TFTEI

Under the Convention on Long Range Transboundary Air Pollution

UNECE

45 YEARS 1979-2024 AIR CONVENTION

# Draft informal document on potential options to revise the TAs to the AGP

*Developed by the TFTEI Co-chairs and the TFTEI Techno-scientific Board*

*- Informal meeting, 7th October 2025 -*

## *Introduction*

In accordance with paragraph 39(b) of the EB_44 report (ECE/EB.AIR/156), the Executive Body (EB): “Requested TFTEI, with the Bureau of the Working Group on Strategies and Review (WGSR), to work on potential options to revise the technical annexes (TA), in particular taking into account the needs of non-Parties and using the proposal set out in the above-mentioned informal document to commence that work” (i.e. informal document on 'Preparatory work on the revision of the TA to the present GP) .

The aim of the TFTEI proposed work ("Draft informal document on potential options to revise the Technical Annexes to the AGP") is to provide, to the extent possible, a flexible and adaptive instrument, that would allow Non-Parties to ratify and accede to a future revised Gothenburg Protocol, from a technical point of view, taking in due account of their different implementation capacities.

As highlighted by TFTEI co-chair during the WGSR 63rd session, in May 2025, the Technical Annexes, especially for the Non-Parties, play a crucial role in the process of BAT implementation and achievement of the Emission Reduction Commitments (ERC), negotiated and established in Annex II

To understand the different roles and aims of the Guidance Documents (GD) and the Technical Annexes (TA) is essential.

## *Guidance Document* vs *Technical Annex*

| Guidance Document | Technical Annex |
| --- | --- |
| Aim: to provide the Parties' experts with the most up-to-date overview of best emission abatement options to support the identification of the most suitable solutions to fulfil their obligations under the AGP.<br><br>Constraints: To kept well clear in mind that BAT AELs are not ELVs | Aim: to define the Emission Limit Values (ELVs) that each Party is expected to meet in order to comply with the obligations set out in the AGP.<br><br>Constraints: ELVs as regulatory targets to ensure compliance with the AGP |

**These are two documents that provide complementary information and must be considered together**: Technical Annex establishes the binding ELVs, the Guidance Document describes the range of available abatement options by offering the technical means to achieve the ERCs.

For **Parties to the AGP**: they have to develop reduction plans, structured and scheduled in a proper time, to achieve their ERCs, technically supported by the Guidance Documents and the Technical Annexes.

For **Non-Parties to the AGP**: the Technical Annexes should serve as additional instrument to operationalize the implementation of measures for emission reductions and to help and guide them in identifying a clear path forward the achievement of the ERCs

The Technical Annexes preserve the ambition and credibility of the Protocol and support the definition of ELVs used for developing several emission scenarios within the AGP revision process.

## *The way we started:*

TFTEI proposed, during the 63_WGSR, to develop **one single** Technical Annex on Stationary Sources, based on a sectoral approach and covering all pollutants of the AGP, and **one single** Technical Annex on Mobile Sources, with the similar approach.

In this way, TFTEI is in the position to work to the update of the TAs while the Parties consider and decide on the final structure and nature of the new annexes.

## *What we consider:*

TFTEI has proposed setting three levels of ambition for establishing ELVs (in principle, BAT could be taken as a basis to set ELVs):

a) Moderate level of ambition;

b) Higher level of ambition;

c)Tailored level of ambition, considering ONLY relevant selected sources.

# *More details on the three levels on ambition:*

**Three levels of ambition for setting ELVs can be envisaged** (as a principle, BAT could be seen as a basis to set ELVs)

- **Moderate level of ambition (option A):** Limit values consistent with current limit values of TAs in the AGP; these limit values still imply an improvement in emission reduction for Non-Parties as compared to their own current implementation capacity;

- **Higher level of ambition (Option B):** Limit values in line with the draft revised Guidance Document on Stationary Sources (use of BAT-AEL ranges: lower and upper emission level, depending on production processes and available abatement measure), and/or, in absence of data from the Guidance Document, other BAT sources are used or other TFTEI documents.

- **Tailored level of ambition (Option C**): **Not tailored on single countries.** Limit values adapted, to the extent possible, to the capabilities of Non-Parties, **considering only relevant selected sources, on the basis of the following works:**
    - TFTEI technological pathways: "Technological pathways towards the ratification of the amended Gothenburg Protocol in Serbia, Georgia, Kazakhstan, Moldova, Montenegro and Armenia" submitted to the EB_44;
    - Summaries of questionnaires, thematic sessions and TFTEI's BAT workshops;
    - Standards used in EECCA countries: Kazakhstan BAT-AELs, Eurasian Economic Union (EAEU) regulations or other relevant regulations identified during Technological Pathway study;
    - Other relevant documents.

# *Scope of the new Technical Annex on Stationary Sources*

1. Large combustion plants (boilers, gas turbines and engines): $SO_2$, NOx, PM
2. Medium combustion plants (1 to 50 MWth): $SO_2$, NOx, PM
3. Mineral oil and gas refineries (boilers, FCC, SRU and other key sources)
4. Cement production: NOx, PM
5. Glass production: NOx, PM
6. Primary iron and steel production: $SO_2$, NOx, PM
7. Iron  foundries: $SO_2$, NOx, PM
8. Non-ferrous metals production and processing (zinc, lead, copper, aluminium): $SO_2$, NOx, PM
9. Solid fuel combustion installations with a rated thermal input < 500 kWth : PM (including BC), VOC and NOx
10. Activities using solvents

In green "new" (Recommended additional activities or pollutants for ELVs compared to the current AGP)

# *Example 1 – Large combustion plants using coal – $SO_2$*

## $SO_2$ - Combustion plants with a thermal input capacity between 50 and 100 MW

### Available information

Current limit values in the AGP (annex IV):
New plants: **400** mg/m$^3$ at 6 % $O_2$
Existing plants: **400** mg/m$^3$ at 6 % $O_2$

Range of BAT-AELs as daily average, from the Appendix to the RGD (table 27):
New plants: 170-**250** mg/m$^3$ at 6 % $O_2$
Existing plants: 170-**400** mg/m$^3$ at 6 % $O_2$

Range of BAT AELs as daily average, from the BREF LCP from Kazakhstan:
New plants: 170-**220** mg/m$^3$ at 6 % $O_2$
Existing plants: **400** mg/m$^3$ at 6 % $O_2$

### Options proposed

Moderate ambition option:
Keep the current limit values of the AGP
New plants: **400** mg/m$^3$ at 6 % $O_2$
Existing plants: **400** mg/m$^3$ at 6 % $O_2$

High ambition option:
New plants: **209** mg/m$^3$ at 6 % $O_2$ (as monthly average)
Existing plants: **378** mg/m$^3$ at 6 % $O_2$ (as monthly average)

Tailored ambition option:
No specific needs – ELVs can be equivalent to the higher ambition option

No change/AGP    Based on upper levels of BAT AELS

# *Example 2 – Large combustion plants using coal – Dust*

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**Dust - Combustion plants with a thermal input capacity between 50 and 100 MW**

## Available information

Current limit values in the AGP (annex IV):

New plants: **20** mg/m$^3$ at 6 % $O_2$

Existing plants: **50** mg/m$^3$ at 6 % $O_2$

Range of BAT-AELs as daily average, from the Appendix to the RGD (table 20):

New plants: 4 - **16** mg/m$^3$ at 6 % $O_2$

Existing plants: 4 – **22** mg/m$^3$ at 6 % $O_2$

Range of BAT AELs as daily average, from the BREF LCP from Kazakhstan:

New plants: 30 - **60** mg/m$^3$ at 6 % $O_2$

Existing plants: 70 - **200** mg/m$^3$ at 6 % $O_2$

## Options proposed

Moderate ambition option:

Keep the current limit values of the AGP

New plants: **20**mg/m$^3$ at 6 % $O_2$

Existing plants: **30** mg/m$^3$ at 6 % $O_2$

Higher ambition option:

New plants: **10** mg/m$^3$ at 6 % $O_2$ (as monthly average)

Existing plants: **20** mg/m$^3$ at 6 % $O_2$ (as monthly average)

Tailored ambition option:

New plants: **35** mg/m$^3$ at 6 % $O_2$

Existing plants: **189** mg/m$^3$ at 6 % $O_2$

No change/AGP

Based on upper levels of BAT AELS

Tailored option more flexible than current AGP or RGD Appendix

# *Example 3 – Small domestic appliances – Dust*

## Dust – Small domestic appliances using wood

### Available information

Current recommended limit values in the AGP (annex X):
New stoves: **75** mg/m$^3$ at 13 % $O_2$
New log wood boilers: **40** mg/m$^3$ at 13 % $O_2$

Range of achievable emission levels in the Appendix to the RGD (table 26)

| Equipment with solid biomass | mg/Nm$^3$ at 13% $O_2$ |
|---|---|
| | Dust |
| **Wood stoves and closed insert appliances** | 20–40 |
| **Log wood boilers (with heat storage tank)** | 15–30 |
| **Pellet stoves and pellet boilers** | 15-20 |
| **Automatic boilers up to 1 MW** | 5-25<br>(7-35 mg/Nm$^3$ at 10% $O_2$) |

### Options proposed

Moderate ambition option:
Existing recommended limit values
New stoves: **75** mg/m$^3$ at 13 % $O_2$New log wood boilers: **40** mg/m$^3$ at 13 % $O_2$

High ambition option:
New stoves: **40** mg/m$^3$ at 13 % $O_2$
New Log wood boilers: **30** mg/m$^3$ at 13 % $O_2$
Tailored ambition option:
NO ELVs Conducting preliminary studies to assess the technical, economic, and institutional feasibility of applying minimum emission standards for heating appliances placed on the market, with the long-term goal of developing and enforcing dust emission limits

No change/AGP

Based on upper levels of Achievable emission level

TFTEI thanks you for the active participation in the discussion on this subject and recommends to send your comments to us within 1 week after the meeting.

Your comments will be taken into due consideration to update the document before to the submission to the Secretariat.