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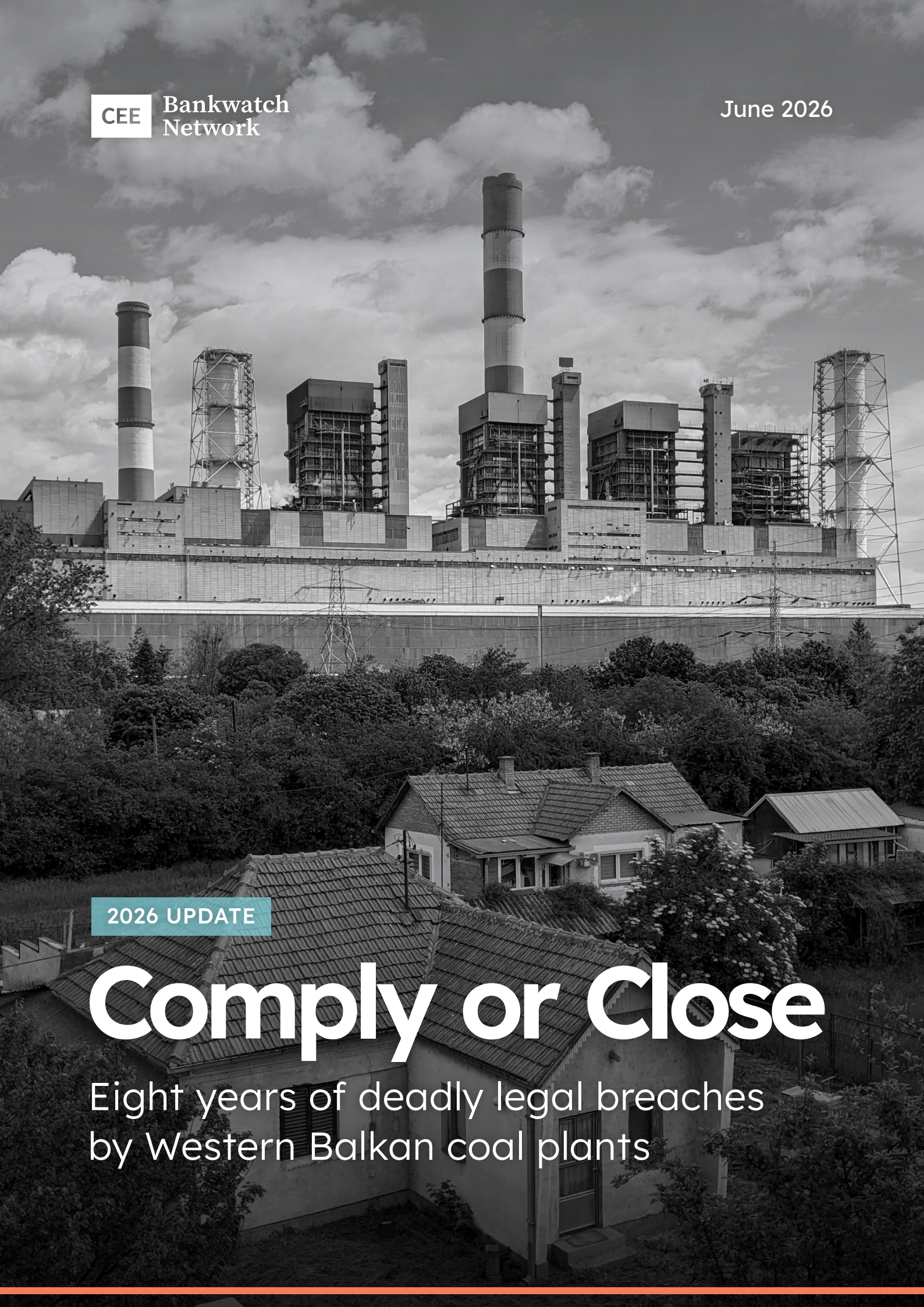

2026 UPDATE

Comply or Close

Eight years of deadly legal breaches by Western Balkan coal plants

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Nikola Tesla power plant, Serbia

Photo: Stefan Aleksić

Back cover

Kosova A power plant, Kosovo

Photo: Matteo Trevisan, done as part of the photographic project More Necessary Than the Sun

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This report is endorsed by the following organisations:

Contents

Glossary

CBAM – Carbon Border Adjustment Mechanism. This tool aims to put a fair price on the carbon emitted during the production of goods from certain sectors, including electricity, that are entering the European Union (EU), and to encourage cleaner industrial production in non-EU countries. Its transitional phase started in 2023 and charges will be applied on the import of goods into the EU from 1 January 2026.

De-NO_x – Equipment for the reduction of nitrogen oxides emissions

De-SO_x – Equipment for the reduction of sulphur oxides emissions

ELV – emission limit value. This represents the permissible quantity of a substance contained in the waste gases from the combustion plant which may be discharged into the air during a given period; it is calculated in terms of mass per volume of the waste gases expressed in mg/Nm^3.

Energy Community Treaty – a treaty signed in 2005 that entered force in 2006 and aims to extend the EU energy market to its nearest neighbours, by applying EU energy, environment and competition legislation to their energy sectors. The Treaty currently includes the European Union, Albania, Bosnia and Herzegovina, Georgia, Kosovo, Moldova, Montenegro, North Macedonia, Serbia and Ukraine.

EU – European Union

IED – Industrial Emissions Directive – Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control). Only Chapter lll, Annex V, and Article 72(3)-(4) of Directive 2010/75/EU are applicable in the Energy Community. In the EU, it has been updated by Directive 2024/1785 of 24 April 2024, but these amendments have not yet been transposed into the Energy Community Treaty.

LCP – large combustion plant. This is defined as a technical apparatus which is used to oxidise fuel in order to use the heat generated with a rated thermal input of equal to or greater than 50 megawatts (MW). This includes plants such as fossil fuel or biomass-fired power stations and combustion in petroleum refineries.

LCP BREF – Best Available Techniques Reference Document for Large Combustion Plants, the conclusions of which were made legally binding in Commission Implementing Decision (EU) 2017/1442 of 31 July 2017 establishing best available techniques (BAT) conclusions, and – following a legal challenge on procedural grounds – again in Commission Implementing Decision (EU) 2021/2326 of 30 November 2021 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for large combustion plants (notified under document C (2021) 8580).

LCPD – Large Combustion Plants Directive – Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants.

MWe – megawatts of electric power – the most common form of expression of a power plant's capacity.

MWth – total rated thermal input of a power plant – the rating used in EU legislation to define different size categories of power plants. In general, it is harder to achieve lower emissions concentrations from smaller power plants, so pollution limits are differentiated by size.

NERP – National Emissions Reduction Plan – a flexible implementation mechanism under the Large Combustion Plants Directive in the Energy Community whereby emissions can gradually be reduced by totalling their combined emissions and ensuring they are lower than the decreasing ceilings set for 2018, 2023, 2026 and 2027.

NO_x – nitrogen oxides

Opt-out – a flexible implementation mechanism under the Large Combustion Plants Directive whereby plants can delay investments in pollution control equipment as long as they limit their operating hours to 20,000 between 1 January 2018 and 31 December 2023. Any plants operating after that have to comply with the rules for emissions from new plants, not existing ones.

PM or **dust** – particulate matter

SO_2 – sulphur dioxide

[1] For further information, see Energy Community Secretariat, Energy Community acquis.

Executive summary

The end of 2025 marked eight years since the deadline passed for power plants in the Western Balkans to meet new air pollution standards for sulphur dioxide (SO_2), nitrous oxides (NO_x) and dust. Yet the deadly air pollution from the region's mostly antiquated coal power plants has decreased only slightly for the first two substances, and has increased for dust.

In 2025, total SO_2 emissions from plants included in the National Emissions Reduction Plans (NERPs)[2] of Bosnia and Herzegovina, Kosovo, North Macedonia and Serbia **were 6.6 times as high as allowed – the highest breach since 2018.** In absolute terms, emissions somewhat decreased, but because the emissions ceilings for each country decreased in 2024 and 2025, the 2025 breach was relatively higher than in previous years.

For the second year in a row, Bosnia and Herzegovina's NERP coal plants were the highest SO_2 emitters in the region, with 196,940 tonnes, or **12.7 times as high as allowed**. This occurred due to Bosnia and Herzegovina's consistently high emissions, combined with a moderate decrease in SO_2 emissions in Serbia – previously the highest emitter. In 2025, SO_2 emissions from Serbia's coal power plants amounted to 177,756 tonnes, or 5.1 times as high as allowed.

Absolute **dust emissions increased** in 2025 compared to 2024, and were 2.9 times as high as allowed by the countries' NERPs, compared to 1.9 times in 2024. **North Macedonia's dust emissions more than doubled** in 2025 compared to 2024, due to massive increases at the Bitola coal power plant.

As in 2024, total emissions of nitrogen oxides from the NERP plants in 2025 amounted to 1.4 times as much as allowed, due to a lack of investments in NO_x reduction and annually decreasing ceilings for NO_x in the NERPs. Kosovo, Bosnia and Herzegovina and Serbia once again exceeded their ceilings. Kosovo had the highest exceedance – 2.7 times as high as its national ceiling.

In absolute terms, long-standing offender Ugljevik in Bosnia and Herzegovina was once again the unit with the highest SO_2 emissions in the region in 2025, with 115,079 tonnes or 16.3 times as high as its individual ceiling. Despite the installation of a desulphurisation unit, for which an operating permit was obtained in November 2021[3], Ugljevik's SO_2 emissions have been increasing since 2022. Its operator admits that the de-SO_x is not working mainly because it is an 'economic burden', and it looks increasingly doubtful that this EUR 85 million project will ever be properly used.

Although individual unit ceilings are not binding – only country-level ones are – looking at breaches of these unit-level limits can give a good indication of where particular action is needed. **In 2025, no fewer than five units exceeded their ceilings for sulphur dioxide emissions by more than ten times:** Bitola B 1 & 2 and B3 in North Macedonia and Ugljevik, Gacko and Kakanj 6 in Bosnia and Herzegovina.

For dust, the absolute highest emitter in the region was Bitola B 1 & 2 in North Macedonia, which emitted 5,276 tonnes. Including unit B3, with its 2,399 tonnes of dust pollution, **the Bitola plant single-handedly exceeded the sum of NERP ceilings for dust of all four countries**, set at 7,094 tonnes.

Gacko in Bosnia and Herzegovina was once again the highest relative dust emitter. Despite a small decrease compared to 2024, it emitted 2,761 tonnes – **15.1 times as much as allowed.**

For nitrogen oxides, Nikola Tesla B in Serbia again had by far the highest absolute emissions in 2025, at 11,247 tonnes. In relative terms, Kosova A5 was again the worst offender for this pollutant in 2025, emitting 3.4 times as much as allowed, or 2,141 tonnes.

In December 2023, the Energy Community Ministerial Council confirmed the NERP breaches by Bosnia and Herzegovina, Kosovo and North Macedonia.[4] The Energy Community Secretariat also escalated its case of non-compliance against Serbia in 2025 due to lack of sufficient progress on reducing SO_2 emissions and new breaches of its NO_x ceiling since 2023.[5]

[2] As part of their obligations to comply with the Large Combustion Plants Directive under the Energy Community Treaty, four Western Balkan countries – Bosnia and Herzegovina, Kosovo, North Macedonia and Serbia – have drawn up National Emission Reduction Plans (NERPs) covering the period from 2018 to 2027. Instead of requiring each large combustion plant to comply with the emission limit values from the Large Combustion Plants Directive from 1 January 2018, these plans allow the countries to calculate national emissions ceilings for sulphur dioxide, nitrogen oxides and dust, and to gradually decrease their total emissions from selected pre-1992 large combustion plants until 2027. In 2027, all the plants included in the NERPs will individually need to be in compliance not only with the emission limit values from the Large Combustion Plants Directive, but also with Part 1 of Annex V to Directive 2010/75/EU on Industrial Emissions.

[3] Ministry of Spatial Planning, Construction and Ecology of Republika Srpska, Decision no. 15.03-360-164/21, 11 November 2021.

[4] Energy Community Ministerial Council, Decision 2023/04/MC-EnC on the failure by the Republic of North Macedonia to comply with the Energy Community Treaty in Case ECS-7/21, Decision 2023/05/MC-EnC on the failure by Kosovo* to comply with the Energy Community Treaty in Case ECS-8/21 and Decision 2023/06/MC-EnC on the failure by Bosnia and Herzegovina to comply with the Energy Community Treaty in Case ECS-9/21, *Energy Community*, 14 December 2023.

[5] Energy Community Secretariat, Case ECS 10/21, accessed 24 April 2026.

The NERP breaches represent only part of the illegal pollution from coal plants. At the end of 2023, the deadline for closing the plants which fall under the 'opt-out' limited lifetime derogation expired. **All three countries in the Western Balkans with coal power plants subject to this provision – Bosnia and Herzegovina, Montenegro and Serbia – continued to breach it in 2025.** None of the plants have officially closed or completed retrofits to comply with the relevant emission limit values, though Tuzla 3 in Bosnia and Herzegovina reported zero operating hours during the year. These plants contributed to the region's massive coal pollution in 2025, but are not even part of the NERP-derived figures above.

Montenegro's Pljevlja plant has been operating illegally since late 2020, when it used up the 20,000 hours of operation allowed after 1 January 2018. It is currently in the testing phase after a controversial retrofit, but it remains unclear whether this will lead to compliance with the relevant emission limit values. In 2022, Bosnia and Herzegovina's Tuzla 4 and Kakanj 5 units also exceeded their allotted 20,000 hours, as did Serbia's Morava plant. Since the end of 2023, when all 'opt-out' units had to close, the Kolubara A plant in Serbia has also continued to operate. The closure dates for all of these units remain unclear.

Due to breaches of the opt-out provisions, the Energy Community Secretariat opened dispute settlement cases against Montenegro in April 2021,[6] Bosnia and Herzegovina in October 2022,[7] and Serbia in October 2023.[8] A decision against Montenegro is pending at the Energy Community's Ministerial Council, and in March 2026 the Secretariat escalated the cases on Morava and Tuzla 4 / Kakanj 5 by issuing reasoned opinions.[9]

Such breaches are a matter of life and death. As our 2021 Comply or Close report showed, out of a total of 19,000 deaths caused by Western Balkan coal plants from 2018 to 2020, the total number of deaths during this period caused by exceedances of NERP ceilings was nearly 12,000. There is no reason to expect that these numbers have decreased significantly since then.

They are also a matter of rule of law: national authorities have failed to enforce environmental regulations with regard to state-owned utilities. **Eight years after the Large Combustion Plants Directive (LCPD) compliance deadline passed in the Energy Community, national authorities have not fined a single plant operator for these breaches.**

Despite the lack of political will to ensure that coal power plants comply or close, increasing technical problems and coal supply problems have led to declining generation from coal power plants in North Macedonia, Serbia and Bosnia and Herzegovina in recent years. The effects of the EU's Carbon Border Adjustment Mechanism (CBAM) are not yet completely clear, but look likely to decrease coal-fired electricity generation by making it more difficult for utilities to balance their books via lucrative exports. Yet none of the countries in the region has a clear, updated and realistic plan to ensure compliance and/or closure of all their coal power plants.

Even North Macedonia, a regional leader in terms of solar installation, is being distracted by new coal mines and costly plans for gas installations while doing nothing to address pollution from its coal power plants. Its recently-adopted updated National Energy and Climate Plan (NECP) does not even specify a clear coal phase-out date, although the scenarios show it as 2030.

Overall, the pollution levels eight years after the deadline for implementing the LCPD remain appalling. The risk of an uncontrolled coal phase-out is increasing rapidly, with unnecessarily harsh impacts on coal-dependent communities that could have been avoided by proper planning.

The Western Balkan governments must finally take responsibility for a managed coal phase-out and hold the energy utilities accountable for their lack of action. Plants operating under the opt-out regime must close promptly,[10] and the NERP plants must comply with their ceilings. Most urgently, the Ugljevik, Kostolac B and Nikola Tesla A3-A6 desulphurisation units need to start functioning properly and the authorities in North Macedonia and Bosnia and Herzegovina must tackle the massive dust pollution from the Bitola and Gacko plants. Where pollution control investments are not feasible, operating hours need to be reduced to decrease the pollution burden.

[6] Energy Community Secretariat, 'Case ECS-15/21: Montenegro / Environment', accessed 8 May 2026.

[7] Energy Community Secretariat, 'Secretariat launches dispute settlement procedure against Bosnia and Herzegovina for breaching Large Combustion Plants Directive in the case of Tuzla 4 and Kakanj 5', 28 October 2022.

[8] Energy Community Secretariat, 'Secretariat launches dispute settlement procedure against Serbia for breaching the Large Combustion Plants Directive in the case of TPP Morava', 23 October 2023.

[9] Energy Community Secretariat, Case ECS-01/22: Bosnia and Herzegovina / environment, Case ECS-09/23: Serbia / environment, accessed 5 May 2026.

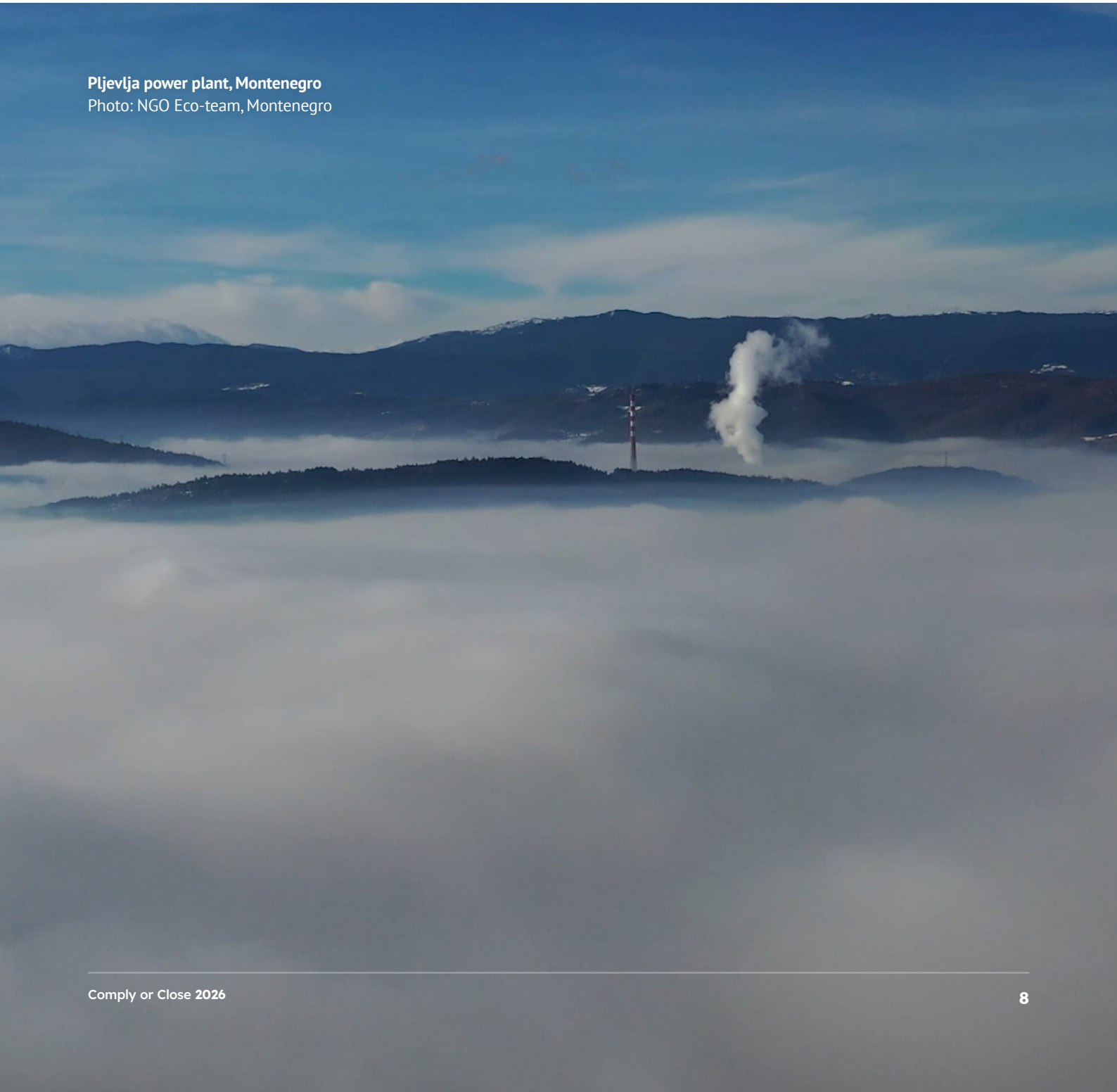
[10] The other option is to undergo major reconstruction to comply with the emission limit values for new plants under the Energy Community Treaty as the Pljevlja plant is attempting to do, but we are sceptical that this would be economically feasible.

Demand must also be reduced by other measures, both short-term and more systematic, such as reducing distribution losses, insulating buildings, and the use of efficient heat pumps instead of electrical resistance heaters. The need for such measures is greater than ever.

The forthcoming updates of the countries' long-term strategies and NECPs provide an opportunity to tackle the weaknesses in their current plans. They need to contain realistic plans for a managed coal phase-out, based on their plants' real technical condition, the level of investment required to bring them into compliance with pollution control, and their lignite reserves and production capacity.

Although the main responsibility is clearly with the Western Balkan governments, EU institutions need to step up their action as well, using all the tools at their disposal, such as conditioning EU financing and accession progress on compliance; sending clear, public political messages; and securing financing for a just transition of coal regions and switch to sustainable district heating.

The European Commission also needs to propose stronger enforcement tools for the Energy Community Treaty, for the benefit of human health and the environment. If the Treaty is to further drive decarbonisation and market integration, its dispute settlement mechanism must be strengthened to include dissuasive penalties for breaches.



Pljevlja power plant, Montenegro
Photo: NGO Eco-team, Montenegro

Introduction

Since the implementation deadline for the Large Combustion Plants Directive (LCPD) under the Energy Community Treaty passed on 31 December 2017, we have analysed the Western Balkan countries' compliance with their National Emissions Reduction Plans (NERPs) in seven editions of the Comply or Close report. This year, we look at the non-compliance in 2025 compared to the previous seven years.

The LCPD was included in the Energy Community Treaty when it was signed in 2005. For a treaty whose aim is to open and unify the energy market of the EU with that of its immediate neighbours in southeast and eastern Europe, the inclusion of environmental legislation in the Treaty is crucial to level the playing field and prevent 'emissions leakage', in which countries with poorer environmental standards provide electricity to the EU.

NERPs allow countries to sum up emissions of sulphur dioxide (SO_2), nitrogen oxides (NO_x) and dust from some or all of their power plants and comply with a national level emissions ceiling, instead of having each plant comply with the emission limits stipulated in the annexes of the Directive. Developing a NERP was only one of the options for complying with the Directive; the countries chose whether to develop one or not.[11] The NERP allows combustion plants to derogate from individual compliance with the emission limit values (ELVs) for existing plants, set in Annex V, part 1 of the LCPD, until 2027. Instead, the NERP establishes periodic annual ceilings (2018, 2023, 2026 and 2027) which all plants' emissions combined must not go above, irrespective of their individual emissions. By 2027, each unit has to individually comply with the ELVs from Annex V, part 1 of the LCPD.

Until then, better performing plants for one pollutant can make up for worse performing ones, if the overall limit is met. Thus, NERPs already represent a compromise compared to full compliance by each unit: failure to even comply with NERP ceilings is thus extremely problematic.

Existing combustion plants also had an option to be exempted from the ELVs specified in the LCPD or from inclusion in a NERP if the operator opted for a limited lifetime derogation – a so-called 'opt-out'. This allowed the power plant to run for no more than 20,000 hours starting from 1 January 2018 and ending no later than 31 December 2023, without having to comply with emission limit values or ceilings. This derogation was applied to units for which either closure or complete refurbishment was planned. To operate beyond these time limits, the plants have to comply not only with the LCPD emission limit values but also with the newer and slightly stricter ones for existing plants from Annex V, part I tttof the Industrial Emissions Directive.

Coal plants which comply with the LCPD still have health impacts, but those which do not are increasing ill health and premature deaths unnecessarily and illegally. Complying with the NERP ceilings and opt-out conditions is therefore not just a matter of compliance, but of life and death. As demonstrated in our 2021 report, between 2018 and 2020, an estimated 19,000 people died as a result of pollution from Western Balkan coal plants, of which 12,000 were due to emissions breaches.[12] Unfortunately, the situation has changed very little since then. While region-wide SO_2 and NO_x emissions from coal power plants have decreased somewhat since 2018, dust emissions have increased.

Taking action to reduce pollution is therefore imperative and long overdue. This eighth Comply or Close report looks at the official reported data for 2025 to see how the situation has evolved since 2018. It provides a regional overview of the results together with country profiles for Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia.

[11] Except Montenegro, which only has one large combustion plant and therefore cannot add up the total of several plants to make a national ceiling.

[12] CEE Bankwatch Network and Centre for Research on Energy and Clean Air (CREA), Comply or Close, September 2021.

Regional overview of pollutant emissions

By 31 December 2017, the deadline for LCPD compliance in the Energy Community countries, the coal power plant operators in the Western Balkans should have invested in pollution control equipment to a sufficient degree to comply with the emission limit values from the Directive, or at least to comply with the national ceilings laid out in the National Emissions Reduction Plans. The countries had already had 12 years after signing the Treaty to do so, as the LCPD has been an integral part of the Treaty since it entered force in 2006.

But despite this, not one of the countries with large combustion plants[13] ensured that their coal power plants complied with the unit-level emission limit values from the Directive by the beginning of 2018, or even by the end of 2025, eight years later.

From 2018 until the end of 2025, none of the four countries with NERPs – Bosnia and Herzegovina (BiH), Kosovo, North Macedonia and Serbia – complied with the ceilings for sulphur dioxide they had committed to in their NERPs either, with the exception of Kosovo managing to comply in 2023 and 2025. Sulphur dioxide emissions have decreased somewhat since 2018, but nowhere near fast enough to comply with the NERPs.

In March 2021, the Energy Community Secretariat opened dispute settlement cases against Bosnia and Herzegovina, Kosovo, North Macedonia and Serbia for failure to adhere to their NERP ceilings in 2018 and 2019.[14] In February 2022, it took the next step forward in the process by issuing reasoned opinions against Bosnia and Herzegovina, Kosovo and North Macedonia.[15] A reasoned opinion is the second step in the process, when the party is requested to rectify the identified issues of non-compliance within a time limit of two months. Depending on the reply from the relevant government, the Secretariat may submit the case to the Energy Community's Ministerial Council for a decision on the country's compliance with the Treaty.

On 13 July 2023, the Secretariat submitted a reasoned request to the Ministerial Council to make a decision confirming Bosnia and Herzegovina, Kosovo and North Macedonia's non-compliance, which it did in December 2023.[16] Because the breaches have not been rectified, as of May 2026, the cases remain open.[17]

The case against Serbia did not escalate for some time, due to uncertainties about the impacts of ongoing investments into pollution control equipment. But in July 2025, as significant breaches on sulphur dioxide persisted and new breaches on nitrous oxides appeared due to the ceilings decreasing annually, the Secretariat issued a reasoned opinion on the case.[18]

Alarmingly, the total aggregated figures reported to the European Environment Agency[19] by Bosnia and Herzegovina, Kosovo, North Macedonia and Serbia for 2025 show continued emissions breaches for all three measured pollutants – SO_2, dust and NO_x.

Although absolute sulphur dioxide emissions decreased somewhat in 2025, the sum of the emissions allowed by the countries' NERPs decreased as well, so the overall breach was 6.6 times as high as allowed – the highest since the LCPD entered force in 2018. The fact that Kosovo just about managed to comply with its ceilings in 2023 and 2025 was not sufficient to make up for the fact that the other countries breached their ceilings by many times.

[13] Albania has no functional large combustion plants. The 98 MW oil and gas plant at Vlora has never worked commercially due to technical problems.

[14] Energy Community Secretariat, Case ECS 07/21, North Macedonia/Environment, Case ECS 08/21, Kosovo*/Environment, Case ECS 09/21, Bosnia and Herzegovina/Environment, Case ECS 10/21, Serbia/Environment, accessed 7 May 2026.

[15] Energy Community Secretariat, 'Secretariat brings forward cases against three Contracting Parties for not reducing air pollution from thermal power plants', 23 February 2022.

[16] Ministerial Council of the Energy Community, Decision 2023/06/MC-EnC on the failure by Bosnia and Herzegovina to comply with the Energy Community Treaty in Case ECS-9/21, Decision 2023/05/MC-EnC on the failure by Kosovo* to comply with the Energy Community Treaty in Case ECS-8/21, Decision 2023/04/MC-EnC on the failure by the Republic of North Macedonia to comply with the Energy Community Treaty in Case ECS-7/21.

[17] Energy Community Secretariat, Case ECS 09/21, Bosnia and Herzegovina/Environment

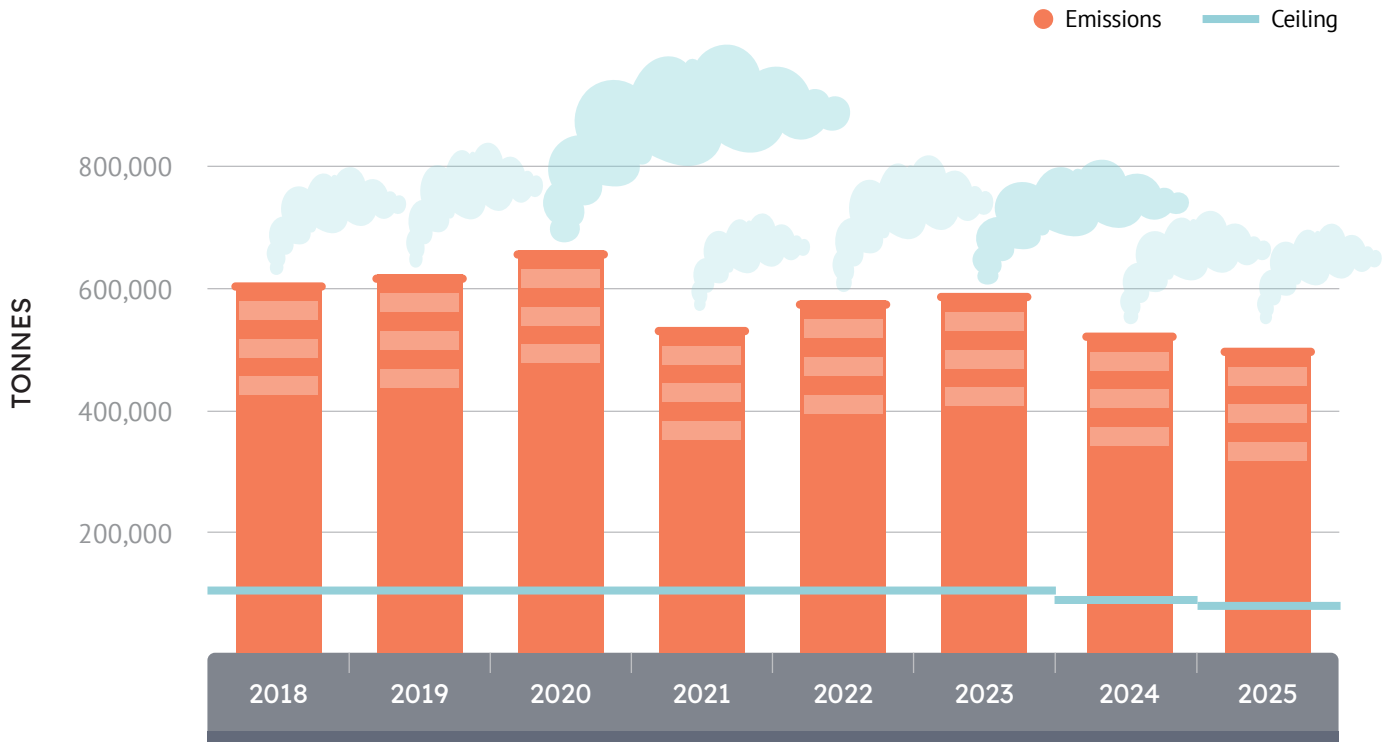
[18] Energy Community Secretariat, Case ECS-10/21: Serbia / environment, Energy Community.

[19] See EIONET Central Data Repository under the country name > European Union obligations > Reporting on combustion plants

Figure 1:

Sulphur dioxide emissions from the Western Balkan NERP coal plants, compared to the allowed emissions ceilings, 2018 to 2025

	2018	2019	2020	2021	2022	2023	2024	2025
Sulphur dioxide emissions	606,467	621,553	660,700	531,466	577,684	589,644	518,248	469,438
Sulphur dioxide ceiling	103,682	103,682	103,682	103,518[20]	103,518	103,518	87,126	70,732



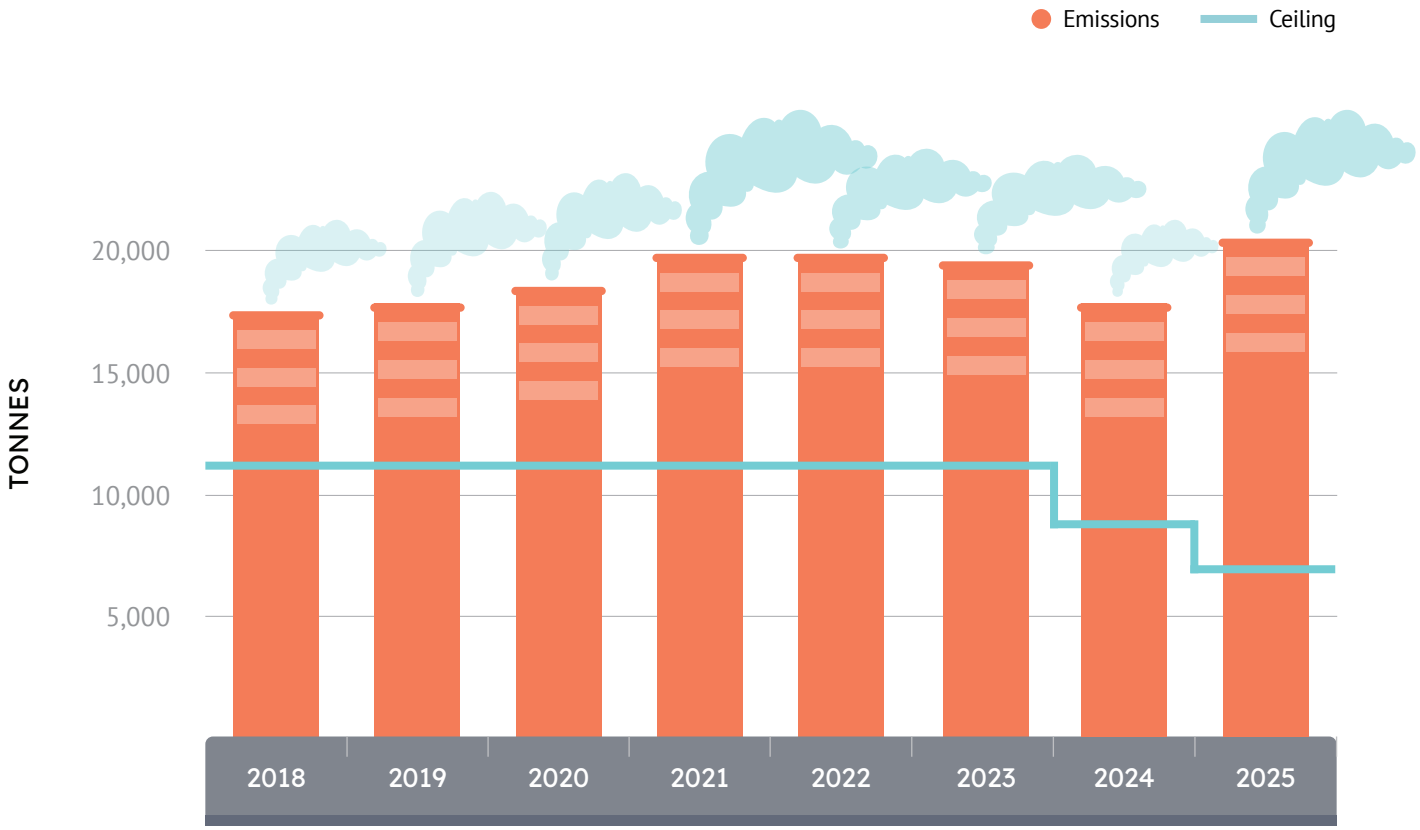
Dust emissions increased in 2025, and reached 2.9 times as high as the countries' NERP ceilings, compared to 1.9 times as high in 2024. This occurred partly due to the absolute increase in emissions and partly due to the decreasing ceiling. The Bitola power plant in North Macedonia, with its two stacks, emitted 7,675 tonnes and singlehandedly breached the 7,094-tonne regional ceiling for dust emissions for 2025.

[20] Kosovo's SO_2 ceiling dropped slightly in 2021.

Figure 2:

Dust emissions from the Western Balkan NERP coal plants, compared to the allowed emissions ceilings, 2018 to 2025

	2018	2019	2020	2021	2022	2023	2024	2025
Dust emissions	17,414	17,557	18,246	19,808	19,859	19,611	17,348	20,376
Dust ceiling	11,200	11,200	11,200	11,180[21]	11,180	11,180	9,147	7,094



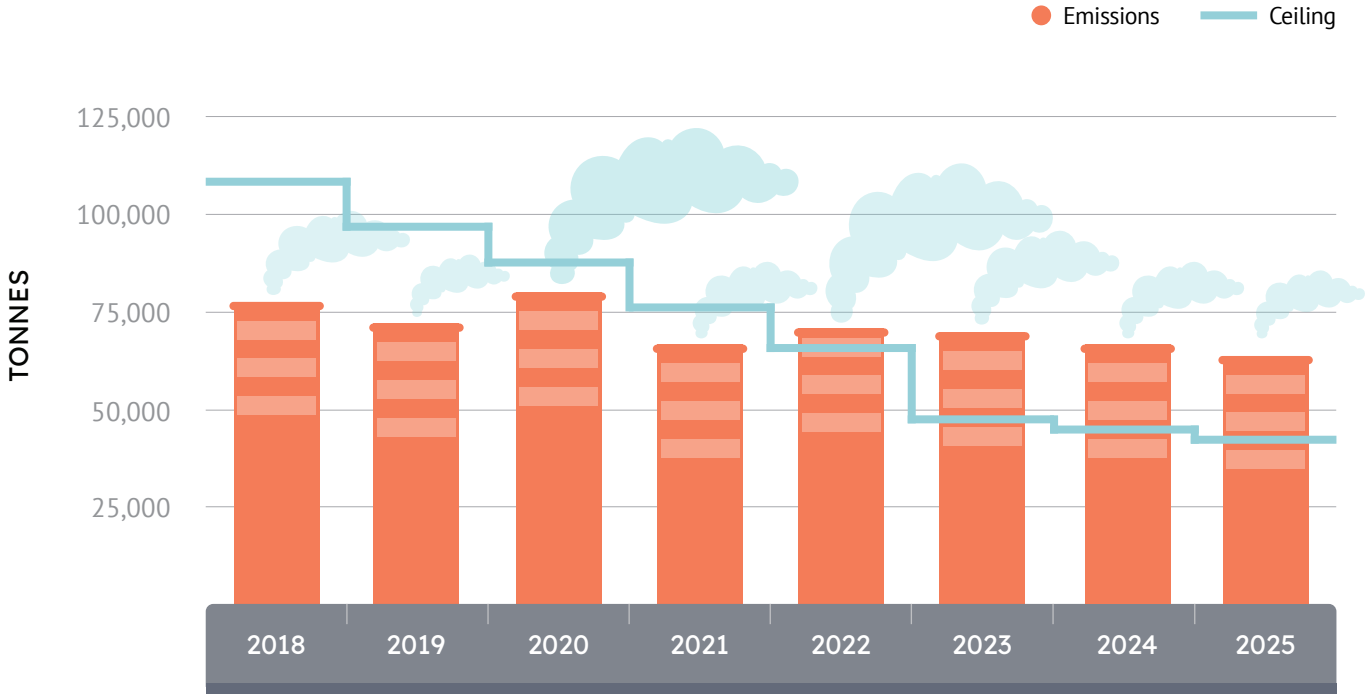
In 2022, for the first time, total emissions of nitrogen oxides slightly exceeded the sum of the countries' ceilings – a breach which increased to nearly 1.4 times the combined ceilings in 2024 and 2025. This was because there were no investments in NO_x reduction, the annual ceilings for this pollutant tighten every year, and absolute emissions stayed at a high level. Kosovo and Bosnia and Herzegovina were the main offenders in relative terms; however, Serbia also exceeded its NO_x ceiling in 2023, 2024 and 2025.

[21] Kosovo's dust ceiling dropped slightly in 2021.

Figure 3:

Nitrogen oxides emissions from the Western Balkan NERP coal plants, compared to the allowed emissions ceilings, 2018 to 2025

	2018	2019	2020	2021	2022	2023	2024	2025
Nitrogen oxides emissions	77,068	72,136	79,694	67,213	70,767	69,153	62,531	61,179
Nitrogen oxides ceiling	107,353	97,226	87,100	76,768	66,641	48,344	46,378	44,612



All of the above assumes that the emissions data is accurate. Yet many of the figures provided by the power plant operators are estimates rather than the result of continuous monitoring. The LCPD[22] obliges the countries to install and operate continuous emissions monitoring equipment, but to this day, almost half of the coal-fired power plants in the Western Balkans either have no such devices in place, or the devices in place do not work. Therefore, emissions data for all countries is at least partially based on estimates derived from once-monthly measurements and sometimes even measurements carried out once every three months.

In 2025, just as in 2024, Bosnia and Herzegovina's NERP coal plants were the highest SO_2 emitters in the region. They emitted 196,940 tonnes, or 12.7 times as high as allowed. Although this represented a slight drop in absolute emissions compared to 2024 (212,840 tonnes), overall there has been no significant progress since 2018, when the country's SO_2 emissions amounted to 202,005 tonnes.

Serbia followed with 177,756 tonnes, or 5.1 times as high as allowed. This represented only a modest decrease compared to 2024, when Serbia's SO_2 emissions amounted to 205,925 tonnes. Serbia's SO_2 emissions have decreased significantly since 2018, but nowhere near as fast as needed to achieve compliance.

[22] Article 12 of the Large Combustion Plants Directive.

In absolute terms, long-standing offender Ugljevik in Bosnia and Herzegovina was once again the unit with the highest SO_2 emissions in the region in 2025, with 115,079 tonnes. Despite the installation of a desulphurisation unit, its SO_2 emissions have increased each year since 2022. The desulphurisation equipment clearly did not work regularly between 2022 and 2025, despite testing having reportedly finished successfully in August 2020[23] and an operating permit having been obtained for the de-SO_x in November 2021.[24] It looks increasingly doubtful that this EUR 85 million project will ever be properly utilised to bring the Ugljevik plant into compliance with its SO_2 ceilings and with the Industrial Emissions Directive limit values it needs to reach by 2027.

Nikola Tesla B in Serbia also had extremely high absolute SO_2 emissions in 2025 – 77,470 tonnes, similar to the previous year. A desulphurisation unit was reported to have started trial operation in April 2026[25] (see the section on Serbia), but the experience with Ugljevik and Kostolac B (see later in this section) shows there is no guarantee that compliance will follow.

Although individual unit-level ceilings are not binding – only country-level ones are – looking at breaches of these unit-level limits can give a good indication of where particular action is needed.

In 2025, no fewer than five units exceeded their ceilings for sulphur dioxide emissions by more than ten times:

- Bitola B3, North Macedonia: 16.4 times
- Ugljevik, Bosnia and Herzegovina: 16.3 times
- Gacko, Bosnia and Herzegovina: 12.8 times
- Kakanj 6, Bosnia and Herzegovina: 12.5 times
- Bitola B 1 & 2, North Macedonia: 11.8 times

Tuzla 6 and Kakanj 7 in Bosnia and Herzegovina also came close, emitting 9.5 and 9.8 times as much sulphur dioxide as allowed by the country's NERP.

Kostolac B, one of the highest absolute and relative sulphur dioxide emitters from 2018 to 2020, had finally started to decrease its emissions in 2024, but in 2025 it emitted 17,452 tonnes, or 3.3 times as much as allowed – somewhat more than the 15,218 tonnes it emitted in 2024. Despite having a desulphurisation unit installed, after a decrease in 2021, its SO_2 emissions increased in 2022 and 2023. The de-SO_x, installed by the China Machinery Engineering Corporation (CMEC), was formally inaugurated in 2017, yet only obtained an operating permit in January 2023.[26]

For dust, the absolute highest emitter in the region was Gacko in Bosnia and Herzegovina. It emitted 2,761 tonnes, or 15.1 times as much as allowed in BiH's NERP. Shocking as this is, it represents a decrease compared to its dust emissions during the period from 2022 to 2024, when the plant emitted more than 3,000 tonnes per year.

North Macedonia's Bitola plant also stands out as a major dust polluter. Its B 1 & 2 units emitted 5,276 tonnes in 2025 – or 10.7 times as much as allowed – and its B3 unit emitted 2,399 tonnes, or 11.2 times as much as allowed, resulting in serious cumulative impacts.

Other very high dust emitters in the region are the Kosova B1 unit, which emitted 2,575 tonnes in 2025, or 6.2 times as much as allowed, and Kosova B2, which emitted 1,567 tonnes, or 3.8 times as much as allowed.

For nitrogen oxides, Nikola Tesla B in Serbia had by far the highest absolute emissions in 2025, at 11,247 tonnes, only slightly less than its 2024 emissions of 12,418 tonnes.

[23] RiTE Ugljevik, 'Izuzetni rezultati u zaštiti životne sredine', *RiTE Ugljevik*, 27 August 2020.

[24] Ministry of Spatial Planning, Construction and Ecology of Republika Srpska, Decision no. 15.03-360-164/21.

[25] Vladimir Spasić, Serbia's EPS starts trial operation of desulfurization system in TENT B coal plant, *Balkan Green Energy News*, 7 April 2026.

[26] Renewables and Environmental Regulatory Institute (RERI), Desulphurisation in the Western Balkans, March 2023.

In relative terms, Kosova A5 was the worst offender for nitrogen oxides in 2025, emitting 3.5 times as much as allowed, or 2,141 tonnes.

All three countries with plants that entered the opt-out regime are still in breach of the LCPD.

Eight units in Bosnia and Herzegovina, Montenegro and Serbia entered the so-called 'opt-out' regime in 2018: Tuzla 3 and 4, Kakanj 5, Pljevlja, Morava, Kolubara A3 (boiler 1), Kolubara A3 (boilers 3, 4 and 5) and Kolubara A5.[27] But not one of them has complied with the relevant ELVs, despite the 31 December 2023 deadline having passed long ago and most of them having exceeded their 20,000-hour limits. In 2024 and 2025, only Tuzla 3 had no reported operating hours, but it has not been officially closed either (see the section on Bosnia and Herzegovina).

The Pljevlja plant in Montenegro is undergoing a retrofit, and the lifetime of Tuzla 4 and Kakanj 5 in Bosnia and Herzegovina was illegally extended by a decision of the Federation of BiH Parliament in March 2022.[28] In early 2023, Elektroprivreda Srbije (EPS) announced it would close the Kolubara and Morava plants at the end of 2024,[29] but this did not happen and the country's energy strategy now mentions 2030 (see the section on Serbia).

Due to breaches of the opt-out provisions, the Energy Community Secretariat opened dispute settlement cases against Montenegro in April 2021,[30] Bosnia and Herzegovina in October 2022,[31] and Serbia in October 2023.[32]

Overall, eight years after the LCPD compliance deadline passed in the Energy Community, the situation remains appalling. Since 2018, emissions covered by the NERPs have decreased only somewhat for sulphur dioxide and nitrogen oxides, while for dust they have increased. None of the opt-out plants have been permanently closed, with the possible exception of Tuzla 3. Yet so far the only fine imposed on a plant operator for these flagrant breaches came from a court as a result of a civil society lawsuit in Serbia, and even this has been challenged by the operator. None of the responsible authorities have issued any penalties.

Coal in decline

Governments and utilities have for years presented coal as a reliable domestic source of energy in the Western Balkans, but this view is now outdated and at odds with reality. As of 2026, the average age of the region's coal power units is 49 years. Planned and unplanned outages at coal plants are increasingly common.

In recent years, coal supply has been a major issue for North Macedonia and Serbia, forcing them to turn to costly imports. In Bosnia and Herzegovina, coal supply has also been an issue in both entities.[33] In all three cases, this has led to a drop in coal-based power generation – in North Macedonia since 2011; in Bosnia and Herzegovina since 2018; and in Serbia since 2015, with an increasing drop since 2020.[34]

27 Energy Community Secretariat, Energy Community Secretariat's Summary Report on the final list of opted-out plants, April 2018.

28 Energy Community Secretariat, 'Environmental concerns increase with decision on lifetime extension of Tuzla 4 and Kakanj 5', 25 March 2022.

29 Vladimir Spasić, 'EPS sets out plan for shutting down coal power plants', *Balkan Green Energy News*, 16 February 2023.

30 Energy Community Secretariat, 'Case ECS-15/21: Montenegro / Environment'.

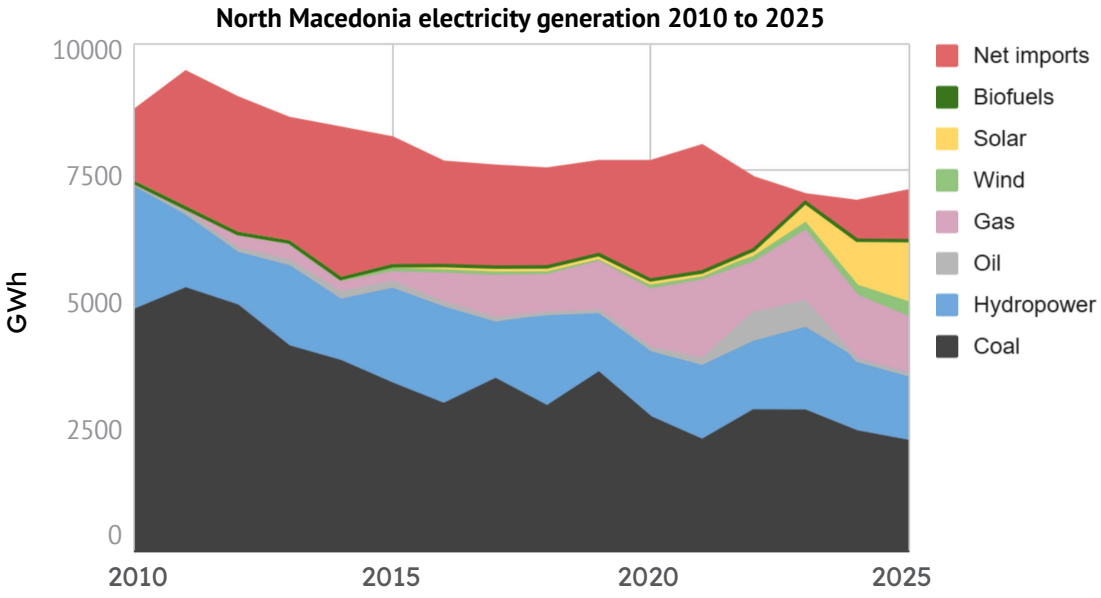
31 Energy Community Secretariat, 'Secretariat launches dispute settlement procedure against Bosnia and Herzegovina for breaching Large Combustion Plants Directive in the case of Tuzla 4 and Kakanj 5'.

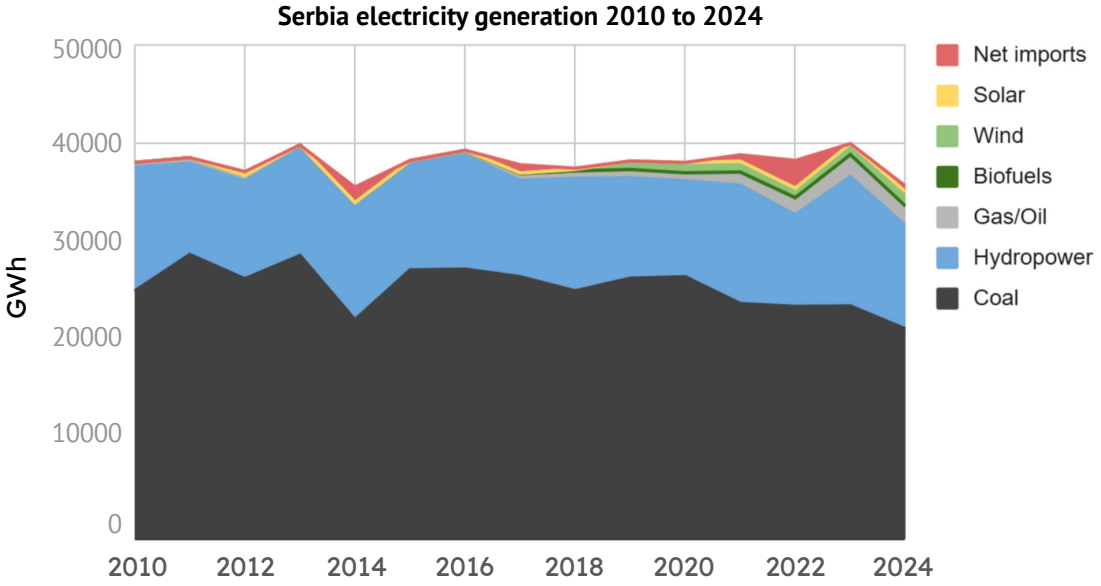
32 Energy Community Secretariat, 'Secretariat launches dispute settlement procedure against Serbia for breaching the Large Combustion Plants Directive in the case of TPP Morava'.

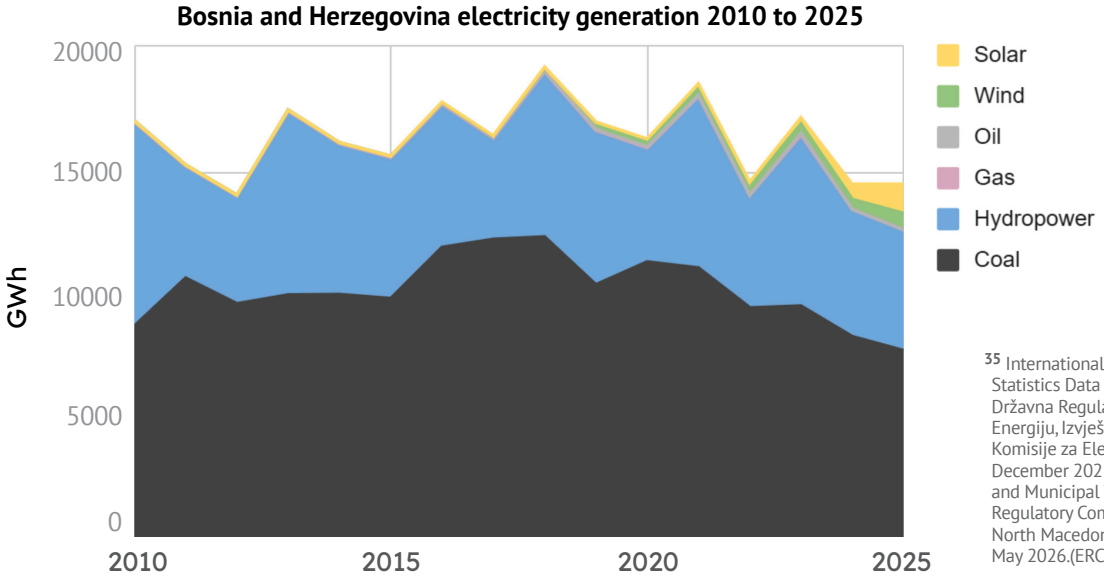
33 Ermin Zatega, 'Kako je Bosna i Hercegovina postala ovisna o uvoznoj električnoj energiji?', *Radio Slobodna Evropa*, 1 May 2025.

34 Figures for 2025 are not yet available for Serbia.

Figure 4: *Decline in coal-fired generation in Bosnia and Herzegovina, North Macedonia and Serbia*[35]







[35] International Energy Agency, Energy Statistics Data Browser, accessed 5 May 2026; Državna Regulatorna Komisija za Električnu Energiju, Izvještaj o radu Državne Regulatorne Komisije za Električnu Energiju u 2025. godini, December 2025; Energy, Water Services and Municipal Waste Management Services Regulatory Commission of the Republic of North Macedonia (ERC), Annual Report 2025, May 2026.(ERC), Annual Report 2024.

The trends in Kosovo and Montenegro are not as clear-cut yet, though Kosovo's coal-based electricity generation may have peaked in 2021 if current trends continue.[36]

All this is without the full impact of the EU's Carbon Border Adjustment Mechanism (CBAM) being visible yet. CBAM's definitive regime began in January 2026, meaning that imports of electricity to the EU from the Western Balkans are now subject to charges set mainly according to default emissions factors per country.[37] Although the Regulation governing CBAM allows exemptions in the electricity sector, subject to electricity market coupling with the EU, introducing carbon pricing at the level of the EU Emissions Trading System, and several other conditions, none of the Western Balkan countries are anywhere near close to meeting these conditions.[38]

The Energy Community Secretariat's first quarterly report on the impacts of CBAM identified two main trends in the first quarter of 2026. Commercially scheduled cross-border exchanges fell by 25% across borders with EU Member States, despite significant generation from hydropower due to favourable conditions. And day-ahead electricity prices in the countries covered by the Treaty were on average EUR 30/MWh lower than in neighbouring EU markets.[39] While the Secretariat highlighted the negative implications of such potential emerging distortions for electricity market integration, civil society groups have pointed out the positive side of CBAM: Finally, a high-carbon energy mix – which in the Western Balkan case does not comply with either national or EU standards – has consequences for countries that want to participate in EU energy markets.[40]

In principle, this could still encourage Western Balkan governments to better plan for a just transition to a 100% renewable, energy efficient economy, though time is running out for the region's antiquated coal power plants. Wind and solar installations have greatly speeded up across the region,[41] but not yet sufficiently to deal with major coal closures.

The region's governments did not use the first round of the National Energy and Climate Plan (NECP) process well enough to bring certainty into their medium-term energy planning, but in 2026 many of them are due to update their long-term climate strategies[42] – a chance which they cannot afford to squander. Their NECPs are also due to be updated in 2027, with the deadline for submission of drafts to the Energy Community Secretariat set on 1 January 2028.[43] This time, the long-term strategies need to show a convincing decarbonisation path to reach climate neutrality by 2050 at the latest, and the NECPs need to translate that into a speedy but realistic action plan.

Unfortunately, the region's governments do not seem to have got the message. On the one hand, they are trying to squeeze every last drop of life out of their coal power plants through expensive retrofits, like the EUR 137 million one announced for Kosova A3 in January 2025 or the EUR 80 million one ongoing at Pljevlja in Montenegro. This no longer makes sense given the age of the plants and the inevitability of introducing carbon pricing in the coming years.

And on the other hand, Western Balkan governments – heavily lobbied by the United States – are increasingly making a dash for gas.[44] Gasification would be a major and very costly mistake for a region that is much less dependent on fossil gas than the EU, and it threatens to distract attention from more relevant and future-proof technologies like appropriately sited solar and wind, heat pumps and geothermal.[45]

As the saying goes, 'failing to plan is planning to fail', and this is regrettably what is happening now in most of the countries. It is too late to start new investments in order to comply with the LCPD, while closure of coal plants and mines requires careful planning, including for a just transition of coal-dependent communities. In the absence of these two, a third 'c' – collapse – becomes a real possibility, as happened in 2024 when the closure of the Zenica coal mine in Bosnia and Herzegovina was announced[46] with no real plan in place.

[36] International Energy Agency, Energy Statistics Data Browser.

[37] Albania is the only country in the region not subject to such charges since its default emissions factor is zero – though this would change if it starts using its floating oil-powered units at Vlora or if it completes its planned gas-fired power plants at Roskovec and Vlora.

[38] CEE Bankwatch Network et al., Electricity market integration needs environmental compliance, March 2026.

[39] Energy Community Secretariat, CBAM Quarterly report, 29 April 2026.

[40] CEE Bankwatch Network et al., Electricity market integration needs environmental compliance.

[41] For more details, see Ioana Ciuta and Pippa Gallop, A perfect storm: The Western Balkans power sector in the time of CBAM, October 2025.

[42] Energy Community Secretariat, Long-term strategies, accessed 5 May 2026.

[43] Energy Community Secretariat, NECPs process, accessed 5 May 2026.

[44] Belgrade Open School et al., Joint civil society statement As the latest fossil fuel crisis starts to bite, Western Balkan governments must avoid further gas addiction and leapfrog to a renewable future!, 27 April, 2026.

[45] With capture of any harmful gases and reinjection of the water.

[46] Tatjana Čalić, Zenica zatvara rudnik: Koji je sljedeći i šta nas čeka sa snabdijevanjem strujom?, *Buka*, 17 December 2024.

Country profiles

Bosnia and Herzegovina (BiH)

Compliance with the NERP ceilings in 2025

Bosnia and Herzegovina's NERP[47] covers seven coal-fired units[48] and one smaller industrial power plant using heavy fuel oil. Of these, two units, Gacko and Ugljevik, are in Republika Srpska, and the Tuzla and Kakanj plants – which each have two units in the NERP – are in the Federation of Bosnia and Herzegovina (FBiH).

Another three units – Tuzla 3, Tuzla 4 and Kakanj 5[49] – were subject to limited lifetime derogations ('opt-outs') (see the next section).

BiH also has one newer plant which does not qualify for inclusion in the NERP – Stanari, in Republika Srpska, which officially started operations in September 2016 and was obliged to comply with LCPD limit values for new plants as soon as it started operating.

Once again in 2025, Bosnia and Herzegovina's NERP coal plants did not comply with the ceilings for any of the regulated pollutants: sulphur dioxide, dust or nitrogen oxides.

In fact, in 2025 **sulphur dioxide emissions from the NERP plants in BiH remained almost as high in 2018.** They reached 12.7 times as much as allowed – 196,940 tonnes, compared to the ceiling of 15,528 tonnes. This was slightly less than their 2024 emissions of 212,840 tonnes, but represented a larger breach because the ceiling was lower in 2025.

[47] USAID, Draft National Emission Reduction Plan for Bosnia and Herzegovina, *Energy Community*, November 2015.

[48] The NERP text also includes Kakanj 5 and Tuzla 4, but these were later approved as opt-out plants, so the real ceilings for BiH do not include the contributions of these plants.

[49] Energy Community Secretariat, Report on the final list of opted-out plants.

Figure 5:

Sulphur dioxide emissions from Bosnia and Herzegovina's NERP coal plants, compared to the allowed emissions ceilings, 2018 to 2025

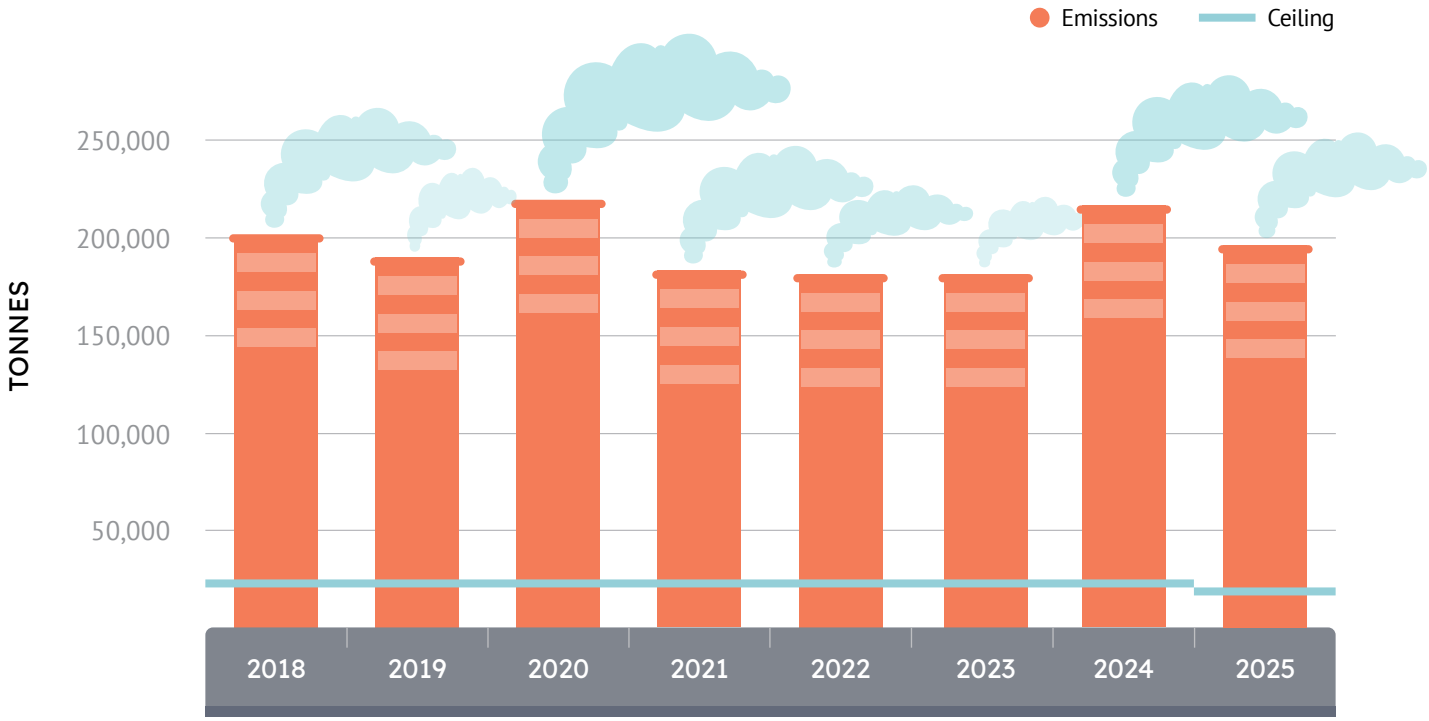
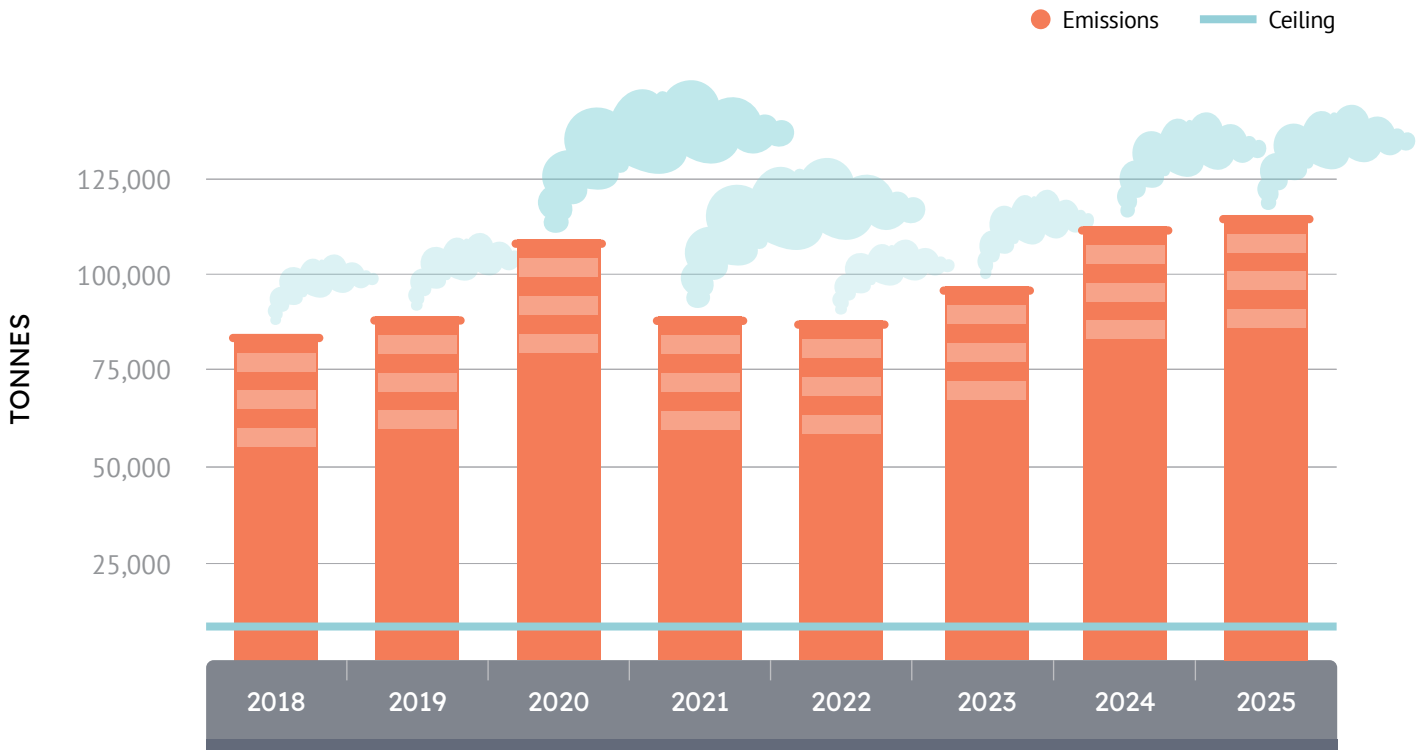


Figure 6:

Sulphur dioxide emissions from Ugljevik, compared to the individual emissions ceiling, 2018 to 2025



The worst offender in BiH and regionally in 2025 in terms of absolute emissions was once again Ugljevik, whose desulphurisation equipment clearly did not operate, despite an operating permit having been obtained in November 2021.[50] **Its 2025 emissions of 115,079 tonnes were at their highest level since the LCPD entered force in 2018.**

In 2025, Ugljevik also had the highest exceedance for sulphur dioxide in Bosnia and Herzegovina – more than 16 times as much as allowed. But Gacko and Kakanj 6 also emitted more than 12 times as much SO_2 as allowed.

In November 2025, the Kakanj power plant temporarily limited its output after a prolonged period of extreme sulphur dioxide pollution prompted the local authorities to request emergency measures[51] – a rare example of such measures in the country.

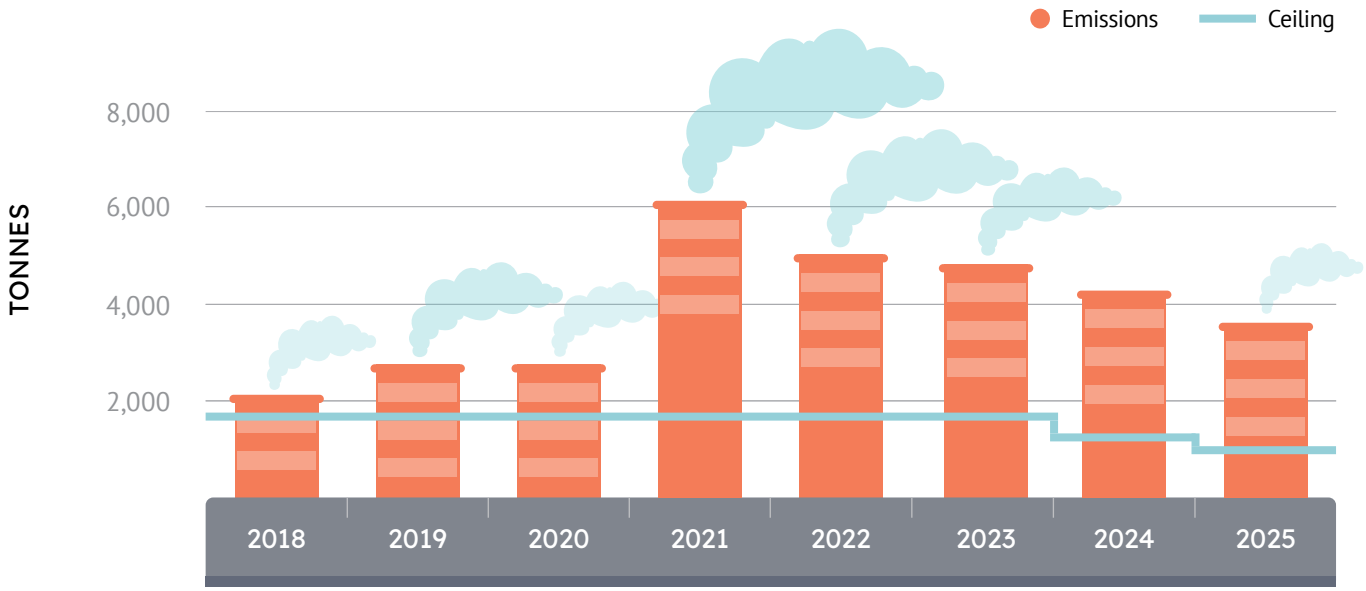
In 2025, dust emissions from Bosnia and Herzegovina's NERP plants amounted to 3,575 tonnes. This was slightly less than in 2024 (4,146 tonnes) and represented a decrease from the 2021 peak of 6,040 tonnes, but was still massively more than the 2,686 tonnes emitted in 2020. Though the absolute emissions somewhat decreased in 2025, so did the allowed ceiling for emissions, so the overall exceedance was higher (3.7 times as much as allowed) compared to the previous year (3.1 times).

[50] Ministry of Spatial Planning, Construction and Ecology of Republika Srpska, Decision no. 15.03-360-164/21.

[51] Vladimir Berbatović, TE Kakanj obustavila proizvodnju struje zbog rekordnog zagađenja vazduha, Balkan Green Energy News, 18 November 2025.

Figure 7:

Dust emissions from Bosnia and Herzegovina's NERP coal plants, compared to the allowed emissions ceilings, 2018 to 2025



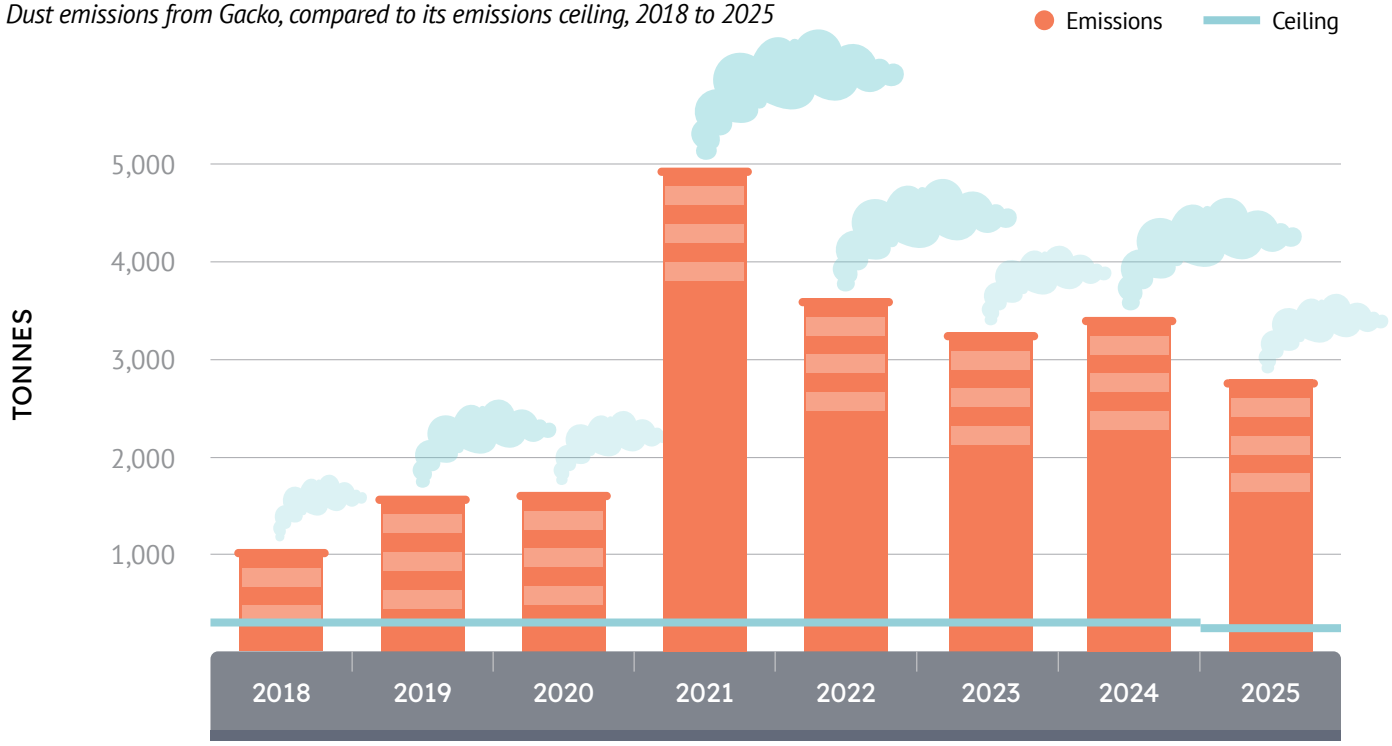
By far the main culprit was the Gacko plant, whose dust emissions amounted to 15.1 times as much as allowed in 2025. After people from the Nadinići area held a protest due to the pollution in May 2023,[52] it seemed that finally some attempts to resolve the problem were being made. By October 2023, some improvements could be seen. However, it was also warned that this was a temporary solution and further investments would be needed.[53] The 2025 measurements show that indeed, the situation has improved only slightly and remains untenable.

[52] Radio Gacko, Održan protest ispred RiTE Gacko - Dosta je bilo pepela, 16 May 2023.

[53] Radio Televizija Republike Srpske, 'Gacko: Privremeno riješen problem zagađenja vazduha', *RTRS Vijesti*, 28 October 2023.

Figure 8:

Dust emissions from Gacko, compared to its emissions ceiling, 2018 to 2025

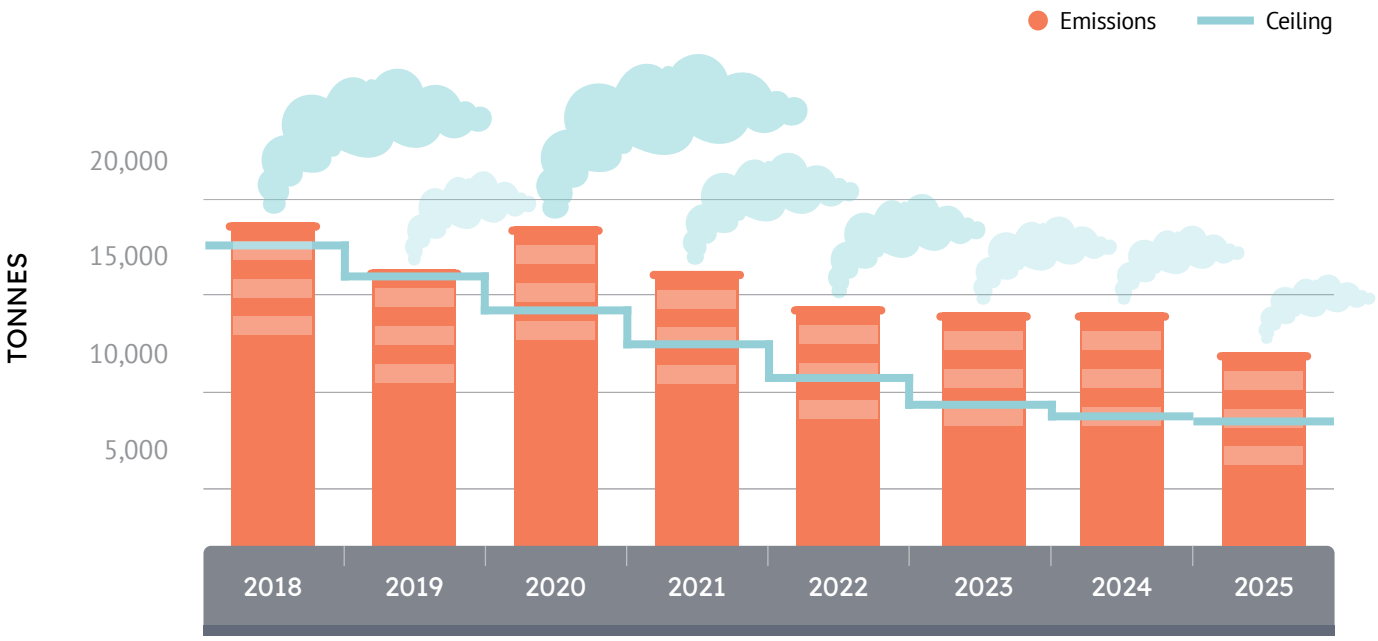


Nitrogen oxides emissions from BiH's NERP coal units in 2025 totalled 10,009 tonnes, compared to the allowed ceiling of 6,562 tonnes, or more than 1.5 times as much as allowed. BiH's NO_x emissions have been gradually dropping; however, so has the NERP ceiling for this substance. The 2025 figure represents only a slightly smaller breach than in 2024, when NO_x emissions were 1.7 times as high as the country's ceiling.

In 2025, Gacko had the highest exceedance for NO_x in Bosnia and Herzegovina, with almost 1.9 times as much as allowed.

Figure 9:

Nitrogen oxides emissions from Bosnia and Herzegovina's NERP coal plants, compared to the allowed emissions ceilings, 2018 to 2025



Bosnia and Herzegovina (2025)

SO_2 ceiling[54]	SO_2 emissions	Dust ceiling	Dust emissions	NO_x ceiling	NO_x emissions
15,528	196,940	955	3,575	6,562	10,009

In March 2021, due to the breaches of the overall NERP ceilings, the Energy Community Secretariat opened a dispute settlement case against Bosnia and Herzegovina, along with cases against other countries. On 13 July 2023, the Secretariat submitted a reasoned request to the Ministerial Council to make a decision confirming non-compliance, which it did in December 2023.[55] As the breaches have not been rectified, as of May 2026, the case remains open.[56]

Overall in Bosnia and Herzegovina, since 2018, sulphur dioxide and dust emissions from NERP plants have increased, while only nitrogen oxide emissions have decreased somewhat, despite a lack of investments in denitrification equipment.

[54] The original BiH ceilings in the NERP included Kakanj 5 and Tuzla 4, which were later included in the opt-out regime, so the calculations for the ceiling were based on the sum of the ceilings for the other plants.

[55] Ministerial Council of the Energy Community, Decision 2023/06/MC-EnC on the failure by Bosnia and Herzegovina to comply with the Energy Community Treaty in Case ECS-9/21.

[56] Energy Community Secretariat, Case ECS 09/21, Bosnia and Herzegovina/ Environment.

'Opting out' of compliance

As mentioned above, Tuzla 3, Tuzla 4 and Kakanj 5[57] were subject to so-called 'opt-out' rules, which allowed them to run for a total of 20,000 hours between 1 January 2018 and 31 December 2023. After this, they either had to close or comply with the emission limit values for new plants under the Industrial Emissions Directive.

By the end of 2023, Tuzla 3 had used up 19,476 hours since 1 January 2018, but due to the expiry of the deadline, had to close in any case. No operating hours were reported for 2024 or 2025, but no announcements have been made about its closure either.[58] Controversial plans exist for its replacement by a biomass plant, but few details are publicly available.[59]

As explained in previous Comply or Close reports,[60] Tuzla 4 and Kakanj 5 have continued to work after their legal expiry date. After using up their 20,000 hours, they could only be operated if they met the emission limit values set out in Part 2 of Annex V to Directive 2010/75/EU.[61] Nowhere in the documentation provided by the plants' operator, Elektroprivreda Bosne i Hercegovine (EPBiH), to the government or in the documentation provided by the government to the FBiH parliament did it suggest that any investments are planned that would make such compliance possible.

In October 2022, the Energy Community Secretariat opened a second case against Bosnia and Herzegovina for non-compliance with the Large Combustion Plants Directive regarding Tuzla 4 and Kakanj 5.[62] Because no progress had been observed since then, in March 2026 it escalated the case by issuing a reasoned opinion.[63]

Investments in pollution control – too little, too late

Apart from the newer Stanari plant which opened in 2016, only Ugljevik has desulphurisation equipment, and even that is not being used because it represents an 'economic burden'.[64] This has not put EPBiH off from planning similar investments at Kakanj and Tuzla, but they are going exceedingly slowly. In 2024, EPBiH signed a contract with a consortium led by China's Dongfang Electric International Corporation for the construction of a desulphurisation unit for Kakanj 6 and 7,[65] and at the same time, a tender for desulphurisation for Tuzla 6 was also announced. However, we have not been able to find substantial updates on the progress of either project online.

Bosnia and Herzegovina has so far not come up with a clear plan to phase out coal. Its long-term strategy, dated December 2020,[66] is outdated and requires a serious overhaul in order to be compatible with carbon neutrality by 2050. The country's energy strategy, adopted in 2018, is even more outdated. It foresees several coal power units remaining in operation beyond 2035 in all scenarios, but does not specify closure dates for them. It also expects several new plants to be built,[67] which has not happened, resulting in reluctance by Elektroprivreda Republike Srpske (ERS) and EPBiH to close existing units at the same locations. As of early May 2026, the country has not adopted its draft NECP, despite a draft having been submitted to the Energy Community Secretariat in 2023. In late 2024, the Federation of BiH was reported to be in the process of preparing an energy strategy,[68] but this has not been published yet.

Time is running out to plan an orderly exit from coal. Even counting the newer Stanari plant which opened in 2016, BiH's coal plants are on average 46 years old. To make matters worse, both the Republika Srpska and Federation of BiH authorities are being distracted by costly gas plans which are unlikely to be economically viable, and are diverting resources away from more rational options such as building retrofits, heat pumps, geothermal, and appropriately-sited solar and wind.

In April, the Republika Srpska authorities signed a contract for the Šepak to Novigrad gas pipeline, which according to the Republika Srpska Premier, Sava Minić, opens up the possibility of gas-fired power plants as well.[69]

[57] Energy Community Secretariat, Report on the final list of opted-out plants.

[58] The Elektroprivreda BiH *Business Plan 2026-2028* does not mention the unit. See Elektroprivreda BiH, Plan poslovanja za period 2026. - 2028. godina, December 2025. On the other hand, the Independent System Operator's Indicative Generation Development Plan 2025 to 2034 states that it has been offline since 2024 but a smaller unit running on biomass is planned as a replacement from 2030 onwards. See Nezavisni operator sistema u Bosni i Hercegovini (NOSBiH), Indikativni plan razvoja proizvodnje 2025-2034, June 2024. The biomass replacement is not mentioned in the 2027 to 2026 plan. See NOSBiH, Indikativni plan razvoja proizvodnje 2027-2026, April 2026.

[59] Klix, 'Šta bi značio prelazak Bloka 3 Termoelektrane Tuzla na biomasu i kada bi se to moglo desiti', *Klix.ba*, 21 January 2024.

[60] CEE Bankwatch Network, Comply or Close 2022 report update, *CEE Bankwatch Network*, June 2022.

[61] Energy Community Ministerial Council, D/2015/07/MC-EnC: On amending Decision D/2013/05/MC-EnC of 24 October 2013 on the implementation of Directive 2001/80/EC of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from large combustion plants and on amending Annex II of the Energy Community Treaty, *Energy Community*, 16 October 2015.

[62] Energy Community Secretariat, 'Secretariat launches dispute settlement procedure against Bosnia and Herzegovina for breaching Large Combustion Plants Directive in the case of Tuzla 4 and Kakanj 5'.

[63] Energy Community Secretariat, Case ECS-01/22: Bosnia and Herzegovina / environment.

[64] RiTE Ugljevik, Letter no: 14047/23, 18 April 2023.

[65] Elektroprivreda Bosne i Hercegovine, Potpisan Ugovor za projekat odsumporavanja u TE „Kakanj", December 2024.

[66] Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina; Ministry of Spatial Planning, Construction and Ecology of Republic of Srpska, Federal Ministry of Environment and Tourism; Department for Spatial Planning and Legal-Property Affairs of Brcko District, The 2020-2030 climate change adaptation and low emission development strategy for Bosnia and Herzegovina, *Global Environment Facility and United Nations Development Programme*, December 2020.

[67] Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina, Framework Energy Strategy of Bosnia and Herzegovina until 2035, 69, 2018.

[68] Vladimir Spasić, Federation of BiH preparing energy sector transition strategy, *Balkan Green Energy News*, 18 December 2024.

[69] Nemanja Vukojević, Potpisan sporazum za gradnju gasovoda Šepak–Novi Grad vrijedan 1,29 milijardi KM, *Nezavisne Novine*, 17 April 2026.

The Federal minister for energy, mining and industry has mentioned plans to build gas power plants in Kakanj, Tuzla and Mostar, in order to improve the feasibility of the planned southern gas interconnection,[70] despite the fact that a gas plant in Zenica had previously been found to be uneconomic.[71] These would be very unlikely to contribute to Bosnia and Herzegovina's coal phase-out, as they would be more expensive to use than coal, hydropower, wind or solar. Instead, it is more likely they would become stranded assets. With the current lack of coherent and evidence-based plans, whether BiH succeeds in sufficiently ramping up solar and wind capacity to step in before its coal plants fall apart is currently anyone's guess.

[70] Maja Smajlović, Vedran Lakić: Amerikanci žele i gasne elektrane, *Oslobodjenje*, 19 January 2026.

[71] Debabrata Chattopadhyay et al., Bosnia and Herzegovina Power Sector Note: Least-cost Power Development Plan Final Report, *ESMAP - Energy Sector Management Assistance Project*, March 2017.

Gacko power plant, Bosnia and Herzegovina
Photo: Andrey Ralev, CEE Bankwatch Network

Kosovo

Compliance with the NERP ceilings in 2025

All of Kosovo's five coal-fired units (Kosova A3, A4 and A5 and Kosova B1 and B2) are included in the NERP.

In 2025, Kosovo's coal fleet was in breach of national ceilings for two of the three pollutants, dust and nitrogen oxides. Similar to 2023 levels, sulphur dioxide emissions were just below the national ceiling, although units A4 and A5 both had emissions above their individual ceilings.

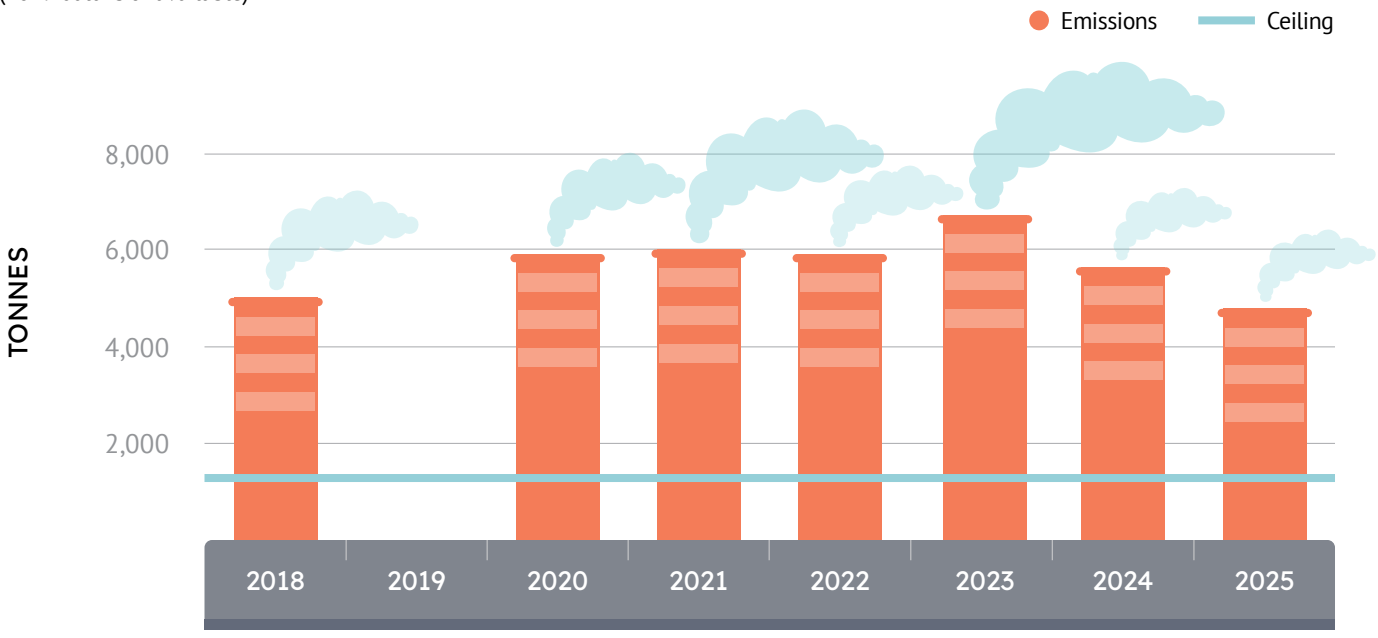
Dust emissions have always been the country's biggest pollution problem. In 2025, despite a visible decrease compared to previous years, they continued to be unacceptably high.

Dust pollution was 4.1 times above the national level ceiling set out in Annex 2[72] of the NERP and totalled 4,762 tonnes. Kosova B1 alone emitted almost twice as much as the national dust ceiling in 2025, releasing a total of 2,575 tonnes into the atmosphere, 6.2 times higher than its individual ceiling allows. Kosova B2, which emitted 1,567 tonnes of dust, continued to reduce its pollution in 2025 compared to previous years. However, this still amounted to 3.78 times as high as allowed.

[72] This annex is not part of the publicly available NERP and has been leaked to the authors of this report.

Figure 10:

Dust emissions from Kosovo's NERP coal plants, compared to the national emissions ceilings, 2018 to 2025
(2019 data is unavailable)



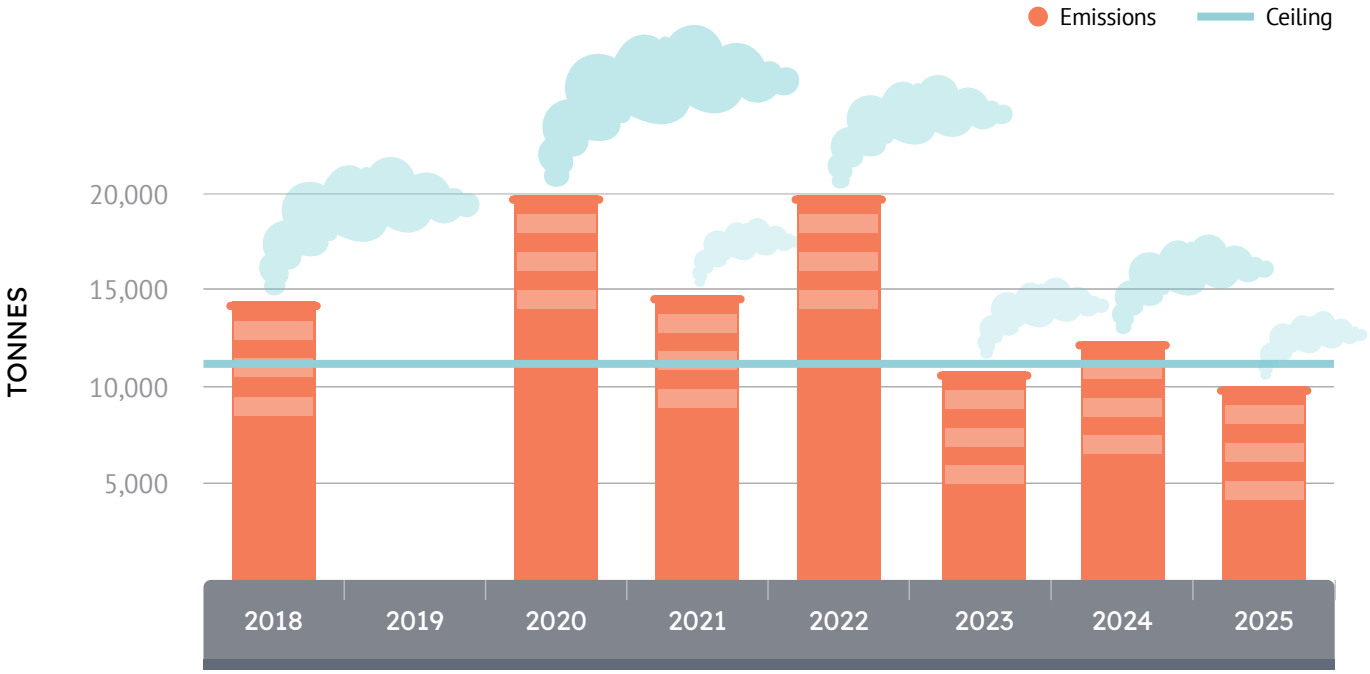
SO_2 emissions were compliant with the national ceiling in 2025 and totalled 10,092 tonnes. Although they were compliant for the first time in 2023, SO_2 emissions rose above the threshold again in 2024. These fluctuations are hard to explain in the absence of a functional desulphurisation installation at any of the units.

However, the country's reported emissions are actually estimates: Kosova A lacks continuous monitoring equipment and Kosova B's monitoring equipment is operational only at regular testing intervals, in between which emissions are calculated mathematically. In 2025, staff from Kosovo's Environmental Protection Agency reportedly received training in monitoring, verifying and reporting emissions,[73] but it is unclear how this is useful in the absence of continuous monitoring equipment installed at the power plants.

[73] Republic of Kosovo Ministry of Energy, Progress report for the period January - June 2025 of Kosovo Energy Strategy Implementation program for the period 2022 - 2025, 70, August 2025.

Figure 11:

Sulphur dioxide emissions from Kosovo's NERP coal plants, compared to the national emissions ceilings, 2018 to 2025
(2019 data is unavailable)

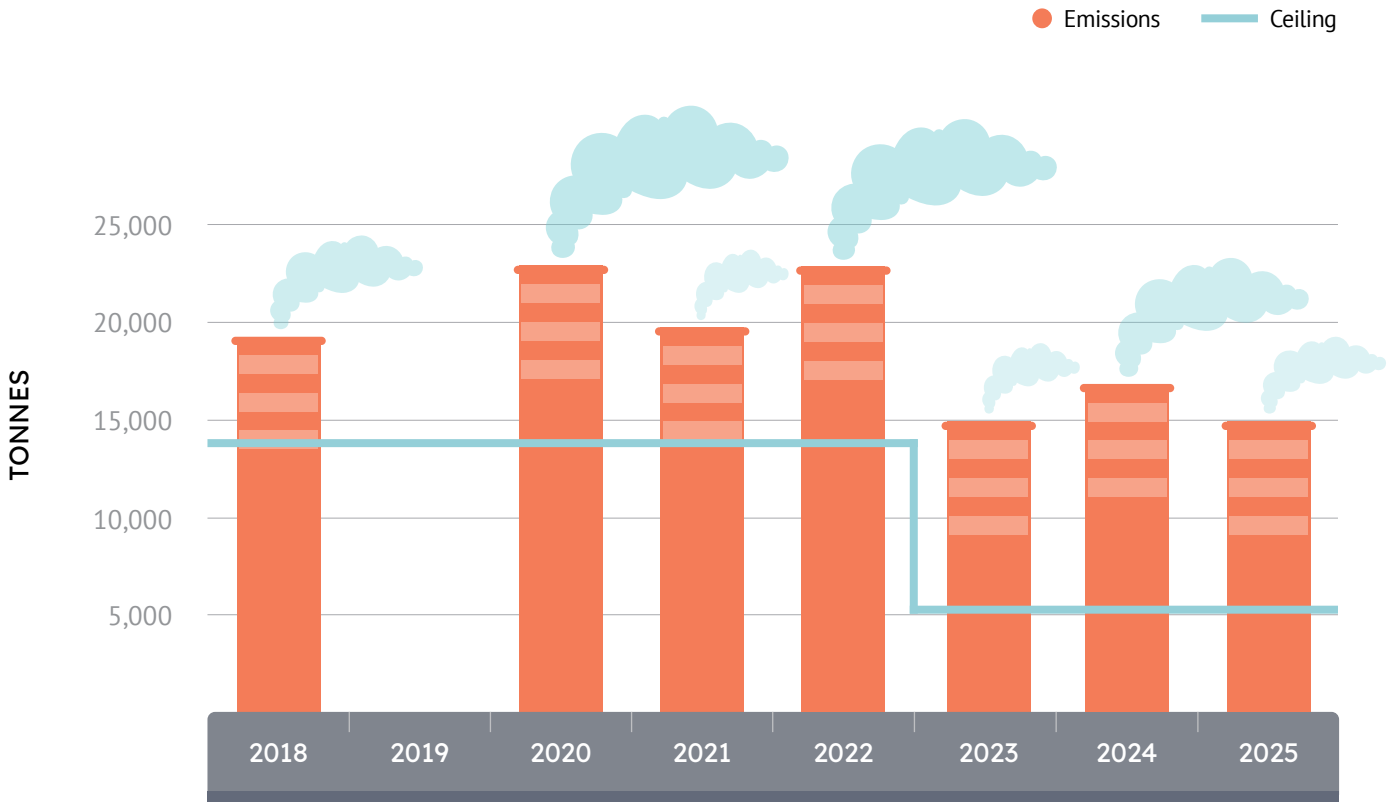


In 2025, Kosovo's NO_x emissions stood at the lowest level so far 14,681 tonnes, which still represents a significant breach of 2.7 times the national ceiling. The country stands out regionally for the highest breach of its NO_x ceiling. On the level of individual units, Kosova A5 had the highest breach of its individual ceiling, emitting 3.39 times as much as allowed, but emissions from units A3, A4 and B1 are also more than twice their individual ceilings.

Kosova B power plant, Kosovo
Photo: Matteo Trevisan, done as part of the photographic project More Necessary Than the Sun

Figure 12:

Nitrogen oxides emissions from Kosovo's NERP coal plants, compared to the national emissions ceilings, 2018 to 2025
(2019 data is unavailable)



The main feature of Kosovo's NERP is the inconsistencies between the ceilings for the three pollutants that appear in the main body of the document[74] and those calculated in Annex 2 of the NERP. This annex is not part of the publicly available NERP and has been leaked to the authors of this report.

The SO_2 ceilings listed in the main body of the NERP only follow a linear decrease until 2021, and then they increase slightly in 2022 and 2023. The NO_x ceiling also increases slightly from 2024 onwards compared to the 2023 level – the opposite of what should happen. Therefore, in this report the authors have taken the ceiling values from the annex, because they appear more in line with the Energy Community's policy guidelines for the preparation of NERPs,[75] even though the ceilings for dust and NO_x are higher than those in the main body of the document.

[74] Government of Kosovo, National Emissions Reduction Plan: Kosovo, *Energy Community*, 2018.

[75] 'The ceilings for the years 2019 to 2022 shall be set providing a linear trend between the ceilings of 2018 and 2023. In practice, this means that the ceilings will not change between 2018 and 2023 except for NO_x.' Energy Community, Policy Guidelines 03/2014, December 2014.

Kosovo (2025)

	SO_2 ceiling	SO_2 emissions	Dust ceiling	Dust emissions	NO_x ceiling	NO_x emissions
Main NERP ceiling	9,497	10,092	475	4,762	6,129	14,681
Annex 2	10,894		1,362		5,446	

In December 2023, a Ministerial Council decision[76] declared Kosovo to be in breach of the Energy Community Treaty, along with Bosnia and Herzegovina and North Macedonia. The 2025 Energy Community Implementation Report[77] notes that the 'related decision by the Ministerial Council remains unaddressed. Despite the existing refurbishment plans of the thermal power plants, compliance in the near future remains unrealistic'.

Ongoing investments in pollution control

Kosovo's draft National Energy and Climate Plan (NECP), submitted to the Energy Community Secretariat in July 2023, reinforces the country's Energy Strategy released a year prior[78] and claims that:

> *the power plant units of 'Kosovo B1 and B2' will be refurbished to maintain the security of supply and decrease emissions. The refurbishment of the Kosovo B1 and B2 units will be carried out in two stages, and by the end of 2025, and respectively 2026, both units will operate in a more efficient, reliable mode, meeting mandatory emission standards of the Industrial Emission Directive.*[79]

The National Energy Strategy's budget foresees a total of EUR 178 million to be spent on the refurbishment of each of the two units of Kosova B (Kosova B1 and B2) between 2023 and 2025. According to the Ministry of Energy's Progress Report on the implementation of the Energy Strategy,[80] despite having allocated EUR 88 million in 2024 for Kosova B1 and another EUR 88 million in 2025 for Kosova B2's rehabilitation, zero progress is noted. The date for expected compliance with NO_x and dust emissions has been moved to October 2026 for unit B1 and October 2027 for B2.

It has now been over seven years since Kosovo's NERP envisaged that Kosova B1 would undergo retrofitting by 2021[81] so that its dust and NO_x emissions would be compliant with the Industrial Emissions Directive emission limit values. It envisaged that unit B2 would follow suit and comply by 2022, with the use of a EUR 76.4 million grant under the European Commission's Instrument for Pre-Accession II (IPA II) signed in November 2019.

These works have been repeatedly and unjustifiably delayed. Yet another proposal – for de-SO_x installation – was included on the indicative list of projects under the Western Balkan Investment Framework (WBIF) that the country submitted as part of its Reform Agenda to the European Commission in 2024.[82] The project description envisages an investment of EUR 105 million for the two units without indicating a concrete timeline, but noting that 'Preliminary design, detailed design, tender documentation, and construction contract signing have not started'. This is all the more worrying, as this move was made after seven years of non-compliance. The project is not likely to receive WBIF funding under the Reform and Growth Facility as no support for fossil fuels is allowed and it would not fit the spending timeline. However, the inclusion of this project on the list for financing shows that desulphurisation plans are in their infancy. Confusingly, in the adopted Reform and Growth Agenda of Kosovo, another EUR 2 million appears as planned only for 'Design preparation of EU Support to Clean Air Phase 3 (SO_x reduction)'[83] under IPA funding. It is unclear why this measure is listed, considering the IPA grant for carrying out the works was signed in 2019.

The country's Energy Strategy, worryingly, also mentions that one of the Kosova A units 'will be refurbished by the end of 2024, whereas the decision to refurbish or phase out the second unit will be made in 2024 at the latest'.[84] There are several problems with this, but the biggest concern is the age of these units – over 50 years. The 2024 deadline proved impossible to meet, but in early January 2025 the Prime Minister's office made a surprise announcement[85] that they were beginning the 'procurement activity (phase I Pre-qualification) of the capital project Rehabilitation and Modernization of Unit A3 of the Kosovo A Power Plant'. This would also come with an increase in installed capacity from 130 MW to 180 MW.

76 Energy Community Ministerial Council, Decision 2023/05/MC-EnC on the failure by Kosovo* to comply with the Energy Community Treaty in Case ECS-8/21.

77 Energy Community, Annual Implementation Report 2025, 83, 1 November 2025.

78 Government of Kosovo, Energy Strategy of the Republic of Kosovo 2022-2031, *Government of Kosovo*, April 2022.

79 Government of Kosovo, National Energy and Climate Plan of the Republic of Kosovo 2025-2030 (first draft version), *Energy Community*, 82, 2023.

80 Republic of Kosovo, Ministry of Energy, Progress report for the period January - June 2025 of Kosovo Energy Strategy Implementation program (KESIP) for the period 2022 - 2025, 19.

81 Government of Kosovo, National Emissions Reduction Plan: Kosovo, 11.

82 European Commission, DG ENEST, Reform and Growth Facility for the Western Balkans, Reform Agenda of Kosovo, version of 6 September 2024.

83 Government of Kosovo, Reform agenda of Kosovo, 93, October 2024

84 Government of Kosovo, Energy Strategy of the Republic of Kosovo 2022-2031.

85 Office of the Prime Minister of Kosovo, Kosovo Energy Corporation invests 137 million euros for the rehabilitation and modernization of Unit A3 of the Kosovo A Power Plant, 24 January 2025.

The announced cost is EUR 137 million, already EUR 17 million more expensive than estimated three years before in the Energy Strategy, raising additional concerns about the increased burden on the public budget. The announcement also mentioned an expected 20-year lifetime extension of the plant, which is hard to imagine from a safety point of view, let alone environmental and economic considerations. However, three international consortia qualified to be awarded the rehabilitation works in November 2025,[86] without any clear timeline or next steps.

The Energy Strategy estimates a further EUR 120 million would be needed to rehabilitate and increase the installed capacity at a second unit at Kosova A, additional to the EUR 137 million at Kosova A3. Again, it is not clear whether Kosovo could secure this funding.

Montenegro

Five years of Pljevlja coal power plant legal breaches

Montenegro only has one large combustion plant, the 225 MWe Pljevlja lignite power plant, which only has one unit. Therefore, it could not be subject to a National Emissions Reduction Plan. Instead of making sure it was LCPD-compliant by 2018, the 'opt-out' option was chosen, in which Pljevlja could operate for a total of 20,000 hours between 1 January 2018 and 31 December 2023. After that, as explained above, it either had to close or to undergo a retrofit that would at minimum bring it into compliance with emission limit values for new plants from Annex V part 2 of the Industrial Emissions Directive.

According to its integrated environmental permit,[87] issued in March 2018, it had to comply with the latest EU LCP BREF standards by 2023, and was the first existing plant in the region that was required to do so.

However, the management of the state-owned power company Elektroprivreda Crne Gore (EPCG) used the available 20,000 hours as quickly as possible and the plant had already exceeded this limit by the end of 2020.[88] But it did not stop there, operating for 6,450 hours in 2021[89] and 6,949 more in 2022.[90] Its report for 2023 lists 6,949 more hours,[91] and in 2024 it operated for 6,813 more hours.[92] In 2025, Pljevlja's operating hours finally decreased to 2,794[93] – but only because the plant went offline for a retrofit.

In April 2021, the Energy Community Secretariat opened an infringement case against Montenegro.[94] In February 2023 it issued a reasoned opinion,[95] followed by a reasoned request to the Ministerial Council in July 2023.[96] A decision by the Ministerial Council confirming the breach has yet to be taken, despite it being a clear-cut case.

As described in previous editions of Comply or Close, successive governments in Montenegro have failed to take any action against the plant operator EPCG.

Emissions in 2025

Due to its low number of operating hours, in 2025 the Pljevlja power plant's yearly pollution figures were much lower than in previous years. In 2025, its sulphur dioxide emissions amounted to 18,643 tonnes – less than half of the 2024 figure of 39,140 tonnes. Its dust emissions in 2025 decreased to 164 tonnes, compared to 793 tonnes in 2024. Its NO_x emissions dropped to 1,670 tonnes, compared to 3,682 tonnes in 2024.[97]

86 Kosovo Energy Corporation j.s.c., Notice on the development of the procurement activity, 11 November 2025.

87 Environmental Protection Agency of Montenegro website, 26 March 2018. The permit is no longer online; only the list of measures to be taken is still available.

88 Operating hours from Montenegro reports to the European Environment Agency, EIONET, Central Data Repository.

89 European Environment Agency, EIONET, Central Data Repository, *EIONET*, reported 15 April 2022.

90 European Environment Agency, EIONET, Central Data Repository, *EIONET*, reported 13 April 2023.

91 European Environment Agency, EIONET, Central Data Repository, *EIONET*, reported 8 July 2024.

92 European Environment Agency, EIONET, Central Data Repository, *EIONET*, reported 13 March 2025.

92 European Environment Agency, EIONET, Central Data Repository, reported 25 March 2026.

94 Energy Community Secretariat, Case ECS-15/21: Montenegro / Environment.

95 Energy Community Secretariat, 'Secretariat sends Reasoned Opinion to address non-compliance of TPP Pljevlja with the Large Combustion Plants Directive', *Energy Community*, 15 February 2023.

96 Energy Community Secretariat, Case ECS-15/21: Montenegro / Environment.

97 European Environment Agency, EIONET, Central Data Repository, last updated 25 March 2026.

Figure 13:
Sulphur dioxide emissions from Montenegro's Pljevlja coal plant, 2018 to 2025

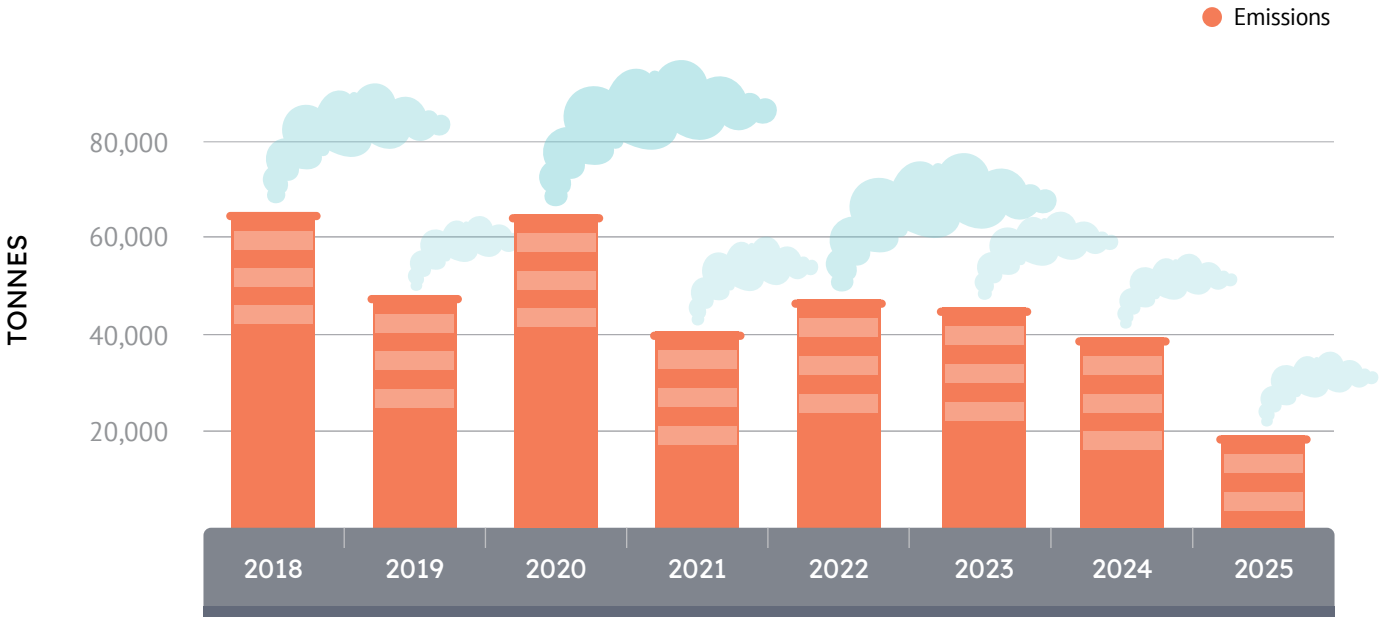


Figure 14:
Nitrogen oxides emissions from Montenegro's Pljevlja coal plant, 2018 to 2025

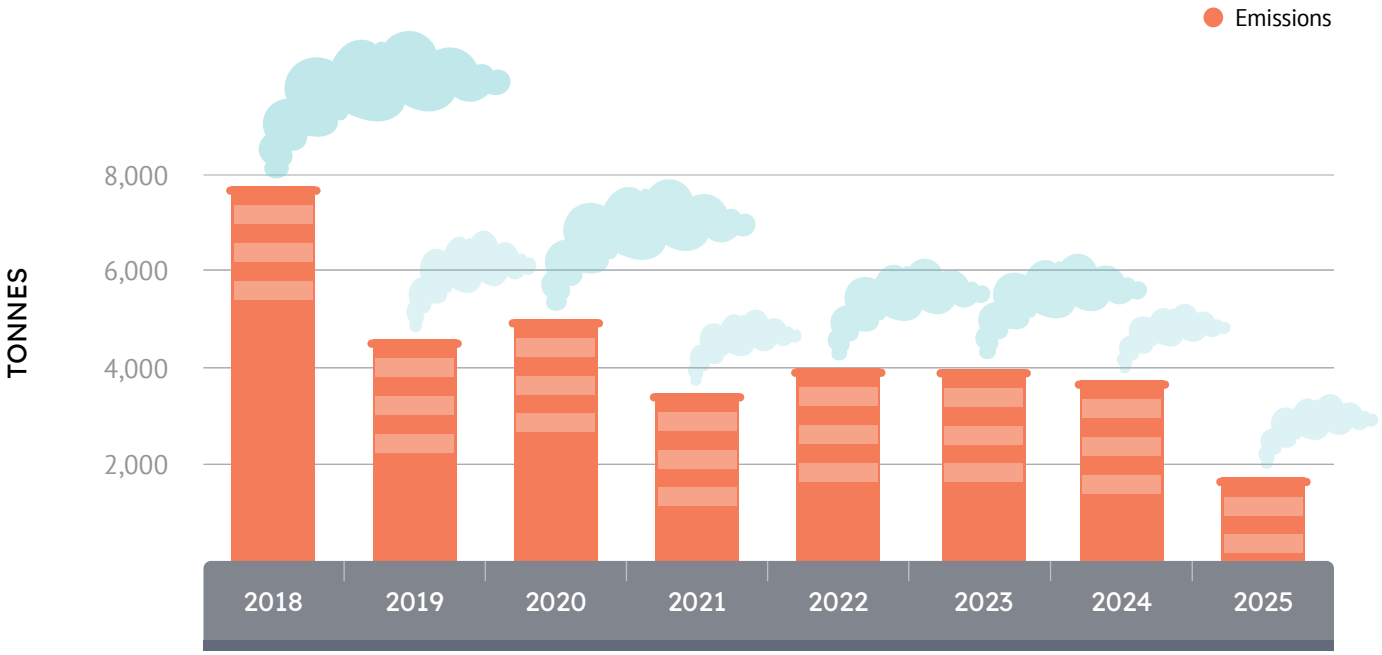
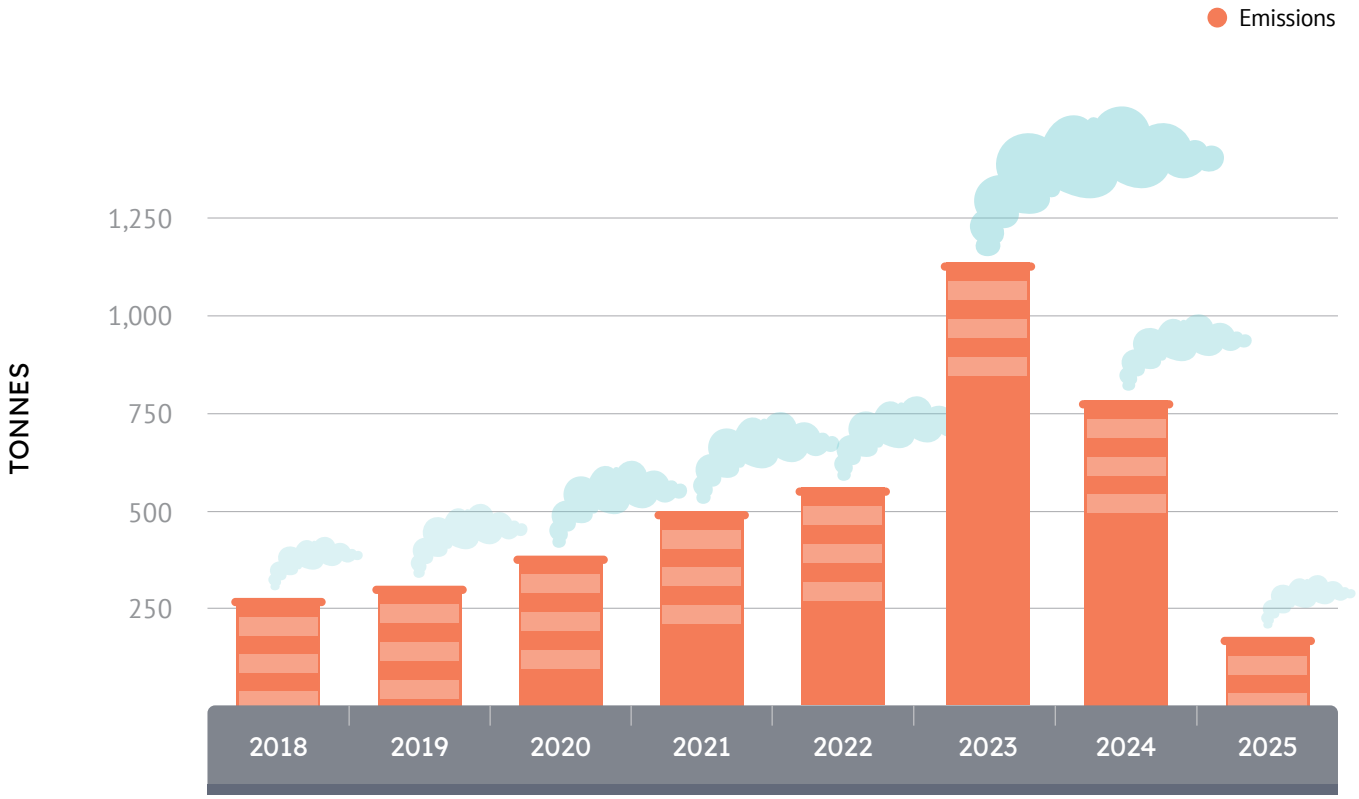


Figure 15:

Dust emissions from Montenegro's Pljevlja coal plant, 2018 to 2025



Retrofit works plagued by delays

For much of 2025, the Pljevlja plant was offline for a retrofit project that aimed to bring it into line with the EU's LCP BREF standards. As discussed in previous editions of Comply or Close, the process has been plagued with irregularities and delays, and it is far from clear whether the project will bring the promised improvements. Although the contract was signed in 2020, it took until the end of March 2025 to get to the stage of taking the plant off the grid for the main works. At that point, it was announced that the plant would remain offline for seven and a half months.[98]

At the end of November 2025, it was reported that the Pljevlja plant was once again online.[99] However, local people reported alarming levels of air pollution. On 23 December, the ministry responsible for the environment confirmed that very high levels of nitrogen oxide (473.8 mg/m^3) and sulphur dioxide (3,249 mg/m^3) had been measured in Pljevlja and that the automatic measuring equipment at the power plant was not in working order. The environmental inspector had ordered EPCG to start operating the desulphurisation and denitrification equipment within 30 days and had initiated procedures against those responsible for the failure of the measuring equipment.[100]

The denitrification system started operating on 22 January 2026 and the desulphurisation equipment started trial operation in early February.[101] Montenegro's Environmental Protection Agency claims it does not yet have official data on their effectiveness. The full results will only be known in the second half of June, after the trial period ends.[102]

[98] Pobjede, TE Pljevlja ulazi u završnu fazu ekološke rekonstrukcije, 31 March 2025.

[99] Tatjana Perović, Termoelektrana puštena u rad; Đordan: Sve pod kontrolom, prvi kilovat-sati predati mreži, *Radio Televizija Crne Gore (RTCG)*, 30 November 2025.

[100] Ministarstvo ekologije, održivog razvoja i razvoja sjevera, MERS: Donijet paket mjera koje su u nadležnosti ekološke inspekcije, u cilju poboljšanja trenutne situacije u Pljevljima, 23 December 2025.

[101] Nađa Vujačić, Emisije sumpor-dioksida smanjene sa preko 4.000 na oko 61 mg/m^3, *Mondo*, 6 February 2026.

[102] Jelena Martinović, Uloženo 70 miliona, a na čist vazduh se još čeka, *Pobjeda*, 3 April 2026.

Pljevlja coal mine, Montenegro
Photo: NGO Eco-team, Montenegro

This is unlikely to be the end of the story, however. At the end of January 2026, it was reported that the Special State Prosecutor had opened a case against the Pljevlja power plant's management and the Ministry of Energy and Mining Admir Šahmanović as a result of the decision to restart the plant in a way that endangered human health and the environment.[103]

Another plot twist occurred in late March, when it was reported that Dongfang, the lead contractor on the reconstruction, had halted work at the site due to a dispute with EPCG over payments.[104] It is not clear whether this dispute was resolved, and if so, when, but in mid-April it was suddenly announced that the Pljevlja plant would be undergoing one-month maintenance works[105] – somewhat surprising considering it spent most of 2025 offline.

Overall, the end of the main retrofit works has brought more questions than answers, and it remains to be seen whether Pljevlja will ever be able to meet EU pollution control standards. Successive Montenegrin governments have counted on this, and the country's NECP, finally adopted in December 2025, still expects the plant to operate until 2040 and to be put into cold reserve afterwards.[106]

This is unrealistically late for a country that sees itself as a frontrunner for EU accession, is already being affected by CBAM,[107] and will have to join the Emissions Trading Scheme once it enters the bloc. Given the small size of the country, it would only take a few more utility-scale solar and wind farms to cover Montenegro's electricity demand, but progress has been slow in recent years. Still, the first part of the Gvozd wind farm started trial operation in April 2026,[108] and rooftop solar continues to advance thanks to EPCG's Solari schemes. These had resulted in the installation of 95 MW of solar photovoltaics on more than 9,643 buildings by April 2026, of which around 89 MW were connected to the grid.[109]

[103] Ivana Vlaović, SDT istražuje zagađenje u Pljevljima, *Vijesti*, 31 January 2026.

[104] Kaćuša Krsmanović, Kinezi obustavili rekonstrukciju Termoelektrane Pljevlja, *ETV*, 21 March 2026.

[105] RTCG, TE Pljevlja od 15. aprila u jednomjesečnom remontu, *RTCG*, 8 April 2026.

[106] Ministry of Energy, National Energy and Climate Plan of Montenegro, adopted 10 December 2025.

[107] Goran Kapor, CBAM smanjuje prihode, skuplja struja nije opcija: Zbog novih EU pravila, EPCG za tri mjeseca izgubila 13 miliona eura, *Vijesti*, 24 April 2026.

[108] Vijesti, EPCG: Prvi vjetrogenerator VE Gvozd pušten u probni rad, kilovat-sati isporučeni u elektroenergetski sistem, 23 April 2026.

[109] Goran Kapor, CBAM smanjuje prihode, skuplja struja nije opcija: Zbog novih EU pravila, EPCG za tri mjeseca izgubila 13 miliona eura.

North Macedonia

Compliance with the NERP ceilings in 2025

North Macedonia's government adopted its NERP in April 2017. The plan did not undergo public consultation or a strategic environmental assessment prior to adoption. It covers three coal-fired large combustion plants, one that uses heavy oil and two fossil gas heating plants that have been partially operational during the plan's implementation period. There are also two boilers from the old oil refinery included, which, although not officially closed, have not been operational for more than ten years.

With only a year and a half until combustion plants need to be completely in line with the Industrial Emissions Directive, North Macedonia has not made any progress in emissions reduction and monitoring. Coal-fired power plants only do periodic measurements once a month, and according to the authorities, even that is not happening regularly. In their own words, as reported to the European Environmental Agency, 'using the data from periodic measurements to calculate the quantities of SO_2, NO_X and TSP [total suspended particulate matter] emissions … for 2025 is unreliable and uncertain'.

This is not the only investment public electricity utility Elektrani na Severna Makedonija (AD ESM) has failed to make in their coal facilities. Neither the Bitola or Oslomej power plants have made any major progress on introducing pollution control equipment since 2013, when Bitola's units 2 and 3 were retrofitted to reduce NO_X emissions. As a direct result of the age of the plants and the lack of such investments, the reported emissions of all three regulated pollutants in 2025 are higher than when the NERP implementation started in 2018.

North Macedonia (2025)

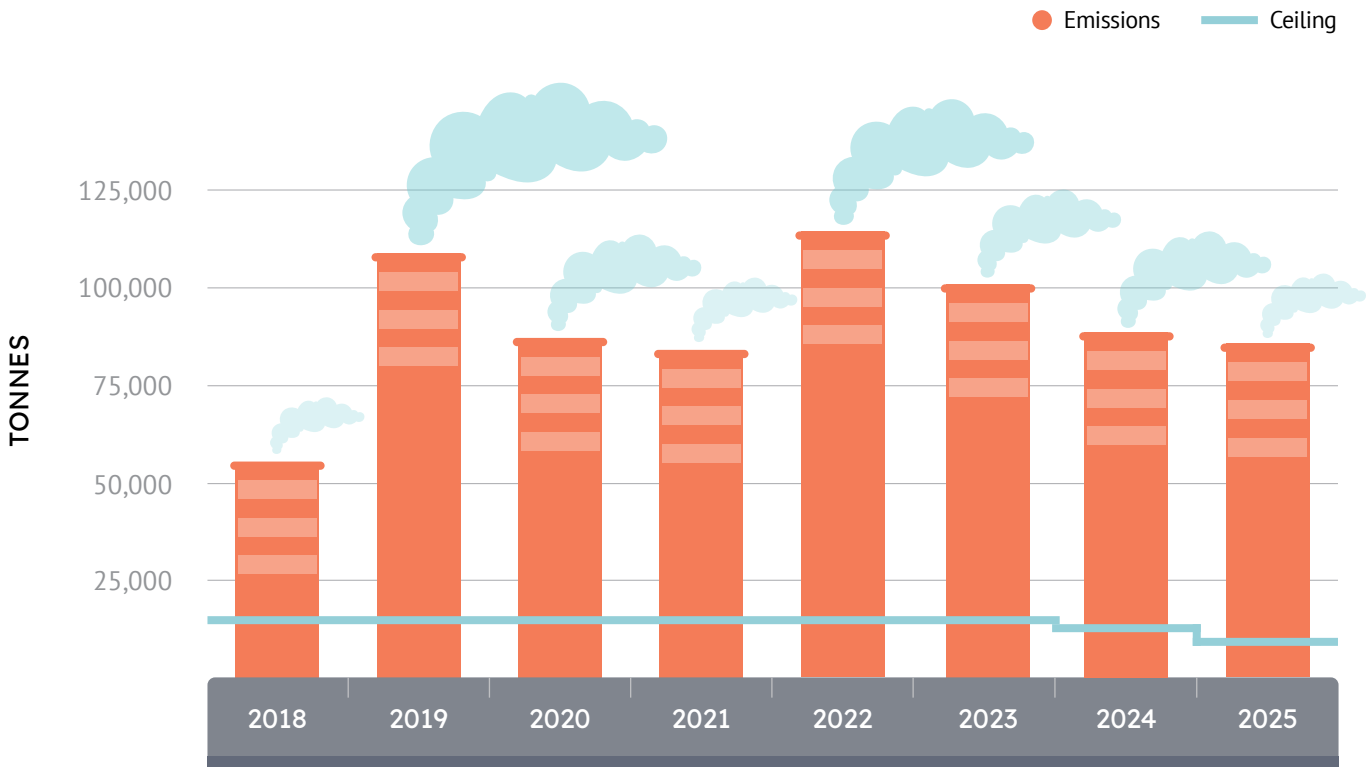
SO_2 ceiling	SO_2 emissions	Dust ceiling	Dust emissions	NO_X ceiling	NO_X emissions
9,412	84,649	985	7,907	6,927	5,426

SO_2 emissions from coal combustion in 2025 were slightly lower than those in 2024. However, with the decreasing ceiling, SO_2 emissions – at 84,649 tonnes – were nine times higher than the allowed 9,412 tonnes.

Bitola power plant, North Macedonia
Photo: Centre for environmental research and information Eko-svest - Skopje

Figure 16:

Sulphur dioxide emissions from North Macedonia's NERP coal plants, compared to the national emissions ceilings, 2018 to 2025



As in previous years, the stacks of Bitola B 1 & 2 and Bitola B3 were the country's highest SO_2 polluters in 2025. Bitola B 1 & 2 emitted 51,585 tonnes, which was 11.75 times as high as the stack's individual ceiling. **Bitola 3 did a lot worse – with 31,205 tonnes it breached its individual ceiling by 16.37 times – the highest breach in the region.**

Oslomej's limited operating hours kept it just under the individual ceiling of 2,036 tonnes, but even this will change at the end of 2027 when emissions need to be below 940 tonnes.

Dust emissions from coal-fired power generation exploded in 2025 and reached levels more than twice as high as the average for the previous seven years. The Bitola power plant with its two stacks emitted 7,675 tonnes and singlehandedly breached the 7,094-tonne regional ceiling for dust emissions for 2025.

Figure 17:

Dust emissions from North Macedonia's NERP coal plants, compared to the national emissions ceilings, 2018 to 2025

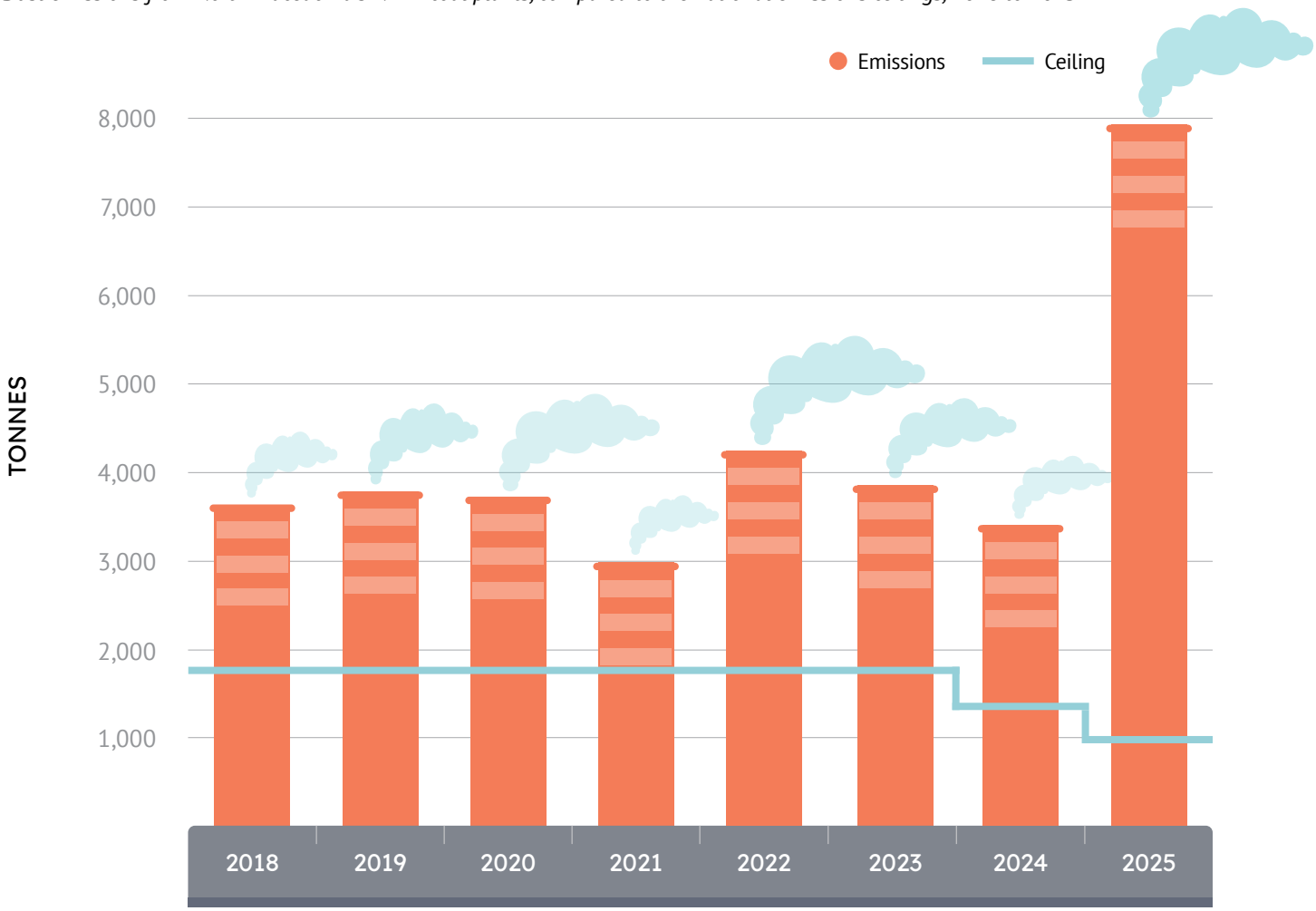
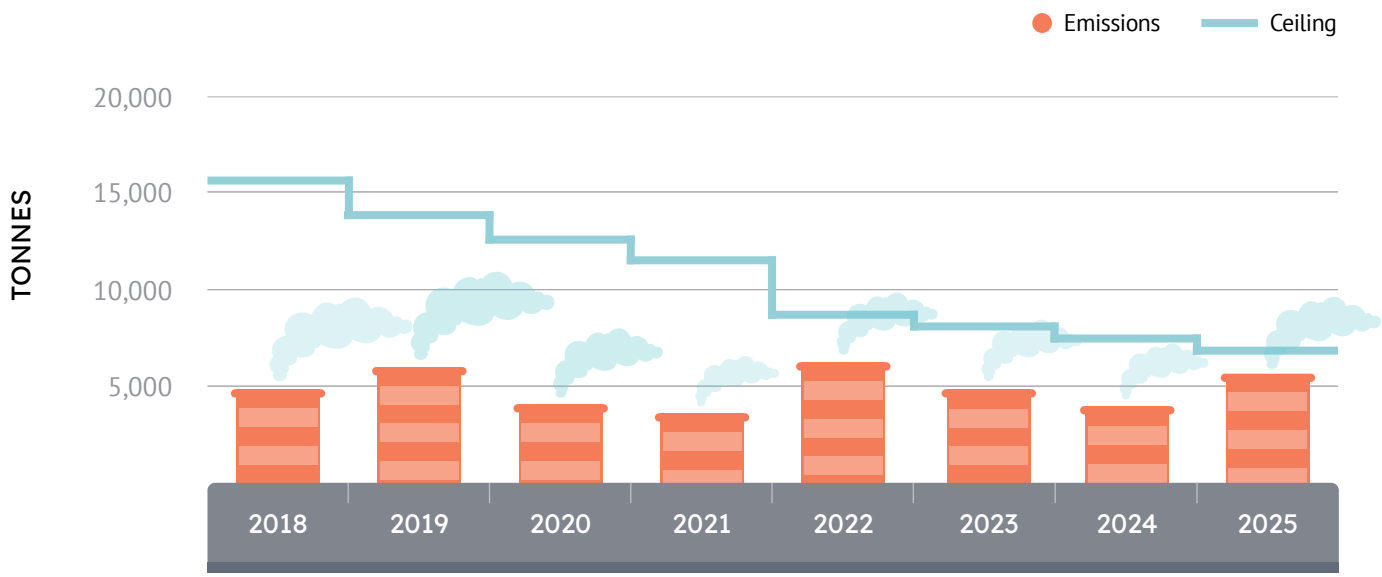


Figure 18:

Nitrogen oxides emissions from North Macedonia's NERP coal plants, compared to the national emissions ceilings, 2018 to 2025



Units Bitola B 1 & 2 contributed 5,276 tonnes and Bitola B3 2,399 tonnes. They both emitted more than ten times the amount allowed by their individual ceilings. Oslomej contributed 232 tonnes, just slightly above its individual ceiling of 219 tonnes.

NO_x emissions increased compared to 2023 and 2024, but they still fall below the 2025 and even the 2027 ceilings. However, this is only because of the unrealistically high ceiling for Oslomej, as well as its low operating hours and limited contributions to the overall NO_x emissions. The reported 5,426 tonnes are mostly emissions from Bitola B 1 & 2, with 3,302 tonnes, and Bitola 3, with 1,808 tonnes. As separate stacks, they are both above their individual ceilings, and absolutely not in line with the requirements for the end of the NERP period.

In March 2021, due to the breaches of the overall NERP ceilings, the Energy Community Secretariat opened a dispute settlement case against North Macedonia, along with cases against other countries. On 13 July 2023, the Secretariat submitted a reasoned request to the Ministerial Council to make a decision confirming non-compliance, which it did in December 2023.[110] As the breaches have not been rectified, as of May 2026, the case remains open.[111]

Lack of investments in pollution control

Of the existing coal facilities, only the Bitola power plant has an Integrated Pollution Prevention and Control (IPPC) permit. It was issued in December 2022,[112] long after all legal deadlines passed and four years after the plant was already supposed to be in line with the LCPD emission limits. The permit contains a detailed list of investments needed for the plant to become compliant with the more stringent IED requirements. Each investment has a deadline for implementation, the last of which falls in December 2026.

The first key milestone was the installation of the continuous monitoring system at the stacks. It was supposed to happen in parallel with the complete overhaul of the electrostatic filters to bring dust emissions within legal limits. The deadline for both investments passed in December 2025, and now the power plant is formally in breach of its IPPC permit. These investments make little sense anyway, considering that North Macedonia plans to phase out coal, but this does not change the fact that the plant continues to breach all national and Energy Community Treaty obligations and must be penalised for that.

The construction of the desulphurisation facility is due by December 2026, but this will also be impossible to complete within the given timeframe. The tendering and permitting alone would last more than six months, which would breach the deadline in the permit.

The Oslomej power plant is a completely different story. According to North Macedonia's Energy Strategy,[113] the plant was supposed to be closed in 2019. This was prolonged once to 2021 with the country's first NECP[114] and has now been further delayed until the end of 2026 with the new updated NECP[115] adopted in April 2026. This is becoming a trend – for seven years, energy planning documents have continually stated that the Oslomej plant will close the year they are adopted; however, in 2025, the plant remained operational.

Oslomej does not hold an IPPC permit and does not have any detailed obligations or plans for investments in pollution control.

The scenarios in the newly adopted NECP keep the ambition for coal phase-out by 2030, but this time the document delegates the details to AD ESM. The company is supposed to prepare a decarbonisation action plan where a detailed timeline for closure of the units will be developed, based on the needs of the system and on the pace of investments in replacement electricity generation capacity.

The problem with this is that AD ESM seems to have other priorities and is not taking its obligation to phase out coal seriously. In spite of the company's declared commitment to the decarbonisation of the energy sector, an environmental impact assessment for the Zhivojno lignite mine[116] near Bitola was completed and approved in September 2025.[117] The open cast mine is planned to be around 11.5 square kilometres with a planned lifetime production of around 23.6 million tonnes of lignite over 15 years. The removal of the soil layer is planned to be done within three years of the project's approval, which puts the start of the exploitation very close to the country's coal phase-out date.

[110] Ministerial Council of the Energy Community, Decision 2023/04/MC-EnC on the failure by the Republic of North Macedonia to comply with the Energy Community Treaty in Case ECS-7/21.

[111] Energy Community Secretariat, Case ECS 07/21, North Macedonia/Environment.

[112] Ministry of Environment and Physical Planning of the Republic of North Macedonia, IPPC permit for AD ESM - subsidiary REK Bitola, December 2022.

[113] Ministry of Economy of the Republic of North Macedonia, Energy Development Strategy until 2024, 28 December 2019.

[114] Ministry of Economy of the Republic of North Macedonia, National Energy and Climate Plan, July 2020.

[115] Ministry of Energy, Mining and Mineral Resources of the Republic of North Macedonia, National Energy and Climate Plan 2025-2030, July 2020.

[116] Tehnolab DOO Skopje, EIA for the Exploitation of Coal in Zivojno using Open-cast Technology, September 2025.

[117] Ministry of Environment and Physical Planning of the Republic of North Macedonia, Decision approving the EIA for the Exploitation of Coal in Zivojno using Open-cast Technology, 26 September 2025.

It is unclear why the country and AD ESM are so determined to open this mine instead of focusing their efforts on something that really supports decarbonisation. Since the country already has a Just Transition Roadmap[118] and an Investment Plan for accelerating coal transition,[119] it needs to start investing in those processes instead of new coal mining capacity and avoid further delays to its coal phase-out date.

North Macedonia remains the most advanced country in the region in terms of planning for the energy transformation and just transition. On paper, the country has reaffirmed its commitment to phase out coal power generation in its updated NECP. However, the actions of the government and AD ESM are not aligned with strategic documents. There is a significant increase in solar and wind power generation driven by private investors, and AD ESM needs to pick up the pace with investments in solar and wind if it intends to remain relevant in the country's energy sector. The government should continue to create an environment that will allow a faster transition to renewable energy with a strong focus on decentralisation and environmental protection. At the same time, stronger transparency, public participation, and accountability mechanisms are needed to ensure that decision-making processes, project selection, and the implementation of just transition measures are inclusive, publicly accessible, and aligned with the needs of local communities.

The country also needs to scrap its unrealistic plans for new fossil gas infrastructure and avoid significant stranded assets. There are currently ambitious plans for new gas power plants and pipelines, despite EU energy policy turning away from gas. An interconnector with Greece[120] was most likely the last fossil fuel project in the Western Balkans built with EU funding, but the United States is now stepping up its promotion of new gas infrastructure in the region in order to sell its LNG.[121] Still, the success of such plans is far from guaranteed: in 2024, North Macedonia's state audit office found that none of the main gas pipelines built in the preceding ten years were operational yet.[122] This indicates a strong risk that North Macedonia will lose yet more precious time and funds on costly distractions that will not help its decarbonisation while increasing its dependence on imported fossil fuels.

118 Government of the Republic of North Macedonia, Just Transition Roadmap, May 2023.

119 Government of the Republic of North Macedonia, Accelerating Coal Transition Investment Plan for the Republic of North Macedonia – Pelagonia and Southwest regions, January 2024.

120 CEE Bankwatch Network and Eko-svest, Greece – North Macedonia pipeline update, November 2024.

121 United States Department of State, Joint Statement on the U.S.-North Macedonia Strategic Dialogue, 8 April 2026.

122 North Macedonia State Audit Office, КОНЕЧЕН ИЗВЕШТАЈ ЗА ИЗВРШЕНА РЕВИЗИЈА НА УСОГЛАСЕНОСТ НА ТЕМА РАЗВОЈ НА СИСТЕМОТ ЗА ГАСИФИКАЦИЈА ВО РЕПУБЛИКА СЕВЕРНА МАКЕДОНИЈА, March 2024.

123 Renewables and Environmental Regulatory Institute (RERI), Legal Analysis of the Court Proceedings Initiated by RERI against Public Electricity Company of Serbia for Endangering Human Health, 6 April 2024.

124 The NERP also includes gas-fired units, such as those owned by Naftna Industrija Srbija (NIS) in Novi Sad and Pančevo, as well as a refinery. Ministry for Environmental Protection of the Republic of Serbia, Nacionalni plan za smanjenje emisija glavnih zagađujućih materija koje poticu iz starih velikih postrojenje za sagorevanje, Annex 2, February 2020.

Serbia

Compliance with the NERP ceilings in 2025

In spite of a final Belgrade High Court decision from May 2023[123] which orders state-owned energy utility Elektroprivreda Srbije (EPS) to bring SO_2 emissions from all its coal power plants in line with the country's NERP, EPS's investments have yet to show sufficient results and even the smallest and oldest plants have not yet been closed. On the contrary, the country is now in breach of the limits for all three pollutants, for the first time since the entry into force of the LCPD.

In spite of a visible decline in the last three years, SO_2 emissions from the NERP coal power plants in Serbia were still over 5 times above the national ceiling in 2025, up from 4.6 times in 2024, as the ceiling is decreasing annually. Dust emissions were above the national ceiling for the first time since 2018, and NO_X emissions also increased considerably to a level comparable to that in 2021.

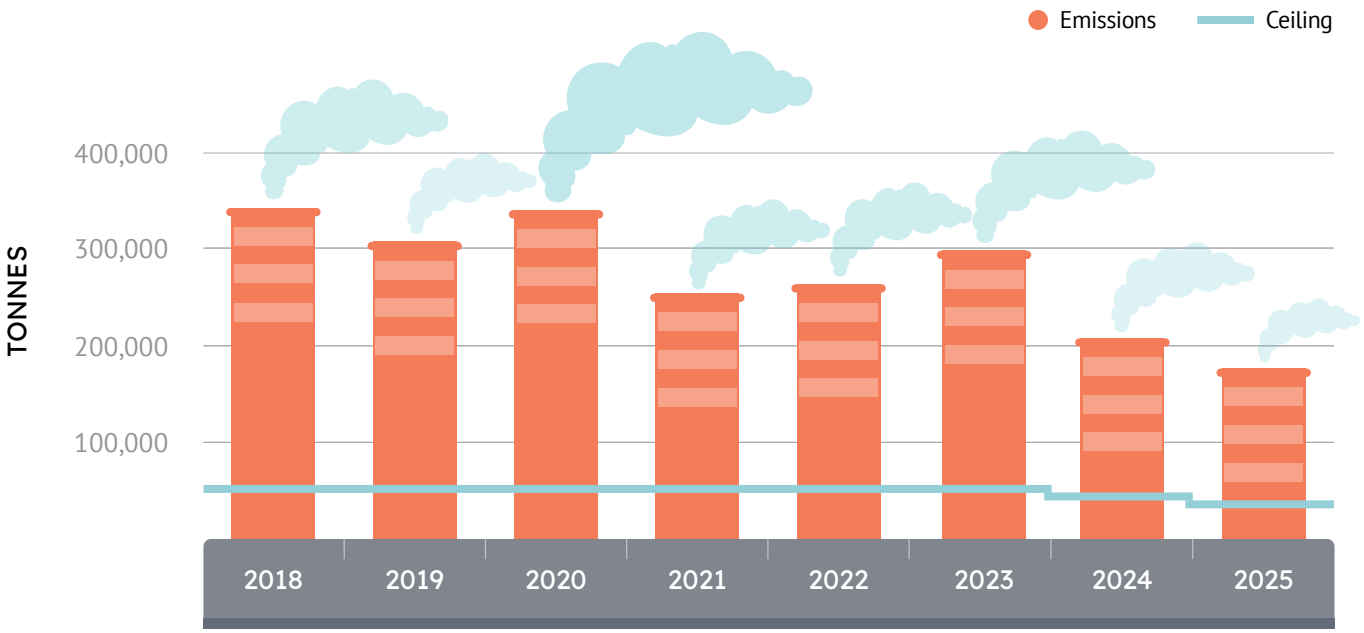
SO_2 emissions from the NERP coal plants are a major problem in Serbia. In 2025, these plants emitted 5.09 times as much SO_2 as allowed under the NERP ceiling.

The SO_2 emissions from the 14 coal-fired units included in the NERP amounted to 177,756 tonnes, while the 2025 ceiling in the NERP for 18 large combustion plants[124] was set at a maximum of 34,898 tonnes.

In absolute values, this is a drop from the 205,925 tonnes reported for 2024, but still nowhere near legally compliant, and certainly not sufficient to reach low enough levels to be acceptable for human health.

Figure 19:

Sulphur dioxide emissions from Serbia's NERP coal plants, compared to the allowed emissions ceilings, 2018 to 2025



On the plant level, the highest emitter was the Nikola Tesla B plant (units B1 and B2) with 77,470 tonnes[125] – this is higher than in the previous year and 5.7 times above its individual ceiling. As in 2023, the plant was the region's second biggest emitter, after Ugljevik in Bosnia and Herzegovina (albeit having four times Ugljevik's capacity).

In terms of individual ceiling breaches, Kostolac A2 emitted 15,905 tonnes, or 8.92 times as much SO_2 as allowed under its individual ceiling. However, these values are almost half those recorded in 2024, as the unit has operated fewer hours (only slightly over 4,700).

After Kostolac B's desulphurisation equipment finally received an operating permit in January 2023,[126] following years of delay and test operations, in 2024 it started to show some results, albeit unsatisfactory ones. In 2025, the plant emitted 17,452 tonnes of SO_2 – still 3.3 times as many tonnes as it was allowed to emit according to its NERP ceiling, and significantly more than in the previous year, raising serious concerns about the quality of the equipment and its operation.

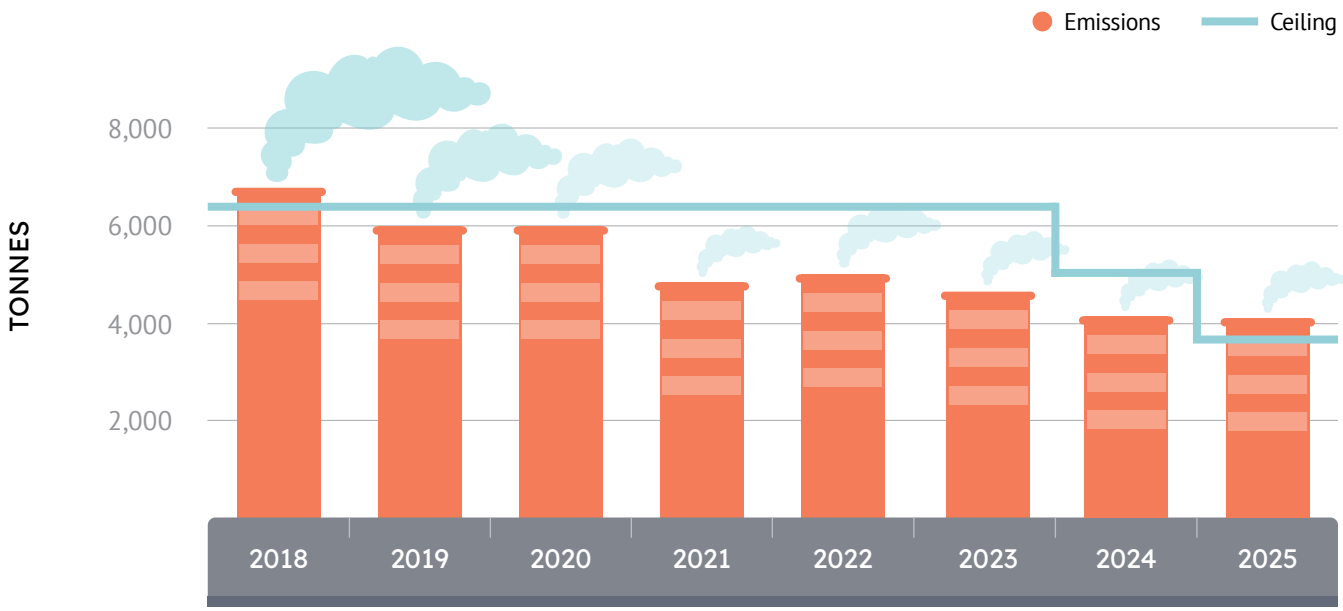
Dust emissions have been gradually declining since 2018, but in 2025 this pace of reduction no longer ensures compliance with the ceiling, which has itself decreased. Therefore, in 2025 Serbia is in breach of its dust ceiling, emitting 1.09 times above the limit, with 4,132 tonnes. On the unit level, Nikola Tesla A1-A3 alone emitted 1,399 tonnes, over 2.26 times more than allowed. The Vreoci heating plant also exceeded its individual ceiling, emitting 2.37 times more than allowed.

[125] European Environment Agency, EIONET, Central Data Repository, reported 30 March 2026.

[126] Ministry of Construction, Transport and Infrastructure of the Republic of Serbia, Decision 351-04-03515/2022-07 to approve the operation of the de-SOx unit at Kostolac B, 11 January 2023.

Figure 20:

Dust emissions from Serbia's NERP coal plants, compared to the allowed emissions ceilings, 2018 to 2025



After several years of marginal decline, NO_x emissions in Serbia saw a considerable increase compared to the previous year, and reached a similar level to that of 2021. Coupled with a decrease of the overall NO_x ceiling, this resulted in a breach, with emissions at 1.21 times as much as allowed.

The year 2025 marks the third time Serbia has breached the ceilings for this pollutant. In 2021, the Energy Community Secretariat opened a dispute settlement case against Serbia for non-compliance with its NERP, or more specifically its SO_2 ceiling. In July 2025 it escalated the case by issuing a reasoned opinion. The opinion also took into account the lack of compliance with NO_x ceilings beginning in 2023.[127]

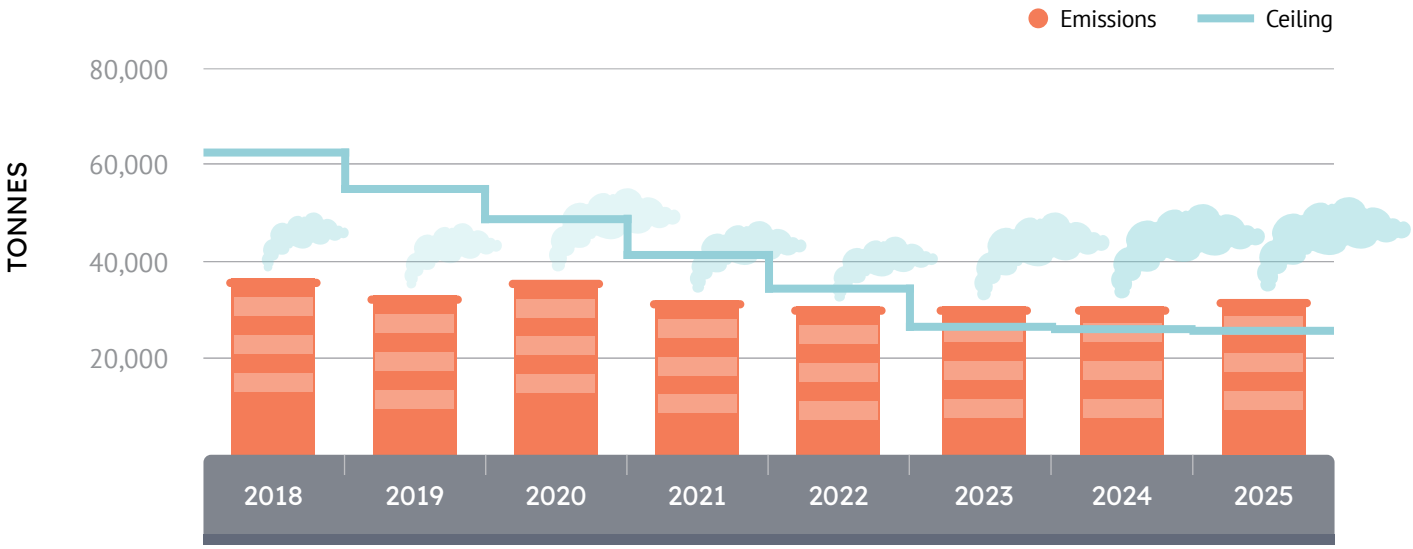
Regarding individual units, the worst offender for NO_x in absolute terms was again the Nikola Tesla B plant (units B1 and B2), with 11,247 tonnes emitted – 1.39 times as much as the individual ceiling.

[127] Energy Community Secretariat, Case ECS 10/21.

Nikola Tesla power plant, Serbia
Photo: Stefan Aleksić

Figure 21:

Nitrogen oxides emissions from Serbia's NERP coal plants, compared to the allowed emissions ceilings, 2018 to 2025



Serbia (2025)

SO_2 ceiling	SO_2 emissions	Dust ceiling	Dust emissions	NO_x ceiling	NO_x emissions
34,898	177,756	3,792	4,132	25,677	31,063

EPS keeps reporting profits,[128] but they are paid for by people's health

In 2023, state-owned EPS reported nearly EUR 1 billion in profits. In 2024, the company's profiles had dropped to EUR 223 million, partly due to significant overhaul activities in mines and coal power plants, but went up to EUR 360 million in 2025 due to 'increased coal production and higher electricity output from thermal power plants'. Yet the company's apparent profitability is rooted in lignite mining and burning and boosted by its failure to pay the real costs: the illegal operation of opt-out plants, failure to fit de-SO_x and de-NO_x equipment at several of its existing units, a lack of carbon pricing, and general failure to internalise external costs borne by the environment and human health.

Serbia kept its antiquated Morava power plant running for another illegal 2,875 hours in 2025, in breach of the 'opt-out' derogation, as its allotted operating hours had already expired at the end of 2022. The Energy Community Secretariat opened a case against Serbia in October 2023, based on a complaint by RERI and Bankwatch,[129] and only followed up with a reasoned opinion – the next step in the dispute settlement procedure – in March 2026.[130] The Serbian government had two months to respond to this, but as of early May, it is not known whether it has done so or plans to do so. A decision in this case is long overdue, as every day that passes, Morava emits deadly pollutants, endangering human health and the environment.

Serbia continued to breach the 20,000-hour derogation in 2025 for all its other opted-out units as well. Units A3-1 and A3 3-5 at the Kolubara power plant both had just slightly more than 1,000 operating hours left at the end of 2022,[131] and they both worked way beyond their lifetime in 2023, 2024 and 2025.

[128] Vladimir Berbatović, Serbia's power utility EPS boosts profit to over EUR 360 million in 2025, *Balkan Green Energy News*, 6 February 2026.

[129] Energy Community Secretariat, 'Secretariat launches dispute settlement procedure against Serbia for breaching the Large Combustion Plants Directive in the case of TPP Morava'.

[130] Energy Community Secretariat, Case ECS-09/23: Serbia / Environment.

[131] Energy Community Secretariat, Serbia Annual Implementation Report 2023, 12, November 2023.

Kolubara A5 did not use up all its 20,000 hours by the end of 2023 but was due to close anyway due to the expiry of the opt-out period. Still, it continued to operate for 2,200 hours in 2025.

Serbia's plans regarding the closure and decommissioning of the Morava and Kolubara A plants are still unclear and jeopardise the essence of the LCPD, since according to the Energy Development Strategy of the Republic of Serbia until 2040, they will be withdrawn from the grid only 'by 2030' for 'energy security reasons'.[132] Additionally, the EPS Decarbonisation Action Plan[133] states that all coal power plants should be decommissioned no later than 2046–2049, depending on the scenario, with Kostolac B2 and B3 retained as cold reserve, but it does not provide a concrete closure and decommissioning timetable for individual units. This leaves uncertainty over the actual end-date of regular operation and the conditions under which certain units may continue to operate.

In October 2024, EPS announced[134] a tender covering both the development of a conceptual design for the conservation process and preparation and submission of environmental impact assessment screening requests for the decommissioning of the Kolubara A and Morava power plants. The contract was awarded on 23 January 2025, but the deadline for completion of the works has not been set clearly. In October 2025 it was announced that solar plants on the former coal ash dump sites of Kolubara and Morava, with capacity of 71 MW and approximately 45 MW respectively, had received a decision establishing the public interest in the expropriation necessary for their construction.[135] Both are linked to the 'phased shutdown' of the coal power plants, with completion expected around 2029.

Worryingly, Serbia's draft law on Integrated Pollution Prevention and Control (IPPC), from November 2025, appears permissive towards existing installations that already operate without IPPC permits, such as EPS' coal power plants.[136] Instead of clearly requiring immediate enforcement, priority inspections, sanctions, and suspension of unlawful operation, the draft risks allowing continued operation through transitional arrangements, derogations or delayed compliance pathways. This is particularly problematic because these plants must comply with NERP requirements by 2027 and be ready for stricter IED/LCP BREF-based standards afterwards. Without binding permit conditions and effective enforcement, there is no credible basis to expect even future compliance.

Ongoing investments in pollution control

During 2025, the desulphurisation unit at Kostolac B1 and B2 appears to have operated to some extent, but, as noted earlier, emissions are still more than three times as high as the plant's individual SO_X ceiling, rendering it a failure. Although the NERP provides flexibility regarding individual plants' contributions to the overall national emissions ceiling, from 1 January 2028 onwards, the plant has to comply with the stricter emission limit values of the Industrial Emissions Directive, something that seems highly unlikely at the moment.

In April 2024, it was reported that the EUR 215 million desulphurisation unit at Nikola Tesla A3-A6 had been commissioned,[137] 13 years after securing funding.[138] EPS's 2024 Environmental Report noted that the flue gas desulphurisation plant started its trial run in 2024, reporting 100% completion of works at the end of the year.[139] Despite a considerable reduction of SO_2 emissions from nearly 60,000 tonnes in 2023 to almost 21,000 in 2025, this amount is still twice as much sulphur dioxide as the plant's individual ceiling in 2025. This cannot count as good value for money by any stretch of the imagination.

The start of works to fit desulphurisation equipment at Nikola Tesla B – the country's highest SO_2 emitter by far – was announced in December 2020, with a deadline of 2024.[140] Yet, it was only in April 2026 that the energy utility began the trial operations at the power plant,[141] so it will be in 2027 that the results of this EUR 250 million investment will begin bearing fruit – or not, considering the results of similar investments at Kostolac B and Nikola Tesla A3-A6.

[132] Ministry of Energy and Mining, 'Energy Sector Development Strategy of the Republic of Serbia up to 2040 with Projections up to 2050', 36, July 2024.

[133] Elektroprivreda Srbije (EPS), Akcioni plan dekarbonizacije Elektroprivrede Srbije - Rezime, accessed 19 May 2026.

[134] Ružica Vranjković, 'Počeo proces gašenja termoelektrana – prvo najstarije, "Kolubara A" i "Morava"', *RTS*, 28 October 2024.

[135] eKapija, Sunlight instead of coal – Project to build 71 MW solar power plant on Kolubara A thermal power plant ash dump to start, 1 October 2025.

[136] Hristina Vojvodić, Ljubica Vukčević, Mirko Popović, Kontrola industrijskog zagađenja u Srbiji. Regulatorni izazovi i analiza Nacrta zakona o integrisanom sprečavanju i kontroli zagađivanja životne sredine, *Friedrich Ebert Stiftung*, March 2026.

[137] Igor Todorović, Mitsubishi Power commissions desulfurization system in Serbia's TENT A coal plant, *Balkan Green Energy News*, 25 April 2024.

[138] Svetlana Jovanović, Construction launched on flue-gas desulfurization systems at coal-fired power plant TENT A, *Balkan Green Energy News*, 14 February 2019.

[139] Joint Stock Company Elektroprivreda Srbije, 2024 Environmental Report, 70, March 2025.

[140] Vladimir Spasić, SO_2 emissions from Nikola Tesla B coal plant to be reduced 20 times by 2024, *Balkan Green Energy News*, 2 December 2020.

[141] Vladimir Spasić, Serbia's EPS starts trial operation of desulfurization system in TENT B coal plant, *Balkan Green Energy News*, 7 April 2026.

For Kostolac A, EPS launched a bid for a feasibility study on the installation of desulphurisation equipment[142] in October 2020, with the aim of extending the plant's lifetime by 15 years.[143] However, in 2022 the company started to reconsider this decision and lean towards a shut-down,[144] as was, in fact, the original plan when the NERP was first drafted in 2016. In 2023, as part of EPS's Go Green Road plan, it was announced that the plant would close at the end of 2028.[145] Due to a lack of investments in pollution control, it is unlikely that its emissions will decrease before this. As of April 2026, there is no credible indication in 2025 that EPS is considering investing in rehabilitating Kostolac A.

EPS's three-year business plan for 2025 to 2027,[146] approved by the company on 31 January 2025, contains plans for further investments in pollution control. The company plans to invest an additional EUR 100 million in different plants, but does not clearly disaggregate these investments. The plan only mentions that the priority will be to operationalise the desulphurisation units in the Nikola Tesla A and Nikola Tesla B power plants, as well as the denitrification at Kostolac B.

Some work has been done to reduce NO_x emissions at Kostolac B2, with a system for primary measures installed in 2019 and a tank for ammonia liquor as a secondary measure installed in 2023.[147] The results are not yet clear, but it is obvious that additional work is needed and planned.

Overall, although EPS is gradually installing pollution control equipment at its plants, the projects have either been insufficiently effective, as with the de-SO_x at Kostolac B and, more recently, at Nikola Tesla A3-A6, or are several steps behind the legal and economic reality.

Regardless, EPS has already sunk massive amounts of funds into desulphurisation projects. This is needed, as these plants cannot close immediately and they cannot continue to pollute at the current levels. But these investments are also expensive and energy-consuming, thus rendering the plants even less efficient. EPS will certainly pay the price for its slow uptake of wind and solar as coal becomes ever less competitive now that CBAM has set in. It is unclear whether Serbia as a whole has a plan to tackle this, as its NECP, approved in late July 2024, was of poor quality and difficult to decipher.[148] Serbia's Strategy of Energy Development until 2040,[149] adopted in November 2024, also lacks details and fails to set a clear coal phase-out date before 2050.

Carbon pricing could be one tool to help speed up the coal phase-out, and in late 2025 Serbia hastily introduced a carbon tax and its own reverse version of CBAM, taxing carbon-intensive imports. However, the CBAM law does not apply to the electricity sector, and the legislation on carbon pricing sets a tax of only four euros per tonne, with no indication that it will increase in the future. The system is so full of loopholes, rebates and subsidies that it can at best be considered a practice run in advance of the introduction of a more effective system.[150]

The carbon tax law creates a risk that carbon pricing in Serbia will function primarily as a fiscal and CBAM-adjustment instrument, rather than as a driver of electricity-sector decarbonisation. This risk is particularly relevant because the law does not clearly guarantee that revenues will be directed toward energy transition measures, does not establish transparent indicators for measuring emission reductions, and does not explain how the tax will be aligned with EPS's decarbonisation pathway or a future EU ETS-compatible system. Without such safeguards, especially in a coal-dependent electricity sector, the law may increase costs without ensuring a credible shift away from fossil fuel-based generation.

[142] Nina Domazet, EPS namjerava produžiti život TE Kostolac A, Energetika-net, 19 October 2020.

[143] Vladimir Spasić, EPS plans to extend lifespan of TPP Kostolac A until 2038, Balkan Green Energy News, 15 October 2020.

[144] Vladimir Spasić, EPS considering shutdown of coal power plant Kostolac A, Balkan Green Energy News, 29 July 2022.

[145] Vladimir Spasić, EPS sets out plan for shutting down coal power plants.

[146] Elektroprivreda Srbije, Three-year business plan for period 2025-2027, 12-13, 31 January 2025.

[147] Elektroprivreda Srbije, 2023 Environmental Report, 113.

[148] Government of Serbia, Integrisani nacionalni energetski i klimatski plan republike Srbije za period do 2030. sa vizijom do 2050. Godine, 13 June 2023.

[149] Ministry of Mining and Energy of the Republic of Serbia, Strategy of Energy Development of the Republic of Serbia until 2040 with projections until 2050.

[150] For more details, see CEE Bankwatch Network et al., Electricity market integration needs environmental compliance, Joint civil society position paper on CBAM and the Western Balkans electricity sector.

Conclusions

The pollution levels from Western Balkan coal plants eight years after the deadline for the implementation of the LCPD remain astonishingly high.

In 2025, emissions of all three regulated pollutants were once again in breach of the ceilings set in the NERPs for Bosnia and Herzegovina, Kosovo, North Macedonia and Serbia.

With the ceiling tightening for all pollutants in 2025, the countries' breaches are even worse than in previous years. For the first time since the LCPD entered force in 2018, Serbia was in breach of its NERP for all three regulated substances. But the more stringent ceilings do not account for this on their own: North Macedonia's coal power plants more than doubled their dust emissions compared to 2024. NO_x emissions also increased in Serbia and North Macedonia.

Overall, in 2025 SO_2 pollution from the NERP coal plants across the region was 6.6 times as much as allowed – the highest relative breach since 2018. Bosnia and Herzegovina remained the highest emitter in the region for the second year in a row. Dust pollution was 2.9 times as much as allowed, compared to 1.9 times in 2024, driven mainly by a massive increase at the Bitola plant in North Macedonia, which single-handedly exceeded the regional dust ceiling. NO_x pollution was nearly 1.4 times as much as allowed, similar to the previous year.

Although the Energy Community Secretariat has opened cases on all the breaches, and CBAM, technical problems and low coal production in some countries are likely to hasten the demise of coal plants in the region, more pressure on the governments and utilities and better planning of a managed coal phase-out are needed. After eight years of breaches, not a single utility in the region has been fined by the authorities for its non-compliance.

There is now a serious danger of an uncontrolled coal phase-out, with unnecessarily harsh impacts on coal-dependent communities that could have been avoided by proper planning. None of the countries' NECPs clearly set out how this will be managed, and clear and decisive plans are desperately needed. The updates of their long-term strategies scheduled for 2026 represent an opportunity to clarify their decarbonisation timelines and to set a basis for the next draft NECPs which need to be submitted by 1 January 2028.

Politicians and utilities will no doubt try to blame the EU and CBAM for the negative social consequences arising from the decline of the coal industry, but the truth is, they have brought it on themselves by failing to plan and make appropriate investments. Governments and utilities have known about the LCPD deadline of 2018 since at least 2005, when the Energy Community Treaty was signed, and they have known that CBAM is coming since at least 2019.

Now it is too late to initiate costly projects like desulphurisation as they will not be feasible, so only lower-cost measures can be taken. The window of opportunity for compliance is closing, so the only real choice for many plants now is between controlled, gradual closure or collapse. This must be planned together with increased attention to energy savings, appropriately-sited wind and solar, grid improvements, geothermal, and heat pumps, avoiding costly distractions like gas infrastructure.

Recommendations

The Western Balkan governments must finally take responsibility for planning a managed coal phase-out and enforce the law. The need to cut pollution and ramp up energy efficiency and sustainable forms of renewable energy is greater than ever, and the public and parliaments need to hold governments accountable.

Plants operating under the opt-out regime must close promptly,[151] and the NERP plants must comply with their ceilings. Most urgently, the Ugljevik, Kostolac B and Nikola Tesla A3-A6 desulphurisation units need to start functioning properly. Where pollution control investments are not feasible, operating hours need to be reduced to decrease the pollution burden.

Energy wastage must also be reduced by other measures, both short-term and more systematic, such as reducing distribution losses, insulating buildings, and the use of efficient heat pumps instead of electrical resistance heaters. Such measures need to be given much higher priority than is currently the case.

The countries' updated long-term strategies and updated NECPs need to contain realistic plans for a managed coal phase-out, based on their plants' real technical condition, the level of investment required to bring them into compliance with pollution control, and their lignite reserves and production capacity. The impacts of CBAM need to be integrated into these plans, with clear and transparent assumptions based on the experience so far.

Although Western Balkan governments clearly bear the main responsibility for decreasing pollution, EU institutions need to step up their action as well, using all the tools at their disposal, such as conditioning EU financing and accession progress on compliance; sending clear, public political messages; and securing financing for a just transition of coal regions and switch to sustainable district heating. The Commission needs to propose stronger enforcement tools for the Energy Community Treaty for the benefit of human health and the environment. If the Treaty is to further drive decarbonisation and market integration, its dispute settlement mechanism must be strengthened to include dissuasive penalties for breaches.

[151] The other option is to undergo major reconstruction to comply with the emission limit values for new plants under the Energy Community Treaty as the Pljevlja plant has attempted to do, but we are sceptical that this is economically feasible.

To all the Western Balkan governments

- Close the opt-out plants.
- Reduce operating hours for non-compliant plants in order to comply with the NERP emissions ceilings until pollution control equipment is functioning or the plants are closed.
- Adopt or update long-term strategies and NECPs with clear and transparent plans for the phased closure of all coal plants and overall fossil fuel phase-out dates. The plans must take into account the likely impacts of carbon pricing and/or the Carbon Border Adjustment Mechanism in the coming years, and must avoid expensive distractions such as new gas lock-in.
- Ramp up investments in solar, wind, energy efficiency measures, and grid improvements to cut losses and allow more connection of renewables, as well as the use of efficient heat pumps for households instead of electrical resistance heaters, in order to minimise the need to keep old coal plants online. Increase environmental scrutiny and public participation to minimise public resistance to solar, wind and grid investments.
- Enable effective environmental inspections of the large combustion plants under the NERP and opt-out regimes, with the aim of identifying breaches of national air protection regulations and applying enforcement measures and proper sanctions where applicable.
- Increase the amount of attention given to bottom-up participatory planning for a just transition at those coal plants and mines which will close first.

To the Bosnia and Herzegovina authorities

- Operate the desulphurisation equipment in Ugljevik immediately and continuously. Undertake real-time monitoring to ensure that the desulphurisation is being used at all times.
- Take immediate action to reduce dust emissions at Gacko, by reducing operating hours and/or installing new equipment, based on a realistic assessment of the plant's remaining lifetime.
- Cancel the decision to extend the lifetime of Tuzla 4 and Kakanj 5 and close the plants. Make the closure of Tuzla 3 official.
- Impose penalties on EP BiH and ERS for breaches of the NERP ceilings, and on EP BiH for the continued operation of Tuzla 4 and Kakanj 5 if they persist in operating after their lifetime extension decision is revoked.
- Immediately reduce the operating hours of all plants that are breaching their NERP ceilings.
- Adopt the draft Integrated Energy and Climate Plan with clarifications regarding plans for the country's coal phase-out and an economic justification for any further pollution control investments planned such as the desulphurisation investments at Kakanj 7 and Tuzla 6, taking into account the impacts of CBAM, coal production and the technical condition of the plants. Set the earliest possible closing dates for Gacko, Kakanj 6 and Tuzla 5, as it is unlikely that substantial investments in pollution control will prove feasible for these units.
- When carrying out environmental impact assessments for emissions reduction measures, ensure that the EIA studies contain detailed information on the technology to be used, what is to be done with by-products, and the expected results in terms of emissions reductions.
- Officially cancel the planned Ugljevik III and Gacko II coal power plants and avoid replacing BiH's coal lock-in with a new gas lock-in.

To the Kosovo authorities

- At the very minimum, impose dissuasive penalties on KEK for its breaches of the NERP emissions limits.
- Immediately reduce the operating hours of all units to bring them in line with their NERP ceilings, particularly with regard to dust emissions from Kosova B.

- Start closing Kosova A, unit by unit, as it seems highly unlikely that further investments in pollution control would be economically justifiable for a plant of this age. Urgently reassess the economic justification for the planned EUR 137 million investment in Kosova A3 and other planned investments in Kosova A.
- Speed up retrofitting works to bring dust and NO_x emissions at Kosova B into compliance. Publish updated information on the project's status and a justification for the extensive delays and ensure speedy completion of the project to improve continuous monitoring at Kosova B.

To the Montenegro authorities

- Clarify the functioning of the country's carbon pricing system based on the climate law adopted in December 2025 and ensure the coal power plant remains ineligible to receive free permits.
- Once the results of testing become available for the desulphurisation and denitrification equipment, publish the data and make clear public statements on the findings and next steps.
- If the plant still does not meet the legally mandated emission limit values, impose dissuasive penalties on EPCG.[152]
- Develop a back-up plan for closure in case the Pljevlja modernisation does not go as planned.
- Use the long-term strategy update and NECP update to commit to a coal phase-out year that is more realistic than 2035, based on the impacts of CBAM and/or increased domestic carbon pricing.

To the North Macedonia authorities

- At the very minimum, impose dissuasive penalties on AD ESM for breaches of the NERP ceilings and the IPPC obligations.
- Formalise the closure of REK Oslomej and TEC Negotino.
- Avoid further delays to the planned coal phase-out and do not open new coal mines.
- Speed up just transition processes and investments in line with the Just Transition Roadmap.
- Urgently address the lack of continuous monitoring in the large combustion plants.
- Reduce SO_2 and dust pollution from the Bitola power plant by keeping operating hours as low as possible to comply with ceilings until the plant is closed.
- Keep the decarbonisation of the energy sector on track by avoiding investments in new fossil gas power generation.

To the Serbia authorities

- Order the closure of the Morava and Kolubara coal plants, or at the very minimum impose dissuasive penalties on EPS for illegally operating them.
- Enable the enforcement of the final verdict of the High Court in Belgrade which ordered EPS to bring SO_2 emissions from its coal power plants into line with the country's NERP annual emission ceilings.

[152] The changes to the Law on Industrial Emissions in December 2022 do not make its operation less illegal – see the 2023 *Comply or Close* report for more details.

- Urgently clarify to the public why Kostolac B's and Nikola Tesla A's SO_2 emissions continue to be so high in spite of a de-SO_x unit being installed and what is being done to fix this. Decrease operating hours in the meantime, and publish emissions data in real time online.
- Considering that investments in desulphurisation are completed at Serbia's main coal plants, the focus for the remainder of the plants should now be on participatory planning for closure and a just transition for the workers and wider regions, depending on the plants.
- Ensure the new Law on Integrated Pollution Prevention and Control correctly transposes the EU's Industrial Emissions Directive.

To the Energy Community

- The Secretariat should continue to assist the Contracting Parties in updating their long-term strategies and NECPs, ramping up investments in sustainable forms of renewable energy, introducing carbon pricing, preventing new gas lock-in and preparing for a just transition.
- Given the continued non-compliance with regard to Morava and other opt-out plants in Serbia, Tuzla 4 and Kakanj 5 in Bosnia and Herzegovina, and Serbia's NERP plants, continue escalating these cases towards the Ministerial Council.
- We call on the Ministerial Council to confirm Pljevlja's obvious breach of the Energy Community Treaty without further delay.

To the European Commission and EU Member States

- Initiate the strengthening of the Energy Community Treaty to ensure dissuasive penalties in cases of non-compliance.
- Secure additional, dedicated funding for a just transition of coal regions and sustainable district heating in the Western Balkans, including funds directly available to local authorities.
- Ensure that the potential exceptions from CBAM under Article 2(7) of the Regulation are stringently applied.
- Ensure that compliance with the LCPD is integrated as a condition in any future EU funds for the region, especially those operating on the principle of the Reform and Growth Facility.
- To address the lack of compliance with the Large Combustion Plants Directive and the Industrial Emissions Directive, emphasise the importance of enforcement at the national level, calling for a more active role for the inspectorates and enforcement before national judiciaries.
- Ensure that EU and international finance does not support gas in order to avoid creating further fossil-fuel lock-in.

Annex 1

Materials and methods

The emissions of Western Balkans coal power plants were collected from the EIONET Central Data Repository. Data for 2025 will only be verified by the European Environment Agency within the next few months, so they should be considered preliminary. The National Emission Reduction Plans used are official documents published by each of the countries. The overall country level ceilings used as reference include, in some cases (e.g. Serbia), emissions ceilings from other facilities that are not coal power plants (e.g. refineries), which explains why in those cases the national ceilings are higher than the sum of individual coal power plants' ceilings. In the case of Bosnia and Herzegovina, the NERP contains Tuzla 4 and Kakanj 5, which were later declared opt-out plants, so the ceiling excludes them.

CEE Bankwatch Network

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