Für Mensch & Umwelt

Umwelt Bundesamt

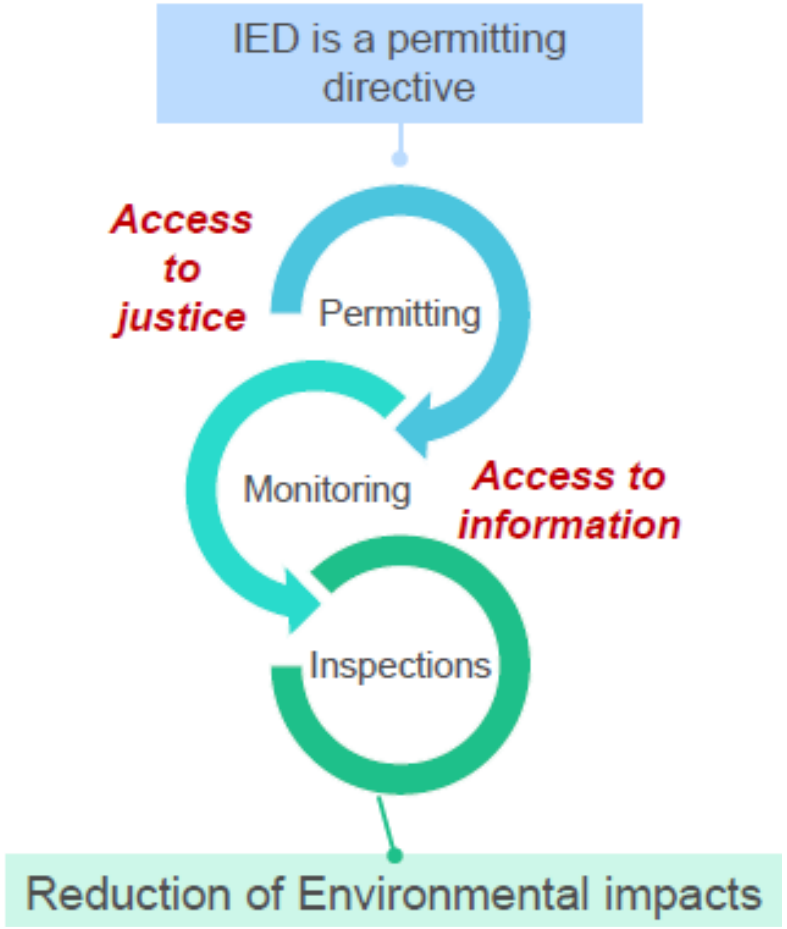
10th CEWEP Waste-to-Energy Congress 2023

Review of the EU Industrial Emissions Directive

Berlin, 16th June 2023

Michael Suhr, German Environment Agency (Umweltbundesamt)
National Focal Point for the IED
Division III 2.1
Tel: +49-340-2103-2490
michael.suhr@uba.de

1. Introduction: Industrial Emissions Directive (IED) - what is it?.....



Source: Commission, 2022

- **Objective of the Directive 2010/75/EU**: Level playing field, equal environmental standards, BAT-based permitting and monitoring
- **Integrated pollution prevention and control of air, water and soil emissions** from **Europe's largest industrial sites and intensive livestock farms,** minimizing **resource use** (energy, materials and water), optimizing **process efficiency** and ensuring **waste prevention and control**…..
- Achieved by **EU-level Implementing Decisions** (via the "**Seville Process**" that gathers Member States, industry experts and NGOs in Technical Working Groups) on '**Best Available Techniques' (BAT)**
- **B**est Available Techniques **Ref**erence Documents **(BREF)** and **BAT conclusions**
- **BAT conclusions** shall be the **reference** for setting the **permit conditions** (Art. 14(3) IED)
- **Emission limit values** that ensure that **emissions do not exceed** the emission levels associated with the best available techniques **(BAT AELs)** (Art. 15(3)

1. Introduction: Why the IED and its BAT is relevant for the waste sector?

2018

2019

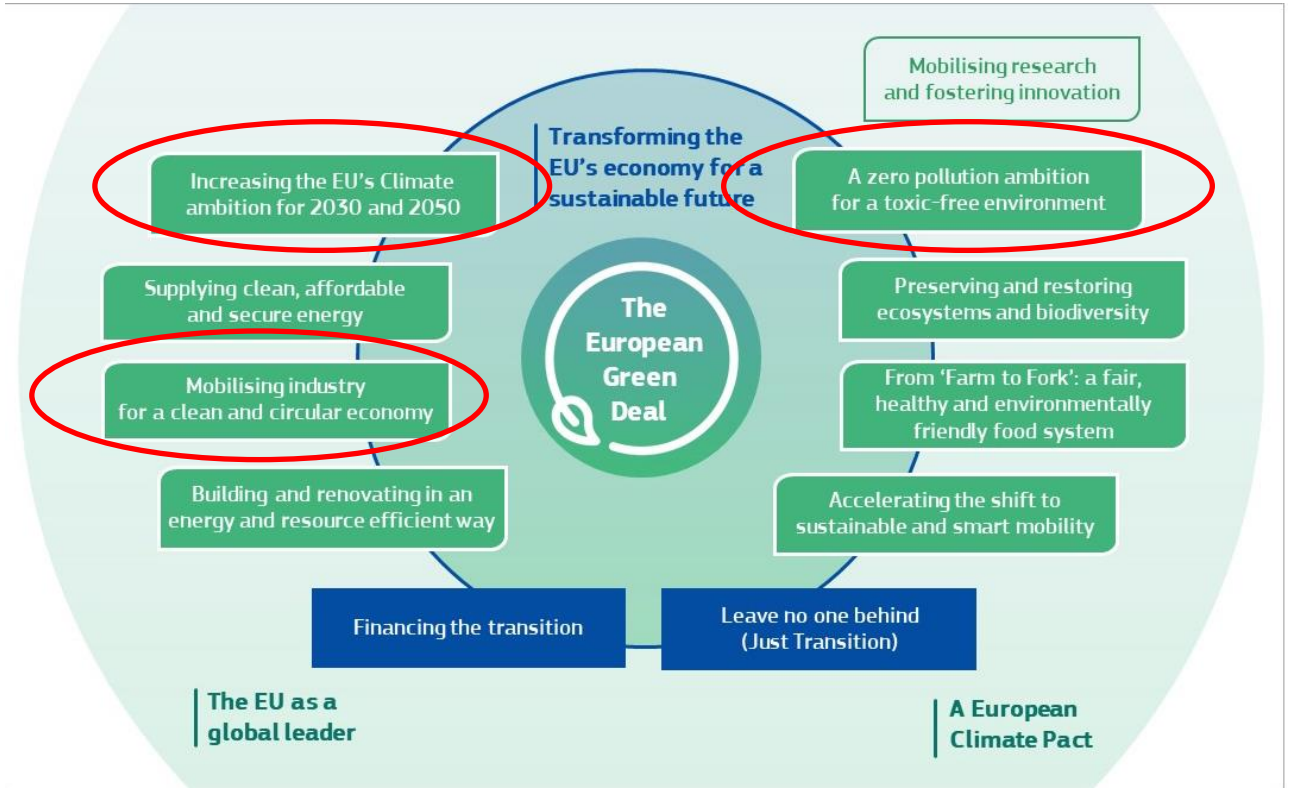
???

Quelle: Bilderbox / Fotolia.com

1 Introduction: Policy background – European Green Deal as a Game Changer

EUROPEAN GREEN DEAL (EGD)

- European Green Deal as a new political framework and course-setting also for industry → Transformation of the economy to become climate-neutral, non-toxic and circular
- New political mandate & remit for action
- ***"review EU measures to address pollution from large industrial installations. It will look at the sectoral scope of the legislation and at how to make it fully consistent with climate, energy and circular economy policies"***
- Zero Pollution Ambition as part of EGD with its 3 elements:
  - Chemicals Strategy for Sustainability (CSS)
  - Zero Pollution Ambition Action Plan
  - Revision of the Industrial Emissions Directive



Quelle: Commission, Communication on the EGD, Dec. 2019

What contribution does the IED make to achieving climate neutrality, the circular economy and the Zero Pollution Ambition → How can we make the IE-RL fit for 2025+?

2. Important changes in the Commission's legislative proposal: General overview

To transform IED into forward-looking legislation to accompany the industrial transformation

1. More effective IED

- Increase the ambition in permits and tighten flexibilities
- More accessible information on permits and performance
- Reinforced Aarhus-rights

2. Support innovation

- Flexible permitting for frontrunners
- Create INCITE to ensure latest technologies are employed
- Transformation plans in Environmental Management System (EMS)

3. Ressources & chemicals

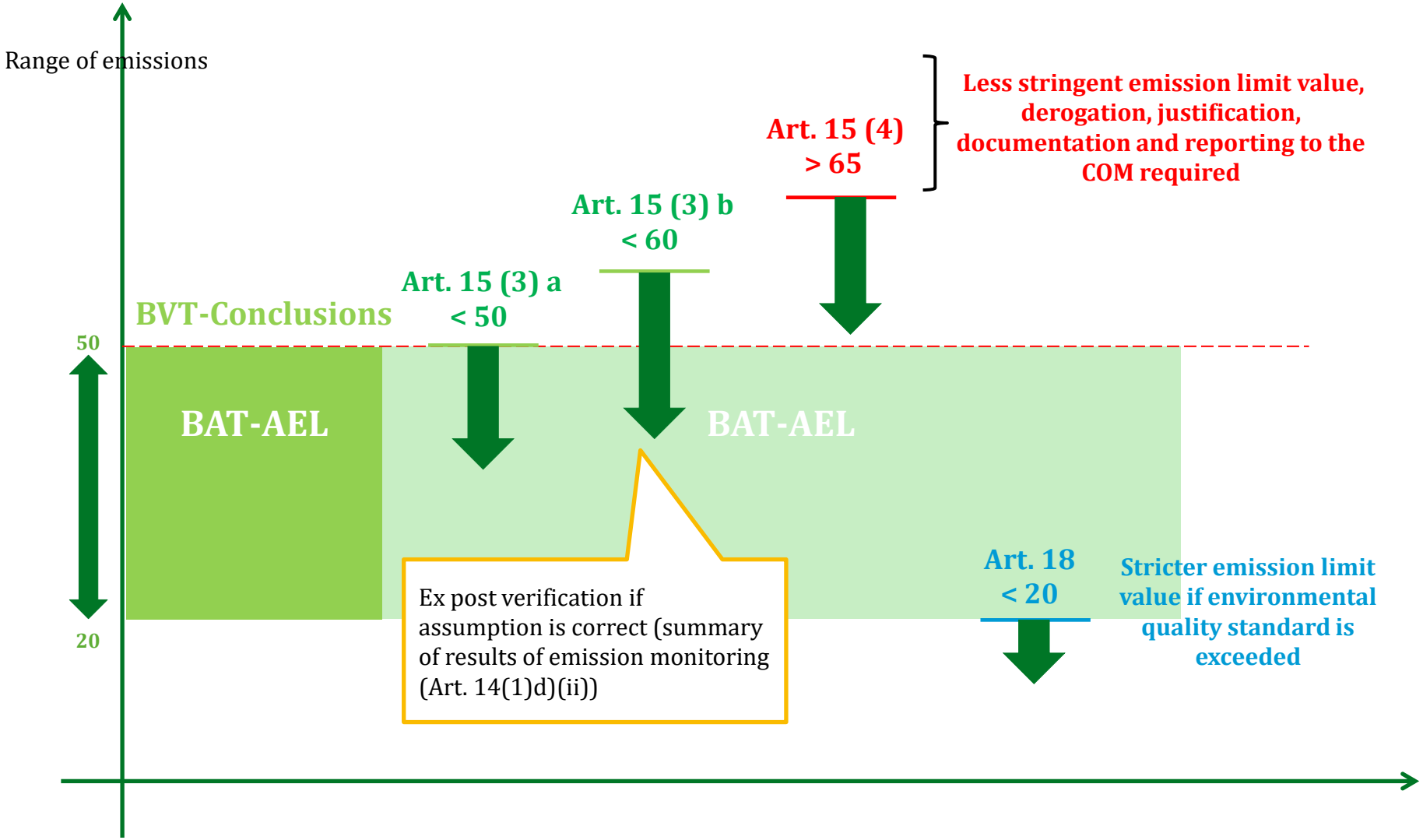
- EMS to improve resource efficiency, apply circular economy practices and use safer chemicals
- Performance levels and benchmarks

4. Support decarbonisation

- Curb non-ETS-GHG-emissions
- Energy efficiency requirements (limited by general approach, Art. 9(2))
- Reports on the alignment between IED and ETS (Art. 8) in the light of innovation dynamics (from June 2028)

5. Widening the scope: (1) **Close gaps in the existing scope** of the IED (textiles, metal processing, landfills); (2) Accompanying the growth of key activities that are important for the green transformation (**certain mining activities and battery giga-factories**); and (3) **20% of the largest livestock farms** are to be are covered in order to reduce NH3 and CH4 emissions, in particular

2. Example ‘More effective IED’: Competent authority to set emission limit values (ELVs) at lowest end of relevant BAT-AEL range, unless operator demonstrates that applying BATC only allows meeting less strict ELVs - Art. 15(3)



2. Example ‘More effective IED’: CA to set emission limit values (ELVs) at lowest end of relevant BAT-AEL range, unless operator demonstrates that applying BATC only allows meeting less strict ELVs - Art. 15(3)

COM-proposal 5.04.22

Art. 15(3) new: *The competent authority shall set the strictest possible emission limit values that are consistent with the lowest emissions achievable by applying BAT in the installation, and that ensure that, under normal operating conditions, emissions do not exceed the emission levels associated with the best available techniques (BAT-AELs) as laid down in the decisions on BAT conclusions referred to in Article 13(5). The emission limit values shall be based on an assessment by the operator analysing the feasibility of meeting the strictest end of the BAT-AEL range and demonstrating the best performance the installation can achieve by applying BAT as described in BAT conclusions.*

General Approach 16.03.23

Art. 15(3) new: The competent authority shall set the strictest ~~possible~~ **achievable** emission limit values ~~that are consistent with the lowest emissions achievable~~ by applying BAT in the installation, **considering the entire range of the emission levels associated with the best available techniques (BAT-AELs)** ~~and that~~ ~~**The emission limit values shall**~~ **to** ensure that, under normal operating conditions, emissions do not exceed the ~~emission levels associated with the best available techniques (~~BAT-AELs~~)~~ as laid down in the decisions on BAT conclusions referred to in Article 13(5). The emission limit values shall be based on an assessment by the operator analysing the feasibility of meeting the strictest end of the BAT-AEL range and demonstrating the best performance the installation can achieve by applying BAT as described in BAT conclusions, **having regard to possible cross-media effects**. *(…)*
General binding rules referred to in Article 6 may be applied while setting relevant emission limit values according to this article. (…)

* Amendments to the Commission proposal that have been agreed in the Council are marked **in bold**

2. **Example ‘More effective IED’:** Common rules for assessing compliance with ELVs to be set by COM (Commission Implementing Decision to establish measuring method by 24 months after entry into force of revisions) - Art. 15a

	A fixed proportion of the measured value is subtracted from measured value before comparison with ELV	A fixed proportion of the ELV is subtracted from the measured value before comparison with the ELV	Subtract measurement uncertainty	Measurement uncertainty is not considered
Measured value (mg/m^3)	**Method A**	**Method B**	**Method C**	**Method D**
80	64	60	75	80
90	72	70	85	90
100	80	80	95	100
110	88	90	105	110
120	96	100	115	120
125	100	105	120	125
130	104	110	125	130
Emission limit value (ELV)	100	Example ELV in mg/m3		
Max. uncertainty	20%	Example value related to ELV in %		
Real measurement uncertainty	5	Example value in mg/m3		

2. Important changes in the Commission's legislative proposal: General overview

To transform IED into forward-looking legislation to accompany the industrial transformation

1. More effective IED

- Increase the ambition in permits and tighten flexibilities
- More accessible information on permits and performance
- Reinforced Aarhus-rights

2. Support innovation

- Flexible permitting for frontrunners
- Create INCITE to ensure latest technologies are employed
- Transformation plans in Environmental Management System (EMS)

3. Ressources & chemicals

- EMS to improve resource efficiency, apply circular economy practices and use safer chemicals
- Performance levels and benchmarks

4. Support decarbonisation

- Curb non-ETS-GHG-emissions
- Energy efficiency requirements (limited by general approach, Art. 9(2))
- Reports on the alignment between IED and ETS (Art. 8) in the light of innovation dynamics (from June 2028)

5. Widening the scope: (1) **Close gaps in the existing scope** of the IED (textiles, metal processing, landfills); (2) Accompanying the growth of key activities that are important for the green transformation (**certain mining activities and battery giga-factories**); and (3) **20% of the largest livestock farms** are to be are covered in order to reduce NH3 and CH4 emissions, in particular

2. Creating of a new Chapter IIa on Promoting Innovation – Art. 27 a) - d)

Innovation centre for industrial transformation and emissions (‘**INCITE**’), privileging emerging and innovative techniques

Umwelt Bundesamt

New Chapter IIa: PROMOTING INNOVATION (Art. 27 und 27a - 27d)

- To set up a dedicated centre to support innovation: innovation centre for industrial transformation and emissions (‘**INCITE**’). CID to set arrangements and functioning of centre -Art. 27a
- To facilitate the testing and deployment of **emerging techniques** with improved environmental performance by giving more time to concerned operators: derogation from ELVs for testing of emerging techniques up to 24 months - Art 27b
- Specific **ELVs associated with emerging techniques** to be set in BATC and to be complied with within **6**years of BATC publication - Art 27c

•**Transformation plans** to be elaborated by operators, and included in their EMS, by 30 June 2030 for Annex I energy-intensive industries; and following publication after 1 January 2030 of new BAT onclusions for other Annex I sectors – Art. 27d

Example: Promoting transformation – Transformation plans Art. 27 d)

Informs how the installation will transform itself during the 2030-2050 period in order to contribute to the emergence of sustainable, clean, circular and climate neutral economy by 2050

Transformation plans (TP) included in operator´s Environmental Management System (EMS)

- for energy-intensive activities of Annex I IED (No. 1, 2, 3, 4 and 6.1 letters a and b) – obligatory by 30.06.30
- for remaining Annex IED activities: as part of the review of the permit conditions and following publication of BATC after 1 January 2030

Content/format of TP to be set in Commission Implementing Decision by ~~30.06.28~~/31.12.25

- Audit organization contracted by the operator assesses the conformity of the plan with requirements of the implementing act
- Plans shall be made pulic

2. Important changes in the Commission's legislative proposal: General overview

To transform IED into forward-looking legislation to accompany the industrial transformation

1. More effective IED

- Increase the ambition in permits and tighten flexibilities
- More accessible information on permits and performance
- Reinforced Aarhus-rights

2. Support innovation

- Flexible permitting for frontrunners
- Create INCITE to ensure latest technologies are employed
- Transformation plans in Environmental Manage-ment System (EMS)

3. Ressources & chemicals

- EMS to improve resource efficiency, apply circular economy practices and use safer chemicals
- Performance levels and benchmarks

4. Support decarbonisation

- Curb non-ETS-GHG-emissions
- Energy efficiency requirements (limited by general approach, Art. 9(2))
- Reports on the alignment between IED and ETS (Art. 8) in the light of innovation dynamics (from June 2028)

5. Widening the scope: (1) **Close gaps in the existing scope** of the IED (textiles, metal processing, landfills); (2) Accompanying the growth of key activities that are important for the green transformation (**certain mining activities and battery giga-factories**); and (3) **20% of the largest livestock farms** are to be are covered in order to reduce NH3 and CH4 emissions, in particular

Main tools to improve resource efficiency, use of chemicals

EMS required under Art. 14a as the main instrument to improve environmental performance regarding use of resources, circularity and use of safer substances –main implementation provision for general principles set out in Art. 11 fa, fb and fc

Permit makes clear an EMS is required -Art. 14(1)(ba):

- Complies with BAT conclusions –Art. 14a(1)
- Includes all aspects required under Art. 14a
- Focus on resource use, waste, hazardous substances
- Includes Transformation Plan

Benchmarks

- **Indicative** performance ranges set in BAT conclusions
- Shall be **taken into account by operator** while establishing performance objectives and indicators in EMS - Art. 14a(2)(b)

BAT AEPLs

- **Binding** performance ranges set in BAT conclusions
- Will be **incorporated by competent authority** in the binding permit conditions - Art. 14(1)(aa) reflects obligation under Art.15(3a)

2. Important changes in the Commission's legislative proposal: General overview

To transform IED into forward-looking legislation to accompany the industrial transformation

1. More effective IED	2. Support innovation	3. Ressources & chemicals	4. Support decarbonisation
• Increase the ambition in permits and tighten flexibilities • More accessible information on permits and performance • Reinforced Aarhus-rights	• Flexible permitting for frontrunners • Create INCITE to ensure latest technologies are employed • Transformation plans in Environmental Management System (EMS)	• EMS to improve resource efficiency, apply circular economy practices and use safer chemicals • Performance levels and benchmarks	• Curb non-ETS-GHG-emissions • Energy efficiency requirements (limited by general approach, Art. 9(2)) • Reports on the alignment between IED and ETS (Art. 8) in the light of innovation dynamics (from June 2028)

5. Widening the scope: (1) **Close gaps in the existing scope** of the IED (textiles, metal processing, **landfills)**; (2) Accompanying the growth of key activities that are important for the green transformation (**certain mining activities and battery giga-factories**); and (3) **~~20% of the largest livestock farms~~** ~~are to be are covered~~ in order to reduce NH3 and CH4 emissions, in particular

2. Examples of amendments of the scope (Annex I and Article 2

Insertion of new numbers or amendment of existing numbers of Annex I:

- 2.7. manufacture of batteries, **other than exclusively assembling**, with a production capacity of [...] ~~3.5 GWh~~ **12 000 tonnes of battery cells (cathode, anode, electrolyte, separator, capsule)** or more per year
- There are a number of clarifications to the industrial activities already present in Annex I

Landfills:

- Art. 2 Amendments to Directive 1999/31/EC
  Art. 1 paragraph 2 of Directive 1999/31/EC is deleted, i.e. in future BAT for landfills will be defined via BAT conclusions (an amendment of the Landfill Directive in conjunction with the Council Decision on Acceptance of waste to Landfills 2003/33/EC would also have been possible)
- Key issue of limiting input of organic waste to landfills is difficult to handle via BAT conclusions (perhaps as binding BAT AEPL or *Techniques that are not BAT*?)
- 4-year period for implementation of BAT conclusions does not seem appropriate

3. The General Approach of the Environment Council: Press release

Romina Pourmokhtari, *Swedish minister for climate and the environment*

Council of the EU, Press release **, 16. March 2023**

Council reaches agreement on amendments to industrial emissions directive

The Council today adopted its negotiating position ('general approach') on a proposal to review the industrial emissions directive. The new rules will offer better protection of human health and the environment by reducing harmful emissions from industrial installations and intensive livestock farms into the air, water and through waste discharges..

The Council agreement reached today on industrial emissions sets stronger rules to tackle pollution at the source. This will set pollution limits at more effective levels and give clear guidance to the industry (....) to make the right investments so that their pollution is effectively reduced.

3. General Approach – Negotiation position of the Member States

Main changes introduced by the Council

- COM proposal to delete **Art. 9(2) to be reinserted** into the IED
- **Amendment of Art. 15(3)** in such a way that it is clarified that the entire range of emissions associated with BAT is to be taken into account and that this can also be done by means of generally binding rules
- Member States included a **threshold for hydrogen produced through electrolysing of water** below which H_2 production which is produced by water electrolysis is no longer covered by the IED. A new No. 6.6 will be introduced: **'6.6. *Electrolysis of water for production of hydrogen where the production capacity exceeds 60 tonnes per day*' (roughly 100 $MW_{electrical\ input}$)**
- The general approach introduced the **flexibility** needed for Member States to adapt the provisions on **penalties and compensations** in case of health damages to their different national legal systems
- Member states introduced a **derogation from the emission limit values associated with best available techniques in the event of a crisis** leading to severe disruption or shortage of supply of energy or essential resources, material or equipment – under strict conditions
- The general approach specifies the objectives for the **innovation centre for industrial transformation and emissions (INCITE) proposed by the Commission**. It also clarifies many other parts of the proposal and strives to reduce administrative burden for operators and national authorities

4 Status of consultations and next steps

Plenary voting: 11.07.23

Commission (DG ENV C4)

European Parliament (Committees Environment (ENVI), Industry (ITRI), AAGRI etc.)

Tomas Tobé ITRI, 7.11.22

Radan Kanev ENVI, 5.06.23

Ministry of Environment (in charge: C I 2)

Economy, Agriculture

Other Ministries

Others

UBA

Industry association (national)

Fedral Council (Drucksache 176/22)

07.10.22

Position paper

Committee of the Regions (CoR)

European Industry Associations

Position papers

EUROPEAN COMMISSION

Strasbourg, 5.4.2022
COM(2022) 156 final

2022/0104 (COD)

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

amending
Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) and Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste