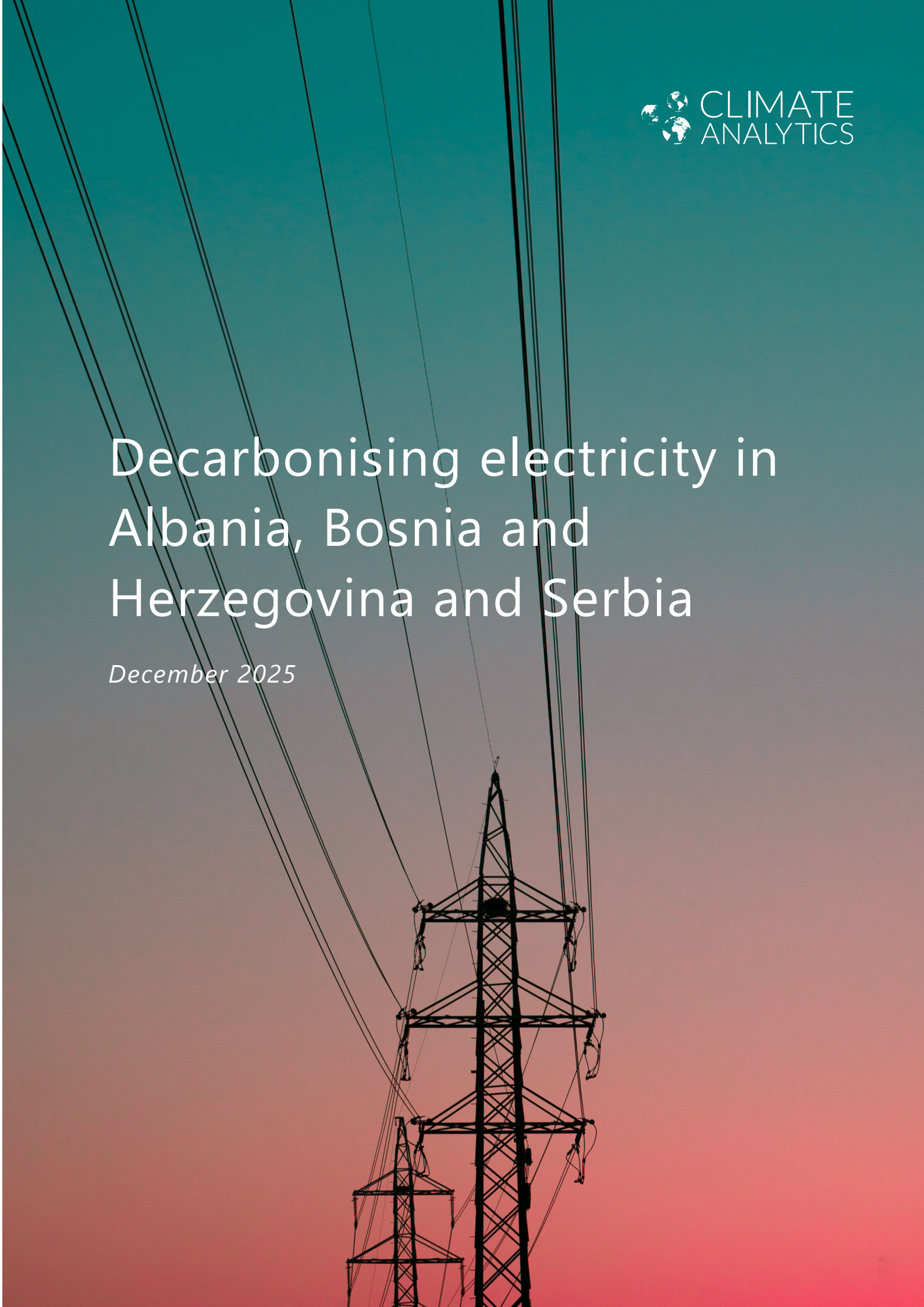
CLIMATE ANALYTICS

# Decarbonising electricity in Albania, Bosnia and Herzegovina and Serbia

*December 2025*



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## About Climate Analytics

Climate Analytics is a global climate science and policy institute. Our mission is to deliver cutting-edge science, analysis and support to accelerate climate action and keep warming below 1.5°C.


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# Summary

As signatories to the Paris Agreement, the European Union (EU), Serbia, Bosnia and Herzegovina (BiH), and Albania commit to limiting global warming to "well below 2°C" and "pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels". Increasingly, the 1.5°C goal is the foundational goal which countries must aim for in accordance with international law. Achieving decarbonisation goals in line with the Paris Agreement requires deep emission cuts across all sectors.

Within the EU, many producers are obliged to purchase emission allowances under the EU Emission Trading System (ETS). The EU's Carbon Border Adjustment Mechanism (CBAM) works to level the playing field between EU producers and non-European firms which are not subject to the ETS and may not be subject to an ETS in their home country and can therefore produce goods at lower cost and higher emissions levels. By placing a tax on the carbon content of imports the CBAM is expected to reduce carbon leakage and support EU decarbonisation while incentivising producers outside of the EU to decarbonise to improve the competitiveness of their products on the EU market, contributing to a reduction in global emissions in line with the Paris Agreement.

This report, the first in a four-part series on technical and policy opportunities for Albania, BiH and Serbia in the context of the CBAM, dives into the critical role of electricity as both an exported commodity and industrial input and offers international case studies and good practices. We look at risk and resilience to the CBAM in the power sector through desk research and original interviews and workshops with industry stakeholders across all three countries.

All export electricity to the EU, and apart from Albania, electricity produced by these countries is heavily emissions intensive as a result of the region's reliance on coal, rendering electricity exports to the EU vulnerable to the CBAM. At the same time, energy intensive industries also covered by CBAM (cement, chemicals, iron and steel, aluminium, hydrogen) are increasing their use of electricity to decarbonise, but this is reliant on access to green electricity. Albania is expected to see the most immediate opportunity under the CBAM as its low-carbon electricity supports a relatively lower carbon content across all CBAM industries. Electricity makes up the largest share of BiH's CBAM-covered exports to the EU and due to the high share of coal in generation (62% of total generation in 2024), the CBAM is expected to significantly raise costs. Serbia is in a similar situation, with coal accounting for 63% of generation in 2024.

The technological options for decarbonising electricity in the region are clear – deep integration of wind and solar coupled with grid and storage upgrades to improve efficiency and flexibility. This also supports energy security in the region, decreasing Albania's reliance on hydropower as droughts become more severe, and reducing BiH and Serbia's dependence on ageing and unstable coal-fired power stations.

In BiH and Serbia, coal phase out is critical to aligning with the CBAM and Paris Agreement. Both countries are heavily dependent on coal power and are planning to expand capacity, which will likely lead to costly stranded assets as lignite generation becomes economically non-viable.

All three countries will need to take decisive policy action to support the technological transformation in the power sector. We conduct two mini case studies examining the issue from a coal phase out perspective and a renewables rollout perspective. Greece offers a contemporary example of rapid coal phaseout, with a policy approach characterised by regional differentiation and reskilling that focusses on the local context, supporting communities in order to uplift the economy. Türkiye has used a variety of mechanisms to support its rapid roll-out of renewables, changing auction structures, instituting electricity market reform and looking into all available technologies.  Both case studies show the importance of comprehensive strategy planning, beyond-the-paycheck workforce planning and deep stakeholder engagement in impacted regions and industries.

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# Introduction

As signatories to the Paris Agreement, the European Union (EU), Serbia, Bosnia and Herzegovina (BiH), and Albania commit to limiting global warming to "well below 2°C" and "pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels".[1] Increasingly, the 1.5°C goal is the foundational goal which countries must aim for in accordance with international law.[2] In an effort to align with the Paris Agreement, the EU aims to cut its emissions by 55% below 1990 levels by 2030 and to achieve climate neutrality by 2050. This has necessitated a whole-of-economy approach, with industry – which accounts for 21% of EU emissions – a critical area to decarbonise.[3]

A dilemma arose for EU policymakers when pushing for climate action in the industrial sector: how to cut emissions while preventing carbon leakage (i.e. the relocation of industry to countries with weaker climate regulations)? To address this, the Carbon Border Adjustment Mechanism (CBAM) was introduced. CBAM ensures that the carbon price of imports to the EU is equivalent to the carbon price of domestically produced products, thereby maintaining fair competition as EU companies transition to low carbon production.[4] While all countries exporting to the EU are subject to CBAM, it is particularly relevant to candidate countries for EU accession, who are to align their domestic legislation with the EU's acquis communautaire before joining the bloc.

CBAM places a price on carbon-intensive goods imported into the EU, with electricity included under CBAM's scope along with cement, fertilisers, aluminium, iron, steel, and hydrogen.[5] For exporters to avoid CBAM costs, they will need to reduce the carbon intensity of those sectors covered by the regulation.

[1] UNFCCC, "The Paris Agreement on Climate Change," UNFCCC, 2015, https://unfccc.int/sites/default/files/english_paris_agreement.pdf.
[2] International Court of Justice, "Obligations of States in Respect of Climate Change - The Court Gives Its Advisory Opinion and Responds to the Questions Posed by the General Assembly," 2025; International Tribunal for the Law of the Sea, "Request for an Advisory Opinion Submitted by the Commission of Small Island States on Climate Change and International Law," 2025, https://www.itlos.org/fileadmin/itlos/documents/cases/31/Advisory_Opinion/C31_Adv_Op_21.05.2024_orig.pdf.
[3] Climate Analytics, "European Union | 1.5°C National Pathway Explorer," 2025, https://1p5ndc-pathways.climateanalytics.org/countries/european-union/.
[4] European Commission, "Carbon Border Adjustment Mechanism," European Commission, 2025, https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en.
[5] European Commission, "Commission Implementing Regulation (EU) 2023/1773 of 17 August 2023 Laying down the Rules for the Application of Regulation (EU) 2023/956 of the European

Electricity will be pivotal to aligning with CBAM on two fronts:

1) The first relates to direct electricity exports. Coal-fired power represents a high share of Serbia and BiH's electricity exports, making them highly exposed to CBAM.[6] Maintaining the profitability of electricity exports will involve reducing their emissions.
2) The second is in relation to industrial exports. As electricity powers industrial production, the higher the carbon intensity of electricity, then the higher the carbon intensity of the final product. Low-carbon electricity is therefore the foundation of low-carbon industry. As decarbonising electricity has the knock-on effect of decarbonising the sectors that rely on electricity, it is central to aligning every industrial sector with CBAM.[7]

Electricity exports represent an important source of income for several Western Balkan countries. In 2023, electricity was the top export for Bosnia and Herzegovina (USD 523 million); and second ranked export for Albania (USD 282 million). Serbia's electricity exports amounted to USD 1.8 billion.[8] Much of the electricity production in these countries is heavily emissions intensive as a result of the region's reliance on coal, rendering electricity exports to the EU vulnerable to application of CBAM.

Decarbonising national electricity grids is of critical importance to maintaining economic competitiveness in the Western Balkans. Some core measures which will support decarbonisation can be seen in **Figure 1** below.

Parliament and of the Council as Regards Reporting Obligations for the Purposes of the Carbon Border Adjustment Mechanism during the Transitional Period," 2023, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R1773.

[6] Verena Allert et al., *Impacts of the EU Carbon Border Adjustment Mechanism on the Western Balkans and Ukraine: Policy Options for Governments*, Life ETX Project (Germanwatch, 2023), https://www.germanwatch.org/sites/default/files/germanwatch_impacts_of_the_cbam_on_the_western_balkans_and_ukraine_2023.pdf.

[7] Elena Benaim, "Designing a Carbon Border Adjustment Mechanism: Reducing Industrial Emissions While Facing an Energy Crisis," *Carbon Free Europe*, 2022, https://www.carbonfreeeurope.org/product/designing-a-carbon-border-adjustment-mechanism-reducing-industrial-emissions.

[8] Observatory of Economic Complexity, "Bosnia and Herzegovina (BIH) Exports, Imports, and Trade Partners," 2025, https://oec.world/en/profile/country/bih; The Observatory of Economic Complexity, "Electricity in Serbia," 2025, https://oec.world/en/profile/bilateral-product/electricity/reporter/srb; The Observatory of Economic Complexity, "Albania (ALB) Exports, Imports, and Trade Partners," The Observatory of Economic Complexity, 2025, https://oec.world/en/profile/country/alb.

Decarbonising electricity requires system-wide changes.

| Switch to renewables | Improve energy efficiency | Energy storage and flexibility | Policy |
|---|---|---|---|
| Phase out carbon intensive fossil fuels from electricity generation - particularly coal | Improve the quality of distribution and transmission grids to reduce losses | Maximise renewables protential by storing low-carbon electricity until it is needed | Introduce carbon pricing, incentivising decarbonisation by shifting the economics of the decision |
| Increase the share of wind and solar in line with Energy Community targets | Deploy smart grids and advanced monitoring to detect losses and inefficiencies | Encourage generation close to demand centres including supporting on-site renewables for industry | Streamline permitting processes, implement functioning auctions and tax incentives to encourage renewables build-out and generation |

*Figure 1: Priority areas to decarbonise electricity*

This paper is the first in a four-part series covering the electricity, steel, cement, and chemicals sectors in Serbia, BiH and Albania. Given the centrality of electricity to all aforementioned sectors aligning with CBAM, this paper can be considered a deep dive not only into electricity but also the first step in supporting CBAM alignment in the target countries' industrial sectors.

Across a variety of indicators, Serbia, BiH and Albania's electricity grids are at different stages of decarbonisation. Each country's exposure and resilience to CBAM will be covered, with a view towards assessing effective ways to align their electricity grids with CBAM requirements. In achieving this, we combine desk research with original interviews and workshops with industry stakeholders from the assessed countries. We then highlight international best practices which can be translated to the Western Balkan context.

# CBAM – addressing the elephant in the room

In an era of rapidly shifting trade relations, CBAM stands out as a policy with a potentially profound impact on business as usual. Yet several years after it was first announced in 2021,[9] it remains elusive to understand even for policymakers. The core reasoning for CBAM's introduction is fairly straightforward. EU efforts to reduce emissions by 55% below 1990 levels by 2030, and to achieve climate neutrality by 2050 push its industry to decarbonise faster than in other countries. This risks competitiveness as companies outside of the bloc who do not pay a carbon price would be able to undercut prices from EU companies in the short term.[10]

To prevent carbon leakage, the European Commission advocated to level the playing field, whereby the carbon embedded in products imported into the EU would be priced at an equivalent level to those produced within the EU. To achieve this, CBAM (Carbon Border Adjustment Mechanism) was introduced. CBAM's transitional phase takes place between October 2023 and December 31, 2025, with full implementation currently planned to begin on January 1, 2026.[11]

CBAM aims to ensure that products imported to the EU pay the same price on carbon as EU companies do. European companies, under the EU Emissions Trading System (EU ETS), must reduce their emissions or buy allowances which cover the cost of the excess carbon that they emit.[12] As many exporters to the EU are not subject to the same level of carbon pricing, CBAM sets an equivalent carbon price on imports. Like domestic European companies, exporters to the EU can reduce – or indeed avoid – paying this carbon price by reducing the carbon intensity of their product.[13]

To comply with CBAM, EU-based importers of CBAM-covered goods report the embedded carbon contained in the shipment and purchase CBAM certificates

[9] European Commission, "Proposal for a Regulation of the European Parliament and of the Council Establishing a Carbon Border Adjustment Mechanism," 2021, https://www.europarl.europa.eu/RegData/docs_autres_institutions/commission_europeenne/com/2021/0564/COM_COM(2021)0564_EN.pdf.
[10] European Commission, "Carbon Border Adjustment Mechanism."
[11] European Commission, "Carbon Border Adjustment Mechanism."
[12] European Commission, "About the EU ETS," 2025, https://climate.ec.europa.eu/eu-action/carbon-markets/eu-emissions-trading-system-eu-ets/about-eu-ets_en.
[13] European Commission, "Carbon Border Adjustment Mechanism."

corresponding to those emissions. The price of a certificate is connected to the EU ETS price, and is expressed in €/tonne of $CO_2$ emitted. If a carbon price has been paid during the production of imported goods, that can be deducted from what is paid when it enters the EU.[14] The price of CBAM will not start out equal to the EU ETS, but will gradually increase until they become equal in 2034.[15]

Although the underlying raison d'être of the policy was simple, the drafting and subsequent implementation of CBAM has been less straightforward. The 2023 iteration of the CBAM regulation is a complicated document which lays out the rules and reporting obligations that EU importers, in partnership with the external businesses they import from, were expected to follow to align with CBAM.[16] This has created a significant imbalance between larger companies who have the in-house capacity to interpret the regulation or can afford external consultants to interpret it on their behalf, and small- and medium- sized enterprises (SMEs) who do not have the financial or technical capacity to properly account for the carbon intensity of their products in line with CBAM requirements.

This has led to concern among stakeholders in the Western Balkan region that their industries are not sufficiently prepared to meet CBAM's complicated reporting requirements. In workshops conducted for this project, Serbian stakeholders raised concerns that industries affected by CBAM were not only facing challenges in meeting the reporting requirements, but many were not aware that they were even expected to.[17] In a worst-case scenario, some Western Balkan SMEs risk being required to meet CBAM requirements without any knowledge in how to do so or preparation to reduce the carbon intensity of their products, leading to a significant loss in competitiveness.

Despite the importance of reducing industrial emissions to maintain economic competitiveness, regional stakeholders have taken issue with the response of Western

[14] European Commission, "Carbon Border Adjustment Mechanism."
[15] Igor Todorović, "Serbia Proposes Taxes on Greenhouse Gas Emissions, Imported Carbon-Intensive Products," *Balkan Green Energy News*, 2025, https://balkangreenenergynews.com/serbia-proposes-taxes-on-greenhouse-gas-emissions-imported-carbon-intensive-products/.
[16] European Commission, "Commission Implementing Regulation (EU) 2023/1773 of 17 August 2023 Laying down the Rules for the Application of Regulation (EU) 2023/956 of the European Parliament and of the Council as Regards Reporting Obligations for the Purposes of the Carbon Border Adjustment Mechanism during the Transitional Period."
[17] Climate Analytics et al., "Pathway Summary Report: Serbia," 2024, https://ca1-clm.edcdn.com/publications/Serbia_Pathway_Workshop_report_042024.pdf?v=1727355554.

Balkan governments to align with  with CBAM, specifically over slow action and orderly engagement with those affected.[18]

Failure to sufficiently reduce the carbon intensity of CBAM-affected industries risks:

- Losing industrial competitiveness as EU-based importers may switch to businesses who can provide similar quality products at a lower carbon cost.[19] Interviews with stakeholders from CBAM-affected industries highlight the risk of committing to large-scale investments in the absence of regulatory and investment certainty from government. , One interviewee highlighted that even when companies do invest in on-site renewable energy, insufficient capacity in governments departments slows down the permitting process and thus alignment with CBAM.
- If Western Balkan governments do not price carbon themselves, they are effectively losing this revenue to the EU. Western Balkan companies will still be affected by carbon pricing, but Western Balkan governments will not be the ones collecting that revenue.[20]

Thus, both companies and governments stand to lose economic competitiveness and revenue if they do not align with CBAM and institute a carbon price. However, inherent to the risks associated with CBAM are its opportunities. Just as companies who move slowly risk losing competitiveness, those who move fast will gain a competitive advantage.

- Governments who do not introduce some form of carbon pricing will lose potential revenue to the EU. Those who do introduce carbon pricing will increase their revenue base while supporting the transition to renewable energy sources.[21]

[18] Climate Analytics et al., "Pathway Summary Report: Serbia."
[19] Peter Spiller et al., "New Opportunities: Capturing Value from CBAM Regulation," McKinsey & Company, 2024, https://www.mckinsey.com/capabilities/operations/our-insights/operations-blog/new-opportunities-capturing-value-from-cbam-regulation.
[20] Luka Vasilj et al., *CBAM: Trade Implications and Opportunities of EU Climate Neutrality Goals*, 4iTraction Discussion Papers (Climate Analytics, 2023).
[21] Ioannis Charalampidis et al., "Impact Assessment for the Establishment of a Regional Emission Trading System in Energy Community Contracting Parties – NEAR.A3," *Trinomics*, 2024, https://www.energy-community.org/news/Energy-Community-News/2025/01/14.html.

- As a prerequisite to market coupling and EU accession (see section 4), there is additional impetus to introduce carbon pricing and transpose EU legislation, thus strengthening the economic case to decarbonise.[22]
- As CBAM raises the cost of inefficient production, plants which modernise and improve energy efficiency will reduce the carbon intensity of their product, thus reducing strain on the grid.
- As EU importers will shift to cleaner producers, companies who decarbonise can increase their competitiveness and potentially charge a 'green premium'.[23,24] Streamlining permitting processes and providing regulatory certainty to companies can stimulate investment, particularly in cost-effective technologies such as wind and solar.
- Lastly, the co-benefits of the energy transition will have lasting impacts on the region, particularly in relation to high-quality green jobs and reductions in air pollution – which was responsible for 20,500 premature deaths in 2022 in Serbia, BiH and Albania.[25]

## CBAM 2025 simplification

Recognising the administrative burden placed on businesses to align with CBAM, the European Commission proposed simplifying the regulation in February 2025. This was in line with a broader effort from the Commission to reduce the administrative burden on European businesses. The Council and Parliament approved the changes in September of the same year.[26] The amendments are illustrated in Figure 2.

[22] Charalampidis et al., "Impact Assessment for the Establishment of a Regional Emission Trading System in Energy Community Contracting Parties – NEAR.A3."
[23] Antoine Dechezlepretre and Antton Haramboure, "EU Carbon Border Adjustment Mechanism: What Is It, How Does It Work and What Are the Effects?," 2025, https://www.oecd.org/en/blogs/2025/03/eu-carbon-border-adjustment-mechanism-what-is-it-how-does-it-work-and-what-are-the-effects.html.
[24] Nik Bollons and Jean-Louis Genest, "What You Need To Know About CBAM, The EU's New Carbon Tariff," Engie, 2023, https://www.engieimpact.com/insights/cbam-eu-carbon-tariff.
[25] European Environment Agency, "Harm to Human Health from Air Pollution in Europe: Burden of Disease Status, 2024," 2024, https://www.eea.europa.eu/en/analysis/publications/harm-to-human-health-from-air-pollution-2024.
[26] European Commission, "Regulation (EU) 2025/2083 of the European Parliament and of the Council of 8 October 2025 Amending Regulation (EU) 2023/956 as Regards Simplifying and Strengthening the Carbon Border Adjustment Mechanism," 2025, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202502083.

Changes to CBAM reduce the required number of reporters, while the European Commission argues roughly the same amount of $CO_2$ emissions will be covered

| Exemption threshold changes | Certificate sales delay | Increased non-compliance penalties | Simplification of reporting requirements | Emissions calculations |
|---|---|---|---|---|
| Firms importing <50 tonnes of goods exempted | Obligation to purchase certificates postponed from 2026 to 2027. However, financial obligations from 2026 will still be incurred | Deliberate non-compliance to result in fines 3-5x higher | Reduces financial pressure and allows greater flexibility for importers in terms of when they purchase certificates for 100% of their emissions | Only direct emissions from electricity to be considered |
| EU estimates this removes obligations for 90% of reporters while still covering 99% of emissions | While 2026 certificates will still need to be bought, companies do not have to do so until 2027. This will reduce the reporting burden in the short term | Cooperation with national authorities to detect and enforce non-compliance | Third parties can submit CBAM declarations on behalf of importers | Modifications to calculations of embedded emissions for some products to better align with the ETS |
| | | Reductions possible for small or unintentional errors | Quarterly certificate holding requirements reduced from 80% to 50% | |

*Figure 2: Changes to CBAM in 2025*

In practice, these changes will mean that many Western Balkan businesses, particularly SMEs, will be exempted from CBAM.

If the EU-based importer imports less than 50 tonnes of CBAM-covered goods per year, they are obligated to report the emissions or buy certificates. To that extent, the worst-case scenario of SMEs with low capacity to adapt to CBAM being faced with significant additional costs can largely be avoided. It should be noted that the <50 tonne exemption relates to EU-based importers, and it is still possible that some Western Balkan SMEs will remain obligated to align with CBAM.[27] Nevertheless, the focus is now

[27] Bogdan Gecić, "Simplifying CBAM: What It Means for Non-EU Businesses in Europe (and Beyond)?," Gecić Law, 2025, https://www.geciclaw.com/carbon-border-tax/.

on larger companies. Overall, the imperative to align with CBAM remains – just with less red tape and fewer administrative headaches.[28]

## Exempting electricity exports from CBAM

Electricity exports stand out from other CBAM-covered goods in a critical way – they have the potential to be exempted until 2030 if certain criteria are met.[29] This has become a priority for Western Balkan governments, with BiH, Serbia and Albania being the largest net exporters of electricity in the region (in that order).[30] For this to occur, each country would need to couple their electricity markets with at least one European country.

This highlights the central essence of CBAM – it charges imports that enter the EU from outside its borders. If a country couples its electricity grid with that of an EU country and transposes EU legislation accordingly, then it is effectively no longer considered an external market and thus exempt from CBAM.

. In practice, exporting electricity to the EU is facilitated by the Energy Community, an international body that brings together the EU and Balkan states to develop a regional based energy market.[31] There are several steps  Balkan countries must follow to align their electricity markets with EU standards in order to be exempted from CBAM.

These steps include:

1. Application of EU legislation, or Acquis, regarding energy, environment, competition, and renewables.[32]

[28] Nina Rašljanin and Srđana Petronijević, "EU Proposes to Simplify CBAM: Key Takeaways for Balkan Companies," *Schoenherr Attorneys at Law*, 2025, https://www.schoenherr.eu/content/eu-proposes-to-simplify-cbam-key-takeaways-for-balkan-companies.
[29] European Commission, "Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 Establishing a Carbon Border Adjustment Mechanism," 2023, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R0956&qid=1688551696609.
[30] Energy Community Secretariat, "2025 CBAM-Readiness Tracker," 2025, https://www.energy-community.org/news/Energy-Community-News/2025/10/17.html.
[31] European Commission, "Energy Community," 2025, https://energy.ec.europa.eu/topics/international-cooperation/international-organisations-and-initiatives/energy-community_en.
[32] European Commission, "Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 Establishing a Carbon Border Adjustment Mechanism"; Energy Community, "The Energy Community Legal Framework 2023 | Edition 5.0," 2023, https://www.energy-community.org/legal/treaty.html.

2. Establish a carbon pricing system equivalent to the EU ETS.[33] Central to achieving an ETS is the development of a Monitoring, Reporting, Verification, and Accreditation (MRVA) system. This is fundamental to developing a robust carbon pricing mechanism in line with CBAM as it allows for accurate $CO_2$ accounting, thereby developing credible emission reports that meets EU standards.[34]
3. Commit to climate neutrality by 2050 and enshrine this in law through a long-term low greenhouse gas emissions development strategy.[35]
4. Provide a roadmap for implementation with a clear set of deadlines.[36]
5. Coupling national electricity markets with the EU's internal market. This refers to linking up with the European market to provide single day-ahead coupling (SDAC) and single intraday coupling (SIDC). SDAC refers to electricity prices being set a day before, allowing supply and demand to be met at the lowest cost across borders. SDIC supports cross-border electricity trading up to an hour before delivery, which is particularly beneficial for trading electricity produced from variable renewables such as wind and solar.[37]
6. Establishment of a system which prevents indirect import of electricity into the EU through third countries who have not met the above criteria.[38]
7. Once the above criteria are fulfilled and an exemption is provided, the country is expected to continue to demonstrate progress at risk of the exemption being revoked. Public support for carbon-intensive electricity (i.e. new coal plants), or a 5% increase in emissions per kilowatt-hour compared to 1 January 2026 are specified as cause for an exemption to be revoked.

If a country had achieved these steps before the full introduction of CBAM at the start of 2026, the exemption for electricity exports would have been granted. However, no Western Balkan country has initiated the necessary reforms to be granted an exemption. Serbia is the furthest along in this regard, with market coupling with Hungary and Bulgaria expected by Q4 2026.

[33] Charalampidis et al., "Impact Assessment for the Establishment of a Regional Emission Trading System in Energy Community Contracting Parties – NEAR.A3."
[34] Energy Community Secretariat, "2025 CBAM-Readiness Tracker."
[35] European Commission, "Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 Establishing a Carbon Border Adjustment Mechanism."
[36] European Commission, "Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 Establishing a Carbon Border Adjustment Mechanism."
[37] Andrea Alberizzi et al., "Analysis of the Intraday Market: Statistical Analysis of German Single Intraday Coupling," *Institute of Electrical and Electronics Engineers*, 2022 AEIT International Annual Conference, 2022, https://doi.org/10.23919/AEIT56783.2022.9951806.
[38] Alberizzi et al., "Analysis of the Intraday Market: Statistical Analysis of German Single Intraday Coupling."

## CBAM-readiness: how close are Western Balkan countries to achieving an exemption for electricity?

The Energy Community tracks its members' readiness to meet CBAM's conditions, evaluating how far each country is in the process of transposing EU regulations and coupling their markets with the EU.[39] Across almost every indicator, Serbia, BiH and Albania have not met the criteria necessary to secure an exemption before CBAM comes into force.

The necessity of this differs for each country. By far and away, the exemption is more relevant for Serbia and BiH, whose electricity mixes rely heavily on fossil fuels, particularly coal. Albania's electricity generation, on the other hand, is almost entirely supplied by hydro energy.[40,41] **Figure 3** below outlines each country's status in meeting the various criteria necessary to qualify for an exemption for electricity.

[39] Energy Community Secretariat, "2025 CBAM-Readiness Tracker."
[40] Ember, "Electricity Data Explorer," 2025, https://ember-energy.org/data/electricity-data-explorer/.
[41] Although Albania's domestic production primarily comes from hydro, much of this is exported while coal is imported to meet domestic consumption. While Albania's electricity exports are therefore less affected by CBAM than Serbia and BiH's, Albanian industry remains at risk due to domestic use of coal.

Progress in meeting CBAM exemption criteria is mixed,
but none of the three countries are on track to receive an exemption.

| Exemption criteria | Albania | Bosnia and Herzegovina | Serbia |
|---|---|---|---|
| Transpose EU legislation | Albania has made progress in transposing the EU's Third Energy Package, but implementation is not yet complete. The establishment and operationalisation of the Albanian Power Exchange (ALPEX) in 2023 was a major milestone towards market integration. However, key challenges remain, particularly concerning the legal and functional unbundling of the Distribution System Operator (OSHEE) to ensure its independence, which is a core requirement of the EU acquis. | BiH is actively transposing EU legislation, but concrete implementation lags behind. It adopted a long-delayed national electricity law in April 2025 to align with the EU Third Energy Package. BiH should now develop a carbon pricing mechanism and MRV system to meet CBAM exemption criteria and support EU accession. | Serbia has adopted key legislation related to energy laws and the taxing of emissions and imports of carbon intensive products. These serve to prepare Serbia for CBAM alignment, though full transposition of EU acquis has not yet occurred. |
| Establish a carbon pricing mechanism | A carbon tax exists in Albania, though it is not yet aligned with the EU ETS. Efforts are underway to enshrine EU ETS principles into domestic law, but they are not yet enforced. | No system in place, though BiH plans to implement an ETS in 2026. However, BiH does not have an MRV system in place, which is a critical prerequisite for implementing an ETS. | Serbia will introduce a carbon tax in 2027. The tax will start at €4 per tonne of $CO_2$ and rise to €40 by 2030. Full alignment with the EU ETS will occur in 2045. |
| 2050 long term strategy | Albania has not adopted a long term strategy with a 2050 climate neutrality target. | BiH submitted a long-term strategy to the UNFCCC but has not committed to carbon neutrality by 2050. Instead, BiH aims to cut emissions by 80% below 1990 levels (including LULUCF). | Serbia submitted a long term strategy to the UNFCCC but has not committed to climate neutrality by 2050. Serbia instead aims to cut emissions by 55-69% below 2010 levels by 2050 (excluding LULUCF). |
| Roadmap to climate neutrality | Albania has not adopted a long term strategy with a 2050 climate neutrality target. | No roadmap submitted. | No roadmap submitted. |
| Market coupling | Albania plans to achieve SDAC with Greece, but there is no clear timeline to achieve this. No SDIC plans currently exist. | No substantial progress has been made. In April 2025, the Bosnian entities agreed on a new law to regulate the electricity market which will lay the foundations for market coupling. | Serbia aims to achieve SDAC by end of 2026 and SDIC by end of 2027 (both with Hungary). |
| Prevention of indirect electricity imports | No system in place. | No system in place. | No system in place. |

*Figure 3: Progress in implementing CBAM exemption criteria in Albania, BiH and Serbia.*

# National context

## Albania

Albania's electricity sector is unique in the Western Balkans, with generation being almost entirely dependent on hydropower. As of the end of 2023, the country had an installed capacity of approximately 2,675 MW. The country's hydro-based generation makes its electricity exports inherently low-carbon, which is a significant advantage under CBAM.

However, Albania's energy landscape is defined by hydrological volatility. In wet years with high rainfall, such as 2023, Albania is a significant net exporter of electricity (approximately 1.7 TWh). Conversely, during dry years, it becomes a net importer, forced to purchase expensive electricity from neighbouring countries, many of whom rely on carbon-intensive fossil fuels. This dependency creates energy security risks and exposes the country to volatile import prices and the indirect carbon costs of the regional energy mix.

From a CBAM readiness perspective, Albania's clean electricity generation is a major asset. The primary goal is to secure a formal exemption for its electricity exports by coupling its market with the EU. The launch of the Albanian Power Exchange (ALPEX) in 2023 and the ongoing work to couple with the Greek market are critical steps forward.

However, significant regulatory hurdles remain, particularly the need to fully unbundle the Distribution System Operator (OSHEE) in line with EU requirements. To mitigate the risks of hydro-dependency and strengthen its position, Albania is actively promoting the diversification of its energy sources. Solar photovoltaic (PV) capacity has seen significant growth, with several large-scale projects recently coming online or under development. This trend is a crucial step towards enhancing energy security and maintaining a low-carbon energy supply.

## Bosnia and Herzegovina

In 2024, about 31% of BiH's goods exports went to the EU. A large share of these consist of carbon-intensive products now falling under CBAM.[42] Precisely, 44% of BiH's total goods exports are covered by CBAM, including electricity, making BiH among the three most CBAM-impacted countries worldwide.[43] According to the Report on Activities of the State Electricity Regulatory Commission in 2024, 58% of electricity in BiH was generated by coal-fired thermal power plants, while a large share of the remaining production came from hydropower. The high share of coal contributes to high embedded emissions across BiH's industrial products, increasing its vulnerability to CBAM.

Traditionally a net electricity exporter, BiH exported approximately 2.23 TWh of electricity to the EU worth around €540 million.[44] Since BiH's electricity production heavily relies on its abundant coal reserves, it makes carbon intensity of its electricity very high, 515 $gCO_2e/kWh$, far above the EU average (213 $gCO_2e/kWh$).[45,46] Based on this, EU importers of BiH's electricity will have to buy CBAM certificates to cover these emissions, which will significantly increase the price of Bosnian power in the EU. At current EU carbon prices (around €85 per tonne), 60% of electricity generation would face a carbon charge, which would lead BIH to pay nearly €3 billion in CBAM fees on electricity from 2026 to 2030.[47]

Unlike other CBAM affected sectors where a phase-in period will be applicable, electricity will experience full and immediate CBAM charges, making the sector particularly vulnerable. Government officials and industry representatives are aware of

[42] Amir Čaušević, "Vanjskotrgovinska / Spoljnotrgovinska Komora BIH," Vanjskotrgovinska / Spoljnotrgovinska Komora BIH, 2025, https://komorabih.ba/.
[43] Adnan Rondić, "Panel I – Carbon Border Adjustment Mechanism (CBAM)," Energetski samit u Bosni i Hercegovini, 2024, https://energetskisamit.ba/en/agenda-2/panel-i-carbon-border-adjustment-mechanism-cbam/.
[44] "Energetika.NET," 2023, https://www.energetika.net/.
[45] Low-Carbon Power, "Electricity in Bosnia & Herzegovina in 2024/2025," 2025, https://lowcarbonpower.org/region/Bosnia_&_Herzegovina.
[46] Chris Rosslowe and Beatrice Petrovich, "European Electricity Review 2025," 2025, https://ember-energy.org/latest-insights/european-electricity-review-2025/.
[47] Janez Kopač, "Carbon Emissions Prices Are Becoming a Reality in Western Balkans and Particularly in Bosnia and Herzegovina – Will the Countries Pay to the EU or Rather Collect Money in Their Budgets?," *Balkan Green Energy News*, November 6, 2023, https://balkangreenenergynews.com/carbon-emissions-prices-are-becoming-a-reality-in-western-balkans-and-particularly-in-bosnia-and-herzegovina-will-the-countries-pay-to-the-eu-or-rather-collect-money-in-their-own-budgets/.

the potential scenarios, but no significant move has been made to lower the share of electricity produced from coal, apart from regulative enablers for prosumers and renewable energy certificates. BiH does not yet have an internal carbon pricing mechanism or an ETS, even though the topics have been debated for several years. There is however domestic awareness that implementing a domestic carbon price can avoid CBAM charges and retain revenue within the country's own budget, presenting an important opportunity to support the uptake of renewable energy projects.

## Serbia

Regarding electricity exports, Serbia occasionally exports power to the EU through interconnected grids with Hungary, Romania and Croatia. The majority of electricity is generated in coal-fired power plants, with a carbon footprint of approximately 1 $tCO_2$ per MWh, significantly above the EU average.[48] Serbia's energy mix remains predominantly coal-based, mostly lignite, which accounts for a large share of primary energy consumption (around 42% in 2022) and provides relatively high energy independence at lower costs, but increases negative environmental impacts and the risk of rising costs due to greenhouse gas emissions.[49]

The implementation of CBAM further challenges the competitiveness of Serbian electricity: estimates indicate that, had CBAM been fully applied in 2023, electricity exports would have incurred a cost of approximately €1.07 billion per year.[50] Practically, this implies that after 2026, exporting electricity to the EU could become economically unviable without structural changes in production.

Regarding electricity exports, Serbia occasionally exports power to the EU through interconnected grids with Hungary, Romania and Croatia. The majority of electricity is generated in coal-fired power plants, with a carbon footprint of approximately 562 $gCO_2$ per kWh, significantly above the EU average.[51] Serbia's energy mix remains predominantly coal-based, mostly lignite, which accounts for a large share of primary energy consumption (around 42% in 2022) and provides relatively high energy

[48] Vladimir Kljajić, "CBAM Dolazi: Da Li Je Srbija Spremna Za Novu Zelenu Evropu?," Zelena Agenda, 2025, https://www.zelenaagenda.rs/post/cbam-dolazi-da-li-je-srbija-spremna-za-novu-zelenu-evropu.
[49] Agencija za energetiku Republike Srbije, *Izveštaj o Radu Agencije Za Energetiku Za 2023* (AERS, 2024), https://www.aers.rs/Files/Izvestaji/Godisnji/Izvestaj%20Agencije%202023.pdf.
[50] Gecić Law, "Carbon Border Tax," 2025, https://www.geciclaw.com/carbon-border-tax/.
[51] Low-Carbon Power, "Electricity in Serbia in 2024/2025," 2025, https://lowcarbonpower.org/region/Serbia.

independence at lower costs, but increases negative environmental impacts and the risk of rising costs due to greenhouse gas emissions.[52]

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The implications of CBAM for the Serbian electricity sector are therefore both financial and structural. According to estimates cited by the Fiscal Council, CBAM-related costs for Elektroprivreda Srbije (Electric Power of Serbia, or EPS) could reach approximately EUR 180 million already in 2026, which is close to the company's current annual revenue. This would effectively erode export profitability and raises the risk that lost revenues will be partially shifted to the domestic market through higher electricity prices.[54]

In response, Serbia has initiated several alignment measures, most notably through the adoption of a domestic tax on greenhouse gas emissions, which applies to electricity generation and is set at EUR 4 per $tCO_2e$, complemented by a limited investment-based tax credit for electricity producers.[55] In parallel, Serbia has adopted a separate law introducing a tax on imports of carbon-intensive products, mirroring CBAM-type logic on the domestic market.[56]

[52]Agencija za energetiku Republike Srbije, Izveštaj o radu Agencije za energetiku za 2023. godinu, AERS, Beograd, 2024, https://www.aers.rs/Files/Izvestaji/Godisnji/Izvestaj%20Agencije%202023.pdf.
[53]Gecić Law. 2025 "Carbon Border Tax." https://www.geciclaw.com/carbon-border-tax/.
[54] Fiscal Council of the Republic of Serbia, "Serbia's climate and energy transition and public finances: will CBAM be a trigger of change?", https://www.fiskalnisavet.rs/doc/analize-stavovi-predlozi/2025/fs_klimatsko-energetska-tranzicija-srbije-i-javne-finansije-hoce-li-cbam-biti-okidac-promena_16102025.pdf.
[55] Law on the tax on the import of carbon intensive products, ("*Official Gazette of RS*", No. 109/2025), https://www.paragraf.rs/propisi/zakon-o-porezu-na-uvoz-ugljenicno-intenzivnih-proizvoda.html.
[56] Law on tax on GHG gas emissions, ("*Official Gazette of RS*", No. 109/2025), https://www.paragraf.rs/propisi/zakon-o-porezu-na-emisije-gasova-sa-efektom-staklene-baste.html.

While these measures may bring short-term benefits, particularly by offsetting CBAM obligations for certain exported goods and retaining part of carbon-related revenues within the national budget, the current level of the domestic carbon price remains insufficient to materially mitigate CBAM exposure for electricity, especially given that electricity will be subject to full CBAM charges from the outset, underscoring the need for a more robust and progressively aligned carbon pricing framework.[57]

# Coal phase out

## Clean power by 2040

To reach the Paris Agreement goal of holding warming below 1.5ºC, globally, coal use in electricity needs to fall by 80% below 2010 levels by 2030 and all coal fired power plants must be shut by 2040 at the latest.[58] Developed countries must move somewhat more quickly, phasing out coal by 2030. The rapid pace of change means that any new coal generation infrastructure is not 1.5ºC aligned, running counter to countries' climate targets and obligations, and introducing costly potential stranded assets to the system.

Phasing out coal globally will require strong partnerships between developed and developing countries, with significant levels of international support. International support will be key to the energy transition of countries like Bosnia and Herzegovina and Serbia, who are highly dependent on goal generation but do have significant renewable potential.

## Coal in Albania, BiH, and Serbia

The power sector in the Western Balkans region is primarily coal-based, with the exception of Albania, which has mainly hydropower generation.[59] **Albania** is not

[57] Fiscal Council of the Republic of Serbia, "Serbia's climate and energy transition and public finances: will CBAM be a trigger of change?", https://www.fiskalnisavet.rs/doc/analize-stavovi-predlozi/2025/fs_klimatsko-energetska-tranzicija-srbije-i-javne-finansije-hoce-li-cbam-biti-okidac-promena_16102025.pdf; Jelena Kozbašić, "Dok CBAM vreba iza ćoška: U zadnji čas, Srbija je usvojila Zakon o porezu na gasove sa efektom staklene baste", Klima 101, https://klima101.rs/zakon-porez-na-ugljenik-srbija-cbam/.
[58] Climate Analytics and NewClimate Institute, *Pulling the Plug on Fossils in Power* (2023).
[59] Ember, "Electricity Data Explorer."

considered in discussion of coal phase out in this text. However, the Western Balkan region's high dependence on coal power and high carbon intensity of electricity does trickle down into the Albanian economy through electricity imports. Imported electricity accounted for 14% of total electricity supply in the country in 2022, up 149% from 2000.[60] Much of this electricity comes from Albania's neighbours Greece, North Macedonia and Serbia, all of which still have coal in generation.

**Bosnia and Herzegovina** has roughly 2.1 GW of operating coal generation capacity, providing roughly 9.4 TWh or 62% of total electricity generation in 2024.[61] All of BiH's coal capacity is built to run on lignite, including its most recent construction Stanari, which began operations in 2016. A further 1.1 GW of coal capacity is either in planning or pre-permitting stages, although since 2010 3.5 GW of coal capacity has been announced and subsequently cancelled.[62] BiH is one of the only entities in the region planning new lignite capacity. The coal plants in Republika Srpska are aged, with two over 40 years old, and the utility operator argued in early 2025 that due to high maintenance and retrofitting costs it is more financially viable to build new plants.[63] The Federation has backed out of plans for new capacity, while Republika Srpska continues to issue permits and move forward with plans for expanding lignite capacity.[64]

**Serbia** has just under 5 GW of operating coal generation capacity, producing 23.4 TWh, or around 62% of total electricity generation in 2024. A majority of Serbia's lignite plants were built in the mid-20th century, however an extension project at the Kostolac Power Plant with 350 MW capacity came online only recently in 2024 at a cost of roughly USD 750 million and after significant delay, scrutiny, and legal challenges.[65] Serbia has moved forward with either mothballing or shutting down some of its oldest plants, with plans to hold them as part of the strategic reserve until a final decision on future use is made.[66]

[60] IEA, "World Energy Balances 2024," IEA., 2024, https://www.iea.org/data-and-statistics/data-product/world-energy-balances.
[61] Ember, "Electricity Data Explorer"; Global Energy Monitor, "Global Coal Plant Tracker. January 2025 Release.," 2025, https://globalenergymonitor.org/projects/global-coal-plant-tracker/.
[62] Global Energy Monitor, "Global Coal Plant Tracker. January 2025 Release."
[63] Vladimir Spasić, "It's Cheaper to Build New Coal Power Plant than Maintain Existing Ones in Republic of Srpska," Balkan Green Energy News, 2025, https://balkangreenenergynews.com/its-cheaper-to-build-new-coal-power-plant-than-maintain-existing-ones-in-republic-of-srpska/.
[64] GEM, "Ugljevik 3 Coal-Fired Power Plant (700MW)," IJGlobal, 2025, https://www.ijglobal.com/data/project/57718/ugljevik-3-coal-fired-power-plant-700mw.
[65] CEE Bankwatch Network, "Kostolac B3 Power Plant, Serbia," December 2024, https://bankwatch.org/project/kostolac-lignite-power-plant-serbia.
[66] Vladimir Spasić, "Serbia's EPS to Mothball Morava, Kolubara Coal Power Plants for Strategic Reserve," *Balkan Green Energy News*, October 23, 2024,

## Comparing the cost of renewables to the cost of fossil fuels

The coal-fired power plants in Bosnia and Herzegovina and Serbia are fuelled by brown coal, or lignite. Lignite is one of the cheapest energy carriers available, and one of the dirtiest. The combustion of lignite for heat and power also produces more $CO_2$, $SO_2$, $N_2O$ and particulate matter per unit of energy than nearly every other fossil fuel.[67]

At the same time, technological advances and economies of scale have pushed the price of renewables down significantly. IRENA estimates that between 2010 and 2024 the global average levelised cost of electricity (LCOE) of solar PV dropped by over 90%, reaching 0.043 USD/kWh.[68] Onshore wind dropped by 70% to 0.034 USD/kWh and the cost of hydropower dropped by one-third to 0.057 USD/kWh.

The global LCOE for coal power was 0.073 USD/kWh and for gas was 0.085 USD/kWh in 2024. Critically, as countries institute carbon prices and as carbon prices rise, the LCOE of fossil fuels increases, while the LCOE of renewables is not impacted. Renewable energy sources are already more cost effective than nearly every conventional power plant, and as operating costs for fossil fuel fired generation rise, the difference in costs will only increase further.[69]

Further regulatory steps in the Western Balkans are also likely to decrease the LCOE of renewables, making coal generation comparatively even more expensive. A case study of Serbia found that de-risking steps like improving permitting procedures, power market reform and increasing experience of developers could drop the LCOE of wind power by nearly 25%, further increasing the cost gap between lignite and renewables.

https://balkangreenenergynews.com/serbias-eps-to-mothball-morava-kolubara-coal-power-plants-for-strategic-reserve/.

[67] Eurostat, "Production of Lignite in the Western Balkans - Statistics," 2023, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Production_of_lignite_in_the_Western_Balkans_-_statistics.

[68] IRENA, "Renewable Power Generation Costs in 2024," July 22, 2025, https://www.irena.org/Publications/2025/Jun/Renewable-Power-Generation-Costs-in-2024.

[69] NewClimate Institute, *Unlocking Low Cost Renewables in South East Europe: Case Studies on De-Risking Onshore Wind Investment.* (Study on behalf of Agora Energiewende., 2019).

## Policy targets and governance of coal phase out

The policy framework needed to support a quick, orderly, and just coal phase out in BiH and Serbia has not been established. Despite having legal obligations and climate targets which require immediate action to phase out coal-fired power plants, discussion on coal phase out in BiH and Serbia is slow.[70] While committing to emissions reduction targets and aligning with EU energy and climate policies, there is no official discussion of coal phase out in BiH. While phase out is "under official discussion" in government processes in Serbia, action remains slow and contradictory.

As members of the EC, BiH and Serbia are legally obliged to transpose the EU acquis, including the Large Combustion Plants Directive (LCPD), with an implementation deadline at the end of 2017. The LCPD set an emissions ceiling for combustion plants above 50 MW, however Neither BiH nor Serbia are compliant with the LCPD emissions ceiling.[71] Nine thermal plants were approved by the EC to opt out, on the condition they limit operations to a further 20,000 hours without regard for the emissions ceiling and either close at the end of 2023 or comply with the stricter emissions limits at that time. Of the thermal units opted-out, all are still open, with most operating in breach of both the 20,000 hour limit and emissions ceiling.[72] While the EC has opened dispute settlement cases against Serbia, these plants continue to operate in many cases.[73] While the intention of the LCPD was to create a clear pathway for Western Balkan coal plants to reduce emissions and decommission, clear decommissioning plans have not been established or implemented for a number of plants.

The National Energy and Climate Plans (NECP) drafting process was a further opportunity to introduce clear and realistic coal phase out plans, however the submissions from BiH and Serbia have not provided the needed clarification in either of their NECPs. Serbia's NECP sets a target of reducing coal generation by at least 25% compared to 2019 levels. Even if Serbia achieves this target, lignite will still account for

[70] Beyond Fossil Fuels, "Europe's Coal Exit," December 2024, https://beyondfossilfuels.org/europes-coal-exit/.
[71] Energy Community Secretariat, "Annual Implementation Report: Energy Community Advances Steadily Towards Integration with the EU," 2024, https://www.energy-community.org/news/Energy-Community-News/2024/12/11.html.
[72] Vladimir Spasić, "Ten Units of Western Balkan Thermal Power Plants Must Be Shut down by 2023," *Balkan Green Energy News*, July 21, 2020, https://balkangreenenergynews.com/ten-units-of-western-balkan-thermal-power-plants-must-be-shut-down-by-2023/.
[73] Energy Community, "Secretariat Opens Dispute Settlement Case against Serbia for Lack of Availability of Interconnection Capacity at Two Interconnection Lines," 2022, https://www.energy-community.org/news/Energy-Community-News/2022/09/06a.html.

roughly 50% of generation in 2030. Serbia's NECP allows for coal capacity to be kept online until 2050, when all "fossil fuel thermal power plants" are to be phased out.[74] By allowing coal generation in the power mix through 2050, Serbia's NECP raises significant questions about the feasibility of reaching its 2030 target as well as the rapid phase down of coal generation between 2030-2050 that would be required without any plant- or unit-level plans. The EC noted this lack of consistency will likely pose a significant challenge to both the economic feasibility and fairness of Serbia's energy transition.[75]

The NECP submitted by BiH in 2023 does not set a coal phase out date, and does not include any significant modelling component including different policy or power system scenarios.[76] The NECP does include an emissions reduction target of 41.2% compared to 1990 levels in 2030 and a renewable energy target of 43.6% of final consumption in 2030, both of which are aligned with EC targets for BiH.[77] It does include a 2050 carbon neutrality target. To align with the Paris Agreement, fossil fuels need to exit the global power system by 2040.[78]

### Economic and energy security and the energy transition

Bosnia and Herzegovina and Serbia's continued reliance on ageing thermal power plants and poorly maintained energy infrastructure is a key driver of energy insecurity. Switching to power systems driven by renewables is critical to achieving energy security, reducing economic vulnerability and supporting socioeconomic resilience in addition to aligning with CBAM, achieving climate goals and integrating with the EU.

The coal-fired power plants in BiH and Serbia are a critical source of energy insecurity. Serbia has faced increasing disruptions in its lignite supply due to decreasing quality and increasing contamination.[79] The fleet of coal power plants in the region is aged,

[74] Republic of Serbia, *Integrated National Energy and Climate Plan of the Republic of Serbia for the Period 2030 with the Projections up to 2050* (2024).
[75] Vladimir Spasić, "Serbia Urged to Adjust NECP Renewables, Energy Efficiency Goals to Energy Community's Targets," *Balkan Green Energy News*, November 14, 2023, https://balkangreenenergynews.com/serbia-urged-to-adjust-necp-renewables-energy-efficiency-goals-to-energy-communitys-targets/.
[76] Energy Community, *Recommendations 2/2023 by the Energy Community Secretariat on the Draft Integrated Naitonal Energy and Climate Plan of Bosnia and Herzegovina* (2023).
[77] Bosnia and Herzegovina, *Integrated National Energy and Climate Plan* (2023).
[78] Climate Analytics and NewClimate Institute, *Pulling the Plug on Fossils in Power*.
[79] Igor Todorović, "Serbia's Electricity Crisis: EPS Struggling to Get Coal Plants Back Online," *Balkan Green Energy News*, December 15, 2021, https://balkangreenenergynews.com/serbias-electricity-crisis-eps-struggling-to-get-coal-plants-back-online/.

facing higher rates of technical failure and increasing costs for retrofits and replacement.

Combined with ill-maintained transmission networks and historic lack of cooperation between TSOs, the Western Balkans region does not have highly resilient electricity grids and costs continue to rise for all consumers. The energy crisis during 2021-2022 underscored the energy and economic security risks of a fossil fuel-driven power system, as volatile international markets drove domestic electricity prices to unprecedented levels. In an area where one-fifth of the population already cannot afford to adequately heat their homes, any increase in the cost of electricity has significant impact on energy poverty levels in the region.[80]

CBAM will increase the economic costs of coal power – new lignite capacity in the region will, if built, result in a cumulative loss by 2040. Phasing out lignite plants by latest 2040 is in-line with 1.5ºC compatible global power system benchmarks, reduces power system costs for the Western Balkans, and is technically feasible if combined with energy efficiency and transmission infrastructure improvements.[81] A well-timed coal phase out paired with the simultaneous phase-in of renewable energy technologies and supporting grid and storage infrastructure can improve system resilience, mitigate large cost increases, and diversify the energy mix to avoid vulnerabilities. Electrification of the economy is one of the most powerful energy security levers available and building out domestic solar and wind resources supports energy independence.

### Just transition

Coal phase out must be carefully planned for to ensure an orderly and quick transition. The coal mining and power generation sector in BiH and Serbia is highly labour-intensive. Coal mining in Serbia directly employs roughly 12,000 people and coal power plants around 3000.[82] In BiH, coal mines directly employ around 14,000 people and power plants 2500. Looking at indirect employment, there are roughly 38,000 people in Serbia and 13,000 in BiH with jobs associated with the coal industry. The coal sector is already losing jobs without recourse or alternatives, a situation that will likely only get worse without active policy development and implementation.

[80] Ana-Maria Boromisa, "Energy Challenges in the Western Balkans," *Per Concordiam*, February 19, 2025, https://perconcordiam.com/energy-challenges-in-the-western-balkans/.
[81] Agora Energiewende, *The Future of Lignite in the Western Balkans* (2021).
[82] Castello Pablo Ruiz et al., *Recent Trends in Coal and Peat Regions in the Western Balkans and Ukraine* (Publications Office of the European Union, 2021), https://doi.org/10.2760/81752.

The Energy Community produced new Just Transition guidelines in the context of NECP development in June 2025.[83] The EC emphasises just transition planning as an integral part of any NDC, supporting alignment with EU frameworks and acting as a financing plan for potential donors or investors. The EC's key recommendations suggest members take a granular and regional approach, linking financing early-on and engaging stakeholders throughout the process.

Serbia is making headway in this area, introducing a just transition plan in May 2025.[84] The draft document does not provide a full decarbonisation plan but does analyse the impacts of two key power plant closures. By 2030, an estimated 930 jobs were projected to be directly affected, with a further 1300 indirectly impacted. Serbia emphasises the renewable energy economy creating new jobs in construction, management and maintenance of renewable energy infrastructure. This would be supported by an EUR 60 million allocation through 2030 to support the redevelopment of industrial areas to attract new investment and job opportunities. A further EUR 12 million would be allocated to support new businesses and the self-employed.

[83] Energy Community Secretariat, "Policy Guidelines on Just Transition as a Part of Integrated Energy and Climate Planning," June 27, 2025, https://www.energy-community.org/events/2025/06/JT_062025.html.
[84] Vladimir Spasić, "Serbia Drafts Just Transition Action Plan," *Balkan Green Energy News*, May 30, 2025, https://balkangreenenergynews.com/serbia-drafts-just-transition-action-plan/.

### Coal phase out mini case study: Greece

Greece officially announced it would seek to exit coal by 2028 at the UN Climate Action Summit in 2019.[85] Lignite had been the cornerstone of the Greek power sector until the week of 20 May 2024, when Greece went seven days without coal power.[86] Highly cost-competitive renewables and lower demand helped to render lignite uncompetitive in the electricity market. A decade earlier, lignite had produced up to 50% of Greece's electricity, but now it sits around 5% of total generation.[87] $CO_2$ emissions from coal have dropped by 90% since peaking in 2005 and the emissions intensity of the grid dropped from 783 $gCO_2$/kWh in 2005 to 320 $gCO_2$/kWh in 2024.

The phase out of lignite entails fundamental changes in the economic structure of dependent regions. Recognising this, Greece focussed on developing policies that support economic diversification in impacted regions, increasing renewable energy in the power supply, improving energy efficiency, and addressing social inequalities and interregional cohesivity.

With the support of the European Commission, European Investment Bank and World Bank, Greece produced its guiding document: *Just Transition Development Plan of lignite areas* in 2020.[88] This document provided essential and highly detailed groundwork for the Territorial Just Transition Plans developed for each lignite region within Greece, which are used to outline transition planning and financial needs, and are required to access funds from the European Just Transition Mechanism.[89] Greece was the first country in the EU to take advantage of the EU Just Transition Fund, receiving EUR 1.38 billion in grants to support the economic transition out of lignite through human resources support for entrepreneurship, upskilling and reskilling.

The EU ETS has played a key role in pushing coal out of the Greek system and supporting just transition financing. The increasing cost of carbon and reduction in free allocations in the ETS has made Greek lignite plants economically unviable.[90] Greece has also leveraged the ETS to funnel funding towards just transition efforts,

[85] Beyond Fossil Fuels, "Europe's Coal Exit."
[86] Igor Todorović, "Share of Coal Power in Greece Tumbles to Zero," *Balkan Green Energy News*, May 20, 2024, https://balkangreenenergynews.com/share-of-coal-power-in-greece-tumbles-to-zero/.
[87] Ember, "Electricity Data Explorer."
[88] Greece, *Just Transition Development Plan of Lignite Areas* (2020), https://www.sdam.gr/sites/default/files/consultation/Master_Plan_Public_Consultation_ENG.pdf.
[89] European Commission, "The Just Transition Mechanism: Making Sure No One Is Left Behind," European Commission Website, 2021.
[90] Harry Aposporis, "Greece Pushes Its Coal Exit Target Date Forward to 2026," *Balkan Green Energy News*, July 30, 2024, https://balkangreenenergynews.com/ppc-pushes-its-coal-exit-target-date-forward-to-2026/.

and was the first EU Member State to do so.[91] The Fair Transition Fund collects revenue from auctioning ETS allowances and is used to support diversification of local economies through social cohesion initiatives, training programs and other capacity building efforts, and green transition and energy efficiency efforts.[92] All-told, Greece expects to spend roughly EUR 5 billion in state funds, EU grants and European Investment Bank (EIB) loans between 2020-2028 to phase out lignite.[93]

Greece has found a measure of success through top-down and bottom-up measures, focusing on regional differentiation, reskilling. and setting the structural conditions to foster the green economy.

While Greece sets an example for lignite phase out, there are some drawbacks and unanswered questions. Greece has not yet fully exited lignite, with roughly 5% of total generation remaining in the system. Follow-through will be critical. While the PPC is estimating a functional phase out date of 2026, the closure of several plants was extended from 2023 to 2025 in response to the energy crisis.[94] This was exacerbated by the fact that Greece had opted to phase-in fossil gas capacity and faced increased exposure to volatile fossil fuel markets. Fossil gas is not a transition fuel – it still generates GHGs when combusted, and additional gas capacity is likely to become a costly stranded asset if Greece is to meet its climate targets and obligations and align with 1.5ºC.[95] Without an all-in approach to fossil fuel phase out – including rapidly increasing renewables, storage and transmission infrastructure – energy security can be compromised and decarbonisation delayed and more costly.[96]

[91] WWF, *Where Did All the Money Go? How EU Member States Spent Their ETS Revenues - and Why Tighter Rules Are Needed* (2022), https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Klima/WWF-Report-ETS-Revenues-2022.pdf.
[92] European Commission, "EU Cohesion Policy: €1.63 Billion for TJTP in Greece," Text, June 2022, https://ec.europa.eu/commission/presscorner/detail/en/ip_22_3711.
[93] Reuters, "Greece to Spend Five Billion Euros to Phase out Coal by 2028," Currencies, *Reuters*, September 9, 2020, https://www.reuters.com/article/markets/currencies/greece-to-spend-five-billion-euros-to-phase-out-coal-by-2028-idUSKBN2602PQ/.
[94] Reuters, "Greece Will Keep Coal-Fired Plants Running for Longer amid Gas Crisis," news, Reuters.Com, September 5, 2022, https://www.reuters.com/business/energy/greece-will-keep-coal-fired-plants-running-longer-amid-gas-crisis-2022-09-05/.
[95] Climate Analytics and NewClimate Institute, *Pulling the Plug on Fossils in Power*.
[96] Harry Aposporis, "Greece Delays Closure of Three Coal Plant Units to 2025," *Balkan Green Energy News*, December 16, 2022, https://balkangreenenergynews.com/greece-delays-closure-of-three-coal-plant-units-to-2025/.

# Opportunities and good practices

Working towards phasing out coal is critical for BiH and Serbia to align with CBAM, achieve their climate goals, and meet their legal obligations. This is a challenging task due to the abundance of lignite and entrenchment of coal in the economy and society of the region. The good practices below offer insight into policy options, stakeholder engagement strategies, and funding mechanisms which have the potential to support a viable pathway out of coal. While most of these good practices must be driven by government, CSOs and other non-government actors can bring these practices into their advocacy efforts, once again emphasising that the green transition is a whole-of-society effort.

**Develop a comprehensive strategy as early as possible**

Developing a strategy both nationally and at the sub-national level is a key step to any orderly structural change and will guide the rest of the process. The process should focus on defining the issue, creating an affirmative vision for the future with clear objectives, identifying potential pathways and setting a review and evaluation process.[97] A robust coal transition strategy will work in tandem with national level climate and energy policies, and should work within the context of a country's international climate commitments and goals. Transition strategies should also be developed on a *regional basis* – establishing the region-specific focus and differentiation as early as possible.[98] The strategy development process should engage a wide range of stakeholders to fully evaluate the issue and identify objectives.

**Financing is critical to drive phase out and support social transition**

The strategy should set out a plan for financing the transition from the very first step. In some instances, early-stage financing for early shutdown of coal plants has not been easy to acquire. Countries without the internal financial resources have struggled to kickstart their transition.[99] Financing strategies should take the same approach as the broader transition strategy, focusing on regional differentiation and assessing the

[97] Wuppertal Institute, *Governance*, Just Transition Toolbox for Coal Regions (2022), https://www.coaltransitions-toolbox.org/governance.
[98] OECD, "Towards a Just Transition in Greece's Lignite-Dependent Regions," OECD, October 5, 2021, https://www.oecd.org/en/publications/ipac-policies-in-practice_22632907-en/towards-a-just-transition-in-greece-s-lignite-dependent-regions_a1a8306a-en.html.
[99] Wuppertal Institute, *Governance*.

financial barriers to transition at the national, regional and thermal generation unit-level.[100] The Rocky Mountain Institute established five key principles to guide coal transition financial mechanisms (see Annex 1: Transition Planning Library for the full report) which can guide how finance should be used to support the coal transition.

Just transitions away from fossil fuels in electricity require fair distribution of costs, risks, and benefits

| Just and equitable | Additional | Managed | Transformational | Scalable |
|---|---|---|---|---|
| Fairly distribute costs, risks, benefits and upsides among key stakeholders | Support the transition of plants that would otherwise continue to operate | Prioritise, sequence and accelerate the transition | Align with and support the green transition | Implementable at scale |
| | | Maximise social benefits and minimse harm | | Enables significant progress on aligning with 1.5°C |

*Figure 4: Key principles for coal transition financing (adapted from RMI (2021)).*

Public financing institutions including multilateral development banks, development financing institutions and other major public funders can offer financial and technical support to countries seeking to exit coal and can catalyse critical private sector financing.[101]

### Workforce policy should be comprehensive – beyond compensation

Emphasise upskilling and reskilling building on the region's specific resources. Greece has introduced a number of policies, initiatives and funding opportunities for projects that focus on upskilling and reskilling lignite industry workers. Efforts focus on reskilling that is relevant for workers, building on the specific economic resources of their region and bridging the gap between workers' current skills and green and digital jobs. Reskilling and upskilling efforts need to focus on the region's specific needs and resources. Planning to boost the tourism economy may work in one area but not be viable in a region with larger agricultural resources for example.

[100] Koben Calhoun et al., *Financing the Coal Transition: Pragmatic Solutions to Accelerate an Equitable, Clean Energy Future* (RMI, 2021), https://rmi.org/wp-content/uploads/dlm_uploads/2021/11/RMI_Financing_the_Coal_Transition_November_2021.pdf
[101] OECD, "Towards a Just Transition in Greece's Lignite-Dependent Regions."

### Stakeholder engagement efforts improve acceptance and buy-in

Every aspect of the coal transition, from establishing a strategy and securing financing to developing and implementing workforce policy and plant closures must be grounded in stakeholder engagement. In Greece, policy recommendations developed through multi-stakeholder engagement processes brought all ministries and levels of government, private groups and international actors to the same page and set the stage for successful policy implementation.[102] Local efforts focus on engaging groups at high risk of being left behind, including coal plant workers and youths, supporting local acceptance of the transition and ensuring their views were brought into the discourse.

## Renewables roll out mini case study: Türkiye

Similar to the Western Balkans, Türkiye's electricity needs have historically been met through a mixture of hydro, gas, and coal. To meet its rapidly growing energy demand cost-effectively, Türkiye aims to have 120 GW of installed wind and solar capacity by 2035 (up from 15.5 GW in 2020).[103] Several policy mechanisms have been critical to Türkiye's renewable rollout.

### YEKA auctions

Türkiye's Renewable Energy Resource Zone auctions (YEKA) auctions are a market-based policy tool designed to ease deployment of utility-scale investments of ~1 GW. The government identifies sites suitable for large wind or solar plants and ensures grid connection, improving investment security. It then launches competitive tenders which helps to drive down costs.[104] YEKA auctions are planned to support the addition of 2 GW every year out to 2035.[105]

[102] OECD, "Towards a Just Transition in Greece's Lignite-Dependent Regions."
[103] Republic of Türkiye Ministry of Energy and Natural Resources, *Yenilenebilir Enerjide 2035 Yol Haritası [Roadmap for Renewable Energy to 2035]*, 2024, https://enerji.gov.tr/haber-detay?id=21380.
[104] Bahadir Gümüş, "New Targets, Old Challenges in Turkish Wind and Solar Tenders," Ember, 2025, https://ember-energy.org/latest-insights/new-targets-old-challenges-in-turkish-wind-and-solar-tenders/.
[105] Republic of Türkiye Ministry of Energy and Natural Resources, *Yenilenebilir Enerjide 2035 Yol Haritası [Roadmap for Renewable Energy to 2035]*.

### Regulatory reform

One of the largest obstacles to rolling out renewables in both Türkiye and the Western Balkans is permitting processes.[106] Türkiye aims to reduce the permitting process from four years to under two years through a 'super permit' scheme which will expedite current processes.[107]

Türkiye has transitioned the electricity market from one controlled by a state-owned monopoly to a competitive market which supports private sector participation.[108] The wholesale electricity market provides clear pricing with day-ahead, intra-day, and balancing market segments.[109]

Türkiye continues to update its regulatory environment to increase private sector investment. Recent updates include transmission fee exemptions and guaranteed minimum prices, further enhancing the renewable energy investment environment.[110]

### Investments in grid infrastructure

Türkiye is directing USD 28 billion by 2035 towards building transmission infrastructure which can handle higher shares of renewables and integrate them into the grid. This will add thousands of kilometres of transmission lines and over 140 new substations to the grid,[111] along with smart technologies to prevent efficiency losses.[112]

### Utilising various forms of wind and solar technologies

Not all wind and solar installations must come in the form of utility-scale power plants. To meet its 2035 target, Türkiye aims to utilise various initiatives to maximise wind and solar potential. These include:

- An unlicensed generation scheme allows small producers with an installed capacity of less than 5 MW to connect to the grid without having to obtain a licence. Surplus energy (limited to the equivalent of the site owner's annual consumption) can be sold back to the grid.[113] 90% of Türkiye's solar PV installations between 2021-2025 were licence-exempt.[114]
- Corporate power purchase agreements (PPAs) are bilateral agreements between a renewable energy producer and a large industrial energy consumer. As PPAs often offer fixed prices, they provide certainty for both parties, drive demand for renewables, and support industry to decarbonise and align with CBAM.[115]

- Floating solar on state-owned dams allows unused water space to be converted into solar energy, not only producing energy but reducing water losses from evaporation.[116]

### Accessing climate finance

Türkiye has been successful in directing international climate finance to support decarbonisation. So far, this has included loans which ease the upfront costs associated with decarbonisation, technical assistance to align energy and industry with CBAM, and financial backing to offset investment risk. Some notable examples include:

- **Significant support from the World Bank**, with finance directed towards several areas in the electricity sector, including expanding renewables,

[106] Pippa Gallop, "Renewable Energy Permitting in Bosnia and Herzegovina: How to Optimise the Process While Safeguarding the Environment and Public Participation," 2023, https://bankwatch.org/blog/renewable-energy-permitting-in-bosnia-and-herzegovina-how-to-optimise-the-process-while-safeguarding-the-environment-and-public-participation.
[107] Republic of Türkiye Ministry of Energy and Natural Resources, "Energy Transition: Renewable Energy 2035," 2024, https://enerji.gov.tr/Media/Dizin/BHIM/tr/Duyurular/Lansman%20EN_202410221149.pdf.
[108] Özgün Akduran-Erol, "Regulation of Natural Monopoly: The Turkish Electricity Market," *Sosyoekonomi Journal* 32, no. 60 (2024), https://doi.org/10.17233/sosyoekonomi.2024.02.01.
[109] Dinç Berk Kurçaloğlu, "Turkish Power Markets," Engie, 2019, https://tegam.itu.edu.tr/docs/librariesprovider223/default-document-library/power-markets.pdf?sfvrsn=0.
[110] Republic of Türkiye Ministry of Energy and Natural Resources, "Energy Transition: Renewable Energy 2035."
[111] Republic of Türkiye Ministry of Energy and Natural Resources, "Energy Transition: Renewable Energy 2035."
[112] Republic of Turkey Ministry of Environment Urbanisation and Climate Change, "2053 Long Term Climate Strategy," 2024, https://unfccc.int/sites/default/files/resource/Turkiye_Long_Term_Climate_Strategy.pdf.
[113] Yasemin Keskin, "Electricity Generation in Turkey Series II: Unlicensed Electricity Generation," Lexology, 2023, https://www.lexology.com/library/detail.aspx?g=a37953fe-ab51-4533-a63c-c2e4edc0b87e.
[114] REN21, "Renewables 2025 Global Status Report: Global Overview," 2025, https://www.ren21.net/gsr-2025/downloads/#pdfs.
[115] Lumian Energy, "Power Purchase Agreement (PPA): Türkiye ve Küresel Trendler," 2025, https://www.lumian.energy/tr/resources/power-purchase-agreement-ppa-turkiye-ve-kuresel-trendler.
[116] General Directorate of State Hydraulic Works, "Yüzer Ges'lerle Hem Temïz Enerjï Hem Su Tasarrufu (Floating Solar Power Plants Provide Both Clean Energy and Water Conservation)," 2024, https://www.dsi.gov.tr/Haber/Detay/12128.

upgrading transmission infrastructure, and improving energy efficiency.[117] The World Bank is also part of an investment platform designed to help decarbonise Turkish industry,[118] and provides partial credit guarantees to reduce investment risk.[119]**Deep cooperation with the European Bank for Reconstruction and Development**, who had over 240 ongoing projects with Türkiye in 2024. Many of these projects support Turkish industry to access renewables and develop decarbonisation plans designed to align with CBAM.[120]

[117] World Bank, "Türkiye - Country Partnership Framework for the Period FY24-FY28," 2024, http://documents.worldbank.org/curated/en/099031824111097800.
[118] World Bank, "World Bank Group Institutions IBRD and IFC Join Government of Türkiye's Groundbreaking Industrial Decarbonization Investment Platform in Partnership with EBRD," 2024, https://www.worldbank.org/en/news/press-release/2024/11/25/world-bank-group-institutions-ibrd-and-ifc-join-government-of-turkiye-s-groundbreaking-industrial-decarbonization-invest.
[119] Tuba Onğun, "Turk Eximbank Inks $1.1B Financing under World Bank Guarantee," Anadolu Agency, 2024, https://www.aa.com.tr/en/economy/turk-eximbank-inks-11b-financing-under-world-bank-guarantee/3233869.
[120] EBRD, "Türkiye Country Strategy 2024-2029," 2024, https://www.ebrd.com/home/news-and-events/news/2024/ebrd-unveils-trkiye-investment-strategy-for-the-next-five-years.html#.

# Conclusion

Serbia, BiH and Albania's electricity grids are at different stages of decarbonisation – increasing and maintaining momentum in the power sector is critical to aligning with 1.5ºC and the CBAM. As both an exported commodity and industrial input, electricity occupies a particularly important place in the economies and emissions profiles of Albania, BIH and Serbia.. Much of this electricity is heavily emissions intensive as a result of the region's reliance on coal, rendering electricity exports to the EU vulnerable to application of CBAM. At the same time, energy intensive industries also covered by CBAM (cement, chemicals, iron and steel, aluminium, hydrogen) are increasing their use of electricity to decarbonise, but this is reliant on access to green electricity. Decarbonising national electricity grids is of critical importance to maintain economic competitiveness in the Western Balkans as the CBAM enters full implementation in 2026.

At the same time, alignment with the CBAM offers significant opportunity for Albania. With essentially carbon-free domestic power generation courtesy of significant hydropower resources, Albania's electricity exports to the EU are expected to be price-competitive under the CBAM. Low energy intensity of electricity also supports the competitiveness of all other CBAM industries in the EU market. However, dependence on hydropower alone can create weaknesses. During dry years, Albania is a net-importer of highly expensive and carbon-intensive electricity from its neighbours. This dependency creates energy security risks and exposes the country to volatile import prices and the indirect carbon costs of the regional energy mix. Further integration of wind and solar into the generation mix can help maintain energy security and support steady income from electricity exports under the CBAM.

BIH and Serbia rely heavily on coal-fired generation, which comes at a cost under the CBAM. As both export electricity to the EU, they are expected to face significant CBAM-related costs, reducing their competitiveness in the European market. However, successful adaptation to the CBAM offers significant opportunity to plan for and organise a just transition out of coal, support green growth across industry, achieve energy security and avoid costly stranded assets.

The technological steps to achieve this are clear – rapid adoption of wind and solar capacity, supported by comprehensive transmission and distribution grid upgrades and integration of smart technologies.

To  support this electricity decarbonisation path, all countries will need to take decisive and comprehensive policy steps. Other countries in the region offer significant learning opportunities and blueprints for policymakers to follow to transition out of coal and into renewables. Greece's steep reduction in coal generation is supported by top-down and bottom-up measures, focusing on regional differentiation and supporting local community building while setting the structural conditions to foster the green economy. On the other side of the equation, Türkiye has utilised a broad set of policies including auctions and regulatory reform to support integration of wind and solar power. Access to significant and varied forms of climate financing will be critical.

The CBAM is already shifting the global trade landscape. As neighbours and trade partners, Albania, BIH and Serbia are expected to see both challenges and opportunities. Deliberate and unhesitating action to decarbonise the power sector of all three countries can support their competitiveness in the European market and facilitate economy-wide decarbonisation.

# References


Agencija za energetiku Republike Srbije. *Izveštaj o Radu Agencije Za Energetiku Za 2023*. AERS, 2024. https://www.aers.rs/Files/Izvestaji/Godisnji/Izvestaj%20Agencije%202023.pdf.

Agora Energiewende. *The Future of Lignite in the Western Balkans*. 2021.

Akduran-Erol, Özgün. "Regulation of Natural Monopoly: The Turkish Electricity Market." *Sosyoekonomi Journal* 32, no. 60 (2024). https://doi.org/10.17233/sosyoekonomi.2024.02.01.

Alberizzi, Andrea, Alessandro Zani, and Paolo Di Barba. "Analysis of the Intraday Market: Statistical Analysis of German Single Intraday Coupling." *Institute of Electrical and Electronics Engineers*, 2022 AEIT International Annual Conference, 2022. https://doi.org/10.23919/AEIT56783.2022.9951806.

Allert, Verena, Maryna Larina, and Anne Gläser. *Impacts of the EU Carbon Border Adjustment Mechanism on the Western Balkans and Ukraine: Policy Options for Governments*. Life ETX Project. Germanwatch, 2023. https://www.germanwatch.org/sites/default/files/germanwatch_impacts_of_the_cbam_on_the_western_balkans_and_ukraine_2023.pdf.

Aposporis, Harry. "Greece Delays Closure of Three Coal Plant Units to 2025." *Balkan Green Energy News*, December 16, 2022. https://balkangreenenergynews.com/greece-delays-closure-of-three-coal-plant-units-to-2025/.

Aposporis, Harry. "Greece Pushes Its Coal Exit Target Date Forward to 2026." *Balkan Green Energy News*, July 30, 2024. https://balkangreenenergynews.com/ppc-pushes-its-coal-exit-target-date-forward-to-2026/.

Benaim, Elena. "Designing a Carbon Border Adjustment Mechanism: Reducing Industrial Emissions While Facing an Energy Crisis." *Carbon Free Europe*, 2022. https://www.carbonfreeeurope.org/product/designing-a-carbon-border-adjustment-mechanism-reducing-industrial-emissions.

Beyond Fossil Fuels. "Europe's Coal Exit." December 2024. https://beyondfossilfuels.org/europes-coal-exit/.

Bollons, Nik, and Jean-Louis Genest. "What You Need To Know About CBAM, The EU's New Carbon Tariff." Engie, 2023. https://www.engieimpact.com/insights/cbam-eu-carbon-tariff.

Boromisa, Ana-Maria. "Energy Challenges in the Western Balkans." *Per Concordiam*, February 19, 2025. https://perconcordiam.com/energy-challenges-in-the-western-balkans/.

Bosnia and Herzegovina. *Integrated National Energy and Climate Plan*. 2023.

Calhoun, Koben, Pintan Chen, Mathias Einberger, et al. *Financing the Coal Transition: Pragmatic Solutions to Accelerate an Equitable, Clean Energy Future*. RMI, 2021. https://rmi.org/wp-content/uploads/dlm_uploads/2021/11/RMI_Financing_the_Coal_Transition_November_2021.pdf.

Čaušević, Amir. "Vanjskotrgovinska / Spoljnotrgovinska Komora BIH." Vanjskotrgovinska / Spoljnotrgovinska Komora BIH, 2025. https://komorabih.ba/.

CEE Bankwatch Network. "Kostolac B3 Power Plant, Serbia." December 2024. https://bankwatch.org/project/kostolac-lignite-power-plant-serbia.

Charalampidis, Ioannis, Anna Flessa, Theofano Fotiou, et al. "Impact Assessment for the Establishment of a Regional Emission Trading System in Energy Community Contracting Parties – NEAR.A3." *Trinomics*, 2024. https://www.energy-community.org/news/Energy-Community-News/2025/01/14.html.

Climate Analytics. "European Union | 1.5°C National Pathway Explorer." 2025. https://1p5ndc-pathways.climateanalytics.org/countries/european-union/.

Climate Analytics and NewClimate Institute. *Pulling the Plug on Fossils in Power*. 2023.

Climate Analytics, Regulatorni institut za obnovljivu energiju i životnu sredinu, Regionalni centar za obrazovanje i informisanje iz održivog razvoja za jugoistočnu Evropu, and Qendra Burimore e Mjedisit në Shqipëri. "Pathway Summary Report: Serbia." 2024. https://ca1-clm.edcdn.com/publications/Serbia_Pathway_Workshop_report_042024.pdf?v=1727355554.

Dechezlepretre, Antoine, and Antton Haramboure. "EU Carbon Border Adjustment Mechanism: What Is It, How Does It Work and What Are the Effects?" 2025. https://www.oecd.org/en/blogs/2025/03/eu-carbon-border-adjustment-mechanism-what-is-it-how-does-it-work-and-what-are-the-effects.html.

EBRD. "Türkiye Country Strategy 2024-2029." 2024. https://www.ebrd.com/home/news-and-events/news/2024/ebrd-unveils-trkiye-investment-strategy-for-the-next-five-years.html#.

Ember. "Electricity Data Explorer." 2025. https://ember-energy.org/data/electricity-data-explorer/.

"Energetika.NET." 2023. https://www.energetika.net/.

Energy Community. *Recommendations 2/2023 by the Energy Community Secretariat on the Draft Integrated Naitonal Energy and Climate Plan of Bosnia and Herzegovina*. 2023.

Energy Community. "Secretariat Opens Dispute Settlement Case against Serbia for Lack of Availability of Interconnection Capacity at Two Interconnection Lines." 2022. https://www.energy-community.org/news/Energy-Community-News/2022/09/06a.html.

Energy Community. "The Energy Community Legal Framework 2023 | Edition 5.0." 2023. https://www.energy-community.org/legal/treaty.html.

Energy Community Secretariat. "2025 CBAM-Readiness Tracker." 2025. https://www.energy-community.org/news/Energy-Community-News/2025/10/17.html.

Energy Community Secretariat. "Annual Implementation Report: Energy Community Advances Steadily Towards Integration with the EU." 2024. https://www.energy-community.org/news/Energy-Community-News/2024/12/11.html.

Energy Community Secretariat. "Policy Guidelines on Just Transition as a Part of Integrated Energy and Climate Planning." June 27, 2025. https://www.energy-community.org/events/2025/06/JT_062025.html.

European Commission. "About the EU ETS." 2025. https://climate.ec.europa.eu/eu-action/carbon-markets/eu-emissions-trading-system-eu-ets/about-eu-ets_en.

European Commission. "Carbon Border Adjustment Mechanism." European Commission, 2025. https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en.

European Commission. "Commission Implementing Regulation (EU) 2023/1773 of 17 August 2023 Laying down the Rules for the Application of Regulation (EU) 2023/956 of the European Parliament and of the Council as Regards Reporting Obligations for the Purposes of the Carbon Border Adjustment Mechanism during the Transitional Period." 2023. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R1773.

European Commission. "Energy Community." 2025. https://energy.ec.europa.eu/topics/international-cooperation/international-organisations-and-initiatives/energy-community_en.

European Commission. "EU Cohesion Policy: €1.63 Billion for TJTP in Greece." Text. June 2022. https://ec.europa.eu/commission/presscorner/detail/en/ip_22_3711.

European Commission. "Proposal for a Regulation of the European Parliament and of the Council Establishing a Carbon Border Adjustment Mechanism." 2021.

https://www.europarl.europa.eu/RegData/docs_autres_institutions/commission_europeenne/com/2021/0564/COM_COM(2021)0564_EN.pdf.

European Commission. "Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 Establishing a Carbon Border Adjustment Mechanism." 2023. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R0956&qid=1688551696609.

European Commission. "Regulation (EU) 2025/2083 of the European Parliament and of the Council of 8 October 2025 Amending Regulation (EU) 2023/956 as Regards Simplifying and Strengthening the Carbon Border Adjustment Mechanism." 2025. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202502083.

European Commission. "The Just Transition Mechanism: Making Sure No One Is Left Behind." European Commission Website, 2021.

European Environment Agency. "Harm to Human Health from Air Pollution in Europe: Burden of Disease Status, 2024." 2024. https://www.eea.europa.eu/en/analysis/publications/harm-to-human-health-from-air-pollution-2024.

Eurostat. "Production of Lignite in the Western Balkans - Statistics." 2023. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Production_of_lignite_in_the_Western_Balkans_-_statistics.

Gallop, Pippa. "Renewable Energy Permitting in Bosnia and Herzegovina: How to Optimise the Process While Safeguarding the Environment and Public Participation." 2023. https://bankwatch.org/blog/renewable-energy-permitting-in-bosnia-and-herzegovina-how-to-optimise-the-process-while-safeguarding-the-environment-and-public-participation.

Gecić, Bogdan. "Simplifying CBAM: What It Means for Non-EU Businesses in Europe (and Beyond)?" Gecić Law, 2025. https://www.geciclaw.com/carbon-border-tax/.

Gecić Law. "Carbon Border Tax." 2025. https://www.geciclaw.com/carbon-border-tax/.

GEM. "Ugljevik 3 Coal-Fired Power Plant (700MW)." IJGlobal, 2025. https://www.ijglobal.com/data/project/57718/ugljevik-3-coal-fired-power-plant-700mw.

General Directorate of State Hydraulic Works. "Yüzer Ges'lerle Hem Temiz Enerji Hem Su Tasarrufu (Floating Solar Power Plants Provide Both Clean Energy and Water Conservation)." 2024. https://www.dsi.gov.tr/Haber/Detay/12128.

Global Energy Monitor. "Global Coal Plant Tracker. January 2025 Release." 2025. https://globalenergymonitor.org/projects/global-coal-plant-tracker/.

Greece. *Just Transition Development Plan of Lignite Areas*. 2020. https://www.sdam.gr/sites/default/files/consultation/Master_Plan_Public_Consultation_ENG.pdf.

Gümüş, Bahadir. "New Targets, Old Challenges in Turkish Wind and Solar Tenders." Ember, 2025. https://ember-energy.org/latest-insights/new-targets-old-challenges-in-turkish-wind-and-solar-tenders/.

IEA. "World Energy Balances 2024." IEA., 2024. https://www.iea.org/data-and-statistics/data-product/world-energy-balances.

International Tribunal for the Law of the Sea. "Request for an Advisory Opinion Submitted by the Commission of Small Island States on Climate Change and International Law." 2025. https://www.itlos.org/fileadmin/itlos/documents/cases/31/Advisory_Opinion/C31_Adv_Op_21.05.2024_orig.pdf.

IRENA. "Renewable Power Generation Costs in 2024." July 22, 2025. https://www.irena.org/Publications/2025/Jun/Renewable-Power-Generation-Costs-in-2024.

Keskin, Yasemin. "Electricity Generation in Turkey Series II: Unlicensed Electricity Generation." Lexology, 2023. https://www.lexology.com/library/detail.aspx?g=a37953fe-ab51-4533-a63c-c2e4edc0b87e.

Kljajić, Vladimir. "CBAM Dolazi: Da Li Je Srbija Spremna Za Novu Zelenu Evropu?" Zelena Agenda, 2025. https://www.zelenaagenda.rs/post/cbam-dolazi-da-li-je-srbija-spremna-za-novu-zelenu-evropu.

Kopač, Janez. "Carbon Emissions Prices Are Becoming a Reality in Western Balkans and Particularly in Bosnia and Herzegovina – Will the Countries Pay to the EU or Rather Collect Money in Their Budgets?" *Balkan Green Energy News*, November 6, 2023. https://balkangreenenergynews.com/carbon-emissions-prices-are-becoming-a-reality-in-western-balkans-and-particularly-in-bosnia-and-herzegovina-will-the-countries-pay-to-the-eu-or-rather-collect-money-in-their-own-budgets/.

Kurçaloğlu, Dinç Berk. "Turkish Power Markets." Engie, 2019. https://tegam.itu.edu.tr/docs/librariesprovider223/default-document-library/power-markets.pdf?sfvrsn=0.

Low-Carbon Power. "Electricity in Bosnia & Herzegovina in 2024/2025." 2025. https://lowcarbonpower.org/region/Bosnia_&_Herzegovina.

Low-Carbon Power. "Electricity in Serbia in 2024/2025." 2025. https://lowcarbonpower.org/region/Serbia.

Lumian Energy. "Power Purchase Agreement (PPA): Türkiye ve Küresel Trendler." 2025. https://www.lumian.energy/tr/resources/power-purchase-agreement-ppa-turkiye-ve-kuresel-trendler.

NewClimate Institute. *Unlocking Low Cost Renewables in South East Europe: Case Studies on De-Risking Onshore Wind Investment.* Study on behalf of Agora Energiewende., 2019.

Observatory of Economic Complexity. "Bosnia and Herzegovina (BIH) Exports, Imports, and Trade Partners." 2025. https://oec.world/en/profile/country/bih.

OECD. "Towards a Just Transition in Greece's Lignite-Dependent Regions." OECD, October 5, 2021. https://www.oecd.org/en/publications/ipac-policies-in-practice_22632907-en/towards-a-just-transition-in-greece-s-lignite-dependent-regions_a1a8306a-en.html.

Onğun, Tuba. "Turk Eximbank Inks $1.1B Financing under World Bank Guarantee." Anadolu Agency, 2024. https://www.aa.com.tr/en/economy/turk-eximbank-inks-11b-financing-under-world-bank-guarantee/3233869.

Rašljanin, Nina, and Srđana Petronijević. "EU Proposes to Simplify CBAM: Key Takeaways for Balkan Companies." *Schoenherr Attorneys at Law*, 2025. https://www.schoenherr.eu/content/eu-proposes-to-simplify-cbam-key-takeaways-for-balkan-companies.

REN21. "Renewables 2025 Global Status Report: Global Overview." 2025. https://www.ren21.net/gsr-2025/downloads/#pdfs.

Republic of Serbia. *Integrated National Energy and Climate Plan of the Republic of Serbia for the Period 2030 with the Projections up to 2050*. 2024.

Republic of Turkey Ministry of Environment Urbanisation and Climate Change. "2053 Long Term Climate Strategy." 2024. https://unfccc.int/sites/default/files/resource/Turkiye_Long_Term_Climate_Strategy.pdf.

Republic of Türkiye Ministry of Energy and Natural Resources. "Energy Transition: Renewable Energy 2035." 2024. https://enerji.gov.tr/Media/Dizin/BHIM/tr/Duyurular/Lansman%20EN_20241022 1149.pdf.

Republic of Türkiye Ministry of Energy and Natural Resources. *Yenilenebilir Enerjide 2035 Yol Haritası [Roadmap for Renewable Energy to 2035]*. 2024. https://enerji.gov.tr/haber-detay?id=21380.

Reuters. "Greece to Spend Five Billion Euros to Phase out Coal by 2028." Currencies. *Reuters*, September 9, 2020.

https://www.reuters.com/article/markets/currencies/greece-to-spend-five-billion-euros-to-phase-out-coal-by-2028-idUSKBN2602PQ/.

Reuters. "Greece Will Keep Coal-Fired Plants Running for Longer amid Gas Crisis." News. Reuters.Com, September 5, 2022. https://www.reuters.com/business/energy/greece-will-keep-coal-fired-plants-running-longer-amid-gas-crisis-2022-09-05/.

Rondić, Adnan. "Panel I – Carbon Border Adjustment Mechanism (CBAM)." Energetski samit u Bosni i Hercegovini, 2024. https://energetskisamit.ba/en/agenda-2/panel-i-carbon-border-adjustment-mechanism-cbam/.

Rosslowe, Chris, and Beatrice Petrovich. "European Electricity Review 2025." 2025. https://ember-energy.org/latest-insights/european-electricity-review-2025/.

Ruiz, Castello Pablo, Hrvoje Medarac, Julian Somers, and Giovanni Mandras. *Recent Trends in Coal and Peat Regions in the Western Balkans and Ukraine*. Publications Office of the European Union, 2021. https://doi.org/10.2760/81752.

Spasić, Vladimir. "It's Cheaper to Build New Coal Power Plant than Maintain Existing Ones in Republic of Srpska." Balkan Green Energy News, 2025. https://balkangreenenergynews.com/its-cheaper-to-build-new-coal-power-plant-than-maintain-existing-ones-in-republic-of-srpska/.

Spasić, Vladimir. "Serbia Drafts Just Transition Action Plan." *Balkan Green Energy News*, May 30, 2025. https://balkangreenenergynews.com/serbia-drafts-just-transition-action-plan/.

Spasić, Vladimir. "Serbia Urged to Adjust NECP Renewables, Energy Efficiency Goals to Energy Community's Targets." *Balkan Green Energy News*, November 14, 2023. https://balkangreenenergynews.com/serbia-urged-to-adjust-necp-renewables-energy-efficiency-goals-to-energy-communitys-targets/.

Spasić, Vladimir. "Serbia's EPS to Mothball Morava, Kolubara Coal Power Plants for Strategic Reserve." *Balkan Green Energy News*, October 23, 2024. https://balkangreenenergynews.com/serbias-eps-to-mothball-morava-kolubara-coal-power-plants-for-strategic-reserve/.

Spasić, Vladimir. "Ten Units of Western Balkan Thermal Power Plants Must Be Shut down by 2023." *Balkan Green Energy News*, July 21, 2020. https://balkangreenenergynews.com/ten-units-of-western-balkan-thermal-power-plants-must-be-shut-down-by-2023/.

Spiller, Peter, Stijn Tollens, Lina Romero, Marysia Skrzypulec, and Sarang Palsule. "New Opportunities: Capturing Value from CBAM Regulation." McKinsey & Company, 2024. https://www.mckinsey.com/capabilities/operations/our-

insights/operations-blog/new-opportunities-capturing-value-from-cbam-regulation.

The Observatory of Economic Complexity. "Albania (ALB) Exports, Imports, and Trade Partners." The Observatory of Economic Complexity, 2025. https://oec.world/en/profile/country/alb.

The Observatory of Economic Complexity. "Electricity in Serbia." 2025. https://oec.world/en/profile/bilateral-product/electricity/reporter/srb.

Todorović, Igor. "Serbia Proposes Taxes on Greenhouse Gas Emissions, Imported Carbon-Intensive Products." *Balkan Green Energy News*, 2025. https://balkangreenenergynews.com/serbia-proposes-taxes-on-greenhouse-gas-emissions-imported-carbon-intensive-products/.

Todorović, Igor. "Serbia's Electricity Crisis: EPS Struggling to Get Coal Plants Back Online." *Balkan Green Energy News*, December 15, 2021. https://balkangreenenergynews.com/serbias-electricity-crisis-eps-struggling-to-get-coal-plants-back-online/.

Todorović, Igor. "Share of Coal Power in Greece Tumbles to Zero." *Balkan Green Energy News*, May 20, 2024. https://balkangreenenergynews.com/share-of-coal-power-in-greece-tumbles-to-zero/.

UNFCCC. "The Paris Agreement on Climate Change." UNFCCC, 2015. https://unfccc.int/sites/default/files/english_paris_agreement.pdf.

Vasilj, Luka, Celeste Gonzalez, and Andrzej Ancygier. *CBAM: Trade Implications and Opportunities of EU Climate Neutrality Goals*. 4iTraction Discussion Papers. Climate Analytics, 2023.

World Bank. "Türkiye - Country Partnership Framework for the Period FY24-FY28." 2024. http://documents.worldbank.org/curated/en/099031824111097800.

World Bank. "World Bank Group Institutions IBRD and IFC Join Government of Türkiye's Groundbreaking Industrial Decarbonization Investment Platform in Partnership with EBRD." 2024. https://www.worldbank.org/en/news/press-release/2024/11/25/world-bank-group-institutions-ibrd-and-ifc-join-government-of-turkiye-s-groundbreaking-industrial-decarbonization-invest.

Wuppertal Institute. *Governance*. Just Transition Toolbox for Coal Regions. 2022. https://www.coaltransitions-toolbox.org/governance.

WWF. *Where Did All the Money Go? How EU Member States Spent Their ETS Revenues - and Why Tighter Rules Are Needed*. 2022. https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Klima/WWF-Report-ETS-Revenues-2022.pdf.

# Annex I: Transition Planning Library

This annex includes supplementary materials for regional stakeholders who wish to delve deeper into implementing a just transition and aligning with CBAM and the Paris Agreement's 1.5°C temperature limit.

## Transition planning and just transition

Energy Community (2025). Webinar: Policy guidelines on just transition as part of integrated energy and climate planning.

Wuppertal Institute (2022). Just Transition toolbox for coal regions.

Koben Calhoun, Pintian Chen, Mathias Einberger, Rachit Kansal, Tyeler Matsuo, Uday Varadarajan, and Udetanshu (2021). Financing the Coal Transition: Pragmatic Solutions to Accelerate an Equitable, Clean Energy Future, RMI.

Tsekeris, Dimitris (2020). Just Transition and Employment in Greece. WWF Greece.

Climate Analytics (2025). Reducing emissions in power and emissions-intensive sectors in the Balkans.

Energy Community (2025). CBAM-Readiness Tracker.


www.climateanalytics.org