CAN Europe’s position on the Commission’s Industrial Emissions Directive revision proposal

Climate Action Network (CAN) Europe is Europe’s leading NGO coalition fighting dangerous climate change. With over 185 member organisations from 38 European countries, representing over 1.700 NGOs and more than 47 million citizens, CAN Europe promotes sustainable climate, energy and development policies throughout Europe. Through our work on industrial transformation, we aim to influence EU policies that support and require an integrated approach to wider transformation, addressing ecodesign of products and production processes as well as business models. Climate should never have been considered as a separate issue to other environmental (and social) challenges that have since become crises. The climate and biodiversity crises are interlinked and caused by unsustainable production and consumption patterns, resulting in land use change and habitat destruction alongside greenhouse gas emissions.

Executive Summary

Around 50 000 large-scale industrial installations are covered by the Industrial Emissions Directive (IED), at the core of which lies an obligation for Member States’ authorities to prepare an environmental permit for a given industrial site, based on the sector’s best available techniques and upholding a holistic approach to pollution prevention. Industrial installations falling under the current IED scope account for 20% of the EU’s air emissions, 20% of emissions to water and 40% of the greenhouse gases emissions. The recent evaluation of the Directive showed that there was room for beefing up the requirements needed to bring forward the industrial transformation of those heavily polluting industries, underpinned by a more effective application of the “polluter-pays” principle. A need for a more ambitious and solid framework driving down the emissions to air and addressing circularity and resource use was identified.

The Industrial Emissions Directive has the potential to drive improvements in production processes, playing a central piece in the industrial transformation puzzle. To do so, it must be framed as one of the small number of industrial transformation pieces of legislation in a toolbox addressing: products (ecodesign of sustainable products regulation with knock on effects on other product-specific regulations, as well as the corporate sustainability legislations), processes (IED) and market mechanisms (EU ETS, CBAM, GPP). The IED revision comes in a timely manner to address resource overconsumption and restore regenerative patterns, when the global

---

consumption of materials such as biomass, fossil fuels, metals and minerals is expected to double in the next 40 years and waste generation is expected to increase by 70% by 2050\(^3\).

CAN Europe welcomes the awaited revision proposal and recognizes the effort to include much needed new aspects in the revised text, especially regarding circular economy and resource use. We however emphasize the lack of clarity on key elements that will truly deliver on the holistic value chain transformation of industry, rooting in resource preservation, health protection, inclusivity and regenerative patterns. We singled out four elements of the proposed revision that will enable a transformation of industry within the planetary boundaries, **provided that the European Parliament and the Council step up the level of ambition from the Commission’s proposal.** Those key elements are revolving around:

- The inclusion of mandatory environmental performance levels in permits, ramping up the industry’s contribution to circular practices and lowering resource use (raw materials, energy, water) in production processes.
- The existence of a precise and binding transformation pathway at plant level with interim milestones, end-goal and indicators compatible with EU overarching climate, zero-pollution and circular economy targets.
- The implementation of the polluter pays principle, achieved through emissions limit values at installation level for relevant pollutants.
- An enhanced framework allowing civil society to better access information regarding industry environmental pollutions, with harmonized reporting throughout Member States, allowing comparison between sites.

1. **Driving industry’s contribution to circularity and lowering its demand for resources**

The evaluation of the IED showed that it had a limited impact on circularity, resource consumption and on industry decarbonisation\(^4\). Heavy-industries however, do not have a neutral impact on the consumption of resources and nature: European heavy-industries (namely petrochemicals, steel and cement) use more than 680 million tonnes of their key inputs of iron ore, coking coal, naphtha and limestone – some 1.5 tonnes of inputs per European\(^5\). Along with releasing massive amount of CO2 into the atmosphere, resource overconsumption pressures our ecosystems, where already 90% of biodiversity loss and water stress are coming from resource extraction and processing of materials, fuels and food\(^6\). A considerable amount of raw materials, water and energy will furthermore be needed in industrial processes through the currently planned technology-shift.

---

4 Commission Staff Working Document, Impact Assessment Report accompanying the proposal for a Directive amending the Industrial Emissions Directive (IED) and for a Regulation on reporting of environmental data from industrial installations and establishing an Industrial Emissions Portal (E-PRTR), SWD(2022) 111 Final, 5 April 2022
5 Material Economics, Scaling Up Europe - Bringing Low-CO2 Materials from Demonstration to Industrial Scale, 2022
Decarbonisation of the steel industry through “breakthrough” technologies

It is estimated that decarbonising the steel sector in Europe will require 165 TWh of renewable electricity and 5.5 million tonnes of green hydrogen per year by 2050 to substitute the current coal-based production by a less-carbon intensive one based on green hydrogen, direct reduced iron and electric arc furnaces. Such a production, without reflecting on the material efficiency and quantities of steel needed in a well-being economy, would amount to 400 TWh of annual electricity demand, 4 times the current consumption of this energy-intensive sector.

The direct reduction of iron with hydrogen - the technology expected to replace the coal-based blast furnace route - will still rely on further extraction of virgin materials, namely iron ore, in a move to replace the current amount of conventional primary production by “greener” one. Although this decarbonisation route helps in achieving EU climate neutrality by putting an end to a massive use of coking coal, the main source of steelmaking CO2 emissions - it does nothing to reduce emissions from raw materials processing and does not avoid habitat destruction.

The IED contains several key policy levers to ensure that transformation of industry occurs on a time frame consistent with EU environmental and climate targets, whilst also decoupling overall resource consumption (water, electricity, raw materials) and biodiversity loss from production, in a compatible way with the planetary boundaries.

We therefore welcome the Commission’s proposal to include the efficient use of resources and water, including through reuse, and the overall lifecycle environmental performance of the supply chain as a guiding principle to operate industrial installations. The inclusion by the Commission of such principle in amended article 11 delivers the right signal for industry and public authorities to enhance material efficiency at installation level as it can deliver up to one quarter of greenhouse gas cuts needed in a 1.5° scenario.

Until now, the permits regulating industrial plants' operations only established binding emission limit values for given process-related pollutants, based on the best available techniques of the

---

7 Communication from the Commission – Towards a competitive and clean European steel, COM(2021) 350 final, 5 May 2021
9 For more information on the steel industry transformation, see CAN Europe’s transformation pathway recommendations for the steel industry, June 2022, https://caneurope.org/can-europes-transformation-pathway-recommendations-for-the-steel-industry/
10 Using the steel example again, production needs to peak before 2030 with a maximum iron and steel stock in the economy around 6 tonnes/person (while the current amount of steel in-use is estimated to 12 tonnes/European), see Watari et al. Global Metal Use Targets in Line with Climate Goals, Environmental Science & Technology 2020 54 as well as COM(2021) 350 final
11 Material Economics, The Circular Economy a Powerful Force for Climate Mitigation, 2018
12 Under the IED, an industrial sector specific best practices that can mitigate environmental impact of an activity are described in the Best Available Techniques Reference Document (BREF). Associate emission limit values linked with those process-specific best practices are described in the conclusions on the Best available techniques (BAT) conclusions, which will serve as a reference for competent authorities to draw up the environmental permits.
sector, without any mandatory and harmonised indicators to monitor resource consumption, the part of recycled content used in the process or the part of waste or by-products actually reused or recycled. The Commission’s proposal to introduce a mandatory “Environmental Management System” (EMS) aligned with the conclusions on the best available techniques to be made public is a promising way forward to address resource, energy and water use in industry.

However, further clarifications will have to be developed to ensure that the performance indicators used to update or establish the BAT conclusions (and especially the mandatory BAT associated environmental performance levels – BATAEPLs) are ambitious enough and adapted to drive industry towards a less resource-intensive model, delivering on both the Zero Pollution Action Plan and the Circular Economy Action Plan. So associated environmental performance levels should at least contain the resource use in the process (water, energy, raw materials), the part of recycled materials used, the amount of waste generated and their treatment mode, and indicators on the carbon/material footprints of the production. Monitoring this latter element and having the best available techniques reflecting on the best carbon/material footprint of one sector is prominent to deliver a timely synergy with EU Commission proposal on the Ecodesign of Sustainable Products Regulation (ESPR), thus allowing synergy and efficiency between different legislative tools to decouple resource consumption and biodiversity loss from business models. European Parliament and Council take the opportunity of the IED revision to help the EU reaching the target laid down in the Circular Economy Action Plan to reduce the EU’s carbon footprint and double its circular and material use rate by 2030.

### Lowering resource consumption with the IED in the steel sector

Blast-furnaces, steelmaking’s most polluting assets, used to produce steel from virgin materials, are not in technical capacity to use more than 20-30% scrap steel for the most efficient ones. On the other hand, an electric arc furnace (EAF) is able to run 100% on scrap, or with a high mix of scrap and direct reduced iron. Furthermore, a higher share of scrap in EAFs not only reduces use of virgin materials, it also lowers the quantities needed of fossil gas or of green hydrogen, both of which are the main feedstocks and energy carriers in virgin materials-based steelmaking\(^\text{13}\).

Including among the environmental performance limit values, quantitative binding circularity metrics such as the amount of recycled materials and the ratio of raw materials in the final output will help ensuring that process changes in the steel sector do not result in an unreasonable growth of the need for hydrogen or fossil gas for scrap melting. Most importantly, deriving the BATAEPLs on circularity and monitoring those metrics at plant level (in permits and for instance in the transformation plans as part of a wider and planned contribution to a circular economy) can pave the way to further industrial synergies between the steel sector and the scrap/waste sector, or even with end-users of steel. A Sandbag\(^\text{14}\) report mentions that an optimised use of scrap in the steel sector, which will bring about resource savings as well as lower CO2 emissions, does not rely so much on new breakthrough technologies than on improved measures relating to scrap

\(^{13}\) Sandbag, Starting from scrap, The key role of circular steel in meeting climate goals, June 2022

\(^{14}\) Ibid.
The increased electrification of processes and of products (e.g. electric vehicles, digitalisation) will not lower the pressure on natural ecosystems due to the increased demand (sometimes more than a thousand percent) for metals until 2050\(^\text{15}\) with all the subsequent environmental hazards that this entails. Even though the talks around raw materials’ increased demand are revolving around addressing Europe’s strategic dependencies towards non-EU countries mainly through a security of supply approach, it is of the utmost importance that the impacts of extractive industry are mitigated. We therefore welcome the inclusion of non-energy minerals mining in the scope of the industrial emission directive, to ensure that a potential re-shoring of extractive industry in Europe is carried out in a regulatory framework that promotes pollution prevention. However, we insist that the priority shall be put on urban mining rather than on virgin materials mining to avoid reproducing overconsumption patterns, thereby jeopardising ecosystems and the existence of local communities\(^\text{16}\).

**CAN Europe therefore calls on the European Parliament and the Council to:**

- **Maintain the proposed inclusion of binding environmental performance limit values in permits, derived from the best available techniques.** Environmental performance indicators retained for the limit values should at least include a minimum ratio for the consumption of raw materials and secondary raw materials, energy and water per quantity produced, as well as on the amount of waste generated per output and its downstream treatment. Those material efficiency requirements should be completed with elements of carbon/material footprint, to consider the overall lifecycle assessment of the supply chain and ensure synergies with other legislative files (namely the Ecodesign Regulation).
- **Include precise performance indicators in transformation plans to measure a plant’s contribution to EU circular economy and climate-neutrality goals for the period 2030-2050.** Transformation plans will at least include minimal requirements on material reuse, or recycled content included in production, as well as energy and water use with intermediary milestones, paving the way to a holistic industrial transformation.
- **Keep the scope extension to extractive industries.**
- **Revise sectoral Best Available Techniques Reference Documents (BREFs) and the conclusions on the Best Available Techniques (BAT-C) to systematically include binding associated environmental performance levels (BATAEPLs).**

\(^{15}\) KU Leuven – ex. Of transport sector

\(^{16}\) ‘Green mining’ is a myth: the case for cutting EU resource consumption’, Friends of the Earth Europe and European Environmental Bureau, October 2021
2. **Laying down a clear pathway for industrial transformation**

Industry needs a clear pathway to achieve a transformation in its use and pressure on resources and energy, thereby mitigating negative impacts on biodiversity, land-use and human rights alongside greenhouse gases emissions. So far, sectoral transformation roadmaps (stemming from the European Climate Law) or transition pathways for energy-intensive industries planned (through the Industrial Forum) have been on hold for the past year or have not yet been adopted. This situation does not de-risk investments in the urgent transformation of processes for heavy-industry, and leads industrials into adopting voluntary pledges for their transformation without accountability in the future, thereby postponing the transition towards a climate neutral and regenerative production model.

Against this background, CAN Europe welcomes the introduction of transformation plans (TP) in the revised text. However, in their proposed design they still comprise a certain number of shortcomings. European Parliament and the Council will need to improve TPs to enable their significant potential to drive industrial transformation forward. To begin with, more clarity will have to be brought to the scope of those plans “The transformation plan shall contain information on how the installation will transform itself during the 2030-2050 period in order to contribute to the emergence of a sustainable, clean, circular and climate-neutral economy by 2050”. If the need for industry to contribute to EU environmental and climate targets is clearly establish, more precisions will be needed especially in order to assess if the site through its transformation plan is on track to contribute to a sustainable, clean, circular and climate-neutral economy by 2050. Consequently, a list of indicators to allow such assessment have to be laid down in the text of the Directive, to give vision for industry on how to prepare the reporting and to ensure a reliable transformation pathway.

The Commission’s proposal states that transformation plans will have to be drawn up by 30 June 2030 at the earliest, but only for some energy-intensive industries. For other sectors the current proposal could lead to transformation plans not needed before 2034. In both cases, the new requirements are too far in time to deliver the needed transformations and bears the risk to not deliver on the EU climate and sustainability goals. A document supposed to describe a contribution during a 20-year-time period cannot possibly be drafted and ready after the beginning of the said period, without any mechanism to revise and enforce it.

---

**Example of the need for a quicker roll-out of the transformation plans: the steel sector**

This sector would be targeted in priority by the transformation plan obligation and has inherent characteristics illustrating why a transformation plan cannot wait another 8 years to be up and running. The sector’s most polluting assets (the coal-based blast-furnaces) **have a long operational lifetime**, estimated to 17 years and 70% of them will reach the end of their operational life before 2030\(^\text{17}\). A clear transition pathway will need to be decided (implemented and enforced) with subsequent investment **already this decade**, to not fail to deliver on the EU climate neutrality target for 2050 and avoid locking-in polluting technologies (and in that matter,

\(^\text{17}\) [Global Steel Transformation Tracker, Agora Energiewende 2022](#)
not only the coal-based blast furnaces but also including the so-called “breakthrough technologies” using fossil gas as a transition fuel).

There is no alternative than for industry to prevent pollution and reduce its impact on the climate. It therefore requires a binding regulatory framework with clearly defined targets. This principle should consequently apply to transformation plans, especially as in some industry sectors (staying with the example of the steel sector), all industries using the most polluting technologies (blast furnaces) have published a non-binding decarbonisation strategy for 2050, and in most cases with interim targets for 2030. Evaluating whether measures taken in those self-established plans are sufficient to deliver on EU climate targets and compelling industries to respect a clear pathway that works for climate, biodiversity and social justice is therefore a key aim the IED revision should strive for. As a direct consequence, audits carried out on transformation plans should not be limited to ensuring they respect the format decided by the Commission (which will be known much too late in a proposed implementing act suggested by 2028 at the earliest) but should also assess whether the quality of the data contained in the TPs is a sufficient basis for industry’s contribution to at least the EU climate neutrality goal. Once the plans are approved, measures described for the transformation of the installation could also be reflected in the permits overtime, with a view to committing industry to following the established transformation pathway. Furthermore, transformation plans could increase heavy industries’ level of preparedness by reflecting on industry’s material efficiency, virgin raw and secondary raw materials consumption as well as energy needs. Having transformation plans as a cornerstone of the IED would accompany industry along its transformation in capturing (and lowering) the strategic dependencies linked with raw materials sourcing (with gradual uptake of secondary raw materials) and reducing the energy consumption from fossil fuels (to the benefit of renewables) to enhance the resilience capacity of the sector towards external shocks.

Transforming the steel sector value chain

In parallel of the development of mandatory environmental performance limit values in the best available techniques and their subsequent inclusion in permits, transformation plans should monitor the amount of primary (e.g. iron ore) and secondary (scrap) raw materials used, energy, water used in order to facilitate the synergy with the Ecodesign of Sustainable Products Regulation and the carbon footprint of steel products. At installation level, the evolution of such metrics would be planned in order for a plant to contribute to EU circular economy, climate and zero pollution targets, as such granular level enables best to consider process-specific aspects, ensures the participation of installation-based staff (likely to have the highest process knowledge) and allows to consider the local impacts of an industrial activity, in the spirit of the IED.

Planning ahead the contribution of a steel plant to EU’s wider environmental goal over several decades might also provide the timely incentive to build synergy between the sector and local businesses (e.g. recycling, repair, etc.) involved in the scrap metal activities.

Moreover, as the technologies that will be used to transform the steel sector are already known (green hydrogen direct reduced iron and electric arc furnaces) and will soon launched commercial scaled up production (within the next 3 years), transformation plans might be a solid and flexible
reference point to anticipate the necessary re-/upskilling of the workforce at plant level along before rolling out those technologies onsite.

In the case of iron and steel sector, having a specific frequency to update the plans doubled with an enforcement mechanism would also help reducing (or even avoiding) the period during which fossil gas will be used as a bridge before green hydrogen is available at industrial scale.

CAN Europe therefore calls on the European Parliament and the Council to:

- **Set in the text of the revised Directive, instead of waiting for a delegated act by 2028, clear indicators that plans should contain, allowing an harmonised assessment as to whether the industry is on track to contribute to a clean, sustainable, circular and climate-neutral economy by 2050.** Minimum indicators should align at least with EU climate-neutrality goals, the Zero Pollution Action Plan, the Circular Economy Action Plan and draw a trajectory to lower emissions to air, soil, water and reduce the pressure on resources (raw materials, energy, water) and land.

- **Ensure the plans are drawn up by 2025 or within a 2-year-transposition period to reflect on heavy industry investment cycles and the need to start the assets transformation already this decade.**

- **Ensure a timely revision of plans and appropriate assessment frequency** not only to check the content of the plans, but to audit the quality of data reported, ensuring that a site is on track to contribute to EU overarching goals. It would also be a way to identify barriers to be lifted to enable holistic transformation of the industry.

- **Define milestones and end-targets for the transformation plans, to guide the industry in its transformation as well as effective mechanism for their enforceability,** to ensure industries’ walk the talk on their transformation.

3. **Finalise the implementation of the integrated approach to pollution prevention**

Since 2005 the main EU tool for industry decarbonisation has been the Emissions Trading System (ETS), a market-based mechanism in which most carbon-intensive industries were allowed to purchase and trade greenhouse gases allowances matching their emission levels. This tool was unfortunately unsuccessful in driving down the greenhouse gases emissions of the industry, which remained on a flat curve for the past decade mainly due to a market entailing more allowances than the actual CO2 emissions, and those “rides” being allocated for free to industry, fearing an alleged risk of carbon leakage.

However, to achieve EU climate neutrality goals, industrial processes (and above all those falling under the IED) have to undergo a transformation and start the much-awaited reduction of their greenhouse gases (GHG) emissions already this decade. In its current setting, the IED contains a legal barrier to establish GHG emission limit values in environmental permits at installation level.

---

18 Jacques Delors Institute, “No More Free Lunches”, Ending free allowances to the benefit of innovation, February 2022
(article 9 (1)) for plants covered by the ETS and to make energy efficiency requirements binding for those installations (article 9(2)), thus missing the point of the Directive as an integrated approach to pollution, through pollution prevention following a command and control principle. Moreover, even though the IED covers 5 times more industrial sites than the ETS, the authorities have not made use of the opportunity to set up GHG emission limit values via permits for industries not falling under the ETS. With its unique integrated approach to pollution prevention at site level, the revised IED is the best vehicle to see emissions limit values for all pollutants, greenhouse gases included. The benefits of such an inclusion would be threefold: upholding the combined approach to pollution of the IED, fostering the complementarity between the ETS (giving a price to CO2 pollution) and the IED (reducing the pollution at the source) and making use of all the policy levers available to achieve EU’s overarching targets, as described in the Green Deal Communication.

In the steel sector for instance, having GHG emission limit values would gradually guide the industry towards the necessary phase out of the coal-based blast furnaces, whose operational lifetime cannot be extended if the EU wants to deliver on its climate-neutrality target19.

Furthermore, the proposal sets forth an obligation for the Commission to analyse the synergies between the Industrial Emissions Directive and the EU carbon market (ETS) “by 2028, and every five years thereafter”. Postponing unnecessarily the combined effect of two important elements for the industry transformation is delaying climate action and contradicts the EU’s adopted strategies and targets. Indeed, since the first version of the IED was adopted, the awareness of the urgency to mitigate climate change consequences grew. For instance, the Green Deal, EU’s landmark strategy to “transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use” was published.

The ongoing revisions of the ETS and of the IED are therefore a golden opportunity to work on both synergies already, allowing the IED to consider implementing limit values for all pollutants, including GHG at installation levels for all industries, taking into consideration the secured wins for climate already reached under the ETS revision.

An obvious link between the two key legislative files lies in the transformation pathway that industry needs to take to contribute to EU climate targets. In that sense, policy-makers could already discuss the integration of CO2 emissions in the decarbonisation trajectory for a given industry in a transformation plan (see part 2). It would reflect on the conditions to receive free allocations under the revised Emissions Trading System, as industry cannot keep on not bearing the cost for its pollution and shall commit in a clear and compelling transformation pathway.

---

19 70% of steelmaking’s blast-furnaces in Europe are subject before 2030 to a decision concerning the extension of their operational lifetime (relining). If those assets are not phased out, EU risks missing out on its climate neutrality target, see Vogl et al., Phasing out the blast furnace to meet global climate targets, October 2021.
CAN Europe therefore calls on the European Parliament and the Council to:

- **Delete the separation between the IED and the ETS** (by deleting article 9(1)) to allow permit writers to set emission limit values for greenhouse gases at plant level
- **Establish ambitious GHG emissions limit values aligned with EU climate targets and compatible with a gradual CO2 reduction trajectory** depending on techniques and technologies available or planned on being scaled up (electrification, fuel switch, circular practices). In the steel sector for example, every emission limit value for greenhouse gases will match the imperative for blast furnaces to be decommissioned before the next relining decision. It will provide a planned phase out pathway and reduce pollution at the source compliant with the IED approach.
- **Keep the deletion of article 9(2) making energy efficiency requirements mandatory**
- **Ensure that transformation plans include emission levels reduction trajectory for greenhouse gases**, are enforceable, and drafted no later than the 2025 (or as soon as 2-year-transposition period expires)

4. **Provide greater access to information for citizens**

CAN Europe welcomes the wider possibilities given to the public to access information concerning an installation subject to the IED provisions. Only a transparent and large access to decisions and figures concerning the plant’s functioning and subsequent local impact can ensure social acceptance of activities. Public participation ahead of decision-making concerning their local environment and health should be granted in all cases. The unrestricted publication of permits as well as EMS and permit summaries is going in the good direction for the public to exert their scrutiny. Further detail and requirements are needed to ensure that provisions can be effectively implemented, e.g. ensuring an EU harmonised way that authorities have the sufficient resources and capacity to make available all the information in due time, and to ensure that data is published (especially on emission measurements) so as to be understandable by the general public. A time element should also be introduced in the revision for the online publication of permits, their summary as well as different site monitoring results. Ensuring that those are made available in due time would facilitate the participation of the public and local communities.

Sharing information on the pollution emitted at installation level is strongly connected to the PRTR revision. In this regard we are standing by our asks provided in the joint civil society statement on the revision of the EU IED and the E-PRTR, published on 17 February 2022, especially submitted under issue number five. In essence, we believe that a EU-wide, user-friendly database centralising the harmonised reported data of the pollution generated/the resources and energy used by installation can allow citizens to have a timely access to data from industrial installations, as well as to overcome the language barrier and to compare it with other EU industrial installations in a few clicks.

---