



European Union Network for
the Implementation and Enforcement
of Environmental Law

Sharing of draft proposals between Member States for
implementing derogations from BAT-AELs under Article
15 paragraphs (4) and (5) of the industrial emissions
Directive 2010/75/EU

2014/18 Final report

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Introduction to IMPEL

The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) is an international non-profit association of the environmental authorities of the EU Member States, acceding and candidate countries of the European Union and EEA countries. The association is registered in Belgium and its legal seat is in Brussels, Belgium.

IMPEL was set up in 1992 as an informal Network of European regulators and authorities concerned with the implementation and enforcement of environmental law. The Network's objective is to create the necessary impetus in the European Community to make progress on ensuring a more effective application of environmental legislation. The core of the IMPEL activities concerns awareness raising, capacity building and exchange of information and experiences on implementation, enforcement and international enforcement collaboration as well as promoting and supporting the practicability and enforceability of European environmental legislation.

During the previous years' IMPEL has developed into a considerable, widely known organisation, being mentioned in a number of EU legislative and policy documents, e.g. the 7th Environment Action Programme and the Recommendation on Minimum Criteria for Environmental Inspections.

The expertise and experience of the participants within IMPEL make the network uniquely qualified to work on both technical and regulatory aspects of EU environmental legislation.

Information on the IMPEL Network is also available through its website at: www.impel.eu

Disclaimer:

This draft final report is the result of a project within the IMPEL network. The content does not necessarily represent the views of the national administrations or the European Commission.

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1. Introduction

In October 2013 the European Network of the Heads of Environment Protection Agencies¹ Better Regulation Interest Group met with senior representatives from the IMPEL Network. One of the items discussed was a small survey carried out across the IMPEL network on how derogations under Article 15 of Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control)² (hereinafter the IED) might be used in various Member States.

The results of the survey had suggested that it might be useful to

- work together to better understand the basis on which a derogation would be justified, specifically in regard to disproportionate cost
- to share and possibly develop common tools or approaches

The project that is the subject of this report built on this work and brought together IMPEL competent authorities to:

- Share how the Article 15(4) and 15(5) derogation provisions may be used;
- Share any methodologies being developed for applying Article 15(4) and 15(5);
- Facilitate opportunities for competent authorities to work together and share best practice

This report summarises the results of the project.

2. Legislative overview

The IED recasts seven Directives, including Directive 2008/1/EC concerning integrated pollution prevention and control (hereinafter the IPPC Directive)³ into a single comprehensive text addressing permitting of a variety of industrial activities that have the potential to cause pollution. The deadline for transposition of the Directive ended on 07 January 2013 and the competent authorities identified to implement the Directive in national law are now in the process of putting the legislation into effect.

A key aspect of the IED Directive relates to the use of BAT conclusions and the emission levels associated with the best available techniques (BAT-AELs) contained therein in the permitting of activities subject to Chapter II of the IED including energy, metal, mineral, chemical, waste and other industrial sectors.

Article 15(3) of the IED provides for a specific role for BAT conclusions and BAT-AELs when setting emission limit values in permits. The expectation is that, in general, emission limit values will be set in permits so that emissions from the installation do not exceed the BAT-AELs. However, Article 15(4) of the IED provides the possibility to derogate from the requirements of Article 15(3) and, thereby, to allow emissions to be higher than the BAT-AELs where an assessment shows that the achievement of BAT-AELs would lead to disproportionately higher costs compared to the environmental benefits due to:

¹ <http://epanet.ew.eea.europa.eu/>

² OJ L 334, 17.12.2010, p. 17

³ OJ L 24, 29.1.2008, p. 8

- (a) the geographical location or the local environmental conditions of the installation concerned; or
- (b) the technical characteristics of the installation concerned.

Under Article 21(3) of the IED, within 4 years of publication of decisions on BAT conclusions competent authorities must reconsider and, if necessary, update the permit to ensure compliance with the Directive and in particular Article 15(3) and 15(4) and that the installation complies with its permit. The first two sets of BAT conclusions for the manufacture of glass and iron and steel production were published on 08 March 2012 and competent authorities are now under pressure to reconsider and update permits for these sectors by the 2016 deadline.

Finally, Article 15(5) of the IED provides for temporary derogations for the testing and use of emerging techniques for a total period of time not exceeding 9 months, after which either the technique is stopped or the activity achieves at least the BAT-AEL. The IED does not stipulate any technical criteria for the using this derogation provision.

3. Project overview

The project was managed by the Scottish Environment Protection Agency⁴ in partnership with the Environment Agency⁵ and Department of the Environment Northern Ireland⁶. It was separated into two key phases.

Phase One involved the collection of information via a questionnaire circulated to IMPEL Members and to Member State representatives to the European Union's Industrial Emissions Expert Group. The questionnaire covered a number of points in relation to Article 15(4) and (5) and was designed to allow the use of as much existing information as possible. A copy of the questionnaire is included in Annex I to this report. Completed questionnaires were submitted by 19 countries⁷, Furthermore, AT provided an e-mail response summarising its position on Article 15(4) and (5) derogations. Where allowed for by respondents to the questionnaire, copies of responses are included in Annex II of this report.

Phase Two involved a workshop held in Edinburgh, Scotland on 26 and 27 November 2014. The workshop used as the basis for its agenda the responses to the questionnaire and focussed on those aspects of Article 15(4) and (5) that are of greatest interest and/or concern to competent authorities. In addition to a majority of the countries that submitted questionnaire responses under Phase One two countries⁸ requested to be involved in Phase Two resulting in 20 countries plus a representative of the European Commission attending the workshop itself. The presentations made at the workshop are included in Annex IV to this report.

4. Administrative arrangements for the granting of derogations under Article 15(4) and (5)

⁴ <http://www.sepa.org.uk/>

⁵ <https://www.gov.uk/government/organisations/environment-agency>

⁶ <http://www.doeni.gov.uk/>

⁷ BE (Flemish Region), BG, CZ, DE, DK, ENG, FI, FR, HR, IE, IS, IT, LT, MT, NI, NL, PL, SCO, WAL

⁸ SI, SK

A majority of project participants (18 out of 19) indicated that responsibility for granting derogations rests with the same competent authority responsible for the general granting of permits. In BE (Flemish Region) derogations are granted at the ministerial level. In many cases (8 out of 19) competent authorities are either split amongst Provinces, Regions and Municipalities with decisions being taken at these devolved levels or are a mix of national and devolved competent authorities depending on the complexity of the activities concerned (2 out of 19). The remainder have a single competent authority involved in making derogation decisions.

The manner in which derogations are granted has a direct influence on the role of competent authorities and operators in the derogation process. In this respect just over half of participants indicated that competent authorities assess information held by them on the state of the installation against the BAT conclusions and may request further information from the operator, where necessary. On the basis of this information the competent authorities consider whether a derogation is warranted. The remaining respondents operate an application procedure whereby operators must submit an application for a derogation which is then assessed by the competent authority.

Where information was provided, participants indicated that other public authorities may be involved in providing expert opinion into the derogation decision making process and that wider stakeholder consultation takes place, including with the public, prior to final derogation decisions being taken.

5. Article 15(4) derogations

This section of the report considers the way in which derogations under Article 15(4) of the IED are presently or are going to be implemented by participants. It uses information from the Phase One questionnaire and the Phase Two workshop. Where possible, examples from individual countries are provided.

5.1 Development of guidance on the application of Article 15(4)

Participants were asked about the type of guidance that had either been developed or was being developed to assist in the implementation of Article 15(4) of the IED. Nine participants indicated that guidance was either in place or forthcoming. It is clear that where guidance has or is being developed that this is generally being produced by national administrations. Conversely, two participants, England and Scotland, indicated that guidance was being developed by the competent authorities involved in the granting of derogations. In the case of Germany and Italy, the legislation transposing the IED into national law had put in place rules on the granting of derogations.

Legislative controls

Germany and Italy have included rules and restrictions on the application of Article 15(4) derogations in their respective countries. In Germany the legislation restricts the reason for derogation to the technical characteristics of the installation only - geographical location or local environment are not considered as justified reasons for derogations. In Italy the legislation allows derogations in cases where a dedicated cost benefit analysis has been produced by an operator and where certain criteria are fulfilled. A translation of the criteria is provided in Annex III.

Links to guidance on the application of Article 15(4) and made available by participants are provided below:

Country	Type of guidance	Link
Belgium (Flemish Region)	Application guidance	http://navigator.emis.vito.be/milnav-consult/consultatieLink?wettekstId=61193&appLang=nl&wettekstLang=nl
Belgium (Flemish Region)	Procedure for granting a derogation	http://navigator.emis.vito.be/milnav-consult/consultatieLink?wettekstId=54729&appLang=nl&wettekstLang=nl
Czech Republic	Procedure for assessing whether a derogation is justified	http://www.mzp.cz/www/ippc4.nsf/b8b42dbc0c8637bac125773c0021a91e/903ff45835028198c1257c0400474f9a?OpenDocument
Denmark	Guidance to operators and competent authorities on the application of Article 15(4)	http://miljogodkendelsesvejledningen.dk/opslag/princippet-om-bat/fravigelser-fra-bat/
England and Wales	Guidance for IED installations including relevant technical characteristics for consideration under Article 15(4)	https://www.gov.uk/government/publications/environmental-permitting-regulations-guidance-on-part-a-installations
England and Wales	Government book providing guidance on the assessment of impacts on air quality (the so-called Green Book)	https://www.gov.uk/government/collections/the-green-book-supplementary-guidance
Finland	Guidance on the application of Article 15(4) and training materials	http://www.ym.fi/fi-Fi/Ymparisto/Lainsaadanto_ia_ohjeet/Ymparistonsuojelun_valmisteilla_oleva_lainsaadanto/Ymparistonsuojelulain_uudistaminen/Ymparistonsuojelulain_uudistuksen_toimeenpano
Netherlands	Manual for determining BAT at IED installations including application of Article 15(4)	http://www.infomil.nl/onderwerpen/duurzame/bbt-ippc-brefs/handleiding-bepalen/

5.2 Development of cost-benefit methodologies

A key component of Article 15(4) of the IED is the need to undertake an assessment that shows that the achievement of BAT-AELs would lead to disproportionately higher costs compared to the environmental benefits as a result of the criteria laid down in Article 15(4)(a) and (b). The assessment of costs and benefits has led to a number of participant countries either looking to develop an IED specific cost-benefit methodology, or to modify existing cost-benefit methodologies to suit the requirements of the IED.

A significant part of the Edinburgh workshop focussed on the development and application of cost-benefit methodologies and the difficulties encountered in such work to date. Further details are provided in the presentations made during the workshop and as included in Annex IV to this report, but the following themes were identified:

i) Gathering data on costs and benefits is not easy, and in some cases is not possible.

Where it is intended to undertake a quantitative analysis of costs and benefits there are a range of options upon which to draw some data. In the presentation made by Wales that contained considerations as to how to assign values to **environmental harm**, reference was made to National⁹

⁹ <https://www.gov.uk/air-quality-economic-analysis>

and European¹⁰ standards that could be used for a range of common pollutants. The Netherlands indicated that it had developed its own method for assigning costs to environmental damage using real life examples, as had Germany¹¹ and Croatia. It was accepted that all of the methods for assessing environmental costs had their merits. It is clear, however, that the methods in existence may result in different values being assigned to the same pollutant and, in the case of many pollutants there being no values upon which to base a quantitative analysis.

With regards to assessment of the **costs of compliance** with the BAT-AELs there was a greater degree of consistency between approaches in assessing the costs of implementing BAT, focussing on the use of data included in the BAT Reference documents and the use of the Reference document concerning economics and cross-media effects¹².

ii) *Assessing costs and benefits over time may require economic specialist skills that are not typically found within IED competent authorities*

A number of the attendees at the workshop had considered issues such as use values, discount rates, investment costs, running costs and other considerations that required considerable oversight by economic experts. It is expected that this need for economic expertise will continue as individual installations assessments are made against published BAT conclusions that may require considerable resource expenditure by the competent authorities concerned and/or the development of new skill sets by competent authority staff.

iii) *Analysis of costs and benefits are likely to be based on a small number of scenarios.*

In order to assess the costs and benefits of action by the operator to comply with BAT-AELs a range of options may exist that are likely to require a number of scenarios to be developed. These scenarios were highlighted in many of the presentations made at the workshop and considered:

- 1) The do nothing scenario;
- 2) The compliance with the BAT-AELs scenario; and, in some cases;
- 3) The partial BAT-AEL compliance or move towards BAT-AEL compliance scenario.

Where possible the costs and benefits against the scenarios developed would enable a decisive derogation decision to be made that could then be included in the justification for the permit conditions set as appended to the permit.

iv) *Quantitative analysis may be supplemented by, or in some cases replaced by qualitative analysis*

A number of attendees considered that detailed quantitative analysis was unlikely to provide all of the information required to allow a derogation to be justified given some of the uncertainties that exist in the assessment of costs and benefits. Indeed, in some cases and for some IED activities it

¹⁰ <http://www.eea.europa.eu/publications/costs-of-air-pollution-2008-2012>

¹¹ <http://www.umweltbundesamt.de/publikationen/methodological-convention-20-for-estimates-of-0>

¹² <http://eippcb.jrc.ec.europa.eu/reference/>

was considered that qualitative analysis may be easier than quantitative analysis in the assessment of derogations under Article 15(4).

v) In some cases competent authorities may use third parties to support derogation cost-benefit analysis

The Czech Republic and Wales referenced the possibility (or requirement in the case of the Czech Republic) for third parties to be involved in cost-benefit analysis in order to verify that a derogation is warranted or to provide an independent check of the data used as part of the analysis.

Six attendees provided links to cost-benefit guidance in existence – note that this guidance is not always specific to the application of the IED and may have been developed for other purposes:

Country	Cost-benefit analysis guidance
Belgium (Flemish Region)	http://emis.vito.be/sites/emis.vito.be/files/pages/migrated/richtlijn_bepalen_bt.pdf (currently under review)
Czech Republic	http://www.mzp.cz/www/ippc4.nsf/b77a7a146f29c439c1256cda0034ce22/ff25a67616f160acc1257d5d00435eb4?OpenDocument
Germany	<p>The guidance provided below refers to general guidance on environmental cost-benefit assessment and is not used to assess derogations for individual installations in Germany. However, it may be of interest to other competent authorities given some of the issues highlighted in this report.</p> <p>Methodological convention on the economic valuation of environmental damage: http://www.umweltbundesamt.de/publikationen/economic-valuation-of-environmental-damage-0</p> <p>Annex A-Economic Valuation Methods: http://www.umweltbundesamt.de/publikationen/methodological-convention-20-for-estimates-of</p> <p>Annex B - Best-practice Cost Rates for Air Pollutants, Transport, Power Generation and Heat Generation: http://www.umweltbundesamt.de/publikationen/methodological-convention-20-for-estimates-of-0</p> <p>as well as “Environmental costs in the energy and transport sectors” http://www.umweltbundesamt.de/publikationen/environmental-costs-in-the-energy-transport-sectors</p>
Finland	http://www.ymparisto.fi/download/noname/%7BC5B52653-424E-4FFC-8A55-44C8A537CA32%7D/57238
Croatia	http://www.mzoip.hr/doc/IPPC/Studija_o_smiernicama_za_ekonomsko_vrednovanje.pdf
The Netherlands	http://www.infomil.nl/onderwerpen/klimaat-lucht/ner/digitale-ner/2-

5.3 Consideration of technical characteristics, local environment and geographic factors that may be considered under Article 15(4) and links with the content of the BAT conclusions

Article 15(4) of the IED makes clear that derogations can only be justified where one or more of three installation specific criteria would mean that the achievement of the emissions levels associated with the best available techniques would lead to disproportionately higher costs compared to the environmental benefits. The criteria are:

- (i) The geographical location of the installation concerned;
- (ii) The local environment of the installation concerned;
- (iii) The technical characteristics of the installation concerned.

These criteria could also be applied under the IPPC Directive in the setting of emission limit values as laid down in Article 9(4) of that Directive. Previous examination of the application of the provisions of Article 9(4) and the interpretation of the criteria laid down demonstrated wide variations in implementation across EU Member States¹³. Given the importance of these criteria for the purposes of applying Article 15(4) participants were provided the opportunity to consider how these criteria may be applied under the IED.

Participants emphasised that the content of the BAT conclusions to be applied play a significant role in relation to the criteria listed under Article 15(4). In particular, it is important that BAT conclusions clearly define BAT and the applicability of such BAT. Where special cases exist that are of a general nature for a sector it is helpful for the BAT conclusions to include this information as an applicability consideration so as to assist competent authorities in understanding the applicability of those specific conclusions.

Participants provided examples against the criteria listed under Article 15(4):

With regard to **technical characteristics** the production of specialist products that are not adequately covered by the BAT conclusions, the configuration of a plant on a given site and lack of space to fit equipment, the practicability of installing equipment within four years, the intended operational lifetime of parts of an installation, application of BAT to short-run / batch activities, specificity of process gases, failure of the application of the BAT concerned to achieve the BAT-AELs and plants designed to use specific local raw materials were given as examples.

With regard to **geographic characteristics** remote locations (such as islands) involving high transport costs for waste treatment, availability of process water, and the size, type and flow of surface water were given as examples.

With regard to **local environment** availability of water and quality of the surrounding environment including location of sensitive receptors were given as examples.

¹³ <http://ec.europa.eu/environment/industry/stationary/studies.htm>

A number of the presentations gave examples of the criteria being applied in practice as provided in Annex IV to this report. Germany provided a rationale as to why the criteria related to geographic characteristics and local environment are not allowed under German law.

Discussion at the workshop generally focussed on technical characteristic considerations, and in particular how the technical characteristics may lead to time limited derogations, whereby sufficient time was provided for an installation to comply with BAT reflecting on the efforts previously made to apply BAT or the periods during which an installation was to be partially or fully shut down to allow large scale changes to be made. Discussion as to the way in which the costs of complying with BAT within the four year window may be disproportionate in comparison to applying BAT at a later date were also held. It was felt by a majority of participants that technical characteristic derogations were likely to form the majority of derogation decisions in the years to come.

5.4 Determining disproportionality

Article 15(4) places an obligation on the competent authority to make a judgement about what constitutes disproportionately higher costs compared to the environmental benefits. This has close links to the issue of cost-benefit analysis discussed in section 5.2 above. However, the results of any cost-benefit analysis will not necessarily provide an answer as to what is disproportionate for a particular installation. Participants raised the following as factors that may be considered in deciding on disproportionality – note that this list reflects individual considerations and was not an agreed list from participants:

- Payback periods for investments to be made to comply with BAT-AELs;
- The impact of compliance with the BAT-AELs on product prices;
- Cross-media impacts of compliance with the BAT-AELs including energy costs and resource consumption;
- Cost-effectiveness of the measures proposed to be implemented;
- Disproportionality may vary by installation and by sector given the wide variety of activities covered by the IED.

Wales provided an example of the determination of disproportionality resulting from the application of the BAT conclusions for the production of Iron and Steel - where the benefit cost ratio (BCR) has consistently been beneath 0.5, even when environmental benefits were maximised, this was considered to be 'disproportionately costly'. This effectively implies that unidentified benefits could be as great as identified benefits without affecting which side of unity the overall BCR falls.

There was general agreement by all participants that disproportionality is not demonstrated by a break-even point resulting from a cost-benefit analysis. Rather the costs of compliance with the BAT-AEL must be clearly higher than the environmental benefits. However, what the effective level at which compliance is said to be disproportionate should be left to the competent authority to decide.

5.5 Limits on the extent of derogations under Article 15(4)

Relatively few participants provided examples of limitations that exist in relation to the length of time for which derogation could be granted or to the extent to which emission limit values could be higher than the BAT-AELs. Where they were given:

Belgium (Flemish Region) indicated that environmental quality standards must be complied with and, if minimum emission limit values exist in national law these must also be complied with. The minimum provisions contained in Flemish law are primarily found in title II and title III of VLAREM. The translation of BAT-conclusions in 'General Binding rules' is included in title III¹⁴ of VLAREM.

Germany indicated that temporary derogations may be provided for installations that are close to achieving the BAT-AEL but for which retrofitting would be deemed unnecessary.

England indicated that all derogations would be reconsidered after the publication of revised BAT conclusions in line with Article 21(3) of the IED.

In **Ireland** reviews of derogations granted can be initiated by the competent authority after three years of issuance.

In **Italy** detailed criteria are laid down in legislative decree.

In the **Netherlands** derogations may be time limited but may also require additional monitoring and ongoing improvement programmes to be applied.

Scotland stated that derogations are limited to individual installation i.e. they cannot apply to an entire sector through one decision and that all environmental quality standards must still be complied with where a derogation is granted.

In **Wales** it is expected that derogations cannot exceed the BAT conclusion review cycle foreseen in the IED of eight years. Upon such an eight year review a further derogation request may be made and granted if the conditions of Article 15(4) are met.

5.6 Experience of issuing derogations under Article 15(4)

Only two participants indicated that derogations had either been issued or were imminent – Lithuania and Wales. The Welsh example was the subject of a presentation made at the workshop and as included in Annex IV to this report. However, a number of respondents indicated that assessments were in process for the sectors concerned by published BAT conclusions to date and that derogations for a number of installations were expected to be issued.

5.7 Commission Guidance on the application of Article 15(4)

Article 15(4) provides a specific reference to the possibility of the European Commission to clarify through guidance the criteria to be taken into account for the application of that paragraph, albeit that such guidance would be based on the implementation reports submitted by Member States under Article 72(1) of the IED. However, the Commission may issue guidance at any time and is not limited in time by these specific provisions of Article 15(4). Participants were asked, therefore, whether they were in favour of Commission guidance.

¹⁴ <https://nnavigator.emis.vito.be/mijn-navigator?wold=61192>

Fourteen participants indicated that they wished to see the European Commission to develop guidance on assessing derogation requests, with a further two participants neither in favour nor against the idea of such guidance. Three participants indicated that they did not wish to see Commission guidance issued at this point in time.

For those participants that indicated they were in favour of Commission guidance the following elements were seen as important to be addressed:

- 1) How to assess disproportionality including the potential development of a decision tree approach to assist competent authorities
- 2) How to measure costs and benefits both qualitatively and quantitatively including reference costs for pollutants
- 3) The level of evidence necessary to justify derogations
- 4) Examples of where derogations are justified

The desire for Commission guidance reflected in part on the different methodologies currently in development for the application of Article 15(4) and the potential problems that may be encountered in the application of multiple approaches resulting in different conclusions.

6. Article 15(5) derogations

This section of the report considers the way in which derogations under Article 15(5) of the IED are presently or are going to be implemented by participants. It uses information from the Phase One questionnaire and the Phase Two workshop. Where possible, examples from individual countries are provided. It should be noted that both Phase One and Two of the project focussed greatest effort on the application of Article 15(4) of the IED and so the information collected to inform the application of Article 15(5) is much more limited.

Procedures for derogations under Article 15(5) appear to have had less consideration to date than those under Article 15(4) as reflected in a majority of the information collected. A majority of those participants who provided information indicated that operators must apply for derogation under Article 15(5) in a similar way to applying for a change to a permit. Guidance has been developed by a small number of respondents:

BE (Flemish Region):

<http://navigator.emis.vito.be/milnav-consult/consultatieLink?wettekstId=10170&appLang=nl&wettekstLang=nl>.

and:

<http://navigator.emis.vito.be/milnav-consult/consultatieLink?wettekstId=20464&appLang=nl&wettekstLang=nl>.

Denmark - <http://miljogodkendelsesvejledningen.dk/opslag/princippet-om-bat/fravigelser-fra-bat/>

Only one participant had issued derogation under Article 15(5) – Malta. In this case derogation was applied related to a water treatment plant within a waste management facility, specifically on the

treated effluent which would be discharged to sea. During the test period the operator was instructed not to discharge to sea but to dispose of all effluent as waste for export. The operator was only allowed to discharge once the data gathered and submitted was deemed acceptable by the Authority.

7. Conclusions and next steps

The information collected as part of this project demonstrates a number of approaches that have been developed for the application of the provisions of Article 15(4) and (5) of the IED. They also highlight a number of problem areas for competent authorities, particularly in respect to the assessment of costs and benefits and determining disproportionality. Furthermore, it appears that a majority of respondents have yet to formally issue any derogations under either Article 15(4) or (5) albeit that a number of such derogations are foreseen.

As part of the discussions at the Phase II Workshop it was considered that the following next steps would be helpful in assisting competent authorities in the application of derogations under Article 15(4) and (5):

- 1) The IMPEL website should contain a page providing links to the location of permitting decisions, including a copy of the permit, and where a derogations is granted in accordance with Article 15(4) the rationale for the derogation granted. This information is already required to be made available according to Article 24(2) of the IED and so the IMPEL page would simply provide links to the relevant existing websites. Updating of this page should be required on a regular basis and be overseen by one of the existing IMPEL clusters. The tables included in this report provide a good starting point for setting up such a page;
- 2) The IMPEL website should contain a page providing links to the location of guidance developed for the application of Article 15(4) and (5) of the IED including cost-benefit analysis guidance. Updating of this page should be required on a regular basis and be overseen by one of the existing IMPEL clusters. The tables included in this report provide a good starting point for setting up such a page. This page may be combined with the content indicated in point 1 above; and
- 3) A follow-up project should be initiated once further experience exists in the granting of derogations under Article 15(4) and (5). This may usefully take place after February 2016 given the expiry of the four year deadline for the updating of iron and steel and glass permits in line with Article 21 of the IED that month.

ANNEX I – QUESTIONNAIRE SENT TO IMPEL MEMBERS

QUESTIONNAIRE

In responding to the questions please:

- provide a summary of any policy or guidance that has been issued on the following issues
- if published on the internet, provide a link to the policies or guidance
- if you are going to attach documents please provide the title of the document in the answer to the question

For longer answers you are welcome to provide responses at the end of this form in the space set aside for each question

.No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	
3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	YES / NO
	Please provide a link to any online guidance or attach a copy of the guidance	
4	Has the competent authority developed its own guidance on derogations	YES / NO
	Please provide a link to any online guidance or attach a copy of the guidance	
5	Do you have a cost benefit methodology that you can or will be applying to derogations?	YES / NO
	Can you provide a copy or a link to a copy	
	If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are considered to be disproportionately	

	<p>higher costs compared to the environmental benefits? In answering this question please consider in particular:</p> <ul style="list-style-type: none"> a) The methods you have applied to monetise costs and benefits and the difficulties you encountered when attempting such monetisation; b) The methods you have applied to qualitatively or quantitatively assess disproportionality; c) Any variations in approach that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of installations covered by that Annex 	
	Has this methodology been adapted from elsewhere and if so where?	
6	Have any derogations under Article 15(4) of the IED been granted in your member state?	YES / NO
	If you hold such information please give an indication of the numbers of installations concerned by the BAT conclusions published to date and the number that are being considered for derogations under Article 15(4).	
	If yes, how many have been issued and for which activities?	
	Are copies of the permits available on line?	
7	If you have issued derogations, or if you are close to doing so, can you give examples of the technical characteristics, local environment and geographic factors that have been used in such judgements	
8	What limitations exist in relation to the extent to which derogations may be granted under Article 15(4)? For example are there any limits in terms of the length of time a derogation may apply?	
9	Do you want the Commission to	YES / NO

	develop any guidance on assessing derogation requests?	
	If yes, what specific elements would you wish to see addressed in Commission guidance in order to assist you in making derogation determinations	
10	How are temporary derogations granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques (Article 15(5))? In answering this question please consider in particular the roles of the competent authorities, operators and other stakeholders in the derogation process	
11	Have you granted any derogations under Article 15(5)?	YES / NO
	If so, please provide details of: <ul style="list-style-type: none"> a) The manner in which the derogation process was managed; b) The main problems encountered and the solutions found to such problems; and c) The website upon which the permit, reasons on which the derogation decision is based and the specific reasons for any derogations granted can be found (if any); d) Which industrial activities / techniques do the applications relate to? 	

ANNEX II – QUESTIONNAIRE RESPONSES

This Annex contains those questionnaire responses for which respondents gave permission for their response to be made publicly available.

BELGIUM – FLEMISH REGION

.No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	<p>In the Flemish Region, the competent authority responsible for granting these derogations is only the Flemish Minister competent for the environmental and water policy.</p> <p>In Belgium, environmental law is the competence of the regions (Flemish Region, Walloon Region & Brussels-Capital Region). The Flemish Parliament and the Flemish Government exercise the legislative powers of the Flemish Region. The Government of the Flemish Region exercises the executive power and consists of a maximum of ten Ministers, and one Minister-President.</p>
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	<p>Operators have to apply for a derogation. The written application with reasons is submitted to the Environmental Licences Division.</p> <p>The Regional Environmental License Commission delivers an opinion to the Flemish Minister (=competent authority) on the applications for derogations.</p> <p>The chairman of the Regional Environmental License Commission seeks the advice of the Environmental Licences Division (others advices possible).</p> <p>Other stakeholders (e.g. members of the public) have access to the derogation procedure through a public inquiry prior to the final decision on the derogation.</p>
3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	Yes, the legal provisions for the derogation application are stated in articles 1.4 and 1.5 of title III of the VLAREM. The procedure for granting the derogation is in accordance with section 1.2.2ter of title II of the VLAREM.
	Please provide a link to any online guidance or attach a copy of the guidance	<p>Application: http://navigator.emis.vito.be/milnav-consult/consultatieLink?wettekstId=61193&applang=nl&wettekstLang=nl</p> <p>Procedure for granting:</p>

		http://navigator.emis.vito.be/milnav-consult/consultatieLink?wettekstId=54729&applang=nl&wettekstLang=nl	
4	Has the competent authority developed its own guidance on derogations	No	
	Please provide a link to any online guidance or attach a copy of the guidance	/	
5	Do you have a cost benefit methodology that you can or will be applying to derogations?	Guidelines for determining the Best Available Techniques at company level (currently under review).	
	Can you provide a copy or a link to a copy	http://emis.vito.be/sites/emis.vito.be/files/pages/migrated/richtlijn_bepalen_bbt.pdf	
	If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are considered to be disproportionately higher costs compared to the environmental benefits? In answering this question please consider in particular: d) The methods you have applied to monetise costs and benefits and the difficulties you encountered when attempting such monetisation; e) The methods you have applied to qualitatively or quantitatively assess disproportionality; f) Any variations in approach that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of installations covered by that Annex	<p>In the Flemish Region, so far zero applications for derogations under article 15 (4) or (5) have been received by the competent authority. Future applications will be evaluated in accordance with article 15 (4) of IED, these provisions have been included in VLAREM.</p> <p>In the Flemish Region, there is an additional condition in comparison to article 15 (4) of IED. The operator has to add a motivation to his application for derogation in which he has to prove the measures he proposes are BAT, using the "Criteria for determining best available techniques" (= IED, Annex II).</p>	
	Has this methodology been adapted from elsewhere and if so where?	/	
6	Have any derogations under Article 15(4) of the IED been granted in your member state?	No	
	If you hold such information please give an indication of the numbers	BREF	# installations

	of installations concerned by the BAT conclusions published to date and the number that are being considered for derogations under Article 15(4).	Iron and Steel Production	2
		Manufacture of Glass	6
		Production of Cement, Lime and Magnesium Oxide	1
		Production of Chlor-alkali	13
		Pulp and Paper Industry	4
		Every installation concerned by the BAT conclusions can apply for a derogation under article 15 (4).	
	If yes, how many have been issued and for which activities?	/	
	Are copies of the permits available on line?	/	
7	If you have issued derogations, or if you are close to doing so, can you give examples of the technical characteristics, local environment and geographic factors that have been used in such judgements	/	
8	What limitations exist in relation to the extent to which derogations may be granted under Article 15(4)? For example are there any limits in terms of the length of time a derogation may apply?	<p>As stated in article 1.4 (4) of title III of the VLAREM, the length of time a derogation will apply is limited until one of the following situations:</p> <p>1° the term of the environmental license, related to the granted derogation, expires;</p> <p>2° the term as mentioned in the ministerial order of the granted derogation, expires;</p> <p>3° if a decision following the reconsideration and updating of permit conditions is inconsistent with the granted emission limit values in the derogation.</p> <p>The granted emission limit values cannot be less strict than:</p> <ul style="list-style-type: none"> - the relevant emission limit values of title II of the VLAREM, as long as there is no derogation possible in title II of the VLAREM; - the relevant emission limit values as stated in annex 2 of title III of the VLAREM. 	
9	Do you want the Commission to develop any guidance on assessing derogation requests?	Yes, to obtain a level playing field on the assessing of derogation requests.	
	If yes, what specific elements would you wish to see addressed in Commission guidance in order to	- assessment of the disproportionately higher costs compared to the environmental benefits of the emission levels associated with the best	

	assist you in making derogation determinations	available techniques. - examples of setting less strict emission limit values in situations where the geographical location or the local environmental conditions of the installation are concerned (article 15, 4 (a)).
10	How are temporary derogations granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques (Article 15(5))? In answering this question please consider in particular the roles of the competent authorities, operators and other stakeholders in the derogation process	<p>The legal provisions for the temporary derogations are stated in article 30bis, §11 of title I of the VLAREM (http://navigator.emis.vito.be/milnav-consult/consultatieLink?wettekstId=54624&applang=nl&wettekstLang=nl).</p> <p>An operator can apply for a temporary derogation for the testing and use of emerging techniques using the procedures as specified in chapter III (application of the license) or chapter IIIbis (modification of a licensed establishment of class 1 or 2).</p> <p>Chapter III: http://navigator.emis.vito.be/milnav-consult/consultatieLink?wettekstId=10170&applang=nl&wettekstLang=nl.</p> <p>Chapter IIIbis : http://navigator.emis.vito.be/milnav-consult/consultatieLink?wettekstId=20464&applang=nl&wettekstLang=nl.</p> <p>In the Flemish Region, every establishment with an activity listed in Annex I to the IED is a so called “class 1” establishment. As stated in article 6 (chapter III) and article 6ter (chapter IIIbis) of titel I of the VLAREM, the competent authority is the Provincial Council of the province to whose jurisdiction the parcels belong.</p>
11	Have you granted any derogations under Article 15(5)?	No
	If so, please provide details of: e) The manner in which the derogation process was managed; f) The main problems encountered and the solutions found to such problems; and g) The website upon which the permit, reasons on which the derogation decision is based and the specific	/

	reasons for any derogations granted can be found (if any); h) Which industrial activities / techniques do the applications relate to?	
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BULGARIA

.No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	The competent authority responsible for granting derogations is Executive Environment Agency. The Agency is an administration under the Minister of Environment and Water.
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	Operators of installations may apply for derogations in the documentation which is submitted for the granting or reconsideration of the integrated permits, and have to provide the necessary evidence of the circumstances. The competent authority shall assess the existence of the circumstances and accepts or rejects the derogation by the permit conditions. In the procedure competent authority require statements from the Regional Inspectorate of Environment and Water, which is the competent authority for carry out environmental inspections according to the compliance with permit conditions and from the Water Management Directorate. If necessary they may organize joint site visits of the installations.
3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	NO
	Please provide a link to any online guidance or attach a copy of the guidance	
4	Has the competent authority developed its own guidance on derogations	NO
	Please provide a link to any online guidance or attach a copy of the guidance	
5	Do you have a cost benefit methodology that you can or will be applying to derogations?	NO
	Can you provide a copy or a link to a copy	
	If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are considered to be disproportionately	

	<p>higher costs compared to the environmental benefits? In answering this question please consider in particular:</p> <ul style="list-style-type: none"> g) The methods you have applied to monetise costs and benefits and the difficulties you encountered when attempting such monetisation; h) The methods you have applied to qualitatively or quantitatively assess disproportionality; i) Any variations in approach that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of installations covered by that Annex 	
	Has this methodology been adapted from elsewhere and if so where?	
6	Have any derogations under Article 15(4) of the IED been granted in your member state?	NO
	If you hold such information please give an indication of the numbers of installations concerned by the BAT conclusions published to date and the number that are being considered for derogations under Article 15(4).	<p>Currently, the number of installations in Bulgaria, whose main activity falls within the scope of the BAT conclusions adopted after the entry into force of Directive 2010/75 / EC on industrial emissions is 36.</p> <p>So far no one from them has applied for the derogation according to Art. 15 (4) of the Directive. It should be noted that most of the integrated permits issued for the operation of the installations mentioned above have not yet been reconsidered and therefore no information is available whether operators will apply for derogations.</p>
	If yes, how many have been issued and for which activities?	There are 16 installations under procedure of reconsideration of the integrated permits. Only for one installation carrying out activities for the manufacture of glass the procedure is completed.
	Are copies of the permits available on line?	Yes. In the register of issued integrated permits published at: http://registers.moew.government.bg/kr/
7	If you have issued derogations, or if you are close to doing so, can you give examples of the technical characteristics, local environment	Currently there are no integrated permits in which a derogation under Art. 15 (4) of the Directive is granted.

	and geographic factors that have been used in such judgements	
8	What limitations exist in relation to the extent to which derogations may be granted under Article 15(4)? For example are there any limits in terms of the length of time a derogation may apply?	No limitations exist. The reasons for granting such derogation should be assessed in each procedure for changing the operation of the installation (as part of the proof of the application of BAT).
9	Do you want the Commission to develop any guidance on assessing derogation requests?	YES
	If yes, what specific elements would you wish to see addressed in Commission guidance in order to assist you in making derogation determinations	We consider that it is necessary to establish guidelines for the evaluation of all aspects of the circumstances under Art. 15 (4) of the Directive in order to achieve a harmonized implementation of the legislation in the EU.
10	How are temporary derogations granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques (Article 15(5))? In answering this question please consider in particular the roles of the competent authorities, operators and other stakeholders in the derogation process	Currently there are no installations in Bulgaria, which has declared intentions to apply for temporary derogations for testing emerging techniques. Such derogations should be granted by the conditions of the integrated permits. In that case have to be allowed operating parameters other than the parameters in specified BAT for a specified period (not longer than 9 months). After the end of this period, the installation must meet the conditions set in accordance with its specified BAT.
11	Have you granted any derogations under Article 15(5)?	NO
	If so, please provide details of: i) The manner in which the derogation process was managed; j) The main problems encountered and the solutions found to such problems; and k) The website upon which the permit, reasons on which the derogation decision is based and the specific reasons for any derogations granted can be found (if any); l) Which industrial activities / techniques do the applications relate to?	

CZECH REPUBLIC

.No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	<p>The regional Authority – the part of the Authority is special office (department), which is responsible for process of issuing permits accordance with European and national law and grants a permit given the local conditions</p> <p>Ministry of Environment leads the Authority methodically, which means that issuing guidelines for the implementation of certain provisions of the Act or Directive</p>
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	<p>The regional Authority shall establish the conditions for the implementation of BAT including deadline, if is necessary, given the conclusions of the European Commission.</p> <p>In the event that the operator is unable to meet the requirements, request the exemption in accordance with the relevant legislation.</p> <p>In this process, the Authority may request the expert opinion of other competent authorities (Environment Agency, Ministry of Industry and Trade, CEI, Regional Public Health etc..)</p>
3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	YES / NO
	Please provide a link to any online guidance or attach a copy of the guidance	<p>http://www.mzp.cz/www/ippc4.nsf/b8b42dbc0c8637bac125773c0021a91e/903ff45835028198c1257c0400474f9a?OpenDocument</p> <p>Decree implementing certain provisions of the Act on integrated prevention (below Decree)</p> <p>The implementing legislation for the amendment of national legislation (the Act no. 76/2002 Coll., on integrated pollution prevention and control) - Annex no.3</p>
4	Has the competent authority developed its own guidance on derogations	YES / NO Guidance for the local authorities has developed by Ministry for Environment
	Please provide a link to any online guidance or attach a copy of the guidance	See above
5	Do you have a cost benefit methodology that you can or will be	YES / NO

	applying to derogations?	Guidance document on the issue of economic evaluation of the achievement of emission levels associated with best available techniques and expert assessment.
	Can you provide a copy or a link to a copy	http://www.mzp.cz/www/ippc4.nsf/b77a7a146f29c439c1256cda0034ce22/ff25a67616f160acc1257d5d00435eb4?OpenDocument This Methodological Instruction contains computer tables (xlsx files) for economic evaluation.
	If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are considered to be disproportionately higher costs compared to the environmental benefits? In answering this question please consider in particular: j) The methods you have applied to monetise costs and benefits and the difficulties you encountered when attempting such monetisation; k) The methods you have applied to qualitatively or quantitatively assess disproportionality; l) Any variations in approach that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of installations covered by that Annex	The Decree specifies the requirements for an expert assessment exemption from emission levels associated with BAT. The operator is obliged to submit (according Annex 3) Expert Assessment for exemption from emission levels associated with BAT. This assessment must include a comparison of the costs, which means the costs of achieving the emission levels associated with BAT or the cost of reducing emissions with a similar effect on the environment and other economic indicators (reference costs, ...).
	Has this methodology been adapted from elsewhere and if so where?	The Methodology is issued by the Ministry of Environment, before its release was consulted with concerned authorities.
6	Have any derogations under Article 15(4) of the IED been granted in your member state?	YES / NO At present the Regional Authority carries out reviews of integrated permits under the Commission's conclusions on industrial emissions for iron and steel productions (10 installations in our region), for the glass industry (1) and for the production of cement and lime (1). Ministry of Environment issued The Timetable of Revisions of Integrated Permits that will be

		carried out in the Czech Republic, including the date of their execution on the basis of the conclusions issued by the Commission (link below).
	If you hold such information please give an indication of the numbers of installations concerned by the BAT conclusions published to date and the number that are being considered for derogations under Article 15(4).	http://www.mzp.cz/www/ippc4.nsf/b8b42dbc0c8637bac125773c0021a91e/c79f86840f4a937fc1257d490045f541?OpenDocument
	If yes, how many have been issued and for which activities?	-
	Are copies of the permits available on line?	-
7	If you have issued derogations, or if you are close to doing so, can you give examples of the technical characteristics, local environment and geographic factors that have been used in such judgements	-
8	What limitations exist in relation to the extent to which derogations may be granted under Article 15(4)? For example are there any limits in terms of the length of time a derogation may apply?	At the present in our region, within pre-negotiation, is not expected to granted any derogations. But operators should invest for meeting BAT of installations relatively in the short time, for example to reduce a dust emissions.
9	Do you want the Commission to develop any guidance on assessing derogation requests?	YES / NO
	If yes, what specific elements would you wish to see addressed in Commission guidance in order to assist you in making derogation determinations	
10	How are temporary derogations granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques (Article 15(5))? In answering this question please consider in particular the roles of the competent authorities, operators and other stakeholders in the derogation process	In our region there is no such installation.
11	Have you granted any derogations under Article 15(5)?	YES / NO CEI is not competent for granting derogations. This year CEI Regional Inspectorate Ostrava

		<p>(North Moravia) drew up statements at the request of the Region Authority under the review of the installations, which concerns the Conclusion of Commission on industrial emissions for iron and steel productions.</p> <p>I was the coordinator of these statements.</p>
	<p>If so, please provide details of:</p> <ul style="list-style-type: none"> m) The manner in which the derogation process was managed; n) The main problems encountered and the solutions found to such problems; and o) The website upon which the permit, reasons on which the derogation decision is based and the specific reasons for any derogations granted can be found (if any); p) Which industrial activities / techniques do the applications relate to? 	

GERMANY

.No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	<p>The competent authority for granting permits is also responsible for granting the derogations. In Germany, these are either the local or the regional permitting institutions. The competent authorities are determined by each Federal State in its own responsibility.</p> <p>In Bavaria, the local authorities are responsible for granting derogations usually in consultation with the Bavarian Environment Agency in difficult cases; in North Rhine-Westphalia the CAs are the district governments; in Baden-Württemberg the Regional Councils are responsible for granting derogations, etc.</p>
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	<p>Competent authority (CA): Reconsidering and updating of permit conditions; assessment of applications for derogations; granting derogations.</p> <p>Operator: Application for derogations including providing the necessary information which allows the competent authority for establishing the disproportionality of a certain measure.</p> <p>Other stakeholders (e.g. in Bavaria: Bavarian Environment Agency): Assessment of applications for derogations in support for the competent authority in difficult cases.</p> <p>Similar roles and responsibilities may be found in all of the other 15 “<i>Länder</i>” (Federal States) of Germany. Basically the administrative structures and names of the competent authorities may vary between Federal States. (e.g. district government, regional council, etc.)</p>
3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	<p>No guidance has been provided. However, the major legislation for implementing the IED provisions (Revised Immission Control Act, 17 May 2013; abbreviation: BImSchG) establishes binding provisions for competent authorities also as far as the derogation acc. to Art. 15(4) IED is concerned (§§7; 12; 48; 52 BImSchG). By law, Germany stipulates that as reason for derogation only the “<i>technical characteristic of the installations concerned</i>” is applicable. When deviating from BAT AELs, the „geographical location or the local environmental conditions of the installation concerned” is not considered as a justified reason. The rationale for that is, that</p>

	<p>Germany wants to maintain a uniform and harmonized application of BAT in its country. Within Germany, there are no areas where higher pollution is generally allowed (only more ambitious standards according to Art. 18 IED). Germany wants to maintain also within its country a level playing field (between regions and companies).</p> <p>The BImSchG in its § 7 (1a+b) establishes that the published BAT AELs are to be met immediately and for existing installations the applicable Ordinance(s) have to be revised and, if necessary, updated. If <u>due to the technical characteristics</u> of the type of installation concerned, the compliance with the recently published BATs is considered as disproportionate, the revised Ordinance can stipulate less stringent BAT AEL and statutory periods for implementation if the derogation is justified and persuasive reasons are given. In justified cases, the revised Ordinance may either deviate itself from BAT-AELs or the 4-year period for implementation, or the legislator may define the specific cases, where deviations from BAT AELs may be considered by the CA.</p> <p>According to § 48 BImSchG, the same applies for revised Administrative Regulations or for the Technical Instruction Air (TA Luft).</p> <p>Then, in cases if the current Administrative Regulations or the Technical Instruction Air does not ensure that the BAT AELs and relevant BATs are met (the revision has not yet taken place), the competent authority has to make sure that this happens or, if an assessment shows that the compliance with the BAT AEL is disproportionate, the CA can set less stringent emission limit values. In other words, normally, the respective Ordinance or Administrative regulations are reassessed and, if necessary, updated in the light of published new BAT conclusions. These provisions stipulate – if necessary – derogations from BAT AELs if their application is considered disproportionate. As criteria, Germany considers only the “technical characteristics of the installations concerned” as applicable.</p> <p>Finally, according to § 52(1) Sentence 5 BImSchG newly published BAT requirements have to be complied with within 4 years of publication of decisions on BAT conclusions.</p>
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		<p>In individual cases however, exceptions may be granted by the CA as far as the time period of implementation is concerned (according to § 52(1) Sentence 7 BImSchG), if assessment by the CA proves that the implementation of subsequent orders would be disproportionate - due to the technical characteristics of the installation concerned - within the defined deadline. In these individual cases, the CA may set a longer period of time for implementation (without questioning the BAT as such).</p> <p>So, in Germany no guidance has been provided to the competent authority on what preferably to consider when granting derogations. Instead, the basic principles and limitations are stipulated by law. Both, the information required as part of the application for derogation as well as the criteria for assessment by the CA lies within the responsibility of the CA.</p> <p>In Germany derogations are considered as being limited to exceptional cases, i.e. when the technical characteristic of the installation would clearly lead to disproportionate costs or are even not possible when the BAT AELs are applied.</p>
	Please provide a link to any online guidance or attach a copy of the guidance	The revised Immission Control Act from Sept. 2013 is attached as a copy (only available in German language at the moment).
4	Has the competent authority developed its own guidance on derogations	<p>NO. But in general is obliged to provide a comprehensive rationale including economic data.</p> <p>They are not more than 6 BAT conclusions published yet and the 4-year time period for Implementation is still in progress. So, the issue of derogations is still under development. In case that in Germany "guidance on derogations" would be considered, this guidance would most probably not developed by the CA but in a Federal Working Group with participation of the Federal States. In Germany, there exists already a guidance document for all relevant issues related to the implementation of the IED. Possibly, i.e. if CA see a need for it, a supplement of this guidance is conceivable which would than include answers on "how to deal with derogations". So far, the Federal States have not yet expressed this need.</p>

	Please provide a link to any online guidance or attach a copy of the guidance	./.
5	Do you have a cost benefit methodology that you can or will be applying to derogations?	NO
	Can you provide a copy or a link to a copy	./.
	<p>If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are considered to be disproportionately higher costs compared to the environmental benefits? In answering this question please consider in particular:</p> <ul style="list-style-type: none"> m) The methods you have applied to monetise costs and benefits and the difficulties you encountered when attempting such monetisation; n) The methods you have applied to qualitatively or quantitatively assess disproportionality; o) Any variations in approach that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of installations covered by that Annex 	<p>./.</p> <p>In Germany, the assessment of applications for derogations according to Art. 15(4) is carried out under the responsibility of the local or regional competent authorities (see question # 1 + 2). The German EPA has not yet an overview about the current applications for derogation and the applied methods (either qualitatively or quantitatively by monetising costs and benefits).</p> <p>The application of the principle of "proportionality" when implementing BAT in permitting of installations has a long tradition in Germany. Over the years, CAs have developed experience and best practices how to deal with these single cases of derogations that may appear under the new provisions of the IED:</p> <p>Possibly, authorities may consider aspects such as payback periods, the development of the product prices in case that a disproportionate BAT would be applied, etc. In any case, during the assessment of a derogation of an individual applicant, the operator will be required to reveal in detail the cost data for the implementation of the BAT considered as disproportionate. The operator will have to provide a substantiated, sound and traceable economic efficiency calculation.</p>
Has this methodology been adapted from elsewhere and if so where?	./.	
6	Have any derogations under Article 15(4) of the IED been granted in your member state?	NO (as far as it is clear at the moment). It seems that at the moment, a number of cases are assessed by CAs in a few Federal States. There are still only a few BAT conclusions published and the time period for reconsidering/updating of permits and the implementation of new permit conditions in the installations concerned respectively, is still running. So, there are not yet many

		cases for derogation identified or known. Generally, we assume that derogations will be required in a limited number of cases and consequently will have inferior relevance.
	If you hold such information please give an indication of the numbers of installations concerned by the BAT conclusions published to date and the number that are being considered for derogations under Article 15(4).	./.. Not available (yet). Data will be gathered when the questionnaire concerning the BAT spotlights (module 3) of a given BAT conclusions has to be reported (starting with Iron & Steel and the Glass Industry: Reporting period is Jan 2013 to 31 Dez 2016). Reporting obligations of MS according to Art. 72 IEDF will provide first results and a more systematic overview with regard to the application of derogations in industrial sectors.
	If yes, how many have been issued and for which activities?	./..
	Are copies of the permits available on line?	./..
7	If you have issued derogations, or if you are close to doing so, can you give examples of the technical characteristics, local environment and geographic factors that have been used in such judgements	In Germany, derogations are only accepted due to technical characteristic of the installations concerned. Example: Manufacture of special glass: The recycling of sulphate-rich filter dust and the unavoidable use of sulphates in the batch formulation causes SO ₂ emission levels above the SO ₂ - BAT AEL given in the BAT conclusion for this type of glass. Nevertheless, the use of sulphates in the batch formulation for the manufacture of special glass is not being assessed and addressed in the BAT conclusions (but only for the manufacturing of container glass). So, the BAT associated emission levels are not achievable by manufacturers of special glass: The costs of additional measures to meet the BAT-AELs for SO ₂ are disproportionate. The higher SO ₂ -BAT AELs of container glass manufacturing seems to be appropriate also for special glass (the use of sulphates was addressed there). Unfortunately the GLS BREF has not addressed this issue (erroneously). From our point of view, the major reason for the derogation in this case is the incompleteness of the GLS BREF with regard to special glass production (recycling of filter dust and the use of sulphates in the batch formulation).
8	What limitations exist in relation to	See our answer to question # 3.

	<p>the extent to which derogations may be granted under Article 15(4)? For example are there any limits in terms of the length of time a derogation may apply?</p>	<p>Possibly, the following case may be relevant in the future:</p> <p>I case of retrofitting of plants that do not yet meet the newly published BAT AELs and where there is therefore a need for an upgrading or replacement of already existing abatement technologies that run close to the BAT AELs, temporary derogations may seem to be appropriate in a few cases (e.g. in cases of marginal exceedance of a BAT AEL; let's say 23 mg dust/m³ instead of 20 mg dust/m³).</p> <p>Usually the temporary derogations will also have a time limit.</p>
9	<p>Do you want the Commission to develop any guidance on assessing derogation requests?</p>	<p>We consider derogations as exception from the rule. So, the granting of derogations shall be limited to a few individual cases where the compliance with BAT AEL is contradictory or inconsistent with the principle of proportionality. In Germany, this principle of proportionality is a constitutional principle. The principle of proportionality is used in different of areas of applicability successfully since decades.</p> <p>If other MS see a need for such guidance, we think this document should be kept short and concise (2 – 3 pages; written by using headwords; include a list of aspects that should be considered; maybe a list of elements to be addressed when applying for a derogation preferably in bullet points; sound assessment of costs and benefits) and should mainly contain a kind of checklist of useful criteria.</p> <p>Anyway, the guidance should leave flexibility to the Member States to decide on the individual cases as to when an exception from the rule seems to be justified. Individual cases are often not resolvable by use of guidance.</p> <p>On the other hand, guidance would maybe support a more harmonised application of Art. 15(4) IED and contribute to creating the intended level playing field.</p>
	<p>If yes, what specific elements would you wish to see addressed in Commission guidance in order to assist you in making derogation determinations</p>	<ul style="list-style-type: none"> - Assessment of cost disproportionality (check list) - Cases of disproportionality of cost for complying with BAT AELs in relation to environmental benefits achieved by the use of BAT AELs
10	<p>How are temporary derogations</p>	<p>./.</p>

	<p>granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques (Article 15(5))? In answering this question please consider in particular the roles of the competent authorities, operators and other stakeholders in the derogation process</p>	<p>Unclear why you refer to temporary derogation in this case (Article 11(a) and (b) and from Article 15(2) and (3)).</p> <p>Unclear why you refer to Article 11(a) and (b) IED in the context of granted derogations.</p> <p>Relevance of Art, 15 (2) unclear in the context of derogations.</p>
11	<p>Have you granted any derogations under Article 15(5)?</p>	NO
	<p>If so, please provide details of:</p> <ul style="list-style-type: none"> q) The manner in which the derogation process was managed; r) The main problems encountered and the solutions found to such problems; and s) The website upon which the permit, reasons on which the derogation decision is based and the specific reasons for any derogations granted can be found (if any); t) Which industrial activities / techniques do the applications relate to? 	./.

DENMARK

No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	<p>The municipality in which the installation is situated will generally be the approval and supervisory authority. However, the Danish Environmental Protection Agency is the approval and supervisory authority for industrial sites, which are considered to be particularly heavily polluting and complex (the 's-marked activities' in Annex 1 of the Order of Environmental Permits (bekendtgørelse nr. 669 af 18. Juni 2014 om godkendelse af listevirksomhed)).</p> <p>The Order and Annex can be seen here (in Danish): https://www.retsinformation.dk/Forms/R0710.aspx?id=163512#Bill</p>
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	<p>According to article 27 of the Danish Order of Environmental Permits, the approval authority may, in specific cases, set less strict emission levels than those associated with BAT, when the authority assesses that:</p> <ol style="list-style-type: none">1) compliance with the emission levels would entail disproportionate costs compared to the environmental benefits due to the installations' geographical location, local environmental conditions or technical characteristics,2) the modification does not cause significant pollution in violation of article 18, paragraph 1 in the Order of Environmental Permits, and3) it ensures a high protection of the environment as a whole. <p>If an operator/company wishes to derogate from the BAT conclusions, the</p>

operator/company must argue why in the application. The operator/company must explain the reason for the need for derogation, including the financial implications. The approval authority must in each particular case estimate whether the BAT conclusions can be waived, and state the reasons in the decision. Whether a derogation is granted depends on the individual assessment of the approval authority in the specific case.

3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	Yes, however so far only limited guidance. Due to the lack of experience with cases of derogations in this area, the Danish Environmental Agency has not yet been able to provide a detailed guidance on the matter.
	Please provide a link to any online guidance or attach a copy of the guidance	http://miljogodkendelsesvejledningen.dk/opslag/principper-om-bat/fravigelser-fra-bat/ (in Danish)
4	Has the competent authority developed its own guidance on derogations	NO
	Please provide a link to any online guidance or attach a copy of the guidance	-
5	Do you have a cost benefit methodology that you can or will be applying to derogations?	NO
	Can you provide a copy or a link to a copy	-
	If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are	-

considered to be disproportionately higher costs compared to the environmental benefits? In answering this question please consider in particular:

- a) The methods you have applied to monetise costs and benefits and the difficulties you encountered when attempting such monetisation;
- b) The methods you have applied to qualitatively or quantitatively assess disproportionality;
- c) Any variations in approach that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of installations covered by that Annex

Has this methodology -
 been adapted from
 elsewhere and if so
 where?

6	Have any derogations under Article 15(4) of the IED been granted in your member state?	NO
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If you hold such -
 information please give
 an indication of the
 numbers of
 installations concerned
 by the BAT
 conclusions published
 to date and the number
 that are being
 considered for
 derogations under
 Article 15(4).

If yes, how many have -
 been issued and for
 which activities?

Are copies of the -
 permits available on
 line?

7	If you have issued derogations, or if you are close to doing so, can you give examples of the technical characteristics, local	-
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8	<p>environment and geographic factors that have been used in such judgements</p> <p>What limitations exist in relation to the extent to which derogations may be granted under Article</p>	-	
9	<p>If yes, what specific elements would you wish to see addressed in Commission guidance in order to assist you in making derogation determinations</p>	<p>Do you want the Commission to develop any guidance on assessing derogation requests?</p>	<p>YES</p> <p>The criteria "<i>disproportionately higher costs compared to the environmental benefits</i>" in article 15(4). Examples of article 15(4) a) and b). - What exactly should the competent authority put emphasis on in relation to derogations under Article 15(4) or (5)?</p>
10	<p>How are temporary derogations granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques (Article 15(5))? In answering this question please consider in particular the roles of the competent authorities, operators and other stakeholders in the derogation process</p>	<p>So far, Danish authorities have not granted derogations as set out in articles, and thus the authorities do not have experience in the area of the matter yet.</p> <p>However, a limited and general guidance is provided via: http://miljogodkendelsesvejledningen.dk/opslag/principper-om-bat/fravigelser-fra-bat/ § 27 of the Order of Environmental Permits states, that the approval authority in specific cases can allow derogations from emission levels set out in BAT conclusions if the authority assesses that 1) compliance with the emission levels would entail disproportionate costs compared to the environmental benefits due to the plant's geographical location, local environmental conditions or</p>	

plant technical characteristics, 2) the modification does not cause significant pollution in violation of § 18 paragraph. 1, pt. 2, and 3) a high protection of the environment as a whole is ensured. The approval authority's assessment and justification for the derogation shall be indicated in the authorization or decision of a reassessment. The local council will inform the Environmental Protection Agency announced on waivers. If the authority in a particular case estimates that BAT conclusions can be waived, the reasons must be stated in the decision. Derogations can only exceptionally be granted. Thus, only special circumstances can justify a relaxation. These considerations have a significant weight in order to be able to derogate from the general rule. The Environmental Protection Agency must be informed of reliefs and exemptions. When cases of derogations and practices on the matter start to occur, the Environmental Protection Agency will advise accordingly.

11 Have you NO
 granted any
 derogations
 under Article
 15(5)?

If so, please provide -
 details of:

- a) The manner in which the derogation process was managed;
- b) The main problems encountered and the solutions found to such problems; and
- c) The website upon which the permit, reasons on which the

derogation decision is based and the specific reasons for any derogations granted can be found (if any);
d) Which industrial activities / techniques do the applications relate to?

ENGLAND

.No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	<p>The Environment Agency (EA) is the competent authority in England responsible for granting derogations. The EA takes direction in its role from the UK responsible government department (i.e. Defra)</p> <p>However some installations are regulated by local councils, for example the EA regulates all installations in the iron and steel and cement sectors but for glass sector the EA regulates 4 sites making glass fibre and local authorities regulate the 17 installations making flat glass and bottle glass.</p>
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	<p>The Environment Agency is responsible for the issuing and review of permits under the Industrial Emissions Directive, implemented in England by the Environmental Permitting Regulations. As part of this role they feed into the review of each Sector Bref, either through direct representation, or indirectly via one of the other UK devolved competent authorities.</p> <p>Once the Bref review is complete, and BAT conclusions published, the EA begins the relevant permit reviews for the sector. Under this process the EA issues Regulation 60 notices to the operators which require them to submit information to confirm how they are to comply with the new standards in the BAT conclusions.</p> <p>If the operator is unable to comply within the 4 year period (from BAT conclusions publication) then a derogation submission should be made.</p> <p>The EA reviews this derogation request using a new methodology which involves using a costs and benefits assessment.</p> <p>If the EA is 'minded to grant' a derogation request they will carry out an on-line external consultation.</p> <p>After considering any consultation responses the derogation request is then accepted or rejected, and then a variation to the permit is issued.</p>
3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	Defra has produced guidance, on how the EA should regulate installations

		HM Treasury has provided guidance on the costs of air pollutants for SO _x , NO _x , particulates and ammonia – “The Green Book”.
	Please provide a link to any online guidance or attach a copy of the guidance	Installations Guidance: https://www.gov.uk/government/publications/environmental-permitting-regulations-guidance-on-part-a-installations See examples of relevant technical characteristics see sections 4.35 to 4.47. The green book supplementary guidance on air quality: https://www.gov.uk/government/collections/the-green-book-supplementary-guidance
4	Has the competent authority developed its own guidance on derogations	YES – methodology and guidance note (for external publication) are nearing completion
	Please provide a link to any online guidance or attach a copy of the guidance	No guidance published yet
5	Do you have a cost benefit methodology that you can or will be applying to derogations?	YES – in draft, not yet complete
	Can you provide a copy or a link to a copy	The amended guidance H1 Annex K is a draft that is not available externally at present
	If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are considered to be disproportionately higher costs compared to the environmental benefits? In answering this question please consider in particular: p) The methods you have applied to monetise costs and benefits and the difficulties you encountered when attempting such monetisation; q) The methods you have applied to qualitatively or quantitatively assess disproportionality; r) Any variations in approach that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of	<ul style="list-style-type: none"> • The original version of Annex K was purely about identifying BAT from a series of options and placing a cost against the achievement of each option. So effectively identifying the most cost effective solution. The new version covers BAT and IED derogations and so broadens the scope to include proposals that are not BAT. • Unlike the original version, the new version attempts to place a numerical value against the benefits resulting from a reduction in emissions where this is available. This is the basis for developing a cost and benefit analysis of each proposal. • In placing a value on the benefits of a proposal approaches such as damage costs are proposed in both the old and new version, but they are given greater prominence in the new version. • The monetised benefits are supported by information on the scale of the

	installations covered by that Annex	<p>impact of the emission in relation to EQS, national emissions and other known local impacts</p> <ul style="list-style-type: none"> • In the original version capital costs spread over more than 1 year were reduced back to their present value in the first year using discounting factors. The new version discounts both the costs and benefits using discounting factors specified by the Treasury in their Green Book, the aim being to produce a ratio of costs to benefits. The new version also considers the sensitivity of the result to factors which may have a particular weighting. • Discounting in the old version was based on “real” rates of between 6 and 12%. The Treasury’s Green Book uses 3.5% up to 30 years and 3% from year 31 to 75. To account for the fact that the operator’s weighted average cost of capital might be higher than HMT’s GB discount rate. The cost of accessing finance is added to the analysis as a stream of annual payments, which will be then discounted using HMT’s GB discount rate. • Following our consultation the life span of plant items is likely to increase in years from that contained in the original Annex K. • In seeking a derogation the operator has to show that achieving emissions levels consistent with the BAT AEL would result in him incurring disproportionately high costs compared to other installations in his sector. In the old version of Annex K BAT was purely a site specific assessment. • The software tool continues to assess costs using the original Annex K approach. The tool is constructed using Microsoft Access. It assumes all capital spending is made in year 1 of the project and the costs are then averaged over the life of the project using whatever “real” discount rate is selected by the operator. Our proposal is to add a spreadsheet worked example into the new Annex K that will allow for spending to be
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		<p>spread over a number of years. The spreadsheet will demonstrate how the discounting methodology should be carried out using the Treasury's Green Book approach.</p> <ul style="list-style-type: none"> • Cross media effects are considered in the original version of Annex K using the environmental quotient. The new version focuses on the Economics and Cross-Media BREF published by the European Commission in 2006. • The structure of the new Annex K follows a proposal from the EA Economics Manager and takes the user through the process of a cost benefit analysis. The old version was structured to carry out a cost assessment of achieving a given standard without reference to the value of reduced emissions.
	Has this methodology been adapted from elsewhere and if so where?	Partly from their original H1 environmental impact assessment, but substantial changes added
6	Have any derogations under Article 15(4) of the IED been granted in your member state?	No – The first, from the iron and steel sector, are under review.
	If you hold such information please give an indication of the numbers of installations concerned by the BAT conclusions published to date and the number that are being considered for derogations under Article 15(4).	<p>Iron and Steel: 2 integrated steelworks and 1 independent coke works. All are requesting derogations on their coke ovens – BATs 48, 49, 50 and 51.</p> <p>Iron and Steel: 4 electric arc furnaces. No derogation requests expected.</p> <p>Cement and Lime: 16 installations. We expect 6 of them to request derogations</p> <p>Glass: 4 glass fibre installations. We expect 1 of them to request a derogation.</p>
	If yes, how many have been issued and for which activities?	None issued yet. The iron and steel derogation requests are the first to be assessed.
	Are copies of the permits available on line?	They will be when we have completed the permit reviews. The public consultation will also be carried out on-line
7	If you have issued derogations, or if you are close to doing so, can you give examples of the technical characteristics, local environment and geographic factors that have been used in such judgements	All of the derogation requests received so far have been based on technical characteristics, for example: the configuration of the plant on a given site; the practicability of installing equipment within the 4 years timescale allowed for in the directive; and the intended

		remaining operational lifetime of parts of the installation.
8	What limitations exist in relation to the extent to which derogations may be granted under Article 15(4)? For example are there any limits in terms of the length of time a derogation may apply?	The EA has assumed that any derogation will be reconsidered when the next Bref and BAT conclusions are published, which is likely to be 8 years after the current Bref and BAT Conclusions
9	Do you want the Commission to develop any guidance on assessing derogation requests?	Not at present but we will keep under review
	If yes, what specific elements would you wish to see addressed in Commission guidance in order to assist you in making derogation determinations	
10	How are temporary derogations granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques (Article 15(5))? In answering this question please consider in particular the roles of the competent authorities, operators and other stakeholders in the derogation process	We have not received any derogation requests related to the use of emerging techniques
11	Have you granted any derogations under Article 15(5)?	NO
	If so, please provide details of: u) The manner in which the derogation process was managed; v) The main problems encountered and the solutions found to such problems; and w) The website upon which the permit, reasons on which the derogation decision is based and the specific reasons for any derogations granted can be found (if any); x) Which industrial activities / techniques do the applications relate to?	Not applicable

FINLAND

.No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	All IED permitting is done by Regional State Administrative Agencies. Agencies are divided in six regions, out of which environmental permitting is done in four Agencies. Agencies could be described as state level environmental permitting authorities.
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	Derogation is done as an integrated part of the environmental permitting process. The roles of stakeholders are the same as in the permitting process. An individual derogation case would be handled as a change to the permit.
3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	YES, some guidance has been issued in the memorandum of the legislations, which implements the IED. More extensive guidance is still to be developed. A draft will be issued for comments early October and it should be finalised by the end 2014.
	Please provide a link to any online guidance or attach a copy of the guidance	Memorandum of the legislation implementing IED: http://www.eduskunta.fi/triphome/bin/thw/?\${APPL}=akirjat&\${BASE}=akirjat&\${THWIDS}=0.47/1412334287_15219&\${TRIPPIFE}=PDF.pdf (see pages 121-123 explanatory text for 78 §, in Finnish) The draft guidance will be published in the the following website early October: http://www.ymparisto.fi/ymparistonsuojelun_valmisteilla_oleva_lainsaadanto/Ymparistonsuojelulain_uudistaminen/Ymparistonsuojelulain_uudistuksen_toimeenpano
4	Has the competent authority developed its own guidance on derogations	NO
	Please provide a link to any online guidance or attach a copy of the guidance	
5	Do you have a cost benefit methodology that you can or will be applying to derogations?	YES, but no specific methodology will be described in the guidance. Guidance will make reference to the ECM BREF and Finnish expert reports, which has been made earlier for the forest industry.
	Can you provide a copy or a link to a copy	Forest industry report: http://www.ymparisto.fi/download/noname/%7BC5B52653-424E-4FFC-8A55-44C8A537CA32%7D/57238

	<p>If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are considered to be disproportionately higher costs compared to the environmental benefits? In answering this question please consider in particular:</p> <ul style="list-style-type: none"> s) The methods you have applied to monetise costs and benefits and the difficulties you encountered when attempting such monetisation; t) The methods you have applied to qualitatively or quantitatively assess disproportionality; u) Any variations in approach that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of installations covered by that Annex 	
	Has this methodology been adapted from elsewhere and if so where?	
6	Have any derogations under Article 15(4) of the IED been granted in your member state?	NO, not yet but we expect that the 15(4) will be used to some extent in Finland.
	If you hold such information please give an indication of the numbers of installations concerned by the BAT conclusions published to date and the number that are being considered for derogations under Article 15(4).	
	If yes, how many have been issued and for which activities?	
	Are copies of the permits available on line?	
7	If you have issued derogations, or if you are close to doing so, can you give examples of the technical characteristics, local environment and geographic factors that have been used in such judgements	Not yet
8	What limitations exist in relation to the extent to which derogations	In Finnish legislation the limitations of the use of the derogation are identical to IED.

	may be granted under Article 15(4)? For example are there any limits in terms of the length of time a derogation may apply?	
9	Do you want the Commission to develop any guidance on assessing derogation requests?	NO, not at this point.
	If yes, what specific elements would you wish to see addressed in Commission guidance in order to assist you in making derogation determinations	
10	How are temporary derogations granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques (Article 15(5))? In answering this question please consider in particular the roles of the competent authorities, operators and other stakeholders in the derogation process	These are granted as a part of the environmental permit. Roles of the stakeholder are identical to the permit process. The testing and use of emerging techniques can also be handled in a simplified permit-like procedure.
11	Have you granted any derogations under Article 15(5)?	NO, not yet due to late implementation of the IED.
	If so, please provide details of: y) The manner in which the derogation process was managed; z) The main problems encountered and the solutions found to such problems; and aa) The website upon which the permit, reasons on which the derogation decision is based and the specific reasons for any derogations granted can be found (if any); bb) Which industrial activities / techniques do the applications relate to?	

FRANCE

.No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	<p>The competent authority for granting derogations is the same as the which grants permits. In France, the State is the only competent authority.</p> <p>Nevertheless, France is composed of 101 administrative divisions called “department” (départements). In each department, a Prefect (préfet) is appointed by the President of France and represents the Government. It is the authority signing permits and enabling derogations.</p>
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	<p>For the reconsideration and for the application for a permit, the operator has to provide a file containing the envisaged emissions of the installation. If an emission is above a BATAEL (eg. a derogation is asked for), the operator has to propose an assessment of the costs of “respecting” the BATAEL compared to the environmental benefits.</p> <p>In every case for the application for a new permit and in case of request for derogation for the reconsideration file (or in case of reconsideration following art. 21-5-a) the file is then submitted to a public consultation.</p> <p>After consultation, the inspectorate service from the Prefect analyses the file and the assessment of the operator and proposes a permit project (that can include the derogation or not) to the Prefect. After a final consultation of a specific committee (called CODERST) composed of representatives of the different stakeholders, the Prefect signs the final permit (which can be the proposed version or a modified version).</p>
3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	NO
	Please provide a link to any online guidance or attach a copy of the guidance	/
4	Has the competent authority developed its own guidance on derogations	NO
	Please provide a link to any online guidance or attach a copy of the guidance	/

5	Do you have a cost benefit methodology that you can or will be applying to derogations?	NO
	Can you provide a copy or a link to a copy	/
	If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are considered to be disproportionately higher costs compared to the environmental benefits? In answering this question please consider in particular: a) The methods you have applied to monetise costs and benefits and the difficulties you encountered when attempting such monetisation; b) The methods you have applied to qualitatively or quantitatively assess disproportionality; c) Any variations in approach that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of installations covered by that Annex	We have no real methodology yet. The biggest issue for us is to assess the benefits for the environment. As said in the previous questionnaire, ideally we would like to be able to create reference costs for pollution per ton of pollutant for a wide range of pollutant. But this task seems very hard, considering that the references are mainly on the "air pollutants", and that these references differ widely from one another.
	Has this methodology been adapted from elsewhere and if so where?	/
6	Have any derogations under Article 15(4) of the IED been granted in your member state?	Not yet.
	If you hold such information please give an indication of the numbers of installations concerned by the BAT conclusions published to date and the number that are being considered for derogations under Article 15(4).	We don't know how many are considered yet.
	If yes, how many have been issued and for which activities?	/
	Are copies of the permits available on line?	All permits are available on line.
7	If you have issued derogations, or if you are close to doing so, can	We don't have real examples yet. Nevertheless, we imagine that examples

	you give examples of the technical characteristics, local environment and geographic factors that have been used in such judgements	could be the following : geographic factors : when the plant is located on an islands with high costs in transport or for waste treatment for example local environment : when the plant is located in desert area and that the BAT requires the use of a lot of water technical characteristics : when there is problem of space to implement the BAT or when the process is used only during a very short period of time each year (high costs for the operator compared with a small environmental benefit)
8	What limitations exist in relation to the extent to which derogations may be granted under Article 15(4)? For example are there any limits in terms of the length of time a derogation may apply?	No – there can be limited derogation or derogation that are granted until next reconsideration.
9	Do you want the Commission to develop any guidance on assessing derogation requests?	YES
10	If yes, what specific elements would you wish to see addressed in Commission guidance in order to assist you in making derogation determinations	As said before, we are interested in reference costs for pollution per ton of pollutant. For us the disproportion could remain addressed by the competent authority of each Member State.
11		
10	How are temporary derogations granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques (Article 15(5))? In answering this question please consider in particular the roles of the competent authorities, operators and other stakeholders in the derogation process	The principle would be the same as for derogation under article 15-4 (except in case of reconsideration where there would not be a first public consultation). Anyway, we transposed this possibility but do not foresee to use it very much.

11	Have you granted any derogations under Article 15(5)?	NO
	<p>If so, please provide details of:</p> <ul style="list-style-type: none"> a) The manner in which the derogation process was managed; b) The main problems encountered and the solutions found to such problems; and c) The website upon which the permit, reasons on which the derogation decision is based and the specific reasons for any derogations granted can be found (if any); d) Which industrial activities / techniques do the applications relate to? 	/

IRELAND

.No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	EPA. The EPA is the CA for the regulation of Chp II activities. The EPA is quasi judicial independent agency who is partially funded by the exchequer.
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	Operator applies for a derogation supported by a justification as part of a licence review. Licence review is open process to all stakeholders. EPA shall attach to the licence one or more conditions and the reasons for the derogation.
3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	NO
	Please provide a link to any online guidance or attach a copy of the guidance	
4	Has the competent authority developed its own guidance on derogations	Under development
	Please provide a link to any online guidance or attach a copy of the guidance	
5	Do you have a cost benefit methodology that you can or will be applying to derogations?	NO
	Can you provide a copy or a link to a copy	
	If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are considered to be disproportionately higher costs compared to the environmental benefits? In answering this question please consider in particular: v) The methods you have applied to monetise costs and benefits and the difficulties you encountered when attempting such monetisation; w) The methods you have applied to qualitatively or quantitatively assess	

	<p>disproportionality;</p> <p>x) Any variations in approach that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of installations covered by that Annex</p>	
	Has this methodology been adapted from elsewhere and if so where?	
6	Have any derogations under Article 15(4) of the IED been granted in your member state?	NO
	If you hold such information please give an indication of the numbers of installations concerned by the BAT conclusions published to date and the number that are being considered for derogations under Article 15(4).	
	If yes, how many have been issued and for which activities?	
	Are copies of the permits available on line?	
7	If you have issued derogations, or if you are close to doing so, can you give examples of the technical characteristics, local environment and geographic factors that have been used in such judgements	NO
8	What limitations exist in relation to the extent to which derogations may be granted under Article 15(4)? For example are there any limits in terms of the length of time a derogation may apply?	There are no time limits in licences but the EPA can initiate a review after 3 years.
9	Do you want the Commission to develop any guidance on assessing derogation requests?	YES
	If yes, what specific elements would you wish to see addressed in Commission guidance in order to assist you in making derogation determinations	Costing methodology and balancing costs with environmental benefits i.e. adapting the cross media BREF to these circumstances. http://eippcb.jrc.ec.europa.eu/reference/BREF/cm_bref_0706.pdf
10	How are temporary derogations granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques	Not considered to date.

	(Article 15(5))? In answering this question please consider in particular the roles of the competent authorities, operators and other stakeholders in the derogation process	
11	Have you granted any derogations under Article 15(5)?	NO
	If so, please provide details of: cc) The manner in which the derogation process was managed; dd) The main problems encountered and the solutions found to such problems; and ee) The website upon which the permit, reasons on which the derogation decision is based and the specific reasons for any derogations granted can be found (if any); ff) Which industrial activities / techniques do the applications relate to?	

ITALY

.No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	<ul style="list-style-type: none"> - The Competent Authorities responsible for granting derogations are the following: <ul style="list-style-type: none"> ▪ <i>Ministry for the Environment, Land and Sea;</i> ▪ <i>Regions or Provinces.</i> - The above mentioned administrative bodies are responsible for granting, reconsidering and updating the permit conditions under IED provisions.
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	<ul style="list-style-type: none"> - <i>Operators</i> should supplement the application for requesting the derogation under Article 15(4) with a 'cost-benefit analysis' duly elaborated for such a purpose. - <i>Competent Authority</i> should assess the above mentioned request and, if one or more criteria laid down in the Annex XII-bis to the Italian Legislative Decree 46/2014 are fulfilled, may grant a derogation. In such case, the Competent Authority shall document, in a special annex to the permit, the reasons for such choice, explaining the result of the assessment carried out and the justification for the conditions imposed. For the elaboration of the above mentioned annex to the permit, the Competent Authority refers to the guidelines set out in Annex XII-bis to the Italian Legislative Decree 46/2014. - <i>Stakeholders</i> are entitled to submit their comments and opinions to the Competent Authority before any decision on derogation is taken. To such purpose, a copy of the application for requesting the derogation and related supplemented documents are made available for comments (via web) at least for 30 days.
3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	YES

	Please provide a link to any online guidance or attach a copy of the guidance	Please find attached a copy (in Italian) of the pages referred to the Annex XII-bis to the Italian Legislative Decree 46/2014, as extracted from the .pdf version published in the Italian Official Journal (see text in the blue boxes). An English courtesy translation of the above mentioned Annex XII-bis will be provided in due course.
4	Has the competent authority developed its own guidance on derogations	NO
	Please provide a link to any online guidance or attach a copy of the guidance	-
5	Do you have a cost benefit methodology that you can or will be applying to derogations?	NO. The cost-benefit methodology is applied on a case-by-case approach.
	Can you provide a copy or a link to a copy	-
	If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are considered to be disproportionately higher costs compared to the environmental benefits? In answering this question please consider in particular: y) The methods you have applied to monetise costs and benefits and the difficulties you encountered when attempting such monetisation; z) The methods you have applied to qualitatively or quantitatively assess disproportionality; aa) Any variations in approach that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of installations covered by that Annex	-
	Has this methodology been adapted from elsewhere and if so where?	-

6	Have any derogations under Article 15(4) of the IED been granted in your member state?	To date, reconsideration and updating of the permit conditions by the Competent Authorities according to IED provisions are ongoing. Thus, no information on the application of the derogation provisions under Article 15(4) and 15(5) of IED has been reported at national level.
	If you hold such information please give an indication of the numbers of installations concerned by the BAT conclusions published to date and the number that are being considered for derogations under Article 15(4).	-
	If yes, how many have been issued and for which activities?	-
	Are copies of the permits available on line?	-
7	If you have issued derogations, or if you are close to doing so, can you give examples of the technical characteristics, local environment and geographic factors that have been used in such judgements	-
8	What limitations exist in relation to the extent to which derogations may be granted under Article 15(4)? For example are there any limits in terms of the length of time a derogation may apply?	Detailed criteria in relation to the extent to which derogations may be granted under Article 15(4) are laid down in the Annex XII-bis to the Italian Legislative Decree 46/2014.
9	Do you want the Commission to develop any guidance on assessing derogation requests?	YES It might be useful.
	If yes, what specific elements would you wish to see addressed in Commission guidance in order to assist you in making derogation determinations	In our opinion, the criteria of the Annex XII-bis to the Italian Legislative Decree 46/2014 should be taken in account (this also might be an opportunity to confirm if such criteria could be considered appropriate and/or need to be clarified any further).
10	How are temporary derogations granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques (Article 15(5))? In answering this question please consider in particular the roles of the competent authorities, operators and other stakeholders in the derogation process	On a case-by-case approach.

11	Have you granted any derogations under Article 15(5)?	NO
	<p>If so, please provide details of:</p> <ul style="list-style-type: none"> gg) The manner in which the derogation process was managed; hh) The main problems encountered and the solutions found to such problems; and ii) The website upon which the permit, reasons on which the derogation decision is based and the specific reasons for any derogations granted can be found (if any); jj) Which industrial activities / techniques do the applications relate to? 	-

NORTERN IRELAND

.No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	NIEA –Chief Inspector IED is transposed into NI legislation which gives responsibility of granting derogations to NIEA under regulation 13/3
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	
3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	YES / NO
	Please provide a link to any online guidance or attach a copy of the guidance	N/A
4	Has the competent authority developed its own guidance on derogations	YES/ NO
	Please provide a link to any online guidance or attach a copy of the guidance	We are currently using EA methodology
5	Do you have a cost benefit methodology that you can or will be applying to derogations?	YES / NO
	Can you provide a copy or a link to a copy	
	If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are considered to be disproportionately higher costs compared to the environmental benefits? In answering this question please consider in particular: bb) The methods you have applied to monetise costs and benefits and the difficulties you encountered when attempting such monetisation; cc) The methods you have applied to qualitatively or quantitatively assess disproportionality; dd) Any variations in approach	NIEA: Reg 13(3) allows consideration for disproportionate costs compared to environmental benefits.

	that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of installations covered by that Annex	
	Has this methodology been adapted from elsewhere and if so where?	Not to my knowledge
6	Have any derogations under Article 15(4) of the IED been granted in your member state?	YES / NO
	If you hold such information please give an indication of the numbers of installations concerned by the BAT conclusions published to date and the number that are being considered for derogations under Article 15(4).	
	If yes, how many have been issued and for which activities?	
	Are copies of the permits available on line?	
7	If you have issued derogations, or if you are close to doing so, can you give examples of the technical characteristics, local environment and geographic factors that have been used in such judgements	N/A
8	What limitations exist in relation to the extent to which derogations may be granted under Article 15(4). For example are there any limits in terms of the length of time a derogation may apply?	Derogation can only be granted for a period of 4 mths.
9	Do you want the Commission to develop any guidance on assessing derogation requests.	YES / NO
	If yes, what specific elements would you wish to see addressed in Commission guidance in order to assist you in making derogation determinations	
10	How are temporary derogations granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques (Article 15(5))? In answering this question please consider in particular the roles of the	Article 11a and 11b is implemented through Regulation 11. To ensure appropriate pollution prevention through use of BAT and no significant pollution is caused. Reg 13(3) allows for derogations to be granted.

	competent authorities, operators and other stakeholders in the derogation process	
11	Have you granted any derogations under Article 15(5)?	YES / NO
	<p>If so, please provide details of:</p> <p>kk) The manner in which the derogation process was managed;</p> <p>ll) The main problems encountered and the solutions found to such problems; and</p> <p>mm) The website upon which the permit, reasons on which the derogation decision is based and the specific reasons for any derogations granted can be found (if any);</p> <p>nn) Which industrial activities / techniques do the applications relate to?</p>	

POLAND

.No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	Derogations are granted by permitting authorities – local or regional self-governments. Ministry of Environment (MoE) is supervising, coordinating their work, and is also appeal body. MoE is responsible for making guidance and trainings for other authorities.
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	Derogations are granted on request of operator. Operator needs to provide data (f.e. cost/benefits analysis) to the permitting authority (PA) in application. PA, based on all data and information available make decision, wherever derogation will be granted or not.
3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	In preparation.
	Please provide a link to any online guidance or attach a copy of the guidance	-
4	Has the competent authority developed its own guidance on derogations	NO
	Please provide a link to any online guidance or attach a copy of the guidance	-
5	Do you have a cost benefit methodology that you can or will be applying to derogations?	In preparation
	Can you provide a copy or a link to a copy	-
	If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are considered to be disproportionately higher costs compared to the environmental benefits? In answering this question please consider in particular: ee) The methods you have applied to monetise costs and benefits and the difficulties you encountered when attempting such monetisation;	We've tried to use f.e. calculations used in Impact Assessment of CAFE Directive. However, in our opinion, it's not quite comparable with cost of operators. Cost/benefit assessment should take into account two variants: "0" - with BATAELs full application compared to "1" – with derogated value of ELVs. Estimation of costs is easier than to estimate benefits for the environment – if benefits aren't monetized properly, there is no possibility to assess disproportionality. ATM we don't consider different approach for different categories of IED Anx 1.

	<p>ff) The methods you have applied to qualitatively or quantitatively assess disproportionality;</p> <p>gg) Any variations in approach that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of installations covered by that Annex</p>	
	Has this methodology been adapted from elsewhere and if so where?	-
6	Have any derogations under Article 15(4) of the IED been granted in your member state?	NO – IED transposition enter into force by 5 august 2014
	If you hold such information please give an indication of the numbers of installations concerned by the BAT conclusions published to date and the number that are being considered for derogations under Article 15(4).	Poland has c.a. 95 installations covered by CAK, CLM, GLS, IS and TAN BAT conclusions. Within a year operators should decide, if they will be applying for derogations or not.
	If yes, how many have been issued and for which activities?	None yet.
	Are copies of the permits available on line?	YES
7	If you have issued derogations, or if you are close to doing so, can you give examples of the technical characteristics, local environment and geographic factors that have been used in such judgements	<p>Tailor-made plants, designed to use local raw materials/fuels with specific properties, f.e. in cement & lime production;</p> <p>Site land-use, that makes impossible to build new units;</p> <p>Other parameters of technological process that prevent or hinder the use of specific BAT techniques to reduce emissions;</p> <p>The impact on the quality of the environment, proximity of sensitive receptors such as Nature 2000, houses etc.</p>
8	What limitations exist in relation to the extent to which derogations may be granted under Article 15(4)? For example are there any limits in terms of the length of time a derogation may apply?	As it is set in IED derogations cannot be higher than ELVs set in Annexes to IED and cannot lead to breaching of environmental quality standards. There is no limit in length, however operator can apply for a limited-time derogation.
9	Do you want the Commission to develop any guidance on assessing derogation requests?	YES
	If yes, what specific elements would you wish to see addressed in Commission guidance in order to	The most important are methods to monetise costs and benefits for the environment – algorithms, methodics.

	assist you in making derogation determinations	
10	How are temporary derogations granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques (Article 15(5))? In answering this question please consider in particular the roles of the competent authorities, operators and other stakeholders in the derogation process	If operator want to test emerging technique, he should apply to PA for a change of the permit. PA grants temporary (max. 9 months) derogation, set as variant of operating of installation. After end of this derogation operator is obliged to report environmental effects (cost/benefits) of emerging technique tested.
11	Have you granted any derogations under Article 15(5)?	NO
	If so, please provide details of: oo) The manner in which the derogation process was managed; pp) The main problems encountered and the solutions found to such problems; and qq) The website upon which the permit, reasons on which the derogation decision is based and the specific reasons for any derogations granted can be found (if any); rr) Which industrial activities / techniques do the applications relate to?	

SCOTLAND

.No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	The Scottish Environment Protection Agency (SEPA) is the competent authority responsible for implementing the IED in Scotland, including the issuance of derogations in relation to Article 15(4) and (5). SEPA is a non-departmental public body.
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	SEPA's role is to assess the level of compliance of installations with BAT conclusions using as the basis of determination the existing permit and monitoring data held by it. Where further information is required SEPA may issue a Regulation 63 Notice to an operator requesting the extra data necessary to assess the need for any justified derogations. The operator is legally obliged to respond to the Regulation 63 Notice. Prior to any decision on derogations being taken public consultation takes place with any comments received taken into account prior to issuing any derogations.
3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	YES / NO
	Please provide a link to any online guidance or attach a copy of the guidance	
4	Has the competent authority developed its own guidance on derogations	YES / NO
	Please provide a link to any online guidance or attach a copy of the guidance	SEPA is in the process of developing its guidance that will be issued in early 2015.
5	Do you have a cost benefit methodology that you can or will be applying to derogations?	YES / NO
	Can you provide a copy or a link to a copy	SEPA's cost benefit methodology will be included in its overall guidance.
	If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are considered to be disproportionately higher costs compared to the environmental benefits? In	SEPA's general approach considers: <ul style="list-style-type: none"> a) How to determine the baseline from which costs and benefits shall be measured including discounting all of the applicable requirements other than the BAT-AEL that must be complied with for other reasons e.g. health and safety legislation.

	<p>answering this question please consider in particular:</p> <p>hh) The methods you have applied to monetise costs and benefits and the difficulties you encountered when attempting such monetisation;</p> <p>ii) The methods you have applied to qualitatively or quantitatively assess disproportionality;</p> <p>jj) Any variations in approach that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of installations covered by that Annex</p>	<p>b) Determining the causal factor (technical characteristics, geographical location, local environment) that results in disproportional costs compared to the environmental benefits</p> <p>c) How to assess costs and non-environmental benefits resulting from compliance with a BAT-AEL e.g. reduced energy / raw material use.</p> <p>d) How to assess environmental benefits both quantitatively and qualitatively.</p> <p>e) How to determine the extent and duration of derogations.</p> <p>One significant difficulty comes from apportioning monetary benefits to environmental improvements through compliance with Article 15(3). There remains a certain lack of clarity about different derogations for operators that propose the application of techniques that result in emissions below the upper (less strict) BAT-AEL but that which require longer term investment in comparison to those that intend to only meet the upper BAT-AEL and go no further.</p>
	Has this methodology been adapted from elsewhere and if so where?	
6	Have any derogations under Article 15(4) of the IED been granted in your member state?	YES/ NO
	If you hold such information please give an indication of the numbers of installations concerned by the BAT conclusions published to date and the number that are being considered for derogations under Article 15(4).	
	If yes, how many have been issued and for which activities?	
	Are copies of the permits available on line?	
7	If you have issued derogations, or if you are close to doing so, can you give examples of the technical characteristics, local environment and geographic factors that have been used in such judgements	
8	What limitations exist in relation to	Derogations can only be applied at the

	the extent to which derogations may be granted under Article 15(4)? For example are there any limits in terms of the length of time a derogation may apply?	individual installation level i.e. no sector-wide derogations are possible; Derogations are determined against individual BAT-AELs – it is not the case that difficulty in meeting one BAT-AEL automatically leads to derogations for other BAT-AELs; All other environmental objectives must be complied with e.g. environmental quality standards.
9	Do you want the Commission to develop any guidance on assessing derogation requests?	YES / NO
	If yes, what specific elements would you wish to see addressed in Commission guidance in order to assist you in making derogation determinations	The definition of the term ‘disproportionately’ in respect of Article 15(4) is unclear and may depend on the particular installation / sector concerned. Further guidance on this matter would be helpful.
10	How are temporary derogations granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques (Article 15(5))? In answering this question please consider in particular the roles of the competent authorities, operators and other stakeholders in the derogation process	No such derogations have been considered to date and no guidance has yet been developed. However, the provisions exist in Scots Law to issue such derogations if requested.
11	Have you granted any derogations under Article 15(5)?	YES / NO
	If so, please provide details of: ss) The manner in which the derogation process was managed; tt) The main problems encountered and the solutions found to such problems; and uu) The website upon which the permit, reasons on which the derogation decision is based and the specific reasons for any derogations granted can be found (if any); vv) Which industrial activities / techniques do the applications relate to?	

WALES

.No.	Question	Answer
1	Who is the competent authority responsible for granting derogations? Please explain briefly how this body fits into the member states legal framework.	<p>Natural Resources Wales, is the competent authority in Wales and is responsible for granting derogations.</p> <p>Natural Resources Wales reports to Welsh Government. The member state (UK) has devolved power on environmental matters in Wales to Welsh Government.</p>
2	Please summarise the roles of the competent authorities, operators and other stakeholders in the derogation process	The competent authority evaluates the derogation request against the directive and issues the permits with details of the derogations annexed. Operators are required to detail how they propose to meet the requirements of the Bat conclusions document. Where they cannot comply they must submit a derogation request or stop operating.
3	Has any guidance been provided to the competent authority on what they should consider when granting derogations.	Some guidance has been issued by Defra, section 4.35 of the document. Please see link below.
	Please provide a link to any online guidance or attach a copy of the guidance	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/221044/pb13898-epr-guidance-part-a-130222.pdf
4	Has the competent authority developed its own guidance on derogations	No, NRW are assessing the need to produce Wales only guidance.
	Please provide a link to any online guidance or attach a copy of the guidance	
5	Do you have a cost benefit methodology that you can or will be applying to derogations?	Yes, this is not specific to the organisation, please see below.
	Can you provide a copy or a link to a copy	No
	<p>If you can't provide a copy can you summarise how the cost-benefit assessment to allow derogations granted under Article 15(4) is undertaken and what are considered to be disproportionately higher costs compared to the environmental benefits? In answering this question please consider in particular:</p> <p>kk) The methods you have applied to monetise costs and benefits and the difficulties you encountered</p>	<p>Methodology</p> <p>As far as possible, the methodology adopted has been in-line with the UK HM Treasury guidelines for public investment.</p> <p>Costs side</p> <p>The cost of the project supplied by the operator has been evaluated by NRW technical experts in the appropriate industry</p>

	<p>when attempting such monetisation;</p> <p>ll) The methods you have applied to qualitatively or quantitatively assess disproportionality;</p> <p>mm) Any variations in approach that you may apply across the different categories of activities listed in Annex I to the IED given the different sizes and scales of installations covered by that Annex</p>	<p>sector.</p> <p>For the Steel industry similar sized projects have been looked at to assess whether the costs are appropriate.</p> <p>All costs have been discounted in accordance with HM Treasury Green Book guidelines over/up to a 40 year period with anything in the first 30 years being discounted at 3.5% per annum.</p> <p>Benefits side</p> <p>This has been done by a variety of different methodologies utilising established values for benefits of preventing emissions from DEFRA’s midpoints to the estimates produced by the environment consultancy, Eunomia (whose values per tonne tend to be higher). In all cases the highest of these valuations per tonne has been taken to maximise environmental benefits. Part years have been treated as a proportion of the yearly benefits. Both sets of benefit values have been modified by an RPI index to bring prices into a current format rather than the year in which the studies were undertaken. In the case of the Eunomia valuation, a regional factor has been applied.</p> <p>We have not yet had to address derogations where there are no published values for benefits.</p> <p>Disproportionality</p> <p>No formal definition of ‘disproportionality’ has been used. However, where the benefit cost ratio (BCR) has consistently been beneath 0.5, even when environmental benefits were maximised, this has been considered to be ‘disproportionately costly’. This effectively implies that unidentified benefits could be as great as identified benefits without affecting which side of unity the overall BCR falls.</p> <p>Major difficulties</p>
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	Has this methodology been adapted from elsewhere and if so where?	<p>Yes see HM Treasury green book. https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government</p>
6	Have any derogations under Article 15(4) of the IED been granted in your member state?	<p>Yes (Derogations have been approved however we have not yet gone to public consultation.)</p>
	If you hold such information please give an indication of the numbers of installations concerned by the BAT conclusions published to date and the number that are being considered for derogations under Article 15(4).	<p>(For Wales only)</p> <p>The number of sites to which the BAT conclusions published to date apply is 8. All 8 are concerned by the investment need to comply.</p> <p>One site (Tata Steel integrated works Port Talbot) is applying for derogations under 15(4). A total of 3 derogations have been applied for.</p>
	If yes, how many have been issued and for which activities?	<p>No permits issued as yet. 3 derogations will be issued.</p> <p>All 3 are in the Iron and Steel sector, 2 relate to the de sulphurisation of coke oven gas and 1 relates to secondary dust emissions from the sinter plant.</p>
	Are copies of the permits available	No permits issued as yet, they will be

	on line?	available online following issue.
7	If you have issued derogations, or if you are close to doing so, can you give examples of the technical characteristics, local environment and geographic factors that have been used in such judgements	Please see below Question 7. We have only been asked to consider technical characteristics. The document containing the full assessment which will form an annex to the permit is attached for reference. '140904 Official - RBB_Tata Derogation Annex to permit'
8	What limitations exist in relation to the extent to which derogations may be granted under Article 15(4)? For example are there any limits in terms of the length of time a derogation may apply?	Any derogations that propose compliance beyond the next Bref cycle would be an exception. The BCR would need to be extremely small, no derogations would be allowed past the life of plant date. (This would need to be agreed).
9	Do you want the Commission to develop any guidance on assessing derogation requests?	Yes
	If yes, what specific elements would you wish to see addressed in Commission guidance in order to assist you in making derogation determinations	<ol style="list-style-type: none"> 1. Assessing benefit costs where recognised data does not exist. 2. Definition of disproportionality linked to an acceptable BRC if possible. 3. The level of proof needed on costs of installing infrastructure needed to comply with BATc.
10	How are temporary derogations granted, from the requirements of Article 11(a) and (b) and from Article 15(2) and (3), for the testing and use of emerging techniques (Article 15(5))? In answering this question please consider in particular the roles of the competent authorities, operators and other stakeholders in the derogation process	None as yet.
11	Have you granted any derogations under Article 15(5)?	No
	If so, please provide details of: ww) The manner in which the derogation process was managed; xx) The main problems encountered and the solutions found to such	

	<p>problems; and</p> <p>yy) The website upon which the permit, reasons on which the derogation decision is based and the specific reasons for any derogations granted can be found (if any);</p> <p>zz) Which industrial activities / techniques do the applications relate to?</p>	
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Question 7

Technical reason 1 BAT 26 Iron and Steel

In order to achieve BAT 26 the sinter plant has to be shut down for a period, the shutdown of the sinter plant involves the over production of sinter in the time running up to the shutdown and the stockpiling of sinter in order to maintain iron production. Whilst the dust emissions from the sinter plant will be constrained by the current ELV, the additional stockpiling of raw material and sinter product will produce additional fugitive emissions which cannot be entirely quantified; this assertion is based on historic impacts during the stockpiling of additional materials on site. The sinter plant has to shut down in December 2014 in order to replace sinter coolers, this work cannot be brought forward as the coolers will not be available until that time. Shutting down the plant twice in one year will cause operational difficulties, concentrate the sinter production and result in additional stockpiling increasing the adverse effect on air quality.

Technical reason 2 BAT 48 Iron and Steel

The age of existing plant, meaning that retrofitted pollution abatement equipment would have a more limited operational life, significantly increasing costs

The installation of coke oven gas de-sulphurisation lies outside the normal investment cycle for the plant.

The requirement to improve tar and ammonia removal to ensure effective operation of the de-sulphurisation plant increase the capital cost of the project.

Technical Reason 3 BAT 49 Iron and Steel

BAT 49 is linked to BAT 48, the use of coke oven gas for under firing can only be done when the coke oven gas is desulphurised. There is no breach of BAT AEL as the Coke Oven Gas is not used for underfiring at Port Talbot.

Annex III – Italian derogation criteria written into law

One or more of the following criteria must be met in the application of derogations under Article 15(4) of the IED under Italian law.

- a) the achievement of BAT-AEL comparable ELVs does not guarantee any valuable effect for the environment compared to the environmental performance ensured according to the existing permit conditions;
- b) the achievement of BAT-AEL comparable ELVs does not guarantee any significant valuable effect for the environment whilst requiring considerable investment by the operator;
- c) the same positive environmental effects could be achieved in the same area by considerably less investment associated to other activities not subject to the requirements of the IED within the same timeframe;
- d) the technical characteristics or geographical location of the installation leads to disproportionately higher costs compared to the average costs that might be afforded by other installations in the same sector;
- e) the technical characteristics or geographical location of the installation do not allow the achievement of BAT-AEL comparable ELVs by the implementation of the best available techniques described in the BAT conclusions;
- f) it is appropriate to grant extra time to achieve BAT-AEL comparable ELVs in order to allow the operator to reach the break-even point in relation to investments already made for implementing BAT;
- g) it is appropriate to grant extra time to achieve BAT-AEL comparable ELVs in order to allow the operator to reach the break-even point in relation to investments already made and due to the technical characteristics of the installation and the production processes applied make the implementation of certain BAT as described in the BAT conclusions is only possible through the complete replacement of the whole technical unit(s) involved instead of the part(s) of the unit(s) to which the BAT should technically apply; or
- h) [...] through the complete replacement of the whole production process;
- i) The installation or part of the installation is used for research, development and testing of new products or processes;
- j) Other special cases related to specific plant layout, environmental conditions and geographical location that are recognised by the competent authority warrant a derogation.



**Introduction to the Project:
Sharing of draft proposals between Member
States for implementing derogations from
BAT-AELs under Article 15 paragraphs (4)
and (5) of the industrial emissions Directive
2010/75/EU**

Keir McAndrew
Project Manager

www.sepa.org.uk



Background to the project

- Meeting in October 2013 between the European Network of the Heads of Environment Protection Agencies Better Regulation Interest Group and the IMPEL Network discussed a small survey on how derogations under Article 15 of Directive 2010/75/EU on industrial emissions might be used in various Member States.
- The results of the survey had suggested that it might be useful to
 - work together to better understand the basis on which a derogation would be justified, specifically in regard to disproportionate cost
 - to share and possibly develop common tools or approaches

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Background to the project

- The project builds on the earlier work and brings together IMPEL competent authorities to:
 - Share how the Article 15(4) and 15(5) derogation provisions may be used;
 - Share any methodologies being developed for applying Article 15(4) and 15(5);
 - Facilitate opportunities for competent authorities to work together and share best practice

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Background to the project

- The project is separated into two key phases.
- **Phase One** involved the collection of information via a questionnaire circulated to IMPEL Members on 27 August 2014 and, more recently, to Member State representatives to the European Union's Industrial Emissions Expert Group. The questionnaire covered a number of points in relation to Article 15(4) and (5) and was designed to allow the use of as much existing information as possible.
- **Phase Two** involves this workshop.
- A final report combining the outcomes of these two phases will be issued in February 2015. An opportunity to comment on a draft report will be provided.

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Workshop expectations

- The workshop offers an opportunity for us all to share our experiences in addressing the derogation aspects of Article 15
- All opinions are welcome and we **are not** here to question the validity of each others work
- **We are here to listen** to what has been done, the problems encountered and the opportunities identified in implementing these important parts of the industrial emissions Directive so that we can learn from one another
- If anything is unclear then please ask questions – we are all here to help one another

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Summary of responses to the questionnaire and results of initial analysis

Keir McAndrew
Project Manager

www.sepa.org.uk

Organisation of the questionnaire

- This questionnaire was designed to:
 - Complement Member States responses to the European Commission questionnaire in line with Commission Implementing Decision 2012/795/EU establishing the type, format and frequency of information to be made available by the Member States for the purposes of reporting on the implementing of Directive 2010/75/EU;
 - Collect examples of the application of derogations under Article 15(4) and (5) of the IED to inform discussions during the workshop; and
 - Allow Impel Members the opportunity to raise points they feel are of importance to be addressed in relation to derogations under the IED.
 - Focus greatest effort on Article 15(4) derogations

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Dissemination of the questionnaire

- The questionnaire was circulated to IMPEL national coordinators and representatives on 27 August 2014
- It was further circulated to members of the EU Industrial Emissions Expert Group (IEEG) on 08 October 2014
- Responses were received from representatives of 20 IMPEL members
- A further two members indicated their desire to be included in Phase Two workshop
- The response rate indicates a high level of interest in the subject matter
- The project board would like to thank all of those who made input
- Summary report issued to respondents on 19th November

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Summary of responses

- **The following initial findings were identified through the responses**
- The same competent authorities responsible for general permitting are predominantly responsible for granting derogations
- There are three main models applied to competent authorities **i)** using a single national competent authority **ii)** using devolved competent authorities to the provincial, regional or municipal level **iii)** a mix of both
- There are also two main ways in which the derogation process operates:
 - through an application process; or
 - relying on information held by the competent authority supplemented by other information requested of the operator

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Summary of responses

- **Guidance on derogations**
- Seven respondents indicated that no guidance has been issued in relation to derogations
- Two respondents indicated that the competent authority was in the process of developing its own guidance
- Two respondents stated that the legislation transposing the IED into national law had put in place rules on the application of derogations
- Nine respondents indicated that guidance had either been issued by national administrations to competent authorities or was in the process of being issued
- Six respondents provided links to the relevant documentation and two others provided links to or copies of their legislation

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Summary of responses

- **Cost benefit analysis**
- A particular area of concern in relation to Article 15(4) according to respondents is how to undertake cost-benefit analyses to determine disproportionality
- Eleven respondents stated that a cost-benefit methodology had either yet to be developed or was in process
- Five respondents provided links to guidance in existence
- A high-level of scrutiny of such analysis was evident in a number of responses that indicated the need for significant detail and data to be provided in order to inform decisions and, in some cases, third party verification
- However, significant difficulties in calculating environmental benefits

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Summary of responses

- **Derogations in practice**
- Only two respondents indicated that derogations had been issued or were imminent
- However, a number of respondents indicated that assessment against BAT publications issued to date was ongoing and some derogations were expected
- In terms of the criteria against which derogations might be issued a number of examples were given, mainly in relation to the 'technical characteristics' criteria
- Limits are in place for derogations, particularly in relation to the need to comply with national / local environmental quality standards and with regard to the future updating of BAT conclusions

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Summary of responses

- **The need for Commission guidance**
- A large majority of respondents indicated their desire for the Commission to issue guidance with a particular focus on:
 - How to assess disproportionality;
 - How to measure costs and benefits both qualitatively and quantitatively, including reference costs for pollutants;
 - The levels of evidence necessary to justify derogations; and
 - Examples of where derogations are justified

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Summary of responses

- **Temporary derogations under Article 15(5)**
- Few respondents provided detail in relation to the procedures that apply for Article 15(5) derogations.
- It appears that the preferred option for those that have developed thinking is for applications to be made by operators for such derogations
- Two respondents provided links to guidance that has been developed for Article 15(5) derogations
- One respondent had used Article 15(5) in relation to water treatment within a waste management facility

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Conclusions

- The responses to the questionnaire demonstrate a number of approaches have been developed for the application of the provisions of Article 15(4) and (5) of the IED.
- They also highlight a number of problem areas for competent authorities, particularly in respect to the assessment of costs and benefits and determining disproportionality.
- It appears that a majority of respondents have yet to formally issue any derogations under either Article 15(4) or (5) albeit that a number of such derogations are foreseen.
- We will use this workshop to cover these important issues in more detail

Criteria used to justify Article 15(4) Derogations

**IMPEL Workshop, Edinburgh
26 November 2014**

Aidan Whitfield,
Environment Agency, England

File: IED Derogations for 26Nov14

Typical Plant or Special Case?

- We assume the Bref has defined BAT properly
- Therefore cost of BAT is proportionate for a “typical plant” in that sector
- An operator requesting a derogation must show why its plant is a “special case”
- Need costs and benefits (reduced emissions) for both typical plant and special case



Derogations

- The operator must justify why its plant is a special case due to:
 - geographical location;
 - local environmental conditions and/or;
 - technical characteristics
- We have developed a methodology to assess derogation requests



Guidance

- UK Government has published IED guidance including derogation criteria
- Environment Agency has added further examples in its derogation methodology



Geographical location guidance

- Construction or energy costs higher in a remote location
- Installation uses local raw materials and it would cost more to import typical raw materials
- Installation is under an airport flight path and cannot build tall structures



Local Environmental Conditions

- ⇒ Added costs in a built up location
- ⇒ Added costs to make visual appearance comply with local planning regulations
- ⇒ Reduced environmental benefits because very few people or no sensitive receptors



Technical characteristics (1)

- ⇒ Recent investment in pollution control equipment (that does not achieve BAT-AEL)
- ⇒ The general investment cycle of the sector
- ⇒ Plant configuration
- ⇒ Stopping the activity to install equipment
- ⇒ The effect on emissions of other substances, energy efficiency, water use, waste production
- ⇒ Remaining lifetime of plant (operator must confirm closure date)



Technical characteristics (2)

- ⇒ Product made for a niche market (not in Bref)
- ⇒ Market dictates raw materials or techniques (aerospace, defence, medical)
- ⇒ Installation is part of a larger facility
- ⇒ Installation designed to use a particular raw material or fuel
- ⇒ BAT techniques will reduce safety

Examples – Geographical Location

- ⇒ No derogation requests have claimed geographical location as a criteria.

Examples – Local Environment

- Iron and Steel installation on coast and prevailing wind blows air emissions offshore
- 2 Paper and Pulp installations discharge effluent into a tidal estuary (receiving water has high dispersion and high suspended solids)



Examples – Technical characteristics

- Iron and Steel – time limited requests after March 2016 deadline:
 - Sinter plant - build equipment during shutdown in 2017
 - 2 coke ovens - build coke oven gas desulphurisation on one oven first then on the other oven later
 - Coke oven particulates - build equipment only when the whole coke oven is rebuilt in 10 to 15 years time





⇒ The Bref says:

⇒ 38 steelworks in Europe and only 12 have coke oven gas desulphurisation

⇒ What are the other 26 doing?



Examples – Technical characteristics

⇒ Iron and Steel - discharge of effluent to off-site effluent treatment plant (ETP), a municipal sewage works with NH_3 treatment

⇒ We must ensure the off-site ETP removes NH_3 and does not achieve BAT-AEL by dilution



Examples – Technical characteristics

- Cement and Lime – some cement works have electrostatic precipitators (EPs) to remove particulates but they do not achieve BAT-AEL (95% compliance with BAT-AEL of $<20\text{mg}/\text{m}_3$)
- BAT is to use a bag filter
- Replacing an EP with a bag filter - high costs but will only result in a small reduction in emissions from about 15 to $<10\text{mg}/\text{m}_3$



Summary – November 2014

- Iron and Steel
 - 3 steelworks, 8 derogation requests (SOx PM10)
 - 4 electric arc furnaces, no derogation requests
- Glass
 - 4 glass fibre, 2 derogation requests
 - 17 flat/bottle, 19 derogation requests (SOx NOx PM10)
- Cement and Lime
 - 16 cement works, 6-8 derogation requests (SOx PM10)



Conclusions

- Operators cannot build equipment in 4 years, unless they start within 1 year of BAT Conclusions publication. This means many requests for time-limited derogations
- Many operators have good examples of technical characteristics but they find it difficult to write a good justification for a derogation



Undertaking quantitative and / or qualitative analysis in order to inform decisions on disproportionality including cost benefit assessment under Article 15(4)

Jeremy Walters

Senior Policy Advisor – Business, Regulation & Economics

Knowledge, Strategy & Planning





Port Talbot Steel Works



Derogation requests



BAT 26

Secondary emissions from sinter strand discharge.

BAT AEL for dust 30 mg/Nm³

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Derogation requests



BAT 48

BAT is to reduce the sulphur content of the coke oven gas (COG) by using one of the following techniques:

- I. desulphurisation by absorption systems
- II. wet oxidative desulphurisation.

BAT AEL for I. is 300 to 1000 mg/Nm³ H₂S

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Derogation requests



BAT 49: coke oven underfiring

Using desulphurised coke oven gas

BAT AEL SO₂ is 200 to 500 mg/Nm³

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NRW assessment Criteria



Does the request contain the information required to assess against Article 15 (4)?

- a) Is there a cost benefit analysis?**
- b) are there geographical or local environmental reasons for derogation?**
- c) are there technical reasons for derogation?**

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Assessment criteria



- d) If we allow the derogation will there be a breach of Environmental Quality Standard?
- e) Does the derogation breach any applicable limit in the annexes to the directive?
- e) Will the derogation result in any significant pollution?
- f) Is a high level of environmental protection achieved?
- g) Is the derogation time limited?

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Assigning values to Environmental harm



Several sources available for common air pollution parameters.

- ICGB: The economic assessment of Air quality Strategy for UK government.
- EEA: Estimates generated to quantify damage attributable to plant in the EPRTR.
- EIPPC: Bref on economics and cross media effects. (Cafe programme)



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All give different values



SO2 (Voly)

ICGB: € 1960

EEA: € 7814 (VSL: € 29000)

EIPPC: € 6939

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Cost in real terms



Money today is more valuable than money in the future.

REAL TERMS VERSUS NOMINAL TERMS

BOB'S LAWN

nominal income rises by 3%
inflation rises by 4%
real = nominal - inflation

© Education Portal

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Sensitivity analysis



The cost benefit needs to include several scenarios to evaluate probable costs.



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Validating costs



BREF is BEST



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Disproportionality



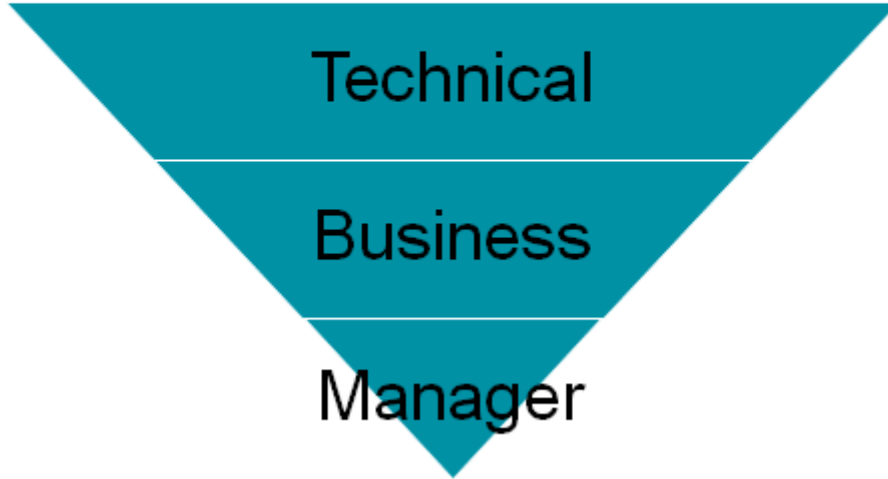
46

What do we do when there are no published costs?



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Approval and Assessment Method



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Any Questions?





Ministry of Infrastructure and the Environment



IMPEL Project: Derogations BAT-AELs

Pieter Roos

Policy Co-ordinator
Climate, Air, Noise Directorate

6 March 2015



Making decisions on disproportionality under article 15(4) IED

1. What does the IED say?
2. Transposition and implementation in NL
3. Real life examples
4. Some issues for discussion: Signals from competent authorities and operators



4. By way of derogation from paragraph 3, and without prejudice to Article 18, the competent authority may, in specific cases, set less strict emission limit values. Such a derogation may apply only where an assessment shows that the achievement of emission levels associated with the best available techniques as described in BAT conclusions would lead to disproportionately higher costs compared to the environmental benefits due to:

- (a) the geographical location or the local environmental conditions of the installation concerned; or
- (b) the technical characteristics of the installation concerned.

The competent authority shall document in an annex to the permit conditions the reasons for the application of the first subparagraph including the result of the assessment and the justification for the conditions imposed.

The emission limit values set in accordance with the first subparagraph shall, however, not exceed the emission limit values set out in the Annexes to this Directive, where applicable.

The competent authority shall in any case ensure that no significant pollution is caused and that a high level of protection of the environment as a whole is achieved.

On the basis of information provided by Member States in accordance with Article 72(1), in particular concerning the application of this paragraph, the Commission may, where necessary, assess and further clarify, through guidance, the criteria to be taken into account for the application of this paragraph.

The competent authority shall re-assess the application of the first subparagraph as part of each reconsideration of the permit conditions pursuant to Article 21.

What does article 15(4) IED say on disproportionality?



Transposition and implementatie in NL (1)

1. Yes/no taking certain measures are often long existing debates between operators, authorities, 'neighbours' and NGOs
2. Triggers for formal procedure:
 - Revised BAT conclusions
 - Changes, extensions
 - Innovations
 - Complaints, accidents, inspections
 - Spatial developments / plans
 - Closure

Transposition and implementatie in NL (2)

3. Operator provides information
 - Permit application
 - Permit reconsideration
4. Assessment: taking into account national guidance
5. Competent authority decides and documents the justification
6. Public participation

Guidance on cost-effectiveness (1)

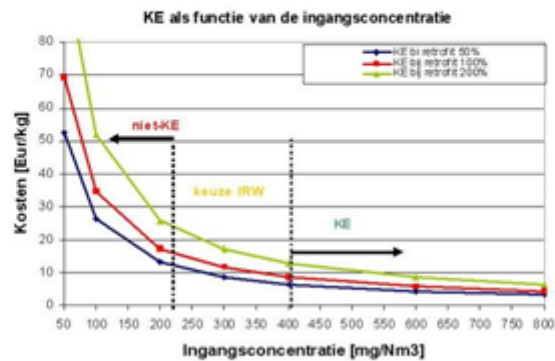
- One of the methods in REF Economics and Cross-media Effects
- Developed to analyse abatement techniques for main air pollutants VOC, NO_x, SO₂ and dust
- Definition cost-effectiveness (CE):

$$CE = \frac{\text{Annual costs}}{\text{Annual emission reduction}}$$



Guidance on cost-effectiveness (2)

- The 'simple' idea is: If the emission reduction is large, the abatement technique is relatively cheaper / less expensive.



Real life examples (1)

- Refineries: SO₂ reduction
- Improving the efficiency of the sulphur recovery units from 99,0% to 99,8% has disproportional costs
- Adding an additional abatement to reduce COS (carbonyl sulphide) before combusting refinery gas has disproportional costs
- In both cases the court supported the decisions of the competent authority (under IPPC D).
- Decisions will be reconsidered now the IED BAT conclusions for refineries are adopted.

Real life examples (2)

- Steelproduction: dust and NOx reduction
- Dust abatement existing sinter plant by bag filter is cost effective
- NOx abatement existing combustion installation by SCR has disproportional costs, but for new installation cost effective
- In the dust case the court supported the decision of the competent authority.
- For NOx the procedures started under IPPCD and are still running under IED

Signals from competent authorities and operators

1. Focus on disproportional costs can be a barrier for new technology
2. Methods for assessing costs are difficult to use in complex installations
3. Costs are assessed when developing BREF's: What is added value of additional assessment during permitting?
4. Which costs are to be included? (esp retrofit)





Extra: Method for calculation CE (1)

cost price	Costs
Additional investments Non-recurring investments Extra depreciation of assets through disinvestment	
Total Investments * annuity (= 0.163) (10 years, 10%) (machinery)	Cost of capital
Structural investments * annuity struct. (= 0.110) (30 years, 10%) (buildings)	Structural cost of capital
Maintenance Service Other fixed operating costs	
Total fixed operating costs	Fixed operating costs
Utilities (gas, electric power water, steam, etc.) Residue processing/emission levies Other variable operating costs	
Total variable operating costs	Variable operating costs
Revenues and savings	Revenues and savings
	<u>Total net annual cost</u>

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Extra: Method for calculation CE (2)

Environmental effects	
Annual unabated emission	Annual unabated emission
Annual remaining emission Annual emission during malfunctions Annual emission during maintenance	
Total annual remaining emission	Total annual remaining emission
	<u>Total annual emission reduction</u>
Cost effectiveness	
Cost effectiveness =	Total net annual cost ----- Total annual emission reduction

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Extra: Method for calculation CE (3)

- Based on real life examples reference values were developed
- Below lower threshold: CE is favourable
- Above upper threshold: CE is unfavourable
- Between upper and lower threshold: no conclusion possible

(euro/kg)	NOx	SO2	VOC	dust
Range	5 - 20	5 - 10	8 - 15	8 - 15

For our Environment

**Umwelt
Bundesamt**

Impel project "Sharing of draft proposals
between Member States for implementing derogations
from BAT-AELs under Article 15 paragraphs (4) and (5)
of the Industrial Emissions Directive 2010/75/EU"

The German approach for derogation from BAT- AELs under Article 15 paragraph (4) of the IED

Dr. Carmen Gottwald
Federal Environment Agency, Dessau, Germany

Gerald Ebertsch
Bavarian Environment Agency, Augsburg, Germany

Structure

- 1 Implementation of IED Article 15 (4) into German law
 - Article 15 (4) derogation due to technical characteristics
 - Approach in short
- 2 Competent authorities for granting derogations
- 3 Role of competent authorities, operators, other stakeholder
- 4 Specific example: Article 15 (4) derogation
- 5 Derogations: Elements to be provided by the operator
- 6 Derogations: Criteria to assess proportionality
- 7 Economic valuation method of environmental damage
- 8 Guidance for derogation

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Implementation of IED and Article 15 (4) into German Law

See revised **Federal Immission Control Act** (=BImSchG, 17 May 2013) with binding provisions for competent authorities **including derogation** acc. to Art. 15(4) IED (§§ 7, 12, 48, 52 BImSchG).

- Derogation in Germany **ONLY** in case of "**technical characteristic of the installation concerned**"
- "geographical location or the local environment conditions of the installation concerned" were **NOT** regarded as justified and therefore not transposed in national law (e.g. *no permit to pollute more in cleaner places*).
- within Germany, there are no areas where higher pollution is generally allowed. Only more ambitious standards (e.g. according to Article 18 IED)



Uniform and harmonized application of BAT in the country
Maintenance of a level playing field for regions and companies)

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Article 15 (4) derogation due to technical characteristics

Approach in Germany

Basic principles and limitations for derogation are laid down in the federal immission control act /federal water act – within a system of generally binding rules for permitting.

- **Ordinances** /Administrative Regulations (Technical Instruction Air) can stipulate
 - less stringent BAT AEL or statutory periods for implementation
 - or the competent authority may determine deviations from BAT-AELs or statutory periods
- in strictly limited **individual cases**.

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German approach in short

- **Generally**
according to German experience up till now, Article 15 (4) derogations are **normally not necessary**. Otherwise, in case of justified disproportionality:
 - First priority:** Reassessment and update of ordinances/administrative instructions in the light of new BAT-conclusions. Derogations may directly stipulated in individual cases after **public consultation**.
 - Second priority:**
Ordinances /technical instructions may determine in individual cases, that competent authorities may stipulate less stringent ELV or time periods (> 4 years)
 - Article 15 (4) derogations are a real exception to the rule
- Germany **keeps the case number of Article 15 (4) derogations as small as possible, therefore** no specific guidance for these cases are provided.



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Competent authorities for granting derogations

The competent authority (CA) for granting permits is also responsible for granting the derogations. In Germany, these are either

- the **local** *or*
- the **regional permitting institutions**.

The competent authorities are determined by each Federal State in its own responsibility.

- **Bavaria**
local authorities usually in consultation with the Bavarian Environment Agency in difficult cases.
- **North Rhine Westphalia** the CAs are the district governments
- **Baden-Württemberg** the Regional Councils are responsible for granting derogations

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Role of competent authorities, operators, other stakeholders

▪ **Competent authority (CA)**

Reconsidering and updating of permit conditions; assessment of applications for derogations; granting derogations.

▪ **Operator**

Application for derogations including the necessary information which allows the competent authority the assessment of disproportionality of a certain measure.

▪ **Other stakeholders** (e.g. in Bavaria)

Assessment of applications for derogations to support the competent authority (in difficult cases by Bavarian Environment Agency)

Similar roles and responsibilities in the other 15 Federal States. Basically administrative structures / competent authorities vary between Federal States (e.g. district government, regional council, etc.)

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Specific example: Article 15 (4) derogation

- **BAT-Conclusions of glass manufacturing (special glass)**

The use of sulphates as a flux in the batch formulation is not being assessed and addressed in the BREF special glass but e.g. in container glass.

In individual cases SO₂ Emissions may exceed the very low SO₂ – BAT-AEL given in BAT-conclusions in case of manufacture of special glass.

So the higher BAT- AEL of container glass might be more appropriate in special cases.

Proportionally of keeping the SO₂ BAT-AEL for special glass has to be investigated in case of **using sulphates** in the batch formulation and **recycling of sulphate rich filter dust** to the process.

Major reason in this case: Inconsistency of GLS-conclusions

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Derogations: Elements to be provided by the operator

- **Detailed application in case of derogations (et seq.)**

Scope

Rationale for derogations should be based on:

- technical description of process and waste gas (water) cleaning system
- Applicability of BAT
- applied primary techniques to reduce emissions / comparison with BAT
- applied secondary techniques to reduce emissions / comparison with BAT
- latest measurement results / reports (daily mean values, individual measurement results)/ comparison with BAT – AELs

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Derogations: Elements to be provided by the operator

- **Detailed application for derogations**
 - if so dispersion calculation (based on actual emissions / BAT - AEL)
 - description /viability of additional measures to comply with BAT – AEL
 - cross media effects (e.g. on energy efficiency, waste management etc.)
 - economic efficiency calculation
 - e.g. capital investment costs of measures to comply with BAT, operational costs, impact on product prices, etc.
 - rationale disproportionality of costs
 - Time table to keep BAT-AEL or ELV

Qualified experts opinion might be helpful as document within the application

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Derogations: Criteria to assess proportionality



- Applicability of BAT
- Immission limit values of EU air quality directives (have to be kept)
- Emission limit values set out in the Annexes of IED (not to be exceeded)
- Disproportionality of costs
(investment/ operational costs in comparison with environmental benefit)
- if so environmental impact
- cross media effects
- completeness of BAT in special cases
- considering marginal exceedings -> temporary derogations

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Guidance for Derogation

- Should only have a few pages. Keep it short and applicable with some flexibility
- Should list **all important elements** that have **to be presented** by the operator and list **all relevant criteria** that have to be taken into account **to decide** on the issue (see list on slides 10 - 12 as a starting point).
- Should indicate how criteria could be prioritized and give an indication where disproportionality starts and what is bearable (if possible)
- Environmental standards **must not** be undermined by the permission of higher pollution due to **better** (cleaner) local or geographical conditions (e.g. close to the sea). BAT AELs should be considered as precautional requirement against harmful effects on the environment.

26-27 November 2014

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Umwelt
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Thank you for your attention!

Carmen Gottwald
carmen.gottwald@uba.de
Umweltbundesamt
Wörlitzer Platz 1
06844 Dessau-Roßlau

Gerald Ebertsch
Gerald.Ebertsch@ifu.bayern.de

<http://www.umweltbundesamt.de/themen/wirtschaft-konsum/beste-verfuegbare-techniken/>
<http://eippcb.jrc.ec.europa.eu/>

Tool: Economic valuation method of environmental damage (actually not applied by competent authorities)
<http://www.umweltbundesamt.de/publikationen/methodological-convention-20-for-estimates-of-0>

Table: Costs of air pollution due to power generation and industrial processes in Germany and the EU-27 (in €₂₀₁₀ / t)

€ ₂₀₁₀ / t emission	Cost rates for emissions in Germany		Cost rates for emissions in EU-27	
	Urban (average)	Rural	Urban (average)	Rural
PM _{2.5} (power station)	30,600	30,600	18,600	18,600
PM _{10aer} (power station)	1,200	1,200	700	700
PM ₁₀ (power station)	21,800	21,800	13,200	13,200
PM _{2.5} (industry)	56,000	55,400	33,500	33,000
PM _{10aer} (industry)	3,200	2,900	2,100	1,900
PM ₁₀ (industry)	40,100	39,700	24,100	23,700
PM _{2.5} (small-scale)	127,200	58,500	85,000	39,200
PM ₁₀ (small-scale)	11,400	2,900	8,600	2,200
PM ₁₀ (small-scale)	92,500	41,800	62,100	28,100
NO _x (power station)	12,300	12,300	8,000	8,000
NO _x (industry/small-scale)	15,400	15,400	10,500	10,500
SO ₂ (power station)	12,400	12,400	9,200	9,200
SO ₂ (industry/small-scale)	13,200	13,200	10,100	10,100
NMVOG	1,700	1,700	1,500	1,500
NH ₃	26,800	26,800	19,100	19,100

Sources: NEEDS (Preiss et al., 2008) and EXIOPOL (Müller et al., 2010), figures rounded. Assumption: 70% of PM₁₀ consists of PM_{2.5}.

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Flanders
State of the Art

Flemish procedure for
granting derogations under
article 15(4) or 15(5)

Ruben Vandewalle
Environmental Permits Division
Workshop IMPEL, Edinburgh, 26-27 november 2014

ENVIRONMENT
NATURE &
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Overview

1. Environmental law in Flanders
2. Evaluation of permits
3. Derogations
 - 3.1 Procedure of the derogation under article 15(4)
 - 3.2 Procedure of the derogation under article 15(5)
4. Future
5. Conclusions



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Flemish procedure for granting derogations under article 15(4) or 15(5) – November 2014

1. Environmental law in Flanders

- ▶ Environmental law is the competence of the regions in Belgium, Flanders is one of three regions
- ▶ VLAREM = Vlaams Reglement betreffende de Milieuvergunning
→ Flemish Region has its own environmental legislation
- ▶ VLAREM I = Order of the Flemish Government of 6 February 1991 concerning Environmental Licences
 - Procedures and classification
 - Classification list (Appendix 1) of disturbing activities:
 - × Class 1 (= most polluting, including all IPPC-activities)
 - × Class 2
 - × Class 3 (= less polluting)



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Flemish procedure for granting derogations under article 15(4) or 15(5) – November 2014

1. Environmental law in Flanders

- ▶ VLAREM II = Order of the Flemish Government of 1 June 1995 concerning General and Sectoral provisions relating to Environmental Safety
 - Permit conditions
 - General binding rules: general + sectoral environmental conditions (± annual update)
- ▶ VLAREM III = Order of the Flemish Government of 16 May 2014 concerning Additional General and Sectoral provisions relating to IPPC-installations
 - New! Only apply to installations under the scope of IED
 - Additional!
 - Translation of BAT-conclusions in 'General binding rules'
- ▶ Extra conditions in environmental permit are possible



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Flemish procedure for granting derogations under article 15(4) or 15(5) – November 2014

2. Evaluation of permits

- ▶ Two-step approach
 - Sectoral evaluation: translation of BAT-conclusions in 'General binding rules' (VLAREM III)
 - × No BAT-AEL, but an emission limit value (ELV)
 - × Only BAT-conclusions that are general applicable
 - Individual evaluation: reconsideration and if necessary updating of the individual permit conditions
 - × Complementary with VLAREM III
 - × Evaluation of the granted derogations (if they exist)
 - × Stricter permit conditions than those achievable using BAT if necessary

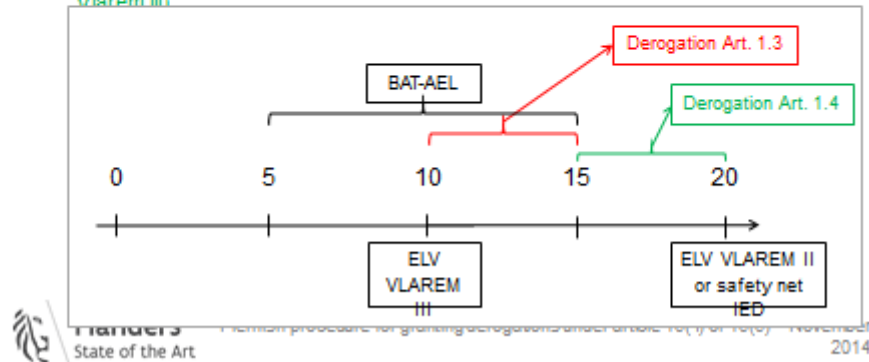


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State of the Art

Flemish procedure for granting derogations under article 15(4) or 15(5) – November 2014

3. Derogations

- ▶ Derogation ELV VLAREM III \leq upper limit BAT-AEL (Art. 1.3 Vlarem III)
 - Standard permit procedure: decision by Provincial Council
- ▶ Derogation ELV VLAREM III $>$ upper limit BAT-AEL (Art. 1.4 Vlarem III)



3.1 Procedure derogation 15(4)

Operator has to prove the installation is still using the Best Available Techniques!

Operator has to prove application meets the requirements of article 15(4) of the IED !

- ▶ Operators have to apply for a derogation. The **written application** with reasons is submitted to the Environmental Permits Division (art. 1.4 VI. III)
 1. Which ELV? Relevant BREF, BAT & BAT-conclusion, relevant provisions of ELV, article of VLAREM III
 2. Assessment which shows that the achievement of emission levels associated with the best available techniques as described in BAT conclusions would lead to disproportionately higher costs compared to the environmental benefits, due to:
 - x The geographical location or the local environmental conditions of the installation concerned
 - x The technical characteristics of the installation concerned
 3. Proposal of ELV's (not higher than VLAREM II or safety net IED)
 4. Proposal of measures taken which guarantee no significant pollution is caused and a high level of protection of the environment as a whole is achieved
 5. Motivation in which he has to prove the proposed measures are BAT (using the criteria for determining BAT of Annex III of IED)

3.1 Procedure derogation 15(4)

- ▶ Procedure granting the derogation: Section 1.2.2ter VLAREM II
- ▶ Application **admissible and complete?**
- ▶ **Public inquiry**
- ▶ Minister asks the **Regional Environmental Permit Commission** an opinion on the application for derogation

Regional Environmental Permit Commission (REPC):
Coordinates procedure, (sub-)advices are discussed
Consist of advising organs and experts
→ one integrated assessment for the minister

- ▶ Decision of minister **6 months** after notification admissible and complete application. Decision takes objections of the public inquiry into account



Flanders
State of the Art

Flemish procedure for granting derogations under article 15(4) or 15(5) – November 2014

3.1 Procedure derogation 15(4)

- ▶ Decision by **ministerial order**
- ▶ **Publication** of the decision by mayor
- ▶ A copy of the decision is send to a.o. operator, REPC, advising organs, provincial Council, ...
- ▶ **Appeal possible**
- ▶ Limited in length of time until:
 - The term of the environmental permit expires
 - The term as mentioned in the ministerial order expires
 - If a decision following the reconsideration and updating of permit conditions is inconsistent with the granted ELV in the derogation



Flanders
State of the Art

Flemish procedure for granting derogations under article 15(4) or 15(5) – November 2014

3.2 Procedure derogation 15(5)

- ▶ An operator can apply for a temporary derogation for the testing and use of emerging techniques using the existing procedures:
 - Application of a permit (Chapter III of VLAREM I)
 - Modification of a permitted establishment of class 1 or 2 (Chapter IIIbis of VLAREM I)
 - Every IPPC-installation is a class 1 – installation. Competent authority is provincial council



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Flemish procedure for granting derogations under article 15(4) or 15(5) – November 2014

4. Future

- ▶ Environmental permit (Omgevingsvergunning) :
 - Integration of the environmental permit (milieuvergunning) and the building permit
 - Permanent character (now max. 20 years)
 - One consolidated permit with actual situation (instead of multiple decisions)



Flanders
State of the Art

Flemish procedure for granting derogations under article 15(4) or 15(5) – November 2014

5. Conclusions

- ▶ **BAT-AEL translated as one value in VLAREM III**
 - Extra derogation option in Flanders
 - No derogation of article 15(4) possible through updating after evaluation, minister competent authority
- ▶ **Derogation procedure exists, but no practical experience yet**
 - Operator is responsible for motivating his application
 - Future workload?
 - × **Timing VLAREM III + evaluations?**
 - Few granted derogations expected based on geographical aspects (densely populated region)
 - Good BAT-conclusions = less derogations



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Flemish procedure for granting derogations under article 15(4) or 15(5) – November 2014

Questions?

Ruben Vandewalle
Environmental Permits Division
T +32 2 553 79 99, M +32 473 83 53 44
ruben.vandewalle@ine.vlaanderen.be



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Draft Finnish guidance for applying IED Article 15(4)

Mr. Jaakko Kuisma, Senior Specialist
Ministry of the Environment

Introduction to BAT derogations

- Finland is a large country with small population far from central Europe, thus low damage costs
- Large number of industrial sites, mainly pulp&paper and metal industries
- A lot of initial interest and political push for applying BAT derogations, Finnish parliament made a following statement:

“when the conditions for granting derogations are met, there should not be restrictive attitude towards granting derogations, instead the derogations should be seen as useful part of the implementation of the BAT conclusions, which in general is considered binding and quite tight regime.”

Introduction to BAT derogations

- Very late with IED implementation (September 2014), no actual derogation cases yet
- Draft guidance has been prepared 2013-2014
- A lot of discussions on applicable conditions for derogations
- Need for streamlined cost-benefit analysis

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Conditions for 15(4) derogation

- There are various technical justifications for derogations, such as end of life plants, retrofit problems, unique technologies used, BREF applicability limitations, cross-media issues, special operational pattern
- Local environmental conditions would be left to decide on local/regional level, these would be very diverse, such as the importance of background pollution
- Only few examples on geographical locations, there is geographical dimension on whether the recipient water is lake, river or sea.
- Also severe ice conditions or cold climate could lead to derogation based on geographical location

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Derogation process

- It should be possible to assess the BAT related costs
- Clear problems in assessing environmental benefits, quantitative approach for air emissions, qualitative approach for water emissions?
- More general approach (ECM BREF) might be possible for air emission derogations, case-by-case for water emissions
- Regional water authority would have major role in assessing the importance of the derogation in water ecosystems
- Disproportional cost would be left to decide on the permit/administrative court cases, but it is higher than equal cost

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Key national discussion points

- Timeline for evaluating the environmental benefits of the permanent derogations, particularly in water ecosystems
- The BREF process should not be repeated in derogation discussion
- Interest to avoid extensive consultancy studies
- There could be diverse data confidentiality issues
- Short time extensions would have a very simplified derogation process based on minimal environmental benefits

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Thank you!

jaakko.kuisma@ymparisto.fi
www.ym.fi



*Ministero dell'Ambiente
e della Tutela del Territorio e del Mare*

*IMPEL workshop "sharing of draft proposal between Member States for
implementing derogations from BAT-AEL under Article 15(4) ad (5) of IED
Edinburgh, 26th-27th November 2014*

BAT-AEL derogation in Italy

Ing. Antonio D. Milillo – milillo.antonio@minambiente.it

Derogation: opportunity or necessity

In Italy the art 15(4) derogation was not yet used in practice. The fear is CA will not use such derogation unless they are forced to: allow derogation expose the permit decision to the attention of the public, of the Ministry, of the UE Commission, of TWG in Sevilla ... and probably of some court of justice

However "old" IPPC permits show a number of cases in which define ELV outside BREF indication was a necessity to grant IPPC principles application to the installation.

In fact reference BAT and BAT-associated (was average) emission levels are proportionate and effective in the majority of cases but not for all of them

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Italian law general provision

The derogation has to be request by operator

In any case a cost-benefit analysis has to justify the request

The derogation regards only BAT-AEL range respect, others obligations (EIA conditions, LCP ELV, ...) stand mandatory and other BAT Conclusions results are not CA value the request and publish the results

To address CA valuation, the law illustrate typical situations in which the derogation could be necessary

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Typical cases in which BAT-AEL derogation could be granted
(1/5: cross-media effect)

•BAT-AEL respect doesn't cause any environmental benefit.

It means a cross-media analysis, related to the specific case, shows the permitted environment performance is not worst than BAT-AEL respecting performance.

For example, when a critical situation* for a pollutant occurs, operator could propose to abate the related emission (in the lower side of BAT-AEL range, or even below) instead to invest resource to reach the BAT-AEL for non-critic pollutants.

* Note: critical situation outside article 18 procedure

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Typical cases in which BAT-AEL derogation could be granted
(2/5: cost benefit)

•BAT-AEL respect drives negligible benefit and noteworthy costs.

It means the cost-benefit analysis, related to the specific case, shows without doubt the ineffectiveness of BAT-AEL requirement.

Next 3 point can be used when some doubt arise.

- **•BAT-AEL respect benefit could be achieved more easily (and in the same time) with other very less expensive investments.**

The typical case arise when the operator can grant the same benefit* acting on a non IPPC plant in the same site. Burning some gas in coal plant could be another case.

*Note: the high level of environment protection is granted, but the reference is no more the installation, but the site

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Typical cases in which BAT-AEL derogation could be granted
(3/5: cost benefit)

- **Reference BAT application is very more expensive respect the application in an installation in the reference condition.**

Typical cases are installations in small islands, high mountain, or in other particular places.

- **Reference BAT application doesn't grant BAT-AEL respect**

Typical cases arise for activities using local raw material. An example was a ceramic (LECA) industry near a volcano. The sulfur presence in the clay, used as raw material, drive high SO_x emission, even if BAT are adopted.

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Typical cases in which BAT-AEL derogation could be granted
(4/5: timeplot viability)

During CME Bref discussion, the TWG decides Brefs has to pay attention on BAT definition, not on the time to implement BAT.

This time depends on technical constraints, administrative processes and economic viability. About the last topic, the break-even point (BEP) of related previous investments seems the more correct marker. =>

- **BAT-AEL respect should be delayed to reach the break-even point of a previous IPPC-requested investment in the installation, or**

- **of a previous relevant investment concerning all the installation parts involved in the BAT application.**

A typical example is the necessity to redefine the layout of a significant part of the plant to find out the space necessary to install the BAT .

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Typical cases in which BAT-AEL derogation could be granted
(5/5: other cases)

•**BAT-AEL respect should be also delayed to tune the time of BAT realization with a major maintenance.**

A typical example occurs when the BAT implementation needs the stop of the whole productive unit and this stop drive the necessity to a mayor maintenance (glass industry, coke oven, ...). Even if the BEP is reached, CA has to verify if planned maintenance anticipation will waste resources who can be better used.

- R & D installation
- Other particular cases

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CB methodology in Croatia

Dr. Damir Rumenjok

Cost - benefit

$$B - C \geq 0$$

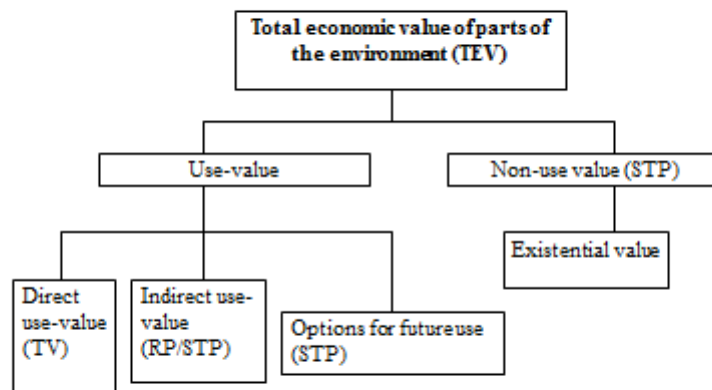
Legislation

- Act on Environmental Protection, OG 80/13
- Ordinance on environmental permitting, OG 8/14
- REGULATION ON THE MANNER OF ESTABLISHING ENVIRONMENTAL DAMAGE, 27 November 2008 (some methodology)

Guidances

- The guidance about directions for economic evaluations of BATs, Ministry web: www.mzoip.hr
- Main method recommended: cost-efficiency as a variety of CB methods

Economic evaluation of environment



Total economic value of parts of the environment (TEV)

- Use-value
- Non-use value (STP)
- Existential value
- Options for future use (STP)
- Indirect use-value (RP/STP)
- Direct use-value (TV)

Economic evaluation of environment

Table 1 MEANING OF SPECIFIC COMPONENTS OF THE TOTAL ECONOMIC VALUE OF THE ENVIRONMENT

Component	Meaning
Direct use-value	Use-value which has market evaluation (potential direct market evaluation)
Indirect use-value	Use-value which cannot be directly evaluated on the market
Options for future use	Future use of resource (direct and indirect value)
Existential value	Pure existence value of a resource, or passive value

Some techniques for evaluation

- Stated preferences,
- Contingent valuation,
- Revealed preferences
- Benefit transfer

Instruction of use for techniques

- INSTRUCTION for determining methods for choosing economic evaluation of parts of the environment:
- Common division contains three basic groups of methods for the economic evaluation of the environment. The first is connected with the possibility of establishing the value of parts of the environment as market values (MV) and is frequently applied to cases in which it is possible to establish the relation between the impact and response (damage) in the environment which can be easily expressed on the market. The implementation of these methods is frequent and possible in the area of waste management, through various, market based prices in relation to handling and treatment of waste or restoration of damaged environment, when it is obvious that restoration operations may completely restore all impaired environmental services.
- The second group of economic evaluation are methods for revealing or determining revealed preferences (RP), which connect a specific market evaluation to parts of the environment which otherwise do not have market value, most frequently through indirect use-values of the environment which can be appropriately expressed.
- Most frequently used methods are stated preference techniques (STP), which are based on questionnaires and surveys. The most popular among them are willingness to pay (WTP) and willingness to accept compensation (WTA), which may be jointly marked as WTP (A). Those methods for establishing environmental value are based on willingness to pay in various, mostly hypothetical, situations.
- The methods for value transfer from other countries (BT) are applicable to all methods prescribed in this Annex (TV, RP, STP) for similar or same costs (damages) if they have not been defined in the Republic of Croatia.

Benefit transfer technique

$$WTP_j = WTP_i (Y_j / Y_i)^e$$

gdje su Y prihod po stanovniku, i, j; zemlja iz koje se prenosi i zemlja u koju se prenosi, e; koeficijent elastičnosti,
Uobičajeni slučaj je prijenos vrijednosti iz razvijenih u manje razvijene zemlje te je: $e \leq 1$.