

# Industrial Emissions Directive: Various LCP derogation regimes

31. 3. 2021, Brno, Czech Republic

This analysis was prepared by the Frank Bold Society as background material for the purpose 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 shortcomings and excessive use of various derogation regimes used by large combustion plants (hereinafter “LCPs”) under the IED.

The analysis looks into the use of the **Transitional National Plan** (Art. 32 of the IED, hereinafter the “TNP”), the **limited lifetime derogation** (Art. 33 of the IED, hereinafter the “LLD”) and the “**indigenous lignite fuel derogation**” under the LCP BAT Conclusions. A separate report by Frank Bold Society is dedicated specifically to Art. 15(4) of the IED derogations.

The analysis first offers an overview of the relevant provisions of the IED, followed by national case studies from three Member States. The analysis shows that **public participation is often restricted** when the authorities decide on various derogation regimes. These derogation regimes are also **used rather extensively**, without proper guarantees that all the legal requirements have been met, and without regard to local environmental conditions. Also, national authorities seem to **neglect some necessary aspects in assessment** of the justification of these derogation regimes.

The recommendations can be summarised as follows:

- **Derogation regimes such as LLD and TNP should not be included in the revised IED.**
- For any derogation regime included in the new IED, there should be an explicit provision stipulating that the regime is to be **implemented with due public participation**.
- The conditions of any derogation regime should be **set very specifically**, including the requirement that necessary evidence is submitted by the operator, revised by the authority and made available to the public.
- **Cumulation of derogation regimes** should be explicitly regulated, taxatively stipulating in which cases it is permitted.

## 1. Relevant provisions of the IED

**The TNP is regulated by Art. 32 of the IED.** According to section Art. 32(1):

*“During the period from **1 January 2016 to 30 June 2020**, Member States may draw up and implement a transitional national plan covering combustion plants which were granted the first permit before 27 November 2002 or the operators of which had submitted a complete application for a permit before that date, provided that the plant was put into operation no later than 27 November 2003. For each of the combustion plants covered by the plan, the plan shall **cover emissions of one or more of the following pollutants**: nitrogen oxides, sulphur dioxide and dust. For gas turbines, only nitrogen oxides emissions shall be covered by the plan.” (emphasis added)*

Art. 32(1) of the IED then follows by enumerating installations which are not eligible for participation in the Transitional National Plan, such as combustion plants which already participate in other derogation regimes under the IED.

According to Art. 32(2) of the IED, combustion plants covered by the plan **may be exempted from compliance with the emission limit values set by Annex V** of the IED for the pollutants which are subject to the plan. At least the emission limit values applicable to the plant on 31 December 2015 shall be maintained.

According to Art. 32(3) of the IED:

*“For each of the pollutants it covers, the transitional national plan shall **set a ceiling defining the maximum total annual emissions** for all of the plants covered by the plan on the basis of each plant’s total rated thermal input on 31 December 2010, its actual annual operating hours and its fuel use, averaged over the last 10 years of operation up to and including 2010.” (emphasis added)*

The provision of Art. 32 further describes the procedure of setting emission ceilings and reporting this regime to the European Commission.

**The LLD is regulated by Art. 33 of the IED**, which stipulates that:

*“During the period **from 1 January 2016 to 31 December 2023**, combustion plants may be exempted from compliance with the emission limit values referred to in Article 30(2) and with the rates of desulphurisation referred to in Article 31, where applicable, and from their inclusion in the transitional national plan referred to in Article 32 provided that the following conditions are fulfilled:*

*(a) the operator of the combustion plant undertakes, in a written declaration submitted by 1 January 2014 at the latest to the competent authority, **not to operate the plant for more than 17 500 operating hours**, starting from 1 January 2016 and ending no later than 31 December 2023;*

(b) the operator is required to submit each year to the competent authority a record of the number of operating hours since 1 January 2016;

(c) the emission limit values for sulphur dioxides, nitrogen oxides and dust set out in the permit for the combustion plant applicable on 31 December 2015, pursuant in particular to the requirements of Directives 2001/80/EC and 2008/1/EC, shall at least be maintained during the remaining operational life of the combustion plant. Combustion plants with a total rated thermal input of more than 500 MW firing solid fuels, which were granted the first permit after 1 July 1987, shall comply with the emission limit values for nitrogen oxides set out in Part 1 of Annex V; and

(d) the combustion plant has not been granted an exemption as referred to in Article 4(4) of Directive 2001/80/EC.”

Art. 33 of the IED then follows by describing the reporting obligations of Member States regarding the LLD regime (section 2) and describes the specifics for small isolated systems (section 3) and indigenous solid fuels in specific types of combustion plants (section 4), which are not relevant to the case studies in this analysis.

The “**indigenous lignite fuel derogation**” is regulated by the Commission Implementing Decision 2017/1442 of 31 July 2017 establishing best available techniques (BAT) conclusions for large combustion plants (hereinafter “**LCP BAT Conclusions**”), which set emission limit values for SO<sub>2</sub>, among others. In the relevant part, the LCP BAT Conclusions stipulate that:

*“For a combustion plant with a total rated thermal input of more than 300 MW, which is specifically designed to fire **indigenous lignite fuels** and which can **demonstrate that it cannot achieve the BAT-AELs mentioned in Table 4 for techno-economic reasons**, the daily average BAT-AELs set out in Table 4 do not apply, and the upper end of the yearly average BAT-AEL range is as follows:*

(i) for a **new FGD system**:  $RCG \times 0,01$  with a maximum of 200 mg/Nm<sup>3</sup>;

(ii) for an **existing FGD system**:  $RCG \times 0,03$  with a maximum of 320 mg/Nm<sup>3</sup>;

*in which RCG represents the concentration of SO<sub>2</sub> in the raw flue-gas as a yearly average (under the standard conditions given under General considerations) at the inlet of the SO<sub>x</sub> abatement system, expressed at a reference oxygen content of 6 vol- % O<sub>2</sub>.*

(iii) *If boiler sorbent injection is applied as part of the FGD system, the RCG may be adjusted by taking into account the SO<sub>2</sub> reduction efficiency of this technique ( $\eta_{BSI}$ ), as follows:  $RCG$  (adjusted) =  $RCG$  (measured)/(1- $\eta_{BSI}$ ).“ (emphasis added)*

In other words, if an LCP applies to derogate from the SO<sub>2</sub> emission limit values set by the LCP BAT Conclusions, it has to prove that: a) it **fires indigenous lignite fuels**, b) it **cannot achieve BAT-AELs** for techno-economic reasons, c) the proposed emission limit value is **max. 200 mg/Nm<sup>3</sup>** for a new FGD systems, or **max. 320 mg/Nm<sup>3</sup>** for an old FGD system, and d) the **calculation of the proposed**

**emission limit** is based on the real values of SO<sub>2</sub> concentrations in flue-gas. Only then can the “indigenous lignite fuel derogation” be applied.

For case study c), it is also relevant to refer to Art. 14(2) of the IED, which states that “*emission limit values may be supplemented or replaced by equivalent parameters or technical measures ensuring an equivalent level of environmental protection.*” This provision’s interplay with the “domestic lignite fuel derogation” and the Art. 15(4) derogations leads to excessive flexibility in permitting emission limit values.

## 2. National case studies

### a) Transitional National Plan in the Czech Republic

In the Czech Republic, the **total of 63 LCPs** (out of 107 installations) **participated in the TNP in 2016**. By the end of the TNP period in 2020, there were 53 participating LCPs. The pollutants covered by the Czech TNP were sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and dust. For the whole TNP, the SEA procedure was carried out, which enabled the public to comment on the plan. However, the results could not be challenged by the public before administrative courts.

When the TNP was transposed into permits for individual installations, all of these permit changes were **carried out in the regime of a “non-substantial” change**, i.e. without public participation. Even in cases of installations located in the most heavily-polluted areas, such as Moravskosleský Region, the TNP was transposed into permits without any option for the public concerned to comment on the decision or propose stricter operating conditions, e.g. based on Art. 18 of the IED.<sup>1</sup>

Within the national emission ceiling, individual installations were able to “trade” (exchange) their portion of the emission ceiling between themselves.<sup>2</sup> This procedure was problematic in two aspects. Firstly, the emission ceilings for individual installations were based on their historic production, which enabled operators to sell a portion of their emission ceilings in cases where they had reduced their operating hours during the TNP. When operators had decided to undergo a major modernization of the installation during the TNP, it was usually associated with a period when the installation was not operating. In some cases, power plants (e.g. Pruněřov II.) entered the TNP regime as already modernised, but their emission ceilings were still based on historic environmental performance. Therefore, they could save a part of their individual emission ceiling and sell it to another installation, which could even increase their pollution (compared to pre-2016 levels). This example shows that **the notion of a national emission ceiling was very inefficient** and did not lead to as quick a reduction of emissions as might have been possible.

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<sup>1</sup> Further information on the issue of „non-substantial” changes and public participation can be found in our report „Industrial Emissions Directive: (Non)-substantial permit change” (Frank Bold Society, 2021).

<sup>2</sup> This option is regulated by the Czech Air Quality Act (no. 201/2012 Coll.), § 37/2: „Operators of stationary combustion sources (...) may exchange parts of emission ceilings with each other, provided that the sum of emission ceilings of these stationary combustion sources is not increased compared to the state before the exchange, these stationary combustion sources are excluded from the transitional national plan or the emission ceiling of the stationary combustion station in agglomeration is not increased.”

Secondly, the “**trades**” of individual plants’ emission ceilings were converted into individual permits under the “non-substantial change” regime, i.e. **without proper public participation**, even in heavily polluted areas. These “trades” were also often carried out in small portions, resembling the “salami slicing method”. E.g. Chvaletice lignite power plant managed to increase its total TNP emission ceiling for dust on a regular basis:

- 2017: increased from 2,079.46 tonnes originally assessed and approved in the TNP to 3,346.86 tonnes
- 2018: increased from 2,079.08 tonnes to 3,544.13 tonnes
- 2019: increased from 2,078.89 tonnes to 3,341.41 tonnes
- 1-6/2020: increased from 1,039.44 tonnes to 1,470.71 tonnes

The total **increase of the emission ceiling for the individual power plant by 4,426.24 tonnes** of dust for the whole TNP period was permitted *per partes*, **without public participation**. The public was only informed about the decisions after they had been issued and could not challenge them on material grounds.

## b) Limited life time derogation in Poland

In Poland, the **Pomorzany coal plant** benefited from the LLD under Art. 33 of the IED. Under this derogation, the power plant was **exempted from the emission limit values** under the IED from 1 January 2016 either: until 31 December 2023, or until the limit of 17,500 operating hours was reached.

The purpose of the LLD was to offer a solution to installations which would be too expensive to modernise to comply with the Annex V emission limits. Instead of an immediate shut down, their further operation was permitted for a limited transitional period. The conditions of the LLD regime are less strict than those of the TNP, because it would not be economically viable to require these soon-to-be phased out installations to invest in abatement technologies.

As stated above, installations using the LLD regime should operate until the end of 2023 or until the hourly limit is exhausted, at which point they will be shut down. However, the Pomorzany power plant **has not ceased operating even after reaching the limit of 17,500 operating hours**.

A representative of the Polish Ministry of Climate and Environment stated, that “...after having consumed the working hours operator decided not to cease the activity. Instead installation was retrofitted to meet requirements foreseen in the IED for new plants including ELVs set up in Annex V, Part 2. Installation is also in line with the LCP BAT conclusions. (*sic*)”<sup>3</sup> It therefore seems that the Polish Ministry of Climate and Environment **considers the retrofitted power plant to be a new**

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<sup>3</sup> Information obtained via email from a representative of the Ministry, Martin Wiśniewski.

**installation** under the IED and BAT Conclusions, which absolves it from its obligation to shut down after the LLD operating hours are exhausted.

It is true that the **installation was retrofitted** and now operates in compliance with the LCP BAT Conclusions. However, under the LCP BAT Conclusions, the installation **enjoys the status of an “existing plant”** (as opposed to a “new plant”) which allows it to comply with less strict emission limits.

In our opinion, the installation in this case, which was “modernised” or substituted by a new plant after the LCP BAT Conclusions were adopted, must be considered either:

- **“a new plant” under both the IED and LCP BAT Conclusions**, which would allow it to operate after the end of the LLD regime, but also requires it to comply with stricter emission limits under LCP BAT Conclusions, or
- **“an existing plant” under both the IED and LCP BAT Conclusions**, which would lead to continuity between the current operation and the LLD regime, and thus require the operator to shut down the installation after the LLD is completed.

The operator, however, chose a purposive combination of these approaches. In our opinion these steps are not compliant with the IED or the LCP BAT Conclusions. This case study demonstrates that the national authorities may be **quite lenient as to the derogation criteria**, which **undermines the purpose of the relevant derogation regimes** and only leads to prolonged durations of unabated pollution.

### c) Indigenous lignite fuel derogation in the Czech Republic and Bulgaria

In the Czech Republic, the **Opatovice lignite power plant was granted an indigenous lignite fuel derogation** under the LCP BAT Conclusions by a decision of the regional authority in October 2020. The emission limit value for SO<sub>2</sub> was set to the upper limit permitted by the BAT Conclusions, i.e. 320 mg/Nm<sup>3</sup> (an existing FGD applies), without further justification of this value. The permit change was issued under the “non-substantial” regime, i.e. **without any public participation**. Information about the proceedings was published only after the decision had been made and the public was not able to challenge it on material grounds.

A local environmental civil association **submitted a motion for review**<sup>4</sup> of this permit change to the Ministry of Environment – the administrative appeal authority. This motion is still pending. The association, supported by Frank Bold Society, argued that:

- The reasoning for the decision **did not include the calculation according to the LCP BAT Conclusions** ( $RCG \times 0,03$  with a maximum of 320 mg/Nm<sup>3</sup>) and it seems that the emission limit value was automatically set to the upper limit of the derogation, without the actual desulphurisation rate being examined by the authority.

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<sup>4</sup>This motion is different from a standard administrative appeal, its result cannot be challenged before administrative courts.

- Based on publicly available information disclosed by the operator for the purposes of public procurement, the calculation could have been reconstructed, resulting in a **maximum emission limit value of 270-300 mg/Nm<sup>3</sup>**.

A **similar case occurred in Bulgaria**, where TPP AES Maritsa East 1 was granted a derogation from LCP BAT Conclusions for SO<sub>2</sub> emission limit values, based on a 97 % desulphurization rate.<sup>5</sup> In this case, however, the authority **did not set a specific emission limit** (mg/Nm<sup>3</sup>) and only referred to the desulphurization rate (%) for the time period from 18. 8. 2021, when the LCP BAT Conclusions came into effect. The authorities achieved this result by a combination of an Art. 15(4) derogation, a domestic lignite fuel derogation and the application of Art. 14(2) of the IED.

First, the authorities applied the domestic lignite fuel derogation under the LCP BAT Conclusions, which allows the installation (an old FGD system) to operate with an emission limit value for SO<sub>2</sub> of up to 320 mg/Nm<sup>3</sup>. However, the decision **did not include any justification of this emission limit based on the calculation** (RCG × 0,03 with a maximum of 320 mg/Nm<sup>3</sup>) required by the LCP BAT Conclusions.

At the same time, the authorities applied the Art. 15(4) derogation, which would enable the setting of an even less strict emission limit for SO<sub>2</sub> than 320 mg/Nm<sup>3</sup>. Subsequently, according to Art. 14(2) and Art. 15(3)b) and also with reference to Art. 31 of the IED, this emission limit would be “replaced by equivalent parameters or technical measures ensuring an equivalent level of environmental protection.” In this case, the Art. 15(4) derogation emission limit was **replaced by the desulphurization rate of 97 %**. However, it is unclear what the actual concentrations of SO<sub>2</sub> would be. Based on the calculations provided by the operator, it **could be up to 570 mg/Nm<sup>3</sup>**.

Environmental NGOs (Za Zemiata and Greenpeace Bulgaria, supported by ClientEarth) challenged the derogation on material grounds before the administrative authority of second instance. The appeal is still pending.

These cases show that the authorities provided **insufficient reasoning** for the use of the domestic lignite fuel derogation. From experience, in general when a derogation regime is to be based on specific evidence, the responsible authorities are not strict and consistent enough to require that evidence from the operators and include it in their reasoning. The Bulgarian case in particular also shows that the **combination of multiple flexibilities** under the IED and LCP BAT Conclusions can lead to very lenient operating conditions and a lack of environmental protection.

### 3. Conclusion and key messages

On the account of various derogation regimes, the Commission Staff Working Document on Evaluation of the Industrial Emissions Directive (SWD(2020) 181 final) states:

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<sup>5</sup> TPP AES Maritsa East 1 was assigned 97 % desulphurization rate for 10 of its boilers, and 97,5 % desulphurization rate for 2 of its boilers.

*“Large combustion plants are a major contributor to emissions to air from IED sectors. Whilst their emissions have been reduced significantly, given a number of time-limited flexibilities granted to Member States under the IED, this has been slower than what would have been achieved if BAT had been applied earlier. However, the decreasing trend is very encouraging and the main time-limited flexibilities are coming to an end at the time when the 2017 BAT conclusions for large combustion plants will become applicable.”*

In this spirit, we would like to emphasise that in the Member States analysed, the various LCP derogation regimes led to a **significant delay in emission reduction in this sector**. This delay continues with the use of the Art. 15(4) derogations and the domestic lignite fuel derogation under the LCP BAT Conclusions. Therefore, for the IED review we suggest that:

- **Derogation regimes such as LLD and TNP are not included.** Their nature was rather transitional and their purpose to avoid severe impacts of the new emission limits on the LCP sector is now obsolete.
- For any derogation regime included in the new IED, there should be an explicit provision stipulating that this regime is to be **implemented with due public participation** and consultation.
- The conditions of any derogation regime should be set very specifically. It should be explicitly determined what **evidence is necessary** from the operator in order to qualify for the derogation, and what are the **obligations of the operator** stemming from the derogation regime.
- **Cumulation of derogation regimes** should be explicitly regulated and prohibited by default.
- **All derogation regimes should be granted only “without prejudice to Art. 18 of the IED”**, with emphasis on the environmental quality standards being complied with.

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*Note: Research has been carried out in cooperation with NGOs 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.*