

EUROMOT

The European Association of Internal
Combustion Engine Manufacturers

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Promoting
Engines in Society

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EUROMOT feedback on the Evaluation of the Industrial Emissions Directive

1. Introduction:

Euromot supports in general harmonised emissions legislation set at a level which can deliver cost-effective improvement in the EU air quality. The emission legislation shall also be supportive of current trends & ambitions.

In the past, Euromot participated in both the LCP BREF 2006 and the IED 2010/75 EU work processes. We have also been involved (as active Technical Working Group (TWG) member) in the latest LCP BREF /1/ revision process which was finalized in year 2017.

Comments below are mainly related to the recent finalized LCP BREF revision process. Some shortcomings detected in the IED 2010/75/EU not reflecting some current EU environmental and other policies such as the sustainable climate action are also highlighted.

We have in below text given some proposals/recommendations on how to improve the IED process as a whole.

2. Feedback on the IED process:

2.1. General

In the "Evaluation Roadmap" /2/ chapter "Purpose and scope" are following statements:

*"This evaluation is to assess how the IED is working, **whether it has the correct scope**, and the degree to which its intended impacts have been achieved. If it is appropriate, the outcome will **provide the basis for a possible future Impact Assessment and possible proposal for revision of the Directive.***

*The evaluation will **cover all parts of the IED, including the process for elaborating BREFs and the BAT Conclusions, and whole of EU**. It will primarily cover the **period from adoption of the IED in 2010**, however it may be pertinent to look back further to its predecessor legislation.*

The evaluation will assess:

- **Effectiveness:**
 - ...
 - .. the process of elaborating BREFs and BAT Conclusions
 - ..

- **Efficiency:**
 - The extent to which the costs are justified, given the impact of the IED and the benefits it has delivered
 - ...

- **Relevance:**
 - The extent to which the IED objectives still correspond to the need of the EU
 - ...

- **Coherence:**
 - -...
 - The extent to which the IEED is coherent with other EU environmental and wider EU policies, and with market-based instruments.
 - ...”

The “Evaluation Roadmap” refers amongst all to the “Report of the implementation of the IED” /3/. In this document following texts are found:

- Page 2 (in regard of BREFs): “...This exemplary process involves full participation of all stakeholders in an evidence-based process...”

- Page 6:
 - “ .. BAT conclusions ... provide information to decision makers about relevant techniques that are economically viable and technically available to industry in order to improve their environmental performance...”
 - “ .. BREFs has become more focussed on the collection and evaluation of information aimed at determining the environmental performance levels achieved by existing plants.”

- Page 7:
 - “ .. The information exchange process is at the heart of BREF production and review. It generates the solid evidence base for decision making.”

In below chapter 2.2 we have given our view based on the experience obtained during the LCP BREF revision process. Some advice is also given on how to maintain a balanced (between environmental and cost-related aspects) IED when it will be updated in the short future, based on the recent finalised LCP BREF.

In chapter 2.3 some shortcomings detected in the current IED 2010/75/EU are briefly discussed. By adding these aspects, the future (updated) IED would also effectively support sustainable climate actions.

2.2. Feedback

2.2.1. Effectiveness & Efficiency

Unfortunately, consensus could not be reached in all aspects of the LCP BREF: due to a sometimes too selective choice of only the “best in class” reference plants (other kinds of plants being disregarded) made by the author team leading the TWG, different views existed among the stakeholders on when a technique is to be considered fully proven, on cost aspects, etc.

In document /4/ the major dissenting views regarding the oil-fired reciprocating engine plant are discussed. Reference 6 of document /4/ contains information on **the “best in class”** oil-fired reciprocating engine reference plant equipped with secondary abatement techniques such as FGD (Flue Gas Desulphurization) system for simultaneous SO₂ and particulate reduction and SCR (Selective Catalytic Reduction) for NO_x reduction. In this document and others such as reference 7 of /4/ Euromot showed that this plant was *not yet* a ready BAT reference plant due to many reported process disturbances – more operational hours should have been needed (especially in order to obtain information on the long term wear and tear of the filter bags of the FGD and better performance of the SCR - NH₃-slips frequently very high). Reference 6 of source /4/ showed also (based on the measured emissions) that at least the set dust BAT emission span in the BAT conclusion chapter 10 is in general set at a too low level.

In regard of the SCR the industry referred also to ECM BREF 2006 (cost aspect) and argued for “own” leaner NO_x limits in remote areas such as SIS/MIS. This was however not reflected in the NO_x BAT conclusion table in chapter 10 of the LCP BREF.

2.2.2. Relevance

In order to remedy the most severe inconsistencies in the BAT conclusions of document /1/ for the oil-fired reciprocating plant, a time-limited derogation text for emissions of the plants in MIS/SIS areas was inserted into chapter 10.3.2.

This is however not a sufficient remedy. This and other aspects are explained further in document /5/, on how to update the future IED and application of the LCP BREF:

- Approved dissenting/split views (in chapter 12 of the LCP BREF) should also be inserted/utilized (for special cases classifying for emission derogations due to e.g. remoteness, technical characteristics, etc.) into chapter V of the future IED in order not to void Article 15 (4) of the IED.
- The maximum BAT range emission value of chapter 10 of the LCP BREF should in general be used in the permitting process (in zones fulfilling the ambient air quality limits).

Another process where a similar remedy as in above LCP BREF 2017 has been used is the MCPD 2015/2193 (Annex II, part 2 new plant) /6/, where time-limited emission limit derogations were inserted for reciprocating engine plants in SIS/MIS. The MCPD Information Exchange Process started in January 2018, with the aim to - amongst others - assess the need to review provisions set for reciprocating engine plants in SIS/MIS.

2.3. Missing aspect of IED 2010/75/EU

Items supportive of the EU sustainable climate action are hardly reflected in the IED. The coherence with these EU ambitions needs to be strengthened in the future IED. Below some general views on how this could be achieved.

2.3.1. Grid stabilisation plants:

Incentives for promoting renewable sources e.g. intermittent ones (such as solar, wind) and energy storage in the energy production should be included in the IED. This highly needed climate action will also have a decreasing impact on the conventional emissions regulated by IED. As a consequence of the increasing share of intermittent renewable sources in the electricity production, there is a need for fast reacting backup fossil fuel-fired power plants in order to maintain/secure the grid stability under all conditions. These grid stabilisation plants (e.g. a gas-fired reciprocating engine plant) operate only when the intermittent renewable source is not generating enough electricity and thus

the total operating hours of the fossil fuel fired back-up plant during the year are often relatively low. Secondary emission abatement equipment performance is highly affected by the fast start-ups and shutdowns of the power plants e.g. if the SCR is too cold it will not abate NOx. IED should therefore include special provisions for these plants securing a bigger penetration of renewable electricity into the electrical grid: this could be done by granting own emission limits for these backup plants considering emission abatement technique restrictions and costs.

2.3.2. Replacement of virgin fossil fuels:

Essential parts of sustainable energy and environment paths are:

- Alternative energy source development (replacement of (virgin) fossil fuels);
- Appropriate waste management strategies.

The pyrolysis process is an option of waste-to-energy technology to deliver alternatives to replace virgin fossil fuels. The advantage of the pyrolysis process is its ability to handle unsorted and dirty plastic or rubber amongst all. The pre-treatment of the material is easy: tyre is needed to be shredded while plastic is needed to be sorted and dried /8/.

Source /9/ quote “...Wastes which are assigned to ANH entries cannot be allocated to hazardous entries and **should be classified as non-hazardous** without any further assessment. “, amongst all used tyres belongs to category ANH (Absolute Non-Hazardous) (List of waste code 16 01 03). Ditto in source /10/, see last slide 36.

LCP BREF /1/ chapter 9 page 683 is focusing (*.. on the effects of the co-incineration of waste materials in large combustion plants (coal-, lignite-, peat-, and wood-fired boilers)...*) i.e. **on solid fuels**. On page 686 is stated “*..Since pyrolysis is not specific to large combustion plants, these processes are not discussed further in this document. More information can be found in the Waste Incineration BREF. ..*”

The Waste Incinerator BREF draft document /11/ is handling both treatment of hazardous and non-hazardous wastes. Handling of used tyres is mentioned only once in a sentence of the document. A typical composition (compared to diesel oil) of the pyrolysis oil made of car tyres can be seen in table 2 of source /8/. Current IED approach refers to “waste” in general (hazardous or not) and requires all waste categories to follow chapter IV (and Annex VI) of the IED.

In order to enhance the sustainable energy and environment path development it should be investigated if plant burning products such as pyrolysis oil, produced from processes utilizing non-hazardous waste such as used tyres, could be subject to the same emission limits as specified for the liquid (oil) fired plants (i.e. Chapter III and Annex V of IED). This should make the approach more practical and cost-effective. For more information about the potential see:

- Scrap tyre recycling /10/ slides 17, 18.
- SULFREE Report Summary /12/

3. Conclusions:

Euromot supports in general harmonised emissions legislation set at a level which can deliver cost-effective improvement in the EU air quality. The emission legislation shall also be supportive of current trends & ambitions. However, the approach “one set of emission limits for the whole EU area”, which seems to be a fundamental element in the long term of the EU LCP BREF, is *not a technique/cost feasible approach* as shown above. In IED 2010/75/EU the derogation in Article 15 (4) enabling a cost-effective feasible approach between environmental and economic aspects is included, this is needed for e.g. remote plants in areas with a weak infrastructure. In order to maintain the intent of Article 15(4), approved dissenting/split views of (LCP BREF) chapter 12 should be utilized as the base for the

emission limits (for special cases classifying for emission derogations due to e.g. remoteness, technical characteristics, etc.) in Annex V of the future IED.

In zones fulfilling the ambient air quality limits the maximum BREF emission span limits should be used in order to maintain a balance between environmental and cost aspects.

Efficiency to fulfil the diverging needs around following elements of the IED working process needs to be strengthened compared to the situation experienced today:

- **Real** consideration of the inputs from all stakeholders in order to fully satisfy the following conditions:
 - o “*full participation of all stakeholders in an evidence-based process ..*”.
 - o “*..provide information to decision makers about relevant techniques that are economically viable and technically available to industry..*”
 - o “*.. evaluation of information aimed at determining the environmental performance levels achieved by existing plants..*”

As explained above, these noble elements seemed unfortunately many times to be absent in the held TWG discussions of the LCP BREF development process. One way to remedy this is to update and strengthen these aspects in the Commission Implementation Decisions /7/ (*laying down rules concerning guidance on the collection of data and on the drawing up of BAT reference documents and on their quality assurance referred*) for future BREF processes.

Finally, elements (such as grid stability plants and replacement of virgin fossil fuels) supporting the EU sustainable climate actions should also be included in the IED.

4. Sources:

/1/ LCP BREF 2017 at link http://eippcb.jrc.ec.europa.eu/reference/BREF/LCP/JRC_107769_LCPBref_2017.pdf

/2/ Evaluation Roadmap document at link https://ec.europa.eu/info/law/better-regulation/initiative/1913/publication/326298/attachment/090166e5bf01919a_en

/3/ Report on the implementation of the IED at link <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017DC0727&from=EN>

/4/ Euromot Position, April 2017 “LCP BREF position for remote areas” at link <https://www.euromot.eu/wp-content/uploads/2018/02/EUROMOT-LCP-BREF-position-for-remote-areas-such-as-MIS-and-SIS-plants-Liquid-fired-reciprocating-engine-plant-2017-04-04.pdf>

Due to an update of the EUROMOT website, the links in that paper changed as follows:

- New link for footnote /6/: https://www.euromot.eu/wp-content/uploads/2017/03/LCP_BREF_EEB_Maltese_plant_data_EUROMOT_comments_2015-01-23.pdf
- New link for footnote /7/: https://www.euromot.eu/wp-content/uploads/2017/03/LCP_BREF_BAT_AELs_for_HFO-fired_engines_2013-09-23.pdf
- New link for footnote /8/: https://www.euromot.eu/wp-content/uploads/2017/03/LCP_BREF_BAT_Response_to_CEFIC_comments_2014-11-20.pdf
- New link for footnote /9/: https://www.euromot.eu/wp-content/uploads/2017/03/LCP_BREF_EUROMOT_Feedback_Liquid_Fuel_Engines_2015-05-20.pdf

Note that the numbering of split views quoted in this document /4/ is different compared to the LCP BREF paper as of December 2017 as the EIPPCB had removed on their own behalf a split view “on SCR applicability” present in LCP BREF Final Draft June 2016 at link http://eippcb.jrc.ec.europa.eu/reference/BREF/LCP_FinalDraft_06_2016.pdf

/5/ Euromot Position “New LCP BREF (2017) and Future Aspects of the Industrial Emissions Directive 2010/75/EU”, March 2018 at link: <https://www.euromot.eu/wp-content/uploads/2018/07/LCP-BREF-EUROMOT-Position-Paper-2018-03-22.pdf>

/6/ MCPD 2015/2193 at link <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015L2193&from=EN>

/7/ Commission Implementing Decisions of 10 February 2012 laying down rules concerning guidance on the collection of data and on the drawing up of BAT reference documents and on their quality assurance referred to in Directive 2010/75/EU at link <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012D0119&from=EN>

/8/ A Comparison of the Use of Pyrolysis Oils in Diesel Engine, 2013 at link https://file.scirp.org/pdf/EPE_2013101613114618.pdf

/9/ Commission notice on technical guidance on the classification of waste 2018/C 124/01 at link [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018XC0409\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018XC0409(01)&from=EN)

/10/ Scrap tyre recycling; DGE Engineering presentation October 2015 at link <http://www.dgengineering.de/download/open/Presentation-Scrap-Tires-2013.pdf>

/11/ Waste Incinerator Draft BREF at link http://eippcb.jrc.ec.europa.eu/reference/BREF/WI/WI_5_24-05-2017_web.pdf

/12/ SULFREE Report Summary at link https://cordis.europa.eu/result/rcn/192551_en.html