



ENERGY COMMUNITY

**CBAM-Readiness Tracker**

2025

**Energy Community Secretariat**

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# Foreword

This year marks the final countdown to the launch of the definitive regime of the European Union’s Carbon Border Adjustment Mechanism (CBAM).

Consistent with previous editions, the 2025 Energy Community CBAM-Readiness Tracker places particular emphasis on the Contracting Parties’ progress towards the finalisation of electricity market coupling with the European Union’s internal electricity market and on the advances in decarbonisation, both of which remain central to the CBAM policy landscape and related discussions.

The Tracker demonstrates measurable evidence of a tangible energy transition taking shape across the Energy Community Contracting Parties: the carbon intensity of both electricity production and the economic output measured by GDP continues to decline, while renewable energy deployment is expanding through auctions.

With regard to the integration of electricity markets, Serbia, Moldova, North Macedonia and Montenegro are heading towards the “point of no return” by transposing the Electricity Integration Package and reaching an irreversible stage towards the market coupling. It remains a priority and interest of the Energy Community to ensure

that this process proceeds without obstacles that could potentially arise from the unintended impacts of CBAM.

Regarding carbon pricing, all but one of the Contracting Parties have expressed their intention to adopt a domestic instrument that aims to internalise the externalities of CO<sub>2</sub> emissions (an emission trading scheme or a carbon tax), while the roll out of MRVA systems is laying the groundwork for future implementation.

These developments indicate growing readiness and credibility for policy actions taken to date by the Energy Community Contracting Parties, although timelines remain tight and implementation challenges persist.

Artur Lorkowski  
Director

Vienna, October 2025



# Summary

On 1 January 2026, the current transition period will end. The system of quarterly reporting obligations for EU importers of CBAM goods (CBAM declarants) will be replaced with annual monitoring and declaration of the embedded greenhouse gas (GHG) emissions in CBAM goods imported into the EU. More importantly, CBAM declarants will be obliged to pay for these embedded GHG emissions by continuously purchasing and surrendering CBAM certificates at the end of each declaration period.

Even as the regime approaches, CBAM continues to evolve. The European Commission's "Omnibus I" simplification package,<sup>1</sup> which has been adopted by the EU co-legislators and is expected to enter into force before the end of 2025, introduces a number of modifications. One significant change related to the financial obligations is that CBAM declarants will only be able to purchase CBAM certificates starting in February 2027, covering the embedded emissions of their imports in 2026. However, aside from other horizontal provisions,<sup>2</sup> the proposed changes have limited impact on the rules governing electricity imports from Energy Community Contracting Parties (Contracting Parties) to the EU, which will generally continue to apply as set out in the original EU Regulation establishing a carbon border adjustment mechanism<sup>3</sup> (CBAM Regulation). Notably, changes to CBAM's *de minimis* threshold—a central element of the simplification amendments—do not apply to electricity imports.

Even though the CBAM Regulation is not part of the Energy Community framework, the Energy Community Secretariat (Secretariat) continues to foster dialogue and information exchange, while highlighting the potential effects of CBAM implementation on the Energy Community region and its markets. In line with its mandate to monitor the implementation of energy and climate acquis, the Secretariat has engaged in targeted outreach to power companies, traders and other stakeholders that export electricity to the EU and are therefore already subject to CBAM rules.

In 2025, CBAM featured prominently in the Energy Community debate, most notably at the Athens Electricity Forum in June 2025 and was the subject of dedicated exchanges with governments, regulators and market participants. A technical event convened by the Secretariat

in Brussels in early July 2025 exemplified this effort, bringing together Contracting Parties and EU Member States—including governments, national competent authorities and market stakeholders—to identify and map potential unintended impacts of CBAM on electricity market integration and to communicate the findings to the European Commission services. At the Informal Ministerial Council meeting in Athens in mid-July 2025, ministers highlighted the **key role of the Contracting Parties in ensuring the smooth flow of renewable electricity from Southeast Europe to the rest of the EU, thereby supporting the green transition and improving consumer welfare.** The Commission was requested to elaborate further on the unintended impacts, along with potential solutions, in the form of refinements to the CBAM Regulation and its associated implementing and delegated acts.

In August 2025, the Commission concluded a [call for evidence](#), which will feed into a legislative proposal due by the end of the year. The consultation addressed the questions of extending CBAM to certain downstream products, introducing additional anti-circumvention measures, as well as addressing concerns with the existing rules on default values and the conditions for using actual emissions for electricity in CBAM. Those changes are all foreseen to be implemented through an amendment of the CBAM Regulation, which—due to the length of the corresponding legislative process—cannot realistically be expected to enter into force before 2027. The existing rules on electricity, currently enshrined in the CBAM Regulation, are to remain in force in their current form throughout the coming year.

In September 2025, the Commission concluded calls for evidence for the drafting of implementing acts complementing the CBAM Regulation. These acts concern the [methodology for calculating emissions embedded in CBAM goods](#), [CBAM certificates to reflect the EU ETS free allocation](#) and the [deduction of the carbon price paid in a third country](#).

This means that **from January 2026, no Contracting Party will benefit from an exemption and CBAM will necessarily apply to electricity imports to the EU from these markets.** The exact additional costs associated with CBAM will not be known until all technical rules are in place (for example,

1 Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 2023/956 as regards simplifying and strengthening the carbon border adjustment mechanism (2025/0039 (COD))

2 Such as the timeline for submitting annual CBAM declarations and surrendering CBAM certificates

3 Regulation (EU) 2023/956 on establishing a carbon border adjustment mechanism

those concerning the recognition and deduction of a carbon price paid in a third country). Nevertheless, these costs are expected to impact overall market fundamentals in the Contracting Parties and potentially also in neighbouring EU Member States. The precise magnitude and nature of these impacts remain uncertain, given the complexity of mature electricity markets. In addition to the direct costs—namely the financial adjustment paid for electricity imports into the EU—it is important to account for indirect costs such as delays in market integration, fewer opportunities for arbitrage, diminished market attractiveness, delay or cancellation of renewable projects and a potential decline in consumer welfare.

In light of these developments, the Energy Community CBAM Readiness Tracker continues—like previous editions—to monitor and record the developments and progress of the Contracting Parties in meeting the conditions for an exemption from CBAM for electricity. **However, from the start of the definitive regime in 2026, the Secretariat, as the facilitator of accelerated energy market integration of the Contracting Parties with the Union, will add a more frequent layer of monitoring to the annual CBAM Readiness Tracker. Quarterly reviews of developments and changes of market fundamentals—if any—are envisaged to help identify the impacts of CBAM in the Contracting Parties.**

The results of the assessment in this year's Tracker show tangible progress in the areas of both electricity market integration and decarbonisation.

The landscape of **electricity trade** from the Contracting Parties differed markedly in 2024 from that of the previous year. Reduced generation due to **unfavourable hydrological conditions, combined with a moderate increase in domestic demand, resulted in almost all Contracting Parties becoming net importers on an annual basis**<sup>4</sup>—with Bosnia and Herzegovina being a notable exception and Montenegro recording only marginally higher exports than imports. This demonstrated that the region did not have a structural surplus position to export electricity to the EU in 2024. The high level of commercial flows to Member States shows

that the Contracting Parties continued to be a major route for transiting electricity between different markets in the EU.

While the Contracting Parties have made some progress, the precondition for the potential exemption from CBAM for electricity, namely the **coupling of their electricity markets** with the single European electricity market, has yet to be met. This process requires significant effort so that the Contracting Parties can reach the “point of no return”, marking full transposition of the *acquis* relevant for coupling, including verification of its compliance. Serbia, Moldova, North Macedonia and Montenegro are close to achieving this milestone. Once reached, the pace of progress will chiefly depend on European counterparties—primarily the EU Agency for the Cooperation of Energy Regulators (ACER), EU nominated electricity market operators (NEMOs) and transmission system operators (TSOs), as well as on the efforts made by NEMOs and TSOs in the Contracting Parties to ensure readiness for market coupling. The current priority is to ensure that Contracting Parties advance in transposing the [Electricity Integration Package](#),<sup>5</sup> and to subsequently verify the compliance of the transposition.

This priority is also supported by the EU's [Reform and Growth Facility for the Western Balkans](#),<sup>6</sup> which—independently of the Energy Community legal obligations—sets binding deadlines for the Contracting Parties to adopt the necessary legislation and reach the “point of no return”. The Contracting Parties are advancing their decarbonisation objectives in line with their political commitments to climate neutrality by 2050 and their legally binding obligations to implement the necessary policies and measures to move closer to the Energy Community's energy and climate targets. The Secretariat continues to monitor progress towards the **2030 Energy Community targets**, as set out in the [decision of the Energy Community Ministerial Council](#)<sup>7</sup> (Ministerial Council Decision), by assessing the adopted national energy and climate plans (NECPs)<sup>8</sup> and the integrated progress reports on their implementation submitted by the Contracting Parties. Given that the deadline for adopting the NECPs was July 2024, the period available for submitting progress

4 In 2023, alongside Bosnia and Herzegovina, Albania, Montenegro and Serbia all recorded considerable net export positions.

5 The Electricity Integration package encompasses nine legal acts adopted by the Ministerial Council Decisions No 2021/13/MC-EnC and No 2022/03/MC-EnC: Regulation (EU) 2019/941, Regulation (EU) 2019/942, Regulation (EU) 2019/943, Directive (EU) 2019/944, Commission Regulation (EU) 2015/1222, Commission Regulation (EU) 2016/1719, Commission Regulation (EU) 2017/2195, Commission Regulation (EU) 2017/2196 and Commission Regulation (EU) 2017/1485, adapted for the Energy Community Contracting Parties.

6 Regulation (EU) 2024/1449 of the European Parliament and of the Council of 14 May 2024 on establishing the Reform and Growth Facility for the Western Balkans

7 Decision 2022/02/MC-EnC on amending Decision 2021/14/MC-EnC and incorporating Directives (EU) 2018/2001 and 2013/2002, Regulations (EU) 2018/1999, 2020/1044 and 2020/1208 in the Energy Community *acquis*

8 By September 2025, Albania, Georgia, Moldova, North Macedonia, Serbia and Ukraine had adopted their NECPs. Bosnia and Herzegovina, Montenegro and Kosovo\*, however, have not adopted their NECPs despite the deadline of 30 June 2024.

reports<sup>9</sup> has been too short to draw in-depth conclusions on the Contracting Parties' positions compared to their planned trajectories towards the targets. The Secretariat plans to present its overall assessment of adopted NECPs and the integrated progress reports in spring 2026.

Work on facilitating just transition planning continues, with the Secretariat having published its [Policy Guidelines on Just Transition](#). However, target dates for **coal phase-out** are either set far in the future (e.g. in 2035<sup>10</sup> or 2050<sup>11</sup>) or being dynamically rescheduled as the specified date approaches.

Work on implementing the **monitoring, reporting, verification and accreditation (MRVA)** framework<sup>12</sup> for GHG emissions on the level of individual installations continued, as progress in this area is also a condition for EU support programmes, such as the Reform and Growth Facility as part of the Commission's Growth Plan for the Western Balkans or the Ukraine Facility.

Regarding the **introduction of carbon pricing instruments**, almost all Contracting Parties outlined their plans for establishing domestic systems that reflect their specific circumstances. There was broad support for continuing discussions in the Energy Community framework on the potential for a coordinated approach to designing certain elements of these heterogeneous carbon pricing instruments. At the 2025 Informal Ministerial Council meeting in Athens, ministers expressed a preference for developing domestic carbon pricing instruments, while acknowledging the added value of exploring enhanced coordination within the Energy Community framework regarding specific design elements. The early deployment of robust MRVA systems in Contracting Parties was mentioned as a key precondition and the need for structured dialogue on financing the just transition was also emphasised as essential for establishing effective carbon pricing policies.



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9 The Governance Regulation obliges Contracting Parties to submit their integrated progress reports by 15 March 2025 and every two years thereafter.

10 As in Montenegro or Ukraine

11 As in Serbia

12 Decision 2022/05/MC-EnC on amending Annex I to the Treaty establishing the Energy Community and incorporating Implementing Regulation (EU) 2018/2066, Implementing Regulation (EU) 2018/2067 and Directive 2003/87/EC in the Energy Community acquis

# Compliance of the Contracting Parties with the CBAM exemption criteria for electricity

The **Energy Community Treaty**—a comprehensive and legally binding legal framework—continues to provide an appropriate basis for application of EU law in the fields of energy, electricity (including renewable energy), environment and competition, as required under the CBAM Regulation, serving as an agreement between the Contracting Parties and the Union.

Article 2(7) of the CBAM Regulation provides that if a third country or territory has an electricity market that is integrated with the Union internal market for electricity through **market coupling** and there is no technical solution for the application of CBAM to the electricity imports into the EU from that third country or territory, such imports shall be exempt from application of CBAM. This exemption is possible only if a set of conditions is met and the Commission's assessment confirms compliance. In line with the Market Coupling Steering Committee's decision, once the Electricity Integration Package is fully transposed and its compliance verified and the Market Coupling Operation Integration Plan (MCO IP) is approved by ACER, an 18-month period must follow, during which contractual and technical readiness for market coupling must be ensured by Contracting Parties' NEMOs and TSOs. Given this requirement and the existence of annual windows for joining, the transposition (including its verification by the European Commission and the Secretariat) and MCO IP approval would need to be concluded by autumn 2025 for a Contracting Party to enable "go live" and conclusion of the coupling process by 2027.

With respect to progress in implementing obligations in **renewable energy**, 2024 marked a record year for wind and solar generation, highlighting a slow, but steady structural shift away from the previously hydro-dominated renewable portfolio. At the same time, the Contracting Parties must continue increasing the share of renewables in gross final energy consumption to ensure compliance with the 2030 target set out in the [Energy Community Renewable Energy Directive](#)<sup>13</sup> (Renewables Directive) and the Ministerial Council Decision.<sup>14</sup>



13 Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources as adapted and adopted by the Ministerial Council Decisions 2021/14/MC-EnC and 2022/02/MC-EnC.

14 Decision 2022/02/MC-EnC on amending Decision 2021/14/MC-EnC and incorporating Directives (EU) 2018/2001 and 2013/2002, Regulations (EU) 2018/1999, 2020/1044 and 2020/1208 in the Energy Community acquis

Regarding the commitment to **climate neutrality by 2050**, outlined in a **long-term low greenhouse gas emissions development strategy** (long-term strategy), progress has been very moderate. No new long-term strategies have been submitted to the Secretariat and only two Contracting Parties (Ukraine and Moldova) have adopted climate laws that enshrine climate neutrality in legislation by 2050. Considering that several Contracting Parties are still working on their draft climate laws, it is essential that the conditions of Article 2(7) of the CBAM Regulation are fully taken into account when finalising these drafts.

Following presentation of the European Commission's [impact assessment of various policy options for carbon pricing](#) at the 2024 Energy Community Ministerial Council meeting, discussions in 2025 focused on the Contracting Parties' plans for introducing such instruments. To date, only Montenegro has an emissions trading system (ETS) in place and only Ukraine—given its advanced position in establishing MRVA—is likely to launch a test phase in 2026. Other Contracting Parties are either planning to introduce a carbon tax around 2027, with subsequent transition to an ETS, or are not planning to implement any carbon pricing policies. The complexity and time required to design and establish an ETS raise questions about whether and how Contracting Parties will be able to comply with the exemption criterion of establishing an ETS for electricity, with a price equivalent to the EU ETS, by 1 January 2030.

Article 2(7c) of the CBAM Regulation also requires the submission of a **roadmap**, in which the third country must outline the main milestones and schedule for complying with the following obligations: a) developing a long-term strategy and, where applicable, communicating it to the United Nations Framework Convention on Climate Change (UNFCCC) b) including the 2050 climate neutrality objective in both the strategy and domestic legislation and c) aligning domestic legislation with the EU climate acquis, including carbon pricing at a level equivalent to that in the EU, in particular for electricity generation, and implementing an emissions trading system for electricity, with a price equivalent to the EU ETS, by 1 January 2030.

The final condition for an exemption is establishment—in the third country—of an **effective system to prevent indirect import of electricity into the EU** from other third countries or territories that do not meet the exemption criteria.



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**Table 1** Compliance with the CBAM exemption criteria for electricity

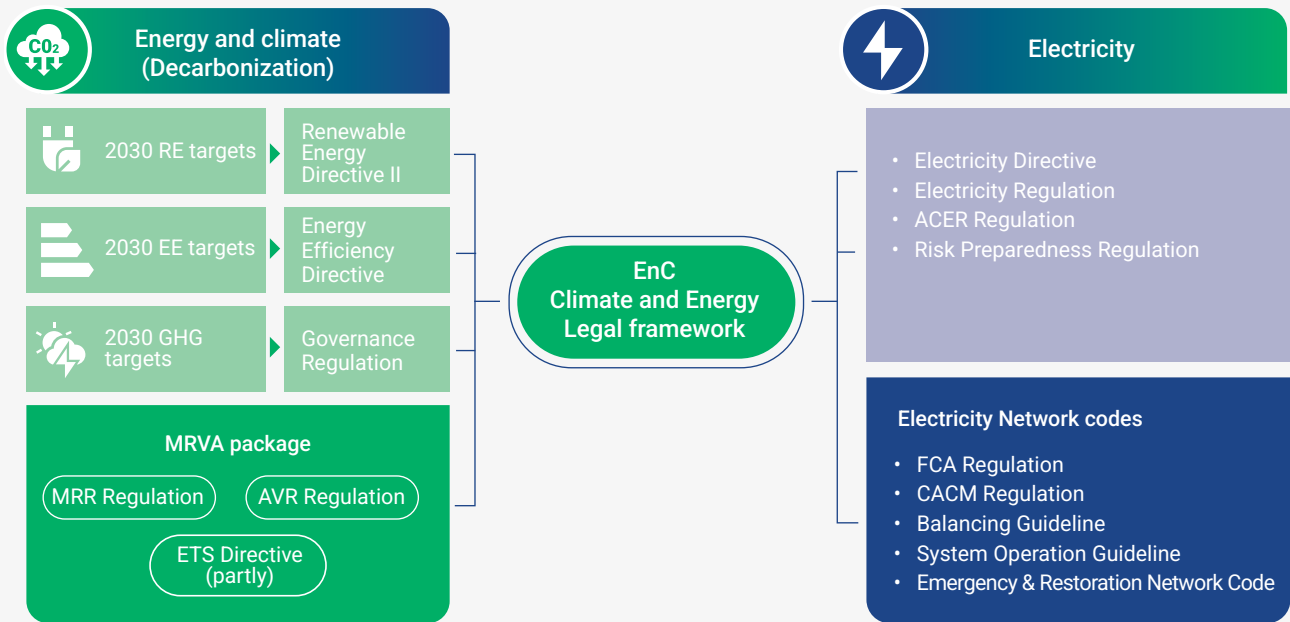
CBAM exemption criterion	ALB	BiH	GEO	MDA	MNE	MKD	SRB	UKR	XK*
Article 2.7 Completion of market coupling	✗	✗	✗	✗	✗	✗	✗	✗	✗
Article 2.7(a) Conclusion of an agreement with the Union, setting out the obligation to apply Union law in the fields of energy, electricity (including renewable energy), environment and competition	✓	✓	✓	✓	✓	✓	✓	✓	✓
Article 2.7(b) Domestic legislation implements the main provisions of electricity market regulation and renewable energy and market coupling of electricity markets									
Transposition of the Electricity Integration Package (including verification of its compliance)	✗	✗	✗	●	●	●	●	✗	✗
Renewable energy legislation	●	●	●	●	●	●	●	●	●
Article 2.7(c) Submission of a roadmap to the Commission outlining the planned achievement of climate neutrality by 2050 and plans to align with the EU climate acquis, including carbon pricing and the establishment of an emissions trading system for electricity by 2030	✗	✗	✗	✗	✗	✗	✗	✗	✗
Article 2.7(d) Commitment to achieve climate neutrality by 2050 and implementation of that commitment in domestic legislation; formulation and inclusion of the climate neutrality objective in a long-term low greenhouse gas emissions development strategy communicated to the UNFCCC, where applicable									
2050 climate neutrality objective in national legislation	✗	✗	✗	✓	✗	✗	✗	✓	✗
2050 climate neutrality objective in long-term strategy	✗	✗	✓	✗	✗	✗	✗	✗	✗
Article 2.7(e) <b>Substantial</b> progress in alignment with the EU climate acquis, including carbon pricing and the establishment of an emissions trading system for electricity with a price equivalent to the EU ETS by 2030	✗	✗	✗	●	●	✗	●	●	✗
Article 2.7(f) Establishment of an effective system to prevent indirect import of electricity into the Union from other third countries or territories that do not meet the CBAM exemption criteria for electricity	✗	✗	✗	✗	✗	✗	✗	✗	✗

 Condition fulfilled
  Condition not fulfilled
  Implementation underway/progress visible

# Energy Community legal framework for the EU acquis relevant to CBAM

The Energy Community legal framework incorporates elements of the EU acquis communautaire in the field of electricity, including legislation on the development of renewable energy sources, as well as rules in the fields of energy, environment and competition. CBAM does not form part of the Energy Community acquis. However, due to the direct impact of its implementation on energy market integration, the Energy Community facilitates regional cooperation to mitigate potential negative impacts of CBAM on electricity trade.

**The Energy Community Treaty—a comprehensive and legally binding legal framework—continues to provide an appropriate basis for application of EU law in the fields of energy, electricity (including renewable energy), environment and competition, as required under the CBAM Regulation, serving as an agreement between the Contracting Parties and the Union.**



# Market coupling as a precondition for CBAM exemption

## Electricity trade

In 2024, the net electricity exchange patterns of the Energy Community Contracting Parties (excluding Ukraine)<sup>15</sup> showed a notable shift from the exceptionally high net export surplus recorded in 2023. Bosnia and Herzegovina remained the region's largest net exporter, although its export volumes were nearly half that of the previous year. Montenegro was the only other Contracting Party with a net export position, albeit with marginal volumes. All other observed Contracting Parties recorded net electricity imports, with Moldova emerging as the largest net importer. If only the Western Balkans 6 Contracting Parties are considered, the region was a net exporter of approximately 482 GWh in 2024, compared to a historical net export level of 6,714 GWh in 2023. This transition from a predominantly export-oriented regional profile in 2023 to a more import-dependent balance in 2024 can be attributed to a combination of significantly less favourable hydrological conditions—reflected in a 13.4% decline in hydropower generation—and a moderate increase in domestic electricity demand of 2.3%, largely driven by the prolonged summer heatwave of 2024.

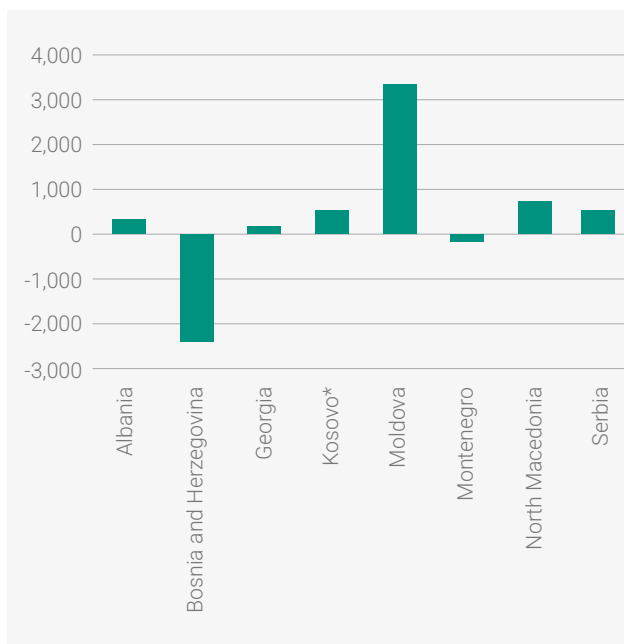
In 2024<sup>16</sup> Serbia remained the central transit corridor for electricity flows, with a total volume of 9,181 GWh. It was followed by North Macedonia (3,354 GWh), Montenegro (3,042 GWh), Bosnia and Herzegovina (2,158 GWh) and Albania (1,307 GWh). Moldova recorded the lowest volume, with only 188 GWh scheduled towards the EU. These figures include both direct exports from each Contracting Party and transit flows that include electricity produced in other EU Member States and/or Contracting Parties.

The 2024 data comparison in Figure 1 and Table 2 reaffirms that, with the exception of Bosnia and Herzegovina, the Contracting Parties primarily act as transit corridors for electricity flows to EU Member States. In these cases, the volumes scheduled towards the EU significantly exceed their net export positions, indicating that much of the electricity flowing through their systems originates in EU Member States or other Contracting Parties.

15 Data on Ukraine are limited due to an exemption under martial law from mandatory data submissions to the State Statistics Service of Ukraine, effective 3 March 2022.

16 ENTSO-E data on Total Scheduled Commercial Exchanges, <https://newtransparency.entsoe.eu/>

**Figure 1** Net imports [+] / exports [-] 2024 (GWh)



Source: compiled by the Secretariat based on Contracting Parties' reports

**Table 2** Total scheduled commercial electricity exports and transit from Contracting Parties to EU Member States in 2024

CPs	Borders	Volume [GWh]
Albania	AL → GR	-1,307
Bosnia and Herzegovina	BA → HR	-2,158
Moldova	MD → RO	-188
Montenegro	ME → IT	-3,042
North Macedonia	MK → BG MK → GR	-3,354
Serbia	RS → BG RS → RO RS → HU RS → HR	-9,181

Source: ENTSO-E Total Scheduled Commercial Exchanges, <https://newtransparency.entsoe.eu/>

**Table 3** The role of electricity transit in selected Contracting Parties

CPs	Net Import [+] / Export [-] [GWh] <sup>17</sup>	Commercial Electricity flows to EU MSs [GWh] <sup>18</sup>
Albania	334	-1,307
Bosnia and Herzegovina	-2,422	-2,158
Moldova	3,387	-188
Montenegro	-161	-3,042
North Macedonia	710	-3,354
Serbia	520	-9,181

While the precise origin of the electricity transiting through the Contracting Parties cannot be determined from the available data, the configuration of the regional power system provides strong indications. The Western Balkans 6 Contracting Parties are entirely surrounded by EU Member States, positioning them as natural transit corridors for cross-border electricity flows. Since March 2022, Ukraine and Moldova have been synchronised with the Continental European power system, operating as a control block with no physical interconnections to Russia or Belarus. Georgia, in contrast, remains physically disconnected from the European grid. The 2024 data reinforce an increasingly evident trend: except for Bosnia and Herzegovina—and, to a marginal extent, Montenegro—the Contracting Parties did not record any meaningful net electricity exports in 2024. However, scheduled commercial flows to EU Member States from these countries significantly exceeded their net export positions. This indicates that most electricity flowing through their networks is not of domestic origin, but rather transits from neighbouring EU countries, with a smaller share coming from intra-regional exchanges. While this pattern is increasingly evident, it underscores the importance of ensuring a clear distinction between commercial imports from non-exempted Contracting Parties and electricity transiting through their systems in order to implement the CBAM principles properly.

17 Positive figures indicate Contracting Parties importing more than their exports, and negative figures show more exports than imports. The Secretariat compiled the values based on Contracting Parties' reports.

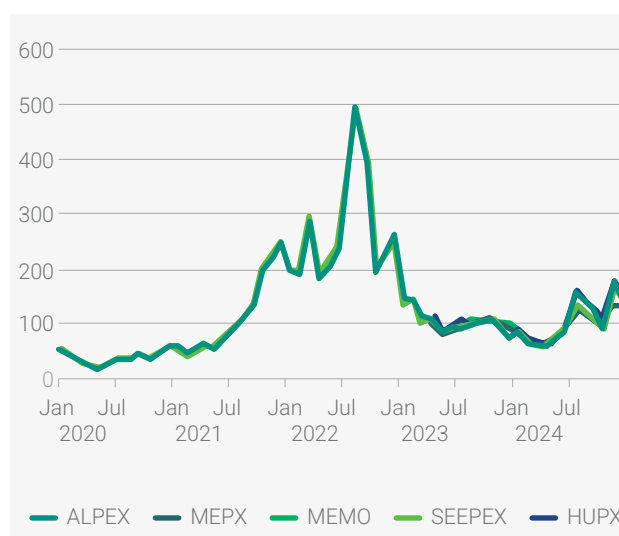
18 Total Scheduled Commercial Electricity Export and Transit from CPs to the EU, based on ENTSO-E Total Scheduled Commercial Exchanges data.

## Getting the price signal right

During the first half of 2024, day-ahead electricity markets across the Contracting Parties experienced a moderate decrease in prices, with monthly averages between January and May mostly ranging from 61 to 86 EUR/MWh, well below 2023 levels, when average prices fluctuated around 100 EUR/MWh. However, a sharp price surge began in June 2024, driven by an extended summer heatwave, higher electricity demand coupled with constrained hydro supply, cross-border transmission bottlenecks in Central and Southeast Europe and unplanned outages of generation assets throughout the wider region. Prices peaked in November 2024, exceeding 160 EUR/MWh in most markets, and remained elevated throughout December. Considering 2024 as a whole, average prices settled at approximately the same level as in 2023, close to 100 EUR/MWh. Throughout this period, price dynamics in the Contracting Parties closely mirrored developments on the Hungarian Power Exchange (HUPX), Southeast Europe's leading reference market. The volatility seen across the Contracting Parties reflected similar movements in neighbouring EU day-ahead markets, underscoring the increasing interdependence of electricity systems. These developments reinforce the importance of fully implementing the Electricity Integration Package, most notably coordinated capacity calculation, the 70% target and integration of the Contracting Parties into single day-ahead and intraday market coupling to reduce persistent price spreads between Southeast and Western Europe and to foster price convergence and market efficiency across the continent.

### 2024: same yearly average price as in 2023, but higher volatility

**Figure 2** Average baseload day-ahead market (DAM) monthly prices [EUR/MWh]



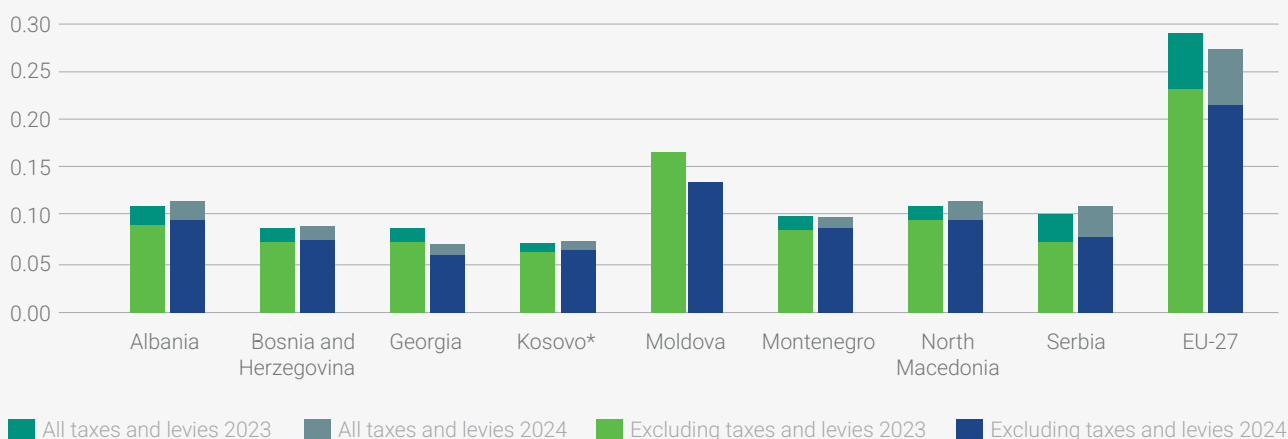
Source: PX Market Reports

Annual average day-ahead market prices in the Contracting Parties remained broadly unchanged in 2023 and 2024, close to 100 EUR/MWh. However, as in 2023, household electricity prices increased in several cases. This suggests a gradual shift in retail pricing policies towards aligning end-user prices to underlying market-based electricity supply costs. Retail household prices, excluding taxes, rose in Serbia (9.29%), Albania and Montenegro (both 5.6%), Kosovo\*<sup>19</sup> (3.3%) and Bosnia and Herzegovina (2.5%). At the same time, prices declined sharply in Georgia (-17.8%) and Moldova (-19%), with Moldova maintaining a full tax exemption on residential electricity consumption. In North Macedonia, the observed change was minimal—a marginal decrease of 1.1%—indicating that the overall price level remained effectively unchanged. Despite these developments, household electricity prices in the Contracting Parties (excluding Ukraine) remained significantly below the EU-27 average—at approximately one-third of the examined DC<sup>20</sup> band level—

underscoring the fact that most household consumers are still largely shielded from wholesale market dynamics.

Price convergence is a key indicator—though not the only one—of a well-integrated electricity market. While such convergence is increasingly evident in several Contracting Parties, extensive state intervention in retail price setting, particularly in the household sector and, to a lesser extent, in the industrial sector, continues to shield many consumers from the actual costs of electricity. As a result, the financial impacts of CBAM-driven changes in cross-border trade are unlikely to be felt directly by these groups. However, this insulation delays or prevents corrective and adaptation measures, increasing vulnerability and placing additional financial strain on the entities providing the price shield—primarily public utilities or state budgets. Against this backdrop, wholesale price developments in 2024 highlight both the progress made in market integration and the challenges that persist.

**Figure 3** Household prices in EUR/kWh DC consumption band 2,500-5,000 kWh



Source: EUROSTAT database<sup>22</sup>

In 2024, industrial electricity prices (IC consumption band,<sup>21</sup> excluding taxes and levies) declined in several Contracting Parties, reflecting the EU-27 trend, where prices fell by 15.4%. The steepest drops—of over 10%—were observed in Moldova, North Macedonia and Georgia. In North Macedonia, the decline closely mirrored the EU-27, indicating a market-reflective adjustment. The sharp drop in Moldova followed an exceptionally high level in 2023, suggesting an earlier exposure to wholesale fluctuations and a subsequent correction, consistent with its reliance on electricity imports.

In contrast, Georgia's reduction reflects regulated pricing in a non-functional wholesale market. Albania, Bosnia and Herzegovina and Montenegro recorded moderate price increases (4–6%), likely due to delayed cost pass-through or tariff rebalancing. While the increase brought Albania closer to the EU average, prices remained relatively low in Bosnia and Herzegovina despite the rise. Serbia and Kosovo\* recorded stable prices, with Serbia maintaining a closer correlation with EU levels and Kosovo\* remaining the lowest-priced market in the region, reflecting persistent regulatory insulation.

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

20 Medium-sized household consumers (DC consumption band with annual consumption of between 2,500 and 5,000 kWh).

21 Medium-sized industry consumers (IC consumption band with annual consumption of between 500 and 2,000 MWh).

22 For North Macedonia, 2024 household and industry prices are sourced from the MAKSTAT database of the State Statistical Office of North Macedonia (EUROSTAT data not yet published).

All Contracting Parties stayed below the EU-27 price average for the examined IC band, though to varying degrees. Serbia, North Macedonia and Albania lay closer to the EU average, indicating significant progress towards market-based pricing for industrial consumers. Moldova occupied a mid-range position, while Kosovo\*, Georgia, Bosnia and Herzegovina and Montenegro maintained the widest gaps—35–45% below the

EU level. These differences reflect the continued influence of state-controlled pricing, fiscal support and dominance of state-owned utilities in the retail market. Overall, the data reveal a growing divide in the retail markets in the Contracting Parties: some are gradually aligning with EU market norms, while others remain highly regulated—underscoring both progress and the need for further reform.

**Figure 4** Industry prices [EUR/kWh] IC consumption band 500–2,000 MWh



Source: EUROSTAT database<sup>23</sup>

## Creating a coupled electricity market

Since there is currently no technical solution to implement CBAM on the electricity markets of third countries integrated with the EU through market coupling, the CBAM Regulation introduced the possibility of an exemption if additional conditions are met. While Contracting Parties are not yet coupled with the EU, they are moving in that direction through transposition and implementation of the Electricity Integration Package.<sup>24</sup> The Package lays down the legal basis for the Contracting Parties' adherence to Single Day-Ahead Coupling (SDAC), Single Intraday Coupling (SIDC) and European balancing platforms, based on the principle of reciprocity among energy sector stakeholders, which is further supported by the Procedural Act on Regional Market Integration.<sup>25</sup> Although none of the Contracting Parties managed to fully transpose the Electricity Integration Package by 31 December 2023, there has been tangible progress in the last 12 months. Serbia has adopted a comprehensive set of primary and

For the specific purpose of market coupling, verification of the compliant transposition of the Electricity Integration Package will be conducted jointly by the European Commission and the Secretariat in a two-stage assessment process. In the first stage, upon receiving the complete set of adopted national legislation, including the translation and concordance tables, the Secretariat will conduct a thorough assessment within three months. Based on the Secretariat's assessment, the European Commission will review the completeness and conformity of national transposition and implementing measures with the EU acquis within five months and issue an opinion on whether the transposition is fully compliant, which will be transmitted to each Contracting Party by the Secretariat. Once the compliant transposition is verified, the Contracting Party concerned will be at the "point of no return" in market coupling, i.e. its NEMO(s)/TSO will be able to formally request accession for the respective go-live windows, provided that the MCO IP is approved.

23 For North Macedonia, 2024 household and industry prices are sourced from the MAKSTAT database of the State Statistical Office of North Macedonia (EUROSTAT data not yet published).

24 The deadline for transposition was 31 December 2023

25 Adopted by Decision No. 2022/01/MC-EnC of the Ministerial Council of the Energy Community

secondary acts aimed at achieving full transposition, while North Macedonia, Montenegro and Moldova have adopted laws targeting partial transposition of the Package, with the remaining acts currently under development. In Ukraine and Bosnia and Herzegovina, draft laws are progressing through parliamentary procedures, with the draft law in Ukraine having passed its first reading. Relevant laws are still in the drafting phase in Albania, Georgia and Kosovo\*. Full transposition of the Electricity Integration Package will be verified by the European Commission following a thorough assessment by the Energy Community Secretariat, which commences

only after the respective Contracting Party submits all laws and regulations fully transposing the EIP, including tables of concordance of appropriate quality in English.

In addition to compliant transposition, Contracting Parties must designate in a compliant manner at least one nominated electricity market operator (NEMO) for their bidding zone. Most Contracting Parties have designated one NEMO however, the compliance of these designations is still to be confirmed, along with the verification process.

**Table 4** Current status of implementation of the necessary preconditions for market coupling<sup>26</sup>

<b>Last update 9 September 2025</b>	<b>Day-ahead market operational (YES/NO)</b>	<b>Intraday market operational (YES/NO)</b>	<b>Legal framework for transposition of the Electricity Integration Package has been adopted (YES/NO)</b>	<b>Compliance of transposition of the Electricity Integration Package has been verified (YES/NO)</b>	<b>NEMO(s) designated in compliance with the Electricity Integration Package (YES/NO)<sup>27</sup>/ Designated NEMO</b>
Albania	<b>YES</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b> / ALPEX, 17 July 2023
Bosnia and Herzegovina	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
Georgia <sup>28</sup>	<b>YES</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
Kosovo*	<b>YES</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b> / ALPEX, 17 July 2023
Moldova	<b>NO</b>	<b>NO</b>	<b>YES partially</b>	<b>NO</b>	<b>NO</b> / OPEM, 29 June 2025
Montenegro	<b>YES</b>	<b>NO</b>	<b>YES partially</b>	<b>NO</b>	<b>NO</b> / MEPX, 30 May 2024
North Macedonia	<b>YES</b>	<b>NO</b>	<b>YES partially</b>	<b>NO</b>	<b>NO</b> / MEMO, 5 June 2025
Serbia	<b>YES</b>	<b>YES</b>	<b>YES</b>	<b>NO</b>	<b>NO</b> / SEEPEX, 16 June 2022
Ukraine	<b>YES</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

26 As of 9 September 2025

27 NEMO designations will be considered valid only after the transposition of the Electricity Integration Package and the verification of its compliance.

28 Georgia is currently not interconnected with any of the Contracting Parties or EU Member States, so market coupling is not feasible at present.

At the European level, the approval of the MCO IP by ACER is a critical precondition for launching the 18-month preparatory process needed to ensure operational and contractual readiness for market coupling, provided that the relevant legislation has been transposed and its compliance verified.

The MCO IP is a crucial document for market coupling, as it should provide a description and timescale for the SDAC and SIDC extensions to the Energy Community, along with an outline of the expected impact of these extensions on the performance of market coupling operation functions. In accordance with the Energy Community Capacity Allocation and Congestion Management (CACM) Regulation,<sup>29</sup> the MCO IP was to be submitted by all NEMOs in the EU and the Energy Community to all regulatory authorities, the Energy Community Regulatory Board (ECRB) and ACER by 15 December 2023.<sup>30</sup> However, due to delays in transposition and NEMO designation, the European Commission recommended proceeding with formal submission by EU NEMOs only, while taking into account the informal input received from power exchanges in the Contracting Parties. Accordingly, on 31 January 2025, all EU NEMOs submitted the MCO IP proposal to ACER for approval. ACER deemed the submission incomplete and therefore requested that NEMOs improve and resubmit the proposal, after which the approval process may continue. The amended version of MCO IP is expected to be provided to ACER by all EU NEMOs in November 2025.

Concerning regional cooperation, Annex I of the Energy Community CACM Regulation defines the default configuration of the Capacity Calculation Regions (CCRs) that include Contracting Parties' bidding zone borders, namely: the Shadow Southeast Europe (Shadow SEE) CCR, the Eastern Europe (EE) CCR and the Italy-Montenegro (ITME) CCR. While work on operationalisation of the ITME CCR and EE CCR had begun, the establishment of cooperation within the Shadow SEE CCR was delayed due to a political dispute between Serbia and Kosovo\*. At the end of January 2025, ACER requested all TSOs to submit a proposal to amend the Determination of CCRs Methodology under Commission Regulation (EU) 2015/1222 in order to include the bidding zone borders and TSOs of the Contracting Parties in the determination of CCRs. In response, in July 2025, the European Network of Transmission System Operators for Electricity (ENTSO-E), on behalf of all TSOs, submitted a proposal for the Amendment of the Determination of CCRs Methodology in line with Article 15(1) of the EU CACM Regulation. With respect to the regions that include

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29 Commission Regulation (EU) 2015/1222 as adapted and adopted as adopted by Ministerial Council Decision 2022/03/MC-EnC

30 Article 7(3) of the Energy Community CACM Regulation



Contracting Parties' bidding zone borders, the configuration of the ITME and EE CCRs remained unchanged, while the reconfiguration of the Shadow SEE CCR was proposed. This assumes the establishment of a new temporary East Central Europe (ECE) CCR, defined for day-ahead capacity calculation only, with a view to eventual merger with the CE CCR, and extension of the existing Southeast Europe (SEE) CCR to the bidding zone borders not included in the ECE CCR. The six-month period for ACER to decide on this proposal expires at the beginning of January 2026. Discussions on the proposal are currently underway.

At the same time, cooperation within the ITME CCR gained momentum: the draft Common Capacity Calculation Methodology was subject to public consultation in June 2025 and is expected to be submitted to regulatory authorities for approval. The other regional terms and conditions or methodologies are also being prepared. Establishment of cooperation within the EE CCR TSOs is also progressing, with a cooperation agreement signed in




December 2024. The TSOs developed an Interim Capacity Calculation Methodology for the day-ahead timeframe for borders between the Ukraine–Moldova (UAMD) Control Block and its neighbouring EU Member States, which has been implemented since 1 July 2025. However, a coordinated Capacity Calculation Methodology for the day-ahead and intraday timeframe is yet to be agreed upon by the EE CCR TSOs and submitted to the regulatory authorities.

Finally, with regard to establishment of the Local Implementation Projects (LIPs), several LIPs have been agreed upon, as shown in the following table. Although there have been delays in transposition of the Electricity Integration Package, NEMOs (power exchanges) and TSOs of EU Member States and Contracting Parties have worked on establishing the framework within LIPs. For some LIPs, the respective NEMOs and TSOs have already signed a memorandum of understanding to agree on cooperation and have begun defining technical and legal procedures in more detail. Several LIPs have opted to leverage existing initiatives and adhere to the Italian Borders Working Table (IBWT).



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**Table 5** Current status of operationalisation of the Energy Community CCRs and establishment of the LIPs for market coupling

Energy Community CCRs as defined by Annex I of the Energy Community CACM Regulation	Cooperation established within the region (YES/NO)	Capacity calculation methodology approved	LIP established
ITME CCR 	<b>YES</b>	<b>NO</b> The Draft Capacity Calculation Methodology was subject to public consultation in June 2025 and is expected to be submitted to the regulatory authorities for approval.	<b>IT-ME LIP</b> Applied for participation in the Italian Borders Working Table (IBWT). The parties are expected to sign the IBWT Operational Agreement Amendment shortly, allowing them to assume the role of project parties.
EE CCR 	<b>YES</b> The Cooperation Agreement was signed in December 2024.	<b>NO</b> The TSOs developed an Interim Capacity Calculation Methodology for the day-ahead timeframe for the bidding zone borders between the Ukraine–Moldova (UAMD) Control Block and its neighbouring EU Member States.	<b>EE LIP (HU, PL, RO, SK, UA, MD)</b> A memorandum of understanding (MoU) was signed in December 2024 and impact assessments on legal, financial and technical aspects are being prepared. <b>MD-RO LIP</b> The project is on hold until external financing is clarified.
Shadow SEE CCR 	<b>NO</b> Establishment of cooperation has been delayed due to negotiations on possible reconfiguration. In December 2024, Contracting Parties' TSOs in the Western Balkans signed the Joint Declaration on Regional Coordination in Southeast Europe with a proposal for reconfiguration of the Shadow SEE CCR, supported by neighbouring EU TSOs. In July 2025, all TSOs submitted a proposal for amendment of the Determination of Capacity Calculation Regions Methodology to ACER, including the proposal for reconfiguration of this region.	<b>NO</b>	<b>HU-RS LIP</b> A MoU was signed and the High-Level Market Design has been agreed. <b>SEE MC LIP (AL, GR, XK*, MK),</b> A MoU was signed and the parties requested inclusion in IBWT. The parties are expected to sign the IBWT Operational Agreement Amendment shortly, allowing them to assume the role of project parties. <b>BG-RS</b> Request for inclusion in IBWT has been submitted.

Considering the current status of fulfilment of the market coupling preconditions, it is highly unlikely that any Contracting Party will be able to join SDAC and SIDC

before 2027. Consequently, CBAM payments are expected to apply from 1 January 2026 to electricity imports from Contracting Parties into the EU.

# Developing decarbonised energy sources

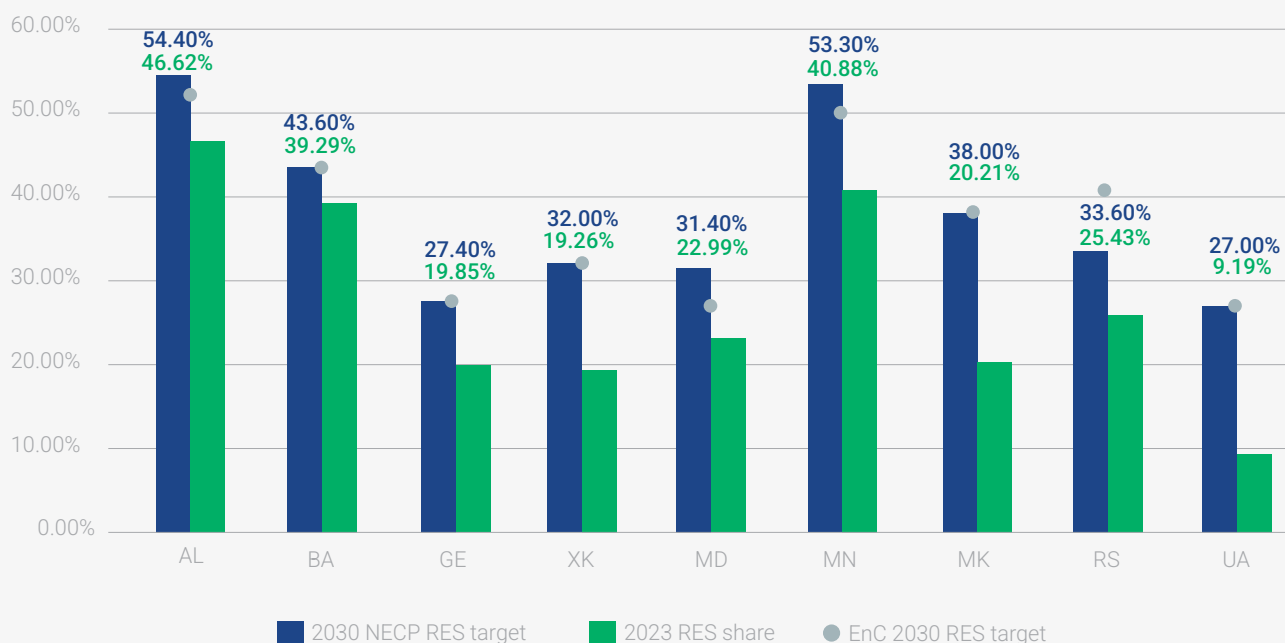
## Achieving the 2030 renewable energy targets

The adopted NECPs<sup>31</sup> demonstrate the operational commitment of Contracting Parties to the 2030 renewable energy targets established by the Ministerial Council Decision.<sup>32</sup> However, the late adoption of NECPs reduces regulatory and policy certainty regarding the planned trajectory of renewable development until 2030.

The progress of Contracting Parties in achieving the 2030 renewable energy targets is monitored through biennial integrated progress reports.



### Overall RES Target



\*For Bosnia and Herzegovina, Kosovo\* and Montenegro, the data from the draft NECPs was used as no NECPs have been adopted in those Contracting Parties yet

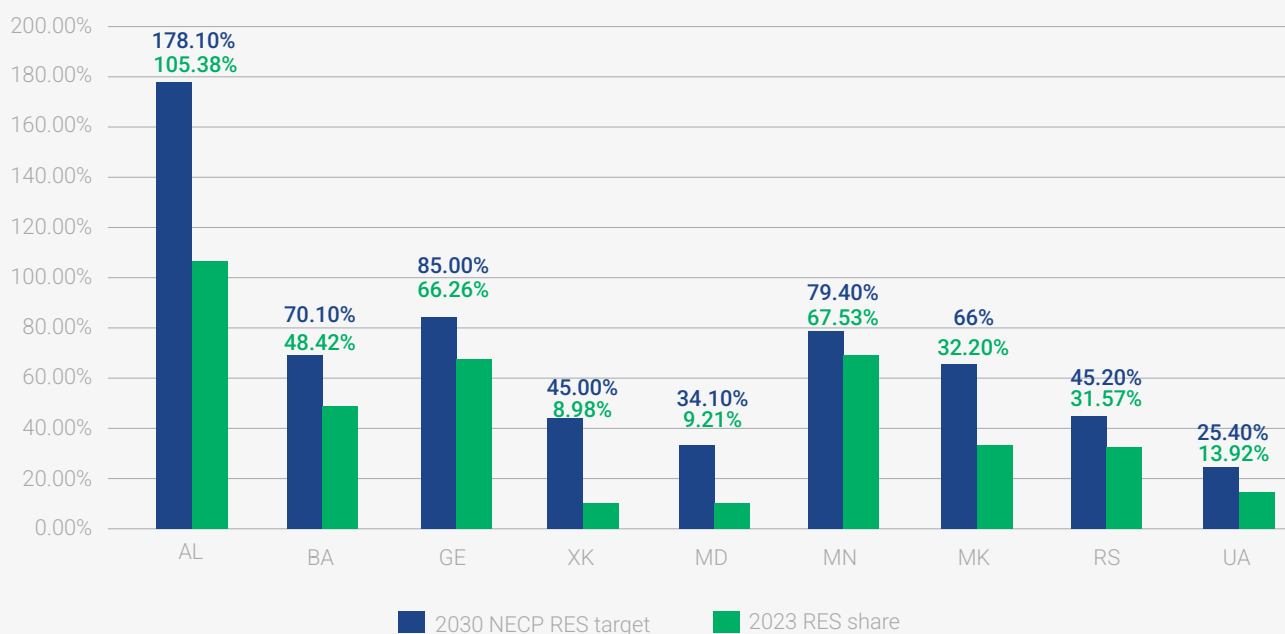
31 By September 2025, Albania, Georgia, Moldova, North Macedonia, Serbia and Ukraine had adopted their respective NECPs. Bosnia and Herzegovina, Kosovo\* and Montenegro however have not adopted an NECP despite the deadline of 30 June 2024. The data in the graphs regarding these Contracting Parties are taken from their draft NECPs.

32 Decision 2022/02/MC-EnC on amending Decision 2021/14/MC- EnC and incorporating Directives (EU) 2018/2001 and 2013/2002, Regulations (EU) 2018/1999, 2020/1044 and 2020/1208 in the Energy Community acquis

In their adopted and draft NECPs, most Contracting Parties have set renewables targets that meet or slightly exceed the levels required by the Ministerial Council Decision. Serbia is the only Contracting Party to set a 2030 target around seven percentage points below the mandated level; however, it has provided justification for this in its adopted NECP. Bosnia and Herzegovina, Kosovo\* and Montenegro are the only Contracting Parties that have not yet adopted an NECP. Based on 2023 data, while many Contracting Parties are slowly increasing the share of renewable energy

in gross final energy consumption, only Albania, Georgia,<sup>33</sup> Moldova and Montenegro have surpassed their 2020 target levels. This is significant, as per Article 32(4) of the [Energy Community Governance Regulation](#)<sup>34</sup> (Governance Regulation), from 1 January 2022 onwards, the share of energy from renewable sources in each Contracting Party's gross final consumption of energy must not be lower than a baseline share that is equal to its mandatory national overall target for the share of energy from renewable sources in 2020, as set out in Article 3(4) of the Renewables Directive.

## Electricity



\*For Bosnia and Herzegovina, Kosovo\* and Montenegro, the data from the draft NECPs was used as no NECPs have been adopted in those Contracting Parties yet

Regarding the 2030 targets for the share of renewables in gross final electricity consumption set by the Contracting Parties and their achievements in 2023, it is evident that further efforts are required to reach the 2030 targets, despite many Contracting Parties continuing to add

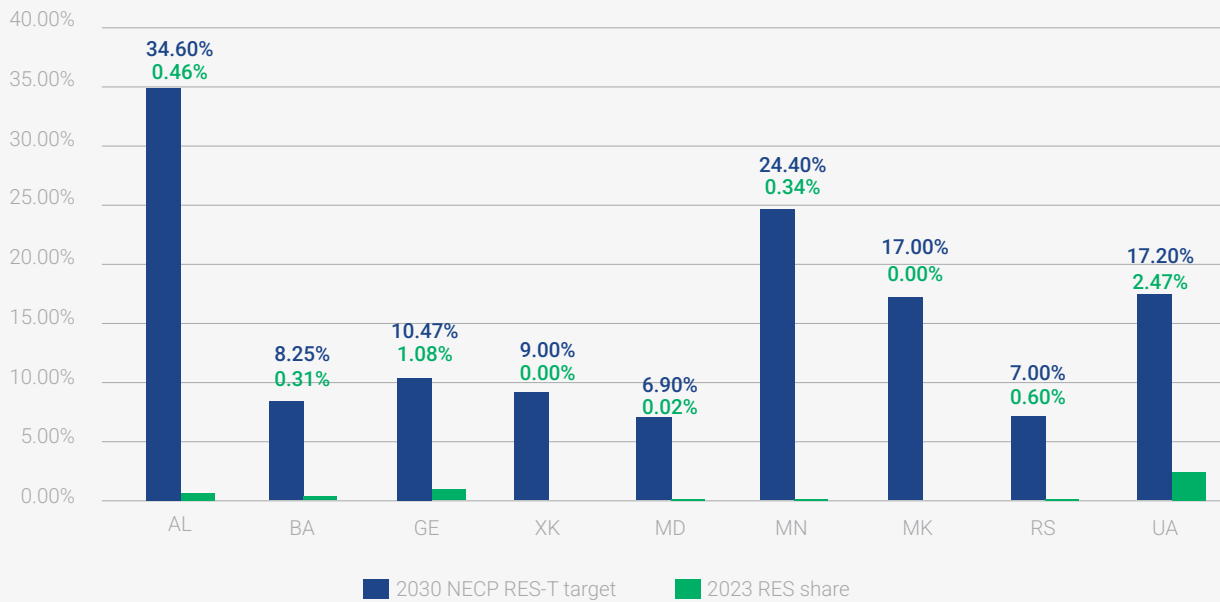
renewable generation capacities to their electricity mix. A notable increase in the share of renewables in electricity has been observed in Albania, Bosnia and Herzegovina, Georgia, Montenegro, North Macedonia and Serbia.

33 Due to its accession in 2016 and the corresponding deadline for implementing the previous version of the Renewables Directive by 31 December 2018, Georgia did not have a 2020 target for the share of renewable energy in gross final energy consumption.

34 Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action as adapted and adopted by Ministerial Council Decision 2021/14/MC-EnC



## Transport



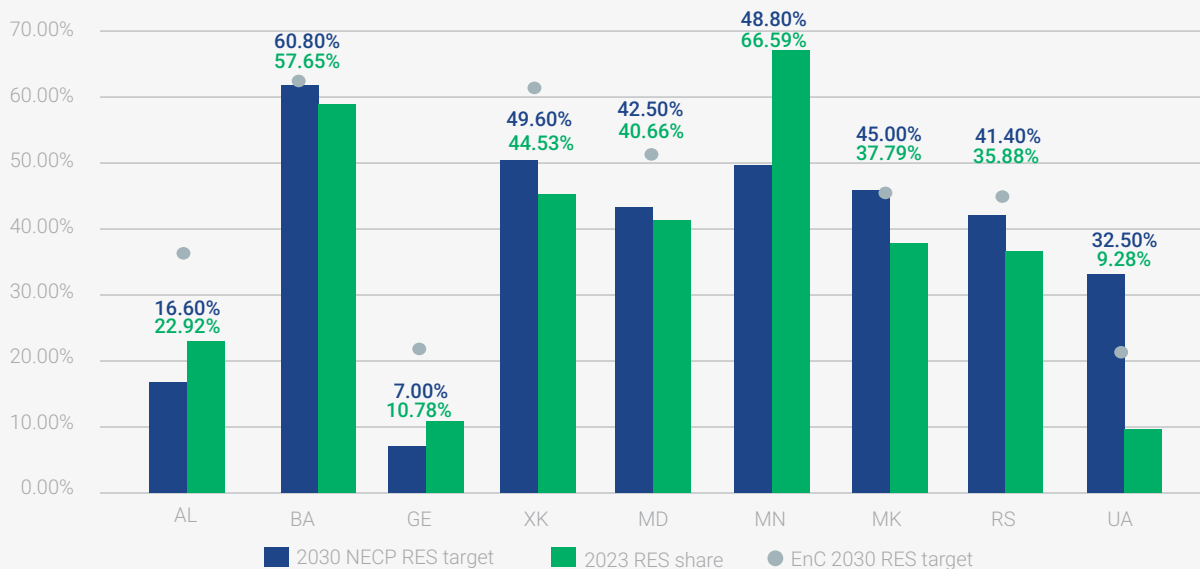
\*For Bosnia and Herzegovina, Kosovo\* and Montenegro, the data from the draft NECPs was used as no NECPs have been adopted in those Contracting Parties yet

All Contracting Parties have set targets for the share of renewable energy consumed in the transport sector by 2030. However, so far only Serbia has established an obligation for fuel suppliers, along with a system for verifying the sustainability and GHG emissions saving criteria for biofuels,

bioliquids and biomass fuels. The lack of a legislative framework hinders progress towards meeting the renewable energy in transport (RES-T) trajectory and poses a risk of failing to achieve the 2030 targets. According to EUROSTAT data, only Georgia recorded a RES-T share above 1% in 2023.



## Heating and cooling



\*For Bosnia and Herzegovina, Kosovo\* and Montenegro, the data from the draft NECPs was used as no NECPs have been adopted in those Contracting Parties yet. | \*\* BA data are from 2022. | \*\*\* The target defined in the Georgian NECP covers a broader range than heating and cooling only, including total remaining energy consumption. | \*\*\*\* UA data are from 2020.

North Macedonia and Ukraine are well aligned with the 2030 targets for renewable energy share in heating and cooling (RES-H&C) outlined in the Renewables Directive, with Ukraine even setting a target that significantly exceeds the minimum recommended level. Bosnia and Herzegovina and Serbia lie close to the outlined levels. In contrast, Albania, Georgia, Kosovo\* and Moldova fall significantly short of the expected ambition. Montenegro, with a 64.78% share of renewables in heating and cooling in 2020, satisfied the criteria set out under Article 23 point 2(b) of the Renewables Directive, which exempts Contracting Parties exceeding a 60% share from setting a 2030 target. Recent progress in 2023 indicates that some Contracting Parties are already approaching their targets, while others remain far from the projected trajectory, highlighting uneven advancement across the region.

### Facilitating the renewable energy transition through auctions

The surge in the implementation of renewable energy auctions continued between September 2024 and 2025.

Following the successful completion of its first solar auction, Kosovo\* launched its first wind auction at the end of 2024. Several potential bidders passed the qualification stage and are expected to submit their financial proposals in autumn 2025.

Amid a severe energy crisis, Moldova successfully conducted its first renewable energy auction, awarding 165 MW of solar and wind capacity. Building on this success, Moldova is now

preparing a second auction—currently under discussion—which will combine renewable energy projects with battery energy storage systems (BESS).

Following the adoption of its first standalone renewable energy law in 2024, Montenegro launched its first solar auction in summer 2025, aiming to support up to 250 MW of solar capacity over a 12-year period.

Serbia has completed its second renewable energy auction, awarding 424.8 MW of solar and wind projects, with an expected installation capacity of up to 650 MW. A key innovation in this round was the introduction of additional qualification criteria based on the share of capacity offered to the guaranteed supplier or directly to end-users. The measure creates the opportunity for more projects to benefit under the quota and increases the overall installed renewable capacity, while also promoting renewable power purchase agreements (PPAs).

During the reporting period, Ukraine held two renewable energy auctions. However, neither was successful due to persistent structural issues—primarily related to the Guaranteed Buyer and concerns over financial instability and lack of transparency under the current support scheme. Significant reforms are also required to enhance market liquidity, transparency, balancing mechanisms and to eliminate price distortions.

Bosnia and Herzegovina remains the only Contracting Party that has not yet initiated renewable energy auctions, despite having the relevant legal framework in place.



**Table 6** Implementation of the most recent auctions in the Energy Community

CP	Kosovo*	Moldova		Montenegro	Serbia		Ukraine					
Technology	Wind	Solar	Wind	Solar	Solar	Wind	Solar	Wind	Other	Solar	Wind	Other
Timeline	2024-2025	2024-2025			2024-2025		2024			2025		
Mechanism	Fixed purchase price with conversion to Contract for Difference	Power Purchase Agreement (PPA)		Fixed purchase price with conversion to Contract for Difference	Contract for Difference		Contract for Difference			Contract for Difference		
Contract duration (years)	15	15		12	15		15			15		
Total Capacity (MW)	100	60	105	250	1248	300	0	0	0.9	33	100	47
Ceiling price (EUR/MWh)	80.2	60	105	65	72	79	90	120	90	Considered as "not having taken place" due to the absence of participants		
Achieved price (EUR/MWh)	N/A- Auction ongoing	59.20	67.3	N/A- Auction ongoing	50.9- 59	53.59- 68.25	N/A	N/A				

### Energy Community regional system for guarantees of origin and the path to EU recognition

As part of a regional project implemented by the Energy Community Secretariat, electronic registries for guarantees of origin have been in place since 2022 with the participation of Albania, both entities of Bosnia and Herzegovina, Georgia, Kosovo\*, North Macedonia, Moldova, Montenegro and Ukraine. Serbia had already operationalised its registries before the regional project began and was therefore not participating in the regional project.

The only two issuing bodies yet to operationalise their registries are those of the Federation of Bosnia and

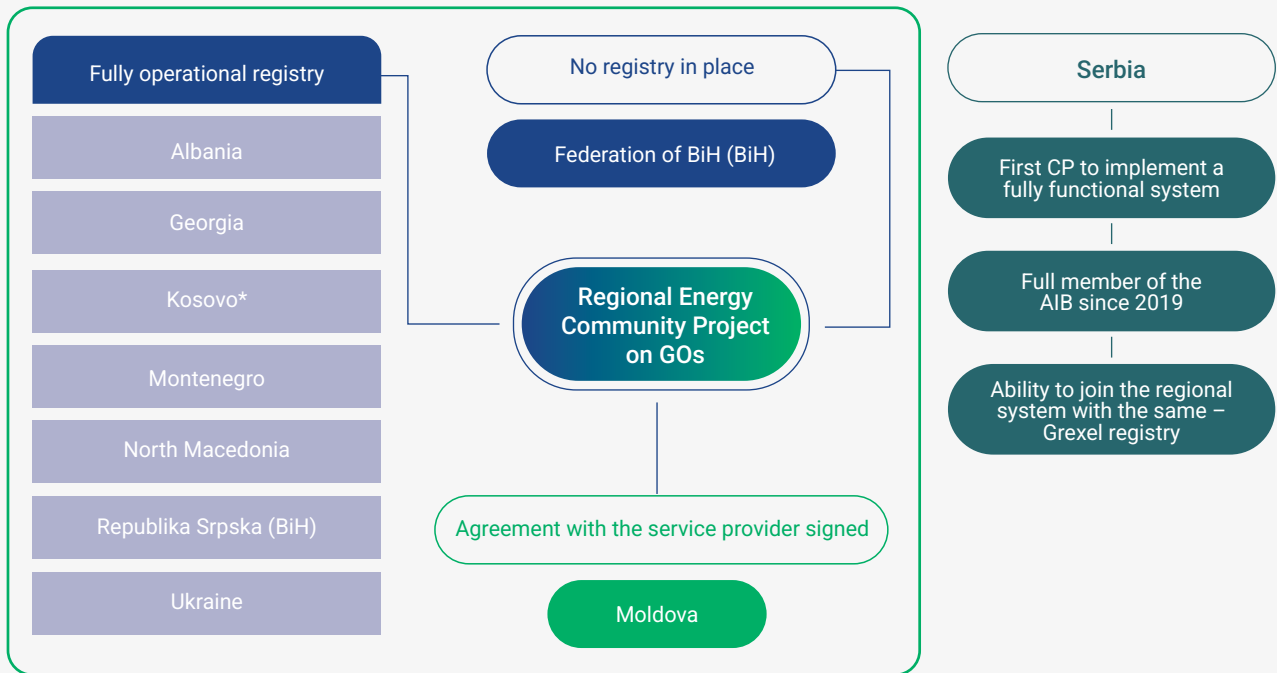
Herzegovina (FBiH) and Moldova. The issuing body in Moldova has signed an agreement with the service provider and is expected to make the registry operational by the end of 2025.

As Contracting Parties began using the registries, concerns arose regarding the restrictions set out in Article 19(11) of Directive (EU) 2018/2001<sup>35</sup> (RED II), which prevent EU Member States from recognising guarantees of origin issued by Contracting Parties.

Discussions are ongoing regarding the requirements, the steps and the anticipated timeline for formalised mutual recognition of guarantees of origin between the Energy Community and the EU.

35 Article 19(11) of Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources provides that "Member States shall not recognise guarantees of origins issued by a third country except where the Union has concluded an agreement with that third country on mutual recognition of guarantees of origin issued in the Union and compatible guarantees of origin systems established in that third country and only where there is direct import or export of energy."

**Figure 5** Current status of the implementation of systems for guarantees of origin in the Energy Community



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## Unlocking renewable PPAs: market readiness and CBAM compliance challenges in the Energy Community

In 2024, the Energy Community Secretariat implemented a project aimed at assessing the feasibility of renewable PPAs and supporting their uptake across the Contracting Parties. The project resulted in a comprehensive regional study analysing market readiness and legal frameworks for renewable PPAs in each Contracting Party.<sup>36</sup> Alongside the study, capacity-building was conducted, including targeted workshops with the participation of power utilities, investors and corporate offtakers.

The study identified several common structural challenges across Contracting Parties. One critical issue is the lack of liquid wholesale markets, including the absence of power exchanges and balancing mechanisms. This undermines market liquidity and weakens the business case for PPAs, especially for large corporate offtakers. Electricity prices remain low and stable, limiting the attractiveness of long-term contracts for producers in the absence of additional incentives. Legal and regulatory uncertainties persist, including monopolistic market structures, vertically integrated utilities and restrictive eligibility criteria for corporate offtakers. While progress has been reached on establishing systems for guarantees of origin across Contracting Parties, the lack of recognition of those guarantees of origin by the EU reduces their usefulness for corporate entities seeking to comply with EU renewable procurement standards.

All these and other factors contribute to a very limited number of PPAs in Contracting Parties, with the majority of agreements taking place between public utilities and investors, rather than between corporate entities and investors.

While PPAs have the potential to reduce CBAM-related costs by fulfilling one of the conditions for the use of actual embedded emissions for renewable electricity imported into the EU, this potential is likely to remain untapped due to the restrictive nature of the other conditions—including the absence of physical congestion between generation and delivery points, firm nomination of capacity at all relevant interconnectors and verification of the fulfilment of all criteria. These conditions are linked to the principles for accounting embedded emissions in electricity imported from non-EU countries. Introduction of an accounting methodology that more accurately reflects the electricity mix (including the share of renewables) and market flows at the time when the export takes place would make it possible to dispense with these complex conditions.

### PPA challenges and recommendations in EnC CPs

Challenges	Recommendations
Significant <b>shortfall in non-hydro RE</b> across all CPs, where scarcity affects virtual, physical, corporate, and utility PPAs	<b>Urgent need to expand RE projects and upgrade infrastructure</b>
<b>Retail prices often below wholesale, thus regulated</b> across the region reduce the attractiveness of PPAs for investors	<b>Remove retail price regulation and liberalize retail markets</b> to reflect true energy production costs and boost RE energy investment
<b>Limited supply options and insufficient incentives</b> challenge uptake of RE projects and PPAs across CPs	<b>Have clear strategy and introduce RE incentives and offtake options</b> to increase investment attractiveness and RES installed capacities
<b>Limited liquidity or non existing power exchange (wholesale market) and advanced B2B products</b> pose challenges for off-takers and producers	<b>Developing PX and/or market coupling</b> to create liquidity and healthy wholesale market. Stimulate utilities to introduce adequate B2B products
<b>Lack of legal and regulatory certainty</b> hampers all types of PPAs	<b>Stronger regulatory frameworks and enhanced market transparency</b> by transposing & implementing EU acquis

36 [Renewable Power Purchase Agreements in the Energy Community](#), December 2024

## Putting energy efficiency first

Energy efficiency plays a pivotal role in the energy transition and meeting the Energy Community's energy and climate targets. By reducing overall energy needs, it enables faster and more affordable decarbonisation, while also strengthening energy security by lowering dependence on imported energy sources. For households, it improves affordability by cutting utility bills and contributes to healthier living conditions. Moreover, energy efficiency drives innovation, boosts economic growth and creates jobs.

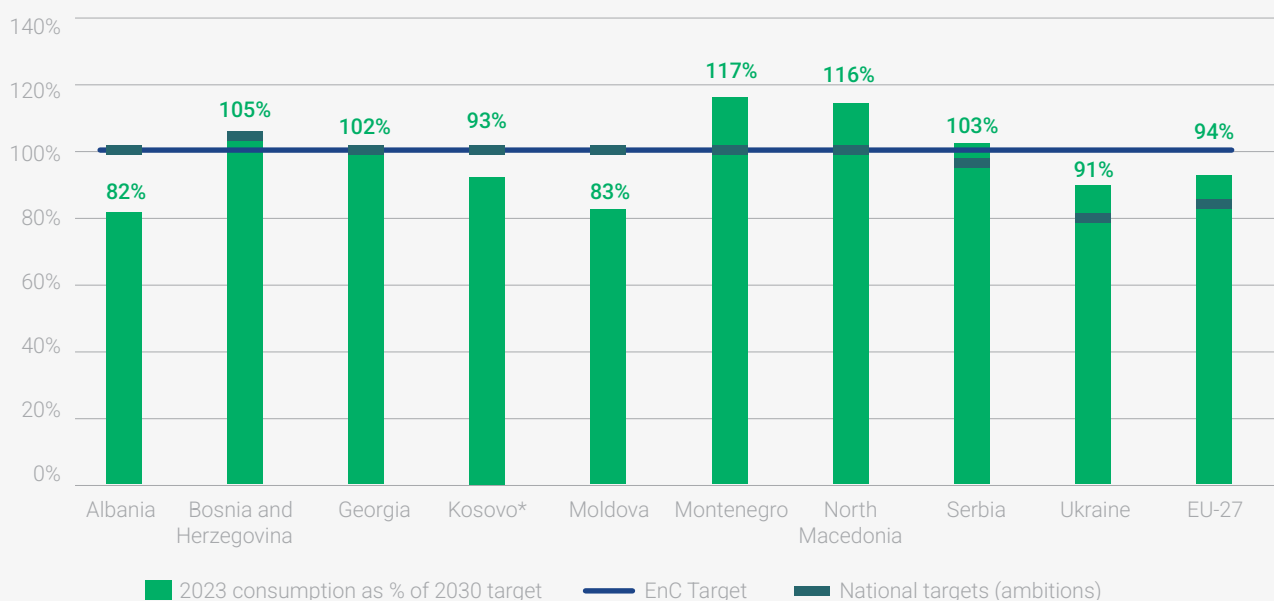
The Energy Efficiency First (EE1st) principle ensures that energy efficiency is systematically considered in all policy, planning and investment decisions. By embedding energy efficiency throughout the entire energy chain, from generation to end use, and incorporating it into domestic policy planning, the impacts of investments are maximised while reducing energy consumption and protecting the environment.

## Ambitious 2030 energy efficiency targets

The Contracting Parties' commitment to energy efficiency is reflected in the targets, policies and measures outlined in their NECPs. Most have set 2030 energy efficiency targets, including maximum levels of primary and final energy consumption, that align with the levels established in the Ministerial Council Decision.<sup>37</sup> However, Bosnia and Herzegovina, Montenegro and North Macedonia<sup>38</sup> were encouraged to raise their ambition during the finalisation of their draft NECPs, while the NECP adopted by Serbia contains a somewhat less ambitious final energy consumption target.

To meet these targets, Contracting Parties have developed a variety of energy efficiency policies and measures, particularly targeting the end-use sector and energy efficiency in buildings. In addition, Albania, Georgia, Moldova, Montenegro and Serbia have further strengthened their energy efficiency legislation since the previous edition of the CBAM Readiness Tracker.

**Figure 6** Energy efficiency (primary energy consumption) targets



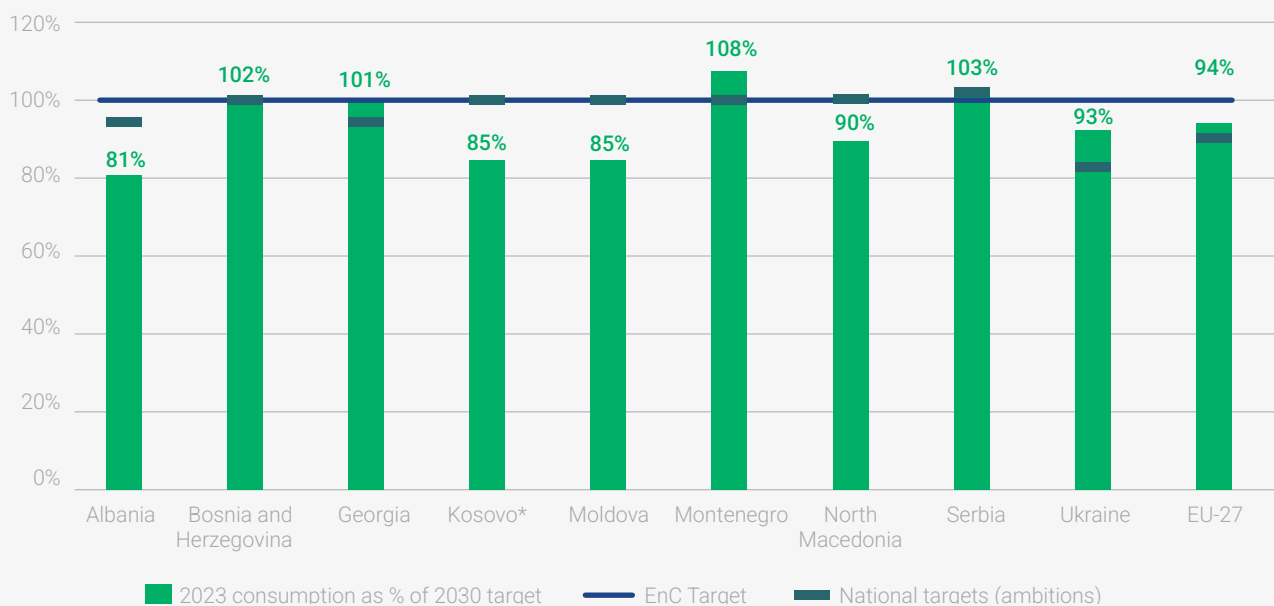
Note: 2023 energy consumption data were not available for Ukraine, the figure indicates data for 2020

\*For Bosnia and Herzegovina, Kosovo\* and Montenegro, the data from the draft NECPs was used as no NECPs have been adopted in those Contracting Parties yet

37 Decision 2022/02/MC-EnC on amending Decision 2021/14/MC- EnC and incorporating Directives (EU) 2018/2001 and 2013/2002, Regulations (EU) 2018/1999, 2020/1044 and 2020/1208 in the Energy Community acquis

38 North Macedonia is currently updating its NECP.

**Figure 7** Energy efficiency (final energy consumption) targets



Note: 2023 energy consumption data were not available for Ukraine, the figure indicates data for 2020

\*For Bosnia and Herzegovina, Kosovo\* and Montenegro, the data from the draft NECPs was used as no NECPs have been adopted in those Contracting Parties yet

### Implementing the Energy Efficiency First principle

Introduced by the Governance Regulation and the [Energy Community Energy Efficiency Directive](#)<sup>39</sup> (Energy Efficiency Directive), the EE1st principle forms part of the Energy Community’s legal framework.

To support implementation of the EE1st principle, the Ministerial Council adopted [Recommendation 2024/1/MC-EnC](#)<sup>40</sup> in December 2024, urging Contracting Parties to establish structured legal and institutional conditions for its implementation, in line with Article 3 of the EU Energy Efficiency Directive.<sup>41</sup>

To assist Contracting Parties in implementation of the EE1st principle, the Secretariat launched a study in December 2024, focusing on buildings and on reducing energy poverty.

This initiative identified actionable recommendations for aligning renovation strategies with social objectives in the following areas: amendments to the legislative and policy framework, integration into plans and strategies, funding and financing models and targeted building renovation measures and programmes. The study also emphasised the importance of monitoring frameworks and EU-aligned indicators to track progress, tools developed under the ODYSSEE-MURE project to quantify multiple impacts.

The findings of the study will inform the drafting of Energy Community Policy Guidelines for implementation of its main recommendations, including introduction of a definition of the EE1st principle into legislation, establishment of criteria for targeted energy efficiency programmes to adequately address energy-poor households and prioritisation of measures through energy efficiency obligation schemes.

39 Directive 2012/27/EU on energy efficiency as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC, 2021/14/MC-EnC and 2022/02/MC-EnC

40 Recommendation 2024/1/MC-EnC on accelerating the deployment of renewable energy projects and implementing the energy efficiency first principle

41 Directive (EU) 2023/1791 of the European Parliament and of the Council of 13 September 2023 on energy efficiency and amending Regulation (EU) 2023/955

# Decarbonising the energy systems

## Compliance with the Large Combustion Plants Directive and links to GHG emissions

The [Large Combustion Plants Directive](#)<sup>42</sup> (LCPD) entered into force in the Energy Community on 1 January 2018, regulating the emissions of sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and dust from existing thermal power plants. However, seven years after the supposed start of its implementation, the situation on the ground has not changed: data reported by the Contracting Parties for 2024 show major non-compliance with the emission ceilings for SO<sub>2</sub>, NO<sub>x</sub> and dust. As the ceilings progressively decrease towards the limits of the [Energy Community Industrial Emissions Directive](#)<sup>43</sup> (IED), it is becoming increasingly difficult to overcome these breaches, particularly in those cases where reported emissions exceed the ceilings by more than ten-fold. The Secretariat launched dispute settlement cases in 2021, three of which were decided by the Ministerial Council.

Although the opt-out mechanism expired at the end of 2023, seven of the eight combustion plants under that regime in the Western Balkans 6 Contracting Parties<sup>44</sup> are still in operation and are therefore in breach of both Energy Community law and the national provisions transposing the opt-out provisions. No opted-out plants exist in Albania, Kosovo\*, North Macedonia, Moldova and Georgia, while in Ukraine, the calculation of hours spent under the opt-out regime is suspended by a decision<sup>45</sup> of the Ministerial Council.

Compliance with the LCPD and IED can only be achieved either through investments in emission-reduction technologies or by shutting down combustion plants. The challenge lies in the fact that the technologies required to lower emissions—particularly SO<sub>2</sub>—lead to reduced plant efficiency due to higher fuel consumption. As a result, GHG emissions increase in proportion to the electricity output. In addition, the financial burden imposed by CBAM is expected to further limit business and export opportunities, creating a strong incentive for Contracting Parties and operators to reconsider their business models.

Continued non-compliance with the LCPD obligations is no longer viable. Operators face mounting pressure to invest in emission-control technologies, which not only requires substantial capital but also increases operating costs due to higher fuel consumption and lower fuel efficiency. At the same time, CBAM will erode the revenues of generators in Contracting Parties, as they will either have to cut prices by an amount equal to the carbon price applied under CBAM (or a domestic carbon pricing scheme) or face a sharp decline in electricity exports to the EU. These uncertainties—combined with an increasing number of unplanned outages in generation units—raise doubts about the long-term economic justification for keeping such plants in operation.

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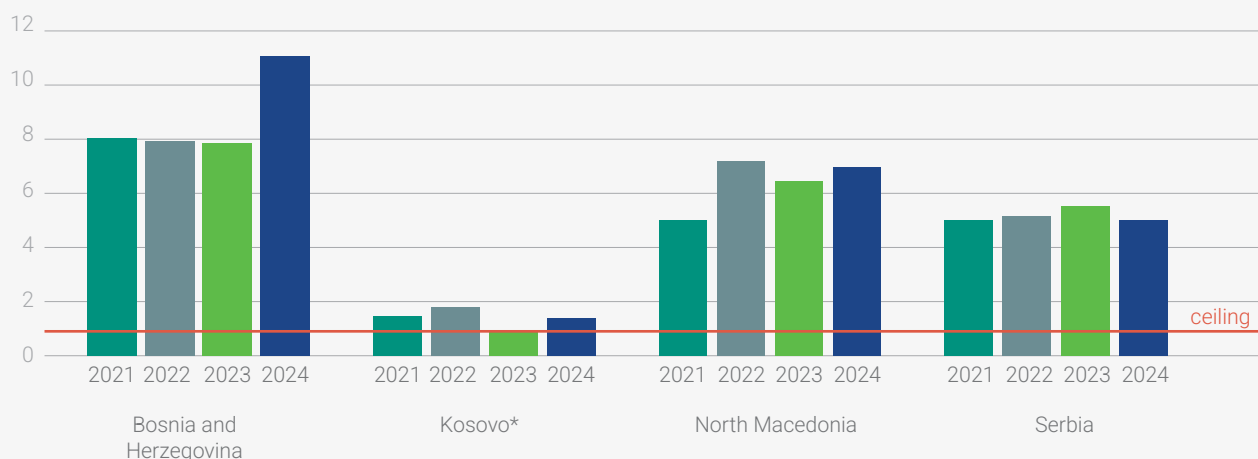
42 Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants as adapted and adopted by Ministerial Council Decisions 2013/05/MC-EnC and 2024/01/MC-EnC

43 Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) as adapted and adopted by Ministerial Council Decisions 2013/06/MC-EnC and 2015/06/MC-EnC

44 In Bosnia and Herzegovina, Tuzla 3 was not in operation in the 2024 reporting year. All other opted-out plants (Tuzla 4 and Kakanj 5 in Bosnia and Herzegovina, Pljevlja in Montenegro and Morava and the three Kolubara A3 units in Serbia) were still in operation.

45 [Decision 2024/01/MC-EnC](#)

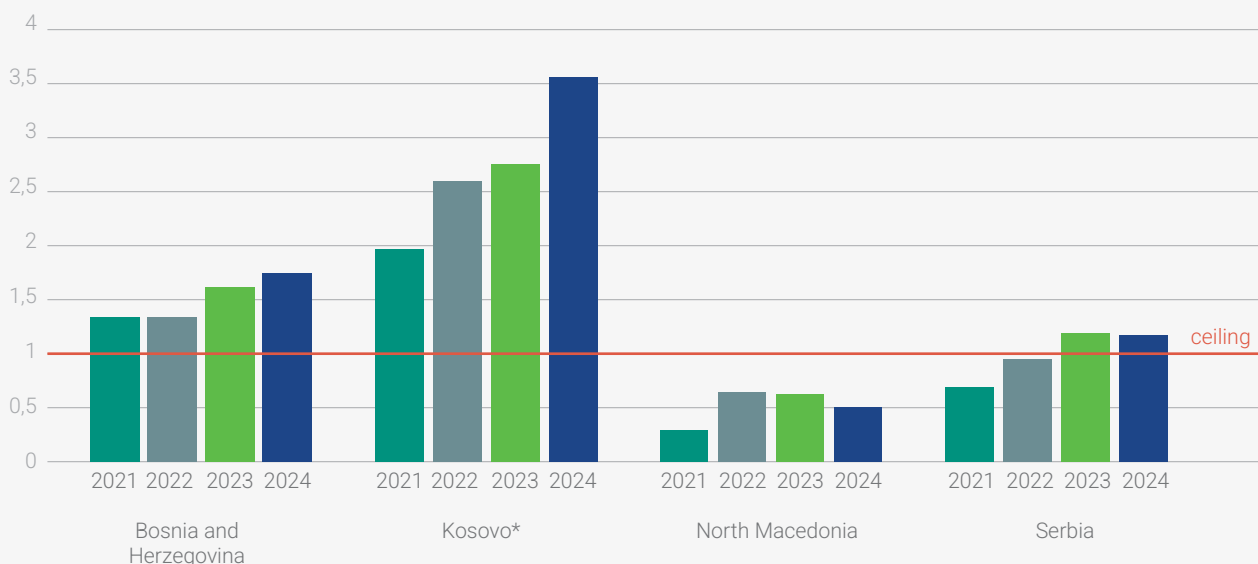
## SO<sub>2</sub>



In 2024, breaches of the SO<sub>2</sub> emission ceilings continued in all Western Balkans 6 Contracting Parties implementing a National Emissions Reduction Plan (NERP) and intensified in several cases. Absolute emissions increased in Bosnia and Herzegovina and in Kosovo\*, with the former recording a record-high breach exceeding the ceilings more than

eleven-fold. North Macedonia and Serbia reduced their SO<sub>2</sub> emissions—Serbia significantly—yet compliance with the ceilings remains out of reach. Combined with the gradual lowering of the ceilings, this suggests that breaches are likely to become more severe in the coming years.

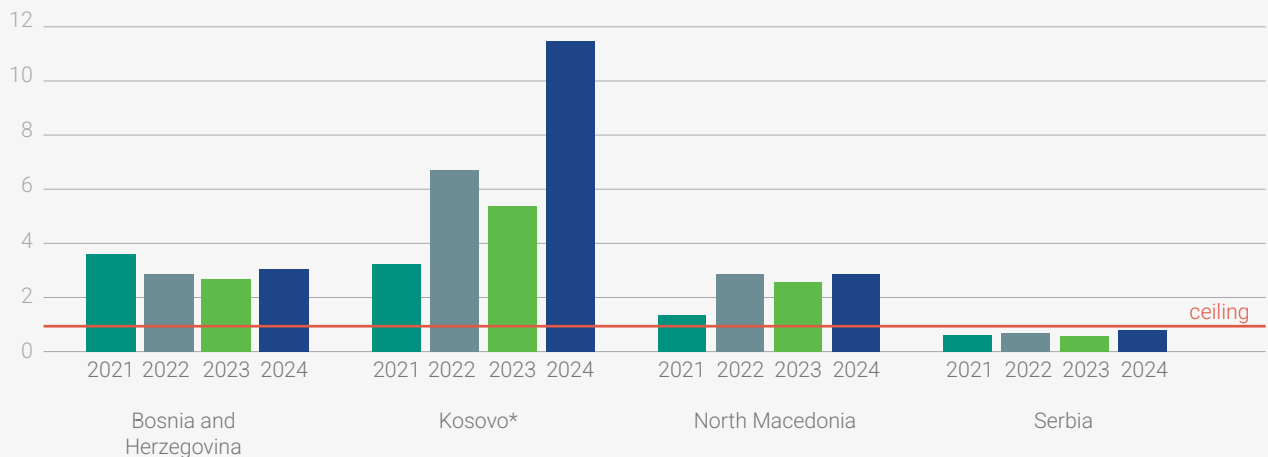
## NO<sub>x</sub>



With the exception of Kosovo\*, Contracting Parties implementing a NERP reduced their total NO<sub>x</sub> emissions compared to 2023. However, only North Macedonia complied with its NO<sub>x</sub> ceilings. The gradual lowering of NO<sub>x</sub>

ceilings by approximately 50% between 2018 and 2023, with further (albeit more moderate) decreases expected in the coming years, makes compliance increasingly challenging.

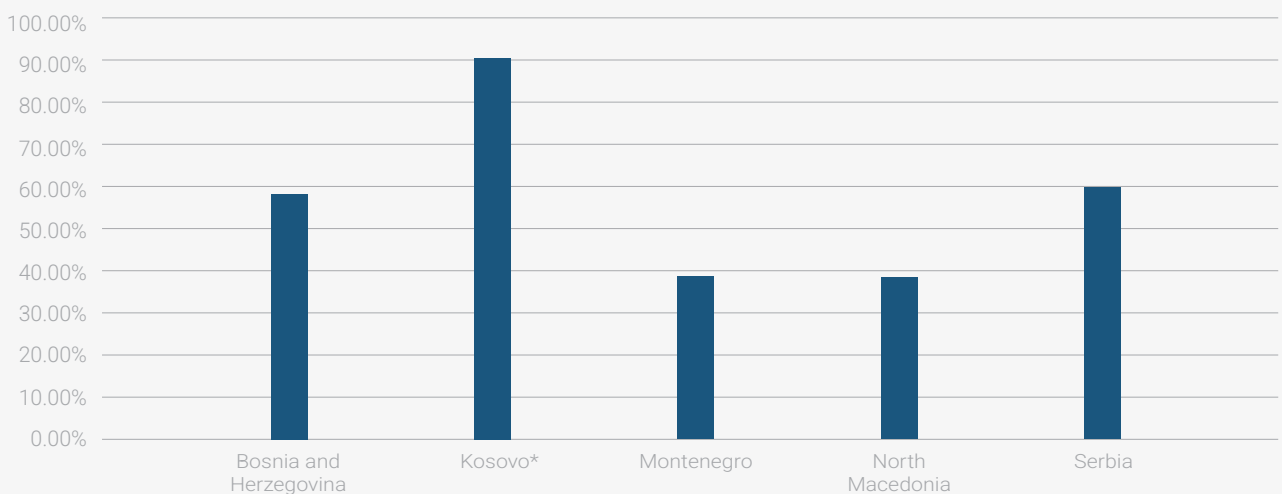
## Dust



Breaches of dust ceiling limits persisted in Bosnia and Herzegovina, Kosovo\* and North Macedonia. In Kosovo\* (the only Contracting Party where absolute dust emissions increased), non-compliance remains at a record-high level, nearly twelve times above the ceiling. Bosnia and Herzegovina and North Macedonia reduced absolute emissions but remained significantly above their ceilings. Serbia further lowered its absolute dust emissions, maintaining its trend of dust ceiling compliance in 2024.

Large combustion plants remain a major source of GHG emissions. On average, they contributed 59% of electricity generated in the region, with Montenegro and North Macedonia at the lower end (38%) and Kosovo\* at the highest (90%). Since coal-fired power plants still account for about 40% or more of electricity production in several Contracting Parties, they are often viewed as critical for ensuring system adequacy. However, this rationale cannot justify non-compliance with Energy Community law.

**Figure 8** Share of electricity generation from coal-fired plants



## Coal phase-out plans

To date, no Contracting Party has committed to a coal phase-out in its domestic legislation. However, North Macedonia and Ukraine have included fixed coal phase-out dates in their adopted national planning documents. The Serbian NECP indicates a coal phase-out date of 2050 in the energy mix and the Serbian Just Transition Plan is currently under consultation.

The earliest planned closure of coal-fired thermal power plants in the Contracting Parties is 2027, as set out in North Macedonia's Just Transition Roadmap. Apart from North Macedonia, only Ukraine has adopted a State Target Programme, with a tentative phase-out date of 2035.<sup>46</sup> Like Ukraine, Montenegro is tentatively aiming for a coal phase-out in 2035 (see the table below).

Five Contracting Parties (Albania, Montenegro, North Macedonia, Ukraine and Kosovo\*) have joined the Powering Past Coal Alliance (PPCA), established in 2021, with coal phase-out dates (see table below). However, no new pledges have been made since 2023 under the PPCA.

The Energy Community has firmly embedded just transition principles in its overarching energy and climate governance framework, including their integration into NECPs and associated reporting obligations, to prepare and guide coal phase-out measures.

To support coal phase-out planning, the Energy Community Secretariat published its [Policy Guidelines on Just Transition](#) in May 2025. These Guidelines facilitate just transition planning, while ensuring alignment with the existing energy and climate legal obligations.

However, little progress was made throughout the year on the development of actual coal phase-out plans for electricity generation. The adopted NECPs largely reflected the commitments and scenarios already outlined in the draft plans. Montenegro, which submitted its draft NECP to the Secretariat in December 2024, specified a coal phase-out date of 2035.



46 State Target Programme for the Fair Transformation of Coal Regions of Ukraine for the Period Until 2030, approved on 18 June 2025

**Table 7** Planned year of coal phase-out in electricity generation

	In the adopted NECP or Just Transition Roadmaps/Plans	PPCA <sup>47</sup>
<b>Albania</b>	Not indicated; no coal used in electricity generation <sup>48</sup>	Coal-free (electricity sector)
<b>Bosnia and Herzegovina</b>	No phase-out in electricity generation <sup>49</sup>	Not a member of PPCA
<b>Georgia</b>	Not indicated; no coal used in electricity generation <sup>50</sup>	Not a member of PPCA
<b>Kosovo*</b>	No phase-out in electricity generation	2050 <sup>51</sup>
<b>Moldova</b>	Not indicated; no coal used in electricity generation <sup>52</sup>	Not a member of PPCA
<b>Montenegro</b>	2035 in draft NECP	2035 <sup>53</sup>
<b>North Macedonia<sup>54</sup></b>	No phase-out in electricity generation. However, the coal-fired thermal power plants (TPPs) in Bitola and Kičevo are scheduled for conversion by 2027.	2030 <sup>55</sup>
<b>Serbia</b>	2050 <sup>56</sup>	Not a member of PPCA
<b>Ukraine</b>	2035	2035 <sup>57</sup> (for electricity generation)

47 Powering Past Coal Alliance

48 Coal is only used in industrial processes in Albania.

49 According to the “Policy” scenario in the draft NECP, the share of coal in Bosnia and Herzegovina’s energy transformation processes is projected at 70,1% in 2030. Under the “Baseline” scenario, which reflects projections based on existing policies and measures, the same indicator is expected to reach 80,46% in 2030.

50 Coal is only used in industrial processes in Georgia.

51 Commitment as of December 2023: <https://poweringpastcoal.org/press-releases/the-united-states-heads-a-group-of-countries-making-new-commitments-to-phasing-out-coal/>

52 Coal is used mainly for industry and residential purposes in Moldova. Eighty percent of electricity is imported and the main source of domestic energy is biomass.

53 Commitment as of 2021, see: Montenegro announces coal phaseout by 2035 ([balkangreenenergynews.com](http://balkangreenenergynews.com))

54 North Macedonia adopted its NECP ahead of the decision of the Energy Community Ministerial Council. The information refers to the NECP adopted in May 2022.

55 Commitment as of January 2022, see: <https://www.euractiv.com/section/enlargement/news/ebrd-backs-e4-billion-plan-to-wean-north-macedonia-off-coal-power/>

56 The NECP adopted by Serbia includes a reduction of lignite use by up to 25% in 2030 compared to 2019.

57 Commitment reaffirmed in June 2023: <https://poweringpastcoal.org/press-releases/amid-war-ukraine-recommits-to-phasing-out-coal-power-by-2035/>



## Long-term strategies and climate neutrality

Long-term low GHG emissions development strategies—also referred to as long-term strategies (LTS)—serve as a long-term roadmap for decarbonisation, outlining a structured pathway to reaching the 2050 economy-wide climate neutrality target at the national level. Contracting Parties are obliged to draft and adopt an LTS containing a list of compulsory elements defined in the Governance Regulation. The adoption of an LTS demonstrating a pathway to climate neutrality by 2050 is one of the conditions for an exemption for electricity from the EU's CBAM.

No new LTSs were submitted by Contracting Parties to the UNFCCC Secretariat and no progress was made in adopting new long-term strategies throughout the year. Historically, Georgia, Serbia, Ukraine, North Macedonia and Bosnia and

Herzegovina have submitted their LTSs to the UNFCCC Secretariat although only Georgia's strategy includes a commitment to climate neutrality by 2050.

North Macedonia, Bosnia and Herzegovina and Ukraine are updating their previous LTS versions and Montenegro, Kosovo\* and Moldova are finalising their drafts.

Regarding confirmation of the 2050 climate neutrality commitment in domestic legislation, in early 2025, Ukraine adopted its climate law setting out a 2050 climate neutrality target, making it the second Contracting Party to do so after Moldova. Currently Montenegro, North Macedonia, Bosnia and Herzegovina, Georgia and Albania are working on creating or updating their climate laws.

**Table 8** The status of long-term strategies and climate neutrality in domestic legislation

	Long-term strategies					Domestic legislation
	Drafting commenced	Adopted	Submission to the UNFCCC	Covers the period up to 2050	Includes climate neutrality by 2050	Includes climate neutrality by 2050
						
Albania	●	●	●	●	●	●
Bosnia and Herzegovina	●	●	●	●	●	●
Georgia	●	●	●	●	●	●
Kosovo*	●	●	●	●	●	●
Moldova	●	●	●	●	●	●
Montenegro	●	●	●	●	●	●
North Macedonia	●	●	●	●	●	●
Serbia	●	●	●	●	●	●
Ukraine	●	●	●	●	●	●



● Yes ● No

## Reaching the 2030 GHG emission reduction targets

Divergences persist between the adopted NECPs and the Energy Community's 2030 GHG emission reduction targets. For several other Contracting Parties, only draft NECPs are

available, and their adoption is delayed beyond the agreed deadlines, preventing a full comparison with the 2030 targets at this stage.

**Table 9** Targeted level of emissions (MtCO<sub>2</sub>) in 2030

	Energy Community Ministerial Council Decision <sup>58</sup>	Policy scenario including land use, land use change and forestry (LULUCF), adopted NECP
		
Albania	12.00	10.204 <sup>59</sup>
Bosnia and Herzegovina	15.65	15.65 <sup>60</sup>
Georgia	20.50	20.91 <sup>61</sup>
Kosovo*	8.95 <sup>62</sup>	8.95 <sup>63</sup>
Moldova	9.10	9.10 <sup>64</sup>
Montenegro	2.42 <sup>65</sup>	2.40 <sup>66</sup>
North Macedonia	2.20	2.20 <sup>67</sup>
Serbia	47.82	47.76
Serbia	309	309

The Secretariat regularly monitors, through biennial integrated progress reports, whether the Contracting Parties are on track to achieve their 2030 targets, in line

with the decision of the Ministerial Council and makes its assessment public.

58 Decision 2022/02/MC-EnC on amending Decision 2021/14/MC-EnC and incorporating Directives (EU) 2018/2001 and 2013/2002, Regulations (EU) 2018/1999, 2020/1044 and 2020/1208 in the Energy Community acquis

59 Albania adopted its NECP ahead of the decision of the Energy Community Ministerial Council. The figure refers to the NECP adopted in December 2021.

60 The figure is from Bosnia and Herzegovina's draft NECP, as the NECP had not been adopted at the time of finalising this report.

61 Based on own calculations referring to the 1990 base value including LULUCF and the unconditional 47% reduction

62 Compared to the 2016 level

63 The figure is from the Kosovo's draft NECP, as the NECP had not been adopted at the time of finalising this report.

64 Due to the multiple target levels listed in the adopted NECP and the unclear territorial scope of these targets, it is not possible to confirm that Moldova's ambition aligns with the decision of the Energy Community Ministerial Council.

65 Montenegro's target excludes LULUCF emissions and removals.

66 Based on own calculations from the draft NECP, as the NECP had not been adopted at the time of finalising this report

67 North Macedonia adopted its NECP ahead of the decision of the Energy Community Ministerial Council. The figure refers to the NECP adopted in May 2022.

# Carbon pricing

## The carbon content of electricity

### Generation mix

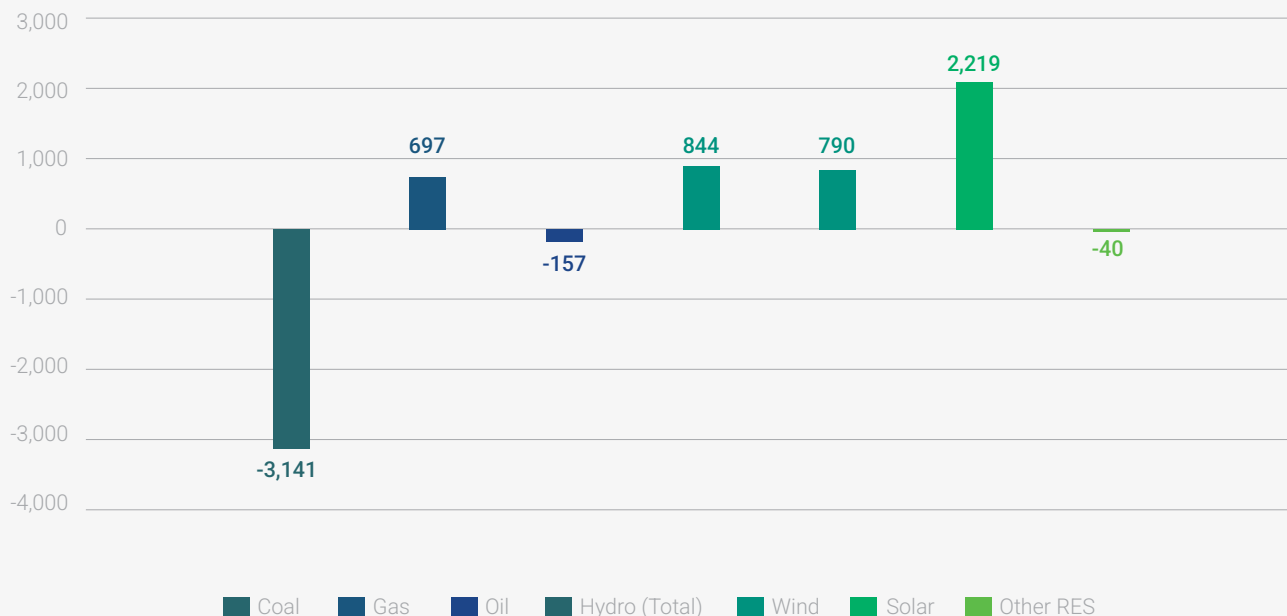
After a strong rebound in 2023, electricity generation across the Energy Community (excluding Ukraine) declined by 5.7% in 2024 to 88.6 TWh. Despite this setback, overall generation remained slightly above the five-year average, indicating structural stability and growing diversification in the region's power systems.

While hydropower output declined due to weak precipitation, 2024 marked a record year for wind and solar generation, highlighting a clear structural change from traditional hydro reliance to a broader renewable portfolio. Electricity generation from non-hydro renewables increased by 50.3% year-on-year, reaching nearly 6 TWh, almost double the five-year average and their share in total electricity generation across the Energy Community reached 6.7%. Albania and North Macedonia more than doubled their output, while

Bosnia and Herzegovina, Moldova and Serbia also saw substantial growth. This expansion enhances the region's climate and energy resilience, in particular to volatility in precipitation.

Installed capacity from wind, solar and other non-hydro renewable sources rose by 56.7% in 2024 compared to 2023, reaching 3.8 GW. Bosnia and Herzegovina, Albania and North Macedonia led this growth, followed by Serbia, Moldova and Montenegro. Kosovo\* remained relatively flat in terms of new capacity. Moldova maintained the highest share of non-hydro renewable energy sources (RES) at almost 40%, followed by North Macedonia (18%) and Montenegro (10%). Georgia remained an outlier, with no significant growth in non-hydro renewable capacity or output in recent years.

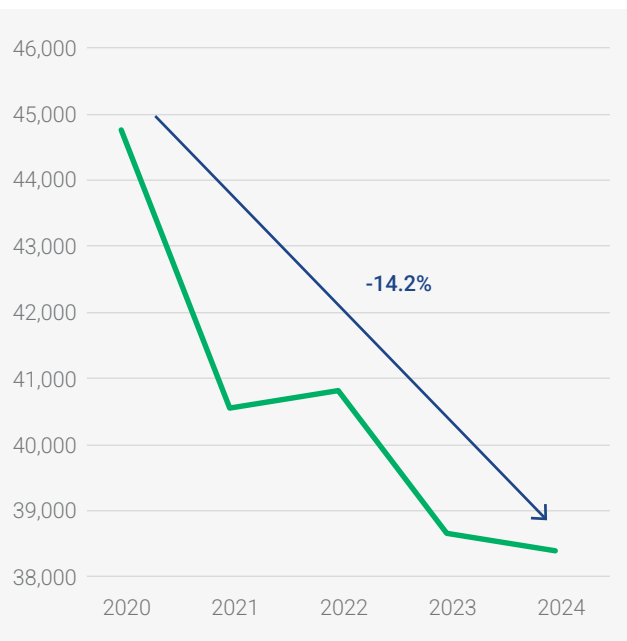
**Figure 9** Difference in 2024 electricity production compared to the 2019 – 2023 average for the Energy Community (excl. Ukraine) [GWh]



Source: compiled by the Secretariat based on Contracting Parties' reports

Electricity generation from coal-fired power plants remained relatively stable in 2024, recording a slight decrease of 0.7% compared to the previous year. The most significant declines were observed in Montenegro and North Macedonia (around -12%), while Kosovo\* registered an 11% increase. The only notable change in coal capacity was the commissioning of the 350-MW Kostolac B3 lignite unit in Serbia at the end of 2024, bringing Serbia's total lignite-based capacity to over 4.3 GW. **Overall, coal generation was 7.6% below the five-year average and 14.2% lower than in 2020, underlining the ongoing structural decline in coal's role within the regional generation mix.**

**Figure 10** Electricity generation from coal in the Energy Community (excl. Ukraine), 2020 – 2024 [GWh]



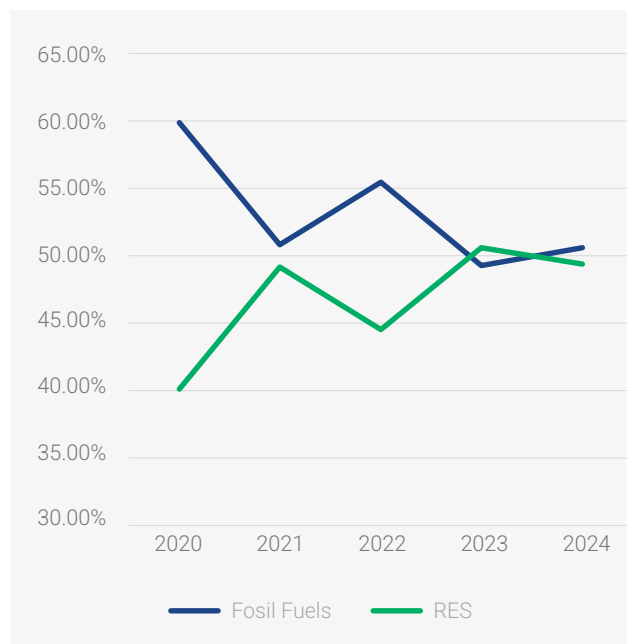
Source: compiled by the Secretariat based on Contracting Parties' reports

Gas-fired generation also declined in 2024, dropping by 11.8% year-on-year, primarily due to reductions in Georgia (-18.4%) and Serbia (-12.4%). Nonetheless, gas-based electricity production remained 12.1% above the five-year average, reflecting its continued role as a flexible balancing source.

Between 2020 and 2024, the share of electricity from renewables (including hydro) in the Energy Community followed a variable path, peaking at 50.7% in 2023. In 2024,

the RES share slightly decreased to 49.4%, primarily due to reduced hydropower output. However, fossil fuels—which accounted for nearly 60% of generation in 2020—declined to just over 50% by 2024, reflecting a gradual but steady shift towards renewable energy sources in the Energy Community electricity mix.

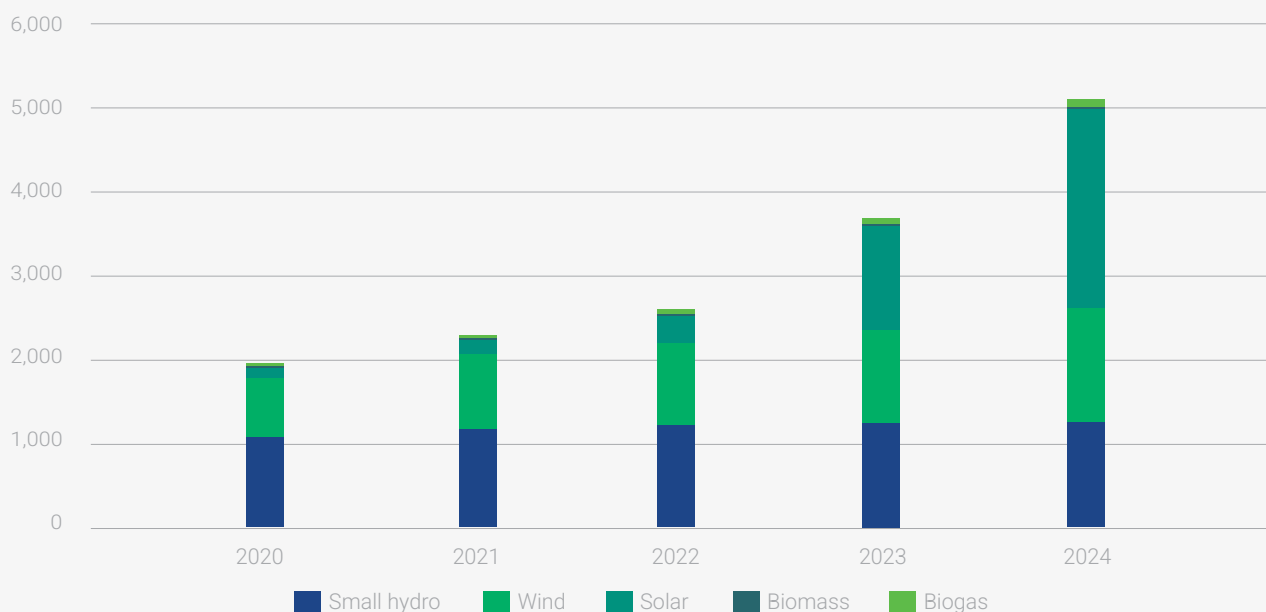
**Figure 11** Share of fossil fuels and renewables (including hydro) in electricity generation in the Energy Community, 2020 – 2024 (excl. Ukraine) [%]



Despite the share of renewable electricity in actual generation declining slightly in 2024, capacity developments indicate a continued structural shift in the Energy Community's electricity sector. By 2024, renewable energy sources—including large hydro and pumped storage—comprised 59.8% of the total installed electricity generation capacity.

Notably, capacity from renewables, excluding large hydro, more than doubled between 2020 and 2024, growing from 2.0 GW to 5.1 GW. This expansion was driven almost entirely by solar and wind. Solar capacity surged from just 114 MW in 2020 to 2.4 GW in 2024, reflecting grid-scale photovoltaic deployment across several Contracting Parties. Wind capacity also rose steadily, reaching 1.35 GW. In contrast, small hydro, biomass and biogas recorded only modest gains. The rapid growth of non-hydro renewables underlines the accelerating pace of the energy transition across the Energy Community.

**Figure 12** Installed electricity generation capacities from RES (excl. large hydro) in the Energy Community (excl. Ukraine) [MW]



Source: compiled by the Secretariat based on Contracting Parties' reports

These shifts in the generation landscape—especially the growing role of non-hydro renewables—directly influence the region's carbon footprint, as detailed in the section below.

### Reducing the carbon footprint

Electricity and heat production remain the primary sources of CO<sub>2</sub> emissions across most Energy Community Contracting Parties. Albania and Georgia are exceptions, owing to their predominantly renewable generation mixes—Albania being powered almost entirely by hydropower and, since 2024, by a growing share of solar, while Georgia relies mainly on hydropower, with gas accounting for around a fifth of generation.

In 2024, total CO<sub>2</sub> emissions from fossil-fired thermal power plants in the Energy Community (excluding Ukraine) declined to 42.4 million tonnes—a 3.1% drop compared to 2023 and 6.6% below the five-year average (2019 – 2023). The most significant absolute reductions occurred in Serbia (–882 kt), North Macedonia (–638 kt) and Georgia (–356 kt). In Serbia, the decline reflects reduced coal and gas generation; in North Macedonia, it stems from high solar PV uptake and reduced lignite use; and in Georgia, a drop in gas-fired generation was offset by higher hydro output. Montenegro also recorded a notable reduction (–187 kt). Kosovo\* and Moldova experienced marked increases in emissions, driven by higher fossil-fired generation, highlighting persistent reliance on coal in Kosovo\*. While Kosovo\* remains structurally reliant

on coal, the right bank of Moldova has ceased its reliance on electricity production from the large gas power plant located on the left bank (MGRES, Transnistria), replacing it with electricity imports and increased generation from renewable energy sources. The total carbon footprint of the whole country, including the left bank, has therefore decreased. Bosnia and Herzegovina recorded a slight annual increase, yet its emissions remained well below the five-year average, reflecting a longer-term downward trend.

Despite this progress, the carbon intensity of electricity generation relative to economic development remains significantly higher in the Contracting Parties than in the EU-27. In 2024, Contracting Parties emitted 197 g of CO<sub>2</sub> per 1 EUR of GDP (current prices) on average—around 7.5 times the EU-27 level (26 g). When adjusted to purchasing power parity (PPP), the gap narrows to 43 g CO<sub>2</sub>/EUR PPP in the Energy Community versus 14 g in the EU, underscoring that structural economic differences—not only energy system inefficiencies—contribute to these disparities.

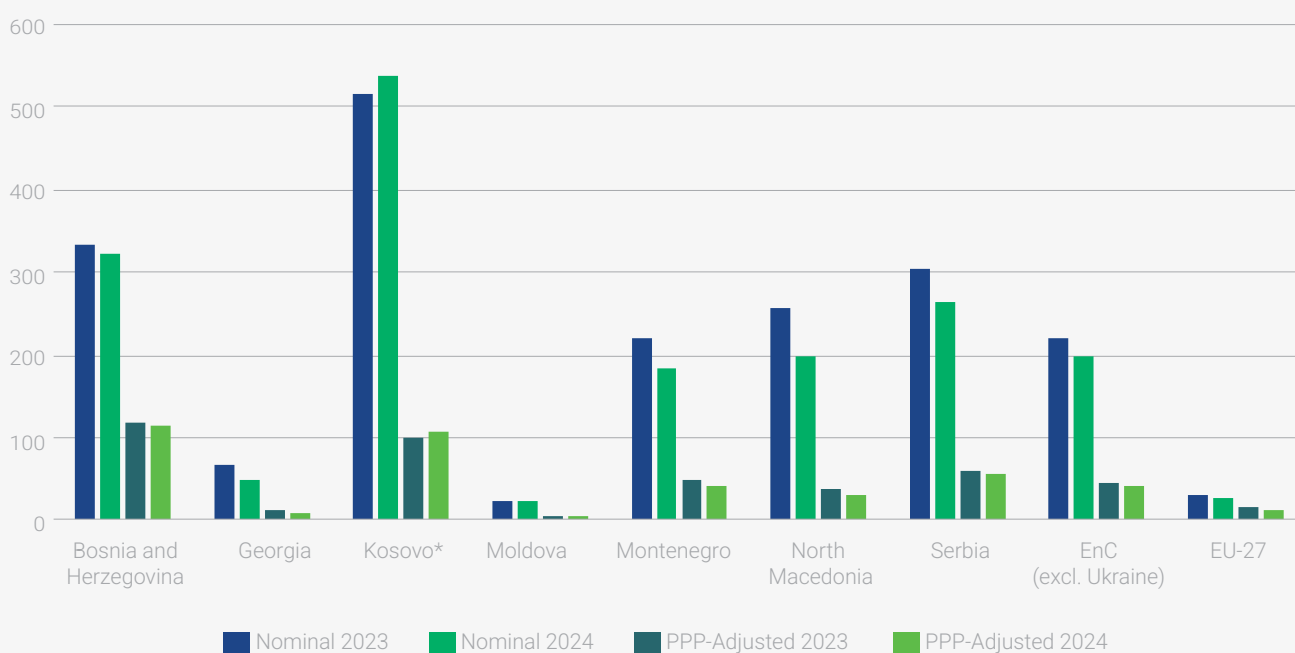
Nonetheless, the region continues to advance. **In 2024, CO<sub>2</sub> emissions per unit of nominal GDP in the Energy Community fell by 11% year-on-year and by 36% compared to the five-year average.** On a PPP-adjusted basis, emissions declined by 8% from 2023 and by 20% relative to the average. Contracting Parties such as Georgia, North Macedonia, Montenegro and Serbia drove this progress, while others like Kosovo\*



and Bosnia and Herzegovina lagged behind, reflecting slower shifts in their generation mix or economic structure. Using both nominal and PPP-adjusted GDP as benchmarks provides a more nuanced view of carbon intensity, capturing

not only external economic competitiveness, but also the domestic economic structures that shape each country's ability to pursue a sustainable energy transition.

**Figure 13** CO<sub>2</sub> emissions from electricity production per unit of GDP (2023 – 2024) [nominal and PPP-adjusted, in gCO<sub>2</sub>/ EUR]

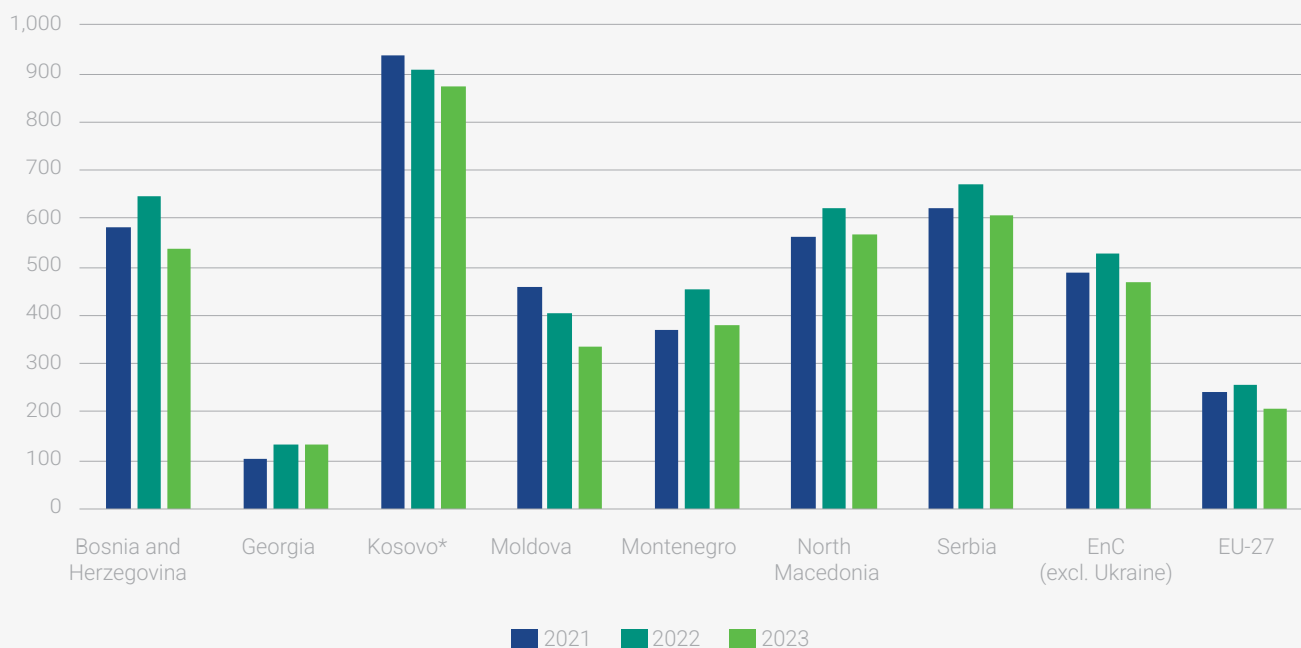


Source: compiled by the Secretariat based on reports from Contracting Parties, as well as data from Eurostat, Eurelectric, the European Central Bank, the World Bank, the IMF WEO and default emission factor values

In addition to economy-linked metrics, carbon intensity per kilowatt-hour of generated electricity directly indicates how clean the power sector has become. While the Energy Community's power sector still has a carbon intensity over twice the EU-27 average, it experienced a significant improvement in 2023, **with average carbon intensity falling**

**from 526 g CO<sub>2</sub>/kWh in 2022 to 466 g CO<sub>2</sub>/kWh**. This decline reflects progress in greening the generation mix, particularly through reduced coal use and rising non-hydro RES output. It confirms that structural changes in power production are translating into measurable emissions reductions.

**Figure 14** Carbon intensity of the power sector [g CO<sub>2</sub>/kWh]



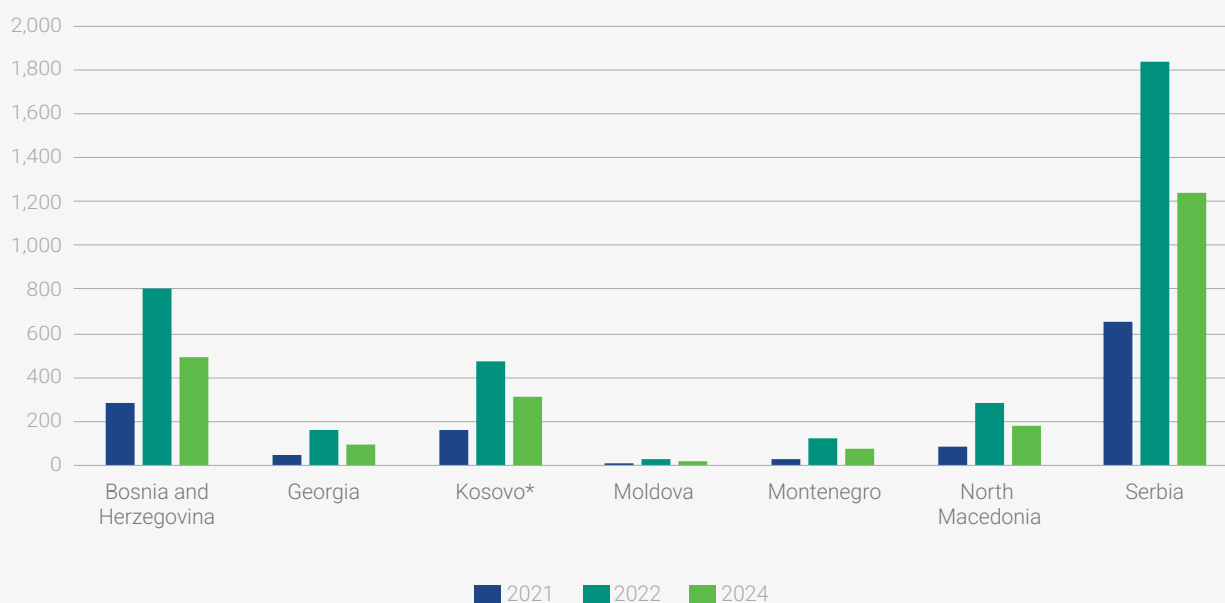
Source: compiled by the Secretariat based on reports from Contracting Parties, as well as data from Eurostat, the European Environment Agency and default emission factor values

Both carbon intensity per kilowatt-hour and per unit of GDP are essential indicators, providing complementary insights into the decarbonisation process. The former measures how clean the electricity mix has become, while the latter relates emissions to the economic structure and development trajectory. Analysing carbon intensity through both nominal and PPP-adjusted GDP enhances understanding of underlying drivers, capturing differences in external competitiveness, as well as domestic capacity for a sustainable transition. This dual lens is particularly valuable for identifying where targeted reforms, aligned carbon pricing and investment incentives are most needed to decouple economic growth from emissions in a fair and effective manner.

### Currently avoided carbon costs

While Montenegro and Ukraine have carbon pricing frameworks in place, the details of their implementation are not always easy to track. For instance, EPCG—Montenegro's main power producer—did not report the purchase of emission allowances in its 2024 Annual Report, making it impossible to monitor compliance with its obligations. In the other Contracting Parties, emissions from electricity generation remain largely unpriced—polluters are not required to internalise the environmental cost of CO<sub>2</sub>. Based on the EU ETS average allowance price of EUR 56.63 per tonne in 2024, **the avoided carbon cost for electricity production in the Energy Community (excluding Ukraine) was estimated at EUR 2.4 billion**. This figure corresponds to approximately 1.12% of the Contracting Parties' GDP at current prices, highlighting the scale of the unpriced externality and the persisting misalignment with EU carbon cost internalisation practices.

**Figure 15** Avoided emission costs at EU ETS price [million EUR]



Source: compiled by the Secretariat based on reports from Contracting Parties, as well as data from Eurostat, the World Bank, the European Central Bank, the IMF WEO and default emission factor values

While the Energy Community Contracting Parties have made tangible progress in reducing absolute emissions and expanding their renewable generation mix, significant structural barriers persist. The sustained disparity in carbon intensity—both per kilowatt-hour and relative to GDP—compared to the EU-27 highlights the need for more cohesive and ambitious decarbonisation strategies. This includes not only scaling up investments in clean energy, but also implementing and enhancing carbon pricing mechanisms to internalise environmental costs across the region. A comprehensive assessment that integrates both operational emissions and economic context—through nominal and PPP-adjusted GDP—is essential to identify targeted policy responses. Ultimately, aligning decarbonisation efforts with broader development objectives—such as improving productivity, attracting green investment and safeguarding equity—will be key to securing a sustainable and just transition to climate neutrality in the Energy Community.

## Plans for introducing carbon pricing

### Monitoring, reporting, verification and accreditation

As CBAM takes shape, alignment with EU emission standards has become a defining challenge for the Energy Community Contracting Parties. Central to this process is the establishment of robust monitoring, reporting, verification and accreditation (MRVA) systems.

Without reliable, transparent and verifiable data on greenhouse gas emissions, neither credible domestic carbon pricing nor compatibility with the EU framework can be ensured. MRVA is therefore more than a technical requirement—it is the backbone of any emissions trading scheme and a valuable instrument for designing other carbon pricing instruments. Its primary task is to provide reliable, accurate and verified information on the GHG emissions of installations subject to the obligation. The data collected by operators throughout the year, compiled in annual emission reports and verified by independent verifiers, must be complete, reliable and consistent over time to ensure credibility, comparability and transparency. The role of the public competent authorities is to ensure integrity of the scheme and the equitable treatment of participants through the approval of permits and methodologies for monitoring GHG emissions (Monitoring Plan), the acceptance of annual emissions reports and the accreditation of verifiers.

The establishment of domestic MRVA systems in Energy Community Contracting Parties remains not only an essential milestone for any progress in domestic carbon pricing, but also a legal obligation requiring the transposition of selected core provisions of the EU ETS Directive<sup>68</sup> and specific Commission Implementing Regulations, the Monitoring and Reporting Regulation (MRR)<sup>69</sup> and the Accreditation and Verification Regulation (AVR).<sup>70</sup> The deadline for the introduction of these provisions into domestic legislation was 31 December 2023.

2025 brought progress in the transposition and implementation of the MRVA system in the Contracting Parties. In Albania, Montenegro, Georgia and North Macedonia, legislative work was initiated or advanced to update climate legislation to include the mechanisms necessary to launch MRVA. In Bosnia and Herzegovina, a draft roadmap for implementing MRVA was prepared, while Kosovo\* was planning to begin preparatory work in the second half of 2025. After adopting the necessary national legislation and appointing the relevant public authorities, Moldova has already begun the preparatory process for implementation. In Serbia, the transposition process has been completed; entities subject to the new obligations are preparing applications for the approval of GHG permits and monitoring plans and approximately 100 GHG permits have already been issued. The National Accreditation Body is preparing to review the first applications for accreditation submitted by verifiers. In Ukraine, the MRVA component of the national emissions trading system was reinstated in early 2025 and installation operators are required to resume monitoring and reporting of GHG emissions, while the National Accreditation Body has already issued several accreditations for GHG verifiers.

One of the incentives supporting the launch of MRVA systems in the Western Balkans 6 countries was the inclusion of the obligation to transpose and implement the necessary EU regulations in the individual [Reform Agendas](#) for these countries.

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68 Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading as adapted and adopted by Ministerial Council Decision 2022/05/MC-EnC

69 Commission Implementing Regulation (EU) 2018/2066 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC as adapted and adopted by Ministerial Council Decision 2022/05/MC-EnC








70 Commission Implementing Regulation (EU) 2018/2067 on the verification of data and on the accreditation of verifiers pursuant to Directive 2003/87/EC as adapted and adopted by Ministerial Council Decision 2022/05/MC-EnC

The Energy Community legislation introduced an additional two-year tentative period during which all relevant public authorities and operators are expected to continue working on complying with and implementing the provisions of these legal acts. The timely transposition of the MRVA rules and the establishment of the necessary procedural and institutional framework represent a major challenge.



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**Table 10** Progress on implementation of MRVA

	Legal basis for MRVA is in place	Competent Authority(ies) designated	Scope of operators and gases subject to MRVA has been defined	GHG emission permitting is in place and functioning	Monitoring Plans prepared by operators	Accreditation Body designated	Accreditation processes in place and functioning
							
Albania	●	●	●	●	●	●	●
Bosnia and Herzegovina	●	●	●	●	●	●	●
Georgia	●	●	●	●	●	●	●
Kosovo*	●	●	●	●	●	●	●
Moldova	●	●	●	●	●	●	●
Montenegro	●	●	●	●	●	●	●
North Macedonia	●	●	●	●	●	●	●
Serbia	●	●	●	●	●	●	●
Ukraine	●	●	●	●	●	●	●

● Completed      ● Work ongoing/Partially completed      ● Not started

### Carbon pricing instruments

Preparations for establishing domestic carbon pricing systems, including instruments such as a carbon tax or an emissions trading system (ETS), continued during the reporting year. Almost all Contracting Parties acknowledge the importance of introducing carbon pricing and are assessing various design options. Approaches, however, vary. While levels of readiness differ and preferences for specific mechanisms diverge, most Contracting Parties highlight that their ultimate objective remains alignment with and eventual integration into the EU ETS.<sup>71</sup>

Bosnia and Herzegovina and Ukraine are planning to implement national ETSs, while Montenegro already operates such a system and aims to further align it with the EU ETS as part of its EU accession process. North Macedonia and Moldova are considering introducing a carbon tax, while Serbia plans to implement a carbon tax that could later evolve into a national fixed-price ETS. Albania has an existing carbon tax and is planning to establish a national ETS. Georgia continues to explore available options, with an initial preference for integration into the EU ETS. Kosovo\* has indicated that it does not currently intend to introduce a carbon pricing instrument.

<sup>71</sup> An impact assessment on carbon pricing for the Energy Community was prepared for the European Commission and presented at the Ministerial Council meeting in December 2024. Four possible design options were outlined for consideration by the Contracting Parties: a regional ETS, a fixed-price ETS, a carbon tax and integration into the EU ETS. Following the presentation, the Contracting Parties submitted feedback through a dedicated carbon pricing questionnaire, indicating their preferences and positions on the different options.

There is a clear preference for establishing carbon pricing systems that cover the CBAM sectors,<sup>72</sup> as indicated by Albania, Bosnia and Herzegovina and Moldova. Additionally, several Contracting Parties, including Bosnia and Herzegovina, Moldova, Montenegro and North Macedonia, aim to gradually extend and align the scope with that of the EU ETS as an ultimate objective. Bosnia and Herzegovina is also considering the potential benefits of an electricity-only ETS.

There is noticeable convergence in the envisaged starting dates for introducing carbon pricing systems. Overall, the Contracting Parties plan to enhance their existing carbon pricing systems or implement new ones before 2030, aiming to align with the requirements for an exemption from CBAM for electricity. Nevertheless, due to the moderate planned levels of carbon pricing, these measures are unlikely to

substantially reduce CBAM-related payment obligations for EU importers starting in 2026.<sup>73</sup> While there appears to be no political demand for the introduction of a joint carbon pricing system on a regional level, there is support for continuing the discussions on opportunities to align and coordinate the key parameters of domestic instruments (such as the timeframe, sectoral coverage and/or the establishment of a minimum carbon price) to prevent distortive effects on economies. The added value of the Energy Community framework for continuing these discussions is also recognised. Such harmonisation would help avoid asymmetric obligations for economic operators, prevent trade distortions—particularly within established electricity market zones—and reduce the risk of carbon leakage. A level playing field, underpinned by consistent and similar carbon price signals, fosters a competitive and sustainable business environment across the region.



72 Aluminium, cement, electricity, fertilisers, hydrogen, iron and steel

73 In general, the Contracting Parties opted for low levels of carbon pricing as a starting point. Moldova would consider a minimum of 2–5 EUR/tCO<sub>2eq</sub> and a maximum of 5–10 EUR/tCO<sub>2eq</sub>, while the figures for Bosnia and Herzegovina are 10–30 EUR/tCO<sub>2eq</sub> from 2026 and 24 EUR/tCO<sub>2eq</sub> for Montenegro (the current price).

**Table 11** Plans for carbon pricing instruments based on the Energy Community survey results

	Type of carbon pricing instrument	Starting year	Starting price and price evolution (where applicable)	Sectors covered
Albania <sup>74</sup>	Hybrid model combining a carbon tax with targeting full implementation of ETS integrated with the EU ETS	2027/2028	<p>a) 1.5 cents per litre for petrol;</p> <p>b) 3 cents per litre for diesel;</p> <p>c) for coal:</p> <p>i. 4.5 cents per kilogramme from 1 July 2026;</p> <p>ii. 6.5 cents per kilogramme for 2027;</p> <p>iii. 9 cents per kilogramme for 2028;</p> <p>iv. 12 cents per kilogramme for 2029;</p> <p>v. 15.3 cents per kilogramme for 2030 and onwards;</p> <p>ç) 3 cents per litre for solar oil;</p> <p>d) 3 cents per litre for fuel oil;</p> <p>dh) 3 cents per litre for kerosene;</p> <p>e) 3 cents per kilogramme for petroleum coke.<sup>75</sup></p>	CBAM sectors
Bosnia and Herzegovina	ETS	2026/2027	<p>2026: 10–30 EUR/tCO<sub>2</sub>eq;</p> <p>2030: 100–140 EUR/tCO<sub>2</sub>eq<sup>76</sup></p>	First electricity, followed by CBAM sectors and subsequently EU ETS
Georgia	–	–	–	–
Kosovo*	No planned carbon pricing system	–	–	–
Moldova	Carbon tax	2028	minimum 2–5 EUR/tCO <sub>2</sub> eq and maximum 5–10 EUR/tCO <sub>2</sub> eq <sup>77</sup>	CBAM sectors, potentially followed by the EU ETS including aviation and maritime
Montenegro	ETS	2020	24 EUR/tCO <sub>2</sub> eq <sup>78</sup>	Thermal power plants, industry, gradual expansion to EU ETS scope

74 The information refers to the NECP adopted in December 2021.

75 Energy Community survey feedback

76 Energy Community survey feedback

77 Energy Community survey feedback

78 Energy Community survey feedback

	Type of carbon pricing instrument	Starting year	Starting price and price evolution (where applicable)	Sectors covered
North Macedonia <sup>79</sup>	Carbon tax	2028	–	EU ETS scope excluding aviation and maritime, starting gradually with emissions from combustion
Serbia	Carbon tax with fixed price ETS later	2027	Initially 4 EUR/tCO <sub>2</sub> eq, with a subsequent increase to 40 EUR/tCO <sub>2</sub> eq, in 2030, reaching the full projected EU ETS price, by 2045 <sup>80</sup>	–
Ukraine	Carbon tax	2011	30 UAH/tCO <sub>2</sub> eq during the martial law regime, with an assumed carbon price of 1 EUR/tCO <sub>2</sub> eq from 2026 to 2027 <sup>81</sup>	Energy, industry and energy supply sectors
	ETS	2026 starting in a test mode	Sectoral price increases to reach the EU ETS price level <sup>82</sup>	EU ETS sectors, including aviation and maritime with a potentially phased approach

While acknowledging Contracting Parties' preference for pursuing domestic carbon pricing systems, it is important to highlight the benefits of some degree of coordination to prevent asymmetric economic burdens on market participants and trade distortions stemming from diverging obligations under the domestic systems<sup>83</sup>. A level playing field, underpinned by consistent carbon price signals, is essential for ensuring a competitive and sustainable business environment across the Contracting Parties.

### Cost of CBAM for the electricity sector

The transitional exemption from CBAM for electricity, which may be granted if a country fulfils the conditions of Article 2(7) of the CBAM Regulation, provides a conditional but strategically important way for Contracting Parties to avoid CBAM charges on their electricity exports to the EU<sup>84</sup>. Considering the current state of progress in market

coupling with the EU—which is a precondition to be considered for an exemption—and the fulfilment of the other conditions, CBAM will be fully applicable, including the financial implications, from January 2026 to the electricity exported from Contracting Parties to the EU.

Day-ahead electricity prices in most of the Contracting Parties closely follow those in HUPX. Adding CBAM costs would make electricity exports from these countries to the EU uncompetitive, as they would become less attractive for importers due to the similar price level, but with the additional administrative burden implied by CBAM. The uncertain future financial burden also reduces the attractiveness of EU imports from Contracting Parties, due to the **daily** volatility of EU ETS prices, which cannot provide a perfect hedge with respect to CBAM certificates, which are to be priced based on a **weekly** average of EU ETS prices. The price offered by EU importers, which will likely be discounted to reflect the

79 The information refers to the NECP adopted in May 2022. The tool is called a CO<sub>2</sub> tax.

80 Energy Community survey feedback and Serbia's NECP

81 Ukraine's NECP

82 Ukraine's NECP

83 At the 2025 Energy Community Informal Ministerial Council meeting in Athens, the European Commission and the Secretariat reiterated the benefits of coordinated approaches to carbon pricing. Harmonisation would help avoid asymmetric obligations for economic operators, prevent trade distortions—particularly within established electricity market zones—and reduce the risk of carbon leakage. For further information, the wrap-up document of the Informal Ministerial Council meeting is available [here](#).

84 Even if such charges are technically imposed on importers in the EU, they are likely to be passed on to exporters.

anticipated CBAM costs, would thus be below the regular market (HUPX) price, reducing the income of generators/traders in Contracting Parties.

Beyond the issue of uncompetitive exports, there is an additional layer of complexity related to how electricity imports in the EU are reported under current practices. The origin of electricity is typically assigned to the last non-EU country it transited, rather than the country where it was actually generated. This poses the serious risk that EU importers will face CBAM charges on electricity that may have originated from another EU Member State, simply because it passed through a Contracting Party. This issue is particularly relevant in the Western Balkans, where most Contracting Parties act primarily as transit corridors rather than consistent exporters, as explained in the chapter on electricity trade. In 2024, only Bosnia and Herzegovina maintained a meaningful net export position, while large volumes scheduled from other Contracting Parties into the EU mostly reflected transit.

In the absence of a robust mechanism to verify the true origin of electricity, flows from Contracting Parties to the EU should be understood as a mix of actual exports, intra-regional exchanges and transits. As a result, the CBAM cost estimates presented below should be viewed as upper-bound approximations, since they do not distinguish between where the electricity was generated and the route it took. This lack of transparency risks distorting cost allocation under CBAM and undermining the mechanism's

environmental credibility and decarbonisation goals, in particular if it results in charging renewable-based electricity that is traded from one EU Member State to another via Contracting Parties.

The estimates for 2024, presented in Table 11 and Table 12, illustrate the potential financial implications of CBAM that EU importers would face until an exemption is secured.

**These calculations are based on aggregated commercial flows (exports and transit) from 2024, as reported to ENTSO-E,<sup>85</sup> combined with the average monthly EU ETS auction prices<sup>86</sup> and default emission factors recorded in the CBAM Transitional Registry. These figures are based on historical data and are solely intended as an illustration and practical approximation of possible financial exposure of EU importers under the definitive regime of CBAM from January 2026.**

**Table 12** Estimated CBAM financial exposure of EU importers for imports sourced via Contracting Parties (excluding Ukraine), 2024

Contracting Party bordering the EU	Export + Transit Contracting Party -> EU (MWh)	Average annual marginal CBAM price per MWh (EUR/MWh)	Total annual CBAM cost for EU importers (EUR)
Albania	1,307,183	0.00	0
Bosnia and Herzegovina	2,158,417	73.37	158,364,080
Moldova	187,946	33.14	6,228,717
Montenegro	3,042,090	62.45	189,982,787
North Macedonia	3,354,317	59.71	200,284,866
Serbia	9,181,098	66.71	612,471,481
<b>Total</b>			<b>1,167,331,931</b>

85 Sourced from ENTSO-E's Total Scheduled Commercial Exchanges, which include data for electricity volumes entering the borders of EU Member States from Contracting Parties.

86 ETS price: <https://www.eex.com/en/market-data/market-data-hub/environmentals/eex-eua-primary-auction-spot-download>

Table 12 shows that Serbia has the largest scheduled volume towards the EU. Accordingly, imports via this Contracting Party would entail the highest level of CBAM exposure—exceeding EUR 612 million. That is followed by flows from North Macedonia and Montenegro, each with estimated exposure above EUR 190 million. These figures reflect a

combination of high flow volumes and relatively elevated emission intensities. For electricity exports via Albania, with a reported zero-emission factor, no CBAM exposure exists, while the share for Moldova is limited due to its lower traded volume and carbon intensity.

**Table 13** Estimated CBAM financial exposure of EU importers for their imports via Contracting Parties (excluding Ukraine) to specific EU Member States, 2024

EU Member State bordering Contracting Party(ies)	Import + Transit Contracting Party - > EU (MWh)	Average annual marginal CBAM price per MWh (EUR/MWh)	Total annual CBAM cost for EU importers (EUR)
Bulgaria	3,458,813	64.48	223,022,476
Greece	3,212,139	35.05	112,578,074
Croatia	3,415,589	70.81	241,874,429
Hungary	3,183,581	65.58	208,768,571
Italy	3,042,090	62.45	189,982,787
Romania	2,918,839	65.47	191,105,594
<b>Total</b>			<b>1,167,331,931</b>

Table 13 shows that the total financial exposure of CBAM-related imports would be the highest in Bulgaria, Croatia and Hungary, which face significant inflows from Contracting Parties combined with high emission factors. They also act as key entry points for electricity flows from the Western Balkans. Italy and Romania also register substantial exposure, though total annual CBAM costs are somewhat lower due to the lower emission factors of the Contracting Parties from which the electricity flows are entering from. Greece, despite receiving similar volumes, faces significantly lower exposure due to the lower average annual marginal CBAM price—driven largely by imports from Albania, which carries a default emission factor of zero. Given that Greece has become a net exporter in solar peak periods, even such a favourable condition would not make importing electricity to Greece from Contracting Parties attractive. The relatively even distribution of electricity inflows from or via the Contracting Parties, with each bordering EU Member State receiving around 3 TWh in 2024, underscores that the region primarily functions as a transit corridor within the wider European electricity system, rather than as a concentrated source of imports.

The data illustrate the considerable financial exposure EU importers may face under CBAM—even when the electricity originates in the EU or a low-emission Contracting Party,

but is recorded as an import from another Contracting Party solely due to transit. This highlights the urgent need for robust mechanisms to verify the actual origin of imported electricity. Without such systems, CBAM implementation risks misallocating costs, distorting price signals and weakening decarbonisation incentives and environmental credibility. The estimates presented here—based on 2024 commercial flows, EU ETS auction prices and CBAM-reported emission factors—provide a useful approximation of potential exposure, but represent a static picture. In practice, market participants are expected to adapt dynamically to the new conditions under the definitive regime, likely resulting in shifts in trade flows, affecting pricing dynamics and altering generator behaviour. For example, reduced export opportunities may raise generation costs for producers in Contracting Parties, while diverted flows could tighten supply at certain EU entry points, increasing wholesale prices. If unresolved, these issues could distort trade, discourage efficient use of cross-border capacities and reduce overall welfare. Over time, this would also undermine market liquidity and hinder regional electricity market integration—contrary to the goals of the Energy Community and the EU's internal market. Persistent uncertainty over the treatment of transit flows under CBAM is therefore not only a matter of fair cost allocation, but a structural risk to the functioning of the regional market.

# The way forward—navigating CBAM’s definitive regime

## The risk of unintended impacts on the electricity markets

With the approach of CBAM’s definitive regime and the certainty that CBAM will be applicable to electricity imports to the EU from Contracting Parties from the beginning of 2026, the Secretariat actively facilitated expert discussions in 2025 on the practical impacts of CBAM on electricity markets in the region. Those exchanges, held in internal working groups and a public event in Brussels in July 2025, aimed to ensure that all unintended impacts of the CBAM Regulation that could jeopardise the implementation of the CBAM principles are identified and communicated to the European Commission. Those principles involve addressing carbon leakage and contributing to the promotion of decarbonisation in third countries, while recognising that “the integration of third countries into the Union electricity market is an important factor for those countries to accelerate their transition to energy systems with high shares of renewable energies.”<sup>87</sup>

A central concern was the current methodology for calculating the default emission factor for electricity<sup>88</sup> imported to the EU as a CBAM good. Under this methodology, the same emission factor is assigned to all electricity imports regardless of the origin of production, using the emission intensity of the fossil fuel-based part of the generation mix in the relevant third country as the basis for the calculation. The CBAM Regulation links the use of actual emissions embedded in imported electricity to a series of conditions<sup>89</sup> that market participants consider almost impossible to fulfil in practice,<sup>90</sup> in particular the requirement regarding the absence of congestion across the transmission route and the uncertainty related to the details of the required cross-border power-purchase agreement (PPA). Stakeholders identified this issue as a potential deterrent to

new investments in renewable energy in Contracting Parties, potentially endangering the achievement of the Energy Community 2030 renewable targets.

Another issue concerns the complexity of distinguishing electricity flows that transit<sup>91</sup> through Contracting Parties from one EU Member State to another. Such flows are by definition not subject to CBAM, but as electricity markets in Contracting Parties mature towards more liquid trading on exchanges where counterparts are anonymous—consistent with the policy direction of EU integration—the identification of transit becomes practically impossible.<sup>92</sup> In the absence of feasible implementation, market participants are unlikely to use Contracting Parties’ markets for such transit, which was reported as expected to have an impact on the export of solar energy from Greece, located at the periphery of the EU electricity system, to the rest of the EU. Such a market bottleneck would impede the deepening of the EU’s internal energy market in Southeast Europe<sup>93</sup>.

Transmission system operators<sup>94</sup> (TSO) flagged the specific issue of CBAM application to unintended deviations and electricity exchanges required for system operations. Of such flows, which are essential for maintaining grid stability, those that cross from a Contracting Party to an EU Member State would be considered as “imports” and therefore be subject to CBAM with the associated administrative and financial burden.

The European Commission included the issue of emission factors in its [call for evidence and public consultation](#) in August 2025, ahead of the planned review of the CBAM Regulation in 2026. However, several issues remain unresolved, including the identification of transit flows and the inherently different nature of electricity trade

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87 Preamble, point (55) of the CBAM Regulation

88 See JP “Elektroprivreda HZ HB” d.d. Mostar position in the European Commission’s call for evidence [here](#).

89 These include (a) the existence of a PPA between the producer and the CBAM declarant, (b) direct connection of the generation facility to the Union network or proof that there was no physical network congestion at any point in the network between the installation and the Union transmission system at the time of export, (c) emission of less than 550 g of CO<sub>2</sub> of fossil fuel origin per kWh of electricity, (d) firm nomination of capacity at all relevant interconnectors, (e) certification of the fulfilment of all these criteria by an accredited verifier based on at least monthly interim reports.

90 See EFT Group position in the European Commission’s call for evidence [here](#).

91 See Energy Traders Europe position in the European Commission’s call for evidence [here](#).

92 See Europex position in the European Commission’s call for evidence [here](#).

93 [Press release](#) of the Ministry of Environment and Energy of Greece on the Energy Community Informal Ministerial Council.

94 See ENTSO-E’s position on the revision of CBAM [here](#).

compared to other CBAM goods. This continues to generate significant uncertainty among market participants about how best to address the new conditions introduced by CBAM. Stakeholders at the Secretariat's July 2025 technical meeting generally expected a potential reduction in commercial

activities between the markets of Contracting Parties and EU Member States. Such a development—if it were to materialise—could isolate the Contracting Parties, running counter to the principles of both the Energy Community and CBAM.

As 2026 approaches, an increasing number of market participants will be adjusting their individual strategies in order to minimise their losses and maximise their gains under the new reality of CBAM on the electricity markets. As short-term changes may be triggered by a multitude of factors—such as the hydrological conditions in Contracting Parties or events with a significant economic impact—a consistent monitoring of selected structural indicators will make it possible for the Secretariat to identify and report on the correlation—if any—between the observed market developments and the impacts of CBAM in Contracting Parties, starting from 2026.











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