Policies and Measures for Air Pollutant Emission Reduction in Montenegro

12th TFTEI Meeting 28 October 2026

The final benchmarks for Air quality under Chapter 27 – Environment

1. Air Protection Act – adopted, June 2026

The adopted Air Protection Act aligns the national framework with Directive (EU) 2024/2881 on ambient air quality and cleaner air for Europe.

2. Emission reduction commitments – negotiated and agreed, 2Q 2026

The emission reduction commitments for 2020–2029 and from 2030 onwards, relative to the 2005 baseline discussed and agreed

3. National Decree on NECD – adopted, September 2026

The adopted national Decree transposes Directive (EU) 2016/2284 on the reduction of national emissions of certain atmospheric pollutants.

4. EU accession negotiations – expected to be completed, 4Q 2026

Montenegro has fulfilled the relevant closing benchmark in its EU accession negotiations.

Montenegro’s negotiation process - key messages

AQ Management Strategy and NECD ERCs

The adopted Air Quality Mnagement Strategy is considered as a framework planning document; while the adopted national Decree on NECD sets the binding national reduction commitments.

$PM_{2,5}$: evidence-based pathway

The 5% commitment for 2020–2029 reflects existing policies, modelling and the limits of short -term reductions from solid-fuel residential heating.

Initial NAPCP shall be adopted by end of 2027

The Initial National Air Pollution Control Programme will consider and adopt additional measures, implementation capacities, costs and financing options.

Gothenburg Protocol status

Montenegro is a Party to the LRTAP Convention; it has not deposited the Protocol ratification instrument or ratified its 2012 amendments –ratification planned to be initiated in the short term (planned - by the end of 2026)

What the Decree sets up

Binding national reductions

Annual anthropogenic emissions of SO_2, NO_x, NMVOC, NH_3 and $PM_{2·5}$, relative to 2005.

National air pollution control programme

Sectoral policies and measures, timetables, assigned bodies and expected impacts.

Emission data and projections

Annual inventories; projections every two years; spatial inventories every four years.

Monitoring and accountability

Inventory quality assurance, reporting and tracking impacts on ecosystems.

Implementation: data/inputs, inventory, verification, planning

Annual emission inventory

Record national source-sector emissions with documented methods and quality assurance.

Biennial projections

Recalculate future pathways and assess whether measures are adequate for Annex 2 obligations.

Air Pollution control programme

Documents selected measures, deadlines, responsibilities, costs and effects.

Progress review

Compare national inventories with the 2005 baseline and the applicable national obligations.

NEC Regulation, Articles 6–12 and 17; Annexes 1 and 3

The Decree on the reduction of national emissions of certain atmospheric pollutants – fully aligned with the NEC Directive

National emission reduction commitments

SO_2	NO_x	NMVOC	NH_3	$PM_{2.5}$
sulphur dioxide	nitrogen oxides	non-methane volatile organic compounds	ammonia	fine particulate matter

Emission reductions are calculated against total emissions in 2005.

Obligations for 2020–2029 and from 2030 onwards

Annex 2 | ERCs

National emission reduction commitments for five main pollutants, compared with the 2005 baseline.

COMMITMENTS FOR 2020–2029

SO_2	NO_x	NMVOC	NH_3	$PM_{2.5}$
60%	25%	10%	25%	5%

COMMITMENTS FROM 2030 ONWARDS

SO_2	NO_x	NMVOC	NH_3	$PM_{2.5}$
99%	55%	37%	30%	49%

All percentages are relative to national emission levels in the baseline year 2005.

Annex 3 | ammonia control measures

Fertiliser and manure application

Low-emission methods; the Annex refers to methods demonstrating at least 30% savings versus reference practice.

Slurry storage

At least 60% reduction for new low-emission storage systems; at least 40% for existing systems versus references.

Animal housing

Systems demonstrating at least 20% less ammonia emissions compared with the reference approach.

Feeding strategies

Low-protein feeding approaches demonstrating at least 10% savings compared with the reference.

These technical benchmarks are not the national NH_3 emission reduction commitment (25% / 30%) – to be adopted in the Initial Air Pollution Controle Programme

NEC Regulation, Annex 3, Part 2, Section A, pp. 13–14

The legally applicable figures take precedence

Pollutant	Regulation 2030+	Strategy p. 35
SO_2	99%	70%
NO_x	55%	55%
NMVOC / VOC	37%	20%
NH_3	30%	30%
$PM_{2·5}$	49%	20%

The adopted NEC Regulation defines the applicable commitments. Different values in the Strategy are planning estimates and must not be treated as the binding legal targets.

NEC Regulation, Annex 2, p. 12; Strategy, p. 35

The Stretegy measures to be implemented and built upon to achieve adopted ERCs

Power sector

Pljevlja thermal power plant reconstruction and emissions control (M1).

Renewables

New wind/solar projects, renewable-energy auctions and additional capacity (M2–M3).

Clean heating

District heating in Pljevlja (M6) and energy-efficiency upgrades in buildings (M7).

Transport

Electric mobility, biofuels and limits on importing vehicles meeting Euro 4 or lower standards (M8–M10).

Agriculture and waste

Manure management and bio-waste actions (M11–M12); ammonia practices in the Decree, Annex 3.

Strategy 2026–2029, measures M1–M12, pp. 41–43; NEC Regulation, Annex 3

Household heating and energy poverty - / $PM_{2.5}$ REDUCTION PRIORITIES

Why household heating matters

Solid-fuel stoves and other dispersed residential sources are major contributors to $PM_{2.5}$ emissions.

Cleaner heating options

Expand district heating in Pljevlja (M6) and support a transition away from polluting household fuels.

Lower energy demand

Improve insulation and building energy efficiency (M7) to reduce heating needs and emissions.

Address energy poverty

Target affordable financing and support towards vulnerable households so cleaner heating is accessible.

Contribution to $PM_{2.5}$ goals

Combine heating upgrades, social support and effective implementation to deliver lasting emission reductions.

Source: Air Quality Management Strategy 2026–2029 (M6–M7); Montenegro's response to the EC on ERCs

Modelled annual emission savings by measure

Measure	Pollutant	Savings (kt/year)
M1 · Pljevlja plant	SO_x	**73.00**
M1 · Pljevlja plant	NO_x	**5.40**
M3 · Renewable auctions	$PM_{2.5}$	**0.99**
M6 · District heating	$PM_{2.5}$	**0.73**
M7 · Building efficiency	$PM_{2.5}$	**0.69**

These are modelled additional savings, NOT achieved reductions and NOT percentages relative to 2005. Measures can overlap.

Strategy 2026–2029, Table 5, p. 41 | kt/year versus existing-measures scenario

2030 projections | existing vs additional measures

Annex IV projections, June 2026 | national totals, kt/year | WM = with measures; WAM = with additional measures

Pollutant	2005 baseline	2030 WM	2030 WAM	2030 ceiling*
SO_x (as SO_2)	45.205	53.350	**3.116**	0.452
NO_x	11.329	11.247	**6.994**	5.098
NMVOC	7.793	7.270	**6.963**	4.909
NH_3	4.110	2.730	**2.746**	2.877
$PM_{2.5}$	1.510	4.462	**4.129**	0.770

* Indicative ceiling = 2005 national total × (1 − Annex 2 reduction obligation). This is not a final legal compliance assessment.

Source: Annex IV workbook (2005, 2030_WM, 2030_WAM; NATIONAL TOTAL, row 141) and NEC Regulation, Annex 2.

2030 outlook | projected reductions vs commitments

Reduction from 2005 (%) under the WAM scenario | calculated from national totals

Pollutant	Required	Projected WAM	Indicative result
SO_x (as SO_2)	99.0%	93.1%	**Below target**
NO_x	55.0%	38.3%	**Below target**
NMVOC	37.0%	10.6%	**Below target**
NH_3	30.0%	33.2%	**Meets target***
$PM_{2·5}$	49.0%	−173.5%	**Below target**

* NH_3 passes only on the national-total basis. The workbook's NECD compliance-total row differs sharply for NH_3 and must be checked before drawing a legal compliance conclusion.

Source: Annex IV workbook (2005 and 2030_WAM, row 141); NEC Regulation, Annex 2. Negative $PM_{2·5}$ reduction indicates an increase.

Interpretation | projection and reporting caveats

Checks needed before using these figures for formal compliance conclusions

Scenario contrast

2030 WAM materially improves SO_x and NO_x over WM, but does not meet their Annex 2 reduction thresholds.

Major concern

2030 WAM $PM_{2·5}$ is 4.129 kt versus a 2005 national total of 1.510 kt; review underlying source-sector assumptions and coverage.

Compliance totals

The workbook distinguishes NATIONAL TOTAL, CLRTAP compliance total and NECD compliance total; NH_3 in 2030 WAM is 2.746 kt nationally but 0.127 kt in the NECD row.

Do not conflate estimates

Modelled measure-specific savings in the Strategy are not additive proof of reaching national emission ceilings; reporting scope and baselines differ.

Source: Annex IV emission projections workbook, June 2026 (rows 141, 152, 154); NEC Regulation, Annex 2; Strategy Table 5.

Thank You for Your Attention
Policies and Measures for Air Pollutant Emission Reduction in Montenegro

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