

Industrial Emissions Directive: Art. 15(4) BAT derogations implementation

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This analysis was prepared by the Frank Bold Society as background material for the purposes of the ongoing revision of Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control, hereinafter "**IED**").

An international comparison has been carried out to demonstrate the **overwhelming overuse and extensive interpretation of Art. 15(4) of the IED**. The analysis focuses on the large combustion plants (hereinafter "**LCP**") sector, which has the most installations regulated by the IED and at the same time, offers the most recent experience with the implementation of BAT Conclusions.

The analysis first provides an overview of the relevant provisions of the IED and available research on this topic, followed by case studies from the Czech Republic, Poland and Bulgaria. The analysis shows that the three main problematic areas are: **lack of access to information** in some Member States; significant **differences and errors in the cost benefit assessment**; and **extensive interpretation** of the criteria of Art. 15(4) of the IED, which leads to **extensive use of this exemption**.

Finally, the analysis offers a set of key recommendations, which can be summarised as follows:

- The option to grant a derogation under Art. 15(4) of the IED should either be completely removed or significantly restricted to prevent the overuse of this tool.
- Criteria under Art. 15(4) a) and b) should be described in detail to be in line with the purpose of the provision.
- The IED should include an obligation for the European Commission to adopt official guidance which should describe in detail the methods of cost benefit assessment for the purposes of this provision. Specific steps of cost benefit assessment should be included in an Annex of the revised directive.
- The IED should **specify in Art. 24**, that all parts necessary to evaluate and verify the cost benefit analysis for the purposes of Art. 15(4) **should be available to the public**, including but not limited to itemised costs of technologies considered in the assessment, sources of this information and description of the method which has been used to conduct the cost benefit assessment.



1. Relevant provisions of the IED

Art. 15(4) of the IED allows the responsible authorities to set less strict emission limits than those prescribed by the BAT Conclusions in force, in case all the criteria are fulfilled. It reads as follows:

"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." (emphasis added)

According to Art. 24(1) of the IED, Member States shall ensure that the public concerned are given **early and effective opportunities to participate** in Art. 15(4) procedures. Where a derogation is granted in accordance with Art. 15(4), the specific reasons for that derogation and the conditions imposed should also be **made available to the public** (see Art. 24(2) of the IED). Based on Art. 72 of the IED, all Art. 15(4) derogations shall be reported by Member States to the European Commission.



2. Available research and other information

In December 2017, a report, *Benefit assessment methodologies for the LCP BREF Implementation*, was carried out by M. Holland, a consultant at EMRC.¹ This report describes the **basic methods for the quantification of costs and benefits** for the purposes of Art. 15(4) derogations. It summarises the current state of science in the area and suggests guidance for Art. 15(4) derogation proceedings. This report was used as one of the sources for the Czech Art. 15(4) derogation proceedings guidance for the LCP sector.²

In March 2018, Amec Foster Wheeler Environment & Infrastructure UK Limited carried out an analysis, *Application of IED Article 15(4) derogations*, for the European Commission.³ This report offers a **complete overview of all Art. 15(4) derogations reported** by Member States at that time. It shows that Member States use different strategies for cost benefit analysis and for disproportionality assessment. Significant differences of interpretation of the criteria under Art. 15(4) a) and b) are also evident from the report. The analysis also suggests that in a small number of cases the criteria of Art. 15(4) of the IED might not have been met, though the authors suggest that more time would be needed to examine this aspect in detail.

In March 2021, Ricardo issued a report "Assessment and summary of Member States' reports under Commission Implementing Decision 2018/1135/EU" (070201/2019/816748/SFRA/ENV.C.4), which contains basic statistical information on Art. 15(4) derogations up to 2018. A more recent complete statistical or analytical overview of Art. 15(4) derogations in all Member States is not currently available. Based on the data available in the Czech IPPC database,⁴ we include at least an **overview of all BAT derogation proceedings in the Czech Republic** (see table 1).

Sector (BAT Conclusions which were derogated from)	Art. 15(4) derogation proceedings (one case might relate to multiple pollutants)	Commentary
Large combustion plants	17	4 derogations already granted, 13 applications still pending
Manufacture of glass	7	All decisions already final
Production of pulp, paper and board	1	Decision already final

¹ The report is available online: https://env-

health.org/IMG/pdf/20180129 guidance on cba for ied derogations mholland.pdf.

 $\frac{\text{https://www.mzp.cz/ippc/ippc4.nsf/b8b42dbc0c8637bac125773c0021a91e/bac8b906439804d4c125846b00426e5d?OpenDocument.}{}$

² The Czech guidance is available here:

³ The report is available online: https://circabc.europa.eu/sd/a/9b59019b-df6c-4e6c-a5c2-1fb25cfe049c/IED%20Article%2015(4)%20Report.pdf.

⁴ See: https://www.mzp.cz/ippc/ippc4.nsf/search.xsp, data taken on 1. 2. 2021.



Total	25	Please note that no Art. 15(4) derogations have been ever rejected by the Czech authorities.

Table 1: Art. 15(4) derogations in the Czech Republic

A similar overview for Poland is not publicly available. The information would have to be gathered from different responsible authorities via requests for information, which would take disproportionate effort.

3. Case studies

a) Invalid BAT derogation criteria in Poland and the Czech Republic

If an Art. 15(4) derogation is granted, not only does there **have to be a disproportionality** between the costs of achieving BAT-associated emission levels (hereinafter "**BAT-AELs**") on one side and the environmental benefits on the other. This **disproportionality also has to be caused** by either a) the "geographical location or the local environmental conditions" or b) the "technical characteristics of the installation". **Other reasons** for granting an Art. 15(4) derogation **are not permitted by the IED**. In our experience, the responsible authorities in both Poland and the Czech Republic interpret Art. 15(4) of the IED extensively in this regard, applying additional reasons to grant derogations.

In the **Polish case**, a derogation for a coal power plant Pątnów II was granted for 3 years for the following pollutants: dust, Hg, NOx, SO2. The **main argument** of the operator, a private company ZEPAK, accepted by the responsible authority, was that the necessity to carry out possible renovation work before August 21, 2021 **did not fit into the established overhaul schedule**. The investor indicated that, according to the established schedule, the modernization was scheduled for mid-2024. This argument was accepted by the authority despite the arguments presented by the public concerned that the maintenance schedule does not constitute a valid premise justifying the granting of a derogation. The derogation has been challenged before an administrative court, but the case is still pending.

In the **Czech case**, Chvaletice lignite power plant was granted an Art. 15(4) derogation from Hg and NOx emission limits for 6 and 8 years respectively. The operator argued that the costs of achieving BAT-AEL for both pollutants would be disproportionate to the environmental benefits and that this disproportionality was **caused by the technical characteristics of the installation**, according to Art. 15(4)b) of the IED. Specifically, the operator argued in the Art. 15(4) derogation proceedings that **the technical characteristics of the installation included the recent investment in SNCR technology**, which would have to be replaced by the more efficient SCR technology in order to



achieve BAT-AELs.⁵ The regional authority accepted this argument, and this position was also confirmed by the Ministry of Environment as an instance of appeal.

In our opinion a **business decision of the operator** to invest in a specific technology which turns out not to be sufficient to achieve BAT-AELs **should not be considered a reason to grant an Art. 15(4) derogation**. Also, neither the operator nor the authorities explained how this "technical characteristic" consisting of investment into denitrification would affect the (dis-)proportionality of the costs of Hg abatement. We consider this an example of a very extensive interpretation of the Art. 15(4) criteria.

In other Czech Art. 15(4) derogation cases, which are still pending, the operators also argue that derogations should be granted because the installations in question are important for **national energy security** (e. g. Ledvice, Prunéřov and Počerady power plants) or they **supply heat for neighbouring municipalities** (Mělník I. and II. lignite power plants). Such arguments were already listed in the reasoning for some of the Polish Art. 15(4) derogations (e.g. Pątnów II power plant, Pątnów I power plant and Konin). In Poland in the case of Siersza and Łagisza power plants, the authorities even argued that not granting the Art. 15(4) derogation would lead to import of higher quality coal, which would **lead to job loss in Poland**. We are convinced that Art. 15(4) derogations be based on these arguments are illegal.

b) Access to information on cost benefit analysis in Bulgaria

In the spring of 2018, seven large coal power plants (out of nine in total) in Bulgaria had filed their applications for Art. 15(4) derogations. In June 2018, the Executive Environmental Agency, the competent national authority that issues and updates the permits of large combustion plants, informed local environmental groups that it had received applications to derogate from the plants TPP Maritsa East 2, TPP AES Maritsa East 1, TPP ContourGlobal Maritsa East 3, Sliven District Power Plant, TPP Brikel, TPP Maritsa 3, and Ruse District Power Plant.

Environmental NGOs (Greenpeace Bulgaria and Za Zemiata, supported by ClientEarth), **requested access to all cost benefit assessments** submitted by the operators as part of their applications for derogation. Cost benefit assessments are extremely technical documents and the environmental organisations wanted to ensure they had early and effective opportunities to participate in the decision-making process. In July 2018, after consulting with the concerned operators, the Executive Environmental Agency denied access to these documents. The environmental NGOs challenged this decision in court and obtained **three successful court decisions** (regarding power plants Maritsa East 2, AES Maritsa East 1, ContourGlobal Maritsa East 3, Sliven, Brikel, Maritsa 3, and Ruse) confirming that the assessments contain environmental information and they should be available to

⁵ The installation participated in the Transitional National Plan (Art. 32 of the IED), which allowed it to postpone the effect of Annex V emission limits from 30. 6. 2016 to 30. 6 2020. Therefore the operator invested in the SNCR deNOx technology during the years 2016-2019, to comply with the Annex V emission limits in 2020. However, it turned out that the investment into the SNCR technology would not be enough to comply with the BAT-AELs enshrined in the LCP BAT Conclusions, which would come into force as of August 2021.

⁶ More information is available online: https://www.greenpeace.org/bulgaria/press/1377/за-земята-достъп-до-правосъдие-о/ (BG) or https://energypost.eu/the-balkans-biggest-power-station-why-thinking-beyond-maritsa-east-2-matters/ (EN).



the public. However, the Executive Environmental Agency has until now denied access to these documents.

In October 2018, the Executive Environmental Agency **published a draft excerpt of the updated permit** of Maritsa East 2 coal plant, granting it with an Art. 15(4) derogation. The excerpt was the only document subject to public consultation and the public was not allowed to review either the cost-benefit assessment or any other document that was part of Maritsa East 2's application. In January 2019, the Executive Environmental Agency issued the updated permit of Maritsa East 2 and **still did not attach the cost benefit assessment**. It was only after environmental groups challenged the derogation decision in court that the cost benefit assessment to be disclosed to the them. In November 2020 and December 2020, the Executive Environmental Agency published draft excerpts for the updated permits of Maritsa East 1 and Maritsa East 3, granting them both Art. 15(4) derogations. Again the cost benefit assessments were not published as part of either consultation. Both power plants already have their permits approved and updated, nor were disclosed to the public after the derogation decisions were issued. Environmental NGOs have challenged them before the Minister of Environment.

This approach of the Bulgarian authorities does not comply with the requirements of the IED, because it means that **the public has no access to the cost benefit assessments**, depriving them of the essential information needed to comprehend the derogation decisions, as well as early and effective opportunities to participate in the public consultations.

c) Cost benefit analysis in Bulgaria

Coal power plant TPP Maritsa East 2 was granted an Art. 15(4) derogation for mercury (Hg) and sulphur dioxide (SO2) emission limits. The derogation was granted on the bases of a questionable cost benefit assessment, which showed that the achievement of the binding emission limit values under the IED and its corresponding reference documents (BAT-AELs) would lead to disproportionately higher costs compared to the environmental benefits. The **assessment contained used approaches that some experts consider flawed**, which raises concerns about its credibility to serve as an authoritative basis for derogation from the BAT-AELs.

A summary of the flaws in the assessment pointed out by environmental NGOs are:

- The assessment cites two models used to calculate the environmental benefits of complying with the emissions levels. One study calculates the benefits at 6.2 mil. EUR, the other at 724.7 mil. EUR. Despite this significant difference in the results of the two approaches, the assessment **only uses the model with the lower figure** (6.2 mil. EUR) with no explanation why. Had the assessment used the higher figure, it cannot reasonably be concluded that TPP Maritsa East 2 should be granted the Art. 15(4) derogation.
- The **dispersion models of the study are applied over a very limited distance** (only 45 km away from the plant). Evidence shows that SO2 and Hg emissions from TPP Maritsa East 2 can reach far beyond this radius.

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The assessment did not account for the environmental harm caused by secondary pollution travelling hundreds of kilometres away from the source. By failing to account for this impact, the Assessment diminishes the environmental benefits in favour of the operator.

This example shows that the lack of clear and unified guidance for Art. 15(4) derogations, especially detailed rules for cost benefit assessments, leaves space for operators and national authorities to loosen the criteria of Art. 15(4). That leads to insufficient assessments of environmental damage caused by Art. 15(4) derogations and to unjustified derogations being granted.

a) Cost benefit analysis in Poland

In Poland the administrative authorities have granted several derogations for large combustion plants on the basis of Article 15(4) of the IED, however in some of these cases there are significant reasonable doubts as to the reliability of the derogation process and the justification for the derogation itself. Two derogations granted in Poland were related to annual HCl emission limits for Łagisza power plant and Siersza power plant. In both cases the operator presented a comparison of modernisation costs and environmental benefits related to the modernisation of the installation.

In its application, the operator, Polish company Tauron Wytwarzanie based its calculation of the environmental costs connected with the emission of 1 tonne of HCl on the fee for using the environment, functioning in the Polish system, which is paid by entrepreneurs in connection with polluting emissions. The operator did not use the amount of costs indicated in the official Handbook⁷ for granting derogations, prepared under the auspices of the Ministry of the Environment. The external costs for each pollutant in the Handbook were based on the results of studies indicated in European documents. Despite the existence of the Handbook and the requirements set up therein, the operator deliberately decided not to apply the official guidance and preferred an ad hoc unjustified basis for their cost benefit analysis. Therefore, looking for another basis, the operator relied on very low rates of fees for polluting the environment. These fees were introduced in the national legislation with the purpose of motivating polluters to lower their impacts on the environment, but are not supposed to internalise all the external costs of environmental damage caused by the polluters.

However, this fee has by no means been calculated to cover all the environmental costs of pollutant emissions, it represents only a small fraction of these environmental costs. The current fee for HCl is 1360 PLN (297 EUR) per tonne of HCl, whereas the environmental costs of emission of 1 tonne of HCl indicated in the Handbook, based on Norwegian studies, are 27 511 PLN (6 000 EUR) per tonne. Similar significant discrepancies are found for other pollutants. For example, the current fee for the emission of 1 ton of SO2 is 560 PLN (122 EUR), while the environmental costs of the emission of 1 ton of SO2 resulting from the EU documents are over 50 000 PLN (10 917 EUR). The current fee for 1 ton of NOx emissions is PLN 560 (122 EUR), while the environmental cost of NOX emissions is more than PLN 21 000 (4 853 EUR); the current dust fee per 1 tonne is 380 PLN (83 EUR) while the environmental cost of the emission of 1 tonne of dust is more than 116 000 PLN (25 317 EUR). This

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⁷ The Handbook is not legally binding, but was prepared by EY at the request of the Economic Society of Polish Power Plants under the auspices of the Ministry. Therefore, it is an auxiliary document, not binding in any way. Handbook: https://ekoportal.gov.pl/fileadmin/Ekoportal/Pozwolenia zintegrowane/Podrecznik dotyczacy udzielania odstepstw -Konkluzje BAT dla LCP.pdf.



comparison clearly shows that the fee for polluting the environment in Poland was not structured in such a way as to cover the full environmental cost of the emission of pollutants.

Despite many doubts as to the legitimacy of basing the environmental cost calculations on the fee for using the environment, the **administrative authorities accepted Tauron's position by granting both derogations**. One of the derogation decisions was even accepted by the Provincial Administrative Court of first instance, and environmental organizations have filed an appeal against this court decision. The other derogation was also challenged before administrative courts, but the case is still pending. This shows that the introduction of general provisions allowing the granting of a derogation without more detailed guidance may, in practice, lead to many irregularities, particularly in terms of calculating environmental costs and benefits.

b) Protection of trade secrets in the Czech Republic

In several Art. 15(4) derogation proceedings regarding lignite power plants Počerady, Prunéřov, Ledvice, Tušimice, Trmice, Mělník I. and Mělník II., the operator ČEZ, a.s., and its subsidiary companies, did not disclose the complete cost benefit assessment to the responsible authorities. Specifically, the operator **refused to impart the specific investment and operating costs of the considered technologies** for the BAT and Art. 15(4) derogation scenarios which were compared in the cost benefit analysis. The operator also refused to disclose any sources of the cost estimates, and these could therefore not be verified in any way. The operator argued that this information is **considered as a trade secret** and cannot be disclosed either to the authorities or to the participants of the proceedings.

The operator only submitted **the total sum of investment costs and operating costs** for all technologies considered for each scenario. The costs were not divided into specific items (such as SNCR installation, fabric filters installation, cost of energy, cost of maintenance, etc.). It was therefore impossible for the authorities or the public to scrutinise this information and critically compare the cost benefit analysis with other sources, such as the BREF document. This lack of detail and sources **renders the whole cost benefit impossible to review or verify** from the side of the authorities and the public.

Environmental NGOs who participate in these proceedings have pointed this issue out to the authorities. Specifically, the NGOs argued that detailed information on costs of both scenarios and their sources is an **integral part of the cost benefit analysis** and as such has to be available both to the authorities and to the public. After all, this information has been disclosed by all operators in other Art. 15(4) derogation proceedings. However, the authorities **have not taken any steps in the aforementioned cases to remedy the situation**. All these proceedings are still pending.

c) Lack of cumulative assessment and environmental monitoring of Hg derogations in the Czech Republic

In total, **10 Czech lignite power plants** have applied for Art. 15(4) derogations for mercury (Hg). The length of these derogations varies from **12 to 96 months**, the derogation emission limit is usually appx. 25 μ g/m³, varying from **13 \mug/m³ to 33 \mug/m³ (BAT AEL being 1-7 \mug/m³). One of these**



derogations has already been granted and has entered into force. The rest of the proceedings are still pending before the authorities of first instance.

Mercury is a **global persistent pollutant** which presents a significant risk to both the global environment and human health. Mercury's properties mean that **once it is released** into the environment it can **remain in circulation for thousands of years**. Furthermore, once in the air it can travel long distances, meaning that emissions have a global impact. Therefore, each kg of mercury which is to be emitted into the environment **should be considered properly**, especially in Member States such as the Czech Republic, which is one of the biggest producers of mercury emissions in the EU.⁸

In the Czech Republic, the difference between BAT and Art. 15(4) scenarios for all 10 installations cumulatively is **1 746 kg of Hg per year**,⁹ which can be also expressed as **40 158 000 EUR – 90 792 000 EUR of external costs**.¹⁰ However, the Czech authorities have **refused to assess all of the Art. 15(4) derogations related to mercury cumulatively** and in their mutual context. The authorities argue that in each case, they need only assess the individual derogation, without taking into consideration that there are several other cases with the same impact on the environment, which will, in the end, add on to each other.

Moreover, no dispersion studies or models of environmental impacts of mercury have been considered for the purposes of the Art. 15(4) derogation proceedings. The only criteria assessed by the authorities based on the official guidelines were: emission trends, derogation emission limit extent, length of derogation and economic criteria (comparison of external costs and cost of technologies for different scenarios). However, the authorities have **completely omitted to look into the actual effects of such significant emissions of mercury into the environment**.

In our opinion this approach **does not fulfil the condition of Art. 15(4)** of the IED that "[t]he 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." We consider this an example of a **lack of unified and specific guidance at the EU level** on how to assess the impact of Art. 15(4) derogations, especially for pollutants such as mercury, which tend to persist in the environment and have global impact.

4. Conclusion and key messages

The case studies demonstrate that there are significant differences and numerous errors in the national implementation of Art. 15(4) derogations. Three main common themes are: lack of access to information, extensive interpretation of the relevant provisions and lack of unified rules for cost

⁸ See: https://www.eea.europa.eu/publications/mercury-in-europe-s-environment.

⁹ The calculation has been done for year 2022, i.e. the first year after the LCP BAT Conclusions start to apply. The difference will be lower in later years when individual Art. 15(4) derogations end.

¹⁰ Nedellec, V. & Rabl, Ari (2016) Costs of Health Damage from Atmospheric Emissions of Toxic Metals: Part 2-Analysis for Mercury and Lead. Risk Analysis.



benefit assessments. Therefore, Frank Bold Society recommends the following amendments of the IED:

- The option to grant a derogation under Art. 15(4) of the IED should either be **completely removed or significantly restricted** to prevent the overuse of this exemption.
- Criteria under Art. 15(4) a) and b) should be described in detail to be in line with the purpose of the provision. Both reasons should only be applicable if the alleged geographical location and/or technical characteristic of the installation really sets it apart from an overwhelming majority of other installations in the sector.
- The "geographical location or the local environmental conditions" should only be applicable in cases where there are demonstrable natural forces or obstacles causing higher costs of achieving BAT-AELs.
- The "technical characteristics of the installation" should only be applicable where the
 operator could not influence the characteristics by its own business decisions. The
 technical characteristic should only be acceptable if it was caused by objective reasons
 specific to the installation.
- The IED should include the obligation for the European Commission to adopt official guidance or specify the derogation criteria in the BAT Conclusions for each sector. Such guidance should describe in detail the proper methods of cost benefit assessment for the purposes of this provision, within a reasonable deadline (e.g. one year). This guidance should be updated regularly and should be based on the current best available science on the external costs of environmental pollution from various pollutants. The guidance should also describe the method of determining disproportionality. Please note that such guidance could be adopted immediately based on the current IED. Specific steps of cost benefit assessment should be included in an Annex of the revised directive.
- The IED should specify in Art. 24, that all parts necessary to evaluate and verify the cost benefit analysis for the purposes of Art. 15(4) should be available to the public, including but not limited to itemised costs of technologies considered in the assessment, sources of this information and description of the method which has been used for the cost benefit assessment.
- The IED should also **specify the condition** that "**no significant pollution** is caused and that a **high level of protection** of the environment as a whole is achieved", including the information that the impact of Art. 15(4) derogations on the environment should be considered in their mutual context, also taking into consideration transboundary and global impacts of pollution. Proper assessment of environmental impacts should also be subject to official EU guidance. Art. 15(4) derogation for priority hazardous substances should be explicitly prohibited.

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Note: Research has been carried out in cooperation with NGOs and public authorities from the Czech Republic (Frank Bold Society), Poland (Fundacja Frank Bold) and Bulgaria (Za Zemiata, Greenpeace Bulgaria, supported by ClientEarth).

All the reference documents are available upon request.

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