



Questions and Answers on Revised EU rules on Industrial Emissions

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What are industrial emissions and why do we need to act on them?

Industrial emissions are pollutants (such as sulphur oxides, nitrogen oxides, ammonium, particulates, methane, mercury and other heavy metals) discharged into air, water and soil from industrial plants, **harming human health and the environment**. Industrial emissions come from activities like electricity and cement production, waste management and incineration, and the intensive rearing of livestock. This pollution can cause health conditions such as asthma, bronchitis and cancer, high blood pressure, heart attack and stroke. The health costs related to this pollution are measured in billions of euros and hundred of thousands of premature deaths each year. Industrial emissions also harm ecosystems, crops and damage the built environment. This proposal will result in health benefits worth €7.3 billion a year.

Over 50 000 industrial installations in the EU – some 30 000 large industrial plants and around 20 000 large poultry and pig farms – are currently covered by the [Industrial Emissions Directive](#) (IED) and its reporting regulation ([European Pollutant Release and Transfer Register](#), E-PRTR).

These installations are responsible for the following EU pollutant emissions to air:

- around 50% of sulphur oxides (SO_x), heavy metals and other harmful substances
- around 40% of greenhouse gases
- around 30% of nitrogen oxides (NO_x) & particulate matter (PM₁₀).

The current framework has reduced pollution to air by between 40% and 85% over the last 15 years, depending on the pollutant.

Why do the EU rules on industrial emissions need to be modernised?

Following years of experience in implementing this directive, it became necessary to **modernise it, streamlining some aspects and updating it** in line with the European Green Deal objectives.

Large industrial plants and livestock farms still cause **over half of Europe's emissions** to air caused by human activities.

The revised framework aims to **accompany the green and circular transformation of the industry over the long term**, with significant health and environmental benefits.

Innovative processes and techniques will enter the market in the coming decades. The revised rules will promote faster uptake of these emerging technologies, stimulating the adoption of processes that are greener, more efficient and more competitive.

Greater **data transparency and availability** will increase public participation in the permitting process, giving the public greater insights into polluting activities in their immediate surroundings and improving access to justice.

What are the main changes proposed in the revised directive?

Pollution prevention and control will still be based on the '**Best Available Techniques**' (BAT) IED permitting process, but the framework will be enhanced by measures **to boost effectiveness**:

- Member State permitting authorities will be required to use **tighter pollutant emission limit values** when revising permits or setting new permit conditions. Currently, about 80% of permits stick to the lowest legally allowed values.
- The EU framework for preventing and controlling industrial emissions will become more **forward-looking and innovative**, including through the establishment of an **Innovation**

Centre for Industrial Transformation and Emissions.

- **Extending the IED's coverage** to additional livestock farming and industrial activities, to keep our regime relevant as our economy evolves: new sectors with significant potential for high resource use or pollution need to also curb environmental damage at source by applying Best Available Techniques.
- **Increased focus on energy, water and material resource efficiency and reuse**, as well as promoting the use of **safer and less toxic, or non-toxic chemicals** in industrial processes.
- **Ensuring that depollution and decarbonisation techniques occur together**, where possible, to achieve the best health and environmental outcomes and harness technological and investment synergies. This will contribute to fulfilling the EU's 2030 zero pollution and net zero carbon objectives and the long-term EU's 2050 objectives for climate neutrality.

Which additional industrial and farming sectors will the IED cover, and what will be the benefits?

The new IED targets activities that carry a high risk of causing environmental pollution, and large individual installations that would benefit from the IED's integrated approach to environmental management of resource use and pollution control.

The new sectors proposed for IED coverage include especially:

- **Extractive industry installations** (mines), covering metals, rare earth metals and industrial minerals. Energy minerals, such as coal, and aggregate quarries are excluded.
- **'Giga-factories' for electro-mobility batteries**: a growth sector, relevant for the industrial transformation, and complementing the Batteries Regulation, for larger-scale plants.
- **Larger-scale cattle farming and additional pig and poultry farms**. All cattle, pig and poultry farms with over 150 [livestock units \(LSU\)](#) will fall under the scope of the directive. This will result in an increase in the coverage of intensive cattle, pig and poultry farms to reach a new total of 13% of the EU's largest livestock farms overall, of which cattle farms are included for the first time. These farms, at 185.000 in total, are together responsible for 60% of the EU's livestock emissions of ammonia and 43% of methane.

The relevant BAT requirements will take into consideration the nature, size, density and complexity of these livestock installations, including the specificities of pasture-based cattle rearing systems, where animals are only seasonally reared in indoor installations, and the range of environmental impacts they may have.

The control of air, soil and water/ groundwater pollution from these farms would ensure that livestock farming has much greater control over methane and ammonia emissions, in particular. This would have the following effects:

- A coverage increase from the current **18% to 60% of ammonia emissions**
- A coverage increase from **3% now to 43% for methane emissions**.

This is expected to yield the following pollution reduction benefits, overall:

- Reductions in **methane emissions** of 265kt per year (229 kt annually for cattle, and 36 kt annually for pigs and poultry)
- Reductions in **ammonia emissions** of 128 kt per year (50 kt yearly for cattle, and 78 kt p.a. for pigs and poultry).

The monetised **benefits to human health** from reducing methane and ammonia from the total cattle, pig and poultry farms in the revised IED scope have been calculated at over **€5.5 billion per year**, not including the improvement to ecological systems.

Industrial plant additions to the scope comprise an additional 1 500 to 1 900 installations.

The pollution control gains and the reduction in the use of natural resources are presently too uncertain to predict for these new industrial sectors, but past IED experience has shown that new sectors covered by the IED and BAT could expect overall pollutant reductions to decrease in the range of 35% to 70%.

Another important benefit of the IED's Best Available Techniques approach is to **level the EU-wide playing field** by providing minimum operating standards in permits, which are then subject to monitoring and inspections.

What will the proposal mean for the public, especially those who live close to these large plants?

The proposal will ensure **much greater access to information** on sites regulated by the directive and give the public more insight into polluting activities in their immediate surroundings. For example, the [revised Industrial Emissions Portal regulation](#) will provide data searchable by industrial plant or farm by type of emissions and by location.

The public and NGOs will also have **greater input into the decision-making processes of whether to grant permits to sites**, and under what conditions. This will make the industrial emissions framework fully compliant with the Aarhus Convention.

Health benefits from better pollution control, locally, regionally, and nationally and in reducing transboundary pollution will be noticeable. Preserving the quality of soils, groundwater, water and air contributes to a healthier environment, either adjacent to IED installations or in river basins further away. At the same time, it improves human health at work and in local communities.

The European Citizens Panel on climate change and environment has adopted clear recommendations in this respect in the framework of the [Conference on the Future of Europe](#). In that context, European citizens have expressed manifest support for the EU to tackle the pollution of water, soil and air and to reduce methane emissions, and they emphasize the responsibilities of the polluters.

This is in line with the [Eurobarometer survey](#) where more than two-thirds of EU citizens (71%) say they think the EU should propose additional measures to address air quality-related problems in Europe. For the largest proportion of respondents (44%), the most effective way to tackle air quality problems is to apply stricter pollution controls on industrial and energy-production activities. This is the most frequently mentioned measure in 25 Member States.

What are the measures to improve the application of existing IED rules?

The new rules will provide incentives for a **higher uptake of Best Available Techniques**.

This will allow installations to reach emission levels towards the most ambitious end of the allowed pollutant ranges. Under the new rules, operators and Member States' permitting authorities will be required to:

- **Assess the feasibility of applying the most ambitious level of emission reduction** within allowed ranges as starting point when revising permits, and when setting emission limits in new permits
- Create a **common methodology for allowing derogations** in IED permits for industrial operators, and set a 4-year maximum time period for any allowed derogations
- Increase the **level of public information** regarding all IED permits, finding **digital solutions** to make this information easily and freely available, enabling comparisons within and between sectors, between regions and Member States.

The revisions will also **enhance public participation in permitting processes**, and access to justice in cases of environmental non-compliance with permits or contravention of judicial or procedural issues, including access to compensation for damage.

How will the IED promote innovation and ensure that technologies are up to date and forward-looking?

The revised IED aims to capture innovative ideas and accelerate their practical application on the ground.

A new **Innovation Centre for Industrial Transformation and Emissions (INCITE)** will be set up to scout for emerging techniques worldwide. INCITE will identify and evaluate new processes and techniques and, if they are deemed ready for use at an industrial scale within a short timescale, incorporate them in the Best Available Techniques framework as candidate techniques.

In addition, plant operators will be allowed up to two years instead of the current nine months to **test emerging techniques** within their own installations. During this time they will be allowed temporary derogations from selected IED permit conditions, subject to monitoring from permitting authorities. Frontrunners will also be allowed an additional 2 years to implement new environmentally better techniques (i.e. a total of 6 years) that INCITE has identified as being close

to market deployment.

To ensure that operators and Member States plan ahead, especially when investing in new technologies, operators will have to produce **installation-specific Transformation Plans** as part of their environmental management system. These plans will show how each installation will contribute to achieving the EU's 2050 zero pollution ambition, circular economy and decarbonisation aims. Sufficient time will be granted for that - by June 2030 for installations other than livestock farms, and the earliest by 2034 for others.

Will the proposals create additional administrative burden?

The proposals have been designed to **minimise administrative burden**, especially for livestock farms. The availability of online information and data processing tools hold huge potential, e.g. via e-permitting, remote sensing, using artificial intelligence in plant operation control systems and in improved national and EU-wide checks on IED permits. The Commission will work with the Member States to identify further opportunities to promote and support such practices.

A **lighter permitting regime will apply both to the 20 000 farms already covered** and to the additional 165 000 farms newly brought within its scope, which represent an expanded scope to include the largest 13% of Europe's livestock commercial farms. The lighter permitting regime is proportional to the lower risks farms represent compared to the industrial installations and will apply to the 20 000 farms already covered by the IED and the newly covered livestock farms. While the permit would cost €2400/year/farm, it will bring about multiple benefits related to health, the environment and innovation.

How are 'Best Available Techniques' set?

The new rules will **preserve the effective mechanism used to date** to decide what Best Available Techniques are for the various industrial sectors, known as the *Sevilla process*. The Sevilla process is a participatory, transparent, science-based information exchange involving all industry, national and European Commission experts, and civil society to set mandatory emission limits of pollutants emitted by large agro-industrial installations. Environmental norms defined through the Sevilla process are published for each industrial sector in the '[Best Available Techniques Reference Documents – BREFs](#)'.

How will the proposals help reduce pollution and carbon emissions?

Minimum energy efficiency levels or the use of a binding **ceiling on energy intensity** will become mandatory, where these are included in the sector-specific, legally-binding BAT conclusions.

Energy use will have to be reported to the Industrial Emissions Portal, while energy audits and follow-up actions required by the newly revised Energy Efficiency Directive will be incorporated in the strengthened Environmental Management Systems. In this way, all of these instruments will become more mutually supportive, with reporting and monitoring to ensure that audit recommendations are carried out.

Installations already subject to the EU Emissions Trading System (ETS) will continue to be included in the ETS. The new IED will in addition cover activities responsible for 15% of the overall EU emissions of greenhouse gas emissions not covered by the ETS.

The installation-specific **Transformation Plans** as part of the Environmental Management System will have depollution and decarbonisation as well as circular economy strategies and techniques in place, helping take Europe closer to its climate and pollution goals for 2030 and 2050.

How will the new rules reap the benefits of the digital transition?

Greater use of digital solutions and accelerated uptake of emerging technologies such as artificial intelligence in operating industrial installations can help optimise industrial processes, reduce environmental impacts, incorporate innovative clean techniques, and improve business processes.

Online information and data processing tools hold huge potential, e.g. via e-permitting, remote sensing, using artificial intelligence in plant operation control systems and in improved national and EU-wide checks on IED permits. Using these tools could yield major administrative simplifications to the BAT-permitting system and improve its performance. The Commission will work with the Member

States to identify further opportunities to promote and support such practices.

Moreover, digital solutions enable industrial emissions data to be made available publicly in near real time and to simplify reporting to authorities. The Industrial Emissions Portal will contribute to making data available and to the European Green Deal Dataspace, helped also by the Open Data Directive.

For more information

[Press release](#)

[Factsheet](#)

[Proposal for Industrial Emissions Directive](#)

[Proposal for Industrial Emissions Portal regulation](#)

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