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Towards more circular industrial processes

The EU's circular economy transition and the role of the Industrial Emissions Directive

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We are Europe's largest network of environmental citizens' organisations. We bring together over 180 civil society organisations from more than 40 European countries. Together, we work for a better future where people and nature thrive together.

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On 5 April 2022, the European Commission adopted the proposal for a revised Industrial Emissions Directive (IED)[1]. Considering the new elements presented, it doubtlessly represents a step forward towards more circular industrial processes. However, there are aspects to be further strengthened and clarified. In this briefing, we provide our assessment on the new elements included therein.

Industrial Emissions Directive (IED): the main EU instrument regulating the environmental impact of industrial installations. The IED lays down rules in order to '**prevent or, where that is not practicable, to reduce' and as far as possible eliminate pollution,** to protect the **environment and human health**. By doing so, it seeks to comply with the '**polluter pays' principle**, and the **principle of pollution prevention**, giving **priority to intervention at source**. The Directive also aims to **prevent accidents** and limit their consequences, to ensure the **efficient use of resources incl. energy**, to **prevent the generation of waste**, and to **avoid any risk of pollution upon definitive cessation of activities** (IED Recital 2, and Article 11).
All environmental aspects are taken into account, as per the so-called '**integrated approach**', which is one of the basic pillars of the IED. **Around 50 000 industrial activities of the most polluting and climate damaging sectors listed in Annex I of the IED are required to operate in accordance with a permit.** The permit conditions are based on the IED provisions, most notably the sector-specific EU BREFs.

EEB is publishing a series of briefings on different aspects relevant to the review of the IED.

All briefings can be accessed and downloaded here: https://eipie.eu/briefings-by-eeb/
Or scan this QR code:

[1] The Industrial Emissions Directive - Environment - European Commission (europa.eu)

Best Available Techniques Reference Documents (BREFs): industry-specific documents which define the most effective techniques that industry can employ to minimise the environmental impact of their activities – the so-called 'Best Available Techniques', or BAT. BATs are already per today's definition technically and economically viable. The BAT conclusions (included in the BREFs) are used as a reference to set permit conditions such as emission limit values or other environmental performance levels, which conditions industrial installations must comply with.

Best Available Techniques – Associated Emission Levels (BAT-AELs): the emission levels achieved by the application of BAT.

Best Available Techniques – Associated Environmental Performance Levels (BAT-AEPLs): the environmental performance levels achieved by the application of BAT.

Industrial Emissions Portal Regulation (IEPR): IEPR is the proposal for a revised Regulation establishing the European Pollutant Release and Transfer Register (E-PRTR), a Europe-wide register providing public access to key environmental data from industrial activities (incl. those covered by the IED). It is intended to implement the 2006 Kyiv Protocol on PRTRs, and refers to the triple objective of (1) enhancing public access to information that would (2) facilitate public participation in environmental decision-making, and (3) contribute to the prevention and reduction of environmental pollution. The current reporting interface is hosted by the European Environment Agency.

Background

In the **European Green Deal (EGD)**[2], it was recognised that achieving the EU's climate and environmental goals requires a new industrial policy based on the circular economy.

In the **EU Circular Economy Action Plan (CEAP)**[3], one of the main building blocks of the EGD, the European Commission committed to enable greater circularity in industry, incl. by assessing options for **further promoting circularity in industrial processes in the context of the review of the IED**.

Under the current framework of the IED, the focus has been on the prevention or abatement of pollutant emissions, while other impacts of industrial activity such as the deterioration of climate, and the depletion of our natural resources, have been insufficiently considered. The aspect of resource efficiency has been mentioned in several instances in the provisions of the Directive **but without concrete accompanying requirements.**

Another related challenge is **how to define and develop such targets and requirements. With regard to pollution abatement, the process is straightforward:** the emission limit values (ELVs) included in the permit are based on the EU BREFs, their BAT conclusions, and the BAT-AELs linked to the performance of pollution abatement techniques. **When it comes to resource efficiency, however, the situation is different: apart from the fact that there is no explicit obligation to include environmental performance levels (equivalent to pollution ELVs) in the permit, the BREFs themselves do not systematically include BAT and accompanying BAT-AEPLs linked to the performance of techniques boosting the resource efficiency of installations.**

The EEB has been advocating for the necessary changes in the legal framework, including both the IED and the BREF review rules[4] (the so-called 'BREF guidance'), to ensure that the operating permits of installations across Europe include specific requirements, which will enable us to move faster towards a circular economy.

[2] A European Green Deal | European Commission (europa.eu)
[3] new_circular_economy_action_plan.pdf (europa.eu)
[4] Commission Implementing Decision of 10 February 2012 laying down rules concerning guidance on the collection of data and on the drawing up of BAT reference documents and on their quality assurance referred to in Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions (notified under document C(2012) 613)Text with EEA relevance (europa.eu)

EEB position

The EEB welcomes the European Commission proposal for a revised IED. Considering the new elements presented, it undoubtfully represents a step forward towards more circular industrial processes. The following are highlighted:

- Art. 9(2) that prevented EU member states from imposing requirements relating to energy efficiency in respect of combustion units (or other units emitting carbon dioxide on the site) for activities listed in Annex I to the Emission Trading System (ETS) Directive[5], **is now deleted.**
- The **efficient use of material resources and water** (including through re-use), as well as the consideration of the **overall life-cycle environmental performance of the supply chain**, have now been included under the **'General principles governing the basic obligations of the operator'** (Art. 11).
- The operating permit of a given installation is proposed to now include, according to amended Art. 14, **environmental performance limit values (instead of emission limit values only), monitoring requirements for the consumption and re-use of resources (such as energy, water and raw materials), as well as information on progress towards fulfilment of the environmental policy objectives** referred to in new Art. 14a (more details below). The environmental performance limit values included in the permit shall not (as per amended Art. 15), under normal operating conditions, exceed the environmental performance levels associated with BATs – this new provision gives **explicit binding status to the BAT-AEPLs included in the EU BREFs**. In addition, the permit shall include the conditions for assessing compliance with the environmental performance limit values or a reference to the applicable requirements elsewhere.
- **A new article (Art. 14a) has been proposed on the implementation of an Environmental Management System (EMS) by the operator.** The EMS shall include performance indicators (in relation to significant environmental aspects) taking into account benchmarks set out in the relevant BAT conclusions, and the life-cycle environmental performance of the supply chain. These **aspects shall concern at least the optimisation of resource use, the prevention of waste generation, the management of energy, the compilation of a chemicals inventory incl. analysis of substitution of hazardous substances, as well as a transformation plan (see also new Art. 27d) on how the installation will transform itself in order to contribute to the emergence of a sustainable, clean, circular and climate-neutral economy by 2050.** The EMS shall be available to the public, on the internet, free of charge.

[5] Directive 2003/87/EC

The EEB has the following recommendations in relation to circularity aspects:

I. Include requirements linked to sustainable resource sourcing, and cooperating across the value chain and across sectors:

- According to the CEAP, the EU industry is recognised to have a key role in transitioning to a circular economy, particularly regarding these aspects. The value chain and intersectoral approach has the potential to further contribute to the achievement of the EGD goals of zero pollution and carbon neutrality, broadening the focus from BAT that aim to limit the (direct) environmental impact of the installations themselves, to also techniques that will reduce the environmental impact elsewhere in the chain.
- The amended Art. 11 and new Art. 14a touch upon these issues but in a narrower approach: they merely refer to the life-cycle environmental performance of the supply chain, but without clarifying how it could/should be taken into consideration. The focus seems to merely be on reducing the consumption of resources; this can be further assumed by the introduction of the new term 'environmental performance limit values' (instead of 'environmental performance values', a term that would encompass metrics for e.g., high levels of material and energy efficiency, or percentages of primary raw materials substitution by secondary ones). Additional elements to be considered by the operator are e.g., the environmental footprint (notably the carbon, material, and water footprint) of the plant's feedstocks and related upstream processes; and the potential for substitution of primary raw materials by secondary ones incl. through internal re-use or recycling of the residues of the process itself or via industrial symbiosis applications. **We expect that such aspects will be addressed by the EMS and the environmental performance (limit) values, and that they will already be specified in the revised Directive. The Commission proposal is vague on this matter and should be clarified by e.g., including the aforementioned examples.**

The importance of lifecycle thinking:

A more complete picture of e.g., energy production would include water abstraction in the fuel production stage (e.g., lignite mining). This is because electricity production (especially due to water abstraction in the mining stage) is responsible for almost 1/5 of freshwater use in Europe[6]. Similarly, agriculture is responsible for almost 60% of Europe's water use, of which two thirds is used for livestock feed. These aspects, to the extent that they are under the control of the operator, shall doubtlessly be considered in the permitting framework of those sectors.

[6] EEA Use of freshwater resources in Europe

II. Promote industrial symbiosis:

Industrial symbiosis (IS) is an innovative approach that brings together companies from all business sectors with the aim of improving cross-industry resource efficiency through the trading of materials, energy and water, and sharing assets, logistics and expertise. IS allows for reuse, and thus more sustainable management of industrial waste, and by-products. The EEB welcomes the CEAP commitment for the development of a reporting and certification system to enable IS applications.

However, we believe that additional measures are necessary such as the requirement for the operator to consider the feasibility of IS applications as part of its permit application (or update) process. **We, therefore, call for the inclusion of explicit reference to IS applications in Art. 14, 14a and 15. The related permitting conditions shall be based on dedicated BAT conclusions outlining IS applications, that should be systemically included in the BREFs.** For more information, please refer to the EEB position paper on IED and circularity.[7]

III. Address the challenges related to the BAT-AEPLs derivation:

Another issue to highlight here is the EU expert groups working methods[8] towards the derivation of BAT-AEPLs, except for BAT-AELs, during the elaboration of BREFs. In contrast with the process of deriving BAT-AELs, much less effort and resources are put into the collection of data and their subsequent analysis. The result is that such performance benchmarks are very often not included in the BAT conclusions, over concerns of the overall data quality and lack of contextual information. This omission leaves competent authorities with the (voluntary) task to derive such benchmarks themselves if they wish to set such quantified permit conditions – a task that in most cases won't be undertaken, and if it is undertaken it may lead to an unlevel playing field for operators.

- **More resources need to be dedicated into the development of BAT-AEPLs, to tackle the challenges linked to their derivation: (un)availability of data and expertise, cross-media effects, confidential business information (CBI) considerations. Related recommendations include:**
- **Review the BREF guidance to properly address these issues – there should already be a relevant provision in the revised IED setting the objectives (and a timeline) for the BREF guidance review.** It comes as a big surprise that there is an entire new chapter on the promotion of innovation (new chapter IIa), but no single mention of one of the most important actions to take in this regard, which is to revisit the process of

[7] https://eebbrussels.sharepoint.com/:b:/s/IEDIEPadvocacybriefings/EbFNnYsM-KFNrc8qT7RbSLIBQ_vUnv14unsEnXwh8ekCXA?e=f3oC1d

[8] Working procedures to elaborate BREFs | Eippcb (europa.eu)

setting BAT conclusions, the BAT determination method, and the method for deriving BAT-AE(P)Ls.

- **Clarify the actual procedure of validation and handling of Confidential Business Information (CBI) claims. The EEB welcomes the improved Art. 13 provision but recommends going a step further and outlining such a process under section 5.3 of the BREF guidance.** For more information, please refer to the EEB position paper on IED and circularity.[9]
- **Define the metrics of the BAT-AEPLs (and related monitoring requirements) taking into consideration the potential of these performance standards to serve as circular economy indicators/drivers.** The Ellen MacArthur Foundation published (2015) a report and supporting toolkit on Circularity Indicators[10] with the aim to provide a framework for determining how effective a company is in making the transition from 'linear' to 'circular' models. In the 2018 study 'IED contribution to the circular economy'[11] the authors suggest that such indicators could be used as a starting point for more bespoke circular economy indicators for the IED sectors to monitor their progress. **We should also not forget that the data obtained (during the BREF process) may further be used for the purpose of delivering on the EU's strategy on Sustainable Products[12], notably by providing input for the products' environmental foot-printing. Both aspects are to be considered when defining the metrics of the BAT-AEPLs; and the concept shall already be recognised in the revised IED (e.g., in Art 14a, 15). The next step would be the standardisation of this process (of defining meaningful BAT-AEPLs' metrics) in the revised BREF guidance (based on inputs from the IED Forum).**
- **The information and data obtained shall be made publicly available through an appropriate digital infrastructure e.g., the proposed Industrial Emissions Portal (IEP)[13],** in order to allow for timely access on key data for more informed assessments and decisions on circular economy matters (serving policymakers, economic actors, academia as well as NGOs and the public), and to ensure consistency between the IED and the IEPR.

IV. Effective Transformation Plans: translating good intentions to concrete actions

Achieving EU objectives regarding a sustainable, clean, circular and climate neutral economy by 2050 calls for a deep transformation of the Union's key

[9] Briefings by EEB - EIPIE

[10] Measuring a circular economy | Ellen MacArthur Foundation

[11] IED Contribution to the circular economy -Service Request 13 under Framework Contract (ENV.C.4/FRA/2015/0042 - Final report for European Commission - DG Environment - 07.0201/2018/785987/SFRA/ENV.C.4)

[12] Sustainable product policy & ecodesign (europa.eu), A proposal for an updated sustainable products initiative was adopted as part of a circular economy package on 30 March 2022.

[13] see related briefing https://eipie.eu/briefings-by-eeb/

industrial sectors. The transformation/transition plans/roadmaps with 2050 commitments are advocated by industry in various fora, notably the High-Level Group on Energy Intensive Industries and the Industrial Forum, hence this proposal is just formalising current initiatives. We welcome the forward-looking proposal of the Commission on Transformation Plans (TP) that shall demonstrate how installations will transform themselves "in order to contribute to the emergence of a sustainable, clean, circular and climate-neutral economy by 2050" (new Art. 27d).

However, as the current proposal stands, the plans will be written up by operators for each installation. There is **no control over the ambition level, effectiveness, and timeliness of these plans**. Hence, it is solely up to the operator's discretion to determine ambition, nature, pace and scope of the transition. **No milestones/performance indicators** are set, **no specific actions** asked, **no monitoring** required. There is not even an option to review the plan's content by an authority, nor to review and update these plans in around 20 years of the transition period. Furthermore, the implementation of the TP depends on the good will of the operator. There is **no option for authorities to enforce** the inexecution of measures contained in the TP. Furthermore, a 2030 deadline, the earliest for the submission of transformation plans by energy-intensive industries, is at odds with EU goals and planetary boundaries.

For recommendations on the TP, please refer to the Joint civil society position on the IED here: https://eipie.eu/briefings-by-eeb/. Regarding circular economy related aspects, we would like to highlight the need for clearer provisions, notably regarding:

- the definition of the performance pathways towards circularity by 2050;
- the definition of intermediate milestones, and key performance indicators at sector level (for similar activities), notably how to transition towards a circular economy operating within planetary boundaries.

Link to the EEB position paper on maximising the EEB contribution to the circular economy: Briefings by EEB - EIPIE

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