

TOWARDS AN EU BREF PROCESS FIT FOR THE 2050 GOALS OF CLIMATE NEUTRALITY, ZERO POLLUTION AND CIRCULAR ECONOMY



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A BREF PROCESS FIT FOR THE FUTURE

Key relevant amendments of the Industrial Emissions Directive:

- **The definition of BAT has been amended to include human health and climate protection:** *'best' means most effective in achieving a high general level of protection of the environment as a whole, including human health and climate protection* (IED Art. 3(10)(c)).
- **The criteria for the determination of the BAT have been similarly amended to include considerations for the protection of human health, the limitation of the use of substances of very high concern, and decarbonisation** (IED Annex III).
- **The BAT conclusions should now identify emerging techniques and best available techniques that industrial operators may implement to innovate and transform their processes towards the 2050 goals.** The need for the process to become more dynamic, in order to support the timely deployment of such transformative techniques is also recognised.

A BREF PROCESS FIT FOR THE FUTURE

Key relevant amendments of the Industrial Emissions Directive:

- **The principle of continuous improvement of the environmental performance and safety of the installation, on the basis of specific objectives and performance indicators, is highlighted**, esp. through the implementation of environmental management systems (EMS). Such objectives and benchmarks shall be included in the relevant BAT conclusions for a given sector (IED Art. 3(12), Art.14a).
- **The BAT-conclusions should now include binding environmental performance levels (incl. resource efficiency levels) associated with BAT, indicative environmental performance values associated with emerging techniques, and indicative benchmarks** (for other cases) to be included in the EMS.
- **The provisions on the setting of emission limit values (ELVs) have been clarified to explicitly demand that operators and authorities consider the entire range of the BAT-Associated Emission Levels (BAT-AELs), and the feasibility of setting an ELV at the strictest achievable level** for a given installation; the provisions on indirect discharges to water bodies have been similarly strengthened.

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A BREF PROCESS FIT FOR THE FUTURE

Key relevant amendments of the Industrial Emissions Directive:

- **The provisions on the control and substitution of hazardous chemicals have been strengthened:**
 - requirement for substitution analysis for the hazardous substances present (irrespective of form) and emitted (EMS provisions);
 - obligation for permit writers to consider the hazardousness of pollutants in permitting; and the protection for water catchment areas;
 - enhanced maintenance and surveillance measures (IED Art. 14);
 - the role of the European Chemicals Agency (ECHA) in the BREF process has been formalised.

A BREF PROCESS FIT FOR THE FUTURE

Future BAT conclusions compatible with the 2050 goals:

- **The BAT conclusions should determine which techniques, and under what circumstances, constitute ‘deep transformation techniques’ for a given sector; and which techniques and processes are incompatible with the transformation vision (and timeline) and should be phased-out.**
 - Any technique, e.g., involving the use of fossil fuels (or feedstock) needs to be included in the BAT conclusions as a so-called ‘negative BAT’, accompanied by a mandatory decommissioning or phase out plan (e.g., BAT2 and BAT3 in CAK BREF).
 - The new innovation centre on industrial transformation and emissions (INCITE) shall be mandated to provide an opinion, that will subsequently be examined by the Forum, on which techniques qualify as ‘deeply transformative’ for a given sector.
 - Minimal expectations should be set in the BREF guidance as to the meaning of what ‘deeply transformative’ is.

A BREF PROCESS FIT FOR THE FUTURE

Future BAT conclusions compatible with the 2050 goals:

- **An outcome-oriented approach is needed. The BREF guidance shall further provide Key Performance Indicators (KPIs) as to what expectations/outcomes the BAT conclusions shall deliver at installation (or sector) level.**
 - IED Art.1, Art. 14a (EMS) emphasize the dynamic nature of BAT and the aim to continuously improve the environmental performance of installations.
 - The EMS shall include ‘environmental policy objectives’ for the ‘continuous improvement of the environmental performance and safety of the installation’, based on ‘objectives and performance indicators’, and those are to be developed on the basis of the so-called ‘benchmarks’ set out in relevant BAT conclusions (IED Art. 14a(b)).
 - The BREF guidance shall provide clarity as to what common ‘headline KPIs’ should apply across IED activities.
 - The KPIs, or outcome-oriented indicators, should be an integral part of the BREFs.

A BREF PROCESS FIT FOR THE FUTURE

Future BAT conclusions compatible with the 2050 goals:

- **The process needs to be fast-tracked** if the 8-year review cycle and dynamic nature of BAT is to be respected. There are currently no tools to factor in the dynamic aspect of BAT determination, or to speed-up the information exchange.
- **The reviews of the BREFs for energy-intensive sectors (steel, cement) should be prioritised**, in line with IED Article 13(5) (highest potential to improve the protection of the environment), but to also ensure that the updated BAT conclusions will be taken up in the Transformation Plans (as these sectors should produce their plans, in priority, by 30 June 2030).

A BREF PROCESS FIT FOR THE FUTURE

Future BAT conclusions compatible with the 2050 goals:

- **A different governance model is needed:**
 - Consensus-finding should be fact-checked against compatibility with the 2050 transformation vision
 - Rules enabling a balanced representation of interests, and a conflict-of-interest policy should be put in place
 - Industry frontrunners (technique providers and operators) should be adequately represented instead of sidelined by well-established industrial associations

PREVENTION AND CONTROL OF POLLUTION

Future BAT conclusions compatible with the 2050 goals

- The pollution abatement hierarchy (prevention first) should be factored-in
 - **The future BREFs shall prioritise the phase-out of fossil-based processes as a means to prevent pollution in the first place, instead of driving investments in end-of-pipe pollution control options.** (End-of-pipe controls may still be relevant for (green) hydrogen and biomass combustion processes that cannot be substituted, or when the substitution comes with significant cross-media impacts).
 - **The techniques should systematically appear in an hierarchical order,** based on their effectiveness to first prevent, or if not practicable, to reduce pollution; the related **pollution abatement efficiencies should also be systematically noted.**

PREVENTION AND CONTROL OF POLLUTION

Future BAT conclusions compatible with the 2050 goals

- **The data collection should only focus on the most effective BAT**, e.g., by:
 - a more suitable selection of reference installations that indeed have BAT to showcase;
 - a more suitable selection of the data used for the BAT-AELs derivation;
 - ensuring an adequate representation of innovative technique providers and operators in the TWG (and in the INCITE) that would advise on these issues in the frontloading phase;
 - an early submission (frontloading phase) of a sample of feasibility assessments (on whether an installation can comply with the lower BAT-AEL ranges of current BREFs).

PREVENTION AND CONTROL OF POLLUTION

Future BAT conclusions compatible with the 2050 goals

- **The BAT Conclusions should systematically contain information on the circumstances allowing the achievement of lower emissions levels within the BAT-AELs range**, incl. the technique(s) used, and potential cross media effects. This will further facilitate the implementation of the updated IED Art. 15(3).
- The practice of setting wide BAT-AEL ranges, with a factor difference of, e.g., 3 or more, of the lower v. the upper end, shall be avoided. This practice is undermining an ambitious implementation of Art. 15(3).
- **The BAT Conclusions should systematically contain BAT-AELs for indirect releases of heavy metals and other persistent pollutants** that the average wastewater treatment plant is not adequately designed and equipped to abate. The operators of downstream treatment plants shall be involved in the determination of such BAT-AELs.

PREVENTION AND CONTROL OF POLLUTION

Future BAT conclusions compatible with the 2050 goals

- **There should be a zero-tolerance approach on persistent, bio-accumulative and toxic (PBT) substances.**
 - This would mean to require the use of effective techniques that can deliver on this ambition, and to set BAT-AE(P)Ls in such a way that emissions close to detection limit for substances qualifying, e.g., as Priority Hazardous Substances under the EU Water Framework Directive are achieved as well as the progressive cessation of all other Priority Substances.
 - The lack of adequate data shall not be an obstacle in preventing (e.g. via closed-loop systems) or minimising discharges when the relevance of the sector has been established through studies, e.g., in the case of PFAS and the BAT (cross-sectoral) studies executed by the Flemish BAT centre; the answer there should be to mandate the most advanced treatment techniques available.
 - The methodology for the determination of the Key Environmental Issues (KEI) in each BREF review shall be adapted to ensure that all relevant PBT substances are targeted, alongside pollutants of emerging concern

FOCUS ON HAZARDOUS SUBSTANCES

Future BAT conclusions compatible with the 2050 goals

- **The European Chemicals Agency (ECHA) and the European Environment Agency (EEA) shall be mandated, in the frontloading phase, to support in the identification of the relevant hazardous substances for each IED sector, incl. substances fulfilling the criteria of article 57 or substances addressed in restrictions in annex XVII to the REACH Regulation, through:**
 - screening of the REACH dossiers;
 - available chemical management systems of well-performing plants;
 - the inventories of inputs and outputs;
 - and independent research projects such as the 'Forever Pollution Project' collecting data as to PFAS pollution hotspots (the dataset, available [here](#), lists many IED related activities)
- **The recommendations of the HAZBREF project should be taken up further.**
- Where an EU member state has already carried out such studies pointing to the relevance of a given substance/group of substances for an IED sector, **it must be assumed that the very same finding is expected in the rest of the Union – the substance(s) shall be treated as KEI by default and addressed in the BAT conclusions.**

CLIMATE PROTECTION AND RESOURCE PRESERVATION

Future BAT conclusions compatible with the 2050 goals

- **The BAT conclusions should systematically address decarbonisation, considering e.g., the options of electrification, (fossil) fuel or feedstock switch, and the derivation of benchmarks or BAT-AE(P)Ls on greenhouse gases (GHG).**
- The European Integrated Pollution Prevention and Control Bureau (EIPPCB) shall be assisted by DG CLIMA in this exercise, based on the data and conclusions derived from the development of the respective benchmarks under the Emissions Trading System (ETS). As a starting point, the 10% most efficient performers list (under the ETS) shall be shared with the EIPPCB and the given BREF TWG, for a more focused data analysis.
- **Other relevant considerations include the substitution of materials, or smart design options which can deliver on decarbonisation gains throughout the value chain.** In the production of ceramics, e.g., we see the design of 'lego-like' (self-locking) bricks that limit the use of carbon-intensive mortar in the use phase of those products.

CLIMATE PROTECTION AND RESOURCE PRESERVATION

Future BAT conclusions compatible with the 2050 goals

- **The use of fossil feedstock/fuels shall be 'recorded' as 'negative BAT', and a decommissioning/phase out plan shall be systematically set where installations in the EU would still employ these 'obsolete, fossil age BATs'.**
- When this is not feasible due to applicability restrictions that are not under the control of the operator (e.g. insufficient electricity supply), these restrictions should be reported in the BAT conclusions and should be well-crafted to not undermine the transformation of the entire sector.
- Carbon capture and storage/use (CCS/CCU) may only be considered when there is no technical feasibility to substitute the fossil-based process, but in any case it cannot be accepted as 'BAT'.

CLIMATE PROTECTION AND RESOURCE PRESERVATION

Future BAT conclusions compatible with the 2050 goals

- **More resources shall be dedicated to tackle the (un)availability of data and expertise**, addressing inter alia the choice of appropriate boundaries for the data collection, the contextual information needed to ensure data comparability, the metrics to be used for the BAT-AEPLs, related monitoring requirements, industrial symbiosis applications, and concerns over cross-media effects.
- **The issue of deriving BAT-AEPLs vs benchmarks also merits attention.** As noted in IED Recital 13a, indicative benchmarks shall be derived (instead of BAT-AEPLs) 'where environmental performance is highly dependent on specific circumstances of the processes'. The BREF guidance should include a clarification on this issue to ensure a consistent approach across the different TWGs.
- The assessment of EMAS reports, benchmarking studies on resource consumption, or other sources, e.g., data supplied through Corporate Sustainability Reporting initiatives, shall systematically be part of the frontloading work.

FAST-TRACKING THE BREF PROCESS

- **The data collection should only focus on the most effective BAT**, e.g., by a more suitable selection of reference installations that indeed have BAT to showcase; by a more suitable selection of the data used for the BAT-AELs derivation; by ensuring an adequate representation of innovative technique providers and operators in the TWG (and in the INCITE) that would advise on these issues in the frontloading phase. **The information exchange shall only consider:**
 - installations whose performance is **in compliance with current BREF conclusions** for the BAT in question; and considering a politically-set 'improvement factor' (e.g. 15-25%).
 - installations whose performance **do not to exceed any national-level general binding rules** for the BAT in question.

FAST-TRACKING THE BREF PROCESS

- **The approach of using data of the past years shall further be reflected upon.**
 - A more flexible and forward-looking approach would be sourcing of data through stack tests, e.g., as per the US model of the 'Maximum Achievable Control Technology (MACT)'. The method used to derive the MACT floor is based on the 'best controlled similar source'. For existing installations it cannot be less stringent than the average emissions of 12% of the best performing installations (if more than 30 sources). The practice of the US EPA is that data from stack tests, generally comprising three one-hour runs are used.
 - There is a considerable time lag between the date of the emissions / performance information used to inform the BAT determination and the moment the BAT Conclusions are finally implemented at installation level (12.2 years in average).
- **The data currently used in the EU BREF process are mainly from EU installations, instead of tapping into innovative solutions worldwide.**

FAST-TRACKING THE BREF PROCESS

- **The early submission of feasibility assessments (IED Art. 15.3) (frontloading phase)** would enable more focused and faster data collection, validation and analysis.
 - If not provided by operators of best performing plants, alternatively, member states authorities shall be mandated (via the BREF guidance) to provide such assessments; the exact deadline for the submission of the feasibility assessments depends exclusively on the authorities planning/timing for the reconsideration of permits (or general binding rules).
 - Such early submission in the frontloading phase of the BREF process will allow the TWGs to quickly assess the improvement potential within a given sector.

FAST-TRACKING THE BREF PROCESS

- **Standardised texts should be included in (an Annex to) the BREF guidance, and be automatically inserted in future BREFs (example is the adoption of the standardised text of BAT 1, EMS).** The aim of this is to ensure a uniform approach across BREFs, avoid parallel debates in the different TWGs, reduce the amount of comments received by the EIPPCB and their subsequent analysis time, and liberate time for more in-depth discussions during the Final meetings
- With the release of the first draft of a given BREF, the EIPPCB shall provide additional justifications, as to how the proposals for the BAT conclusions incl. the BAT-AE(P)Ls derived, are fit for the wider transformation goals and share such justifications in written form at the same time with the release of the first draft. Depending on the comments received, a data workshop may be considered prior to the Final meeting.

FAST-TRACKING THE BREF PROCESS

- **Development of a standalone document, e.g., a ‘Common BAT candidates reference document’, or ‘Common BAT options compilation reference document’, that would be of interactive and dynamic nature** so to allow more regular updates (notably on the cross-sector applicability, validated cross-media effects, performance levels expected, cost and benefit data, common maintenance criteria etc.).
 - Sectoral BREFs would only cross reference to that standalone document and include sector-specific information if (substantiated) specificities of a given sub-sector or process do not allow for the application of the identified techniques therein and/or the achievement of such performance levels.
 - This could also provide for ‘default’ BAT-AELs, such as a maximum 5mg/Nm³ dust to air level that shall apply to all IED activities involving dust emissions to air.
 - Repeating over and over the same discussions and developing lengthy descriptive texts can be avoided. This approach will also ensure a level playing field for the different sectors.

FAST-TRACKING THE BREF PROCESS

- **The sectoral BREFs could also be adapted in a fast-track manner to align to the expected best performance levels pursuant to what is established in the ‘Common BAT candidates reference document’**
 - Only where the sector concerned has robust evidence that the levels expected / achieved in other sectors cannot be achieved in the relevant sector under review due to ‘specificities of the sector’ (those need to be arguments on technical feasibility only), then a higher level may be considered.
 - the Commission shall be mandated to provide interim draft Commission Implementing Rules amending all existing BAT conclusions, incl. the existing BAT-AE(P)Ls with a politically-set ‘improvement factor’ (or ‘innovation factor’, if this terms is preferred).
 - Those BAT conclusions shall apply automatically as a fallback should a revised IED-BREF is not published within the foreseen 4 years after entry force of the revised IED.

FAST-TRACKING THE BREF PROCESS

- **Partial reviews of BREFs** targeting only issues of significant environmental impact, following the opinion of the EEA and ECHA, as well as areas of advanced technological developments, following the opinion of INCITE

GOVERNANCE OF THE BREF PROCESS

- **a conflict-of-interest policy** is needed so that the experts involved in the exchange on behalf of governments do not have links to the industry being regulated. A clear prohibition on operators (or members of the TWG affiliated to operators) to act within the TWG on behalf of member states. Following scandalous revelations regarding the industry infiltration of the LCP BREF TWG, the issue was partly settled when the European Commission (IED Forum of 27 November 2018) demanded that the member state delegations shall be led only by public servants; however there was no clear demand for the total exclusion of the concerned industry (operators to be part of that delegation).

GOVERNANCE OF THE BREF PROCESS

- **Rules enabling a balanced representation of interests, as currently industry is over-represented whereas NGOs are under-represented in the process. If no equal seat allocation is feasible then the balanced representation should be ensured through**
 - giving more weight to NGOs that do participate, e.g., through more speaking time during the kick-off and Final meetings (the NGO delegates should be systematically allowed to respond / react to industry or MS comments made), and through
 - adapted decision-making rules for reaching consensus when critical decisions are made. Consensus should mean agreement between the various interest groups present (member states, NGOs, operators, technique providers) and not a 'number-counting exercise' of TWG delegates around the table. For the member states the Council majority rules could be used. For industry, the proposal of having two separate groups has obvious benefits to the process



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