China, otherwise major energy players in the region, are distancing themselves from the Kosovo state and its economy.

Kosovo is not connected to the regional gas pipeline network, but the envisaged **gasification is strongly supported by the US**. Two gas supply options have been discussed, connecting to the Trans Adriatic Pipeline via North Macedonia and connecting to the planned LNG terminal in Albania, both with the participation of US companies and capital. However, gasification would require **high up-front costs**, which have caused the **current government to freeze the projects**. Kosovo is also not connected to the oil pipeline infrastructure and has no processing capacities, and therefore relies on imports of oil products from refineries in Greece and Albania through private distributors. Turkey is active in Kosovo's energy sector through private companies that develop RES projects in addition to operating the KEDS distribution company.

Kosovo places great emphasis on **regional energy integration**, which is however severely limited by an ongoing dispute with Serbia. Thus, energy **integration with Albania is a priority**, alleviating the instability of the energy system by linking Kosovo's coal capacity with Albania's hydropower.

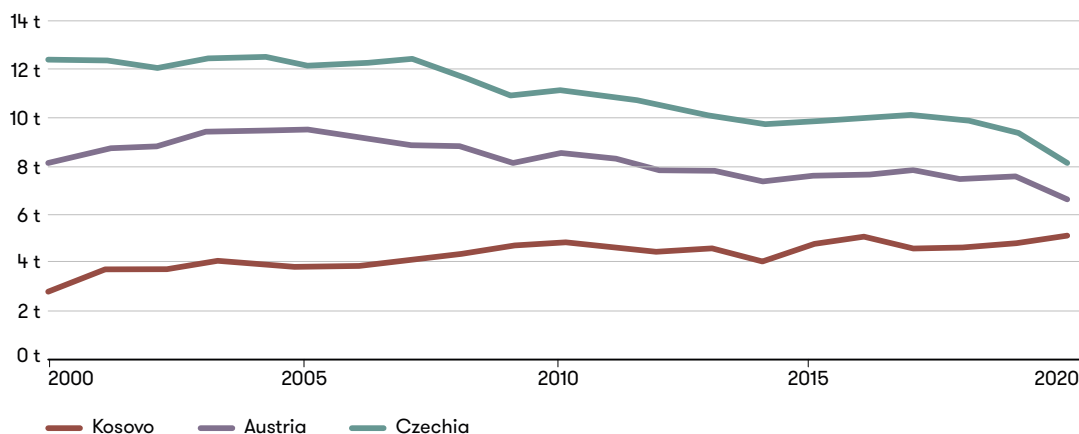
Role of the EU

European integration is a priority of Kosovo's foreign policy, but its implementation is hampered by its disputed international status, ongoing conflict with Serbia and incomplete recognition of Kosovo's statehood even within the EU. The declared efforts to **align Kosovo's energy policy with European requirements** have so far yielded only **partial results**. The reason for this is to be found not only in the inadequate structure of Kosovo's energy sector, which requires deep and costly reform, but also in the **reluctance of previous governments** to abandon their policy objectives in the coal-fired power sector.

Kosovo is a contracting party to the **Energy Community (EC)**, which is the main European actor seeking to integrate the energy market and align it with European standards and objectives. In Kosovo, the Community has long emphasised a **shift away from coal and the development of renewable energy** as a sustainable alternative. The EC has strongly opposed plans to build a new coal-fired power plant, but accepts the need to revitalise existing units and supports possible gasification. Overall, Kosovo ranks at the bottom of the regional assessment of the implementation of EC requirements, which is also due to the **structural set-up of the coal-oriented energy sector and the resulting difficult starting position** of the country in the transition process.

The **European Bank for Reconstruction and Development (EBRD)** is also an important European player, providing **financing for large infrastructure projects**, including a gas pipeline interconnection with Albania, in addition to systemic support for local energy saving and greening projects.

CO₂ emission per capita (t)



Source: Our World in Data

Relevance for Czechia

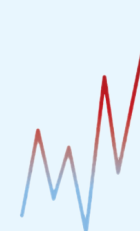
In the coming years, Kosovo will inevitably undergo an economically and politically **challenging process of structural energy transition** towards weaning itself off an absolute dependency on coal. The Czech Republic can contribute to this process in particular by **sharing its own experience** in dealing with the environmental, economic and social impacts of coal use and especially its expected phase out. Involvement in the energy transition can be an interesting **opportunity for Czech state, private and non-profit actors** who can offer Kosovo the necessary **know-how or technologies**.

The potential for participation of Czech companies lies in particular in the **development of sustainable RES, greening of the heating sector or optimisation of the distribution network**. However, the possible involvement of Czech exporters in the construction of new hydropower plants could be problematic due to their environmental impacts.

The **revitalisation of Kosovo's coal sector** offers significant economic opportunity for foreign players. However, from a climate policy perspective, the possible **involvement of Czech companies** in the extension of the lifetime of existing coal-fired units or even the construction of new ones (ČEZ was previously a favourite in the project to build a new coal power plant) **would be problematic**. In this lucrative area, a careful **balance** will have to be struck **between the necessary modernisation of coal capacities and deepening the carbon lock-in**.

Czech state institutions and the non-governmental sector should use their **experience in dealing with the economic, environmental and social impacts of the phase-out of the coal industry** and offer to share it with Kosovo's public and non-governmental actors.

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Montenegro:

Towards renewables and gas extraction



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Montenegro is a small coastal and mountainous country with 620,000 inhabitants. **It has considerable potential for renewable energy** – mainly hydro and wind, but also solar. Having high ambitions as regards the green transition, it is so far the only Western Balkan country to **introduce a national carbon pricing system in 2020**.

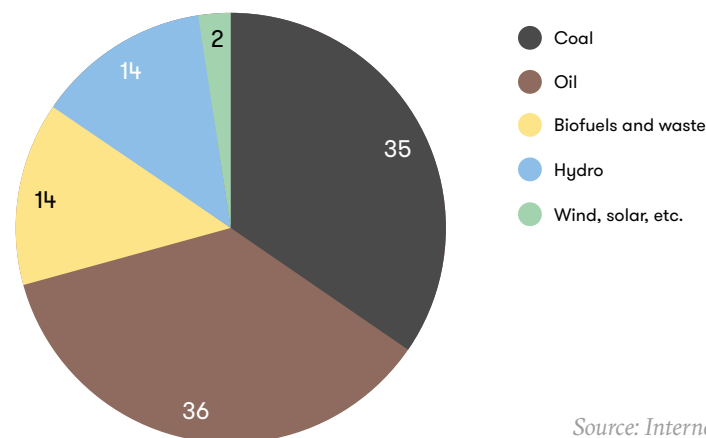
The main sources of electricity are currently **two large hydroelectric power plants – Perućica and Piva, which combined produce about half of the electricity generated**. Wind farms in Krnovo and Možura account for around 9% of electricity production, while the use of solar energy is negligible. However, the government, with EBRD support, **plans to increase wind and solar capacity**.

The lignite-fired Pljevlja power plant remains the single greatest electricity source, accounting for around 35% of all production. In 2019, a plan for the construction of a new unit of that power plant, in which the Czech company Škoda was also interested, was abandoned. The intended 'ecological reconstruction' of the existing unit has not started, although the exemption from the Large Combustion Plant Directive was **already exhausted in 2020 and the plant's operation is now breaching it**. Revitalisation would extend the life of the plant by at least 15 years.

In the overall energy mix, a significant component (45 %) is made up of petroleum products, mainly used in transport. Montenegro currently does not produce oil and has no refinery, **all consumption is imported in the form of petroleum products**. Biomass, specifically wood used for domestic heating, is also strongly represented (18 %).

Montenegro is not gasified but has ambitious plans in this area, including connection to the gas grid through the Trans Adriatic Pipeline and the recently announced construction of three gas-fired power plants to replace the Pljevlja power plant. The potential for **gas and oil production in the Adriatic Sea is also being explored and plans are underway to build an LNG terminal in the port city of Bar**.

Total energy supply by source, 2019 (%)

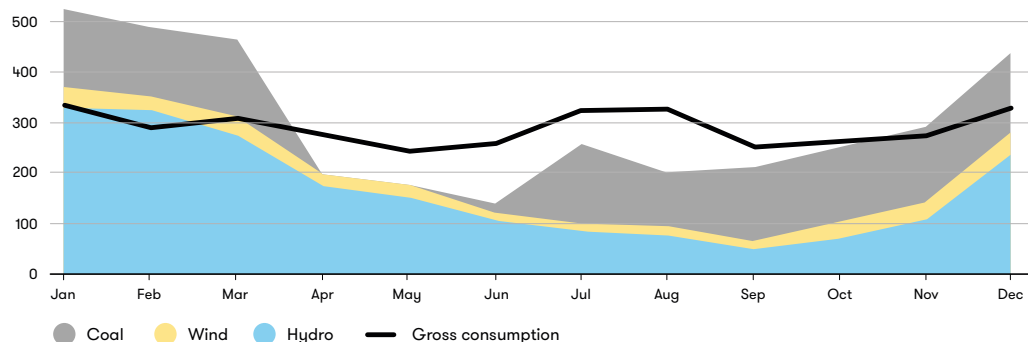


Source: International Energy Agency

Key challenges for the energy transition

- **Moving away from burning coal** by finding a replacement for the ageing coal-fired Pljevlja power plant.
- **Problems of non-transparency as well as protection of the environment and tourism in projects related to gasification and gas extraction** in the Adriatic Sea.
- The **planned expansion of solar and wind power capacities** and the long-discussed **construction of the Komarnica hydroelectric power plant**, in view of negative environmental impacts, insufficient legal framework for RES, or problems with financing and corruption.
- Increasing the **efficiency of electricity use and modernising** the high-loss transmission system.
- Linking the emissions trading system to the EU ETS.
- **Stabilisation of electricity production during the year**. Dependence on hydropower leads to a drop in production in the summer months when consumption increases due to the tourist season.

Electricity generation and consumption in 2021 (GWh)



Position of domestic actors

The **Ministry of Capital Investment** works on the preparation and evaluation of energy investment projects and monitoring of the whole sector, while environmental aspects are handled by the **Ministry of Ecology, Spatial Planning and Urban Planning**. The government of **Zdravko Krivokapić (2020–22)** has taken a more proactive approach to the green transition than previous Democratic Socialist Party governments, withdrawing from several controversial projects and increasing Montenegro's climate commitments in 2021. The **minority government of Dritan Abazovic** of the liberal-green URA movement, which held power for only four months, then made **energy and environmental protection top priorities with the idea of creating a 'green state'**.

Electricity generation in Montenegro is predominantly in the hands of the state. The Pljevlja power plant, the Pljevlja coal mine, and the large hydroelectric plants Perućica and Piva are managed by the **state-owned Energy Plants of Montenegro (EPCG)**. EPCG also owns the distribution company CEDIS. The transmission company has been independent of EPCG since 2009, but remains majority state-owned. The independence of the state energy regulator REGAGEN was strengthened in 2020.

Other domestic players are concentrated in the ownership structures of small hydropower plants, which account for around 3% of electricity generation.

International actors

European companies, especially Italian ones, have long been present in Montenegro's energy sector. The Italian firm A2A owned a 40% stake in EPCG until 2019, when the state took control of the company. Another Italian company Terna holds a 20% stake in the state-owned company that manages the transmission system, and an **undersea cable has connected the Italian-Montenegro electricity markets**. The oil market is dominated by Jugopetrol, owned by Greece's Hellenic Petroleum, and Croatia's INA also has a significant presence. Russia's Lukoil share accounts for around 10%.

Montenegro's **energy sector does not suffer from dependence on Russia** due to the absence of gas and pipelines. The planned connection to the IAP pipeline, which would link the TAP pipeline to the Croatian gas system, will **bring gas from Azerbaijan**.

To strengthen its position in the energy sector, **China is trying to take advantage of the green transition** in a way typical for the region, **namely by revitalising old coal-fired power plants in what it calls 'green reconstruction', although it amounts to carbon lock-in**. The Chinese firm Dongfang has signed a contract with EPCG to 'green' Pljevlja CHP plant. However, it is currently unclear whether the project will be implemented.

Other non-Western players are concentrated in the wind sector. The Krnovo wind park is co-owned by a company from the United Arab Emirates and the Mozur wind park by a consortium of Maltese and Chinese state-owned companies.

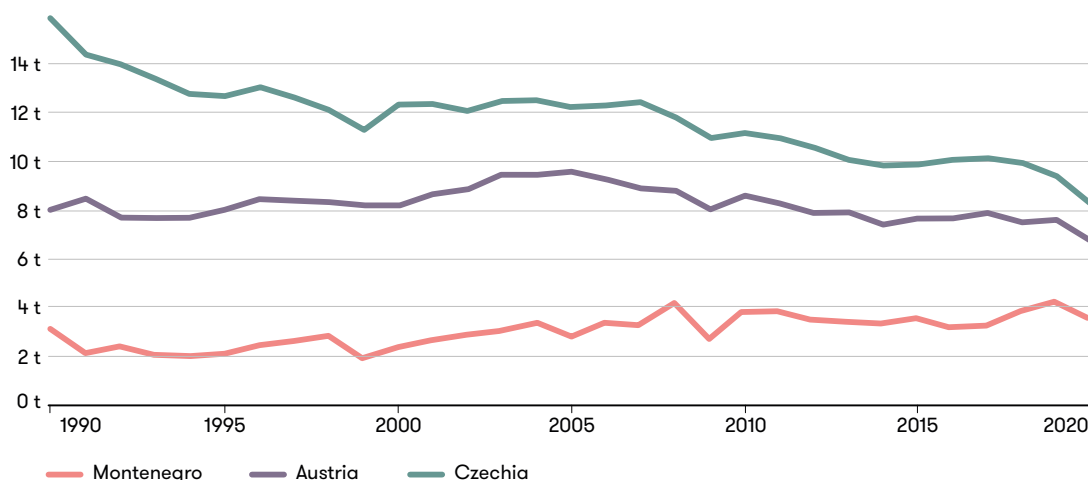
The position of international players in the energy sector may be significantly strengthened with the planned gasification of the country. Italian oil company ENI and Russian gas giant Novatek have started drilling exploratory wells in the Adriatic Sea in 2021. The Bar LNG terminal is to be built by EPCG in partnership with Singapore's LNG Alliance. **International players, including US firms, are also showing interest in investing in renewable energy.**

Role of the EU

The European Union and its Member States are clearly the **main foreign player in the Montenegrin energy sector**. Montenegro is a **member of the Energy Community**, which aims to create a single energy market between EU countries and their neighbours. As such, it is **bound by the EU regulatory framework** in energy matters – directives in the areas of electricity and gas markets, environment, renewables and energy efficiency.

Further energy issues and alignment with European climate targets are being addressed in the framework of accession negotiations with the EU. The process also includes the development of a National Energy and Climate Plan (NECP), the preparation of which has been very slow and the country therefore lacks a clear vision and strategy for the energy transition. Montenegro is also a **signatory to the Sofia Declaration on the Green Agenda for the Western Balkans**, to which the EU investment package is linked. The green transition is further supported by the EIB, EBRD and other European development agencies.

CO₂ emissions per capita (t)



Source: Our World in Data

Relevance for Czechia

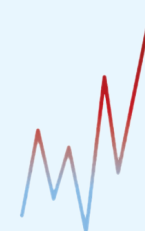
Montenegro has published a list of priority infrastructure projects this year, including 13 from the energy sector. The expected investments are also an opportunity for Czech exporters.

As a long-standing supporter of the integration of the Western Balkan countries into the EU, the Czech Republic should avoid supporting projects in the mining and oil industries that are not in line with European climate goals (Škoda, for example, bid for the construction of the second unit of the Pljevlja coal-fired power plant in 2014). Although Czech companies have much to offer in this sector, **the state should be reticent to support such investments and should not provide guarantees.**

On the contrary, participation in the expansion of renewable energy capacities is an opportunity for Czech companies. Support for the construction of small hydroelectric power plants, in which some Czech companies participated, has been discontinued due to the negative environmental impact, but **new opportunities lie in the planned development of photovoltaics. Another promising sector is transport**, in the modernisation and greening of which Czech companies can participate.

Although Montenegro is not among the priority countries for Czech development assistance, the state should **look for opportunities to support local civil society organisations** that are engaged in energy and environmental issues and require greater transparency in the sector.

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North Macedonia:

Greening as part of a European perspective



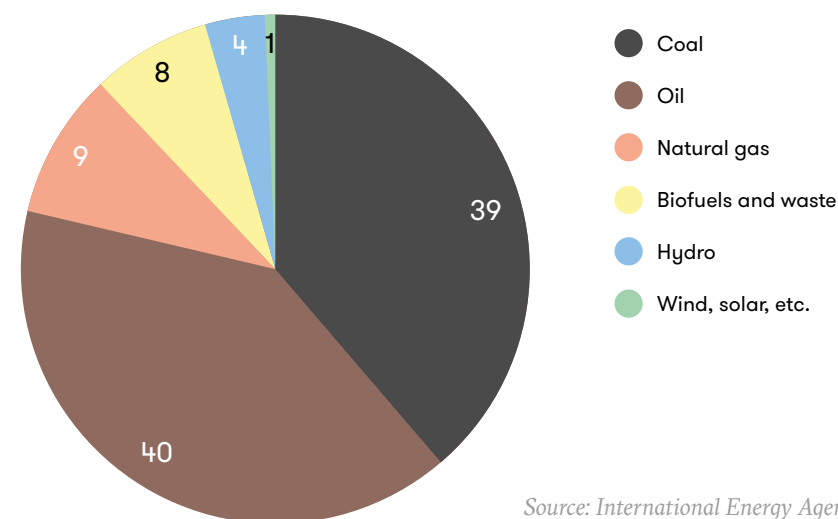
North Macedonia is a country of two million people at the intersection of several great powers' influences. Since 2016, when the government of the pro-Russian and pro-Chinese Nikola Gruevski fell following widespread protests, North Macedonia has strongly leaned towards a European perspective, as evidenced by the country's name change. In **July 2022, almost seventeen years after obtaining a candidate status, its accession talks with the EU have begun.** Energy and environmental reforms represent some of the biggest challenges in the integration process.

Despite a relatively strong transition trend, **North Macedonia's energy sector remains significantly dependent on fossil resources**, mainly coal and oil. Last year, the local government decided to close the two remaining coal-fired power plants, Bitola and Oslomej, as early as 2027. However, as a result of the energy crisis leading to power outages in late 2021-22 (similar to neighbouring Serbia) and following the resignation of progressive Prime Minister Zoran Zaev, the **coal phase-out was postponed until 2030.** At the same time, the past decade has seen a relatively significant development of gas capacity, but this is still entirely dependent on Russian supplies due to the still missing connection to the southern pipelines.

The share of renewables is still marginal, with only hydroelectricity producing significant output so far. **North Macedonia had built the region's first major wind farm in 2014**, but has not followed this up with any increase in installed capacity since. **Solar energy remains underdeveloped despite significant potential**, but several larger projects are planned, particularly on former coal sites. For example, a large photovoltaic park (120 MW installed capacity) is to be developed in cooperation with Bulgarian and Turkish investors on the site of the existing Oslomej mine and thermal power plant.

North Macedonia became the first Western Balkan country to adopt its National Energy and Climate Plan (NECP) in June 2022, providing a low-carbon transition roadmap for the next decade according to European Commission standards. It is also one of the countries in the region that has taken the first steps towards compliance with the EU ETS.

Total energy supply by source, 2019 (%)



Source: International Energy Agency

Key challenges for the energy transition

- **Moving away from mining and burning lignite and reducing the share of electricity imports** while maintaining a stable and affordable supply.
- **Eliminating dependence on Russian gas imports**, in particular through participation in the EU LNG joint purchasing initiative, and thanks to the construction of a link to the southern pipelines transporting natural gas from Turkey and Azerbaijan.
- **Accelerating the introduction of carbon taxation** or an EU ETS-linked trading system to avoid the prospective negative impacts of the of CBAM.
- **Substantially reducing local pollution from coal-fired power plants, transport and heating of buildings**, one of the highest in Europe, with negative impacts on the health of the population and the economy.

Position of domestic actors

The former state-owned energy monopoly was split into three separate companies in 2005: **the Electricity Supply Company of North Macedonia (ESM)**, which manages most of the country's key generating capacity, the transmission system manager **MEPSO**, and finally **EVN** as a distribution and supply company privatised years ago into Austrian hands. **GA-MA** is the manager of the still underdeveloped gas transmission system, while fuel distribution is handled by **Makpetrol**. The role of regulator is played by the Energy Regulatory Commission, whose independence is positively assessed by the Energy Community.

The energy agenda falls under the responsibility of **the Ministry of Economy**, for more than five years headed by **Kreshnik Bekteshi**, representing the most important party of the Albanian minority in North Macedonia, DUI. The party announced last year that it wanted to prioritize to environmental issues, which cross ethnic divides, causing scepticism among analysts and environmentalists.

In recent months, the ministry under Bekteshi's leadership has allowed households and businesses to sell surplus clean electricity from their own generation to the grid, and it has introduced an obligation for the distributor EVN to supply all households installing solar panels with free smart meters, a necessary part of the effort to introduce a so-called smart grid.

However, the North Macedonian government must **currently prioritise addressing high energy prices and the lack of electricity supply** that have led it to declare a state of crisis lasting the entire first half of 2022, and then again from August. This situation has resulted in the **postponement of the planned closure of domestic lignite power plants, efforts to purchase millions of tonnes of coal from Kosovo, and a plan to open up new coal deposits** in the North Macedonian territory, driven also by the activities of the ESM.

In June this year, the **Open Balkan initiative established a working group on energy cooperation** between North Macedonia, Albania and Serbia with the aim of creating joint investment plans in renewable energy or taking steps to integrate energy markets. If successful, it can serve as an example of good practice in regional cooperation, which could be built upon over time with further activities and possibly the participation of other countries.



Serbian Minister Zorana Mihajlović (left), North Macedonian Minister Kreshnik Bekteshi and Albanian Minister Bellinda Baluku – initiators of the Joint Energy Task Force. Source: Facebook/Bellinda Baluku (2022)

International actors

Although **North Macedonia has been fully dependent on Russian gas supplies, the planned steps should open up access to alternative suppliers**. By contrast, the country imports almost no oil products directly from Russia. The key exporter of petroleum products to North Macedonia is Greece, with which the country is currently cooperating on the construction of a floating LNG terminal. The country has also started talks with Bulgaria to secure electricity and gas supplies for next winter.

In the renewable energy sector, apart from domestic investors, **Turkish companies are the most active** as they stand behind large photovoltaic and wind projects. Slovenian and Bulgarian companies are also investing in PV in the country and German and French investors are expected to enter as well.

China's role in the North Macedonian energy sector is limited at the moment. The Chinese state-owned company CWE built the HPP Kozjak hydroelectric power plant in the country at the turn of the millennium. Later, China was implicated in the Gruevski government's corruption scandals, and the new administration focused on building relations with the West. With the coming renewable energy boom, its increased role can be expected, but no information is available on specific projects. **The focus of Chinese influence is currently on transport infrastructure projects.**

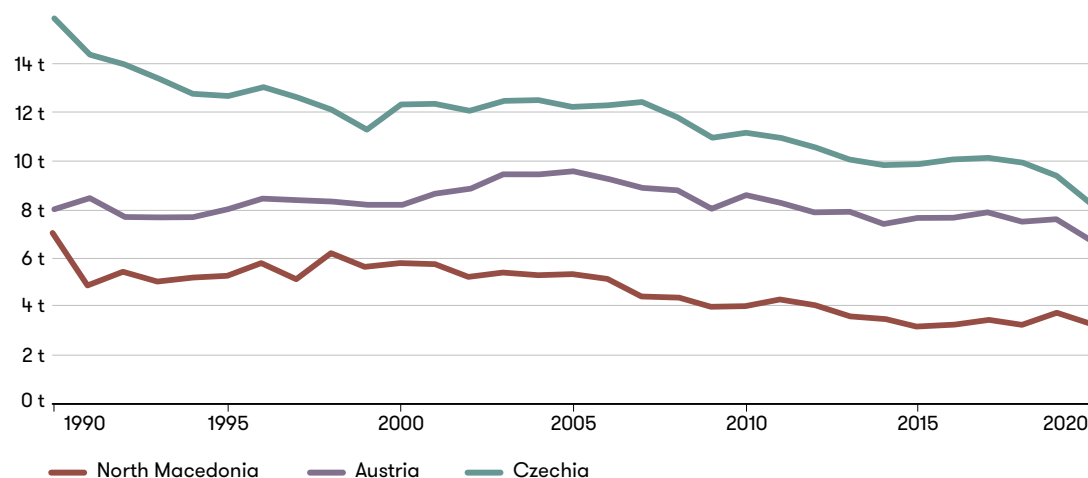
Role of the EU

Although North Macedonia was granted candidate status in 2005 already, accession talks with the country did not start until the summer of 2022. **The role of the European Union in the country is nonetheless crucial**, having been significantly strengthened especially after the so-called colour revolution in 2016 and the arrival of pro-EU Prime Minister Zoran Zaev. He also co-hosted the Sofia Summit in 2020, where the so-called **Green Agenda for the Western Balkans** was adopted, promising compliance with EU targets of climate neutrality by 2050, continued interconnection with the EU ETS (a condition for exemption from the effects of the planned introduction of CBAM, the so-called carbon tariff), development of renewable energy sources or energy savings.

North Macedonia is part of the Energy Community, where it regularly ranks among the most advanced of the six Western Balkan countries in terms of energy sector reforms. This year it also **became the first Energy Community country to adopt a National Energy and Climate Plan (NECP)**, following the example of EU Member States.

The European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD) are among the most important investors in the modernisation of the country's energy sector.

CO₂ emission per capita (t)



Source: Our World in Data

Relevance for Czechia

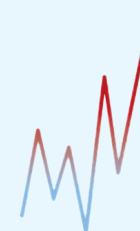
Historically and due to its geographical location, North Macedonia has not been one of the most interesting partners for the Czech Republic in the region, but this may be different in the future. Given its long-standing strong pro-European orientation and the progressive reform process, **North Macedonia may offer attractive opportunities for cooperation in areas related to energy transformation and decarbonisation.**

The energy crisis, manifested by high prices and insufficient energy supply, has led the North Macedonian government to increase support for the construction of renewable energy sources, creating **an interesting situation for potential foreign investors in strategic projects.** According to available information, the Czech Embassy in Skopje has already been in contact with several domestic companies in this regard. However, it should be noted that obtaining state support and implementing projects is preceded by a rather complicated administrative process.

In addition to supporting the development of low-emission energy, investment opportunities for specialised Czech companies in the field of technological solutions to the high level of local pollution from outdated coal-fired power plants or from domestic heating can also be considered. The modernisation of the building and transport sectors may also prove promising for a potential entry of Czech firms.

Last but not least, the Czech Republic can look for ways to assist the local highly active civil society in its efforts to support the implementation of environmental reforms.

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Serbia:

Energy transition between the interests of global powers



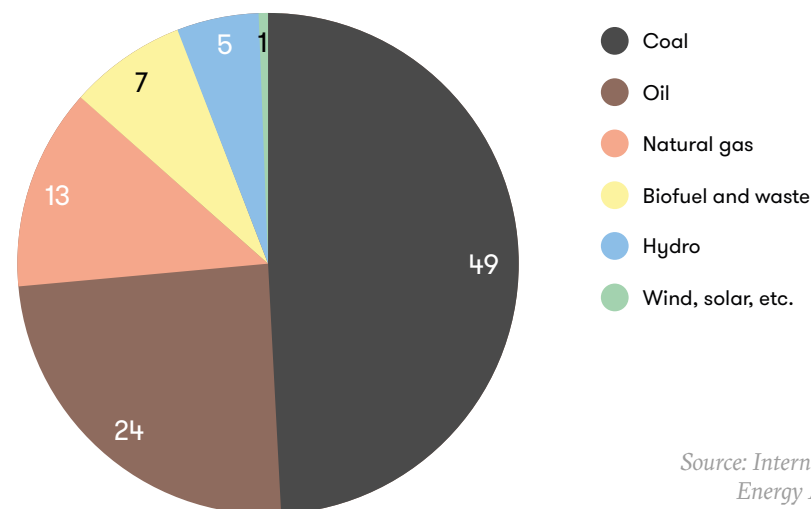
Serbia, a country of 7 million, traditionally balances among different global powers. President Aleksandar Vučić's has aspired to continue to **maintain good relations with both the European Union and Russia**, which, in the face of Russian aggression in Ukraine, is proving to be an untenable position in the long term. However, **China, Turkey and some Arab states also have strategic interests** in the country. These are also manifested in the field of energy.

Serbia's energy sector is still **significantly dependent on fossil fuels**, mainly lignite mined at the Kolubara and Kostolac mines. Around **70% of its electricity is still generated in coal-fired power plants**. Despite the global and European decarbonisation trend, the government's **priority remains the 'greening' of coal-fired power plants** by means of desulfurisation, and allowing them to continue operating. Serbia, in cooperation with Chinese investors, is interested in completing Unit 3 of the Kostolac power plant, even though construction started without the necessary permits and its operation would exceed European emission limits.

The **share of renewables, with the exception of hydropower, remains marginal**, despite the significant growth of wind power in recent years. As in neighbouring countries, the construction of hydropower plants is encouraged by the government despite negative local environmental impacts. The consequence of years of underfunding of energy infrastructure has been a **massive power blackout in late 2021**. As for **heat supply**, there are **growing efforts to replace coal with gas, biomass, heat pumps, waste heat or geothermal energy**. However, Russia remains the exclusive supplier of natural gas.

Environmental issues have been gaining ground in the country in recent years, notably in the form of efforts to improve the local environment and prevent extensive development in Belgrade, efforts to improve water and air quality, and the fight against the giant Rio Tinto lithium mine project. However, the ruling establishment has not shown a willingness to actively address these issues.

Total energy supply by source, 2019 (%)



Source: International Energy Agency

Key challenges for the energy transition

- **Shifting away from the mining and combustion of lignite**, which forms the backbone of Serbia's energy sector and has serious environmental consequences.
- **Resolving dependence on natural gas supplies from Russia** and revising energy strategy documents that envisage a high level of gasification.
- **Clarifying the role of China as a key investor** in the "greening" of Serbian coal-fired power plants and renewable energy sources.
- **Introducing an emissions trading system** linked to the EU ETS to evade the impacts of the introduction of CBAM.
- Dealing with the **immediate adverse environmental and health effects of a fossil-fuel dependent economy**, including through the full implementation of relevant strategic documents.

Position of domestic actors

The state-owned energy company **Elektroprivreda Srbije (EPS)** is the **largest employer in the country and it retains a de facto monopoly as electricity producer and supplier** despite the gradual liberalisation of the market. EPS also operates lignite mines in Kolubara and Kostolac. The national transmission system operator is **Elektromreža Srbije (EMS)**.

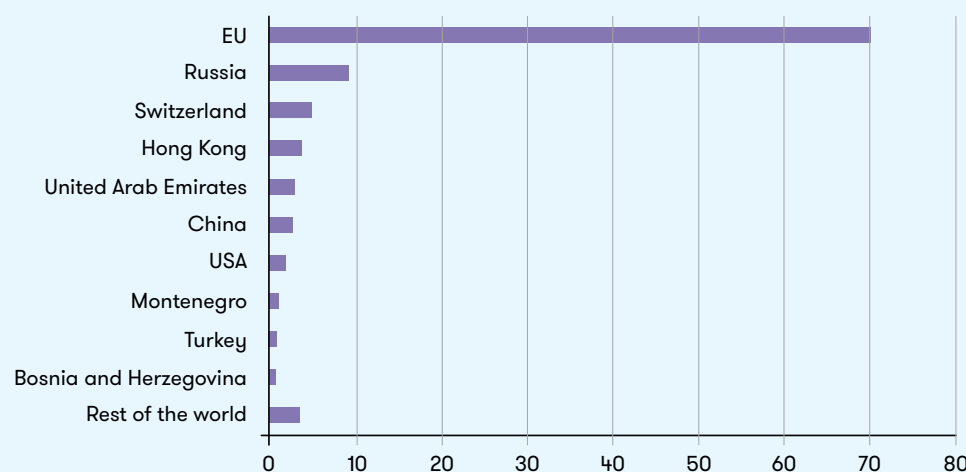
The oil and gas company **Naftna Industrija Srbije (NIS)** is **another key player, the monopoly importer of oil and the third largest exporter in the country. Since 2008, its majority has been in the hands of Russia's Gazprom**, to which it was sold off below market price in the months following Kosovo's declaration of independence. The state distribution company **Srbijagas** is the vehicle for importing natural gas from Russia.

There is some tension at the level of Serbia's government in relation to the energy transition. The long-term Deputy Prime Minister and **Minister of Energy and Mining, Zorana Mihajlović**, has, among other things, pushed through a **law opening the way for the development of solar and wind energy** or the creation of an investment support programme for households similar to the Czech New Green Savings. She has also been at the forefront of efforts to develop a National Climate and Energy Plan and an Energy Sector Development Strategy. Together with Environment Minister Irena Vujović, she coordinates the work of the Coal Commission, which was established last year. In addition, in the wake of the Russian invasion of Ukraine, **she is working to quickly replace natural gas supplies from Russia.**

President Aleksandar Vučić, on the other hand, advocates the use of domestic fossil resources and, after the energy crisis in December, expressed regret that he had listened to the words of environmentalists and foreign institutions and had not advocated the rapid commissioning of the Kostolac 3 lignite power plant and the implementation of the Kolubara B project. Similar voices are also heard from EPS and EMS, which can be considered the main advocates of the status quo in the Serbian energy sector.

The green-left political coalition **Moramo** ('We must'), which has put climate issues at the forefront, entered the national Parliament in the 2022 elections but remains in opposition without strong political influence.

Cumulative FDI inflows to Serbia for the period 2010—2018 (%)



Source: National Bank of Serbia

International actors

Russia remains the sole supplier of gas to Serbia, channeled through the TurkStream pipeline and its Balkan Stream link. Serbian imports of Russian gas have increased substantially in recent years despite rising market prices. President Vučić prefers to retain Russian imports, utilizing traditionally strong ties between the countries, but that becomes increasingly complicated.

EU sanctions against Russia in recent months have complicated Serbian imports of Russian gas, and in particular oil, which are provided by Gazprom's majority-owned NIS. The **possibility of Russia's Rosatom building a nuclear power plant in Serbia** remains in play, which would further strengthen Moscow's position in the country's energy sector.

China is a major investor in Serbia's energy sector, based on a strategic partnership concluded in 2009. **Unlike Western donors and development banks, Chinese funds come without requirements for reforms.** However, with the ongoing change in Chinese policy, one can foresee a future prioritisation of building renewable energy sources and related infrastructure.

Renewable energy projects in Serbia are also financed by the United Arab Emirates, and Turkish companies are also considering further investments.

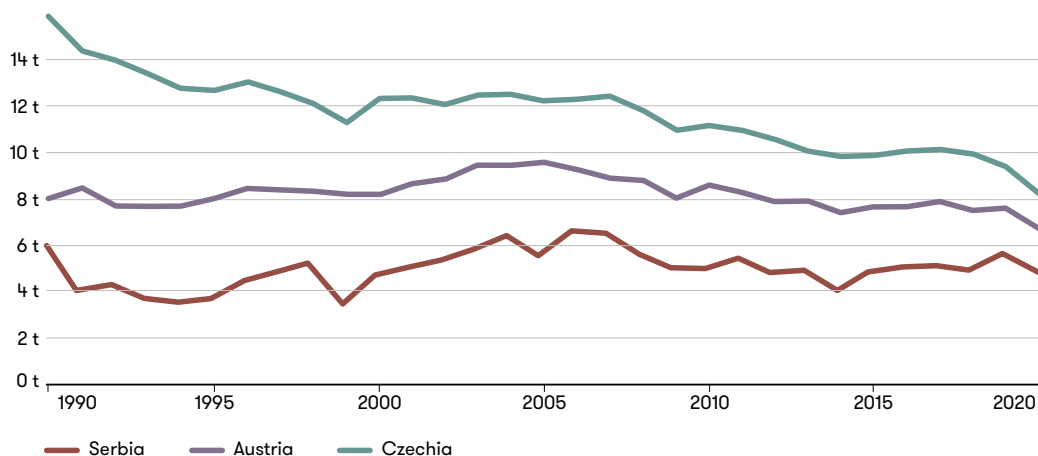
Role of the EU

Despite the strategic interests of China, Russia and the United Arab Emirates, the **vast majority of all foreign investment in Serbia comes from the European Union**. The European Bank for Reconstruction and Development (EBRD), for example, is leading the efforts to decarbonise its central heating supply.

Energy issues are also inevitably reflected in the ongoing accession talks for EU membership. Energy Community, the international organisation of the EU and SEE countries to which Serbia is a party, together with the EBRD and the World Bank, are demanding a continuation of the reforms that have become the target of growing criticism by the EPS and the EMS. A possible **change of course could pose a significant obstacle for Serbia in terms of meeting the objectives of the recently opened set of EU accession chapters** covering energy and climate.

The European Commission and the Energy Community are both pushing for the full integration of Serbia and other countries in the region in EU energy markets and the setting of national targets for RES, energy efficiency and GHG emissions.

CO₂ emissions per capita (t)



Source: Our World in Data

Relevance for Czechia

The Czech Republic has a long history of cooperation with Serbia, including through bilateral development assistance. Presently, Serbia remains an interesting destination for Czech investors, including in the energy sector.

At the same time, it is possible to find a number of parallels between the energy transition in Serbia and the Czech Republic, ranging from the high dependence on Russian supplies to the substantial domestic lignite reserves to the slow uptake of renewables.

It can be assumed that **more information on the Czech experience and the lessons that may be learned from it would be highly relevant for Serbian government officials** and it would therefore be appropriate to seek channels through which to voice it. These could include support for the increasingly active civil society working on energy and environmental issues in Serbia, but which is faced with a relatively closed state administration and poor standards of participation in relevant processes, or even an openly hostile environment when it comes to highlighting corruption risks in the Serbian energy sector.

The Czech Presidency of the EU Council will also address Serbia's progress in implementing energy reforms, setting its climate targets or preparing for the introduction of a greenhouse gas emissions trading system.

A key question for the coming months is how will Serbia's leaders eventually deal with their country's long-term dependence on fossil fuel supplies from Russia, and how the role of China and other players will be established in terms of investment in fossil or renewable energy and downstream infrastructure.

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