

Synthesis Briefing

Policy priorities for Serbian industry in the CBAM era

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Why CBAM matters for Serbia

Since the European Union introduced the Carbon Border Adjustment Mechanism (CBAM), the competitive landscape for exporting carbon-intensive goods to the EU has changed drastically. CBAM places a price on carbon similar to that which EU producers pay in the electricity, iron and steel, cement, chemicals, aluminium, and hydrogen industries.

Serbia's electricity, iron and steel, cement, and aluminium sectors are highly exposed to CBAM due to the size of these industries as well as the carbon intensity of production. Serbia's electricity production is three times more carbon intensive than the EU average due to the heavy share of coal in the mix, placing Serbian industry at a structural disadvantage when exporting to the EU. Meanwhile, process emissions remain above the EU average due to factors such as the use of blast furnaces in steelmaking and the high reliance on coal as a direct fuel source for furnaces and kilns.

The recent introduction of carbon pricing and a monitoring, reporting, verification, and accreditation (MRVA) system places Serbia in a strong position to incentivise decarbonisation and align with CBAM. A proactive decarbonisation effort can cut emissions, slash operating costs, and increase competitiveness when exporting to the EU.

This report synthesises four reports funded by the European Climate Initiative (EUKI).^{1,2,3,4} It highlights the key challenges and opportunities faced by Serbia in aligning with CBAM. Priority policies are then identified, which can support alignment with CBAM and unlock Serbia's industrial competitiveness.

Electricity

Due to the carbon intensity of Serbia's grid, its electricity exports are highly exposed to CBAM. Coal supplies around 62% of the country's electricity, and the grid has a carbon intensity of 667 gCO₂/kWh. This is far higher than the EU average of 211 gCO₂/kWh.⁵ As can be seen from table 1 below, of the countries in the Energy Community that export electricity to the EU, Serbia must pay the second highest CBAM charge, behind only Bosnia and Herzegovina.

In 2026 alone, power company Elektroprivreda Srbije is expected to lose EUR 150 million through lost exports as a result of its carbon-intensive production.⁶ Not only is the electricity sector affected by CBAM through reduced export revenue; it has a knock-on effect on other CBAM sectors by increasing the carbon intensity of their production.

	Default value (tCO ₂ e/MWh)	CBAM cost per imported MWh (EUR)
Albania	0	0
Bosnia & Herzegovina	1.148	86.421
Kosovo	0.984	74.076
Moldova	0.530	39.898
Montenegro	0.979	73.699
North Macedonia	0.887	66.773
Serbia	1.041	78.366
Ukraine	0.907	68.279

Table 1: CBAM costs for electricity exports to the EU in Q1 2026. Default values are assigned by the EU when actual data is not available. Source: Energy Community.⁷

Specific sectoral enablers and challenges

Challenges:

- Serbia's National Energy and Climate Plan (NECP) allows for coal capacity to stay online until 2050. If it does, Serbian electricity is likely to remain carbon-intensive for decades.
- Insufficient transmission infrastructure led Elektromreža Srbije to institute a grid connection freeze until 2029. This represents a major bottleneck to the rollout of renewables, as new projects cannot be connected to the grid.
- It is highly unlikely that the current financial support for a just transition is sufficient. To be effective, this will need to be increased.
- Serbia has not yet coupled its electricity market to the EU, with transposition of EU legislation moving slower than expected. Although market coupling was meant to be finalised by the end of 2026, the deadline has since been pushed back to 2029.

Enablers:

- Serbia has significant wind and solar potential that can supply cheap and clean electricity to domestic industry and to the EU.
- Serbia's contract-for-difference auctions are already demonstrating their potential to scale up wind and solar energy, with an influx of investors.
- Serbia's Just Energy Transition Plan until 2030 allocates funding to coal-dependent communities to support the transition to a low carbon economy.

Iron and steel

The total carbon emissions intensity of Serbia's iron and steel production was estimated at 2.11 tCO₂/t in 2018, significantly higher than the EU average of 1.15 tCO₂/t.² However, there is a significant difference in the production processes of Serbia's two main steel producers. HBIS Group Serbia is the largest steel producer in the country and utilises carbon-intensive blast furnace technology. Metalfer Steel Mill uses electric arc furnaces (EAFs) combined with recycled scrap, meaning the carbon intensity of its products is far lower.

Serbian steel faces CBAM default values of 0.22 to 3.39 tCO₂e/t, with the value varying depending on the product. The default value for the vast majority of Serbian steel products is 2.31 tCO₂e/t or higher.⁸

The iron and steel sector is Serbia's most exposed CBAM sector. Around 70% of exports are directed to the EU, amounting to EUR 556 million in 2024.² The high emissions intensity of Serbia's steel production, combined with carbon-intensive electricity, mean that Serbian steel products face significant CBAM costs.

Decarbonising the sector requires a shift away from blast furnaces towards lower-carbon production methods. Using EAFs with recycled steel as the main input can produce steel at an emissions intensity of 0.2-0.5 tCO₂/t. Meanwhile, the direct reduction (DRI)-EAF method, using green hydrogen, can cut emissions to almost zero. As steel production uses large quantities of electricity, decarbonising the grid is also a critical part of producing low-carbon steel.

Specific sectoral enablers and challenges

Challenges:

- As long as the HBIS plant uses blast furnaces, it will remain carbon-intensive and exposed to CBAM.
- Limited scrap availability is an issue for Serbian steelmakers as it constrains expansion towards the scrap-EAF route.
- Serbia's emissions-intensive grid remains a key barrier, as it raises the embedded carbon in the final steel product, making it less competitive when exporting to the EU.

Enablers:

- Metalfer's success in producing low-carbon steel (0.5 tCO₂/t) proves the feasibility of green steel production in Serbia.
- The EBRD's grant for Metalfer's rooftop solar project shows that, when a Serbian company develops a clear and actionable emissions reduction plan, international green finance is available to fund the initiative.

- Serbia's carbon tax revenues can provide further financial support for emissions reduction initiatives, as is done in the EU through the Innovation Fund.

EU carbon tax revenue is directed to the Innovation Fund to drive deployment of low carbon technologies

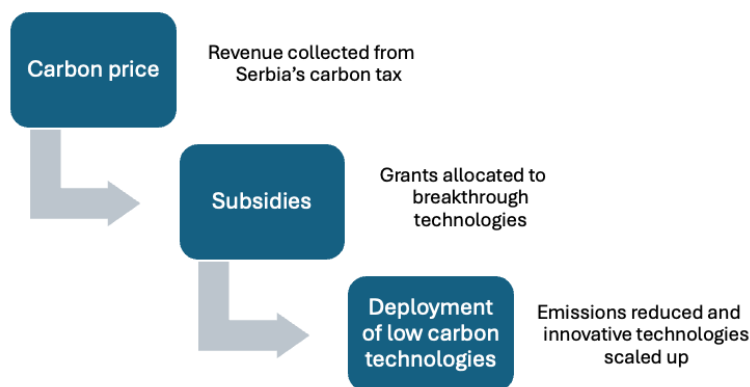


Figure 1: Demonstration of how carbon tax revenue can be directed towards low carbon technologies.

Aluminium

Serbia does not have a primary aluminium smelting facility. Instead, its aluminium sector produces semi-fabricated and finished products. This structure means that the carbon intensity of Serbia's aluminium products is heavily impacted by the inputs sourced for their production, as well as the carbon intensity of the electricity supply. Under CBAM, however, only direct emissions are relevant for aluminium. The aluminium sector differs from other CBAM sectors in this way, i.e. electricity supply does not fall under CBAM's scope.

The average emissions intensity of Serbia's aluminium products varies significantly due to the variety of products and production pathways – official CBAM default values range from 1.51-2.27 tCO₂e/t.⁹

Serbia exported roughly EUR 430 million worth of aluminium products to the EU in 2025. Impol Seval Aluminium Mill in Sevojno is Serbia's largest aluminium processor and the country's only rolling mill (manufacturer of rolled products). It produced almost 48,000 tonnes of products in 2025, with total Scope 1 and 2 emissions reaching roughly 72 ktCO₂e.⁴

Specific sectoral enablers and challenges

Challenges:

- There is insufficient availability of low-carbon aluminium input materials, which limits the ability of downstream processors to reduce their products' carbon intensity.
- The absence of domestic primary aluminium production means that Serbia has less control over the carbon intensity of its inputs.

Enablers:

- As Serbia's aluminium industry exclusively produces semi-fabricated and finished products, the core focus can be on sourcing secondary scrap.
- Impol monitors its own emissions, a critical step in avoiding CBAM charges. It reported a Scope 1 emissions intensity of 0.594 tCO₂e/t for 2025, below the CBAM default values of 1.51-2.27 tCO₂e/t for Serbia's products.²
- Efforts are already underway to increase the use of recycled scrap, such as Impol's rolling division's 35% secondary aluminium target by 2030 and Alumil YU's construction of a scrap sorting and processing unit.

Cement

In 2023, Serbia's cement sector accounted for over 2% of national emissions. The carbon intensity of production was between 0.6-0.8 tCO₂e/t.¹⁰ In comparison, the EU average is around 0.5-0.8 tCO₂e/t.¹¹ Accurate emissions reporting will be critical to reduce CBAM costs, however, as CBAM default values for Serbia are between 1.35-1.41 tCO₂e/t.¹²

Serbia has a total cement production capacity of around 2.7 million tonnes per year, which equates to 30% of Central Balkan capacity.³ Its cement exports to the EU were worth between EUR 1.5-2 million in 2024. Due to the carbon intensity of Serbian cement production, it has one of the highest default CBAM values of Energy Community members.

The vast majority (85-90%) of cement emissions are generated during clinker production, either from the use of coal as an energy source or through the emissions directly released from the rock as it calcifies. There are three key measures necessary to cut these clinker-related emissions: cutting the share of clinker through alternative materials, minimising coal use, and improving energy efficiency. For remaining emissions, standard renewable technologies can meet energy needs.

Specific sectoral enablers and challenges

Challenges:

- The sector remains far too reliant on coal, meaning the carbon intensity of production remains high.
- As coal production falls over the medium term, availability of fly ash for cement production will decrease.
- Slow permitting processes hamper efforts to transition towards renewable energy and alternative fuels, as can be seen from Holcim's efforts to build its 26 MW solar plant.

Enablers:

- The presence of European parent companies like Holcim, CRH, and Titan Cement brings technical expertise, capital, and corporate decarbonisation targets.
- Locally sourced fly ash from coal production can serve as a fairly effective clinker substitute, with Holcim Srbija and Titan Cementara Kosjerić increasing their use of fly ash.
- Calcined clays, such as LC3, are abundant in Serbia. These have major potential to radically reduce the share of clinker and most cement plants can integrate LC3 use into the existing production processes relatively easily. Over time, LC3 can significantly decrease overall production costs.
- Revenue from Serbia's carbon tax has been earmarked to support industrial decarbonisation projects. This can ease upfront transition costs for cement producers.

European plants producing cement from LC3

Plant/product name	Location	Key characteristics
AUMUND Fördertechnik	Rheinberg, Germany	Uses an electrified 'Linear Calcination Conveyor' to produce LC3 cements from calcined clay, reducing emissions by 40% compared to Portland cement.
FUTURECEM	Denmark, France, Benelux	Produced by Cementir, FUTURECEM cement reduces emissions by 30% while maintaining strength and quality.
Holcim	Saint-Pierre-la-Cour, France	Produces 500,000 tonnes of cement per year, reducing emissions by 50%. The operations are powered with 100% biomass-based alternative fuels and waste heat recovery systems.
Vicat Group	Xeuilley, France	Produces 400 tonnes per day of LC3 cement, with operations powered by 100% alternative fuels.

Table 2: Name, location, and key characteristics of European plants producing cement with LC3.

Policy recommendations

Transition to renewable energy

Wind and solar are the obvious solution to CBAM alignment. They have lower levelised costs of electricity (LCOE) than building new fossil fuel infrastructure, they are the most potent energy source in reducing emissions and aligning with CBAM, and they bulletproof Serbian industry from volatile international fossil fuel markets. Fast tracking grid connections and on-site solar plants for industrial producers can further accelerate emissions reductions.

Develop a credible coal phase-out plan with just transition provisions

Coal is the central reason Serbian industry is as carbon intensive as it is. Serbia's NECP allows coal to remain in the energy mix until 2050, serving to undermine industrial competitiveness. This gap between the LCOE of coal and renewables will only grow over time. Serbia needs a credible coal phase-out which sets clear decommissioning dates for its plants, accompanied by a well-funded just transition strategy. Lessons can be taken from Greece's coal phase-out, which emphasised industrial diversification, regional differentiation, and took advantage of EUR 5 billion in state funds, EU grants, and European Investment Bank loans.

Fast-track permitting for on-site renewables

Serbian stakeholders regularly cite the permitting process as a barrier to decarbonisation. There are numerous examples of innovative companies being slowed down by red tape. Streamlining permitting for on-site renewable energy projects can allow factories to produce their own low carbon energy while taking pressure off the grid.

Leverage green public procurement

Green public procurement policies have a huge impact on stimulating demand for low carbon products. Public infrastructure projects are some of the largest users of steel, cement, and aluminium and can have an outsized impact in guaranteeing a market for low carbon producers. The CO₂ Performance Ladder (CO2PL) from the Netherlands is a proven model that drives emissions reductions, increases innovation, and involves extremely little administrative burden for the government. By developing a domestic market for low carbon products, companies can scale up production and become more competitive internationally.

Increase the use of calcined clays in cement production

Calcined clays such as lime-calcined-clay (LC3) are abundant in Serbia. As the raw material is cheap and requires far less energy to heat, it reduces production costs by up to 25% and cuts emissions by up to 40%. Ideally for producers, it also does not require major infrastructure upgrades to the cement plant.

Increase access to green finance

While many low carbon technologies are more cost-effective than traditional technologies, upfront costs pose a challenge for companies. Serbia's carbon tax provides a new revenue base that can be directed towards decarbonising heavy industry. Beyond Serbia, a wide array of bilateral and multilateral sources exist that finance industrial decarbonisation in the Balkan region. The EU, EBRD, World Bank, KfW, and Green Climate Fund are examples of international donors active in the Balkan region. The Serbian government can provide capacity building support to companies intending to access green finance.

Replace blast furnaces with electric arc furnaces

HBIS Group's production process is highly carbon intensive due to the use of traditional blast furnaces. As Metalfer has shown, green steel production in Serbia is economically viable. The government should prioritise working with HBIS Group to secure the funding necessary to shift towards low-carbon steel production.

Green hydrogen production

Green hydrogen will be a pivotal technology to decarbonise heavy industry. Serbia has already launched a pilot project and aims to produce 5100 tonnes of green and blue hydrogen by 2035. Backing this target up with concrete funding will be critical to scaling up a nascent industry and displacing coal from energy-intensive industrial production.

Workforce capacity building

There is a general sense among industry stakeholders that government support for CBAM alignment is insufficient. While Serbia's Ministry of Internal and Foreign Trade has been active in educating SMEs on CBAM, there is still a perception that in-depth support is lacking. This can be rectified through training workshops, an online portal with up-to-date resources, and direct exchanges between firms.

Strengthen circular economy policies

An emphasis on improved waste management and recycling can increase the supply of scrap steel and aluminium. For instance, Serbia's Extended Producer Responsibility legislation is good on paper, but lacks enforcement and recycling rates remain well below government targets. Improved policy in this area, backed by clear enforcement, can reduce reliance on imports and significantly lower emissions.

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