

6th CEWEP Congress 2012

Waste-to-Energy

▶ **Energy & Resource Efficiency**

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Revision of the BREFs Waste Treatment & Waste Incineration

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Revision of IPPC - IED



DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 24 November 2010

on industrial emissions (IED)

(integrated pollution prevention and control)

(Recast)

Revision of IPPC



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Revision of IPPC - IED



Council Directive 78/176/EEC of 20 February 1978 on waste from the titanium dioxide industry

Council Directive 82/883/EEC of 3 December 1982 on procedures for the surveillance and monitoring of environments concerned by waste from the titanium dioxide industry

Council Directive 92/112/EEC of 15 December 1992 on procedures for harmonising the programmes for the reduction and eventual elimination of pollution caused by waste from the titanium dioxide industry

Council Directive 1999/13/EC of 11 March 1999 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations



Revision of IPPC - IED



Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the **incineration of waste**

Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants

and **Directive 2008/1/EC** of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control.



Principle targets of IED

The permit should include:



- all the measures necessary to achieve a high level of protection of the environment as a whole
- and to ensure that the installation is operated in accordance with the general principles governing the basic obligations of the operator
- emission limit values for polluting substances, or equivalent parameters or technical measures, appropriate requirements to protect the soil and groundwater and monitoring requirements.
- Conditions be set on the basis of best available techniques (BAT)



Principle targets of IED on BAT



- In order to determine best available techniques and to limit imbalances in the Union as regards the level of emissions from industrial activities, reference documents for best available techniques (“**BAT reference documents**”) should be drawn up, reviewed and, where necessary, updated through an exchange of information with stakeholders and the key elements of BAT reference documents (“**BAT conclusions**”) adopted through committee procedure.



Principle targets of IED on BAT



Commission should:

- through committee procedure, establish guidance on the collection of data, on the elaboration of BAT reference documents and on their quality assurance.
- BAT conclusions should be the reference for setting permit conditions. They can be supplemented by other sources.
- should aim to update BAT reference documents not later than 8 years after the publication of the previous version.



Principle targets of IED on BAT



- **“Best available techniques”** means the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing the basis for emission limit values and other permit conditions designed to prevent and, where that is not practicable, to reduce emissions and the impact on the environment as a whole:



Principle targets of IED on BAT



- (a) “**techniques**” includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned;
- (b) “**available techniques**” means those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator;



Principle targets of IED on BAT



- **“BAT reference document”** means a document, resulting from the exchange of information organised pursuant to Article 13, drawn up for defined activities and describing, in particular, applied techniques, present emissions and consumption levels, techniques considered for the determination of best available techniques as well as BAT conclusions and any emerging techniques, giving special consideration to the criteria listed in Annex III;



Principle targets of IED on BAT



- **“BAT conclusions”** means a document containing the parts of a **BAT reference document** laying down the conclusions on best available techniques, their description, information to assess their applicability, the emission levels associated with the best available techniques, associated monitoring, associated consumption levels and, where appropriate, relevant site remediation measures;



Principle targets of IED on BAT



- **“Emission levels associated with the best available techniques”** means the range of emission levels obtained under normal operating conditions using a best available technique or a combination of best available techniques, as described in BAT conclusions, expressed as an average over a given period of time, under specified reference conditions;



Principle targets of IED on BAT



- **“Emission levels associated with the best available techniques”** means the range of emission levels obtained under normal operating conditions using a best available technique or a combination of best available techniques, as described in BAT conclusions, expressed as an average over a given period of time, under specified reference conditions;
- **Example given by BREF “Waste Incineration” from 2006**



Operational emission level ranges associated under BAT for releases to air (Chapter 5 Tab. 5.2) in mg/Nm³



Substance	Non continuous measurement values	1/2 hour average	24 hour mean average	Comments
Dust		1-20*	1-5	with use of fabric filters
HCl		1-50	1-8	use of wet FGT systems preferred
SO ₂		1-150*	1-40*	use of wet FGT systems preferred
NOx with SCR		40-300*	40-100*	requires additional energy demand and costs
NOx with SNCR		30-350	120-180	NH ₃ slip must be considered when raw gas concentrations are high; use in combination with wet FGT preferred
TOC		1-20	1-10	optimized combustion conditions
CO		5-100	5-30	optimized combustion conditions
Hg	<0,05*	0,001-0,03	0,001-0,02	input reduction, carbon-based adsorption
PCDD/ PCDF in ng/Nm ³	0,01-0,1*			optimal combustion conditions, temperature controlled reduction of de-novo synthesis, carbon-based adsorption techniques

BAT-Documents for Co-Incineration



As Commission decided to regulate the co-incineration of waste in the relevant sectors following sectors and the linked BREF document should be taken into account:

- iron and steel industry,
- large combustion plants and
- cement, lime and magnesium industries.



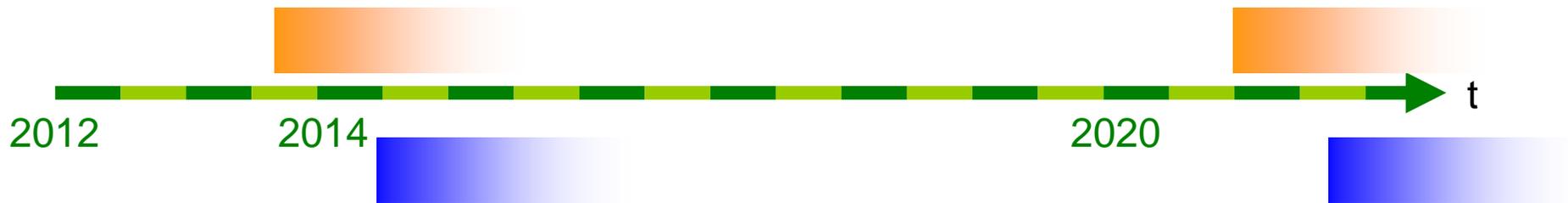
BAT/Requirements for Waste Treatment and Waste Incineration



Emission limit values should lead to operations levels which correspond with emission levels associated with the best available techniques

Timetable for BAT Revision Activities:

Waste Treatment



Waste Incineration



New National Emission Limits should mostly lead to operation levels matching the requirements of the next BAT-Revision!

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Revision BAT-Document for Waste Treatment



German Activities:

- Research project to collect data on MBT, Biological Treatment, Treatment of Residues and Shredder Plants will end in 2012
- Controversial Discussion on BAT-Standards especially for Biological Treatment Plant between German Länder Authorities, UBA and industry
- Final German position expected in 2012
- Wish list under discussion



Revision BAT-Document for Waste Incineration



German Activities:

- Research project to collect special data on Waste Incineration will start in autumn 2012
- Discussion on BAT-Standards especially for energy efficiency, treatment of residues (e.g. recovery of metals and phosphorus from ashes and slag) and new emission standards (e.g. nitrogen oxides and mercury) between German Länder Authorities, UBA and industry (Working Group) will start in Winter 2012
- Final German position (Wish List) expected in Summer 2014



Information on BAT



Public drafts and finalized BAT-Documents are available by

<http://eippcb.jrc.es>

For German speaking participants finalized BAT-Documents, translations of chapter 4 and 5 and actual information are available by

www.bvt.umweltbundesamt.de/kurzue.htm

The text of the Ordinances in the several EU-languages and additional information are prepared by DG Environment

<http://europa.eu.int/comm/environment>



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**Thank you
for your attention!**

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Für Mensch und Umwelt



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